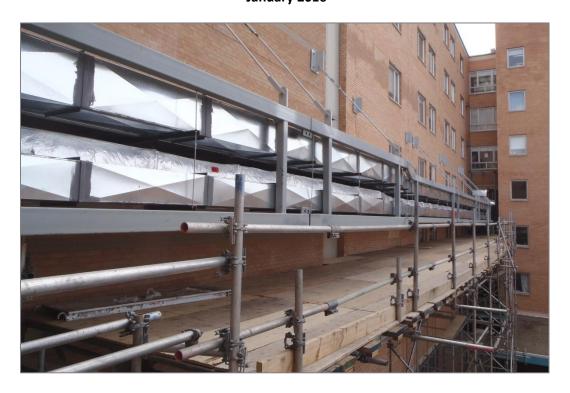


# SCHEDULE OF RECOMMENDED FEES TO BE CHARGED FOR SPECIALIZED ENGINEERING PROJECTS AND

# **SERVICES IN THE BUILDING FIELD**

January 2016



#### **FOREWORD**

Professional Engineers and Professional Geoscientists, including all those who provide consulting engineering and geoscience services, must be registered in accordance with The Engineering and Geoscience Professions Act of Saskatchewan. As a member of the Association of Professional Engineers and Geoscientists of Saskatchewan, a Professional Engineer or Geoscientist subscribes to a Code of Professional Ethics, constituting part of the Bylaws of the Association.

This document provides guidelines for engineers providing their specialized expertise in the area of building services, including when engaged in the role of "Prime Consultant" to building projects and when engaged to provide engineering services to the "Prime Consultant" on a building project. It replaces the former Schedule 2b of the 1995 Guidelines, although the name Schedule 2B has been retained because of its acceptance within the building trades field.

At the time that the previous fee schedules were being reviewed in 2003, it was felt that the fees in general were too low relative to the current cost of doing business, the complexity of the project should be identified and an appropriate fee be assigned, and that the basis of the fee structure created inequities when the client was GST tax exempt. During the course of the revision process, the cost of construction increased and with that the net value of a percentage fee also increased. As such, the original percentages were retained, but the threshold was revised to address the complexity of design required for various types of construction. To address the GST issues, the percentage fee has been increased by 0.5% and the fee based on the before GST tax cost of construction.

It must also be pointed out to the user of this document that the word "fee" as used in this document refers to the net fee payable to the professional engineer. This definition recognizes circumstances where the professional member may work as a sub-consultant to another professional who is the prime consultant on a work of engineering.

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#### 1. ACKNOWLEDGEMENTS

This update of the "Building Fees Guidelines" is a co-operative effort of the Board of Directors and member firms of the Association of Consulting Engineering Companies - Saskatchewan (ACEC-SK).

The document supersedes previous versions prepared by the Association of Professional Engineers and Geoscientists of Saskatchewan ("APEGS"), the Association of Consulting Engineering Companies - Saskatchewan (ACEC-SK)), and the Saskatchewan Construction Panel ("SCP"). The structure and general principles of past versions is retained in this new version. The excellent and thorough work of APEGS and its volunteers in preparing past versions of this document is acknowledged.

Special thanks and acknowledgements are due to the members of the Task Group, these being Grant Dawson, P. Eng., Willem deLint, and to all members of the Saskatchewan Construction Panel ("SCP"), the Association of Professional Engineers and Geoscientists of Saskatchewan ("APEGS"), the Saskatchewan Architects Association ("SAA"), and the CES 2007/08 ACEC-SK Board of Directors.

The Association would also like to thank the volunteers who reviewed the first draft of this document. Their comments and suggestions contributed to its overall usefulness

#### 2. INTRODUCTION

This document presents a Schedule of Fees recommended to provide an equitable basis for the remuneration for professional engineering services, whether provided as a sole practitioner, in partnership, or in an incorporated practice. The fees noted herein are suggested only and are considered to be commensurate with the provision of competent and responsible professional engineering services.

For the purposes of this schedule, the following definitions apply:

Client The Consultant's client.

Consultant The party contracting with the Client to provide professional engineering services.

Contractor The party contracting with the Client for the provision of labour, materials and

equipment for the execution and quality control of the work.

Cost of Construction The final contract price, including the cost of any additions or change orders, for

construction of an engineering work including taxes (GST / PST).

