The *Business* of Professional Surveying

A workshop to
improve the quality of
business management
in the
land survey profession

tailored to all
OLSs and senior staff
involved in the
management of a
private or government
survey operation.

The Business of Professional Surveying

Agenda

8:00-8:30	COFFEE & REGISTRATION
8:30-8:45	**INTRODUCTION & CASE STUDY** Introducing the fictional firm of Brad Brooks Surveying Ltd
8:45-9:45	**WHAT IS BUSINESS ALL ABOUT?** An introduction to marketing principles and strategies; Learn what goes into a good bid for an RFP
9:45-10:00	Break
10:00-11:00	**ACCOUNTING FOR PROFITS** Find out how to take the fear out of finance and figure out the right questions to ask
11:00-noon	**BUSINESS & THE LAW** What goes into a surveyor's business agreement? Here's a sample contract! Learn how to collect more of your Accounts Receivable.
noon-1:00	Lunch
1:00-1:20	**RE-ENGINEERING & MANAGING CHANGE** Once you've decided on a strategy, how can you be sure to get the results you expected?
1:20-1:40	**QUALITY CONTROL/QUALITY ASSURANCE** We all expect to purchase quality. How can we be sure we can provide it?
1:40-2:00	**MANAGING YOUR PROJECTS** How do you keep costs under control AND get them completed on time?
2:00-3:00	**LABOUR LAW/WRONGFUL DISMISSAL** Learn about non-survey legislation that can affect you organization.
3:00-3:15	Break
3:15-4:15	**INSURANCE** Why does Brad Brooks need professional liability insurance and what does it cover?
4:15-4:30	**WRAP-UP/QUESTIONS?**

The Presenters

Graham Bowden, O.L.S.
Graham received his commission in 1977 and currently runs Marshall Macklin Monaghan's Mississauga office. He teaches Erindale's Professional Affairs course for the Survey Science program.

John Breese, Kevin Goranson, Dan Mullen, Craig Walker
Kevin is the broker for the Association's professional liability insurance program at Cosburn, Griffiths & Brandham. John, Dan & Craig are at F.C. Maltman's - the adjuster for the liability insurance program. They promise all-new material.

Brian Munday, B.Comm., M.B.A.
Brian has a number of years experience with small and large financial organizations before joining the Association. In 1992, he earned his Master of Business Administration, specializing in Change and Leadership.

J. Paul Wearing, B.A., M.P.A., LL.B.
Paul is a principal of the Toronto law firm of Borden Wearing. His area of expertise is labour and employment law and environmental law.

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The materials and examples presented herein are for illustrative purposes during the Business of Professional Surveying workshop only.

It is not intended to take the place of individual legal, financial or other professional advice.

Neither the Association of Ontario Land Surveyors nor the individual presenters will assume any liability related to the use of the material contained herein.

The Case of Brad Brooks Surveying

Brad Brooks was sitting in his office on a cold Friday afternoon in September. He had just completed his last contract for survey work and there seemed like there were no prospects for future jobs. Brad reflected on how he got to this point.

Brad Brooks graduated from Erindale College's Survey Science program in 1984. He articled to a well-known survey firm in Northern Ontario where he gained tremendous experience throughout the hectic, busy days of the mid-80's. Brad turned down the opportunity to buy the survey firm in Northern Ontario. Instead, he decided to return to the Metro Toronto area where his wife wanted the family to return to live. He got his own Certificate of Authorization in 1989 and set up his own small office.

For the first two years, his business seemed to go reasonably well. Brad was pleased to have his own business. He wanted to prove he could build his own company from scratch. Brad was surprised, however, at the cost of setting up his own business. There were plenty of expenses that he had not counted on. He was also disappointed that we was not able to spend more time in the field actually doing the survey work. In the early days, he spent most of his time trying to keep track of the progress of various jobs and dealing with unhappy clients who couldn't get their surveys fast enough. Still, there seemed to be enough money available for him to earn a reasonable living. The bank even phoned him to ask if he wanted a loan.

During the middle of 1990, Brad Brooks began to notice that the number of jobs he was getting seemed to drop off. Brad figured he could use this time to learn about the latest developments in Condominium surveys. He had hoped his firm could specialize in Condo surveys. Until then, he had just put up his shingle and he won all sorts of jobs. But now, the number of jobs just wasn't what it used to be. After attending one of his Regional Group meetings, he realized other surveyors were facing similar desperate times.

(Please ensure all participants from your organization have read the opening case study prior to the workshop.)

WHAT BUSINESS ARE WE IN ?

With our expanded profession and all our hightech systems what business are we in?

We are in the business of____

____

Charles Darwin reasoned the theory of evolution as "survival of the fittest". If Charles Darwin had been a 90's executive he probably would have postulated the theory of corporate evolution as " He who hesitates is lunch ".

In today's business world the old cliches are still true.

> If you aren't part of the solution you are part of the problem.
>
> Get involved or get out of the way.
>
> Keep moving. Standing still is really moving backwards.

So how can you make your staff and therefore your company a moving involved solution? Perhaps the first step is to find out how your company appears to others. What image do you convey ? How do your clients perceive you. ?

____

____

____

MARKETING

What is the difference between marketing and selling ?

Selling : ____

____

Marketing : ______________________________________

____

Why do we do it? ________________________________

OPPORTUNITY

PROFIT ***RISK***

These interdependent effects are the corners of the marketing triangle.

If marketing is what we do,

And marketing is convincing people to select you...

How do we differentiate ourselves from other OLS firms? Choose me because,

______________________	______________________
______________________	______________________
______________________	______________________

What makes for successful marketing ?

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________

We need to recognize that effective marketing requires marketing to a target audience.

In the simplest sense there are only 2 target groups. Who are your target markets ?

____

____

Why do we need to market to both target groups ?

____

____

____

____

____

If you have 2 target groups then it follows that each requires an unique marketing style.

Client Group ____________________ ____________________

Marketing Style ____________________ ____________________

Each marketing style has unique strategies.

Style ____________________ ____________________

Strategy ____________________ ____________________

____________________ ____________________

____________________ ____________________

Three words the marketer lives by:

What marketing tools do you use ?

MARKET ANALYSIS

There is an old adage " You have to know who you are before you can decide what you want to be." Applied to marketing you need to analyze what you do and who you do it for before you start to market. Why ? Because it is a poor marketing plan that markets a low profit, high risk service to a client who is slow to pay or markets a service that no one in your area needs. Sound obvious? Of course, these are extreme cases. However it is important to establish a client/service profile. It is the cornerstone of your overall business plan and the benchmark against which we measure improvement.

Client Type	**Survey Service**
% of our business	% of our business

So how are we going to decide which clients to market to?

How do we decide which services to market?

If we combine the results of the analyses we realize the choices are many and sometimes difficult to distinguish. The easiest way to visualize your choices is by the;

MARKETING PYRAMID

THE TEN COMMANDMENTS OF GOOD BUSINESS

The client is the most important person in any business.

The client is not dependent on us, we are dependent on them.

Clients are not an interruption of our work,
they are the purpose of it.

Clients do us a favour when they call,
we are not doing them a favour by serving them.

A client is part of our business, not an outsider.

THE TEN COMMANDMENTS OF GOOD BUSINESS *continued*

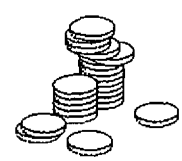
Clients are not a cold statistic,
they are flesh-and-blood human beings with feelings and emotions
(like our own).

A client is not someone to argue or match wits with.

A client is a person who brings us wants,
it is our job to fill those wants.

A client is deserving of the most courteous and
attentive treatment we can give.

A client is the life-blood of this and every other business.



