



Scope of Services

Part 1 – BASIC SERVICES FOR BUILDING PROJECTS IN ALBERTA

Part 2 – DETERMINING FEES FOR BASIC SERVICES

Part 3 – DEFINITIONS AND ADDITIONAL INFORMATION
RELATED TO A & E SERVICES

2010 Version 1.0

PREAMBLE

In 2009 the Consulting Architects of Alberta (CAA) and the Consulting Engineers of Alberta (CEA) agreed that the 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 (APEGGA), needed to be updated and brought under the joint authorship of the CAA and CEA, consistent with their role as advocacy bodies. Determination of fees for architectural, engineering and interior design services no longer falls with the jurisdiction of the AAA and APEGGA in their role as regulatory bodies for their respective professions, but services provided by architects and engineers do.

This is the first edition of this document. It is the intention of CAA and CEA to update this document annually; consistent with emergent trends and input from private and public sector clients and members.

Overall there are three distinct, yet interconnected parts;

PART 1: BASIC SERVICES FOR BUILDING PROJECTS IN ALBERTA

PART 2: DETERMINING FEES FOR BASIC SERVICES

PART 3: DEFINITIONS AND ADDITIONAL INFORMATION RELATED TO A & E SERVICES

PART 1: BASIC SERVICES FOR BUILDING PROJECTS IN ALBERTA

Architects, engineers and interior designers provide building design services within accepted professional norms, governing standards and legislation such as building codes, land use bylaws and similar regulations.

The intent of Part 1 is to describe the scope of basic services and standard terms of agreement for a normal building design process. Effective communication is encouraged between the Client and the Architect so that both parties understand the nature of the relationship between parties, the scope of design and construction services to be provided and the determination of appropriate professional fees for these services.

PART 2: DETERMINING FEES 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 architect and consultants based on merit; the experience and expertise of the firm and the team members proposed, compatibility, creativity, approach and methodology: qualification-based rather than fee-based selection.

Common to the procurement of other professional services, a low fee is not a reflection of good value and is often not in the best interest of a client. Professional complaints concerning architects, engineers and interior designers often have a common denominator of fees that were not commensurate with basic services and vice versa. Appropriate professional fees are required by design firms to deliver high-quality services to their clients.

PART 3: DEFINITIONS & ADDITIONAL INFORMATION RELATED TO A & E SERVICES

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

This section deals with the additional scope of services associated with these factors and provides insight and guidance to clients and member firms 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.

Examples of such additional services include: functional programming, sustainable design and certification (LEED certification), building information modeling (BIM), energy modeling, 3D visualization, different methods of construction procurement such as fast-track construction management, documentation of existing facilities and preparation of record drawings to name a few.

IN CLOSING

The CAA & CEA gratefully appreciate the permission to use and modify existing document from the Alberta Association of Architects, the Association of Professional Engineers, Geologists and Geophysicists of Alberta, the Consulting Engineers of Alberta and the Ontario of Association of Architects.

CAA and CEA Fees Joint Task Force, December 7, 2010.

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Part 1

BASIC SERVICES FOR BUILDING PROJECTS IN ALBERTA



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1.0 THE PROFESSIONAL RELATIONSHIP

1.1 GENERAL

Selection of a prime consultant 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 to a large extent on the prime consultant and consultant team. Clients are encouraged to select a team of architects, engineers and interior designers based on a careful evaluation of qualifications. This document describes the basic and additional services a consulting team provides, the fees recommended for these services and the recommended conditions of engagement. The services and fees described are based on the premise that:

- A professional is required to deliver the minimum scope of service necessary to protect the public.
- Each project requires at least a minimum level of scope of service 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.
- Compensation commensurate with the scope and quality of professional services is a critical factor in the success of building projects.

1.2 SELECTING A PRIME CONSULTANT

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

The consultant team typically includes the architect, structural, mechanical and electrical engineers, interior designers, and may also include specialty consultants. Dependant on the nature of the project, the client will ask that the consultant team be led by an architectural, engineering or interior designer as the prime consultant. The client will typically determine the make-up of the team; roles and scope of services to be provided by project team members. The client will then proceed with a selection process for the architectural, engineering and interior design team.

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
 - Suitability for the particular project, commitment to the project schedule and budget
- Confirmation of fee for basic and additional services and reimbursable expenses as set out in this document

2.0 AGREEMENT BETWEEN CLIENT AND PRIME CONSULTANT

2.1 CONTENT OF AN AGREEMENT

A prime consultant provides the most effective service when there is a clear understanding between client and prime consultant about their respective involvements. An agreement between the two parties is essential to clarify roles and obligations and eliminate ambiguity; a written agreement is a regulatory requirement of the *Architects Act* and the *Engineering, Geological and Geophysical Professions Act*. Regardless of the form of agreement used, the client/prime consultant agreement must fully explain:

- The scope of the project including the anticipated schedule and budget;
- The scope of basic services to be provided under the agreement;
- The responsibilities and obligations of both prime consultant and client;
- The professional liability terms and obligations;
- The fee for the basic services and
- The potential scope and compensation approach for additional services (not part of the basic services).

Documents have been developed to protect the interests of both the client and the prime consultant, and the prime consultant and the sub consultants. Use of these documents, based on recognized standards, is recommended to all CAA and CEA member firms. These documents include:

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

There are also appropriate agreements in place for the sub consultants and CAA/ CEA member firms are recommended to use the following:

- Canadian Standard Form of Agreement Between Architect and Consultant, NPP Document No.9
- Agreement Between Engineer and Sub consultant, ACEC Document No. 32

The value in using these documents at least as a basis is that they are fully coordinated and integrate with the construction contracts typically referred to as CCDC documents.

2.2 INSURANCE COVERAGE

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 prime consultant, 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

2.3 PROJECT COORDINATION

Coordinating the work of the consultant team is not only vital to the successful completion of a project but is a legal requirement under the Alberta Building Code. This coordination is usually undertaken by the architect or professional engineer leading the team of design consultants and appointed by the client as prime consultant. Under the Alberta Building Code, this is referred to as the “coordinating professional”

The prime consultant (coordinating professional) coordinates the design and construction contract administration of the project; informs sub-consultants of their responsibilities and reviews the progress of their work. The coordinating duties of the prime consultant benefit the client. The prime consultant must be compensated fairly for performing this role whether the sub-consultants and specialists are retained by the prime consultant or directly by the client.