Fee The net fee payable to the professional engineer or professional geoscientist.

Owner The person or persons who will own the work or works upon completion of the

contract between the client and the contractor.

Practice of Professional

Engineering

Any kind of planning, designing, composing, measuring, evaluating, inspecting, advising, reporting, directing or supervising, or managing any of the foregoing, that requires the application of engineering principles and that concerns the safeguarding of life, health, property, economic interests, the public interest or the environment.

Professional Member A person or persons providing professional engineering services.

Professional Practice The set of generally accepted ethical and business practices, apart from a member's

specific technical skills, that invest a member with the requirements to provide

professional engineering services to the public.

**Project Construction** 

Value

The final cost of constructing the work that the engineering fee is based upon. The Project construction value includes the original construction contract price, the cost of any additional work or change orders issued through the course of the work, the cost of any equipment designed by the consultant but purchased outside the contract,

PST, but not GST.

Written Agreement The legal contract between the client and consultant that sets forth as a minimum the

scope of work, schedule of execution, basis of the fees, and payment conditions.

### 3. SCHEDULE OF FEES

3.1 SCALE 2(B): Recommended Minimum Fee Schedule for Basic Prime Consulting Services for Buildings

Project		Description of	Project Construction Value (Dollars)*			
Complexity	Facility		M = 1 million dollars Project Value For the Next In Excess of			
			\$.5M to \$1M	\$1M to \$5M	\$5M	
Non	Public	Storage and Warehousing	8.5%	7.5%	6.5%	
Complex	Private	Garages, Pre-Engineered, Parking				
		Lots				
Standard	Health	Personal Care Homes, Clinics	9.5%	8.5%	7.5	
		Community Hospitals				
	Education	Elementary, High Schools				
	Community	Libraries, Stadiums,				
		Community Centres, Recreation				
		Facilities and Arenas, City and				
		Town Halls, Fire and Police				
		Stations, Casinos, Churches,				
		Cemetery Chapels				
	Public &	Office Buildings, Parking Garages,				
	Private	Malls, Theatres, Banks, Hotels and				
		Motels, Bus and Rail Stations,				
		Airport				
		Facilities, Retail, Armed Forces				
	Residential	Multiple Unit Residential				
		Semi-Detached Row Housing,				
		Typical				
Complex	Health	District Hospitals, Integrated	10.5%	9.5%	8.5%	
	Care	Facilities, Diagnostic and				
		Treatment				
	Education	Specialized Teaching Facilities				
	Community	Pools, Museums, Crematoriums,				
		Spas, Court Houses, Performing				
		and Visual Arts				
	Research	Educational Laboratory				
	Data	Telecommunications, Broadcasting				
	Dungan	Call Centers, Computer Facilities				
	Process	Equipment Repair, Energy				
Vani	Lie elth O	Production	11.50/	10.50/	0.50/	
Very Complex	Health Care	Provincial Hospitals, Regional	11.5%	10.5%	9.5%	
Joinpiex	Doggarah	Hospitals				
	Research	Scientific, Laboratory, Chemical,				
	Docidential	Education Research				
	Residential	Custom Single Family Homes				
*Soo Soolo 2P I	Ownership**	Joint Use Facilities				

<sup>\*</sup>See Scale 2B - User Notes \*\*See Scale 2B - User Notes

#### 3.2 SCALE 2B User Notes

- 1. PST is included in the calculation of fees. GST is excluded in the calculation of fees.
- 2. \*Project Construction Value includes Provincial Sales Tax for calculation of percentage fees to consultant. (GST is accounted for in the percentage fee).
- 3. Descriptions are for Major Project Use. Where multiple uses are contemplated, a best fit or blended rate is recommended.
- 4. For smaller projects less than \$500,000 use of hourly rate or fixed fee structures may be more appropriate.
- 5. Use of a fixed fee structure is acceptable provided fee is representative of the work required.
- 6. Fees are earned on an 'as designed basis'. Where work is designed but does not proceed, fee is applicable at representative rate for the designed work to the completion level attained. Fee is normally apportioned as follows:

Schematic Design	15%
Design Development	10%
Construction Contract Documents	50%
Project Tendering Phase	5%
Construction Contract Administration	20%

