Architectural, Interior Design and Engineering
Prime Consultant

Fee and Scope of Services Reference 2024

consulting ARCHITECTS of ALBERTA

consulting engineers of alberta

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.

The CAA and the CEA prepared and issued Scope of Services Version 1.0, issued Version 2.0 in 2013 and Version 3.0 in 2017. This is the fourth edition of this document, *Fee and Scope of Services Reference 2024*. 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. Comments are welcome and should be submitted to connect@consultingarchitects.ca

The *Fee and Scope of Services Reference 2024* continues to describe 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 licensed interior designers provide building design services within legislated and regulated standards, accepted professional norms - such as the Royal Architectural Institute of Canada (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. Clients are encouraged to select a team of consultants based on qualifications such as:

- 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 sets out fee guidelines but is not a mandatory schedule. Each project is unique, and members are free to negotiate appropriate fees in each instance. These fee guidelines have been validated through years of use in Alberta, but it is important to recognize client and project specific circumstances in establishing fair fees for each project.

Part 3: Additional and Specialty Consultants and Services

The design and construction industry has experienced 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 Clients and consultants 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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1. Part 1: Basic Services Available for Building Projects in Alberta

1.1 Introduction To Part 1

1.1.1 Preamble

Part 1 is intended to provide insight and guidance to Clients and consulting firms as they define the anticipated scope of work and determine an appropriate fee for the Basic Services (see Section 1.4) within commonly provided services for building projects in Alberta.

Part 1 of this reference 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) are described and defined.

1.2 The Professional Relationship

1.2.1 General

The Client is the person or organization that retains the architect to provide professional services. Often, but not always, the Client is also the owner of the property where the project is to be located or represents the owner of the property. The Client may also be a design-builder, construction manager, or developer.

What all Clients have in common is that they are the entity with whom the architect has a contract for services. The Client:

- usually selects the prime participants, including the design consulting team and the construction contractor;
- usually pays for the required design, construction, and subsequent operation of the facility;
- may be the owner, user or occupant of the building, or a combination of all three;
- provides the preliminary information the consulting team requires to begin work such as site information and functional program requirements, and participates with other parties in the design process from the project outset.

Selection of professional design services is one of the most important decisions a Client makes when undertaking a building project; among other important factors, the success of a project depends on this selection. Clients are encouraged to select a team of architects, engineers and consultants based on a careful evaluation of their qualifications.

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

- A registered professional is required to provide the minimum scope of service necessary to serve the public interest;
- 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.

1.2.2 Selecting a Consultant Team

Clients may use a variety of methods to retain professional design services. **Public sector clients have different procurement laws related to selecting a consultant than private sector clients.** A Client may sole source based on existing relationships, select using a competitive process such as a design competition, request for proposals (RFP), request for qualifications (RFQ), qualification-based selection (QBS) or competition for a placement on a standing offer list (RFSO).

The CAA and CEA recommend Qualification Based Selection (QBS) for the selection of the consultant team. QBS is a competitive process for the procurement of professional consulting services based on professional qualifications. Qualifications are submitted to the Client, who evaluates and selects the best-qualified firm or individual(s) for the proposed project, based on technical qualifications. The selected firm and the Client then jointly develop a detailed scope of services. The Prime Consultant's fee is then negotiated based on the detailed scope of services and the project schedule. The benefit of the QBS approach is that evaluation and negotiation is based on best overall value delivered to the Client, rather than lowest fee.

Selecting Engineering and Geoscience Consultants (Version 2.0 April 2022) prepared by The Association of Professional Engineers and Geoscientists of Alberta (APEGA) provides an overview of QBS. This can be found at:
Selecting Engineering and Geoscience Consultants (apega.ca)

Similarly, the publication Selecting a Professional Consultant (Version 1.0 June 2006 © Federation of Canadian Municipalities and National Research Council) provides another overview of QBS. This can be found at:
http://www.fcm.ca/Documents/reports/Infraguide/Selecting_a_Professional_Consultant_EN.pdf

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 consulting team does not provide schematic design options during the selection process. Rather the Client chooses the consulting team and together they negotiate the terms of the consulting agreement, then begin the pre-design and design process.

The consultant team normally includes the architect, structural, mechanical and electrical engineers, interior designers, and may also include specialty consultants. A Client typically engages a Prime Consultant first and then works with the Prime Consultant to select appropriate team members and assess specialty consultants and additional services that are appropriate to the project requirements.

The Prime Consultant acts as the Coordinating Registered Professional for the project as defined by the National Building Code – Alberta Edition (NBC(AE)) and the Safety Codes Act and its Regulations. Depending on the nature of the project, the Client should ask that the consultant team be led by the most qualified consultant team member to suit the nature of the project, be that an architect, engineer, or interior designer.

1.3 Agreement Between Client and Consultants

1.3.1 Client – Prime Consultant Agreement

A Prime Consultant provides the most effective service when there is a clear understanding between Client 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 Client 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 Client;
- Professional liability terms and obligations; and
- Fee for the services and the potential scope and compensation approach for additional services and specialty consultants.

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

- *RAIC: Canadian Standard Form of Contract for Architectural Services Document Six;*
- *ACEC: Engineering Agreement Between Client & Engineer, Document No. 31.*

1.3.2 Agreements with Consultants

The remainder of the consultant team should have a completed copy of the Prime Consultant contract for review prior to negotiating their contact for the project as they need to understand the scope of the services to be provided and most will be bound by the Prime Consultant's obligations as they apply to the work of their discipline.

The Client typically has two methods of engaging other consultants for the project:

- The first method is to have them be sub-consultants of the Prime Consultant. The CAA and the CEA recommend the use of the following forms of agreement:
  - *RAIC: Canadian Standard Form of Agreement Between Architect and Consultant Document 9;*
  - *ACEC: Agreement Between Engineer and Sub Consultant, Document No. 32;*
- The second method is that the Client contracts directly with each consultant. The contracts noted above can be used with the appropriate modification for direct contracting of the consultant team. The risks and responsibilities of all parties should be defined and understood as well as the responsibilities of the coordinating registered professional described below.

The value in using these documents is that they are coordinated and integrated within the industry standard construction contracts such as the RAIC and Canadian Construction Documents Committee (CCDC) documents.

These agreements may be amended or revised by the parties. The following link can be used to view RAIC forms of agreement: https://raic.org/raic-digital-contracts

1.3.3 Insurance Coverage

The extent of the need for insurance varies from project to project and in relation to the risk involved for the Client 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.

It is important to define Professional Liability amounts per occurrence and in aggregate that are appropriate for the project scale and risk and are reasonable in proportion to the fees paid to the Prime Consultant. It is also important that the Prime Consultant's agreement is written to include only obligations which are covered by professional liability insurance. Such terms include an industry accepted, court referenced "Standard of Care" definition and indemnity restricted to negligence, being negligent acts, errors and omissions. The Prime Consultant and their insurer can help review appropriate and insurable agreement wording.

1.3.4 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 National Building Code – Alberta Edition (NBC(AE)) and the Safety Codes Act and its Regulations. This coordination is usually undertaken by the architect, interior designer, or professional engineer leading the team of consultants and appointed by the Client as Prime Consultant. Under NBC(AE), this is referred to as the "*Coordinating Registered Professional"*.

