

Architectural and Engineering

Suggested Fee and Scope Services Reference



Part 1

BASIC SERVICES AVAILABLE FOR BUILDING PROJECTS IN ALBERTA

Part 2

SUGGESTED FEE GUIDELINES FOR BASIC SERVICES

Part 3

ADDITIONAL AND SPECIALTY CONSULTANTS AND SERVICES

Date Updated: January 2017

PREAMBLE

In 2009 the Consulting Architects of Alberta (CAA) and the Consulting Engineers of Alberta (CEA) agreed that the 1998 *Recommended Conditions of Engagement and Schedule of Professional Fees*, issued by the Alberta Association of Architects (AAA) and the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGA), needed to be updated and brought under the joint authorship of the CAA and CEA, consistent with their role as advocacy bodies.

The CAA and the CEA prepared and issued *Scope of Services Version 1.0* and in 2013 issued *Release 2.0*. This is the third edition of this document, *Scope of Services Version 3.0*. It is the intention of CAA and CEA to update this document on a regular basis; consistent with emergent trends and input from private and public sector clients and members.

The Scope of Services Version 3.0 describes the scope of basic and additional services for building projects and offers a framework and suggestions on how to determine appropriate professional fees. It is not a mandatory schedule. Each project is unique and members are free to negotiate appropriate fees in each instance. There are no sanctions or penalties from the CAA or CEA for any CAA or CEA members who choose not to follow this guide. It is offered for information purposes only.

This Guide contains three distinct, yet interconnected parts:

PART 1: BASIC SERVICES AVAILABLE FOR BUILDING PROJECTS IN ALBERTA

PART 2: SUGGESTED FEE GUIDELINES FOR BASIC SERVICES

PART 3: ADDITIONAL AND SPECIALTY CONSULTANTS AND SERVICES

PART 1: BASIC SERVICES AVAILABLE FOR BUILDING PROJECTS IN ALBERTA

Architects, engineers and interior designers provide building design services within legislated and regulated standards, accepted professional norms - such as the RAIC's recommended scope of service definitions – and the industry's governing standards and legislation such as building codes, land use bylaws, Architects and Engineering Acts, and similar regulations.

PART 2: SUGGESTED FEE GUIDELINES FOR BASIC SERVICES

The fees for the building design team; architect, engineers and interior designers are an important investment in the provision of effective professional building design services. Owners are encouraged to select a team of Consultants based on:

- Merit
- Experience
- Expertise
- Compatibility
- Creativity
- Approach
- Methodology
- Availability

Common to the procurement of other professional services, a low fee is not necessarily a reflection of good value or in the best interest of a Client. Appropriate professional fees are required by design firms to deliver appropriate services to Clients.

Part 2 outlines a framework and suggestions on how professional fees may be determined, but is not a mandatory schedule. Each project is unique and members are free to negotiate appropriate fees in each instance. There will not be any sanctions or penalties from the CAA or CEA for any CAA or CEA members who choose not to follow this guide. It is offered for information purposes only.

PART 3: ADDITIONAL AND SPECIALTY CONSULTANTS AND SERVICES

The design and construction industry as a whole is experiencing significant change. Many factors outside of the scope of basic suggested services are important determinants of building design fees.

Part 3 deals with the additional scope of services and provides insight and guidance to Owners and member firms as they define the anticipated scope of work and determine an appropriate fee for specific services and Specialty Consultants outside commonly provided services within the RAIC's recommended scope of service definitions.

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Part 1

Basic Services Available for Building Projects in Alberta

1.0 INTRODUCTION TO PART 1

1.1 PREAMBLE

Part 1 is intended to provide insight and guidance to Owners and member firms as they define the anticipated scope of work and determine an appropriate fee for the basic services within commonly provided services for building projects in Alberta.

This Guide contains three distinct, yet interconnected parts:

PART 1: BASIC SERVICES AVAILABLE FOR BUILDING PROJECTS IN ALBERTA

PART 2: SUGGESTED FEE GUIDELINES FOR BASIC SERVICES

PART 3: ADDITIONAL AND SPECIALTY CONSULTANTS AND SERVICES

Part 1 of this guide describes the general services most projects will require and the manner in which those services may be procured and contracted. Subsequent parts describe how fees may be determined (Part 2) and additional available services (Part 3) described and defined.

2.0 THE PROFESSIONAL RELATIONSHIP

2.1 GENERAL

Selection of a Consultant Team is one of the most important decisions an Owner makes when undertaking a building project; among other important factors the success of a project depends to a large extent on this selection. Owners are encouraged to select a team of Architects, Structural Engineers, Mechanical Engineers, Electrical Engineers and Interior Designers based on a careful evaluation of qualifications. This document describes the basic and additional services that consulting teams provide, suggested (though optional) fees for these services and recommended conditions of engagement.

The services and fees described are based on the premise that:

- A professional is required to provide the minimum scope of service necessary to protect the public;
- Each project requires this minimum level of scope of service be performed by the Consultant Team or other registered professionals working under the review of the Prime Consultant acting as the Coordinating Discipline Professional in order for all members of the Consultant Team to fulfill their professional obligations;
- The more complex a project, the greater the scope of services required; and
- Compensation commensurate with the scope of professional services is a critical factor in the success of building projects.

2.2 SELECTING A CONSULTANT TEAM

When a building project is undertaken, a management group is usually formed. For most projects this includes the Owner and a project representative. For larger and most public sector Owners a project manager may be appointed or engaged to manage the process on the Owner's behalf. An Owner-led planning or steering committee is commonly established to provide overall project direction. This group includes an executive and may include facility and user group representation from the Owner's team, Consultant Team representation and may include construction team representation as the project proceeds.

CAA and CEA recommend using Qualification Based Selection (QBS) for the selection of a Consultant Team. QBS is a competitive process for the procurement of professional consulting

services based on professional qualifications. Qualifications are submitted to an Owner, who evaluates and selects the best-qualified firm or individual(s) for the proposed project, based on technical qualifications. The selected firm and the Owner then jointly develop the final scope of work for the project. The Consultant's fee is then negotiated based on the agreed-upon scope of work and the Consultant's submitted rate schedule.

Using Qualification Based Selection provides Owners the competitive selection process for consultant selection based on the most appropriate project specific criteria and then, upon successful negotiation of fees, the competitive selection process is completed.

The publication *Selecting a Professional Consultant* (Version 1.0 June 2006 © Federation of Canadian Municipalities and National Research Council) provides an overview of QBS. This can be found at:

http://www.fcm.ca/Documents/reports/Infraquide/Selecting_a_Professional_Consultant_EN.pdf

The publication *Selecting a Professional Consultant* (Version 1.0 June 2006 © Federation of Canadian Municipalities and National Research Council) provides an overview of QBS.

Some of the typical factors in the selection of a building design team include:

- The professional capability, experience and expertise of the firm;
- The experience, expertise and availability of the team members proposed;
- Suitability for the project including:
 - Compatibility, creativity and understanding of the project;
 - Approach to managing the work of the design and project teams; and
 - Suitability for the particular project, commitment to the project schedule and budget.

The Consultant Team normally includes the Architect, Structural, Mechanical and Electrical Engineers, Interior Designers and may also include Specialty Consultants. An Owner typically has two options for engaging a Consultant Team:

- The first option is to engage all the members of the consulting team independently and bring them together to form the team and appoint the Prime Consultant from this group of Consultants;
- The second option is to engage a Prime Consultant first and then work with the Prime Consultant to find appropriate team members.

In each case, the job of the Prime Consultant is to act as the Coordinating Professional for the project as defined by the Alberta Building Code. Depending on the nature of the project, the Owner should ask that the Consultant Team be led by the most qualified Consultant Team member be that an Architect, Engineer or Interior Designer. The Owner will typically determine the make-up of the team and roles to be provided by project team members.

3.0 AGREEMENT BETWEEN OWNER AND CONSULTANTS

3.1 CONTENT OF AN AGREEMENT BETWEEN OWNER AND PRIME CONSULTANTS

A Prime Consultant provides the most effective service when there is a clear understanding between Owner and the Prime Consultant about their respective involvements. An agreement negotiated between the two parties is essential to clarify roles and obligations and eliminate ambiguity; a contract is a regulatory requirement of the *Architects Act* and the *Engineering and Geoscience Professions Act*. Regardless of the form of agreement used, the agreement between Owner and Prime Consultant should fully explain the:

- Scope of the project including the anticipated schedule and budget;
- Scope of services to be provided under the agreement;
- Responsibilities and obligations of both Prime Consultant and Owner;
- Professional liability terms and obligations; and
- Fee for the services and the potential scope and compensation approach for any additional specialized services.

Documents have been developed to protect the interests of both the Owner and the Prime Consultant, and the Prime Consultant and the Sub Consultants. Use of these forms of agreement documents is recommended. These documents, which may be amended or revised by the parties, include:

- *Canadian Standard Form of Agreement Between Client and Architect*, RAIC Document No. 6;
- *Canadian Standard Form of Agreement Between Client and Architect Abbreviated Version*, RAIC Document No. 7;
- *Short Form of Agreement Between Client and Architect*, RAIC Document No. 8; and
- *Prime Agreement Between Client & Engineer*, ACEC Document No. 31.

CONTENT OF AN AGREEMENT BETWEEN OWNER AND OTHER CONSULTANTS

The remainder of the Consultant Team provides services when there is a clear understanding of party responsibilities. In order to facilitate this communication, other team members should have a completed copy of the Prime Consultant contract for review prior to executing any contact for the project.

Therefore the Owner typically has two methods of engaging the other Consultants for the project:

- The first method is to have them be sub-Consultants of the Prime Consultant. There are appropriate agreements in place if the Prime Consultant is to contract the other team members as sub Consultants and CAA/ CEA member firms are recommended to use the following forms of agreement:
 - *Canadian Standard Form of Agreement Between Architect and Consultant*, NPP Document No. 9;
 - *Agreement Between Engineer and Sub Consultant*, ACEC Document No. 32; and
- The second method is that the Owner contracts directly with each Consultant. The contracts noted above can be used with the appropriate modification for direct contracting of the Consultant Team.

As with the above agreements, these agreements may also be amended or revised by the parties. The following links can be used to view RAIC forms of agreement:

http://www.raic.org/practice/contract_documents/index_e.htm

<https://www.raic.org/raic/contract-documents>

The value in using these documents is that they are coordinated and integrated within the industry standard construction contracts (i.e. CCDC documents).

3.2 INSURANCE COVERAGE

The extent of the need for insurance varies from project to project and in relation to the risk involved for the Owner and the Consultants. The Client, in consultation with the Consultant Team, reviews the type and amounts of coverage needed on the project. When a project is large or complex, the assistance of specialists may be required to determine insurance requirements.

Types of insurance may include:

- General Liability;
- Professional Liability;
- Valued Documents;
- Occupational Health And Safety;
- Workers Compensation; And
- Project Specific Insurance.

3.3 PROJECT COORDINATION

Coordinating the work of the Consultant Team is not only vital to the successful completion of a project but is a legal requirement under the Alberta Building Code. This coordination is usually undertaken by the Architect or Professional Engineer leading the team of design Consultants and appointed by the Owner as Prime Consultant. Under the Alberta Building Code, this is referred to as the “Coordinating Professional”.