- 7. For projects involving renovations, fees are to be multiplied by 140% for renovation portion.
- 8. Fees for contemplated changes to a project following completion of the design package are to be considered on the same basis as identified fee for project.
- 9. \*\*Ownership acknowledges complex nature of when project governance model involves multiple owner groups.
- 10. Projects involving repeat designs for the same client should be calculated with a royalty concept. Basic recommended royalty structure, first project at applicable rates, next projects at 50% of rates plus separate fees for variations from first project. Required changes are normally completed based on hourly rate structures.
- 11. Disbursements are extra to the rates described, chargeable at cost plus 10% for administrative burden.
- 12. Recommended standard consultant/client agreements are available from Association of Consulting Engineering Companies Canada (ACEC), Royal Architecture Institute of Canada (RAIC) and Canadian Construction Documents Committee (CCDC).
- 13. Refer to other sections of documents for definition of standard and special or additional services.
- 14. Where project alternative designs are requested by the owner, design costs associated with development of the alternative(s) are paid at the rate appropriate to the design portion of a project. Not all alternative designs require the same level of design input leading to the requirement for negotiations on fee related to the development of the alternatives required.
- 15. Prime Consultants normally retain a portion of sub consultant's fees for project co-ordination purposes. While 20% of the sub consultant's fee is considered normal practice, actual retained fee should be negotiated in advance to reflect representative project co-ordination requirements.
- 16. Many fee options are available including, but not limited to, contractual agreements whereby the client retains the sub-consultants directly based on per-diem or percentage fee basis.
- 17. Fees for projects less than \$500,000 to be negotiated with the client.

18. For projects of \$1 million to \$5 million value, the fee is calculated as the sum of the higher percentage based on the first \$1 million of project construction value, plus the lower percentage for the remaining project construction value in excess of \$1 million dollars.

For projects of \$5 million, the fee is calculated as the sum of the higher percentage based on the first \$1 million of project construction value, plus the lower percentage for the next \$4 million of project construction value, plus the lowest percentage for the remaining project construction value in excess of \$5 million dollars.

#### 4. PERFORMANCE STANDARDS

#### 4.1 General

These "Performance Standards" define the scope of services to be provided by a Consultant when retained by a Client for the design and general administration during construction of a complete building project. This means that the Consultant is the prime consultant responsible to the Client for the coordination of the project.

The Consultant acts as the coordinator of the total building project. Scope of service is normally negotiated with the client with an understanding of fair fee for fair service. Fee percentages shown in scale 2B have been established with an understanding of certain expectations related to standard levels of service. Often projects require variations in service, usually related to extra requirements for a project. Fees for these services are normally negotiated separately and should be consistent with the level of effort required to achieve the required service outcome. The following table (Table 3A) provides a general summary of standard service earned in accordance with scale 2B separated into standard service phase definitions. Additional or optional services common to the design industry are listed to identify specifically that these services are not considered standard service and require separate negotiation of associated fee.