The Coordinating Registered Professional coordinates the design work and field review of the project; coordinates with other consultants on their responsibilities and reviews the progress of their work. The coordinating duties benefit the Client and the Coordinating Registered Professional must be compensated fairly for performing this role whether the sub-consultants and specialists are retained by the Coordinating Registered Professional or retained directly by the Client.

1.3.5 Professional of Record

The Prime Consultant, in addition to the Coordinating Registered Professional role, is usually engaged to be a Professional of Record for their respective discipline. Other members of the consulting team also act as a Professional of Record for each professional discipline. A Professional of Record is required to coordinate the design work and field review for that component of the project for which the registered professional of record is responsible in order to ensure the design will comply with NBC(AE) and the Safety Codes Act and its Regulations. 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 Client to be part of the project team and must work directly under the overview of the Professional of Record.

1.3.6 Professional Review of Construction

NBC(AE) and the Safety Codes Act requires for an Occupancy Permit to be issued and further that the Prime Consultant (the Coordinating Registered 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.

1.4 Basic Services

1.4.1 Foundation of Basic Services

A project is initiated by the Client, who describes the anticipated scope of the project. The role of the Client will vary, depending on the experience of the Client and the complexity of the project. Therefore, the Client'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 Client and to protect the public interest. 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 Client as documented in a project brief, functional program or similar documents provided by the Client to the Prime Consultant;
- The basic services provide a design that meets the requirements of the governing codes and regulations;
- The Prime Consultant must coordinate with the Registered 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 Client, 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.

1.4.2 Recommended Basic Services

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

- The services described in the RAIC Canadian Handbook of Practice (CHOP), current edition document the recommended scope of services for architectural teams to provide on a phase-by-phase basis. The CHOP also provides information on the Client, consultants and supplemental architectural services.
- The CHOP is available for free on the RAIC’s website at the following link: Canadian Handbook of Practice for Architects - RAIC

It is important for the Client and the Consultant to review and discuss the required scope of services and contractual requirements before agreeing to a fee as each project requires a scopes of services tailored to its scale, type and complexity.

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

1. "Basic Recommended Services" represents the services typically required for most projects and these services are captured in the suggested fees described in this guide. Basic Recommended Services include: architectural; structural; mechanical; electrical;
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; Cost Consulting; 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.

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

1.4.3 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 Client and the consultant team in determining 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 Client and consultant team. It is highly recommended that the Client and consultant team review each phase of the project, identifying the services required. These services then become the basis for the agreement between the Client and Prime Consultant.

This table has been developed 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) and is in alignment with the current scope of services as identified in the RAIC documents.

Designated Services Summary Chart

The designated services summary chart lists the scope of services the consultant team may provide on a phase of work basis. The list represents the basic recommended services on the left and additional services and specialty services on the right. The additional services & specialty services list is not exhaustive, and Part 3 should be referred to for additional details.

Pre-Design (Outside Basic Scope of Service)	
In alignment with the RAIC documentation, pre-design services are outside of a basic scope of services. The list of Additional Available Services is not exhaustive but represents services sometimes requested by a client for which the scope and fee needs to be evaluated on a case per case basis.	Additional Available Services • site utilization study (highest & best use) • site analysis & selection and comparison • master planning • concept development study • on-site or off-site utility review • agency consulting, review & approval process • re-zoning applications and circulation process • special studies (feasibility, economic, market, environmental, energy, life cycle, traffic, parking, heritage, etc.) • programming review, development & diagrams • explorations related to sustainability programs (LEED, Built Green, WELL, etc.) • lease assist fit test / drawings • preparation of measured/ as-built drawings • BOMA area calculations • existing facility surveys or condition assessments • inventory of existing assets such as FF&E • selection, design and/or procurement of FF&E and art • photographic records • preparation of client & consultant services agreement • preparation of RFP documents or call for competitions • client supplied data coordination • project scheduling / planning • project budgeting • funding application & fund raising assistance • services related to project management. • presentations (public, board or other) • specialty consultant or specialty services

Schematic Design	
Basic Recommended services • project administration • coordination with client • program review & evaluation • disciplines coordination (architectural, structural, mechanical, electrical) • agency consulting, review & approval process • client supplied data coordination • architectural design & documentation • structural design & documentation • mechanical design & documentation • electrical design & documentation • materials research & specifications • project scheduling • probable construction cost updates / project budget review • civil design & documentation • landscape design & documentation • interior design & documentation	Additional Services and Specialty Consultants including (Part 3): • civil design & documentation • landscape design & documentation • interior design & documentation • coordination of specialty consultants • coordination of specialist services • marketing materials, graphic design, models, renderings • special presentations or submissions (public, board, promotional, etc.) • special studies and reports (feasibility, future planning, guidelines, client standards, architectural controls, heritage, etc.) • review of alternative design approaches

Design Development	
Basic Recommended services • project administration • coordination with client • disciplines coordination (architectural, structural, mechanical, electrical) • agency consulting, review & approval process • client supplied data coordination • architectural design & documentation • structural design & documentation • mechanical design & documentation • electrical design & documentation • materials research & specifications • project scheduling • probable construction cost updates, review, and confirmation of alignment with design • civil design & documentation • landscape design & documentation • interior design & documentation	Additional Services and Specialty Consultants including (Part 3): • civil design & documentation • landscape design & documentation • interior design & documentation • coordination of specialty consultants • coordination of specialist services • marketing material, models, renderings • special presentations or submissions (public, board, promotional, etc.) • special studies / reports (planning tenant or rental spaces, energy modeling, acoustic, etc.) • changes to approved design • detail value engineering

Construction Documents	
Basic Recommended services • project administration • coordination with client • disciplines and document coordination (architectural, structural, mechanical, electrical) • agency consulting, review & approval process • owner supplied data coordination • architectural drawings & specifications • structural drawings & specifications • mechanical drawings & specifications • electrical drawings & specifications • bidding documents preparation & coordination • project schedule update • probable construction cost update, review, and confirmation of alignment with design • application for building permit • civil contract documents & specifications • landscape contract documents & specifications • interior design contract documents & specifications	**Additional Services and Specialty Consultants including (Part 3):** • civil contract documents & specifications • landscape contract documents & specifications • interior design contract documents & specifications • coordination of specialty consultants • coordination of specialist consultants • preparation of special bidding documents & scheduling (construction management or other RFP preparation and/or RFP evaluations) • BIM model/unlocked contract document • detailed construction cost estimates • changes to approved design • detail value engineering

Bidding or Negotiation	
Basic Recommended services • project administration • coordination with client • support client's internal bidding process • issue bidding documents • bidding process coordination and documentation • issue addenda • negotiations coordination • analysis of alternates & substitutions • bid evaluation and recommendation • standard form construction contract agreements preparation	**Additional Services and Specialty Consultants including (Part 3):** • detailed /extraordinary analysis of alternates & substitutions • separate bids or negotiated bids • coordination of specialty consultants • coordination of specialist services