The Coordinating Professional coordinates the design and construction contract administration of the project; coordinates with other Consultants on their responsibilities and reviews the progress of their work. The coordinating duties benefit the Owner and the Coordinating Professional must be compensated fairly for performing this role whether the sub Consultants and specialists are retained by the Coordinating Professional or retained directly by the Owner.

3.4 PROFESSIONAL OF RECORD

The Prime Consultant, in addition to the Coordinating Professional role, is usually engaged to be a Professional of Record for his discipline. The other members of the consulting team also act as a Professional of Record for their disciplines. A Professional of Record is required by the Alberta Building Code to perform or supervise their respective portion of the services required by the Alberta Building Code. In order to complete the requirements of the building code, specialist Consultants may also be required for the project team. They are retained as additional service, by a separate allowance or directly by the Owner to be part of the project team and must work directly under the overview of the Professional of Record.

3.5 PROFESSIONAL REVIEW OF CONSTRUCTION

The Alberta *Safety Codes Act* and the Alberta Building Code requires for an Occupancy Permit to be issued and further that the Prime Consultant (the Coordinating Professional) and all Professionals of Record (or other suitably qualified persons as determined by the Professional of Record) perform field reviews to determine general conformance with the construction documents. Without these services being performed by the professionals, an Occupancy Permit cannot be obtained as these site reviews are required so that the professional can sign off on the Code required Schedules at the completion of construction.

4.0 BASIC SERVICES

4.1 FOUNDATION OF BASIC SERVICES

A project is initiated by the Owner, who describes the anticipated scope of the project. The role of the Owner will vary, depending on the experience of the Owner and the complexity of the project. Therefore, the Owner's role in planning, financing, managing or coordinating a project should be clearly defined before the scope of services for the Consultant Team is established. The basic services defined for the Consultants must reflect the Consultants' duties, both to satisfy the expectations of the Owner and to protect public safety. The basic services contained in this document are based on the following suggested guidelines:

- The Prime Consultant is responsible for determining that the scope of basic services of the Consulting team is adequate and based on the needs of the Owner either documented through a Project Brief/Description, Functional program or similar description;
- The basic services provide a design that meets the requirements of the governing codes and regulations;
- The Prime Consultant must coordinate with the Professional of Record in each discipline at the beginning of a project to determine if any special scope of services is required for the project that will affect any of their professional service or the professional service of others;
- Each Consultant is responsible for their scope of services based on their qualifications and expertise, and takes part in individually determining or negotiating an adequate fee in relation to that scope and in relation to the overall project fee; and
- Each Consultant is responsible for the design and review of aspects of the project falling within their discipline. The Prime Consultant, the Owner, the public and the authorities having jurisdiction have a right to expect that this will be the case, unless appropriate scope restrictions are clearly identified in any documents bearing the Consultant's seal.

4.2 RECOMMENDED BASIC SERVICES

There are many descriptions of the scope of basic services of architects and engineers. For the purposes of this document:

- The CAA has determined that the services described in the RAIC *Canadian Handbook of Practice* (CHOP), current edition, will be accepted as the recommended scope of services for architectural teams to provide on a phase by phase basis. The CHOP also provides information on the role of the Owner, coordinating Consultant and supplemental architectural services. The CHOP must be purchased from the RAIC website; and
- The CEA has determined that the engineers' recommended basic scope of services is defined by the APEGA publication: *Responsibilities for Engineering Services for Building Projects*, V1.2 March 2009. This document describes the roles of the Owner, coordinating Consultant and supplemental engineering services. The APEGA publication is available for free on the APEGA website under the *Publications* tab.

In terms of generalized services being provided, there are three main categories:

1. **“Basic Recommended Services”** represent the services typically required for most projects and these services are captured in the suggested fees described in this guide. Basic Recommended Services includes: Architectural; Structural; Mechanical; Electrical; and Cost Consulting;
2. **“Additional Available Services”** are additional services required to be provided and are typically required only in some projects. Additional Available Services are extra fees above the basic fee and include: Civil; Landscaping; Interior Design; Re-Zoning; Marketing Studies; Existing Facility Surveys; and the like;
3. **“Specialty Consultant Services”** are special and additional services that may be required for very specific project needs and are infrequently required. Specialty

Consultant Services include: Acoustic; Environmental; Photorealistic Computer Renderings and Physical Models; Furniture Specifications; and the like.

The following links connect to the industry standard RAIC Doc 6 and APEGA building services documents:

<https://www.raic.org/raic/canadian-standard-form-contract-architectural-services-%E2%80%93-document-six>

<https://www.apega.ca/assets/PDFs/building-projects.pdf>

Part 3 of this Reference describes many Additional and Specialty Consultant Services in detail.

4.3 SUMMARY CHARTS

The following Recommended Services Summary Chart is a summary of each stage and disciplines. The chart shows the “Basic Recommended Services”, “Additional Available Services” and “Specialty Consultant Services” that may be required for phases of a typical project. This Chart is designed to assist the Owner and the Consultant Team to determine the scope of services to be provided. It also can provide a useful attachment to short form letter agreements, as amended or revised as necessary by the Owner and Consultant Team. It is highly recommended that the Owner and Consultant Team review each phase of the project, identifying the services required. These services then become the basis for the agreement between the Owner and Prime Consultant.

This table has been copied from an historical fee Guide originally published by the Alberta Association of Architects (AAA) and The Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA – now called APEGA).

DESIGNATED SERVICES SUMMARY CHART PART A

Chart Key:

- Basic Recommended Services included in Base Fee
- Additional Services Available for Additional Fee

Pre-Design	Schematic Design	Design Development	Construction Documents
<p>Basic Recommended Services</p> <ul style="list-style-type: none"> ● Site Analysis ● Presentations ● Concept Development Study ● Agency Review ● Off-Site Utility Review ● Project Scheduling ● Project Budgeting ● Owner-Supplied Data Coordination ● Programming Review ● Preparation of Owner & Consultant Services Agreement 	<p>Basic Recommended Services</p> <ul style="list-style-type: none"> ● Project Administration ● Disciplines Coordination ● Agency Consulting, Review & Approval ● Owner Supplied Data Coordination ● Architectural Design & Documentation ● Structural Design & Documentation ● Mechanical Design & Documentation ● Electrical Design & Documentation ● Materials Research & Specifications ● Project Scheduling ● Probable Construction Cost Updates 	<p>Basic Recommended Services</p> <ul style="list-style-type: none"> ● Project Administration ● Disciplines Coordination ● Agency Consulting, Review & Approval ● Owner Supplied Data Coordination ● Architectural Design & Documentation ● Structural Design & Documentation ● Mechanical Design & Documentation ● Electrical Design & Documentation ● Materials Research & Specifications ● Project Scheduling ● Probable Construction Cost Updates 	<p>Basic Recommended Services</p> <ul style="list-style-type: none"> ● Project Administration ● Disciplines Coordination ● Agency Consulting, Review & Approval ● Owner Supplied Data Coordination ● Architectural Drawings & Specifications ● Structural Drawings & Specifications ● Mechanical Drawings & Specifications ● Electrical Drawings & Specifications ● Bidding Documents & Scheduling ● Project Schedule Update ● Probable Construction Cost Update ● Application for Building Permits

Pre-Design	Schematic Design	Design Development	Construction Documents
Additional Available Services <ul style="list-style-type: none"> ○ Re-zoning Applications ○ Public Presentations ○ Surveys ○ On-Site Utility Studies ○ Market Studies ○ Economic Feasibility Studies ○ Lease Assist Fit Drawings ○ BOMA Area Calculations ○ Existing Facility Surveys ○ Site Analysis & Selection 	Additional Available Services <ul style="list-style-type: none"> ○ Civil Design & Documentation ○ Landscape Design & Documentation ○ Interior Design & Documentation ○ Coordination of Specialist Services 	Additional Available Services <ul style="list-style-type: none"> ○ Civil Design & Documentation ○ Landscape Design & Documentation ○ Interior Design & Documentation ○ Coordination of Specialist Services 	Additional Available Services <ul style="list-style-type: none"> ○ Application for Building Permit ○ Civil Design & Documentation ○ Landscape Design & Documentation ○ Interior Design & Documentation ○ Coordination of Specialist Consultants ○ Special Bidding Documents & Scheduling

Pre-Design	Schematic Design	Design Development	Construction Documents
Special Consultants' Services <ul style="list-style-type: none"> ○ Coordination of Legal Survey ○ Coordination of Geotechnical Engineers ○ Coordination of Environmental Site Assessments 	Special Consultants' Services <ul style="list-style-type: none"> ○ Civil Design Concepts ○ Landscape Concepts ○ Statements of Probable Costs ○ Interior Design Concepts ○ Coordinate of Specialists 	Special Consultants' Services <ul style="list-style-type: none"> ○ Civil Design Development ○ Landscape Development ○ Detailed Construction Cost Estimates, Quantity Surveys ○ Interior Design Development ○ Coordinate of Specialists 	Special Consultants' Services <ul style="list-style-type: none"> ○ Civil Construction Documents ○ Landscape Documents ○ Detailed Construction Cost Estimates, Quantity Surveys ○ Interior Design Documents ○ Coordinate of Specialists

The Designated Summary Chart lists the scope of work on a typical project and the services the Consultant Team may provide on a phase of work basis.

DESIGNATED SERVICES SUMMARY CHART PART B

Chart Key:

- Basic Recommended Services included in Base Fee
- Additional Services Available for Additional Fee

Building or Negotiations	Construction And Post-Construction Contract Administration	Supplemental Services
<p>Basic Recommended Services</p> <ul style="list-style-type: none"> • Project Administration • Bidding Materials • Addenda • Bidding & Negotiations • Analysis of Alternates & Substitutions • Bid Evaluation • Standard Form Construction Contract Agreements Preparation 	<p>Basic Recommended Services</p> <ul style="list-style-type: none"> • Project Administration • Disciplines Coordination • Agency Consulting, Review & Approval • Construction Contract Administration • Construction Field Review • Field Review Coordination • Quotation Requests & Change Orders • Project Schedule Monitoring • Construction Cost Monitoring • Project Closeout & Substantial Performance • Systems Startup • Review of Record Drawings, Operations & Maintenance Manuals • Startup Assistance • Year-End Warranty Review 	<p>Basic Recommended Services</p>

Building or Negotiations	Construction And Post-Construction Contract Administration	Supplemental Services
Additional Available Services <ul style="list-style-type: none"> ○ Special Bidding Services ○ Coordination of Specialist Services 	Additional Available Services <ul style="list-style-type: none"> ○ Full Time or Supplemental Review ○ Supplemental Documents ○ Coordination of Specialist Services ○ Additional Administration ○ Safety/Prime Contractor Responsibilities ○ Owner Supplied Data Coordination ○ Application of Occupancy Permits ○ Building Commissioning ○ Deficiency Reviews Beyond Final Review ○ Preparation of Record Drawings ○ Preparation of Operations & Maintenance Manuals ○ Project Evaluation Services ○ Detailed Cost or Schedule Analysis ○ Dispute Resolution Support or Services 	Additional Available Services <ul style="list-style-type: none"> ○ Special Studies ○ Renderings and Computer Animations ○ Model Construction ○ Life Cycle Cost Analysis & Value Analysis ○ Detailed Probable Construction Cost Estimates ○ Energy & Environmental Studies & Reports ○ LEED or Similar Design and Application Processes ○ Tenant-Related Services ○ Graphic Design ○ Furnishings Design & Procurement ○ Non-Building Equipment Selections ○ Project Promotion & Public Relations ○ Leasing Brochures ○ Expert Witness & Arbiter ○ Public Presentations ○ Reproduction, Printing & Copying ○ Travel ○ Owner Assistance in the case of Contractor Insolvency ○ Providing Special Insurance ○ Research & Development & Innovative Design ○ Fund Raising Assistance ○ Materials & System Testing ○ Photographic Records ○ Coordination with Non-Design Professionals

Building or Negotiations	Construction And Post-Construction Contract Administration	Supplemental Services
Special Consultants' Services <ul style="list-style-type: none"> ○ Issue Bidding Documents ○ Issue Addenda ○ Bid Evaluation 	Special Consultants' Services <ul style="list-style-type: none"> ○ Civil Construction Review ○ Landscape Review ○ Detailed Cost Accounting 	Special Consultants' Services

The Designated Summary Chart lists the scope of work on a typical project and the services the Consultant Team may provide on a phase of work basis.