BASIS of a MARKETING PLAN

The Business
Form 1

Mission

Date: ____________________

A. Industry Sector

1. Most narrow — 1. ____________________
2. Next level — 2. ____________________
3. Most broad — 3. ____________________
4. Others based on technology — 4. ____________________
5. ____________________

B. My business satisfies customers' needs for:

1. ____________________
2. ____________________
3. ____________________
4. ____________________
5. ____________________
6. ____________________
7. ____________________

Mission (cont'd)

C. The major strengths my business has to offer are:

1. ______________________________
2. ______________________________
3. ______________________________
4. ______________________________
5. ______________________________
6. ______________________________
7. ______________________________

D. In summary, the mission for my business is to:

____
____
____
____
____
____

Page 2 of 2

Industry Trends

Date: ____________

Key Trends Description	Threat/ Opportunity	Planned Response
A. Most narrow sector ______		
1. ______	______	______
2. ______	______	______
3. ______	______	______
B. Next level sector ______		
1. ______	______	______
2. ______	______	______
3. ______	______	______
C. Most broad sector ______		
1. ______	______	______
2. ______	______	______
3. ______	______	______
D. Others ______		
1. ______	______	______
2. ______	______	______
3. ______	______	______

Research

Date: ____________________

Information Needed	Potential Sources	Disposition
A. ____________	1. ____________	____________
	2. ____________	____________
	3. ____________	____________
B. ____________	1. ____________	____________
	2. ____________	____________
	3. ____________	____________
C. ____________	1. ____________	____________
	2. ____________	____________
	3. ____________	____________
D. ____________	1. ____________	____________
	2. ____________	____________
	3. ____________	____________
E. ____________	1. ____________	____________
	2. ____________	____________
	3. ____________	____________
F. ____________	1. ____________	____________
	2. ____________	____________
	3. ____________	____________
	____________	____________

The Customer
Form 5

Customer Needs Opportunities

Date: ____________________

Key Customer Groups	Existing Needs Met	Related Needs	Action (✓)
A. ______________	______________	______________	
	______________	______________	
	______________	______________	
	______________	______________	
B. ______________	______________	______________	
	______________	______________	
	______________	______________	
	______________	______________	
C. ______________	______________	______________	
	______________	______________	
	______________	______________	
	______________	______________	
D. ______________	______________	______________	
	______________	______________	
	______________	______________	
	______________	______________	

The Customer
Form 7

Trading Area Profile

Date: ____________________

Information Item	Actual 19__	Actual 19__	Actual 19__	Projected 19__
1. Population				
2. Male/Female				
3. Households				
4. Homes Built				
5. Building Permits				
6. Average Family Income (19__ census)				
7. Family Expenditures				
8. Gross Expenditures				
Other Items:				
9. ____________				
10. ____________				
11. ____________				
12. ____________				
13. ____________				

Sources:

The Competition
Form 9

Competitors

Date: ____________________

Business Name	Location	Pricing		
		Item A	Item B	Item C
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				

Competitive Analysis

Date: ____________________

Criterion	My Business	Competitor 1	Competitor 2	Competitor 3
Pricing				
Signage				
Vehicles				
Range of skills				
Working hours				
Shopping convenience				
Staff				
Trading area				
Leadtime to schedule work				
Advertising				
Literature				
Legend				
B = Best **G = Good** **F = Fair** **P = Poor**				

Image
Form 14

Analysis

Date: ____________________

Mechanism/Medium	Evaluation (1 = Very good) (2 = Good) (3 = Poor)	Comments (Consistency, Need for Change)
Advertising		
Business Cards		
Direct Mail		
Employees		
Exhibits		
Letterhead		
Literature		
Packaging		
Personal Selling		
Publicity		
Public Relations		
Sales Promotion		
Signage		
Store Front		
Telephone Listing		
Vehicles		
Word of Mouth		
Other ____________ ____________ ____________		

Advertising and Promotion
Form 21

Promotion Plan

Date: ____________________

Kinds of Promotion - Description		Cost	Timing
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

Advertising Plan

Date: ____________________

Purpose/Description of Advertisement		Target Audience	Media	Cost
1.				
2.				
3.				
4.				
5.				

Public Relations and Publicity
Form 23

Media List

Date: ____________________

	Medium	Contacts	Telephone #	Comments re: Audience
A.		1. 2.		
B.		1. 2.		
C.		1. 2.		
D.		1. 2.		
E.		1. 2.		
F.		1. 2.		

Public Relations and Publicity
Form 24

Plan

Date: ____________________

Occasion or Event	Media Choices	Cost?	Timing

HOW DO YOU GET WORK ?

3 primary methods: ______________________________

____

____

What % of your business is acquired by each method ?

Why do we need to know this? Because we must focus our marketing initiatives in the areas with the highest probability of success. For instance, after 3 hours of marketing effort would you rather be added to a client's list of qualified bidders or would you rather be appointed the client's geomatics consultant?

Prioritize Your Efforts

DEPARTMENT OF THE CITY CLERK
LOBBYIST DISCLOSURE FORM

INSTRUCTIONS № 0811

(These instructions are for reference only. For full requirements refer to By-law 976-88, as amended.)

Effective July 1, 1990, Toronto City Council will require the disclosure of lobbying activities with respect to certain types of City of Toronto applications.

COMPLETING THE DISCLOSURE FORM WHEN THERE IS - NO - LOBBYING

If, in respect to any of the application types named below, you have not lobbied, and will not be lobbying in the future complete parts 1 to 3, and 7 of the disclosure form.

COMPLETING THE DISCLOSURE FORM WHEN THERE IS - OR WILL BE - LOBBYING

If, in respect to any of the application types named below, you have lobbied or plan to lobby - you must fully complete, and update, parts 1 to 7 of the disclosure form.

Disclosure forms indicating lobbying activity must be received within TWO working days prior to the preparation of committee agendas and/or the council order paper. To facilitate the processing of your application - please record your Disclosure ID No(s), and have your copy of the form handy when contacting City Hall about your application.

APPLICATIONS REQUIRING LOBBYIST DISCLOSURE

The following types of applications require the completion of a Lobbyist Disclosure Form. To complete Part 2 of the form, you will need to indicate the corresponding application code.

Code	Application Type	Code	Application Type
01	Zoning By-law Amendment	10	Grant (over $ 15,000)
02	Official Plan Amendment	11	Loan (over $ 15,000)
03	Site Plan Approval	12	Purchase of Real Property from City
04	Holding Symbol Removal	13	Leasing of Real Property from City
05	Temporary Use By-law	14	Vending Location
06	Part Lot Control	15	Sale of Real Property to City
07	Cash Payment in Lieu of Parking	16	Lease of Real Property to City
08	RHPA Approval	17	Lottery Licence
09	Boulevard Cafe	18	Sale of Consulting Services to City

DISCLOSURE OF LOBBYING OF OFFICIALS

The disclosure of lobbying of officials (other than Council Members or their staff) requires the naming of departments. To complete Part 6 of the form you will need to indicate the corresponding department number.

No.	Department	No.	Department
02	Audit	33	City Property
03	City Clerk's	34	Public Health
05	Finance	35	Fire
06	Legal	36	Parks & Recreation
09	Purchasing & Supply	38	Housing
10	Management Services	39	Public Works
11	Labour Relations	71	Planning & Development
31	Buildings & Inspections		

FAILURE TO COMPLY

By-law No. 976-88, as amended, states:

> The City Clerk shall not place an application before Council or a Committee thereof for consideration, and Council or a Committee shall not consider an Application unless a Lobbyist Disclosure Form, current to the date of the preparation of the Order Paper or Agenda, as the case may be, has been filed with the City Clerk for such application.

PLEASE NOTE

"Lobbyist" means (i) a person, other than an employee of the applicant, paid to make representation on behalf of an applicant with respect to an application and attempting to influence a decision of Council or a Committee thereof with respect to that application;

or

(ii) a person, being an employee of the applicant, a significant part of whose duties are to make representations on behalf of an applicant with respect to an application and attempting to influence a decision of Council or a Committee thereof with respect to that application.

PRICE COMPETITION:

BETTER KNOWN AS BIDDING

What is our Association's position on bidding ?

The Association does not prohibit nor discourage competitive bidding. The Association will not initiate disciplinary action against any member for engaging in any competitive bidding activities.

What are the Pros and Cons of bidding ?

PROS	***CONS***
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________
______________________________	______________________________

REQUEST FOR PROPOSAL

The same game as bidding but by a more genteel name is the RFQ or RFP.

How do you respond to a Request for Proposal?

What information does the client want? Need?

Which is the most important information?

What weight will the client apply to each piece of information?

How much documentation is required to support your claims ?

You need to know the answers before you start your reply.

Your ability to persuade the client to award the work to you depends on 3 key items.