Compensation for the coordination role is usually called the coordination fee and is part of the basic scope of services and therefore part of the fee. Internally, between prime consultant and sub-consultant the coordination fee varies depending on the complexity of the project, sub-consultant’s discipline, the magnitude of the coordination activity, and the level of coordination undertaken by the prime consultant and the sub-consultants. Traditionally the coordination fee has been as much as 20%. However with the emergence of BIM and modern methods of project delivery this is being shared amongst the entire team to support more collaborative approaches. The prime consultant and sub-consultants will agree on the allocation of coordination fees and document their understanding in a separate agreement between the prime consultant and each sub-consultant.

2.4 SUB-CONSULTANTS

Sub-consultants are usually retained by the prime consultant to perform their respective portion of the basic services outlined in this document. Specialist consultants may also be required for the project team. They are usually retained as additional service, by a separate allowance or directly by the client to be part of the project team. CAA and CEA mutually support the notion of fair compensation commensurate with the level of professional services provided, the prime consultant and the sub-consultant are free to reach their own agreements on what ‘fair’ means. Sub-Consultant fees should be based on properly prepared cost estimates or reasonable estimates that take into account the complexity and special requirements of the Project. Before the agreement with the prime consultant is formalized, it is in the client's best interests to ensure that contracts arranged between the prime consultant and other sub-consultants are appropriate to meet client and project needs. There should be formal contracts, with clear written definitions of:

- The scope of the project including the anticipated schedule and budget;
- The scope of specialty services to be provided under the agreement;
- The responsibilities and obligations of both prime consultant and client;
- The professional liability terms and obligations;
- The fee for the specialty services and
- The potential scope and compensation approach for additional services (not part of the specialty services anticipated).

2.5 PROFESSIONAL REVIEW OF CONSTRUCTION

The *Safety Codes Act* of Alberta and its regulation the Alberta Building Code requires that the prime consultant (in a coordinating professional role) along with sub consultants (or other suitably qualified persons) perform reviews to determine general conformance with construction documents.

All member firms should have professional knowledge of their legal obligations under the *Safety Codes Act* and its regulation the *Alberta Building Code*. The level of professional involvement found in the current *Alberta Building Code* is considered the minimum required as basic services.

3.0 BASIC SERVICES

3.1 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 prime consultant is established. The basic services defined for the prime consultant must reflect the prime consultant's duty both to satisfy the expectations of the client and to protect public safety. The basic services contained in this document are based on the following 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 either documented through a Project Brief/Description, Functional program or similar description.
- The basic services provide a design that meets the requirements of the governing codes and regulations.
- Sub-consultants make the prime consultant aware, at the beginning of a project, of any special scope requirements that will affect their professional service or the professional service of other sub-consultants.
- Each sub consultant is responsible for their scope of services based on their qualifications and expertise, and takes part in determining an adequate fee in relation to that scope.
- Each sub-consultant is responsible for the design and review of aspects of the project falling within that sub-consultant's 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.

3.2 BASIC SERVICES BUILT ON THE CANADIAN HANDBOOK OF PRACTICE

There are many descriptions of the scope of basic services of architects and engineers. For the purposes of this document, the CAA and the CEA have determined that the services described in the RAIC Canadian Handbook of Practice (CHOP²), current edition, will be accepted as the minimum scope of services the consultant team is expected to provide on a phase by phase basis. Each member should have a current set in their office for reference and communication purposes.

The CAA and CEA were of the opinion that instead of recreating a set of basic services CHOP was extremely valuable in that it describes in detail not only what each stage is, but what each stage should include as to process and deliverables. The following summary refers to the CHOP Volume 2 Chapter 2.3.1 Management of the Project.

² The CHOP refers to "Scope of Services" which should be considered as interchangeable with "Basic Services" in this document. For clarity and brevity see CHOP 31-1, page 291 of the pdf version.

1. PRE-AGREEMENT PHASE³

Upon receipt of notification from a prospective client, undertake tasks prior to a submission or execution of an agreement.

2. SCHEMATIC DESIGN PHASE

Part A — *Tasks prior to starting the schematic design phase*

Part B — *Tasks to be started after completion of Part A*

3. DESIGN DEVELOPMENT PHASE

Part A — *Tasks prior to starting the design development phase*

Part B — *Tasks during the design development phase*

4. CONSTRUCTION DOCUMENTS PHASE

Part A — *Tasks prior to starting the construction documents phase*

Part B — *Tasks during the construction documents phase*

5. BIDDING AND NEGOTIATION PHASE

Part A — *Tasks during the bidding and negotiation phase*

6. CONTRACT ADMINISTRATION PHASE

Part A — *Tasks to be completed prior to start of construction and after execution of contract(s)*

Part B — *Tasks during the contract administration phase*

Part C — *Ongoing scheduled tasks during the contract administration phase*

Part D — *Project take-over tasks*

7. POST-CONSTRUCTION SERVICES

This scope of services is reflected in RAIC Document #6; the Canadian Standard Form of Agreement between Architect and Client. This form of agreement is the recommended form of agreement of this document.

3.3 SUMMARY CHART

The following Basic Services Summary Chart is a summary of each stage found in Section 4.3. The Chart shows the basic minimum services, potential additional services and special consultant's services that may be required for the phases of a typical project. The Basic Services Summary Chart is designed to assist the client and prime consultant to determine the scope of services to be provided. It also can provide a useful attachment to short form letter agreements. It is highly recommended that the client and prime consultant review each phase of the project, identifying the basis and additional services required. These services then become the basis for the agreement between the client and prime consultant.

3.1 Designated Services Summary Chart

The Designated Services Summary Chart lists the scope of work on a typical project and the services the consultant team is expected to provide on a phase of work basis.