Construction Contract Administration	
Basic Recommended services • project administration • coordination with client • disciplines and document coordination (architectural, structural, mechanical, electrical) • agency consulting, review & approval process • interpretation of the contract documents • construction field review, deficiency review, and reports • field review coordination (architectural, structural, mechanical, electrical) • quotation requests & change orders • review of shop drawings, product data, samples • project schedule monitoring • construction cost monitoring • certificate for payment • project closeout documents, substantial performance review, and final review • review systems startup procedures & reports • review of as-built (red lines) • review of operations & maintenance manuals • disciplines and document coordination (civil, landscape & interior design services) • field review coordination (civil, landscape & interior design services)	Additional Services and Specialty Consultants including (Part 3): • disciplines and document coordination (civil, landscape & interior design services) • field review coordination (civil, landscape & interior design services) • full time or supplemental review • client supplied data coordination • client initiated changes • application of occupancy permits • deficiency reviews beyond final review • attendance at systems startup • building commissioning • preparation of record drawings • preparation of operations & maintenance manuals • detailed cost or schedule analysis • dispute resolution support or services • assistance with procurement of testing services • coordination of specialty consultants • coordination of specialist services

Post-Construction	
Basic Recommended services • one-year warranty review	Additional Services and Specialty Consultants including (Part 3): • field review after take-over • deficiency assessments • instructions for correction of deficiencies • review of warranties • total performance inspection and certification • client consultation • start-up assistance • additional warranty reviews • re-commissioning services • post-occupancy evaluations and reports • maintenance and operations programming • client assistance in the case of contractor insolvency • coordination of specialty consultants • coordination of specialist services

2. PART 2: Suggested Fee Guidelines for Basic Services

2.1 Introduction To Part 2

2.1.1 Introduction

When the Client, 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 size of the project, 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 and other consultants are free to reach their own agreements with the Client 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. These guidelines are intended to form the basis of fee and scope discussions between parties. Each project is unique and members are free to negotiate appropriate fees in each instance.

Fees should be based on a thorough understanding of the scope, schedule and complexity of the project as well as a properly prepared construction cost estimate or reasonable estimate of the construction cost that takes into account the complexity, special requirements and escalation to the anticipated time of bid of the Project. Before any agreements with the Prime Consultant or other consultants are formalized, it is in the Client's best interests to ensure that all contracts are based on terms appropriate to meet the Client's and project's needs.

While there are several ways to determine fees for professional services, the CAA and the CEA recommend that basic 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 $1,200,000 fees can be calculated based on a:

- Percentage based fee determined as a percentage of the cost of construction, greater than the percentage shown on table in Part 2, to suit the complexity and scale of the project;
- 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.

2.1.2 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.

2.1.3 Construction Budget

The construction budget is the total estimate of the construction cost, for construction covered by the basic services, including:

- The construction manager's or general contractor's fees;
- General requirement costs; and
- Design, escalation and construction contingencies.

The Client will advise the Prime Consultant of the construction budget including each of these items and the form of agreement between the two will define the obligations of the Prime Consultant and the Client in the event that the actual construction price exceeds the Client's construction budget.

Where there is no construction budget for all or part of the project, or if the construction does not proceed, the construction cost on which fees would be calculated is the estimated cost at market rates at the estimated time of construction, as initially determined by the Client and consultants.

The Client should clearly understand, and the agreement between the parties should state, that:

- Neither the consultants nor the Client has control over other professional fees, land development or other costs related to the entire endeavor of the Client. The Prime Consultant cannot and does not warrant or represent that project costs will not vary from the project budget, which is solely the Client's responsibility to establish.
- Neither the consultants nor the Client 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 Client's responsibility to establish.

Fees must 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. In addition, fees must include the construction cost of change orders except for change orders that are the direct result of consultant errors. Expended portions of the construction contingency are therefore included in the construction cost used for the purposes of determination of the fees, including reconciliation to include the expended cost of owner-initiated changes.

Percentage fees are commonly turned into fixed fees with the agreement of the Client 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 Client's construction budget. It would normally be fixed at an appropriate time between the completion of Design Development and the completion of the

Construction Documents phase when the pre-tender estimate and construction documents are reviewed and agreed to by the Client. Retroactive adjustments to fee based on bid price may create an unanticipated or punitive situation for the Client, the consultant team or both.
In the event that labour or material is furnished by the Client 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, change orders, 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 for the purposes of fee determination does not include “soft costs” such as:

- Prime Consultant's fee and disbursements;
- Client project management and workforce 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; these services would be an additional service.

2.1.4 Reimbursable Expenses

The consultants should be reimbursed for all reasonable expenses. Such expenses are discussed and agreed to when the Client/Prime Consultant agreement is being negotiated and determined. Reimbursable expenses are normally approved in advance by the Client.
Reimbursable expenses may include costs such as:

- Reproduction, photography, digital services, etc.;
- Long distance telephone calls;
- Courier and delivery charges; 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 Client 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 Client carry a reimbursable expenses allowance, typically between 6% and 8% of the total fees, in the project budget. This allowance includes the markup noted above. 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.

It is also recommended that the Client consider fixing the disbursement allowance at 7% of the total fees and prorate payment for this allowance with fees payable. This approach achieves substantial processing cost savings for both the Client and the consultants.

2.1.5 Allocation of Project Fees by Phase

When calculating the distribution of the fee over the traditional five phases of projects, the following breakdown is typical but may be adjusted based on project specific requirements:

- Pre-Agreement and Schematic Design 15.0%
- Design Development 15.0%
- Construction Documents 43.0%
- Bidding and Negotiation 2.0%
- Contract Administration and Post Construction 25.0%

It may be appropriate to vary these percentages, subject to project and workflow requirements, negotiation and agreement between the Client and the consultants.

2.1.6 Payment of Project Fees

Projects falling under the Prompt Pay legislation will follow the prescribed payment procedures and timelines. For other projects, the Client and the Prime Consultant should agree on the terms and schedule of payment when the Client/Prime Consultant agreement is being negotiated and defined. The Client should not delay payment of fees to the Prime Consultant without just cause and withholding of fees for lien holdback requirements is not recommended. If lien holdbacks are imposed, such as in design build methodologies, it is recommended that progressive holdbacks be released immediately when each design phase is completed. During the construction phase, the holdback should be at periodic completion milestones and at least at 50% and 100% completion or more frequently on large projects.

The Prime Consultant should pay the consultant team for their services promptly upon receiving payment from the Client. Sub-consultants should be informed of the payment terms in the Prime Consultant’s agreement.

2.1.7 Additional Services / Project Variables

The scope of services required by a particular project and Client can be many and varied; the Client 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 Client's own planning and development capabilities. These may include such services as master planning, programming; re-design to changing Client 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. New technology driven additional services such as virtual or augmented reality, computational design work, enhanced BIM modeling and management services and applicable areas of sustainable design evaluation, energy use projection, assessment and tracking require additional services.

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 Client can identify a basic fee using the recommended fee for basic services for a particular Project Category and Construction Cost and that the Client and the design team will then review and agree upon the applicable additional services/project variables and the commensurate additional fee. Similarly, a Client 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.

2.1.8 Re-Use of Documents or Design

To prevent re-use of drawings, specifications and other documents prepared by a Prime Consultant, which may be subject to intellectual property protections, an appropriate clause is recommended to be inserted in the Client/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 and that the Client indemnifies the Prime Consultant in the event of such unauthorized re-use.

2.1.9 Repeat Work

Sometimes, a project is undertaken as a repeat project for the same Client, by the same design team, 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 Client 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.

2.1.9.1 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 negotiated to suit the project specifics to cover:

- Negotiation and drafting of a new Client/Prime Consultant agreement;
- Receipt of the Client'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.