1. ____________________ ______________________________

2. ____________________ ______________________________

3. ____________________ ______________________________

Your reply to the RFP must address every key point in the client's document. Too often however the RFP is vague, contradictory or incomplete. Your proposal reply must answer the explicit and implicit questions. If you follow these guidelines you should cover most eventualities.

A successful proposal minimizes the gap between *your* **SPECIFICATIONS** and the client's **EXPECTATIONS**.

FEES

While we are on the topic of proposals and bidding, and as fees are often the first and last item the client looks at, we would be remiss to not mention pricing. Now we can't discuss actual prices but I want to ask the question;

What are the 3 *primary* fee arrangements ?

1.____________________________

2.____________________________

3.____________________________

We won't mention the 4th fee arrangement which is the loss leader.

If you don't put a value on your time then your client certainly won't.

Since we agree your expertise and therefore your time is valuable.

What is your time worth ? ____

Do you charge for OLS time ? ______________________________________

Do you charge different rates for your time when you work at different tasks?

____

____

____

APPENDIX "A"

SURVEYING

SCOPE OF WORK

GENERAL SPECIFICATIONS:

The Contractor herein agrees to supply all materials, labour, tools and equipment to complete the survey services as follows:

Stake Out

1. Re-stake and/or stake out lot corners along street lines necessary for layouts of houses. "Key" bars (standard iron bars) assumed to be in place. The builder should satisfy himself in confirming same with the developer ahead of time.

2. Calculation of location of houses to comply with the Zoning By-Laws for each municipality.

3. Stake out houses for excavation of basement foundations.

4. Provide one (1) grade stake with cut to underside of footing for each house, and provide the site supervisor with a written grade cut sheet for each house.

5. Provide the site supervisor with a temporary bench mark in the proximity of the houses being constructed.

6. Upon excavation,check grade as excavated and report any discrepancy to the supervisor. Stake out footings with metal corner pins.

7. After construction of foundation walls and backfilling operations, carry out Final (Mortgage) Survey, including planting of monuments in accordance with the new standards and applicable regulations under the survey Act and Land Titles Act and verify top of wall elevations by letter for each unit.

8. Search each lot in the Land Registry Office re if any easements, etc.

9. Prepare a plan showing the building location. provide seven (7) prints of the plan per house.

Grading

1. Upon the completion of the construction of houses, and prior to sodding, re-establish lot corners and provision of grades with cut and fill for proper grading control. this is for stake out of rear lot corners, centre high points and front lot corners.

APPENDIX "B"

SURVEYING

CONTRACT PRICES

All applicable taxes are included, except G.S.T.

All prices are guaranteed until:______________________________

Model Type & Elevation	Stake-Out Price	Grading Price

____

Authorized Signature

APPENDIX "C"

UNIT PRICES

UNIT PRICES:

All unit prices include supply and installation of all material, labour, provincial sales tax, inspection, markups, incidentals, delivery charges, and any and all other charges pertaining to the work, including warranty. The same amount will be applicable as a credit should the work not be completed.

Field Work

(a)	Three-man crew	$	/hr.
(b)	Two-man cres	$	/hr.
(c)	Reset corner lot bars	$	/lot

Office Work

(a)	Ontario Land Surveyor	$	/hr.
(b)	Calculations	$	/hr.
(c)	Drafting	$	/hr.

Disbursements

(a)	Mileage, etc.	At Cost	

EXTRA TO STANDARD

The Contractor is responsible to ensure that he is aware of all extras, changes and/or deletions for each unit prior to commencing work, by consulting with the Site Superintendent an/or the Head Office.

All extras to the standard contract price must be authorized by a Purchase Order.

All extras are to be billed separately from the standard contract price and are to be submitted under a separate completion slip from the standard work, or the Contractor agrees to wait until the unit's closing date for payment of said extras.

INSTRUCTIONS TO BIDDERS

PROJECT: Eagle Run
Mississauga, Ontario

OWNER: Woodpine Developments Inc.

1. The Georgian Construction Company Limited is acting as Construction Manager for Woodpine Developments Inc.

2. Please address all bids to Woodpine Developments Inc. c/o Georgian Construction Company Limited on the Bid Form provided.

3. Include Provincial Sales Tax; exclude the Goods & Services Tax.

4. Lowest or any tender not necessarily accepted.

5. Tenders to be received no later than 2:00 p.m., June 3rd, 1994.

6. Bids are to be a lump-sum for the thirty-seven (37) units indicated on the Bid Form.

7. Provide a unit price for each model type indicated on the Bid Form.

8. Construction of the thirty-seven (37) units is to be complete prior to December 31st, 1994.

9. The successful bidder will be required to execute a contract on the Owner's standard form of agreement.

PROJECT: Eagle Run
Mississauga, Ontario

CONTRACTOR: ____________________

ADDRESS: ____________________

____

TELEPHONE : ____________ FACSIMILE: ____________

SUBMISSION DATE: ____________

BID SUBMITTED TO: Woodpine Developments Inc.
c/o Georgian Construction Company Limited
160 Traders Boulevard East, Suite 200
Mississauga, Ontario
L4Z 3K7

Attn: Mr. Ken Warkentin/Mrs. Fiona Spicer/Mr. Joe Laronga

Having carefully examined the:
- (i) Model Type Breakdown and Quantities herein;
- (ii) Scope of Work on Appendix "A";

Having completed the:
- (iii) Unit Pricing on Appendix "B" and "C";

Having included:
- (iv) Addenda No. ______ *(fill in the number of Addenda, Revisions, etc. included);*

And having visited and investigated the site and examined all conditions affecting the work, the undersigned offers to furnish all labour, material, equipment, supervision, to accept all costs and perform all duties and services required to undertake and complete in all respects

____

____

including all applicable freight, exchange, expenses, overhead, profit, customs duties, excise taxes and Provincial Sales Tax excluding the Goods and Services Tax for the Stipulated Sum of

____

____

____________________ DOLLARS ($ ____________)

Separate or Alternative Prices:

____

____

____

The undersigned agrees that this Bid is irrevocable and is valid and subject to acceptance for a period of sixty (60) days from the date hereof and that if notified of award of Contract will:

(i) execute a Contract on the Owner's standard form of agreement;

(ii) furnish a breakdown of the Contract price within 72 hours from the date of notification which is mutually agreeable to the Contractor and the Owner for progress billing purposes; and,

(iii) deliver the Bonds, Letters of Credit, Insurance Certificates, W.C.B. Clearance Certificates, as or if required, within 10 days of notification of award and prior to commencing work on site.

The undersigned recognizes that it is the intent of the design drawings, specifications and other associated documents to provide the general construction methods, materials and systems which will enable this project to be constructed in accordance with current trade practice to produce fully operable and complete buildings in all respects. Extras will not be considered unless authorized by written purchase order by the Owner.

The undersigned recognizes that any or all Bids may be rejected.

Yours very truly,

____
Contractor

______________________________ (Seal)
Signature

____
Title

____
Date

LIST OF REFERENCES

Please complete the following form in its entirety and include it with your tender.

Company: ______________________________

Years in Business: ______________________________

Union (Yes/No): ______________ Local (if any): ______________

References:

Company	Contact Person	Telephone	Name & Description of Projects

1.

2.

3.

The above references are to be builders, contractors, architects, engineers and/or suppliers.

EVALUATION CRITERIA

I. MANDATORY CRITERIA

Failure to satisfy any of the following criteria will render the proposal non-responsive.

1. STAFFING

a) The Proposer must provide for the on-site services of a Canada Lands Surveyor (CLS) having experience in carrying out similar boundary survey projects.

b) The Proposer must provide the names and resumes (directly related background, professional qualifications and work experience) of all surveyors and technicians who would work on the project.

c) An Education and Experience Certification for the proposed personnel must be provided (see Annex "E").

2. SURVEY INSTRUMENTS AND EQUIPMENT

The Proposer must identify: the type(s) of equipment to be used and what arrangements will be made for spare parts and/or complete back-up units on site; and the procedures for field maintenance, tests, calibration checks, etc. of equipment during field operations, if necessary, so that the specifications in Articles 3.1 and 3.2 of the Statement of Work are met.

3. TRANSPORTATION

The Proposer must indicate the quantities and types of aircraft and/or means of ground transportation to be used in the field. In addition, the Proposer must indicate arrangements for the provision and maintenance of back-up aircraft within 72 hours and/or back-up ground transportation.