Part 2

Suggested Fee Guidelines For Basic Services

1.0 INTRODUCTION TO PART 2

1.1 INTRODUCTION

When the Owner, Prime Consultant and other Consultants involved in a project have agreed on the basic services for the project and identified specific requirements, they then arrive at an appropriate fee for the professional services to be provided. Fees for basic services are directly related to the building typology, specific requirements and other factors identified.

CAA and CEA mutually support the notion of fair compensation commensurate with the level of professional services provided.

The Prime Consultant, the Coordinating Consultants and the Professional of Record are free to reach their own agreements with the Owner on what 'fair' means. Part 2 outlines a framework and voluntary schedule describing how to determine appropriate professional fees. It is not a mandatory schedule. Each project is unique and members are free to negotiate appropriate fees in each instance. There will not be any sanctions or penalties for any CAA or CEA members who choose not to follow this guide. It is offered for information purposes only and can be used to form the basis of fee and scope discussions between parties.

Fees should be based on a thorough understanding of the scope and complexity of the project. Also a properly prepared construction cost estimates or reasonable estimates of the construction cost that take into account the complexity and special requirements of the Project. Before any agreements with the Prime Consultant or other Consultants are formalized, it is in the Owner's best interests to ensure that all contracts are based on terms appropriate to meet the Owner's and project's needs.

While there are a number of ways to determine fees for professional services, the CAA and the CEA recommend that fees be calculated as a percentage of the construction cost. Calculating a fee based on a percentage of the cost of construction is a reliable method of establishing fees. The percentage can either be used as the basis of the final fee (percentage based fee), as a guide to agreement for a fixed fee, or as a guide to establishing a budget for an hourly based fee for the scope of services described in this document.

For projects less than \$500,000 fees can be calculated on the basis of a:

- Percentage based fee determined as a percentage of the cost of construction;
- Fixed fee calculated using costing data from similar projects in the past; or
- A time-based fee determined based on the number of hours spent on the project plus expenses needed to complete the work.

1.2 PERCENTAGE BASED FEE

The percentage-based fee establishes the fee as a percentage of the construction cost. This calculation takes into account both construction cost of the work and building category.

1.3 CONSTRUCTION BUDGET

The construction budget is the Owner's total estimate of the construction cost. It includes:

- The construction manager's or general contractor's fees;
- General requirement costs; and
- Design, escalation and construction contingencies (contingencies exclude unforeseen conditions which impact the scope, complexity and extent of the work).

Where there is no construction budget for all or part of the project, or if the construction does not proceed, the construction cost is the estimated cost at market rates at the estimated time of construction, as initially determined by the Owner and Consultants. The Owner should clearly understand, and the agreement between the parties should state, that:

- Neither the Consultants nor the Owner has control over other professional fees, land development or other costs related to the entire endeavor of the Owner. Therefore the Prime Consultant cannot and does not warrant or represent that project costs will not vary from the project budget, which is solely the Owner's responsibility to establish.
- Neither the Consultants nor the Owner has control over the cost of labour, materials or equipment, over the contractor's methods of determining bid prices, or over competitive bidding, market, or negotiating conditions and therefore the Consultants cannot and do not warrant or represent that bids or negotiated prices will not vary from the estimate of probable construction cost which is the Owner's responsibility to establish.

Fees should be revised during a project if specific information is determined through the project work that affects the scope, construction cost, schedule or complexity of the project or the scope of services to be provided. Fees should be revised to include the construction cost of change orders. The construction contingency should be included in the construction cost used for the purposes of determination of the fees.

Percentage fees are commonly turned into fixed fees with the agreement of the Owner and the Consulting team. In such cases, it is recommended that the fee is fixed at the completion of Design Development or at such time that the scope is adequately understood and defined and is based on the approval of that phase of work and the Owner's construction budget. It should not normally be later than the completion of the Construction Documents phase when the pre-tender estimate and construction documents are reviewed and agreed to by the Owner but before the bid phase. Retroactive adjustments to fee based on bid price are not recommended for completed work. The fluctuations of the economic and tendering climate may create a punitive situation for the Owner, the Consultant Team or both.

In the event that labour or material is furnished by the Owner below market cost or that old materials are re-used, the construction cost, for purposes of establishing the fee, is recommended to be interpreted as the cost of all materials and labour necessary to complete the work, as if all materials had been new and all labour had been paid for at market prices at the time of construction or, if construction does not proceed, at existing market prices at the estimated time of construction.

The construction cost definition used for the basis of determination of fees is recommended as the contract price(s) of all project elements designed or specified by, or on behalf of, or as a result of the coordination by the Prime Consultant, including cash allowances and design and construction contingencies, building permit fees, changes, construction management fees or other fees for the coordination and procurement of construction services, and all applicable taxes, including the full amount of value-added taxes, whether recoverable or not.

The construction cost of the work does not include “soft costs” such as:

- Prime Consultant's fee and disbursements;
- Client project management and manpower costs;
- Cost of the land; and
- Cost of furniture, fittings and equipment (FF&E) related to the specific use of the building for production, manufacturing, treatment or processing purposes, where the Consultant is not required to design, specify or coordinate the installation of the items.

1.4 REIMBURSABLE EXPENSES

The Consultants should be reimbursed for all reasonable expenses. Such expenses are discussed and agreed to when the Owner/Prime Consultant agreement is being negotiated and determined. Reimbursable expenses are normally approved in advance by the Owner.

Reimbursable expenses may include costs such as:

- Reproduction, photography, digital services, etc.;
- Long distance telephone calls, facsimile transmissions, etc.;
- Mail, courier, and delivery; and
- Travel, travel time, meals, accommodation and other expenses required for the project.

Traveling time to destinations outside of the Prime Consultant's community is recommended to be paid by the Owner at the full hourly rates that apply.

A markup of 10% on expenses is recommended to cover the Prime Consultant's administrative costs.

It is recommended that the Owner carry a reimbursable expenses allowance, typically between 6% and 8% of the total fees, in the project budget. In this way, estimates of reimbursable expenses do not become a factor in selection of the consulting team as reimbursable expenses should be virtually identical between consultants for the same scope of work.

1.5 ALLOCATION OF PROJECT FEES

The fees for common services for more traditional project delivery methods are recommended to be allocated as follows:

• Pre-Agreement & Schematic Design	12.5%
• Design Development	12.5%
• Construction Documents	50.0%
• Bidding & Negotiation	5.0%
• Contract Administration & Post Construction	20.0%

For projects that include Building Information Modeling (BIM), the scope of work per phase change to allow for development of the BIM model during the design phase and the following percent allocations are recommended and should be tailored to suit each project's particular needs. The following percentages would be allocated:

• Pre-Agreement & Schematic Design	15.0%
• Design Development	20.0%
• Construction Documents	40.0%
• Bidding & Negotiation	5.0%
• Contract Administration & Post Construction	20.0%

For specific projects, it may be appropriate to vary these percentages, subject to negotiation and agreement between the Owner and the Consultants.

The Owner and the Prime Consultant should agree on the terms and schedule of payment when the Owner/Prime Consultant agreement is being negotiated and defined. The Owner should not delay payment of fees to the Prime Consultant without just cause and withholding of fees is not recommended. If the withholding of fees becomes essential to a contract, it is commonly seen to be in design build agreements and it is recommended that any holdback be released immediately when each design and construction phase is completed. In addition, during the construction phase, the holdback should be released periodically and at least at 50% and 100% completion. If any portion of the fee is retained, the Owner should pay the Consultant interest on the holdback amount at a rate previously agreed by the parties in the Owner/Prime Consultant agreement.

The Prime Consultant should pay the Consultant Team for their services promptly on receiving payment from the Owner. Sub-Consultants should be informed of the payment terms in the Prime Consultant's agreement.

1.6 ADDITIONAL SERVICES / PROJECT VARIABLES

The scope of services required by a particular project and Owner can be many and varied; the Owner may need to retain the Consultant for additional services to address specific project variables. The scope of these additional services will depend on the nature and complexity of each project and the Owner's own planning and development capabilities. These may include such services as master planning, programming; re-design to changing Owner requirements or supplemental graphic, rendering or modeling work. On the procurement side, fast-track construction management based procurement requires the preparation of multiple tender packages. Emergent areas of additional service include LEED certification, P3 and Design-Build procurement and BIM.

In an effort to bring consistency to the development of a recommended fee for a project, these additional services/project variables are addressed in Part 3. The intent is that the Owner can identify a basic fee using the recommended fee for basic services for a particular Project Category and Construction Cost and that the Owner and the design team will then review and agree upon the applicable additional services/project variables and the commensurate additional fee. Similarly, an Owner can identify a basic services fee common to proponents as part of a qualifications-based consultant selection process.

Possible additional services are identified in the Basic Services Summary Chart and further defined and explained in Part 3. These are additional services that may be provided over and above those basic services included in the basic services fee.

1.7 RE-USE OF DOCUMENTS OR DESIGN

To prevent re-use of drawings, specifications and other documents prepared by a Prime Consultant, which may be property or subject to intellectual property protections, an appropriate clause is recommended to be inserted in the Owner/Prime Consultant agreement. The recommended clause states that the documents are the property of the Prime Consultant and are not to be used on any other project without prior written consent and payment of the appropriate fee.

1.8 REPEAT WORK

From time to time, a project is undertaken as a repeat project for the same Owner, from the identical design and using the same documents. In such a case, when consulting services for the original or prototype project were charged to the Owner at the full recommended basic fee, it is recommended that a repeat fee be calculated. The fee for a repeat project may be between 50% and 100% of potential full-service charges.

The repeat fee may consist of four components:

- Basic charges;
- Redesign, permitting, and other work charges;
- Bidding or negotiation services; and
- Contract administration and post-construction charges.

BASIC CHARGES

On all repeat projects, the Prime Consultant receives basic compensation prior to redesign charge and bidding service and construction phase services. This compensation is recommended to be 25% of the potential full service charges for the new project, to cover:

- Negotiation and drafting of a new Owner/Consultant agreement;
- Receipt of the Owner's instructions;
- Assistance in obtaining development permits;
- Presentation of construction estimates;
- Minimum changes to original drawing title blocks;
- Provision of ongoing professional liability insurance coverage related to the repeat project;
- Compensation for use of the Consultant's original design; and
- General advice related to starting a new project.