## Table 3A Service Delivery

Project Inception	Project Assessment	Concept Approval	Development Permit	Building Permit	Award of Construction Contract	Substantal Performance OF Construction
1.0 Predesign	2.0 Schematic Design	3.0 Design Development/ Preliminary Design	7.0 Construction Documents	5.0 Bidding or Negotiating/Tender	6.0 Construction Contract Administration	7.0 Post-Construction
Optional Services*  Facility Programming Space Relationships, Flow Diagrams  Project Development Scheduling Project Budgeting Life Cycle Cost Studies Economic Feasibility Studies Agency Consulting / Review Approval Site Selection Analysis & Utilization Environmental Studies Energy Studies Existing Facilities Survey Client Supplied Data Co-ordination Services Related to Business Case Development Presentations Marketing Studies Project Financing Special Studies Re-zoning Assistance Project Promotion	Basic Services (15% of Basic Fees)  Client-supplied Data Co-ordination Program and Budget Evaluation Review of Alternate Design Approaches Schematic Design Drawings and Documents Statement of Probable Construction Costs Client Consultation Interior Design Concepts Agency Consultation Sub Consultant Co-ordination  Optional Services*  Special Studies such as Future Facilities or Environmental Impact Special Submissions of Promotional Presentations Special Models or Perspectives Project Management	Basic Services (10% of Basic Fees)  Client Supplied Data Co-ordination Design Co-ordination Design Development Drawings and Documents Statement of Probable Construction Costs Client Consultation Agency Consultation Sub Consultant Co- Ordination  Optional Services*  Interior Design Development Special Studies/Reports such as Planning Tenant or Rental Spaces Promotional Presentation Models or Perspectives Project Management	Basic Services (50% of Basic Fees)  Client Supplied Data Co-ordination Project Co-ordination Construction Documents (Working Drawings Form of Contract and Specifications) Document Checking and Co-ordination Statement of Probable Construction Costs Client Consultation Agency Consultation Sub Consultant Co- Ordination  Optional Services*  Interior Construction Documents Alternate Bid Details and Special Bid Documents Project Management Multi-Phase Packaging	Basic Services (5% of Basic Fees)  Client Supplied Data Co-ordination Project Co-ordination Issue Bidding Documents Issue Addenda Bid Evaluation Construction Contract Client Consultation Sub Consultant Co-Ordination  Optional Services*  Separate Bids or Negotiated Bids Services Related to Bidders' Proposals Project Management Multi-Phase Tendering	Basic Services (20% of Basic Fees)  Construction Inspection and Review Progress Reports/Evaluation Process Certificates for Payment Interpretation of Contract Documents Shop Drawing/ProductData/Sam ple Review Development of Contemplated Change Notices and Change Orders, Site Instructions Substantial Performance Report and Certification Client Consultation Agency Consultation Sub Consultant Co-Ordination  Optional Services*  Resident Supervision Project Management Promotional Material Record (As-Built) Drawings Detailed Commissioning	Basic Services (0% of Basic Fees)  Project Inspection Deficiency Assessment Instructions for Correction of Deficiencies Review of Warranties Total Performance Inspection and Certification Client Consultation Sub Consultant Co-Ordination Start-Up Assistance  Optional Services*  Detailed Commissioning Services Provided After Total Performance Non-Building Equipment Selection Building Analysis and Reports Services Related to Alterations and Demolition Life Cycle Cost Monitoring Environmental Monitoring Project Management

Interpretation of normal deliverables related to development of a building construction contract should be guided by Table 3A. Normal project sequencing is described as follows. These requirements are noted for all consultant participants, delivered by the group normally charged with the responsibility based on definition of trade scope.

#### 5. SPECIFIC PRIME CONSULTANT DUTIES

- 1. Negotiate the scope of professional services, compensation and terms of payment with other consultants where applicable.
- 2. Prepare a time schedule based upon the Client's program for the project in agreement with the Client and other consultants where applicable.
- 3. Obtain from the Client, or arrange for the performance of surveys, sub-surface and soil investigations and obtaining of other necessary data.
- 4. Arrange for all project conferences with the Client and maintain co-ordination on all project matters.
- 5. Establish and co-ordinate design standards with concurrence of other consultants where applicable, and co-ordinate statements of probable construction costs.
- 6. Where construction is involved:
  - a. Prepare and arrange for the printing, publication and distribution of the construction contract documents.
  - b. Advise the Client on construction contract procedures, compile a list of bidders, and aid in negotiations with the selected contractor.
  - c. Perform general administration during construction.
  - d. Prepare a completion report with the assistance of other consultants, where applicable, and recommend acceptance of the work.

#### 6. DESIGN SERVICES ALL CONSULTANTS

The services listed are the normal services required by the Client and are usually performed on a percentage fee basis noted as Scale 2.

#### 6.1 Schematic Design and Design Development

These services consist of the preparation and submission of sketch plans, outline specifications, preliminary estimates of the project costs and schedules for the completion of the work.

The Consultant's services usually include the following:

- (a) Obtaining the Client's instructions regarding functional, aesthetic and cost requirements.
- (b) Reviewing the site survey, inspect the site and consider existing conditions such as topography access, drainage, and availability of sewer, water, and other utilities on the design of the project. Arrange to have the necessary soil testing carried out on behalf of the Client.
- (c) Checking applicable codes, regulations and restrictions, insurance requirements, and other factors affecting the design of the project.