4. COMMUNICATION

The Proposer must elaborate how communication from the field directly to the Project Authority will be established and maintained.

5. REFERENCES

The Proposer must provide CONTACT NAMES AND PHONE NUMBERS of references for previous similar work for Energy, Mines & Resources Canada and/or other clients.

II. RATED CRITERIA

Proposals will be evaluated for compliance with the Statement of Work and compatibility with the foregoing mandatory requirements, in accordance with the following criteria.

1. APPROACH AND METHODOLOGY (maximum 40 points)

   a) understanding of geographic location and climate.
   b) proposed survey approach and methodology.
   c) proposed logistic approach.
   d) forseen problems and methods of handling.
   e) originality and innovation.
   f) arrangements to minimize costs and also impact of down days.

2. PROJECT MANAGEMENT (maximum 35 points)

   a) liaison.
   b) methods to ensure maximum utilization of local resources.
   c) quality control.
   d) relevant experience and expertise of personnel.
   e) overall organization of the project.

3. EXPERIENCE AND PAST PERFORMANCE (maximum 25 points)

   a) similar projects (large scale cadastral surveys).
   b) magnitude of similar and related survey projects.
   c) reference follow-up on proposer's past performance (including sub-contractors) on previous contracts for Energy, Mines & Resources and/or for other clients.

In assessing Letters of Interests against the four above criteria, the Screening Board will consider achievements and direct experience related to local particularities such as weather, local or traditional practices as well as codes and by-laws applicable to the project location.

Categories		Ratings Weighted Ratings						
		APPLICANT						
		A	B	C	D	E		
1. Achievements of Firm Comparable Projects	3.5							
2. Achievements of Firm Other Projects	2.5							
3. Experience of Key Personnel Comparable Projects	3.0							
4. Experience of Key Personnel Other Projects	1.0							
TOTAL WEIGHTED RATINGS	10							

Figure 1 The above is the rating form used for the screening evaluation process. The Screening Board will assess Letters of Interest based on the merits of the information contained in the applications. Rating values from 1 to 10 will be multiplied by the weighting factor. The results are then totalled, for a maximum possible score of 100. The highest score is then determined.

YourMoney

BATTLING FOR BUCKS

■ *Tight pursestrings at banks a small biz beef*

Terri
WILLIAMS
SMALL BUSINESS

— Bill Sandford, SUN

NO TRUCK WITH BANKS ... Barry, Rob and Gary Poljanowski are typical of many small business people: their growing business is stymied by banks uninterested in loaning them money.

Finding financing to start or expand a business can be the biggest frustration a small business can face.

A government report tabled last week said banks have a responsibility to serve the nearly one million businesses in Canada that employ fewer than 50 people.

But no matter who you talk to, besides the banks themselves, the consensus is that they are just not getting the job done.

The Commons committee, which tabled the report entitled "Taking Care of Small Business," held several weeks of hearings last spring, triggered by complaints from small business people across Canada that the banks were making it too difficult for them to get financing.

The committee said small business operations "have experienced increasing difficulty in obtaining financing for start-up, normal operations and expansion."

Just talk to almost any small business and you'll realize the truth in that statement.

Take the case of three Weston brothers who recently were turned down for a small business loan.

Barry Poljanowski and his two brothers, Gary and Roy have a growing landscaping business. They need to upgrade their truck to carry the equipment they use to service their growing number of clients. So they went to the bank to apply for a loan of $90,000 for a ten-ton truck. The bank told them they needed $25,000 before they would even look at their application.

They went to an accountant, put together $15,000, completed the personal paperwork and guarantees needed, but the bank still wouldn't even look at them.

Brian Austin, president of Padgett Business Services, says for most people starting their own business, traditional sources of capital are just not available.

"Starting a small business these days requires more imagination in searching out and securing money," he said.

Brien Gray of the Canadian Federation of Independent Business says there is serious problems with access to financing.

A recent CFIB survey says 13.8% of small businesses had their most recent loan request rejected. That's up from 8.1% in 1990. And firms with less than five employees have their loan requests denied 17.1% of the time, the survey said.

Gray said while lending has improved marginally because of the end of the recession, "banks are still acting as if we are in it."

But Rob Pearce, senior vice-president of personal and financial services at the Bank of Montreal, said their bank is fully committed to small businesses.

He said BeeMo got serious about the small business market in 1990 when they placed small to medium business lending as one of their top priorities.

Part of their program is a small business lending rate which is 1% lower than the prime rate big business pays.

Pearce said since 1990 the Bank of Montreal's loans of under $500,000 to small firms have grown by over 50%.

"And since the same time, (all banks') loans to small business has shrunk," he said.

The Small Business Loans Act, which was revised in April 1993 to provide greater access to loans, makes up less than 15% of the Bank of Montreal's small business loans, Pearce said.

Under the SBLA, the government and bank share any loan losses.

Banks issue 80% of these loans which have quintupled since April 1993.

In the first year of the program (April 1993 — March 1994), 40,000 SBLA loans were issued involving $2.5 million. The previous year only $500,000 in loans were given out.

There are a number of government programs out there aimed at helping small businesses, but until mainstream lenders get onside it is a continuing battle for any entrepreneur.

■ **Small business appears every Monday.**

Small Business Loans R Us

Here are some options available to small businesses looking for funds:

• The Small Business Loans Act: For-profit businesses with gross revenue below $5 million can apply for up to $250,000 under this program. Company owners must provide security in the form of the assets purchased with the loan as well as a personal guarantee (ranging from 10% to 25% of the amount of the loan).

• New Ventures Program: This is an Ontario government program for loans up to $15,000. The borrower must match the amount he wants to borrow.

Venture loans

• Federal Business Development Bank: FBDB has a number of options available to entrepreneurs, including regular term lending much like the SBLA, Venture Loans for companies with good growth potential, and a brand new Working Capital for Growth Program for loans up to $100,000 for companies at least two years old.

•Other sources of financing can include: the landlord for leasehold improvements, inventory suppliers for retailers, leasing from equipment suppliers, subsidy programs for employees from employment centres and programs, personal savings and love money from spouses, parents, grandparents and anyone else who might believe in you and your new business.

— *Terri Williams*

The Case of Brad Brooks Surveying

In spite of a recent course on marketing, Brad continued to believe that he was on the right track and that things would eventually improve on their own.

However, on Friday afternoon, Jack Campion, the branch manager from the Canadian Imperial Toronto Scotian Bank (CITS) called him to ask him to come to the bank on Monday morning so that they could together review his business finances.

Brad had been hoping to ask the bank to increase his loan. However, it looked to him like he would be fortunate to keep the same line of credit as he had now.

Although Brad had known the branch manager for many years, he had heard through the grapevine that there was a new regional manager at CITS who was bearing down hard on Campion to improve the quality of Campion's accounts.

It was now Sunday night. Brad had put off reviewing his finances for some time and spent most of the weekend nervous, restless, and constantly wiping the sweat from his brow.

Brad thought about putting his banker off but decided it was finally time to look at his financial statements himself.

How could things have changed so quickly? What happened to the "good ole days?"

As Brad began to stare at the numbers, he thought, "What will Campion ask me? What will the bank decide to do?"

Your Assignment

If you were the banker, what ***criteria*** would you use to determine if Brooks' line of credit should be cut back or extended?

DOING THE NUMBERS[1]

The purpose of this section is ***NOT*** to teach you how to be high-financiers, accountants or bookkeepers.

You are not an accountant

There are plenty of people who have gone to school for many years and have a great deal of training and experience in these areas and you should take advantage of their expertise.

You make decisions

As a business leader, you are not the one who should be responsible for compiling your financial accounts. You are the one who should ask questions about the information you receive. You are the one who must appeal to the banker. You are the one who must make decisions and take action based upon the financial health of your organization.

It is for this reason, you must take an active interest in your organization's finances.

And yet, many people don't. Why do so many people (including some surveyors) refuse to "do the numbers"?

Common Excuses

There are many excuses. They include...

The "busy" excuse

1. I'm too busy.
   You will always be able to find something else to do besides reviewing your financial statements, like cleaning out your sock drawer or washing the dog. The only time when you will have plenty of time to review the financial statements is the time when you are out of business.

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[1] The examples shown within this section are for illustrative purposes only. While effort has been made to make the examples seem realistic, the figures are completely fictional and are not intended to show what "ideal" revenues or expenses should be.