PRE-DESIGN	SCHEMATIC DESIGN	DESIGN DEVELOPMENT	CONSTRUCTION DOCUMENTS
<p>Basic Minimum Services</p> <ul style="list-style-type: none"> ● Site Analysis ● Presentations ● Concept Development Study ● Agency Review ● Off-Site Utility Review ● Project Scheduling ● Project Budgeting ● Owner-Supplied Data Coordination ● Programming Review ● Preparation of Owner & Consultant Services Agreement 	<p>Basic Minimum Services</p> <ul style="list-style-type: none"> ● Project Administration ● Disciplines Coordination & Document Checking ● Agency Consulting, Review & Approval ● Owner Supplied Data Coordination ● Architectural Design & Documentation ● Structural Design & Documentation ● Mechanical Design & Documentation ● Electrical Design & Documentation ● Materials Research & Specifications ● Project Scheduling ● Construction Cost Updates 	<p>Basic Minimum Services</p> <ul style="list-style-type: none"> ● Project Administration ● Disciplines Coordination & Document Checking ● Agency Consulting, Review & Approval ● Owner Supplied Data Coordination ● Architectural Design & Documentation ● Structural Design & Documentation ● Mechanical Design & Documentation ● Electrical Design & Documentation ● Materials Research & Specifications ● Project Scheduling ● Construction Cost Updates 	<p>Basic Minimum Services</p> <ul style="list-style-type: none"> ● Project Administration ● Disciplines Coordination ● Agency Consulting, Review & Approval ● Owner Supplied Data Coordination ● Architectural Drawings & Specifications ● Structural Drawings & Specifications ● Mechanical Drawings & Specifications ● Electrical Drawings & Specifications ● Bidding Documents & Scheduling ● Project Schedule Update ● Construction Cost Update ● Application for Building Permits
<p>Additional Services</p> <ul style="list-style-type: none"> ○ Re-zoning Applications ○ Presentations ○ Soils Report & Surveys ○ On-Site Utility Studies ○ Market Studies ○ Economic Feasibility Studies ○ Specific Fit Programming ○ Existing Facility Surveys ○ Site Analysis & Selection 	<p>Additional Services</p> <ul style="list-style-type: none"> ○ Civil Design & Documentation ○ Landscape Design & Documentation ○ Interior Design & Documentation ○ Coordination of Specialist Services 	<p>Additional Services</p> <ul style="list-style-type: none"> ○ Civil Design & Documentation ○ Landscape Design & Documentation ○ Interior Design & Documentation ○ Coordination of Specialist Services 	<p>Additional Services</p> <ul style="list-style-type: none"> ○ Provision of Building Permits ○ Civil Design & Documentation ○ Landscape Design & Documentation ○ Interior Design & Documentation ○ Coordination of Specialist Consultants ○ Special Bidding Documents & Scheduling
<p>Special Consultants' Services</p> <ul style="list-style-type: none"> ○ Legal Survey ○ Geotechnical Analysis 	<p>Special Consultants' Services</p> <ul style="list-style-type: none"> ○ Civil Design Concepts ○ Landscape Concepts ○ Statements of Probable Costs ○ Interior Design Concepts ○ Coordinate Specialists 	<p>Special Consultants' Services</p> <ul style="list-style-type: none"> ○ Civil Design Development ○ Landscape Development ○ Detailed Construction Cost Estimates, Quantity Surveys ○ Interior Design Development ○ Coordinate Specialists 	<p>Special Consultants' Services</p> <ul style="list-style-type: none"> ○ Civil Construction Documents ○ Landscape Documents ○ Detailed Construction Cost Estimates, Quantity Surveys ○ Interior Design Documents ○ Coordinate Specialists

Key

- Basic Minimum Services
- Additional Services

Designated Services Summary Chart (continued from previous page)

BIDDING OR NEGOTIATIONS	CONSTRUCTION AND POST-CONSTRUCTION CONTRACT ADMINISTRATION	SUPPLEMENTAL SERVICES
<p>Basic Minimum Services</p> <ul style="list-style-type: none"> ● Project Administration ● Bidding Materials ● Addenda ● Bidding & Negotiations ● Analysis of Alternates & Substitutions ● Bid Evaluation ● Construction Contract Agreements <p>Additional Services</p> <ul style="list-style-type: none"> ○ Special Bidding Services ○ Coordination of Specialist Services <p>Special Consultants' Services</p> <ul style="list-style-type: none"> ○ Issue Bidding Documents ○ Issue Addenda ○ Bid Evaluation 	<p>Basic Minimum Services</p> <ul style="list-style-type: none"> ● Project Administration ● Disciplines Coordination (Checking) ● Agency Consulting, Review & Approval ● Owner Supplied Data Coordination ● Office Construction Administration ● Construction Field Observation ● Field Observation Coordination ● Quotation Requests & Change Orders ● Project Schedule Monitoring ● Construction Cost Monitoring ● Project Closeout & Substantial Performance ● Systems Startup ● Maintenance & Operational Programming ● Review of Record Drawings, Operations & Maintenance Manuals ● Startup Assistance ● Year-End Warranty Inspection <p>Additional Services</p> <ul style="list-style-type: none"> ○ Project Representation & Clerk-of-Works ○ Supplemental Documents ○ Coordination of Specialist Services ○ Additional Administration ○ Safety/Prime Contractor Responsibilities ○ Application for Occupancy Permits ○ Building Commissioning ○ Deficiency Inspections Beyond Final Inspection ○ Redrawing of Record Drawings ○ Preparation of As-Built Documents ○ Preparation of Operations & Maintenance Manuals ○ Project Evaluation Services <p>Special Consultants' Services</p> <ul style="list-style-type: none"> ○ Civil Construction Inspection ○ Landscape Inspection ○ Detailed Cost Accounting 	<p>Additional Services</p> <ul style="list-style-type: none"> ○ Special Studies ○ Renderings ○ Model Construction ○ Life Cycle Cost Analysis & Value Analysis ○ Quantity Surveys ○ Detailed Construction Cost Estimates ○ Energy & Environmental Studies & Reports ○ Environmental Monitoring ○ Tenant-Related, Services ○ Graphics Design ○ Fine Arts & Crafts Services ○ Special Furnishings Design Investigation & Research ○ Non-Building Equipment Selections ○ Project Promotion & Public Relations ○ Leasing Brochures ○ Expert Witness & Arbitrator ○ Computer Application ○ Presentations ○ Reproduction, Printing & Copying ○ Travel ○ Legal Consulting ○ Contractor Insolvency ○ Computer Modeling ○ Providing Special Insurance ○ Research & Development & Innovative Design ○ Fund Raising ○ Materials & Systems Testing ○ Photographic Records ○ Coordination with Non-Design Professionals ○ Safety/Prime Contractor Responsibilities

● Basic Minimum Services ○ Additional Services

Part 2

DETERMINING FEES FOR BASIC SERVICES



consulting
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1.0 DETERMINING THE BASIC FEE

1.1 INTRODUCTION

When the client and prime consultant have agreed on the basic services for the project and identified specific requirements, they then arrive at an appropriate fee for the professional services to be provided. Fees for basic services are directly related to the building typology, specific requirements and other factors identified.