- (d) Developing preliminary sketches and outline specifications as outlined in the detailed design standards.
- (e) Providing information on the essential elements of the project including basic materials, finishes and basic structural, electrical and mechanical systems compatible with the preliminary sketches and specifications.
- (f) When required, prepare a preliminary site plan to show site grading, road elevations and service connections of public utilities to the building services with respect to siting and establishing floor elevation of new buildings.
- (g) Obtaining the Client's approval of preliminary design and outline specifications.
- (h) When required at this stage, obtaining approval or assist in obtaining approval of the design from authorities having jurisdiction.
- (i) Providing the Client with a preliminary statement of the construction cost and schedule for the completion of the design and construction.

#### 6.2 Construction Documents and Project Tendering all Consultants

The Consultant normally shall provide the following as deliverables for construction documents:

- (a) After preliminary sketch drawings have been approved and can be considered as "frozen", prepare contract drawings, specifications and documents that contain specific instructions as to how the project is to be constructed. Contract Documents including drawings and specifications shall be consistent with project requirements, capturing concepts of technical construction requirements, form of contract between the owner and the contractor(s), description of contractual issues and related issues.
- (b) Consult with the Client and obtain approval of any additions and deletions during the design stage and advise of any change in costs arising from these changes.
- (c) Provide as many sets of drawings and specifications as required for tendering, construction, approvals and permits. Fifteen sets of documents are considered the normal maximum for standard service delivery relationships.
- (d) Assist in obtaining formal approval from the authorities having jurisdiction. Any relevant fees are disbursements chargeable to the Client.
- (e) Provide the Client with a revised statement of construction cost estimate.
- (f) Assist in arrangement of tender call. Receive tenders on behalf of the Client or attend and assist at the opening of tenders.
- (g) Analyze and evaluate tenders, review substitutions and alternatives offered and check necessary price adjustments. Ensure receipt of requisite documents, certificates, agreement to bond, etc.

- (h) Make recommendations regarding award of contract having regard to lowest tender price, savings to be achieved by alternative methods of substitution of materials, time of completion, and capabilities of contractor and subcontractors bidding.
- (i) Revisions to achieve alternate design schemes are not considered to be standard service. Where revisions are required to meet construction cost objectives established at project inception, consideration must be given to where extra construction cost originated from. Generally, the consultant group is responsible to deliver design statements consistent with project intent. Construction costs established through fair market tendering procedures are not under the control of the consultant team. Therefore, cost reduction revisions require separate negotiation of fee, identified as extra service to a standard design services contract.

#### 6.3 Construction Contract Administration all Consultants

This consists of office and field functions during the construction period following the award of contract. Services provided by the Consultant normally include:

- (a) Assisting in preparation and execution of contract documents between Client and Contractor.
- (b) Issuing supplementary details and instructions during the construction period, as required.
- (c) Reviewing shop drawings, equipment lists, and samples submitted to the degree necessary to satisfy the Consultant that the Contractor's work is in compliance with the design requirements.
- (d) Providing the Client, when requested, with copies of all relevant correspondence affecting construction and costs.
- (e) Approving the construction schedule proposed by the Contractor, and advising as to the methods and sequence of work, with regard to the Client's operations and other contracts.
- (f) Checking and approving charges for additions or deletions and issue applicable change orders.
- (g) Recommending the withholding of payment for faulty or incomplete work.
- (h) Examining and transmitting to Client all guarantees, warranties, bonds, etc.

#### Normal Site Administrative Functions include:

- (a) Making periodic visits to the site during construction to ascertain that the work is being executed in reasonable conformity with plans and specifications.
- (b) Checking and certifying Contractor's application for progress payments. Estimate completed work in place and materials on site for payment according to the terms of contract.

- (c) Arranging for the testing and inspection of materials and work by an inspections and testing company. Where the contract calls for such testing and inspection, the cost of this work is a disbursement chargeable to the Client.
- (d) Attending regular site meetings to assist in the co-ordination of the work of various trades, and keeping a check on the scheduling of the work.
- (e) Arranging and performing final inspection of finished project, preparing a list of deficiencies and when these have been rectified, issue final certificate of acceptance.

#### 6.4 Resident Staff Provided by the Consultant

For some projects, the Consultant will recommend the provision of resident engineering services during construction, per Section II, Category V. This involves the placing of engineering inspection and layout staff on the project to provide continuous service. Charges are made for this service as set out in the Schedule of Fees, Scale 1, plus the recovery of related disbursements.