The "Wrong Answer" excuse

2. I'll probably get the wrong answer.
   There is no such thing. Sure, people calculate their ratios a little different than their colleague but as long as ***you are consistent***, it won't matter. As long as you have the right question, don't worry about the wrong answer.

The "Not My Job" excuse

3. Somebody else will do the number crunching for me.
   Yes, somebody else probably should prepare the financial statements for you. But only you can make the decisions for your company.

The "What Does It Mean" excuse

4. I don't know what the number means.
   There is no financial calculation that you can do that is inherently "right". You have to put all the calculations in context with one another and the general business environment. For example, a profit of $500,000 would be considered mediocre by General Motors but absolutely fantastic by a typical survey firm. Remember: context!

The "I Don't Understand" excuse

5. I don't understand the terminology.
   It seems like the people in the world of finance have created a whole language unto themselves. Like the Inuit have 18 different words for "snow", financiers have a number of different words for "profit" - but many of them mean exactly the same thing. As long as you understand the question, it really doesn't matter what you call the answer.

The "I Don't Want to Know" excuse

6. I am afraid what I might find.
   You are going to find out eventually. Why not find out now while you can still do something about it?

Financial statements enable you to make a better decision

The role of the business manager is to make decisions.

The only purpose for "doing the numbers" or preparing financial statements is to give the business manager an opportunity to make a more informed (and hopefully, better) decision.

The purpose of this section is to put into context the type of financial and accounting questions you should be asking yourself - and debunk many myths associated with the topic of money.

You will be able to:

By the end of this module, you should be able to:

(1) Understand what goes into the preparation of financial statements and be able to tell the fundamental differences between an Income Statement and a Balance Sheet.

(2) Ask the right questions that affect the financial performance of your business and perform basic financial calculations.

(3) Decide if you should purchase that total station or not.

(4) Determine the estimated value of a firm.

(5) Know what it costs to run a business.

(6) Use the Profit Dynamic;

(7) Develop a financial accounting and control system.

(8) Understand the concepts of "cash vs. profit", "expense vs. expenditure", "the cash-to-cash gap and financing", "return", "net present value", "cash flow" and many more....

MAKING SENSE OF FINANCE

"You rise and fall on your assumptions.
Your logic must be clear, precise and consistent."

There are two things every business manager should know about financial statements.

First, financial statements are really only a list of numbers.

Second, accountants and bookkeepers prepare financial statements but they don't tell you what decisions to make.

The only reason financial statements should be really necessary is that so they will provide some information to a business manager so that he or she can make a more informed decision. (But, of course, there's no such thing as perfect information.)

Too often, preparing or reviewing financial statements becomes a boring, frustrating, routine exercise. No thought is given to what the numbers might tell you.

The fascinating point about financial statements is that anyone can use them to answer almost any kind of business question.

This manual cannot tell you what the right answers are, but it can give you a framework for asking the right type of questions.

The first question to ask is, "what decision do we have to make?" It seems like a simple question but many business people come up with a solution to something only to realize it wasn't the problem in the first place.

If you have a simple, basic question that has to be answered (like the ones below), then it is very easy to know if the question has been reasonably answered when an apparent solution has been uncovered.

Some of the questions listed below may seem so obvious that they are not worth asking. However, put yourself in your banker's shoes. If you were the banker, would you really lend yourself the money?

1. FOCUS
What decision do we have to make?

Are you going to purchase an established company?
Are you going to start-up a new company?
Are you going to sell your business?

Are you going to buy (or rent) new equipment?
New Office Space?
Are you going to add new staff or downsize?

Are you going to ask for a loan or mortgage?
Are you going to ask for a longer line of credit?

What are your payment terms going to be?
What is going to be your budget for the next year? Next five years?

2. TIME FRAME

What is the time frame of our decision?
Is it short term?
Is it long term?
What is the economic climate?

3. DECISION CRITERIA

What are the lending objectives?

minimize bad debts, rate of return on loan, risk/return ratio, acceptable risk, increase/decrease lending portfolio

What is your ability/willingness to repay?

Is the size of loan request reasonable?
Is growth managed? (Are you proactive or reactive?)
What is the reasonableness and certainty of your objectives?
What is the value of the business to the community? To the bank?

What collateral can you put up?

A bank doesn't like to take all the risk.

4. OPTIONS
What choices does the firm have?

Increase/decrease financing now or over length of time
The loan is granted/called
Renegotiate terms, length of payment, interest rate
Turnover to collection agency
C.O.D. - Cash on delivery
Controls - Maintain financial ratios and spending conditions
Additional collateral
Personal guarantee
Buy
Sell

5a. GENERAL ECONOMIC FACTORS

What is the state of the business cycle? (Boom or Bust)
What is the rate of inflation?
What are the general levels of interest rates (Bank Rate)?
What is the country's international position and the foreign exchange rate relative to the Canadian dollar (even if your firm has not yet gone global)?
What is the government doing in regulating general business conditions and in particular industries and markets?
Besides the Surveys and Surveyors Acts, you might consider the Occupational Health and Safety Act, the Income Tax Act, Party policies (Liberal, Conservative) and many, many more.
Is the industry first or last hit by the boom/bust cycle?
What warning signals are there that will indicate a change in the economy?

    ie: change in political power, new housing starts, interest rates, inflation rates, exchange rates, spread in Canada-U.S. interest rates.

5b. INDUSTRY CONDITIONS

Demand Risk

    Uncertainty in demand
    Elasticity of demand (How will changes in demand affect price?)
    Is it a luxury or necessity?
    How will technological changes affect demand?

Supply Risk

    What is the certainty of costs, distribution, availability of materials & labour?
    What is the competitive structure and future prospects of the profession?

5c. GENERAL MARKET OUTLOOK

How many competitors are there?
How big are the competitors?
What is the rate of industry growth?
How stable are industry profits?
What are the major opportunities and threats due to

- P Political
- E Economic
- S Social
- T Technological

developments?

What are the short and long term prospects for growth and profitability in the industry?

Competitor Analysis

What is likely to be the state of future competition in the profession because of new entrants or failures?
How intense is competition and how large are competitors?
What are the barriers to entry (technology, capital, price, legislation)?
Are substitute products are real threat?
What are your competitive stengths?

* Economies of scale
* Brand image
* Strong channels of distribution
* Financial resources to meet capital requirements
* Cost advantages because of raw material sources or prime locations
* Government protection
* Financial strength to fight off new competition
* Contribution margins

6. ABILITY TO SUCCEED

Are you able to respond successfully to adverse economic conditions or competitive challenges?
What are your key success factors?
Commodity or differentiated?
Service or product?
Niche or mass marketing?
Why do people do business with us?
Delivery, price, credit terms, company image, service?
How do you evaluate your performance in each key success factor area?

ABILITY TO SUCCEED - MARKETING

What market segments have you targeted and what are the needs and buying behaviour of each segment?
What is the relative importance of pricing, promotion, product features, and distribution in achieving market share?
What is the company's strengths and weaknesses in each of the critical marketing areas and, consequently, its ability to gain a reasonable share of the market?
What are the company's plans to overcome any marketing problems or deficiencies? (ie. disaster recovery plan)

ABILITY TO SUCCEED - OPERATIONS

What is the basic production process? What changes are required to be competitive?
How adequate are the facilities (capacity, technology/quality)?
What quality control program do you have in place?
What is the relative cost position of the company?
(labour cost as a percent of overall costs?)
(expenses vs. expenditures?)
What is the impact of technological change?
What is the morale, ability, skill level of the firm's staff?
Does the firm have a policy on Research & Development?
What is likely to be the firm's ability to compete?
What are the financing needs as a result of changes in production?

ABILITY TO SUCCEED - MANAGEMENT

Often, the overriding factor which determines how successful a business will be (and the type of relationship it will have with the bank) is Management.

Therefore, this is the most important aspect of Risk Assessment.

What is management's

...experience and training
...commitment and entrepreneurial drive
...capabilities as part of a management team
...character
...integrity
...leadership
...motivation

7. ABILITY TO SUCCEED - FINANCE

It is best to do the financial analysis only once you have a thorough understanding of current business and market conditions.