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

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

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

1.2 PERCENTAGE BASED FEE

The percentage based fee establishes the fee as a percentage of the Construction Cost. This calculation takes into account both Construction Cost of the work and Building Category.

1.3 CONSTRUCTION BUDGET

The Construction Budget is the Client's combined estimate of the Construction Cost. It includes; the construction manager's or general contractor's fees and general requirement costs; design, escalation and construction contingencies; and value-added taxes. Where there is no construction budget for all or part of the project, or if the construction does not proceed, the Construction Cost is the estimated cost at market rates at the estimated time of construction, as initially determined by the client and prime consultant. The client should clearly understand, and the agreement between the parties should state, that¹:

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

¹ The two bulleted definitions are taken verbatim from the GC's found in RAIC #6. This is the generally accepted definition for Project Budget and Construction Budget.

- Neither the prime consultant 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 prime consultant cannot and does 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. Fees must be revised to include the Construction Cost of change orders. The construction contingency must be included in the Construction Cost used for the purposes of determination of the fees.

Percentage fees are commonly turned into fixed fees with the agreement of the client and the consulting team. It is recommended that the fee is fixed at the completion of Design Development and approval of that phase of work and the client's construction budget. It should never be any later than the completion of the Construction Documents phase when the pre-tender estimate and construction documents are reviewed and agreed to by the client but before the bid phase. Retroactive adjustments to fee based on bid price are not recommended for completed work. The fluctuations of the economic and tendering climate may create a punitive situation for the 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 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 definition³ used for the basis of determination of fees is 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, building permit fees, changes, construction management fees or other fees for the coordination and procurement of construction services, and all applicable taxes, including the full amount of value-added taxes, whether recoverable or not.

The Construction Cost of the work does not include "soft costs" such as:

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

1.4 REIMBURSABLE EXPENSES

The prime consultant is entitled to reimbursement for all reasonable expenses. Such expenses are discussed and agreed to when the client/prime consultant agreement is being defined. Reimbursable expenses are normally approved in advance by the client. Typically, reimbursable expenses include costs such as:

³ RAIC Document Six – 2006 Edition, release date: February 2008 D – 1 of 2.

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

Traveling time outside the prime consultant's community to the project is 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 clients carry a reimbursable expenses allowance, typically between 6% and 8% of the total fees, in the project budget. In this way, estimates of reimbursable expenses do not become a factor in selection of the consulting team.

1.5 ALLOCATION OF PROJECT FEES

The fees for basic services are typically allocated as follows for more traditional methods of project delivery:

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

For projects that will include more modern methods of project delivery such as Integrated Design, Building Information Modeling, Integrated Project Delivery, etc. The following percentages would be allocated:

- | | |
|---|-------|
| • Pre-Agreement & Schematic Design | 25.0% |
| • Design Development | 25.0% |
| • Construction Documents | 25.0% |
| • Bidding &Negotiation | 5% |
| • Contract Administration & Post Construction | 20% |

For specific projects, it may be appropriate to vary these percentages, subject to agreement with the client.

Client and prime consultant should agree on the terms and schedule of payment when the client/prime consultant agreement is being defined. The client should not delay payment of fees to the prime consultant without just cause and withholding of fees is not recommended. If the withholding of fees becomes essential to a contract, it is recommended that the holdback be released immediately when the phase is completed during construction. In addition, during the construction phase, the holdback should be released periodically and at least at 50% and 100% completion. If any portion of the fee is retained, the client should pay the consultant interest on the holdback amount at a rate previously agreed in the client/prime consultant agreement.

The prime consultant must pay the consultant team for their services promptly on receiving payment from the client. Sub-consultants should be informed of the payment terms in the prime consultant's agreement.

1.6 ADDITIONAL SERVICES / PROJECT VARIABLES

The scope of services required 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 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. Emergent areas of additional service include LEED certification, P3 and Design-Build procurement and BIM.

In an effort to bring consistency to the development of a 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. It is intended that CAA and CEA member firms can be consistent in providing potential clients with fee quotations. 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. These are considered services over and above those basic services included in the basic services fee and additional services fees should not be a factor in determining award of a commission.

1.7 RE-USE OF DOCUMENTS OR DESIGN

To prevent re-use of drawings, specifications and other documents prepared by a prime consultant, an appropriate clause is inserted in the client/prime consultant agreement. The clause states that the documents are the property of the prime consultant and are not to be used on any other project without prior written consent and payment of the appropriate fee.

1.8 REPEAT WORK

From time to time, a project is undertaken as a repeat project for the same client, 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 basic fee, it is recommended that a repeat fee be calculated. The fee for a repeat project is expected to be between 50% and 100% of potential full-service charges. The repeat fee consists of four components:

- Basic charges
- Redesign charges
- Bidding or negotiation services
- Contract administration and post-construction charges.

BASIC CHARGES

On all repeat projects, the prime consultant receives compensation. This compensation is 25% of the potential full service charges for the new project, to cover:

- Negotiation and drafting of a new client/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.

REDESIGN CHARGES

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

BIDDING OR NEGOTIATION SERVICES

To cover bidding procedures or negotiation of the construction contract including assistance with contract drafting, the prime consultant receives an amount of 5% of the potential full service charges for the project.

CONTRACT ADMINISTRATION AND POST- CONSTRUCTION CHARGES

To cover contract administration and field services during construction, services during construction and services during the building warranty period, the prime consultant receives an amount of 20% of the potential full service charges for a new project.

2.0 BUILDING CATEGORIES

2.1 BASIC CATEGORIES

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

The following is a list of types of building by category for use with the Schedule of Recommended Minimum Percentage Fees for Basic Services included as 3.3:

CATEGORY 1

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

CATEGORY 2

- Apartment, Multiple Residential, Row Housing, Cluster and Townhousing
- 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, Ice Arena, Recreation Building, Physical Education Building
- Zoo, Animal Hospital, Botanical Garden
- Licensed Day Care
- University, College Non-Technical Classroom Building and Vocational Senior High School
- 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 and Custom Residence Swimming Pool, Fraternity House, Official Government Residence
- Decorative Work, Exhibition Display, Public Garden, Promenade, Fountain
- Commemorative Monument, Funeral
- Monument
- Air Traffic Control Tower, Control Centre and Flight Service Station
- Tenant Space Planning
- Restoration of Historic Monument or Building
- Alterations, upgrade and/or modernization to existing building in Categories 1 through 6

2.2 ALTERATIONS AND RENOVATION

For alterations and renovations to buildings in Category 7, the fee is the percentage fee in 3.0 Percentage Fees for Basic Services, plus 2%. On projects for which the additional complexity of the alteration or renovation work is not appropriately reflected with this 2% increase in the basic service fee an additional service / project variable fee will be determined to suit the complexity of the existing building considerations.