2.1.9.2 Redesign Charges

Redesign charges cover the cost of the necessary redesign work prior to the bid phase. They include any changes to the Schematic Design, Design Development and Construction Documents, building orientation, building layout, etc. Redesign charges are variable and can be up to 70% of the original project fee. They depend on the extent of redesign and changes to original documents. It is recommended that the Client and Prime Consultant negotiate appropriate redesign charges for the particular project.

2.1.9.3 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 up to 5% of the potential full-service charges for the project, depending on the extent of bid phase services.

2.1.9.4 Contract Administration and Post- Construction Charges

To cover typical contract administration and field services during construction and services during the building warranty period, it is recommended that the Prime Consultant receive an amount of 25% of the potential full-service charges for a new project.

2.2 Building Categories

2.2.1 Basic Categories

For the purposes of the Schedule of Recommended Percentage Fees for Basic Services included as 2.3, 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 a 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 buildings by category for use with the Schedule of Recommended Percentage Fees for Basic Services included as 2.3.

2.2.2 Multiple Residential Sector Scope and Fees

Residential uses are noted under Category 2, but it is important to note that private sector multiple residential sector projects typically have unique scope and fee reference considerations which can vary from those included in this reference document. A detailed exploration of the variances is beyond the scope of this Reference.

The Architectural Institute of British Columbia published its Bulletin 55 in 2001, offering helpful insight into the determination of architectural scope fee references for Market Multiple-Residential Sector Projects.

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

2.3 Percentage Fee Calculation

2.3.1 Calculating The Basic Service Fee

The Schedule of Recommended Percentage Fees for Basic Services included 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%.

2.3.2 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 2.3 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 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.

2.3.3 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 Client, Prime Consultant and sub-consultants.

Complexity Variables should be added to the base fee. 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).

2.3.4 Additional Services/Project Variables Fee

The Client and the consultant 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 Client 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.

2.3.5 Source Data and Credit

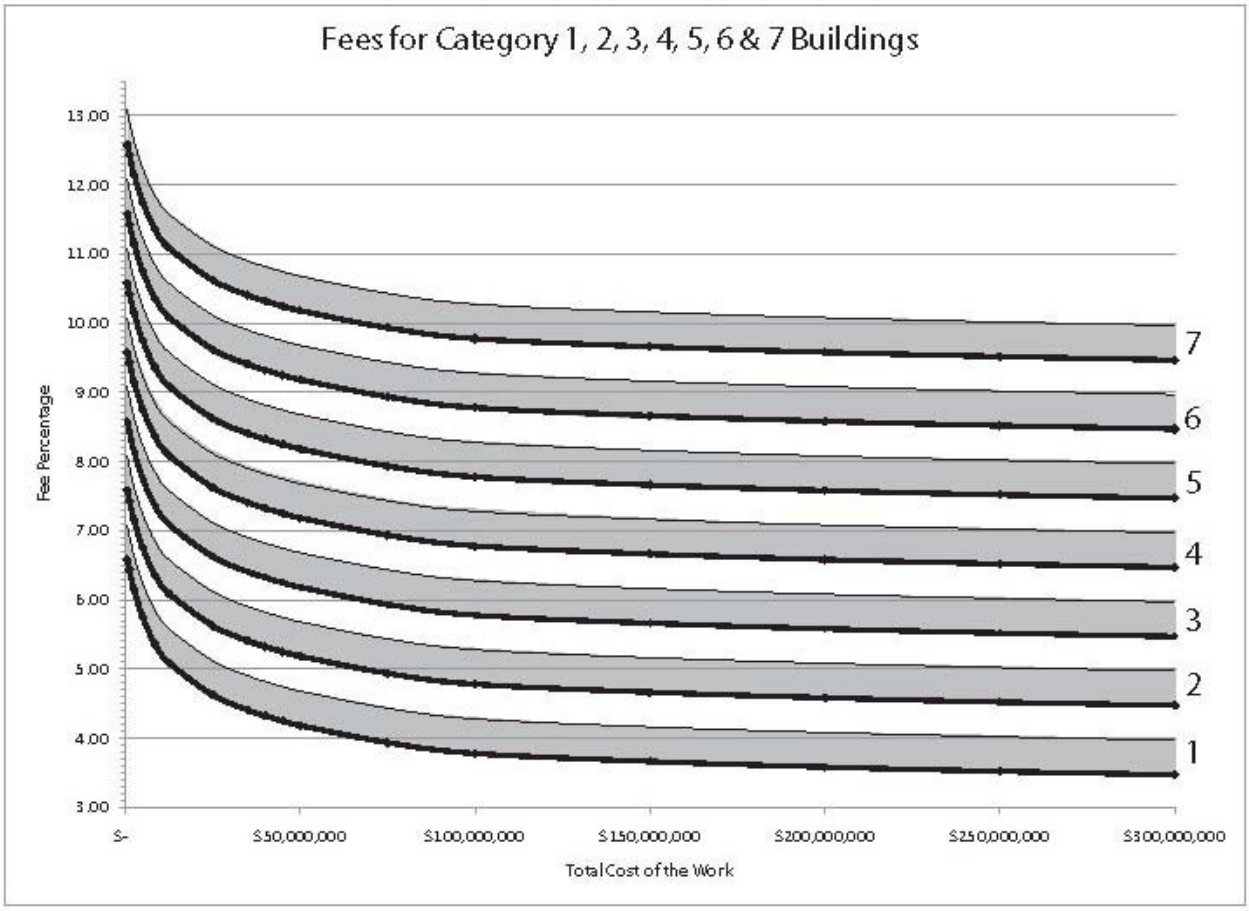
This table is based on an historical fee guide originally published by the Alberta Association of Architects (AAA) and the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGA) and extrapolated for percentages above $35,000,000.

The Schedule of Recommended Percentage Fees for Basic Services follows:

Division	Category of Building						
Total Cost of the Work	1	2	3	4	5	6	7
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 $8,5000,000	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

2.3.6 Graph of Percentage Fees

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



2.3.7 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).

2.3.8 Sample Percentage Fee Calculation

A simple sample calculation follows to illustrate the recommended approach to calculating fees. The recommended methodology is to assess each project budget and complexity and, in consultation with the Client and sub-consultants, reach agreement with respect to project complexity, project variables, and project scope and calculate the percentage fees and additional fees appropriately.