How effectively has management controlled costs, profits and made use of financial resources?

i/ EFFICIENCY

Efficiency ratios attempt to explain how well the firm is using the money it has and how much more it will need.

a) Days Sales Outstanding (DSO)

(Accounts Receivable * 365)/Sales

Average time to collect cash from sales

b) Days Sales in Inventory (DSI)

(Inventory * 365)/COGS

Average time you have stakes before they are used on a job. (COGS=Cost of Goods Sold)

c) Cash-to-Cash Gap

DSO + DSI - DPO

The number of days for which financing is required.

Essentially, you would say there is `x' days from the time you pay for a job and the time you receive the cash.

d) Required Financing

(GAP*COGS)/365

This number will give you an approximate dollar figure of the ongoing financing you require.

e) Capacity Utilization

$$\frac{\text{Number of Billable Hours}}{\text{Total Number of Hours}}$$

ii/ LIQUIDITY

Can the firm expect to have enough cash on hand to meet its current obligations?

a) Current Ratio

$$\frac{\text{A/R + Inventory + Cash}}{\text{Current Liabilities}}$$

b) Acid Test

$$\frac{\text{A/R + Cash}}{\text{Current Liabilities}}$$

iii/ PROFITABILITY

How profitable is the firm?

a) Return on Capital Employed (ROCE)

$$\frac{\text{Earnings before Interest \& Taxes}}{\text{Debt + Equity}}$$

For debt, include bank loans, current, long term and shareholder loans. Do not include A/P, accrued wages, expenses. Use average of debt and equity over course of past year.

b) Contribution Margin (aka Gross Profit Margin)

(Net Sales - COGS)/Net Sales

c) Return on Equity (ROE)

$$\frac{\text{Net Profit After Taxes}}{\text{Equity}}$$

Always calculate before dividends

d) Return on Assets

$$\frac{\text{Earnings before Interest and Taxes}}{\text{Long Term Assets}}$$

Are you making effective use of your assets?

iv/ FINANCING

Financing a business with all debt or all equity is not a viable option. What is the "right" mix of debt and equity?

a) Interest Coverage

EBIT/Interest

A good ratio is approximately 20. This ratio will give you a good sense of the proper proportions of debt and equity financing.

b) Days Payable Outstanding (DPO)

(Accounts Payable * 365)/COGS

On average, how long does it take before you pay a supplier?

c) Debt to Total Capitalization

(Total Debt)/(Total Debt + Equity)

Use long and short-term loan figures.

v/ OTHER RATIOS

a) As a percentage of sales

Cost of Goods Sold?
Profit
Wages
Selling and General Administration

b) What percentage of costs are fixed costs? Variable costs?
As sales increase, what happens to variable and fixed cost proportions?

c) What is the relationship of assets to sales?
If sales go up, do assets go up?
As assets go up, do liabilities also go up? Proportionately?

vi/ SUSTAINABLE GROWTH

Is the firm's growth sustainable?

Does it have the financial resources at its disposal to purchase new equipment, hire more labour, as it grows?

If a firm grows quickly, its cash flow depletes that much quicker.

You will notice that of the seven categories of questions, only one deals with finance.

Put Financial Analysis in context

You cannot make sense of finance nor ask the right questions (and certainly not come up with decent answers) unless you understand the context in which the questions have to be asked.

Rising costs are understandable in times of roaring inflation but less so when inflation is close to 0%

So, once you understand the context in which the questions are asked, how do you make sense of all the returns, ratios and percentages?

Suppose you discover that your ROCE is 12%. How do you know if this return is good or bad?

There are four things you can do.

Comparing Ratios

(1) Is 12% better or worse than last year? Or last statement date?

(2) Is 12% better or worse than your competitors?

(3) Is 12% better or worse than you would have expected given your strategy?

(4) How does a ROCE of 12% affect the decision you have to make?

Example

Suppose your ROCE was not as good as you expected (You expected 18%, the same as last year). You can begin to ask some basic non-financial questions and review some other ratios in order to discover why.

For example, you now know that ROCE is a profitability calculation. Suppose you know from reading your Income Statement that Net Profit (before taxes) has risen from $2,000 to $2,500 over last year.

By definition then, we know that something has changed to the amount of "Capital Employed". In fact, it would have had to have almost doubled.

But profits only rose by one-quarter - which means that the additional capital you employed was poorly employed and produced a very small benefit for you.

Now the question to ask is, Why?

SUMMARY

1. FINANCIAL ANALYSIS only makes sense if...
   the financial statements are put in context of the overall

   General Economic
   Industry
   Firm

   conditions.

2. FINANCIAL RATIOS only make sense if...
   there is some yardstick from which to compare the numbers (even if the comparison is with your own expectations).

3. The only reason for FINANCIAL ANALYSIS is...
   to assist the business manager to make a better decision.

4. FINANCIAL RATIOS will not tell you what the right answer is...
   but will force you to ask the right questions.

5. Are the ANSWERS to your questions REALISTIC?
   Try putting yourself in your banker's shoes

SETTING UP A FINANCIAL CONTROL SYSTEM

Statements are a decision-making tool

The purpose of this module is to provide business managers with a framework for establishing (or re-establishing) a financial control system.

As has been stated before, financial statements are only useful if they provide the business manager with information to make a more informed decision.

However, when a decision ***has to be made***, it is too late to start gathering financial data.

Gather data before it is required

Therefore, it is best to have the data at your disposal ***before*** you are faced with an important decision.

But what kind of information will you need?
How will you know what to look for?

Here are some suggestions.

As mentioned above, this is only a framework. You may tailor it to suit your own individual needs. But regardless, it is imperative to have a financial control system of some kind.

Every Month...

It would be considered good practice if every month you...

...review Income Statement & Balance Sheet

Review your Income Statement and Balance Sheet as prepared by your bookkeeper or accountant.

It is not your job to prepare the statements (unless of course you wish to) but it is your responsibility to review them.

...have statements that are easy to read

The statements should be easy for you to read. That is, the page should not be cluttered with line after line of numbers. If your statements are difficult to read, get them changed! (But do not hide important information.)

Statements should be prepared at regular intervals (usually each month) and should be reviewed also at regular intervals. In this manner, you will have the opportunity to correct problems uncovered in the financial statements.

...watch for:

When you review the financial statements, you should pay close attention to:

REVENUES

Revenues:
- Number of jobs (completed and in progress)
- Types of jobs
- Average price of jobs
- Total revenue
- Billable time

EXPENSES

Expenses:
- Variable Costs vs. Fixed Costs
- Contribution Margin
- Expenses as a percent of total revenue
    - (ie. wages as a percent of overall revenue)

ASSETS

Assets:

Cash position
Accounts receivable
(due and past due accounts)

LIABILITIES

Liabilities:

Current vs. Long-term liabilities
Debt/Equity ratio

and compare with:

Compare your financial statements with:

your budget
last month
this time last year
other firms

(I prefer my income statements to have four columns. For example, my income statement ending this past June had four columns labelled: Jan-Jun Actuals; 1994 budget, 1993 Jan-Jun Actuals; 1993 Actuals. I find it makes comparison easier.)

Here's what you're looking for ☞

When you compare figures you are looking for:

wild variations and
unforeseen costs and liabilities

If and when you find wild variations or unforeseen costs, you can ask the question, "why?" and then decide to make appropriate changes if necessary.

Should not be time consuming

The entire review should take no more than 30 minutes if there is nothing out of the ordinary and if the information comes in a suitable format.

Every 3-6 Months...

It would be considered good practice if every 3-6 months you...

...review budget and made any necessary adjustments

Budgets lose all their credibility and value as decision-making tools if the forecasts prove to be absolutely wrong.

Suppose you predicted 10% growth in sales but actually had a 10% drop or inflation rose to 10% but your prices remained constant.

Such rare events would make a budget worthless to you for comparison purposes. In such instances, it would be necessary to prepare a revised budget to take into account the changing world.

...review your financing requirements

Will the firm have to find new sources of financing or more financing from current sources (ie. the bank)?

Does the firm have enough cash on hand to meet its current obligations (ie: payroll, interest payments and the like)?

What is the expected cash flow of the firm for the next six months?

...review strategic objectives and goals.

Does the firm's financial position necessitate making any changes to your strategic objectives or goals?

Not every deviation from budget will force you to make changes to your goals. However, you don't want to wait until year-end (and likely too late) before deciding that you will have to change your goals or go bankrupt.