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

3.0 PERCENTAGE FEE CALCULATION

3.1 CALCULATING THE BASIC SERVICE FEE

The Schedule of Recommended Minimum Percentage Fees for Basic Services included as 3.3 below defines the recommended minimum fee 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 (e.g., the total cost of work is \$2,300,000 which is greater than \$1,200,000 but less than \$5,000,000, the calculation on the first amount of the cost be governed by the percentage for the lower division and the remaining amount by the percentage for the higher division. For example: On a project of \$2,300,000 in Category 5, the first \$1,200,000 would be at 10.43%; the remaining \$1,100,000 at 10.15%.

3.2 ADDITIONAL SERVICES / PROJECT VARIABLES FEE

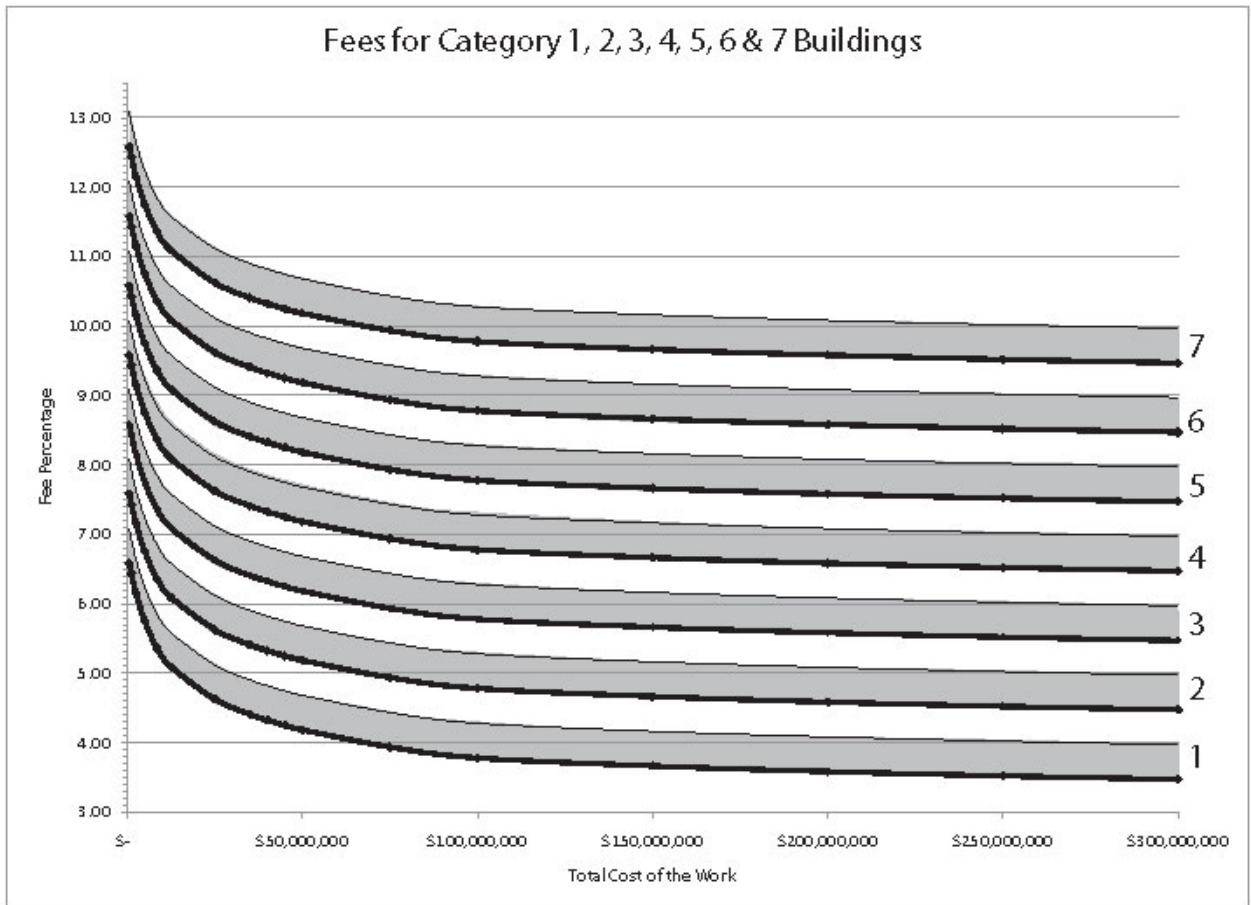
The client and the design team will review and agree upon the applicable additional services / project variables and the commensurate additional fee as described in Part 3 of this document. The basic services fee and the additional services / project variables fee are added together to determine the total fee. The 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.

3.3 SCHEDULE OF RECOMMENDED MINIMUM PERCENTAGE FEES FOR BASIC SERVICES

Division	Category of Building						
Total Cost of the Work	1	2	3	4	5	6	7
On the first \$500,000	Fees can be negotiated as a percentage, fixed or hourly rate basis						
On the first \$600,000	6.58	7.58	8.58	9.58	10.58	11.58	12.58
On the first \$1,200,000	6.43	7.43	8.43	9.43	10.43	11.43	12.43
On the first \$2,500,000	6.15	7.15	8.15	9.15	10.15	11.15	12.15
On the first \$5,000,000	5.75	6.75	7.75	8.75	9.75	10.75	11.75
On the first \$8,500,000	5.37	6.37	7.37	8.37	9.37	10.37	11.37
On the first \$12,500,000	5.08	6.08	7.08	8.08	9.08	10.08	11.08
On the first \$25,000,000	4.61	5.61	6.61	7.61	8.61	9.61	10.61
On the first \$35,000,000	4.42	5.42	6.42	7.42	8.42	9.42	10.42
On the first \$50,000,000	4.18	5.18	6.18	7.18	8.18	9.18	10.18
On the first \$75,000,000	3.95	4.95	5.95	6.95	7.95	8.95	9.95
On the first \$100,000,000	3.78	4.78	5.78	6.78	7.78	8.78	9.78
On the first \$150,000,000	3.76	4.66	5.66	6.66	7.66	8.66	9.66
On the first \$200,000,000	3.58	4.58	5.58	6.58	7.58	8.58	9.58
On the first \$250,000,000	3.52	4.52	5.52	6.52	7.52	8.52	9.52
On the first \$300,000,000 and above	3.47	4.47	5.47	6.47	7.47	8.47	9.47

3.4 GRAPH OF PERCENTAGE FEES

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



3.5 HOURLY RATES

In some instances consultants may be called on to provide services which cannot be easily quantified as fixed fees or with no direct correlation to Construction Cost. Examples of such services 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 basic services and thus fee calculation provided previously. A time-based fee is often the best option in this situation; fees are determined as the sum of the hourly rates for each project staff member multiplied by the time staff members spend on the project.