Description / References	Item / Amount
Sample Project: • 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	
Overall Construction Budget (From Definition in Part 2, Section 1.3 of this guide)	$18,800,000
Project Category • Defined from Part 2, Section 2.1 of this Guide • Commercial Office Building, General Purpose Office Building (tenant layouts not included)	Category 3
Project Variables • Defined from Part 2, Section • Assume a simple project approach and single bid package, therefore 0% out of 0.5%	No Variables (0.0%)

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)		$0
		$17,9000,00
• **Total Relevant Base Fee Construction Budget** (Overall Construction Budget less items not included in Base Fee for Architectural, Structural, Mechanical and Electrical)		**0**
% 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%	$356,940
• **Total Base Fee (Architectural, Structural, Mechanical, Electrical)**		**$1,241,940**
Blended Fee Calculation:		
• Blended % Fee ($1,241,940 / $17,900,000 X 100)		6.94%
• Add Complexity Variables (zero % in this example)		0.0%
• **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		$0
• **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		$0
• **Total Fee**		**$1,346,940**
Reimbursable Expenses:		
• **7% of Total Fee**		**$94,285**

Sample Fee Calculation #2

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)		$0
		$17,9000,00
• **Total Relevant Base Fee Construction Budget** (Overall Construction Budget less items not included in Base Fee for Architectural, Structural, Mechanical and Electrical)		**0**
% 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%	$356,940
• **Total Base Fee (Architectural, Structural, Mechanical, Electrical)**		**$1,241,940**
Blended Fee Calculation:		
• Blended % Fee ($1,241,940 / $17,900,000 X 100)		6.94%
• Add Complexity Variables		
• (For this example, assume multiple tenders, Construction Management,		
• complex site work – assume 0.35%)		0.35%
• **Total Blended % Fee**		**7.29%**
Total % Fee Calculations for Base Fee		
• Blended % Fee	6.94%	$1,241,940
• Complexity % Fee	0.35%	$62,650
• **Total Fee Calculation**		**$1,304,590**
Add Fees for Additional Services (includes Prime Consultant's Coordination Fee):		
• Landscaping (estimate only)		$25,000
• On-site utilities and civil works (estimate only)		$80,000
• Re-Zoning		$45,000
• **Total Additional Fees**		**$150,000**
Add Fees for Specialty Services (includes Prime Consultant's Coordination Fee):		
• Cost Consultant		$10,500
• Project Renderings		$21,000
• Acoustic Consultant		$15,000
• **Total Specialty Services**		**$46,500**
Total Fee:		
• Total % Fee Calculation for Base Fee		$1,304,590
• Total Additional Services		$150,000
• Total Specialty Services		$46,500
• **Total Fee**		**$1,501,090**
Reimbursable Expenses:		
• **7% of Total Fee**		**$106,638**

2.3.9 Project Schedule Changes

The recommended fees described throughout this Fee and Scope of Services Reference are based on typical project schedule durations or those documented at the time the fees are determined. For no reason attributable to the Prime Consultant or the sub-consultants, a project schedule may extend past that which could be reasonably anticipated at the time of preparation of the fee quotation, significantly increasing the time required of the consulting team to perform the documented scope of services.

These situations could, for example, result from external economic influences, from the performance of the construction contractor, or other factors – all impacting the schedule and extending 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.

This would also apply for projects that are developed in stages and where the work is suspended for an extended period and the consulting team needs to demobilize and remobilize. Suspension costs which were not explicitly agreed upon and which could not be reasonably anticipated at the time of preparation of the fee quotation should be negotiated to fairly compensate the Prime Consultant and the consultants for the cost of demobilization and remobilization.

3. PART 3: Additional and Specialty Consultants and Services

3.1 Introduction To Part 3

3.1.1 Preamble

Part 3 is intended to provide insight and guidelines to Clients and 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 referenced in Part 1 and Part 2.

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 Coordinating Registered Professional through the design phases, holds the design services contract with the Client and provides services and may engage other consultants in the provision of Basic Services. On building projects, the Prime Consultant is typically, but not always, the architect. On interior design or engineering projects those consultants are commonly the Prime Consultant.
- 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. Types of other services are categorized into four main headings:
    - Mandatory Services;
    - Additional Consultants;
    - Specialty Consultants;
    - Additional Services.

3.1.2 Types Of Other Services

3.1.2.1 Mandatory Services (To be engaged directly by the Client)

Mandatory extra services are required but must be provided by a specialty consultant outside 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.

3.1.2.2 Additional Consultants (Engaged by either the Client 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.

3.1.2.3 Specialty Consultants (Engaged by either the Client or the Prime Consultant)

Specialty consultants may be needed to suit special conditions on a project such as acoustic engineers and transportation engineers.

3.1.2.4 Additional Services (Provided by the Prime Consultant)

Additional Services are services that may be required or desired by the Client 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.

3.1.3 Client Responsibilities

Client responsibilities are described in the RAIC's Canadian Handbook of Practice and APEGA documents but generally may include the following pre-design activities:

- Defining the scope of the project through a program or design brief;
- 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 Client such as Survey, Geotechnical, Hazardous Material and Environmental Services.
- Assignment of a knowledgeable Client representative to provide timely direction and decisions for the duration of the project.

3.1.4 Client Project Budget and Contingencies

The Client has the responsibility to build appropriate project budget including the soft costs it will manage, carrying allowances for design fees, construction cost budgets, furniture fixture and equipment cost, contingencies and the cost of its own management and user participation and management of the project.

It is impossible to accurately predict the cost of contingencies required but the Prime Consultant and cost consultant can advise the Client of typical industry norms. The various types of contingencies are described below:

- The Client will need to carry contingencies in its project budget to allow for design changes including the additional consultants, services and specialty consultants described in Part 3. The Prime Consultant and the Client should review this section and develop an estimate of these additional services for the Client to carry in its project budget.
- A design contingency will be built into the construction cost estimates as recommended by the cost consultant and the Prime Consultant.
- The Client needs to carry a construction contingency to allow for Change Orders. Change Order costs are composed of client-initiated changes which will result in both design and construction costs, as well as the coordination and execution changes that normally arise as the contract documents are interpreted through the construction phase. Design consultants are not expected to be perfect within the Standard of Care, but they are responsible for negligent errors and omissions.

In addition, if a Client does not have sufficient time, knowledge or expertise to properly complete all the required pre-design activities, they 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.

3.2 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 Client, or in the case of Delegated Design, but the contractor. The Client represents the owner responsible for the site and existing building conditions and related risks. These mandatory additional services may not be covered by the Prime Consultant's professional liability coverage and may result in disproportionate liability to nature and scope of services provided by the Prime Consultant and to the fees paid for their services.

The Design team can assist the Client in obtaining these services, but the services themselves are engaged directly by the Client.

They include:

3.2.1 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 the specified and related construction activities. These services are performed by a geotechnical engineer.

3.2.2 Land Surveys

To obtain and/or coordinate the necessary information specifically required such as legal description, property lines, right of Ways, existing physical conditions and topography, to allow the consultant team to knowledgeably review the project site. These services are performed by a registered surveyor (Alberta Land Surveyor).

3.2.3 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.

3.2.4 On-Site Utility Surveys

To establish the location and characteristics of 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.

3.2.5 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 l 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.

3.2.6 Delegated Design

Professionals and technical specialists working for the construction contractor are best suited to design some specific building components. The design of such components is called delegated or deferred design. The Prime Consultant and the consultant team (within the base contract fee) specify the design characteristics and performance criteria for the delegated design components. Supporting Registered Professionals provide the detailed design services for these building elements as required for Building Code compliance and bear the professional responsibility for the same.

Such items typically include some building components which may be load bearing such as steel studs, custom stairs and guards, fasteners and connections, glazing systems and fire suppression systems that cannot be fully designed as a component of the Construction Documents.

Delegated-Design submittals require seals and signatures of a Registered Professional responsible for the preparation and supervision of the design solutions based on engineering performance described by the Registered Professional of Record. Delegated-Design requires the completion of the model forms of commitment and compliance; which must be described within the project specifications, and to align with guidelines for deferred design described by APEGA. See 3.7.4, 2.28 and 2.37 in the previously referenced APEGA Document.