REDESIGN CHARGES

Redesign charges cover the cost of any redesign work necessary and any changes to the original drawings and specifications, building orientation, building layout, etc. Redesign charges are variable and can be up to 50% of the original project fee. They depend on the extent of redesign and changes to original documents. It is recommended that the Owner and Prime Consultant negotiate appropriate redesign charges for the particular project.

BIDDING OR NEGOTIATION SERVICES

To cover bidding procedures or negotiation of the construction contract, including assistance with contract drafting, it is recommended that the Prime Consultant receive an amount of 5% of the potential full service charges for the project.

CONTRACT ADMINISTRATION AND POST- CONSTRUCTION CHARGES

To cover contract administration and field services during construction, services during construction and services during the building warranty period, it is recommended that the Prime Consultant receive an amount of 20% of the potential full service charges for a new project.

2.0 BUILDING CATEGORIES

2.1 BASIC CATEGORIES

For the purposes of the Schedule of Recommended Percentage Fees for Basic Services included as 3.3, buildings will generally belong in one of the seven categories listed in this section. If a building is not specifically listed, it belongs in the category to which it is most closely related. Categories are determined according to how the space is used. Where a building has multiple occupancy types (where one occupancy is more than 10% of the floor area), the highest category is used to determine the recommended fee.

This table has been copied from an historical fee guide originally published by the Alberta Association of Architects (AAA) and the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA – now APEGA). The following is a list of types of building by category for use with the Schedule of Recommended Percentage Fees for Basic Services included as 3.3:

CATEGORY 1

- Warehouse (10% maximum office area not exceeding 600 m²)
- Barn, Stable, Storage Shed, Kennel
- Demolition (total)

CATEGORY 2

- Apartment, Multiple Residential, Row Housing, Cluster and Townhouse
- Non-Complex Motel, Motor Hotel, and Apartment Hotel

CATEGORY 3

- Armed Forces Warehouse, Armory, Drill Hall
- Customs, Immigration Building
- Building shell only for: Summer Camp, Park Building, Resort/Tourist Building
- Marina, Trailer Park
- Maintenance Building, Service Garage, Gas Station, Parking Structure (above ground and free standing)
- Commercial Office Building, General Purpose Office Building (tenant layouts not included)
- Mercantile Building Store, Shop, Market Building, Shopping Centre and Department Store (tenant layouts not included)
- Student or Institutional Residence, Senior Citizens' Apartment
- Industrial Building such as Cold Storage, Printing, Bakery, Laundry or Light Manufacturing Facility
- Specialized Agricultural Building
- Kindergarten and Elementary School
- Minimum Security Level Correctional Camp

CATEGORY 4

- Junior and Senior Academic High School, University and College Non-Technical Classroom Building
- Administrative Office Building, Client Occupied Office Building (provided tenant work is tendered with the building shell)
- Bank and Trust Company Facility
- Stock Exchange
- Grandstand, Stadium, covered Ice Rink with minimal support facility
- Convention Hall, Exhibition Building
- Summer Camp, Park Building, Resort/tourist Building

- Plant: Manufacturing, Processing, Specialized Storage
- Facility for a high level of residential support including Specialized Housing, Senior Citizens' Lodge
- Animal Clinic
- Police Station, Fire Station, Emergency Measures Facility, Ambulance Facility
- Store, Market Building, Warehouse Sales Outlet
- Hotel or Complex Motor Hotel
- Club: Town, Country, Sports, Health
- Settlement House, Inner City Core Housing, "Y" Facility
- Telephone Equipment Building
- Community Centre (single hall with support space)
- Parking Structure above ground attached to an existing or new building
- Minimum Security Level Institution, Jail, Penitentiary, Reformatory, Corrections Centre, Remand Centre, Rehabilitation Centre

CATEGORY 5

- Terminal: Traffic, Passenger, Freight, Road, Rail, Air, Water, Armed Forces Hangar or Terminal or Specialty Building
- Amusement Park Building
- Community Multi-Use Centre
- Swimming Pool, Arena, Recreation Building, Physical Education Building
- Zoo, Animal Hospital, Botanical Garden
- Licensed Day Care
- University, College Non-Technical Classroom Building, Vocational Senior High School and
- Theatre, Opera House, Auditorium, Concert Hall
- Cemetery Chapel, Mausoleum, Crematorium
- Funeral Home, Undertaking Establishment
- City Hall, Town Hall
- Chancery and Embassy, Consulate or Legation in Alberta
- Museum (exhibition hall as shell space, non-complex program without specialized environmental conditions)
- Medium Security Level Institution, Jail, Penitentiary, Reformatory, Corrections Centre, Remand Centre, Rehabilitation Centre

- Bar, Restaurant, Lounge
- Place of Worship, Monastery, Convent
- Facility for a Medium Level of Medical Care including Mental Health Hospital, Auxiliary Hospital, combined Auxiliary Hospital and Nursing Home, Special Care Facility (e.g., for severely handicapped children), Convalescent Rehabilitation Facility.
- Parliament Building, Post Office, Mint, Treasury, Courthouse, Archives Building, Library

CATEGORY 6

- Facility for High Level of Medical Care including Active Treatment Hospital, Combined Active Treatment and Auxiliary Hospital with Nursing Home
- Medical Research Building, Medical Clinic, Blood Donor and Transfusion Centre
- Communications Building, Radio or TV Facility, Studio, Computer Centre
- Science Building
- Laboratory Building
- Dental Building
- Observatory, Planetarium
- Museum, Art Gallery
- Aquarium
- Plus 15 or below grade pedway, link between buildings, Rapid Transit Station, Passenger Loading Bridge
- Maximum or Mixed Security Level Institution, Jail Penitentiary, Reformatory Corrections Centre, Remand Centre, Rehabilitation Centre

CATEGORY 7

- Custom Residence, Custom Residence Swimming Pool, Fraternity House, Official Government Residence
- Decorative Work, Exhibition Display, Public Garden, Promenade, Fountain
- Commemorative Monument, Funeral Monument
- Air Traffic Control Tower, Control Centre, and Flight Service Station
- Tenant Space Planning
- Restoration of Historic Monument or Building
- Alterations, upgrade and/or modernization to existing building in Categories 1 through 6

2.2 ALTERATIONS AND RENOVATION

As a general approach, regardless of building type, renovation projects are included in Category 7. For alterations and renovations to buildings in Category 7, the recommended fee is the percentage fee in 3.0 Schedule of Recommended Percentage Fees for Basic Services, plus 2%. On projects for which the additional complexity of the alteration or renovation work is not appropriately reflected by including the building in Category 7 or with the 2% premium with this 2% increase in the basic service fee, an additional service/project variable fee is recommended to be determined to suit the complexity of the existing building considerations.

Additions to existing buildings are considered as new work in the appropriate building category plus an additional service/project variable determined to suit the complexity of the existing building considerations. If the addition makes it necessary to alter the existing building, fees for this work are set as for alterations and renovations.

3.0 PERCENTAGE FEE CALCULATION

3.1 CALCULATING THE BASIC SERVICE FEE

The Schedule of Recommended Percentage Fees for Basic Services included as 3.3 below defines the recommended fees for basic services for a particular Project Category and Construction Cost.

When the total cost of the work is greater than the lower division but less than the next division the calculation on the first amount of the cost should be governed by the percentage for the lower division and the remaining amount by the percentage for the higher division. For example: On a project of \$2,300,000 in Category 5, the first \$1,200,000 would be at 10.43%; the remaining \$1,100,000 at 10.15%.

3.2 ADDITIONAL SERVICES/PROJECT VARIABLES FEE

The Owner and the design team will review and agree upon the applicable additional services/project variables and the commensurate additional fee as described in Part 3 of this document. The basic services fee and the additional services/project variables fee are added together to determine the total fee. The Owner will then add the cost of specialty and other Consultants, an estimate of reimbursable expenses and a contingency in determining the project fees as part of the project soft cost budget.

3.3 SCHEDULE OF RECOMMENDED PERCENTAGE FEES FOR BASIC SERVICES

This table is based on an historical fee guide originally published by the Alberta Association of Architects (AAA) and the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGA) and extrapolated for percentages above \$35,000,000:

3.4 SCHEDULE OF COMPLEXITY / PROJECT VARIABLES FOR BASIC SERVICES

Project Complexity Variables are complexity variables used to recognize more complex projects which require additional work compared to a standard project. Complexity variables should be discussed and negotiated between the Owner, Prime Consultant and Sub-Consultants. Complexity Variables should be added to the base fee percentage up to an additional maximum of 0.5 and typically falls between 0 and 0.5% of Construction Cost. For example:

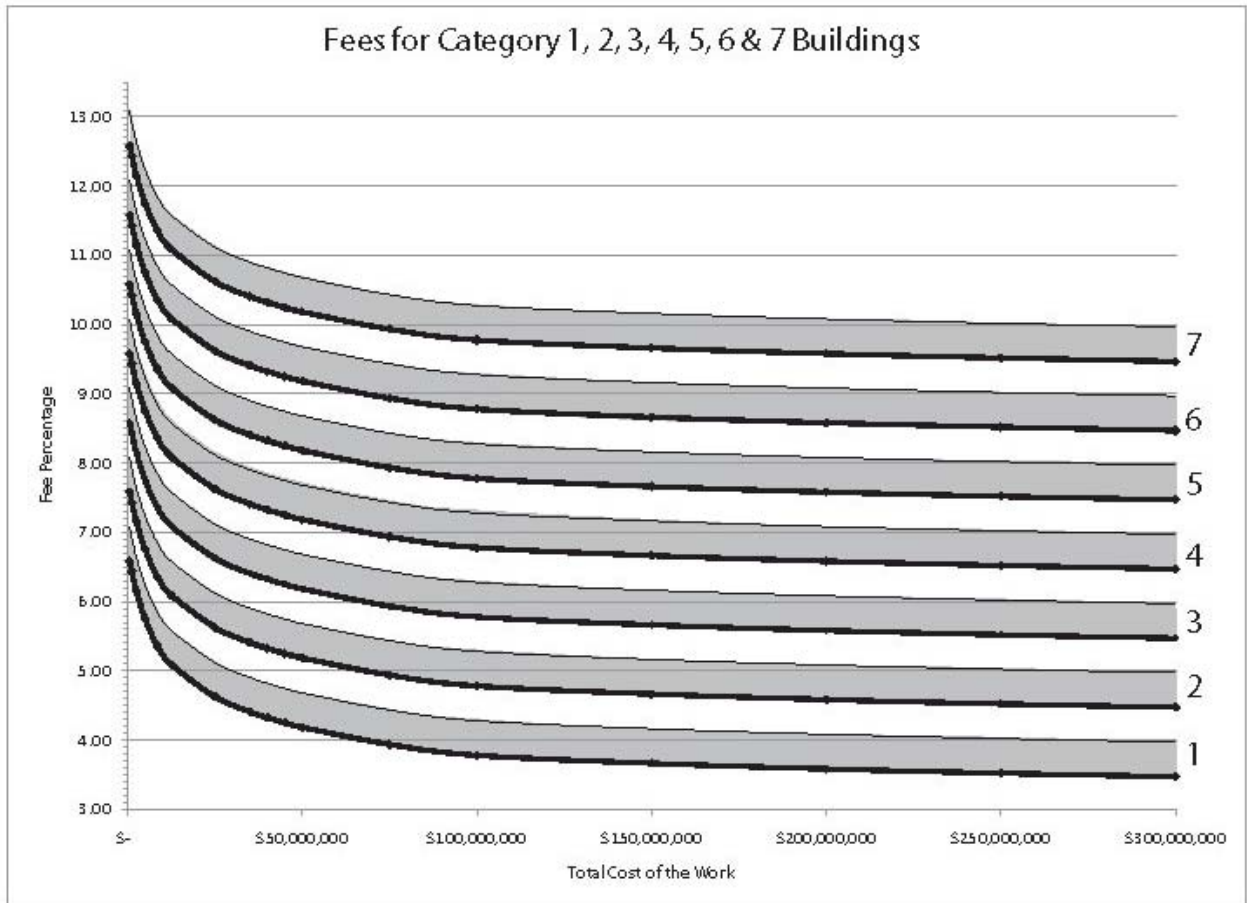
- 0.0% (zero) for a simple, standard stipulated sum bid project;
- 0.25% (1/4 %) for a somewhat complex project (e.g. complex site or multiple tenders / bid packages); and
- 0.5% (1/2 %) for a more complex project (e.g. complex site AND multiple tenders / bid packages).