The CAA and CEA will issue annual updates for both classifications of professional and technical staff along with appropriate rates for the calendar year. These are available on the respective websites of the CAA and CEA.

Part 3

DEFINITIONS & ADDITIONAL INFORMATION RELATED TO A&E SERVICES



2010 Version 1.0

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1.0 INTRODUCTION TO PART 3

1.1 PREAMBLE

The design and construction industry as a whole is experiencing rapid and significant change. Many factors outside of the scope of basic services are important determinants when calculating building design fees. Therefore this section deals with the additional scope of services associated with these factors. Because there are numerous variations in terminology currently being used by different organizations, institutions and government bodies to describe the broad array of additional services, definitions are important to help clarify expectations for the delivery of these various services.

Since there are no real common or consistent industry standards for most additional service deliverables, there is a wide range in the quality and accuracy of information provided by clients to consultants at the start of the design phase and in the expectations of clients for many additional service deliverables. The success or failure of any project is dependent, to a large extent, on the quality and completeness of the activities that precede the design phase and on enhanced (additional) services provided during the design and construction phase. The three most common measures of the success (or failure) of a project are:

- Scope - Did the project meet the performance expectations of the client or not?
- Cost - Was the project completed within the budget or over the budget?
- Schedule - Was the project completed on time or was it late?

1.2 INTENT

Part 3 is intended to provide insight and guidance to clients and member firms 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. It has two major sections, which are focused on providing descriptions of services and levels of service deliverables for two categories of additional services. The two categories of services are Pre-design Services and Optional Services

Pre-design services (often referred to as ‘upstream services’ or ‘front-end planning services’) are services in support of activities, which are normally completed prior to commencing the design of a building project. Some examples of pre-design services include:

- Functional programming,
- Documentation of existing facilities (facility audits & building condition reports),
- Land surveys, geotechnical surveys and analysis,

- Historical research,
- Options analysis, economic feasibility studies, etc.

Optional Services are all other additional services not included in basic services. Some examples of such additional services include:

- Sustainable design and LEED™ certification,
- Building information modeling (BIM),
- Energy modeling, 3D visualization,
- Different methods of construction procurement such as fast-track construction management, preparation of record drawings, etc.

1.3 LEVEL OF EFFORT

Since the level of effort varies for many additional services, dependant on the type, size or phase of the project, some of the service descriptions include definitions for more than one level of service to help clarify the scope, expected deliverables and level of effort required.

1.4 CLIENT RESPONSIBILITIES

It is generally the responsibility of the client to:

- Define the detailed scope of the project,
- Establish a reasonable budget that is aligned with the project scope,
- Ensure that available funding is aligned with the expected scope and quality of the project and
- Determine a realistic schedule for the completion of the design and construction of the project.

If a client does not have sufficient time, knowledge or expertise to properly complete all the required pre-design activities, using in-house resources, 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 client should not overlook the value the consultant team can provide in assisting with these activities.

2.0 MANDATORY ADDITIONAL SERVICES

2.1 There are some services that the architect and the engineers cannot perform their services to a client unless they have certain activities that must be provided by others. Often these are services than only can be provided by certain qualified individuals, as most insurers of architects and engineers will not cover them for services performed in these areas, they are:

i. Geotechnical Surveys

To obtain and/or coordinate the necessary information specifically required to analyze the sub surface conditions to determine such information as bearing capacity, water table.

ii. Land Surveys

To obtain and/or coordinate the necessary information specifically required, so as to analyze the project site.

iii. 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.

iv. On-Site Utility Surveys

To establish requirements and prepare initial designs for on-site electrical service and distribution, gas service and distribution, water supply and distribution, site drainage, sanitary sewer collection and disposal, process waste water 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.

v. Environmental Planning

- Environmental Impact Analysis
- Environmental issues
- Hazardous Material Assessment I

3.0 DEFINITIONS & ADDITIONAL INFORMATION RELATED TO A & E SERVICES

3.1 PLANNING SERVICES

i. Computer Systems Planning

ii. Cost Planning

iii. Functional Programming

a. Methodology

b. Level 1 Functional Program

A Level 1 Program is generally used for small, relatively simple or repetitive types of projects where the standard requirements are well understood. It is a relatively simple program which includes:

- A summary of required useable spaces, along with net areas and general notes outlining the client's specific space requirements
- The approximate gross area required to accommodate the space program
- A description, in general terms, of the relationships between spaces and groups of spaces, in sufficient detail to commence the Schematic Design Stage.

c. Level 2 Functional Program

A Level 2 Program is used for larger projects with some degree of complexity. This program is more detailed which includes:

- A summary of required useable spaces, along with net areas
- An outline of specific technical and functional requirements for each space
- The approximate gross area required to accommodate the program, determined by developing component diagrams
- Relationship diagrams indicating adjacencies and flow patterns between spaces and groups of spaces.

d. Level 3 Functional Program

A Level 3 Program is used for major projects and projects with a high degree of complexity. This program is very detailed and includes:

- A qualitative (functional) and quantitative (net area and gross area) description of all required spaces
- Detailed Program Areas including;
- Net useable area requirements for each space and component group of spaces and
- Gross Area Summary needed to accommodate the program
- An outline of specific Technical Requirements, indicating general Architectural, Structural, Mechanical, Electrical and Security systems applicable to the entire building and/or to each similar space type.