The parties involved in delegated design must provide sign-off for their respective systems through the submission of a C3 Building Code Schedule which is necessary for Occupancy. It is the responsibility of the contractor to ensure that the proper level of services is provided through registered professionals for delegated design work. For further information refer to Standata Variance 19-BCV-024 and the National Building Code (Alberta Edition) Schedules User Guide:

https://open.alberta.ca/dataset/5a1e414d-6639-467d-b5a4-6d68454f1340/resource/74a8a52f-c0d9-4dd1-9456-332f5c31227a/download/ma-standata-building-code-variance-19-bcv-024.pdf

https://www.aaa.ab.ca/getattachment/Professional-Resources/Practice-Support/Practice-Resources/Building-Code-Schedules/AAA-APEGA-National-Building-Code-Schedules-User-Guide-FINAL-2022-05-02.pdf?lang=en-US

3.3 Additional Consultants

3.3.1 Interior Design

Interior designers referred to in this document are licensed professionals regulated under the Architects Act. The scope of interior design services can vary widely depending on the nature of the project, the Client and the Design team and can be provided by either licensed interior designers or architects. For some projects, such as tenant improvement projects, an 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 typically included in the Basic Services Fee. Partition planning and design and selection of colours, materials and finishes would be examples of such included services.

On the other hand, the design of highly specialized interiors or the selection and specification of furniture, fixtures and equipment, furniture inventories and move services, would normally be provided by interior designers as negotiated Additional Services. In this case the cost of the furniture, fixtures and equipment would not be included in the Construction Cost for the purposes of the Base Fee calculation.

3.3.2 Landscape Architecture

Landscape architecture is the design and planning of outdoor spaces and structures. Landscape design typically includes the design for all “soft surfaces” on the site that are not roadways or building and can also include interior spaces that provide “natural planting materials” within the building. The landscape architectural 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 in consultation with the landscape architect and the civil engineering consultant.

The construction cost of the landscape architectural work is usually 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 an Additional Service 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 Part 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 fairly 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.

The Alberta Association of Landscape Architects provides a fee guide as a helpful resource. It is found at:
AALA Fee Guide - Beta Version | AALA

3.3.3 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 an Additional Service 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 fairly 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.

3.4 Specialty Consultants

There are some services that the architect and engineers can provide through specialty professionals. The Client could engage these services separately from the Prime Consultant, however the architect or engineers could also engage them.

A coordination fee will be due for the coordination of specialty consultants and specialty services engaged by the Prime Consultant.

Examples of specialty consultants include:

3.4.1 Cost Control (Quantity Surveying)

The Client will advise the Prime Consultant of the construction budget including each of these items and the form of agreement between the two will define the obligations of the Prime Consultant and the Client in the event that the actual construction price exceeds the Client's construction budget.

A cost control consultant can be engaged to conduct research and reviews information provided by the Client or consultants to analyze the proposed project budget and to provide, to the Client, the associated implications.

Cost consultants can be engaged by either the Client or the Prime Consultant to 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 Client's budget.

On some public sector projects, the Prime Consultant will choose to engage a cost control consultant as a Basic Service to provide their estimating responsibilities for the design as it progresses. In this case, more detailed cost studies and value engineering services would be an Additional Service.

On many private sector projects, and projects using construction management, design build, IPD or P3 methodologies, cost estimating services are typically provided by the construction manager or design build contractor.

3.4.2 Transportation/Traffic Engineering

A 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.

Parking studies assess capacity, peak times, vehicle movements and parkade design considerations and may be part of a Transportation Engineer's work.

3.4.3 Acoustic Engineering

An acoustic engineer assesses the acoustic impact, either from, onto or within a project. It is important to assess the appropriate level of study and detail to suit the project's unique nature. 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 such as building system noise and vibration, 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.

3.4.4 Food Services/Commercial Kitchen Consultant

Kitchens designed to serve commercial operations or large 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;
- On site review and verification for compliance with specifications.

3.4.5 Commissioning Consultant

On more complex buildings or those with unique systems and performance requirements a commissioning consultant may be engaged. The consultant validates the constructed system performance against the system performance requirements set out by the design team and leads the systems commissioning through to the transition from construction to operation.

Commissioning consulting services can be provided by independent commissioning consultants or by design team members, but the services are not included in basic services and are an additional service. Commissioning by an independent consultant from the design team is a mandatory requirement of the LEED program.

3.4.6 Building Code Consultant

On most projects, the design team will design the building to suit the building code requirements as a Basic Service. A building code consultant and / or fire engineering consultant may be required to provide specialty building code assessments and to seek rulings on alternative approaches to building code compliance. Such measures are commonly required on large or complex buildings with public occupancies such as concert venues, arenas and airports as well as buildings with significant interconnected spaces. Building code consultants and / or fire engineering consultants are an Additional Service.

3.4.7 Cultural or Indigenous Consultants

Working with certain indigenous or other cultural groups may require additional engagement and/or consulting to better understand the unique perspectives and needs shaping the project. A specialized consultant, appropriately selected, can offer insights in both process and approach, to the benefit of these projects.

3.4.8 Historic Building Restoration, Rehabilitation or Adaptive Reuse

A specialist may be required to research the importance, design, restoration, rehabilitation and or adaptive reuse of a historic building or site and the impact of its registration with a municipal or provincial historic board. A specialist can prepare appropriate reports, designs and details to address the historically relevant aspects of the project.

3.4.9 Art Consultant

Art consultants source artwork that complements a space. They may consult with the interior designer, architect and Client to select appropriate artwork to comply with the design concept.

3.4.10 Hardware Consultant

Hardware consultants specify and detail hardware for door openings of all types in buildings so that hardware can be competitively bid, and will comply with fire, life safety, accessibility and building code requirements.

3.4.11 Security Consultant

Security consultants specify and detail electronic security system design as well as physical security 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.

3.4.12 Information Technology (It) Consultant

Clients 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 the project and the Client.

3.4.13 Energy Management Consultant

Energy management consultants consider air quality, moisture control and energy usage and efficiency and assist the mechanical engineer with design criteria in the design of heating, ventilation and air conditioning systems.

3.4.14 Vertical Transportation Consultant

Vertical transportation 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.

3.4.15 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 Client's needs. Designs consider lighting levels and placement of lights to create an effect.

3.4.16 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.

3.4.17 Theatre Consultant

A theatre consultant specializes in the detailed functional requirements of performing arts facilities. They program, plan and provide the technical requirements and specifications for theatres, auditoriums, concert halls and other performing arts facilities. Architects and Clients may engage a theatre consultant to design lighting systems, stage spaces, rigging, orchestra spaces, seating and other theatre related design elements.

3.4.18 Audio Visual Consultant

Projects may have individual requirements for audio visual requirements for planning and management of audio video and conferencing services. Audio visual consultants specialize in the design of and how to provide and install the technology throughout the building and to meet the conferencing objectives of a Client.

3.4.19 Wayfinding Signage

Wayfinding signage is designed to complement architectural spaces and the design of 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.

3.4.20 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.

3.4.21 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. A building envelope consultant may be required to address critical, complex, functional or climatic circumstances unique to a particular project.

3.4.22 Seismic And Vibration Engineering

Seismic engineers assess seismic and vibration loads and design systems to provide earthquake-resistant structures and appropriate vibration performance characteristics.

3.4.23 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.

3.4.24 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.