The Schedule of Recommended Percentage Fees for Basic Services follows:

Division	Category of Building						
	1	2	3	4	5	6	7
Total Cost of the Work							
Up to \$1,200,000	Fees can be negotiated as a percentage, fixed or hourly rate basis						
On the first \$1,200,000	6.43	7.43	8.43	9.43	10.43	11.43	12.43
On the first \$2,500,000	6.15	7.15	8.15	9.15	10.15	11.15	12.15
On the first \$5,000,000	5.75	6.75	7.75	8.75	9.75	10.75	11.75
On the first \$8,500,000	5.37	6.37	7.37	8.37	9.37	10.37	11.37
On the first \$12,500,000	5.08	6.08	7.08	8.08	9.08	10.08	11.08
On the first \$25,000,000	4.61	5.61	6.61	7.61	8.61	9.61	10.61
On the first \$35,000,000	4.42	5.42	6.42	7.42	8.42	9.42	10.42
On the first \$50,000,000	4.18	5.18	6.18	7.18	8.18	9.18	10.18
On the first \$75,000,000	3.95	4.95	5.95	6.95	7.95	8.95	9.95
On the first \$100,000,000	3.78	4.78	5.78	6.78	7.78	8.78	9.78
On the first \$150,000,000	3.76	4.66	5.66	6.66	7.66	8.66	9.66
On the first \$200,000,000	3.58	4.58	5.58	6.58	7.58	8.58	9.58
On the first \$250,000,000	3.52	4.52	5.52	6.52	7.52	8.52	9.52
On the first \$300,000,000 and above	3.47	4.47	5.47	6.47	7.47	8.47	9.47

3.5 GRAPH OF PERCENTAGE FEES

This chart illustrates the total fees that would commonly apply to projects in each category showing a basic services fee based on the recommended Schedule 3.3 plus additional services/project variables fees (illustrated as a range by shading) of up to 0.5% of Construction Cost.



3.6 HOURLY RATES

In some instances Consultants may be called on to provide services that cannot be easily quantified as fixed fees or with no direct correlation to Construction Cost. Examples of such services may include pre-design services and studies, re-design services to suit changing project requirements or services for ancillary project work. These fall outside the scope of recommended basic services and thus fee calculation provided previously. A time-based fee is often the best option in this situation. Fees may be determined as the sum of the hourly rates for each project staff member multiplied by the time staff members spend on the project. The CEA issues annual recommended updates for both classifications of professional and technical staff along with suggested rates for the calendar year, which is available on the CEA website (and all of which are subject to negotiation).

3.7 SAMPLE PERCENTAGE FEE CALCULATION

A simple sample calculation follows to illustrate the recommended way of calculating fees. The recommended methodology is to assess each project budget and complexity and, in consultation with the Owner and sub-Consultants, make a decision with respect to project complexity, project variables, and project scope and calculate the percentage fees and additional fees appropriately and fairly.

Description / Reference	Item / Amount
<p>Sample Project:</p> <ul style="list-style-type: none"> • A multi-storey 5,000 sq.m. “spec” base building office building • A 2.0 hectare site with surface parking • Building lobby, public corridors and public washrooms included in work • Interior tenant work excluded 	
<p>Overall Construction Budget (From Definition in Part 2, Section 1.3 of this guide)</p>	<p>\$18,800,000</p>
<p>Project Category</p> <ul style="list-style-type: none"> • Defined from Part 2, Section 2.1 of this Guide: • Commercial Office Building, General Purpose Office Building (tenant layouts not included) 	<p>Category 3</p>
<p>Project Variables</p> <ul style="list-style-type: none"> • Defined from Part 2, Section • Assume a simple project approach, therefore 0% out of 0.5% 	<p>No Variables (0.0%)</p>

SAMPLE FEE CALCULATION # 1

Calculation (All Amounts Listed Here are for illustration purposes only)	Amount
Overall Construction Budget	\$18,800,000
Less those items not included in the Base Fee Calculation:	
• Landscaping (estimated only)	\$150,000
• On-site utilities and civil works (estimated only)	\$750,000
• Other elements (assume none)	<u>\$0</u>
• Total Relevant Base Fee Construction Budget	\$17,900,000
(Overall Construction Budget less items not included in Base Fee for Architectural, Structural, Mechanical and Electrical)	
% Calculation for total Base Fee for Project Category of Category 3	Category 3
• On the first \$12,500,000	7.08% \$885,000
• On the next \$5,400,000 (\$17,900,000 - \$12,500,000)	6.61% <u>\$356,940</u>
• Total Base Fee (Architectural, Structural, Mechanical, Electrical)	\$1,241,940
Blended Fee Calculation:	
• Blended % Fee ($\$1,241,940 / \$17,900,000 \times 100$)	6.94%
• Add Complexity Variables (zero % in this example)	<u>0.0%</u>
• Total Blended % Fee	6.94%
Add Fees for Additional Services (includes Prime Consultant's Coordination Fee):	
• Landscaping	\$25,000
• On-site utilities and civil works	\$80,000
• Other elements	<u>\$0</u>
• Total Additional Fees	\$105,000
Add Fees for Specialty Services (includes Prime Consultant's Coordination Fee)	
• Assume none for this example	\$0
Total Fee:	
• Base Fee	\$1,241,940
• Additional Services	\$105,000
• Specialty Services	<u>\$0</u>
• Total Fee	\$1,346,940
Reimbursable Expenses:	
• Additional plus 10% for Administrative Handling	Additional at Cost + 10%

SAMPLE FEE CALCULATION #2

Calculation (All Amounts Listed Here are only for illustration purposes)	Amount
Overall Construction Budget	\$18,800,000
Less Those items not included in the Base Fee Calculation:	
• Landscaping (estimated only)	\$150,000
• On-site utilities and civil works (estimated only)	\$750,000
• Other elements (assume none)	\$0
• Total Relevant Base Fee Construction Budget (Overall Construction Budget Less items not included in Base Fee for Architectural, Structural, Mechanical and Electrical)	\$17,900,000
% Calculation for total Base Fee for Project Category of Category 3	
• On the first \$12,500,000	7.08% \$885,000
• On the next \$5,400,000 (\$17,900,000 - \$12,500,000)	6.61% <u>\$356,940</u>
• Total Base Fee (Architectural, Structural, Mechanical, Electrical)	\$1,241,940
Blended Fee Calculation:	
• Blended % Fee ($\$1,241,940 / \$17,900,000 \times 100$)	6.94%
• Add Complexity Variables (For this example, assume multiple tenders, Construction Management, complex site work - assume 0.35% of 0.5% max.)	<u>0.35%</u>
• Total Blended % Fee	7.29%
Total % Fee Calculation for Base Fee	
• Blended % Fee	6.94% \$1,241,940
• Complexity % Fee	0.35% <u>62,650</u>
• Total % Fee Calculation	\$1,304,590
Add Fees for Additional Services (includes Prime Consultant's Coordination Fee):	
• Landscaping (estimated only)	\$25,000
• On-site utilities and civil works (estimated only)	\$80,000
• <u>Re-Zoning</u>	<u>\$45,000</u>
• Total Additional Services	\$150,000
Add Fees for Specialty Services (includes Prime Consultant's Coordination Fee)	
• Cost Consultant	\$10,500
• Project Renderings	\$21,000
• <u>Acoustic Consultant</u>	<u>\$15,000</u>
• Total Specialty Services	\$46,500
Total Fee:	
• Total % Fee Calculation for Base Fee	\$1,304,590
• Total Additional Services	\$150,000
• <u>Total Specialty Services</u>	<u>\$46,500</u>
• Total Fee	\$1,501,090
Reimbursable Expenses:	
• Additional plus 10% for Administrative Handling	Additional at Cost + 10%

3.8 PROJECT SCHEDULE EFFORT

The recommended fees described throughout this Suggested Fee and Scope of Services Reference are based on an average typical project schedule or that as documented at the time the fees are determined and the effort needed to execute the work. At times and through no reason attributable to the Prime Consultant or the sub-Consultants, a project's timeframe may extend past the anticipated or what would and should normally be considered average timeframes and therefore significantly expand the average effort on behalf required of the consulting team to perform the documented scope of services.

These situations could, for example, result from external economic influences or from the performance of the construction contractor, or other factors – all impacting the schedule and elongating the design or construction time frame. Where the project schedule is extended through no fault of the Prime Consultant or the Consultants, it is recommended that additional service fees should be negotiated to fairly compensate the Prime Consultant and the Consultants for the additional effort required to complete the project. The Owner, Prime Consultant and sub-Consultants should agree on the additional anticipated time frame and additional fees are negotiated appropriately.

Part 3

Additional and Specialty Consultants and Services

1.0 INTRODUCTION TO PART 3

1.1 PREAMBLE

Part 3 is intended to provide insight and guidelines to Owners and Prime Consultants as they define the anticipated scope of work and determine an appropriate fee for specific services and specialty Consultants outside the normal scope of basic services.

Many factors outside the traditional scope of basic services are important to the success of projects and therefore become determinants when calculating building design fees. This section deals with those additional services and Consultants that are required or may be required because of these factors. Because there are numerous variations in terminology being used by different organizations, institutions and government bodies to describe the broad array of basic and additional services, this section is intended to help define services anticipated within the recommended Basic Services Fee versus services that can often be additional to the Basic Services Fee.