- Room / Space Data Sheets, indicating specific requirements for each space type, that is not otherwise covered in the technical requirements
- Space Concept Plans, associated with each Space Data Sheet, indicating all fixed equipment and any special features
- Component (Group or Department) concept planning diagrams indicating required relationships between all spaces in each component group
- Component Relationship Diagrams, indicating relationships between all component groups
- A Demonstration plan (to scale) to confirm that;
 - Net to gross area ratios are reasonable and
 - Component group relationships can reasonably be achieved either within the established gross building area for new buildings or within the limitations of the building floor plate(s) for existing buildings
- Mechanical Schematic Zoning and Directional Air Flow Diagrams for laboratory and hospital projects

iv. Master Planning

A Master Plan is a result of a site planning study conducted to determine the long term potential for site development, including issues related to:

- Potential location of all facilities and services
- Height limitations and set-backs
- Identifying urban design objectives
- Zoning and land use controls
- Designated activity districts
- Transportation issues
- Heritage districts
- Environmental Impacts
- Community and Civic design issues

v. Risk Management Planning

vi. Scheduling

Based upon the research and review of the information provided by the Owner, to analyze the proposed project schedule and to provide, to the Owner, the associated implications. Schedules for:

- Project Development
- Cash Flow Planning Project Phasing or decanting (Swing Space) strategies in order to maintain a client’s operations during changes to an existing facility

vii. Urban Planning

- a. Studies of regulations to determine code and zoning constraints, urban design objectives and community issues related to a project.
- b. Official plans and community plans
- c. Zoning and land use controls
- d. Designated activity districts within cities
- e. Transportation issues
- f. Heritage districts
- g. Community organizations and concerns
- h. Civic design panels

3.2 AUDIT & SURVEY SERVICES

i. Accessibility Audit

ii. Facilities Condition Audit

a. Level 1 Facilities Condition Audit

A Level 1 Facilities Condition Audit is primarily used to determine the current value of the building and property. It is a cursory overview, which includes:

- Only a broad description of components and systems with a relatively small amount of detail,
- Class D cost estimates for the major systems (Architectural, Structural, Mechanical, Electrical, Accessibility and Site) sufficient in detail to determine order of magnitude estimates required to bring the facilities up to current codes and standards.

b. Level 2 Facilities Condition Audit

A Level 2 Facilities Condition Audit is the most common approach, as it is typically used in the development of a Building Management Plan (BMP). It is a more detailed audit, which includes:

- A description of each building component and/or system, along with an assessment of its condition and deficiencies
- Evaluations of existing facilities, including; Building Envelope; Mechanical, Electrical and Structural Systems and Interior finishes
- Life Cycle Cost projections
- Code Compliance and Building Code issues
- A projection of the probable remaining life expectancy of each element
- Class D cost estimates for either the Repair or the Capital Replacement of each building component and / or system
- A classification of the “*urgency of attention*” recommended for each Repair and Capital Replacement item, by categorizing their priority in accordance with Owner requirements.

c. Level 3 Facilities Condition Audit

A Level 3 Facilities Condition Audit is the least common approach used, as it is usually required for very special projects, such as major heritage restoration work or if a building

has to be dismantled and reconstructed or relocated. It is a very detailed audit and inventory, which, in addition to all the requirements of a Level 2 Audit, usually has very specific customized requirements, such as; an assessment of functional adaptability; an assessment of existing structures and their adaptive re-use for the future, etc.

3.3 ANALYTICAL SERVICES

i. Accounting and Financial Analysis

Financial Studies identifying:

- Capital, operating and maintenance costs
- Sources of revenues, including funds to offset capital and operating costs

ii. Building Development Options Analysis

A Building Development Plan is applicable to projects, which in whole or in part, propose to fit-up or upgrade space within an existing facility. It is essentially a combined Technical and Functional Analysis

iii. Concept Development Analysis

Based upon the information provided by the Owner, to undertake diagrammatic studies and document review in sufficient fashion, so as to provide the degree of analysis and comment required.

iv. Specific-fit Options Analysis

A Specific-fit Options Analysis is applicable to projects, which in whole or in part, proposes to fit-up or upgrade space within an existing facility. A Functional Program is generally required prior to commencing the development of a Specific-fit Options Analysis. A Specific-fit Options Analysis assesses the existing accommodation potential of the existing facility by:

- Describing the current use, areas and types of areas,
- Identifying the Building Users and Occupants,
- Developing strategies to improve the existing accommodation effectiveness
- Assessing the:
 - Potential maximum capacity of the existing building,
 - Potential to accommodate current and future needs,
 - Functional accommodation of the users programs,
- Determining the functional inadequacies and deficiencies with the existing building by assessing:
 - Life & safety deficiencies that are apparent in the existing building,
 - Short and long term suitability and sustainability of all building components.
 - Suitability of existing building systems to meet User's requirements
 - The building functions for efficiency and effectiveness

Developing Specific-fit Option plans to determine if the existing space is suitable and if the functional program requirements can be met within the existing facilities.

- This is accomplished by laying out the required Component Group Plans in a variety of different configurations and applying them to the existing building floor plans.
- If this step confirms that the functional space program requirements can be met, within the existing space available, then options are developed and tested against the program relationship requirements.
- The option which appears to be the most appropriate and efficient is used as a demonstration plan to move to the next stage of development

Developing a strategic implementation plan for feasible options.

- If the Specific-fit Option plans demonstrate that program requirements cannot be achieved within the existing available space, alternate solutions will then be considered in discussion with the client.

v. Technical Analysis

There are generally two areas of focus where a technical analysis may be warranted:

- Technical Analysis of existing facilities
- Technical Analysis of options for new facilities (including additions to existing facilities)
- For sites with more than one structure, the technical analysis often includes a combination of both types.

A Technical Analysis of existing facilities is a two-part process.