3.5 Additional Services Relating to Project Delivery

3.5.1 Additional Services Relating to Project Delivery

The scope of services is typically described in the contract, as are services which are not included in the base fee assumptions. The following are common changes to the scope of services which necessitate additional consultant fees:

- Changes to the Client's program, functional or site requirements and / or the project size, scope, quality, or complexity;
- Changes to the Client's construction budget from factors outside of the control of the consultant team and greater than that anticipated in the consultant's contract;
- Changes to the project schedule from factors outside of the control of the consultant team, that require the consultant team to deliver its services over a longer time frame than that anticipated at the time the consultant agreement was executed;
- Client instructions that are inconsistent with previous approvals at any stage of the project;
- Extensive documentation requirements or reporting required to support the Client's internal and/or approval processes requiring additional documentation tracking, review or production to support the Client's expertise, capacity or continuity;
- Changes to the project delivery methodology such as an increase in the anticipated number of bid packages;
- The enactment of new or revised statutes, regulations, codes, or by-laws;
- Interpretations by Authorities Having Jurisdiction which the consultant could not have reasonably foreseen, or which change previously similar rulings by the Authority;
- The Client's failure to render timely decisions and direction;
- Documentation of proposed alternatives or substitutions that require design changes or alternatives;
- Extensive Requests for Information (RFI's), unwarranted submission requirements, reporting or unreasonable documentation;
- Replacement of work which may have been destroyed or damaged through no fault of the consulting team;
- Major defects or deficiencies in the construction work or default of the construction contractor;
- Dispute resolution or adjudication proceedings between the Client and the construction contractor.

3.6 Additional Services

There are some services that could be provided as Additional Services by the consultant team or by outside consultants as best suits the Client's needs and the consultant team's expertise. Because each building design and construction project is unique, these services are not necessary on every project and therefore are not included in the Basic Services. They include:

3.6.1 Planning Services

3.6.1.1 Computer Systems Planning

Design of an IT infrastructure system that supports the Client's technology computer systems needs and may include cabling, connectivity, data blocking design and IT Room Systems designs. Each is unique to each Client and some Clients provide their own in- house expertise to design their IT systems.

3.6.1.2 Project Cost Planning

In many cases, Clients require additional services to provide cost planning of the complete project, including equipment, land and other costs. Project cost planning can provide cost analysis for any aspect of a Client's project from pre-planning through project completion.

3.6.1.3 Functional Programming

A program is required to define the needs of a building. Clients, 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.

3.6.1.4 Master Planning

The master planning process involves a comprehensive and strategic view of the form and function of the planned environment, by-laws, budgets, business cases and planning criteria.

3.6.1.5 Risk Management Planning

Risk management consultants help in the assessment, identification, monitoring and cost impact of project risks. They work with the Client and consulting team to prioritize processes and tasks to mitigate the potential impact of anticipated risks.

3.6.1.6 Scheduling

Complex, multi-phased, multi-building and multi-user buildings frequently require the expertise of a scheduling consultant. They start at the beginning of a project and itemize important tasks through to completion, working with the Client and consulting team to assess progress and future needs. The schedule is updated regularly, and changes are reviewed and documented.

3.6.1.7 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.

3.6.2 Accessibility And Facility Condition Audit Services

3.6.2.1 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 based on code requirements, standards and guidelines and client priorities.

3.6.2.2 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.

3.6.3 Analytical Services

3.6.3.1 Accounting and Financial Analysis

Financial studies identifying capital, operating and maintenance costs and sources of revenues, including capital and operational cost funding.

3.6.3.2 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.

3.6.3.3 Concept Development Analysis

Based upon the information provided by the Client, preliminary concept studies review and document development options to suit the Client’s needs.

3.6.3.4 Specific-Fit Options Analysis

A Specific-fit Options Analysis is applicable to projects that, in whole or in part, propose 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.

3.6.3.5 Technical Analysis

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.

3.6.3.6 Business Case Development

Provision of an economic feasibility analysis to determine the viability of the project within the anticipated context.

3.6.3.7 Real Estate Analysis

The identification and evaluation of potential sites and of their appropriateness for project needs.

3.6.3.8 Site Analysis

Preliminary assistance in the establishing of site related considerations, limitations and requirements for a project prior to the commencement of design services.

3.6.4 Special Advisory Services

3.6.4.1 Detailed Historical Research

Services to assess:

- Historic resource overviews, historic resource impact assessments;
- Conservation resource management;
- The historic place, heritage value and character defining elements of a site or an existing structure.

3.6.4.2 Management Consulting

Any additional management services needed by the Client, such as client project management services.

3.6.4.3 Market Research

Market studies are used to forecast the demand and real estate value of a project. Studies may include demographic studies predicting potential demand, preferences and lifestyle trends of a community, and the marketability of a project.

3.6.4.4 Rezoning Applications

To provide services relating to research and documentation as may be necessary, so as to assist the Client with the rezoning of a selected site.

3.6.4.5 Extra-Ordinary Presentations

Consultants may be asked to present the analysis and recommendations (resulting from the pre-design phase) to pre-selected Client representatives or to provide presentation material and formal presentations to groups and individuals other than those as initially agreed to by the Client.

3.6.5 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 a Client and then prescriptively describes functional, operational and purchasing requirements, tenders to multiple dealers and assists the Client 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.

3.6.6 LEED ® / Sustainability Design

There are many different sustainable design, review and certification systems and protocols. Design and or certification to any standard beyond that required by the authority having jurisdiction is an Additional Service. Common examples of certification systems the Zero Carbon Building Standard (Canada Green Building Council), LEED, Built Green, WELL, Passive House, and other 'Net-Zero' standards.

Clients may have to engage the coordinating professional to provide sustainable design consulting services or may engage specialty consultants familiar with the applicable design and certification process on the building type in question. Note that many approaches require other specialty consultants or another qualified design team member, to provide further Additional Services such as detailed energy modeling and building commissioning.

It is important for Clients to understand that there are many parties to the completion of any specific sustainable design standard with important roles played by the Client, design team members, sustainable design consultants and the reviewing body. The design team cannot therefore warrantee that any particular standard will be met.

3.6.7 Building Integrated Systems Testing (IST)

Where required, IST is carried out prior to handover of the facility to review the performance of the life safety systems, operating in concert with each other and in accordance with the design intent. IST is the final test which reviews the design, equipment selection and construction for conformance with defined performance criteria.

IST is an additional service that can be completed by design team members or a commissioning agent.

Integrated Systems Testing (IST), is review for verification that:

- Life Safety Systems are functionally integrated;
- Life Safety Systems communicate properly when faults occur;
- Life Safety Systems continue to operate as planned in a crisis;
- Weakest links in the system are identified and managed;
- All Life Safety Systems can be operated reliably.

Testing is completed in conformance with the National Building Code (Alberta Edition) and the CAN/ULC S1001 for Integrated Systems Testing of Fire Protection and Life Safety Systems. In addition to the initial testing, an integrated testing plan is created, and the facility is tested again one year after completion of the initial test.

3.6.8 Fire Alarm Witnessing and Verification

On all projects including fire alarm systems, fire alarm verification and witnessing of the testing are to be completed by the engineer of record as an Additional Service. As indicated in the Alberta Building Code STANDATA, the verification will include the testing of the fire alarm system to confirm that it is operational and installed in accordance with the National Building Code 2019(AE), CAN/ULC-S524-14 - Installation of Fire Alarm Systems, CAN/ULC-S537-13 – Verification of Fire Alarm Systems and the Electrical Regulations made pursuant to the Safety Codes Act.