A clear written agreement should exist with the Client detailing the extent of such resident services. This service normally includes:

- 1. Checking Contractor's line and grade.
- 2. Ensuring that all work will satisfy the intent of the design and will conform substantially with plans and specifications.
- 3. Arranging for, or carrying out, all necessary testing and inspection of material and equipment installed.
- 4. Investigating, reporting, and advising on unusual circumstances which may arise during construction.
- 5. Final inspection at the conclusion of the construction contract and at the end of the maintenance period.
- 6. Obtaining field information for the modification of contract drawings to show the work as built.
- 7. Preparing special progress certificates and final certificates for subsidy payments, grants, or rebates.

#### 6.5 Other Specialist Consulting Engineering Services

Although most of the professional services the Consultant renders on a building project fall under the foregoing headings other requirements do arise. Optional services have been listed in Table 3A illustrating types of service normally considered additional to standard service delivery arrangements. The consultant and the owner should be guided by the philosophy that if the service is not listed, then the issue should be addressed from a deliverable and required fee perspective. Separate negotiation for fixed fee or percentage fee related to these services should be guided by table 2B.

#### 7. SUB CONSULTANTS DELIVERABLES

As with the Prime Consultant, deliverables are common to a large degree. Table 3B illustrates the deliverables normal to a sub-consultant relationship, with optional services identified.

# Table 3B Service Delivery - Sub Consultant

Project Inception	Project Assessment	Concept Approval	Development Permit	Building Permit	Award of Construction Contract	Substantal Performance OF Construction
1.0 Predesign	2.0 Schematic Design	3.0 Design Development/ Preliminary Design	4.0 Construction Documents	5.0 Bidding or Negotiating/Tender	6.0 Construction Contract Administration	7.0 Post-Construction
Project Development Scheduling Project Budgeting Life Cycle Cost Studies Economic Feasibility Studies Agency Consulting / Review Approval Site Selection Analysis & Utilization Environmental Studies Existing Facilities Survey Client Supplied Data Co-ordination Services Related to Business Case Development Presentations Marketing Studies Project Financing Special Studies Re-zoning Assistance Legal Survey Geotechnical Analysis	Basic Services (15% of Basic Fees)  Client-supplied Data Co-ordination Program and Budget Evaluation Review of Alternate Design Approaches Schematic Design Drawings and Documents Statement of Probable Construction Costs Client Consultation Agency Consultation Special Studies such as Future Facilities or Environmental Impact	Basic Services (10% of Basic Fees)  Client Supplied Data Co-ordination Design Co-ordination Design Development Drawings and Documents Statement of Probable Construction Costs Client Consultation Agency Consultation Optional Services* Special Studies/Reports Quality Surveys Energy Studies Services Related to Business Case Development	Basic Services (50% of Basic Fees)  Client Supplied Data Co-ordination Construction Documents (Working Drawings Form of Contract and Specifications) Document Checking and Co-ordination Statement of Probable Construction Costs Client Consultation Agency Consultation  Optional Services*  Alternate Bid Details and Special Bid Documents Project Management Multi-Phase Packaging Quality Surveys	Basic Services (5% of Basic Fees)  Client Supplied Data Co-ordination Issue Bidding Documents Issue Addenda Bid Evaluation Construction Contract Client Consultation  Optional Services* Separate Bids or Negotiated Bids Services Related to Bidders' Proposals Project Management Multi-Phase Tendering	Basic Services (20% of Basic Fees)  Construction Inspection and Review Progress Reports/Evaluation Process Certificates for Payment Interpretation of Contract Documents Shop Drawing/Product Data/Sample Review Development of Contemplated Change Notices and Change Orders, Site Instructions Substantial Performance Report and Certification Client Consultation Agency Consultation Poptional Services* Resident Supervision Promotional Material Record (As-Built) Drawings Detailed Cost Accounting	Basic Services (0% of Basic Fees)  Project Inspection Deficiency Assessment Instructions for Correction of Deficiencies Review of Warranties Total Performance Inspection and Certification Client Consultation Start-Up Assistance  Optional Services*  Detailed Commissioning Services Provided After Total Performance Non-Building Equipment Selection Building Analysis and Reports Services Related to Alterations and Demolition Life Cycle Cost Monitoring Environmental Monitoring Project Management Systems Perofrmance Review

Optional Services\*:

Services are considered to be extra to normal expectations and require separate negotiation.