At an essential level:

- The Prime Consultant often acts as the prime coordinator through the design phases, holds a design services contract with the Owner and provides services and may engage other Consultants in the provision of Basic Services. The Prime Consultant is typically, but not always, the Architect. The Prime Consultant may hire the other Consultants.
- The minimum recommended level of services is called “Basic Services”. They are referenced in Part 1 and 2 of this document and are based on standards of practice that in practice commonly include:
 - Prime Consulting Services
 - Architectural Services;
 - Structural Engineering Services;
 - Mechanical Engineering Services; and
 - Electrical Engineering Services.
- Other services may include any service that is not provided for within the Basic Services. Additional services are categorized into four main headings:
 - Mandatory Services Engaged directly by the Owner
 - Additional Consultants Engaged by either Owner or Prime Consultant
 - Specialty Consultants Engaged by either Owner or Prime Consultant
 - Additional Services Provided by Consultants

1.2 TYPES OF OTHER SERVICES

- i. Mandatory Services (engaged directly by the Owner)
Mandatory additional services are services that are required but must be provided by a Specialty Consultant outside of the Prime Consultant’s or any of the Architect’s, Structural, Mechanical or Electrical Engineer’s scope of services. These services are described in more detail in the next sections but generally include Survey, Geotechnical, Hazardous Material or Environmental services.

- ii. **Additional Consultants (engaged by either the Owner or the Prime Consultant)**
Additional Consultants may be required and may form part of the Prime Consultant's services by engaging the services of an additional professional. These services are also described in the next sections however generally these could include Interior Design, Landscape, Civil Engineering and Cost Control services. These services can also be engaged directly by the Owner.
- iii. **Specialty Consultants (engaged by either the Owner or the Prime Consultant)**
Specialty Consultants may be needed to suit special conditions on a project such as Acoustic Engineers and Transportation Engineers.
- iv. **Additional Services (provided by the Prime Consultant)**
Additional Services are services that may be required or desired by the Owner and are frequently provided by the Prime Consultant or any one of the Architect, Structural, Mechanical or Electrical Engineers. These services are described in detail in the next sections.

1.3 OWNER RESPONSIBILITIES

Owner responsibilities are described in the RAIC and APEGA documents but generally may include the following pre-design activities:

- Defining the detailed scope of the project;
- Establishing a reasonable budget that is aligned with the project scope;
- Providing funding aligned with the expected scope and quality of the project;
- Establishing a realistic schedule for the completion of the design and construction of the project; and providing mandatory consultants to be engaged by the Owner such as Survey, Geotechnical, Hazardous Material and Environmental Services.

If an Owner does not have sufficient time, knowledge or expertise to properly complete all the required pre-design activities, he/she should engage the services of qualified professionals to assist in completing this work to ensure that the scope is achievable within the budget available and that the established time frames are reasonable. The Design team can be engaged to provide these activities.

2.0 MANDATORY SERVICES

The Architect and Engineers must be able to rely upon information provided by others. The following services are outside the expertise of the Design team and must be provided by the Owner. The Design team can assist the Owner in obtaining these services, but the services themselves are always engaged directly by the Owner. They include:

2.1 GEOTECHNICAL PROFESSIONAL OF RECORD

To obtain and/or coordinate the necessary information specifically required for analyzing the sub surface conditions to determine such information as soil composition, bearing capacity, and water table and supervise construction activities that he has specified. These services are performed by a Geotechnical Engineer.

2.2 LAND SURVEYS

To obtain and/or coordinate the necessary information specifically required such as legal description, property lines, Right of Ways, existing physical conditions, so as to analyze the project site. These services are performed by a Surveyor.

2.3 OFF-SITE UTILITY SURVEYS

To undertake a review of provided data necessary for the location, size and adequacy of utilities serving the site, connections to utilities, planning for off-site utilities extensions and facilities. These services are performed by a Surveyor.

2.4 ON-SITE UTILITY SURVEYS

To establish requirements and prepare initial designs for on-site electrical service and distribution, gas service and distribution, water supply and distribution, site drainage, sanitary sewer collection and disposal, process wastewater treatment, storm water collection and disposal, central plant mechanical systems, fire systems, emergency systems, security, pollution control, site illumination, communications systems, and master planning of site utilities for future development. These services are performed by a Surveyor or a Utility Locate service.

2.5 ENVIRONMENTAL AND HAZARDOUS MATERIAL ASSESSMENTS

- Environmental Impact Assessment
 - To establish the possible impact that a proposed project may have on an environment, assessing environmental, animal, social and economic impacts. These services are performed by an Environmental Engineer.
- Environmental Site Assessment – Phase I Environmental Assessment
 - To establish potential and existing environmental contamination on a site or within a building. These services are performed by an Environmental Engineer.
- Environmental Site Assessment – Phase II Environmental Assessment
 - A follow up of a Phase I Assessment, this Phase II report establishes the extent of contaminants and recommendations for removal and mitigation of those contaminants. These services are performed by an Environmental Engineer.

2.6 DELEGATED DESIGN

For many individual components of a building, such as Glazing Systems, Steel Stud Assemblies and Open Web Steel Joists, the building consultant will design the overall performance of the component (i.e. imposed loads) and it is up to Architects, engineers and technical specialists working for the construction contractor to design the finite and specific actual pieces of the components. As an example, for Open Web Steel Joists, a separate engineer, typically engaged by the contractor or steel installer, is engaged to design the individual steel connects and the joists to support the loads indicated by the building's structural engineer. See 3.7.4, 2.28 & 2.37 in the previously referenced APEGA Document.

3.0 ADDITIONAL CONSULTANTS

3.1 INTERIOR DESIGN

Interior Designers are professionals regulated under the Architects Act.

The scope of Interior Design services can vary widely depending on the nature of the project, the Owner and the Design team. For some projects, such as tenant improvement projects, the Interior Designer may be the Prime Consultant or may be a Consultant to a Prime Consultant.

Interior Design services for construction included in the Construction Cost on which the Basic Services Fee is calculated are, at times, included in the Basic Services Fee but can, in many instances (i.e. Tenant work, separate ownership team for interiors) can and is considered Additional Services whether these services are provided by an Interior Designer or the Architectural Consultant and where the scope of the services is fairly compensated by the percentage based fee.

3.2 LANDSCAPE ARCHITECTURE

Landscape Architecture is the design and planning of outdoor spaces designed to achieve environmental, zoning codes, and aesthetic outcomes. Landscape design includes the design for all “soft surfaces” on the site that are not parking space or building and could also include all interior spaces that provide “natural planting materials” within the building. The landscape scope may be extended to include all exterior aspects of the public realm and even coordination of the work of the Civil Engineer; the actual scope of Landscape Architecture services needs to be defined by the Prime Consultant.

The construction cost of the landscape can and is frequently included in the Construction Cost of the project. There are two methods of inclusion of the Landscaping fee:

- As part of the Basic Recommended Fee where the cost of the landscaping is included in the overall Cost of Construction for the project; or
- As part of the “Additional Available Services” where the cost of the landscaping is not included in the overall Cost of Construction for the project.

In both cases, the percentage fee shown in section 2 can be used for basic services. However where the scope of services exceeds that which is compensated by the percentage fee, an additional services fee can be negotiated and is recommended to compensate the landscape architect. Typical examples of scopes of work to be compensated by an additional services fee include off-site design services, services required to obtain municipal permits required for site works over and above normal development and building permit applications, accommodation of storm water management design and public consultation.

3.3 CIVIL ENGINEERING

The scope of Civil Engineering includes the design of elements such as roads, sidewalks, storm water management, water collection systems, site services, parking lots and site grading. Typical definition of the Civil Engineering scope includes the design of underground utility connections from (typically) the municipal utility system up to (but not into) the building. The Mechanical Engineer, as part of the Basic Services, connects to these services and designs these services within the building.

The construction cost of the Civil Engineering can and is frequently included in the Construction Cost of the project. There are two methods of inclusion of the civil fee:

- As part of the Basic Recommended Fee where the cost of the civil work is included in the overall Cost of Construction for the project; or
- As part of the “Additional Available Services” where the cost of the civil work is not included in the overall Cost of the Construction for the project.

In both cases, the percentage fee shown in Section 2 can be used for basic services. However, where the scope of services exceeds that which is compensated by the percentage fee, an additional services fee can be negotiated and is recommended to compensate the Civil Engineer. Typical examples of scopes of work to be compensated by an additional services fee include off-site design services, services required to obtain municipal permits required for site works over and above normal development and building permit applications, storm water management design and public consultation”.

4.0 SPECIALTY CONSULTANTS

There are some services that the Architect and Engineers can provide through specialty professionals. The Owner could engage these services separately from the Prime Consultant however the Architect or Engineers could also engage them. Examples of Specialty Consultants include:

4.1 COST CONTROL (QUANTITY SURVEYING)

A Cost Control Consultant conducts research and reviews information provided by the Owner or Consultants to analyze the proposed project budget and to provide, to the Owner, the associated implications.

Cost Consultants typically provide estimates of the construction cost based on the design as it develops through successive phases of the design process, assist with the evaluation of various design options and help the project team develop the design to balance the current construction cost estimate with the Owner's budget.

4.2 TRANSPORTATION/TRAFFIC ENGINEERING

Traffic Impact Assessment (TIA) is a report that assesses the effects that a particular development's traffic will have on the supporting road and transportation network. There are various levels of report studies that result in differing range of detail. TIAs typically are required for developments that may impact the project's transportation network by virtue of their size or type of transport needs.

Included as part of a Transportation Study may be included a Parking Study. These studies assess capacity, peak times, vehicle movements, and internal Parkade needs and may be part of a Transportation Engineer's work as part of the Traffic Study or separate.

4.3 ACOUSTIC ENGINEERING

An Acoustic Engineer assesses the acoustic impact, either from, onto or within a project. There are various levels of studies differing range of detail to suit the unique nature of the project. An acoustic analysis will assess the type and volume of sound emitted from a source and the resultant legibility and level of sound.

In the case of unwanted acoustic impact, the Consultant will recommend mitigating measures to be incorporated in the building design and in others, such as lecture halls, theatres or concert venues, will recommend measures to enhance the acoustic performance of the space.

4.4 FOOD SERVICES/COMMERCIAL KITCHEN CONSULTANT

Kitchens designed to serve either the public or larger numbers of people are designed by experienced Commercial Kitchen Designers. Kitchen Designers oversee the functional and equipment needs of a commercial kitchen and provide for:

- Planning and Consultation
- Equipment Design and Selection
- Mechanical and Electrical Rough-in and Connection Plan

4.6 BUILDING LIFE CYCLE ANALYSIS

A building life cycle analysis is a report assessing the on-going maintenance and repair costs of a building forecast over the life of the building and may include specific condition of the existing structure and recommendations regarding the repair. An evaluation of a structure's environmental sustainability may also be included.

4.7 HERITAGE BUILDING/ARCHITECTURAL HISTORIAN

Research of an area or building may need to be done to determine how historically important a building is or if the building is already registered with a city or provincial Historic Board. An Historical Architect creates a detailed report, and details how a building can be modified to stay in keeping with the historically relevant aspects of the building.