Every 12 months

It would be considered good practice if every twelve months you...

...prepare a new budget

Preparing budgets are never easy but they are absolutely vital. People dislike preparing budget because they often force difficult and painful decisions.

A good budget is based on...

Past performance
Desired (or anticipated) strategic changes

Instead of budgeting being a chore, think of it as...

an opportunity to dream and be creative and develop new goals and directions for the firm...

using anticipated sales and expenses as a "reality check."

Beware of...

optimistic sales and expense projections.

Due to human nature, it is common for sales to be 10% lower than expected and expenses 10% higher than forecast. (Are you prepared if your budget deviates from your forecast?)

Your assumptions...

should be clearly stated on your budget.

Example

REVENUE	Assumption
$400,000	200 SRPRs @ $500 each 20 construction projects @ $15,000 each
EXPENSES	
Bookkeeping $12,000	to average $1,000 per month
Wages $30,000	one Party Chief @ $15 per hour for 250 days
Bars $4,000	$10 per SRPR/ $100 per construction project

For example, if you have budgeted sales to be $400,000, what kind of sales of volume does this require? Will you require more capital equipment to accommodate this amount of work and has it been included in your budget?

By clearly spelling out what your assumptions are, it will be easier for you to revise your figures and avoid illogical assumptions.

Consult with your bookkeeper or accountant.

Since they are familiar with your financial books and have training, they may be an invaluable source of information and suggestions.

Ask them to drop account numbers that are no longer active and add ones where you require more specific information. For example, you may ask your bookkeeper to set up separate account numbers for postage and courier instead of lumping them into one account called "mail". But do this only if it will provide information which will eventually lead to a decision.

Likewise, delete old accounts that are no longer used. If you had an account for "Telex expenses", you can probably get rid of it now.

Consult with your staff.

Your staff may be more familiar with the details of some of your operations than you are in some cases. If you are looking for ways of changing procedures that will improve profitability, they may be a wealth of information. (Once a year should be a minimum requirement; more often is better.)

SUMMARY

Every month...	Every 3-6 months	Every year
Review Income Statements and Balance Sheets as prepared by bookkeeper or accountant Paying attention to... Revenues Expenses Assets Liabilities While comparing with... budget last month this time last year other firms And looking for... wild variations unforeseen revenues and expenses	Review budget and make interim changes Review financing and liquidity (cash flow) position Make changes to strategic objectives and goals if necessary	Prepare budget that reflects... developed strategic objectives past performances logical and clearly-spelled out assumptions Consult with bookkeepers, accountants and staff.

THE BUSINESS PLAN

Any Ontario Land Surveyor who wishes to establish his or her own business, must have a Certificate of Authorization (C of A) granted to them by the Association of Ontario Land Surveyors.

The Business Plan...

Similarly, a good business plan is also a must - if one intends to stay in business for any length of time.

is not a curiosity

The business plan is not something you do to satisfy the requirements or the curiosity of your banker. It is a vital part of any business. Without one, any business owner (surveying, engineering, retail, manufacturing, etc.) is certain to fail!

The question becomes: What goes into a good business plan?

A Good Business Plan Consists of...

A good business plan will consist of eight components...

Analysis of General Economic Conditions
Analysis of Industry Conditions
Analysis of Local Market Conditions
Analysis of Firm's Ability to Compete

Marketing Plan
Operations/Production Plan
Anticipated Management style and structure
Financial Plan (including 5-year budget)

For more information about what goes into each of these components, see the module on *Making Sense of Finance.*

Don't forget these considerations...

With beginning a new business, there must be other considerations too, such as...

- Will my business be sole propietorship, a partnership, or a limited company?
- Have I spoken to a lawyer about incorporation (if applicable)?
- How much will the lawyer charge for his services?
- How do I register for GST?
- What bank will I deal with? Will they lend me funds (if so, how much)? What is my relationship with the bank?
- How much money will I (or my family, or my friends) put up?
- What are the tax consequences of my actions? Who is my accountant?

Why be in business?

Perhaps, the most important consideration is...

Why do I want to run my own business?

Good reason

Is it because you feel there is a gap in the marketplace that you can fill?

or

Bad reason

Is it because you think you can make more money being your own boss?

Preparing a good business plan requires a great deal of thought and effort.

As you prepare your analysis on each of the eight sections, you must...

Assumptions

Consider what assumptions you are making and are they realistic.

Be specific

Be as specific as possible - backed up by research. It is one thing to say that you think the bank will lend you the necessary funds and that your local branch of the CIBC will loan you $15,000 at 8.75% over five years if you put up certain collateral. Is this enough financing or will you need more?

Sensitivity Analysis

Consider what happens if your assumptions prove to be optimistic or pessimistic. (that is, what are your contingency plans if things do not go acording to your forecast?)

Long Term

Consider the long term. It may be relatively easy to predict what will happen in the next 12 months but what about thereafter? What analysis have you done to show that your business will be able to survive the long term?

Are assumptions consistent?

Finally, are all your assumptions realistic and consistent? If your analysis indicates market growth of 2%, how do you realistically explain 10% growth in your business? It is not to say that it is impossible, but it does give cause for questioning.

Take the time

Preparing a good business plan cannot be typed up in one night on your home computer. It requires thoughtful analysis and meetings with key people (bankers, lawyer, accountants, even other surveyors) who will ultimately play a role in the success of the business.

You may want your loan approved so badly that you decide to doctor your budget or prepare an optimistic analysis.

But you are only fooling yourself if you ask your banker (or yourself) to rely on those figures.

You may think you are fooling others but don't fool yourself!

Don't kid yourself with optimistic forecasts and hopeful analysis!!

If you take the time to prepare a proper business plan for your own use, your new firm will have the chance at survival that most don't get.

If you don't prepare a business plan now, then you will certainly not have time for one when you actually start operations.

Your business plan is your roadmap to success!

THE PROFIT DYNAMIC

As we have discussed, there are only two ways of increasing cash within a firm.

Two ways to increase cash

1. It can have an owner personally contribute more money to the firm or secure a loan from the bank.

2. It can sell its products and services *at a profit.*

While both sources are necessary, only the second one provides a chance for long-term survival.

So, how does a firm manage to increase profits?

In the course of running a business, there are many decisions you will have to make (some large and some small) that will affect the profitability of the firm.

Five factors that affect profitability

At its most basic level, there are really only **five** buttons you can push that will impact profitability. It is important to keep this in mind when developing a marketing strategy, a budget or preparing to make any other kind of decision.

These buttons are:

Volume
Price
Variable Costs
Fixed Costs
Investments

Now you can begin to ask some important fundamental questions, such as...

Now ask questions

If you lower price, what will happen to volume?
If you are unable to invest in more equipment, what will happen to variable costs?

and so on...

Which factor will you push on?

When you concentrate on improving profitability, are you going to concentrate on....

increasing volume?
increasing price?
decreasing variable costs?
decreasing fixed costs?
decreasing investments (or capital spending)?

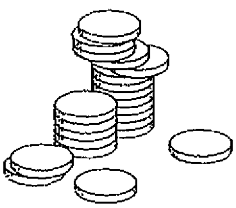
or some combination of all five?

The Profit Dynamic

$$\text{Profit} = \frac{\text{Volume} \times (\text{Price} - \text{Variable costs}) - \text{Fixed Costs}}{\text{Investments}}$$

If you want to increase profits...
you will have to...

Increase Volume
Increase Price
Decrease Variable Costs
Decrease Fixed Costs
Decrease Investments



while keeping everything else constant

WEIGHTED AVERAGE COST OF CAPITAL

The weighted average cost of capital is a figure which, on its own, means relatively little. However, it is crucial when comes to making decisions such as:

Why use Weighted Average Cost of Capital?

Should I BUY or SELL the company?
Should I BUY or LEASE the piece of equipment?

What is it?

The weighted average cost of capital is the after-tax cost of equity and debt.

Debt costs $$$

That is, debt costs the firm money and this money is known as interest payments. Any firm hopes to invest in projects (whether it is buying a company or leasing a piece of equipment) where the incremental cash flow from the project exceeds the amount of the interest payments.