- Condition Audit
 - Conduct a Condition Audit of either all, or of specific building components and / or systems
 - Prepare the Condition Audit Section of the Report,
- Options Analysis
 - Determine if there are any feasible options (other than replacement or repair) for resolving the major problems identified in the Condition Audit.
 - Conduct a comparative analysis of the feasible options against the repair or replacement of current components and / or systems, addressing applicable issues, such as: Functional Performance, Best Value (capital costs & life-cycle costs), Advantages & Disadvantages, Energy efficiency, Schedule of work, Health & Safety, Sustainability, Durability & Reliability, Risks, Impact on users, etc.
 - Prepare the Options Analysis Section of the Report
- A Technical Analysis of options for new facilities is also a two-stage process

Technical Options

- Gather information on various types of available building systems and materials and conduct sufficient research to determine which are appropriate for application to this specific project or building type
- Prepare the Technical Options Section of the Report

Options Analysis

- Conduct a comparative analysis of the feasible options, addressing applicable issues, such as; Functional Performance, Best Value (capital costs & life-cycle costs), Advantages & Disadvantages, Energy efficiency, Schedule of work, Health & Safety, Sustainability, Durability & Reliability, Risks, Impact on users, etc.
- Prepare the Options Analysis Section of the Report

vi. Economic Feasibility Analysis

- To provide services necessary, so as to determine the viability of the project with respect to economics

vii. Energy Use Analysis

viii. Value Engineering Analysis

ix. Options Analysis

x. Real Estate Analysis

- Identification and evaluation of potential sites
- Valuation of lands and sites

xi. Site Analysis

- For a pre-selected site, to provide initial consultation, in order to assist in the establishing of site related limitations and requirements for the project, reviewing and checking the documents prepared or provided by the owner.

xii. Technical Analysis

3.4 SPECIAL ADVISORY SERVICES

i. Agency Review

To undertake preliminary consultations with appropriate agencies in order to identify critical, applicable regulations and attitudes towards the project concept. These services apply to applicable laws, statutes, regulations and codes of regulating entities.

ii. Business Case Development

iii. Historical Research

- Historic Resource Overviews, Historic Resource Impact Assessments
- Conservation Resource Management
- Defining the Historic Place, Heritage Value and Character Defining Elements

iv. Management Consulting

v. Market Research

- Market studies, which forecast demand and also real estate market value of a completed project
- Demographic studies predicting demand and possibly, preferences and lifestyle trends
- To provide services necessary, so as to undertake the determination of the marketability of the project.

vi. Owner Supplied Data Review

- At the start of the process, to review and coordinate data furnished for the project by the Owner to undertake site visits required to confirm criteria, to advise the Owner in obtaining existing title information, contracting for surveys, surface site data and sub-surface site data.

vii. Program Review

- Based upon the research and review of the information provided by the Owner, to analyze the proposed project programming information and to provide, to the Owner, the associated implications.

viii. Rezoning Applications

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

ix. Presentations

- To present the analysis and recommendations resultant of the pre-design phase to pre-selected Owner representatives
- To provide presentation material and formal presentations to groups and individuals other than those as initially agreed to by the Owner.

4. OPTIONAL ADDITIONAL SERVICES

4.1 COST CONTROL (COST ESTIMATING AND QUANTITY SURVEYING)

Based upon the research and review of the information provided by the Owner, to analyze the proposed project budget and to provide, to the Owner, the associated implications

4.2 VARIABLE FOR CONSTRUCTION MANAGEMENT

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 Minimum 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.

RECOMMENDATION: It is recommended to add an additional fee in the range of 0.1 to 0.5% of Construction Cost, dependant on the number and complexity of bid packages, to the basic services fee.

4.3 LEED™

An optimum LEED™ project should have the Coordinating Professional as the LEED™ AP. The CAA and CEA encourage clients to engage their LEED™ team in this fashion. As architects and engineers, we have the experience of project delivery from design through construction. This enables us to bring our full knowledge and experience to bear when serving as LEED™ administrators. The following is the Basic Services for LEED™ Administration.

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

Fees for LEED™ Administration services varies depending on the complexity of the project, LEED™ certification level targeted, size of the project, and the scope required during the certification process. However fees can vary widely depending on the size, complexity or type of certification sought.

A multiple building or university project would be treated very differently than a single building. A core and shell office building in turn would be treated different than a hospital. Therefore fees can vary greatly depending on the scope of the project. The higher the certification level sought the more labor is required in researching and managing the additional credits.

The CAA & CEA recommend that LEED™ administration projects be carried out in two phases. This provides for a better fee analysis and a more accurate alignment with scope. The two phases are:

- Phase 1: A review and scoping phase - Defines the applicability of LEED credits to a project and determines the amount of work necessary for completion.
- Phase 2: The LEED administration phase.

RECOMMENDATION: Member firms state that the range of fees would be between **TBD** subject to confirmation after Phase 1.

4.4 MEASURED DRAWINGS AND MEASURED 3D MODELS

* To be developed for the 2011 Edition

4.5 BUILDING INFORMATION MODELING (BIM)

* To be developed for the 2011 Edition

4.6 RECORD DRAWINGS & DOCUMENTATION

* To be developed for the 2011 Edition

4.7 P3 & DESIGN BUILD PROJECTS

P3 projects are usually built on the design-build procurement methodology; both are addressed on the same basis here. Generally speaking, it is in the interest of all team members to limit costs and services provided until an committed agreement is in place, but in both the P3 and the design-build approach the design built 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. These guidelines address the fee issues concerning the cost and risk of what is termed the pursuit phase.

General Guidelines primarily for P3 and Design Build include:

1. There are generally two phases: a pursuit phase (from RFQ through to submission of bid) and post-pursuit phase (from bid submission to completion of project). The post-pursuit phase is generally

defined by two sub-phases that tend to blur together: the phase after the team has been identified as the preferred proponent but before financial close (in which the team is still at risk as a contract has not yet been established and during which changes to the bid submission are typically negotiated on a competitive basis), and the phase after financial close (in which the team is at much less risk as a contract has been established and changes can be defined as change orders to the contract).

2. A fee should be established in advance between the architect and the client (proponent) for the total work based upon guidelines found in Part 2. The total fee should identify the additional services for fast-track construction management and should include coordination of sub-consultants and specialty consultants.
3. A pursuit phase fee is required 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 typically discounted between 25 and 30% to remove profit and arrive at a fee based upon cost recovery (cost defined as total cost inclusive of payroll, payroll burden, and office overhead).
4. 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.
5. The pursuit phase fee must be billed and paid as the work is being undertaken and not held until end of pursuit phase.
6. A success bonus should be included and should be the equivalent of 3 x deferred profit from pursuit phase to account for deferred profit on successful pursuit plus to cover lost profit from unsuccessful pursuits - assuming a 1 in 3 success rate.
7. The success bonus should be paid upon financial close in the case of a P3.
8. Modifications to bid documents following pursuit phase (i.e. once a team has been identified as preferred proponent) but prior to financial close should 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.
9. Other terms should include waiver of liquidated damages by all parties and the use of established contracts such as CCDC Doc 15.