- 4.8 **ART CONSULTANT**
Art Consultants source art work that compliments a space. They may consult with the Interior Designer, Architect or Owner to select appropriate art work to comply with the design concept.
- 4.9 **HARDWARE CONSULTANT**
Hardware Consultants specify and detail hardware for door openings of all types in buildings so that hardware can be competitively bid, will comply with fire, life safety, accessibility and building code requirements.
- 4.10 **SECURITY CONSULTANT**
Security Consultants specify and detail security access control systems and closed circuit television systems required for all types of buildings that comply with the building safety and security requirements. Further, Crime Prevention Through Environmental Design (CPTED) reviews can be conducted to design security requirements within a building and its surroundings.
- 4.11 **INFORMATION TECHNOLOGY (IT) CONSULTANT**
Owners may have individual requirements for software and hardware IT developments and installation, for planning and management of computer and technical communication services. IT Consultants specialize in how to provide and install technology to meet the objectives of a project and an Owner.
- 4.12 **ENERGY MANAGEMENT CONSULTANT**
Energy Management Consultants consider air quality, moisture control and energy usage and efficiency and assists the Mechanical Engineer with design criteria in the design of heating, ventilation and air conditioning systems.
- 4.13 **ELEVATOR CONSULTANT**
Elevator Consultants specialize in the design of elevators, escalators and moving walkways. They are required on complex vertical and horizontal movement projects or where larger numbers of people are required to be accommodated.
- 4.14 **SPECIALTY LIGHTING DESIGN ENGINEER**
Lighting Engineers are required for specialized projects and are sometimes provided by Electrical Engineers and they design lighting systems based on spatial needs, Architectural or Interior Designer specifications and Owner's needs. Designs consider lighting levels and placement of lights to create an effect.
- 4.15 **EXHIBIT DESIGN CONSULTANT**
Exhibits are designed by an exhibit design firm in a design and procurement process parallel to the building design process. Exhibit Design Consultants prepare a statement of base building requirements for the base building design team to provide.
- 4.16 **THEATRE CONSULTANT**
A Theatre Consultant specializes in the detailed functional requirements of performing arts facilities. They plan and provide the technical requirements and specifications for theatres, auditoriums, concert halls and other performing arts facilities. Architects and Owners may engage a Theatre Consultant to design lighting systems, stage spaces, rigging, orchestra spaces, seating and more theatre related design elements.

- 4.17 **WAYFINDING SIGNAGE**
Wayfinding signage is designed to complement Architectural spaces and the design of a buildings or arrangement of buildings. Building naming, numbering and general organization is considered in the design of maps and signage for users to find their way in public buildings such as hospitals, airports and malls.
- 4.18 **WIND/SNOW STUDIES**
A building is exposed to many external factors that impact the design including wind and snow. Consultants specializing in wind and snow studies/laboratories specializing in wind and snow studies may be required to assess the impact of these factors on a building. Wind studies are especially prevalent and needed within city cores where significant wind can be funneled along streets and can significantly impact pedestrians, the public and buildings.
- 4.19 **PROCESS ENGINEERING**
Process Engineering specializes in the design, installation, operation, control, and optimization of manufacturing, chemical, product packaging, physical and other processes. Typically computer modeling is used extensively in the design and operation of such systems. Process Engineering is typically required for product manufacturing, product packaging, baggage handling and within the food and petrochemical industries.
- 4.20 **SEISMIC AND VIBRATION ENGINEERING**
Seismic Engineers assess seismic and vibration loads and design systems to provide earthquake-resistant structures and appropriate vibration performance characteristics.
- 4.21 **BUILDING ENVELOPE**
Building Envelope Consultants specialize in the assessment of building wall systems, making recommendations for repair to existing wall systems, mitigation procedures of existing damaged walls systems and the design and detailing of new systems. Frequently they work directly with the Architect and consulting team to develop appropriate material and detailing selections.
- 4.22 **AUDIO VISUAL CONSULTANT**
Projects may have individual requirements for audio visual requirements for planning and management of audio video conferencing services. Audio Visual Consultants specialize in the design of and how to provide and install the technology to meet the conferencing objectives of an Owner.
- 4.23 **MATERIAL MANAGEMENT CONSULTANT**
Projects such as hospitals and airports have individual requirements for the movement of goods. Material Management Consultants specialize in planning to suit and in the accommodation of technology such as material lifts to meet these needs.

5.0 ADDITIONAL SERVICES ARISING DURING PROJECT DELIVERY

5.1 ADDITIONAL SERVICES DURING PROJECT DELIVERY

The scope of services should be and generally is described in the contract and the contract generally will indicate those elements which are not included in the scope of services being provided by the consulting team. The following are some common changes to the contract which necessitate additional fees being negotiated:

- i. **Changes to the client's program of requirements**
Changes to the client's program, either through an increase or decrease in the number of spaces or types of spaces requires that additional fees may be required to compensate for the change.
- ii. **Changes to the project size, scope, quality, or complexity,**
Changes to the client's program may result from a more complex series of requirements or more complex site requirements, or the overall scale of the work has changed or the overall type of project may have changed and may result in additional fees needing to be negotiated to compensate for the change.
- iii. **Changes to the client's construction budget**
A change to the client's budget, either through an increase or decrease, results in changes in the scope and deliverables and additional fees may need to be negotiated.
- iv. **Changes to the client's schedule**
A change to the client's schedule, either due to the client's or the contractor's responsibility means the Consultant Team are delivering their services over a different time frame than that which was originally planned, including site administration services, and additional fees may need to be negotiated to compensate.
- v. **Changes to the project delivery method or the form of construction**
The complexity of a project delivery method has direct bearing on the fees charged and a change to the mode of construction delivery requires that additional fees may need to be negotiated.
- vi. **Client instructions that are inconsistent**
Inconsistent client instructions may lead to changes to approved items requiring that previously approved items are required to be undone and these types of changes may require additional fees.
- vii. **The enactment of new or revised statutes, regulations, codes, or by-laws**
From time to time additional laws, codes, statutes and regulations come into force for which the consultants have no control and these may require additional fees to compensate for any revisions or changes to the work necessitated by the change.
- viii. **Interpretations by Authorities Having Jurisdiction**
Unforeseen interpretations by the Authority Having Jurisdiction which the consultant could not have reasonably foreseen or which change previously similar rulings by the Authority may require additional fees to revise design or drawings.
- ix. **The client's failure to render decisions**
The client is required to give timely answers and direction to the consultant and withholding such direction or approvals may require the consultant to spend more time on the project than that which was anticipated and this additional time may require additional fees.

- x. Acceptance of constructor proposed substitutions that require revisions
Should a client accept proposed alternates or substitutions by the constructor which requires the consultant to redesign or revise the design, additional fees may be required.
- xi. An extensive or unreasonable number documentation requirements
Extensive Requests For Information (RFI's) or unwarranted submission requirements or unreasonable Progress Draw submission requests or increased number of reports or other documentation needs requires the consulting team to perform excessive duties and may require additional fees be negotiated.
- xii. Replacement of work damaged or destroyed during construction
Work which may have been destroyed or damaged through no fault of the consulting team may require additional site reviews, redesign or otherwise additional time being spent on the project and this may require that additional fees be negotiated.
- xiii. Major defects or deficiencies in the work or default
Through no fault of the Consultant Team, work may be excessively poorly completed and or deficient requiring additional site reviews, or additional site time being spent to re-review the work for general compliance. These additional efforts may require additional fees be negotiated.
- xiv. Dispute resolution proceedings arising out the construction contract
Contracts do not compensate consultants for any time spent in dispute resolution between the Owner and the Contractor and any requirement to perform these duties may require additional fees be negotiated.

6.0 ADDITIONAL SERVICES

There are some services that the Architect and Engineers should provide based on their industry knowledge and direct experience but because each building design and construction project is unique, often these services are not necessary on every project and therefore are not included in the Basic Services. The Owner could engage these services separately from the Prime Consultant however the Architect or Engineers should likely provide them as additional services. They include:

6.1 PLANNING SERVICES

- i. Computer Systems Planning
Designing an IT infrastructure system that supports the Owner's technology computer systems needs and may include cabling, connectivity, data blocking design and IT Room Systems designs. Each is unique to each owner and some owners provide their own in-house expertise to design IT systems.
- ii. Project Cost Planning
Architects provide Construction Cost Estimating but in many cases, Owners require additional services to provide cost planning of the complete project, including equipment, land and other costs. Project Cost Planning provides cost analysis for any aspect of an Owner's project and is managed throughout a project to reflect changes in project cost centres.
- iii. Functional Programming
A program is required to define the needs of a building. Owners, Architects or Specialty Programming Consultants can provide these by assessing and defining the functional accommodation requirements through user interviews, prepared space and functional standards and in preparation of the building design, space and inter-departmental

proximity needs. This can be a simple “space allocation” program or a more complex functional assessment of user needs.

- iv. **Master Planning**
The master planning process involves a comprehensive and strategic view of the form and function of the planned environment as well as by-laws, budgets, business cases and planning criteria.
- v. **Risk Management Planning**
Risk Management Consultants help in the assessment, identification, monitoring and cost impact of risks. They work with the Owner and Consulting team to prioritize processes and tasks to mitigate the risk’s impact. Complex, time critical and publically impactful building designs benefit from a Risk Management Planner.
- vi. **Scheduling**
Complex, multi-phased, multi-building and multi-user buildings frequently require the expertise of a Scheduling Consultant. This Consultant starts at the beginning of a project and itemizes all tasks through to completion and works with the Owner and Consulting team to continually assess progress and a project’s future needs. The schedule is updated regularly and changes are reviewed and documented. Scheduling Consultants are critically appropriate with inexperienced Owners working on very complex projects.
- vii. **Urban Planning**
Urban Planners are professionals who design land-uses, Area Development Plans, Area Architectural Design Guidelines and the effectiveness of a community's land by-laws, use and infrastructure focusing on the development of urban and suburban areas.

6.2 ACCESSIBILITY AND FACILITY CONDITION AUDIT SERVICES

- i. **Accessibility Audit**
Accessibility Audits are reports measuring the overall accessibility and usability of a building according to the needs of persons with disabilities. The interior and exterior environment is assessed base on code requirements, standards and guidelines.
- ii. **Facilities Condition Audit**
Facilities Condition Audits are reports assessing the overall condition of a facility focusing on its anticipated needs for repair and maintenance requirements. Frequently projections for costs for repair and mitigation are included in the reports. Reports are typically multi-disciplinary.

6.3 ANALYTICAL SERVICES

- i. **Accounting and Financial Analysis**
Financial Studies identifying: capital, operating and maintenance costs and sources of revenues, including funds to offset capital and operating costs
- ii. **Building Development Options Analysis**
A Building Development Plan is applicable to projects that, in whole or in part, propose to fit-up or upgrade space within an existing facility. It is essentially a combined Technical and Functional Analysis.
- iii. **Concept Development Analysis**
Based upon the information provided by the Owner, to undertake diagrammatic studies and document review in sufficient fashion, so as to provide the degree of analysis and comment required.

- iv. **Specific-Fit Options Analysis**
A Specific-fit Options Analysis is applicable to projects that, in whole or in part, proposes to fit-up or upgrade space within an existing facility. A Functional Program is generally required prior to commencing the development of a Specific-fit Options Analysis. A Specific-fit Options Analysis assesses the existing accommodation potential of the existing facility by analyzing area program needs to the existing spaces.
- v. **Technical Analysis**
There are generally two areas of focus where a Technical Analysis may be warranted:
 - Technical Analysis of existing facilities
 - Technical Analysis of options for new facilities (including additions to existing facilities)
 For sites with more than one structure, the technical analysis often includes a combination of both types.
- vi. **Business Case Development**
Provide an economic feasibility analysis to determine the viability of the project within the anticipated context.
- vii. **Energy Modeling / Energy Use Analysis**
Energy modelling will be required to validate the operational use of energy to comply with the current National Energy Code and forecast efficiency for applicable systems within a building.
- viii. **Value Engineering and/or Life Cycle Analysis**
Detailed analysis of a project design to assess the cost effective expenditure of capital or operating (staffing, energy, maintenance) funds over the life of the project.
- ix. **Options and Technical Analyses**
Specific projects may require any manner of studies such as looking at a large number of options or detailed technical considerations that are beyond the normal scope of base building services.
- x. **Real Estate Analysis**
The identification and evaluation of potential sites and of their appropriateness for project needs.
- xi. **Site Analysis**
For a pre-selected site, to provide initial consultation, in order to assist in the establishing of site related limitations and requirements for the project, reviewing and checking the documents prepared or provided by the owner where this is not part of the normal course of the base building design process.