The actual testing of the system is to be completed by the contractor and manufacturer's representative. The scope of work of the engineer of record includes a witness test of the fire alarm devices and system for compliance with the above noted standards and to confirm that the fire alarm system is operational as intended.

3.6.9 Energy Modeling

Energy modeling will be required to simulate the project's energy use to comply with the current National Energy Code and demonstrate the modeled efficiency for applicable systems within a building. Energy modeling required to meet the minimum requirements of the energy code is a Basic Service. Typically, some exploratory modeling and iteration may be required in advance of final design to confirm that selected equipment and systems do corroborate with energy efficiency exceeding code minimums. Additional energy modeling in excess of energy code requirements including the

assessment of cost effectiveness of investments in energy efficiency or energy modeling to suit the requirements of sustainable design certification is an Additional Service.

Energy system modeling involves the process of building computer models of energy systems to analyze them. These models often employ scenario analysis to investigate different assumptions about the technical and economic conditions at play. In Canada, the National Energy Code of Canada for Buildings (NECB) was developed as part of a commitment to improving the energy efficiency of Canadian buildings and reducing greenhouse gas emissions. The NECB applies to large buildings and sets out the technical requirements for the energy-efficient design and construction of new buildings and additions. Energy modeling may be required to demonstrate compliance with NECB and other local and national energy efficiency standards and codes.

Many of Alberta's Authorities Having Jurisdiction (AHJs) now require a form of energy modeling to be completed as part of the permitting process. This modeling assesses technical feasibility as well as cost-effectiveness, which is helpful in assessing the cost effectiveness of investments in energy efficiency. For most building types and contexts, it is considered good practice to conduct energy modeling in the earlier phases of design to provide evidence that performance requirements can be met by the proposed design, and to analyze potential alternatives for building systems and assemblies for performance impact and cost. A higher degree of energy efficiency may be valuable as it contributes to reduced operating cost and operating greenhouse gas emissions. Energy modeling often interacts with other important parts of holistic building design.

3.6.10 Detailed Cost Analysis, Life Cycle Analysis and Value Engineering

Cost consultants can be engaged by either the Client or the Prime Consultant to 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 Client’s budget.

On some public sector projects, the Prime Consultant will choose to engage a cost control consultant as a Basic Service to provide their estimating responsibilities for the design as it progresses.

More detailed cost studies, cost reduction evaluations, life cycle analysis and detailed value engineering services are available as be an Additional Service as are 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. Such studies can assess the on-going maintenance and repair costs of a building forecast over the life of the building.

Value engineering is a systematic and organized approach to providing the necessary functions in a project at the right cost. Value engineering is an approach to be take as the design progresses to maintain the design with the appropriate budget however, in some cases value engineering comes in as a separate exercise outside the control of the consultant or after key sign-off milestone of the project.

3.6.11 Alternative Energy Systems

The design team can provide an overview of applicable alternative energy systems (solar, geothermal, etc.) options for incorporation into building projects within Basic Services. A detailed study including energy modeling, an assessment of energy produced and the cost effectiveness of, or payback for, alternative energy systems would be an Additional Service.

Where the Client decides to proceed with an alternative energy system and where the cost of the system is included in the construction cost on which the fee is based, the fees to design the installation would be included in Basic Services.

3.6.12 Radon

Health Canada recognizes long term exposure to elevated levels of Radon to be a health concern, increasing risk of lung cancer. There is no way to predict what the level of Radon in a completed building will be. Only a properly applied long term test after occupancy will accurately confirm Radon levels.

Provisions for the rough-in of a Radon Mitigations system will be provided as a basic service by the design team to facilitate the installation of a future Radon Mitigation system if determined to be required after testing.

Design, inspection and testing of an actual Radon Mitigation system will be engaged by the Client to be completed under direction of a Canadian National Radon Proficiency Program (C-NRPP)- Certified Radon Mitigation / Measurement Professional after occupancy.

3.6.13 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, dependent on the number and complexity of bid packages, over and above the basic services fee.

3.6.14 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 or using specialty camera systems. architects and /or specialty companies can provide this service.

3.6.15 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.

3.6.16 Building Information Modeling (BIM)

Building Information Modeling is a three-dimensional 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. LOD 300 is the maximum level for critical elements only, anything above LOD 300 would be considered as an additional service as it would be typically carried out by the contractor during construction, or on the Client's behalf for maintenance purposes.

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

- Existing condition modeling;
- Detailed photo realistic visualizations, 3D design and imagery and 3D simulations;
- Quantity identification and take-offs;
- Physical element conflicts review;
- Detailed lighting analysis;
- Shop drawing support;
- Detailed planning for phased construction;
- Record document modeling;
- Fabrication and construction machining support;
- Room data and equipment documentation;
- Facility management post occupancy data entry and 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.

IBC Documents

The Institute for BIM in Canada (IBC) publishes a BIM Contract Appendix which is helpful as a detailed guide to the provision of BIM services, available here. The parties may wish to use the IBC materials to document the anticipated provision of BIM services.

3.6.17 Visualization Services and Models

The design team can provide basic and enhanced visualization services. Basic representations including sketches, renderings or computer model representations which the design team produces in the normal course of design services are included in Basic Services.

Detailed renderings produced for the Client's use would be an Additional Service, as is the production of a physical model.

3.6.18 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 Client 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 based on lowest bid. When working with a contractor whose qualifications and approach are not appropriate for the project, the Client may experience higher costs and the architect may need to provide Additional Services such as those noted above.

3.7 Alternative Project Methodologies

3.7.1 Private Public Partnerships (P3s) and Design Build Projects (DB)

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.

3.7.1.1 General Guidelines primarily for P3s and Design Build projects include the following:

Overall Project:

- 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);
- An overall project 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. Other terms should include waiver of liquidated damages by all parties and the use of established contracts such as CCDC 15.

Pursuit Phase:

- The initial pursuit phase services and compensation are commonly defined in an Early Works Agreement;
- 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 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 is recommended to be billed and paid as the work is being undertaken and not held until the end of pursuit phase;
- 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.

Post-Pursuit, Implementation Phases:

- 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 success bonus is recommended to be included to account for deferred profit on successful pursuit plus to cover lost profit from unsuccessful pursuits;
- 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.

3.7.2 Design Build Projects (CCDC 14 – Design-Build Stipulated Price Contract; CCDC 15 – Design – Builder/Consultant Contract (Subcontract))

- 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.

3.7.3 Integrated Project Design (IPD) (CCDC 30 – Integrated Project Delivery Contract)

IPD is a collaborative approach to design and construction that includes the Client, and design and construction team members in a multiparty contract to promote collaborative efforts and enhance overall project performance. It encompasses phases from pre-design, design, and construction through operation, emphasizing transparency and cooperation throughout the project's lifecycle. Risk and reward sharing are key components, with the intent that project success translates into mutual benefits and that challenges are collectively faced. IPD agreements define the applicable fee, profit, and scope terms. It’s important to consider the specific IPD contract best applicable to project, team, and regional requirements. Two examples are CCDC30 and the Hanson-Bridgett Contract.

3.8 Other Services

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

End of Fee and Scope of Services Reference 2024