6.4 SPECIAL ADVISORY SERVICES

- i. **Detailed Historical Research**
 - Historic Resource Overviews, Historic Resource Impact Assessments
 - Conservation Resource Management
 - Defining the Historic Place, Heritage Value and Character Defining Elements
- ii. **Management Consulting**
Any additional management services needed, such as client project management.

- iii. **Market Research**
Market studies are used to forecast the demand and real estate value of a completed project. Studies may include demographic studies predicting demand predictions and possibly preferences and lifestyle trends of the community. Commenting on the marketability of a project may also be provided.
- iv. **Rezoning Applications**
To provide services relating to research and documentation as may be necessary, so as to assist the Owner with the rezoning of the selected site.
- v. **Extra-Ordinary Presentations**
Consultants may be asked to present the analysis and recommendations (resulting from the pre-design phase) to pre-selected Owner representatives or to provide presentation material and formal presentations to groups and individuals other than those as initially agreed to by the Owner.

6.5 FURNITURE SERVICES

The design team may be engaged to provide furniture, fixtures and equipment (sometimes referred to as FF&E) selection, specification and procurement services and/or move coordination services.

Furniture can be ordered from a furniture manufacturer / dealer or it can be formally designed and tendered by a design professional, typically an Interior Designer. Furniture design assesses the functional needs of an Owner and then prescriptively describes functional, operational and purchasing requirements, tenders to multiple dealers and works with the Owner to objectively and subjectively rate the submissions and review and monitor installation.

In order to reuse existing furniture, an inventory may need to be created. The inventory will include details noting the manufacturer, description, size, colour, condition and quantity. Photographs and Excel spreadsheets may be included but a list of furniture systems and components will result.

6.6 LEED™ / SUSTAINABILITY DESIGN

An optimum LEED™ project would have the Coordinating Professional as the LEED™ AP however the CAA and CEA encourage Owners to engage their LEED™ team using a team that is familiar with accommodating the process of LEED™ for the specific building type being designed. Architects and Engineers have the experience of project delivery from design through construction, which enables full knowledge and experience to be brought to bear when performing LEED™ administration. The following is the Basic Services for LEED™ Administration.

- Review the design for LEED™ certification feasibility
- Identify the appropriate LEED rating system. i.e. LEED™ NC (single application/ multiple) vs LEED™ CS vs LEED™ CI vs LEED™ ND etc.
- Identify prerequisites and credits that the project has achieved and clarify what needs to be done where non-compliance is an issue.
- Identify and outline what needs to be done for additional credits.
- Identify Innovation in Design Credits
- Create a task matrix that identifies key players and their responsibilities as relates to LEED™ design and certification.
- Undertake any additional energy modeling in excess of any code required energy modeling if required for particular credits
- Provide support and assistance in understanding LEED™ credit requirements
- Provide support to key team members in preparing letter templates.

- Guide and manage the project team throughout the entire process.
- Manage the LEED™ Online process.
- Review letter templates and submittals as requested.
- Assist the team in responding to comments during the review process.

6.7 VARIABLES FOR “FAST TRACK” AND CONSTRUCTION MANAGEMENT PROJECTS

Many projects in Alberta have a different approach to construction procurement from the traditional Design-Bid-Build or Stipulated Sum approach used as the baseline in Schedule of Recommended Percentage Fees for Basic Services included in Part 2 as 3.3. A modification of the traditional approach is fast-track construction management. This procurement method is fairly common on larger projects and often includes a fast-track, multiple bid package approach. The design team is required to prepare and coordinate multiple bid packages.

An additional fee in the range of 0.1 to 0.5% of Construction Cost is recommended, dependant on the number and complexity of bid packages, over and above the basic services fee.

6.8 MEASURED DRAWINGS AND 3D MODELS

Existing building drawings document the built condition of a structure. Prior to beginning a renovation project, existing built conditions must be determined and recorded to assist in design decisions and as the basis for the preparation of renovation documents.

3D models can be generated from existing building drawings. Architects and /or specialty companies can provide this service.

6.9 RECORD DRAWINGS & DOCUMENTATION

At the completion of a project, the construction contractor typically provides a set of “as-built” mark ups recording changes made from the contract documents during construction. Record Drawings can be prepared to document changes that occurred during construction as identified by the contractor on the as-built mark-ups. Record Drawings are often very useful in the on-going operations of a facility.

6.10 BUILDING INFORMATION MODELING (BIM)

Building Information Modeling is a digital representation of the physical and functional characteristics of a building and its materials. BIM is a process that uses 3D design and drafting tools for the preparation of contract documents on building projects today.

The Basic Services for BIM projects would consist of providing a model that includes objects at a Level of Development (LOD) ranging from LOD 200 to 300, related to the deliverable required for the purposes of design coordination and construction. Anything above LOD 300 would be considered as an additional service as it would be typically carried out by the contractor during construction, and potentially by billing the owner and used for maintenance purposes.

BIM makes possible a number of ancillary and supportive opportunities for the design, construction and operations processes of a building:

- 3D design and imagery and 3D simulations
- Quantity take-offs
- Physical element conflicts review
- Energy analysis
- Shop drawing support
- Fabrication and construction machining support
- Facility management post occupancy support

BIM promotes and necessitates interdisciplinary coordination as consultants and contractors are working from the same computer drawing model. Implementation of BIM beyond the preparation of normal contract documents is an additional service and fees for the Level of Development being provided should be paid to the Consultant Team.

6.11 P3 – PRIVATE PUBLIC PARTNERSHIPS AND DB – DESIGN BUILD PROJECTS

P3 projects are usually built on the design-build procurement methodology; both are addressed on the same basis here. Generally speaking, it is in the interest of all team members to limit costs and services provided until a committed agreement is in place, but in both the P3 and the design-build approach the design build team is often required to provide significant design services without full compensation as part of the overall procurement and bid strategy. Each case will be unique and will need to be tailored to suit the scope of services required, the size and complexity of the project and the amount of fee the Consultant Team is asked to put at risk. The recommended guidelines below address the fee issues concerning the cost and risk of what is termed the pursuit phase.

General Guidelines primarily for P3 and Design Build include:

- There are generally two phases: a pursuit phase (from RFQ through to submission of bid) and post-pursuit phase (from bid submission to completion of project). The post-pursuit phase is generally defined by two sub-phases that tend to blur together: the phase after the team has been identified as the preferred proponent but before financial close (in which the team is still at risk as a contract has not yet been established and during which changes to the bid submission are typically negotiated on a competitive basis), and the phase after financial close (in which the team is at much less risk as a contract has been established and changes can be defined as change orders to the contract).
- A fee should be negotiated and established in advance between the Consultants and the Client (proponent) for the total work based upon guidelines found in Part 2. It is recommended that the total fee identify the additional services for fast-track construction management and include coordination fee for the Prime Consultant and specialty Consultants fees.
- A pursuit phase fee is recommended to provide basic documents for the development of a bid submission - typically somewhere between the equivalent of SD and DD level of average documentation. The pursuit phase fee is then recommended to be discounted between 20 and 30% to remove profit and contingency and arrive at a fee based upon cost recovery (cost defined as total cost inclusive of payroll, payroll burden, and office overhead).
- The pursuit phase fee can be credited against the total fee to the extent the pursuit phase work can be re-used in the post- pursuit phase design without rework.
- The pursuit phase fee is recommended to be billed and paid as the work is being undertaken and not held until the end of pursuit phase.
- A success bonus is recommended to be included and equivalent of 2 x deferred profit from the pursuit phase to account for deferred profit on successful pursuit plus to cover lost profit from unsuccessful pursuits - assuming a 1 in 3 success rate.
- The success bonus is recommended to be paid upon financial close in the case of a P3.
- Modifications to bid documents following the pursuit phase (i.e. once a team has been identified as preferred proponent) but prior to financial close is recommended to be considered as an additional service to the pursuit phase fee. These additional service fees may be credited against the total fee if the additional services work can be re-used and if the additional services advanced the original bid documents rather than simply modified previous work.
- Other terms should include waiver of liquidated damages by all parties and the use of established contracts such as CCDC Doc 15.

DESIGN BUILD PROJECTS

- Design Build is a methodology for project delivery. It is the method to deliver a project by which the design and construction services are contracted to a single entity known, typically as a contractor or Design Builder. The Design Build method uses a single point of responsibility for the design and construction of the project.
- Projects delivered this way typically are “Bid” by a number of Design Build companies who, in turn, engage the architect and engineers.
- Design Build projects commonly require the provision of “at-risk” services by the design team and are therefore recommended to be compensated following the guidelines set out above.

6.12 CONSTRUCTION / CONTRACTOR’S PERFORMANCE

The performance of the Construction Contractor has a direct impact on the extent or level of services provided by the Architect and Engineers as Basic Services. Normal fees for Basic Services anticipate the provision of a normal scope of construction services by the Construction Contractor to a normal quality standard and within a normal schedule.

Where the Contractor does not provide this standard of construction contract services and where the Architect is required to provide additional services to deal with this performance and / or to defend the Owner against claims or potential claims by the Contractor, the services are over and above normal construction administration services and are considered Additional Services. RAIC Document 6 identifies the following services in this regard:

- Services Necessitated by Default of Client or Contractor – provide services made necessary by the default of the contractor, by major defects or deficiencies in the work of the contractor, or by failure of performance by either the client or the contractor under the construction contract.
- Consultation Services in Regard to Replacement of Damaged Work – provide consultation concerning replacement of any work damaged by fire or other cause during construction and furnish services as may be required in connection with the replacement of such work.
- Evaluation of Extensive or Unreasonable Claims – provide services in evaluating an extensive or unreasonable number of claims submitted by the contractor or others in connection with the work.

In addition, services made necessary by the default of the Contractor and services provided to prepare for and/or participate in any form of dispute resolution on behalf of the Client, including negotiation, mediation, arbitration and legal action are Additional Services.

Ideally, contractors for either bid or negotiated jobs should be carefully prequalified. A contractor's reputation for staffing jobs with trained and experienced key personnel should count heavily in his or her favour. If the contractor cannot be preselected because of procurement laws applying to public work, the Client needs to be aware of the problems (and costs) associated with selecting the contractor solely on the basis of lowest bid. When working with a low-bid contractor, the Client will probably experience higher costs and longer schedules due to the additional and more experienced field personnel required as well as the additional documentation the Architect will need to provide to compensate for the Contractor's inadequate staffing.

6.13 OTHER SERVICES

Building projects can be very complex and the provision of consulting services can be varied and extensive. There are other services beyond commonly provided scope of services compensated by a basic fee that can be provided by a consulting team.