So does Equity

Similarly, equity costs the firm money too. Every firm has a choice. It can choose to invest its equity into a capital project or it could choose to invest in,say, a mutual fund. Regardless of the choice, the concept is the same. Is the firm going to earn a higher rate of return investing in the capital project or in the mutual fund?

aka Hurdle Rate, Required Rate of Return

The Weighted Average Cost of Capital is sometimes also known as the HURDLE RATE because every time you jump over the hurdle, the incremental cash from the project has ***exceeded*** the cost of financing the new piece of equipment. It is also known as the REQUIRED RATE OF RETURN.

Example

For example, suppose the firm's Weighted Average Cost of Capital is 15% (how to derive this figure will be explained shortly). The firm is considering purchasing an old firm's field notes that will produce an incremental cash flow of 9%.

With this example, it would not make financial sense to purchase the field notes because the Field Note Purchase will not exceed the required rate of return.

The Weighted Average Cost of Capital consists of three elements:

Debt, Preferred Shares, Common Shares

Let us look at how to calculate the cost of each one of these elements.

The Cost of DEBT

The formula for the cost of debt is:

$$Kd = K \times (1 - t)$$

where
Kd = After Tax cost of debt
K = Before Tax cost of debt
t = marginal tax rate

Let's say you want to go to the bank to borrow money. What is the rate they are going to offer you? That is "K".

Big firms may issue bonds and other debt instruments which would be included here but for the purposes of our discussion, let's stick to the bank analogy.

Long-term debt only

We want to consider only long-term (more than one year) debt since a capital project usually extends over the course of a number of years.

***Marginal* tax rate**

"t" is the marginal tax rate. Since the cost of debt is deductible for tax purposes, you must take this into account in the equation.

Note that it is a marginal tax rate. "Marginal" means that you use the rate at the tax bracket you are now at.

Not *Average* Tax Rate

For example, suppose you are taxed 26% on the first $200,000 of profit and 50% on everything else therafter. If Brad Brooks had $250,000 of profit his average tax rate would be 39% but his MARGINAL tax rate is 50%.

Assuming firm is profitable

Note that for the purpose of calculating the cost of debt, we are assuming the company is profitable and can deduct interest. If it is not profitable, and likely won't be for the foreseeable future, then t=0.

Example

For Brad Brooks, suppose his before-tax cost of debt is 8.18% and his marginal tax rate is 45%. Therefore, his after tax cost of debt is:

$$Kd = 8.18 * (1 - 0.45)$$

$$= 4.5\%$$

The Cost of EQUITY: PREFERRED SHARE

Calculating the cost of equity is more difficult. Equity is the total of the common and preferred shares of a firm.

Preferred shares have no maturity date. They are paid dividends prior to common shareholders (hence their "preferred" status).

Assuming that the dividend is paid each year, the cost of preferred shares is:

$$Kp=\frac{D}{I}$$

Where Kp = Cost of preferred shares
D = Annual Dividend
I = Net proceeds from Preferred issue

Note that preferred-share dividends are paid out of after-tax funds. If the dividend is not paid regularly, then this formula cannot be used.

The Cost of EQUITY: COMMON SHARES

One Option

The traditional way to calculate the cost of equity is:

$$Ke=(\frac{D}{Po})+g$$

Where Ke = Cost of Equity
D = Dividends to be paid in first year
Po = Price of shares today
g = growth rate of dividends

Unfortunately, this equation has several problems for the average survey firm. First, shares are not publicly traded and, therefore, do not have a "price" the same way a Bell Canada does. Second, it is very difficult to estimate in a small firm the growth rate of dividends.

So what alternative do we have?

Let's ask the question in a different way. If you asked a stranger to contribute $1,000 to the firm, what kind of return would the stranger expect?

Or

If you had $1,000, would you earn a better return investing in the firm or an equity mutual fund?

There are still problems with this approach. It assumes dividends will be constant and that your firm is similar to that of the underlying securities in the mutual fund. However, that is the problem with trying to estimate the cost of equity.

There is another solution.

A Better Option

Using your financial statements, you can calculate your Return on Equity (ROE) *(see Making Sense of Finance).*

$$ROE = \frac{Net\text{-}Profit\text{-}After\text{-}Tax}{Equity}$$

The Return on Equity will tell you in percentage terms, how much value the firm's equity produced.

The assumption with this equation is that you want your Cost of Equity on this capital project to be at least the same as your ROE last year and that economic conditions will be exactly the same.

Example

Brad Brooks looked at his Income Statement as saw that the firm's Earnings After-Tax was $10,930.

By looking at this year's Balance Sheet he saw an Opening Retained Earnings figure of $33,916 and a Closing Retained Earnings figure of $44,846. (Take the average equity amount because equity was accumulating *throughout the entire year.*)

Therefore, the average equity figure was $39,381.

Brad calculated his Cost of Equity as:

$$Ke = \frac{\$10{,}930}{\$39{,}381}$$

$$= 27.75\%$$

Best Available Cost figure

Brad was concerned that this figure was not accurate. However, Brad came to realize that his reasoning was sound, his analytical model was solid, and that he had no better information at his disposal.

He stuck with the figure.

THE WEIGHTING SYSTEM

Since Brad's decision (to buy the new piece of equipment or sell the firm or whatever decision he has to make) will involve both debt and equity financing, he must find a way of coming up with a single figure for the cost of capital.

If the bank is going to loan the entire amount for the purchase of the total station, then the Weighted Average Cost of Capital is simply the cost of the debt.

Assuming project financed in same proportions

Often, however, the bank will loan only a portion of the amount necessary. (This is particularly true where the purchase of a company is involved.)

The Weighted Average Cost of Capital equals:

(w1)(Kd) + (w2)(Kp) + (w3)(Ke)

where w1+w2+w3=100%

How does one determine what w1,w2,w3 (the weighting system) are?

The easiest way is to use the proportions from the Balance Sheet.

Use the Balance Sheet for weightings

	Market Value	Proportion	Cost	Weighted Cost
Debt	$96,000	68%	4.5%	3.1%
Preferred	0	0%	0	0
Common	$44,846	32%	27.75%	8.88%

The Cost of Capital for Brad Brooks is 3.1% + 8.88%, or 11.98%.

Go or No Go

Brad Brooks hurdle rate is 11.98%. Any capital project that earns 11.98% or more is worth doing. Any return less is not worthwhile.

Don't be too strict with the numbers

Nevertheless, remember that we have used a number of (informed) estimates in deriving this cost of capital. Brad should not automatically dismiss a capital project with a return of 11.96% or automatically accept one at 12.01%.

However, this figure gives Brad a framework for making a more informed decision.

SUMMARY

1. The Weighted Average Cost of Capital is used to discount cash flows for buy/sell, buy/lease or don't-purchase-at-all type of decisions.

2. The Weighted Average Cost of Capital is the after-tax cost of debt, preferred shares and common shares.

3. The weighting proportions are the same ones as found in the firm's Balance Sheet.

THE CAPITAL PURCHASE DECISION

Buy or Lease

Are you going to buy (or lease) a new total station or computer system for the firm?

What are Capital Purchases?

Equipment, such as total stations and computers, is called capital equipment. It is called this because it will be used over a number of years for many different jobs which will produce cash inflow for you in the near future.

Items, like SIBs, are not capital equipment because they are (or at least will be) associated with a particular job.

Capital purchases are usually expensive but since the equipment is expected to last for a number of years, the purchase cost does not appear on the Income Statements as an Expense.

Depreciation Expense versus Accumulated Depreciation

Instead, the capital equipment appears on the Balance Sheet as an Asset (because it will produce money for you). Each year, a portion of the asset (say, 10% of purchase value) will be deducted from the Asset (called Accumulated Depreciation) and added to the Income Statement as a Depreciation Expense.

Example

Let's suppose Brad Brooks bought a $10,000 Total Station which he is going to depreciate at $1,000 per year for 10 years.

	Yr 1	Yr 2	Yr 3
Depreciation Expense	$1,000	$1,000	$1,000
Accumulated Depreciation	$1,000	$2,000	$3,000

THE NET PRESENT VALUE SOLUTION

Should you buy? Should you lease? Or do nothing at all?

Since the decision to purchase or lease capital equipment involves a great deal of money, how can you be sure that you are getting your money's worth?

Like many other decisions, you must look at projected revenues and expenses over a period of time.

Example

Suppose you are considering buying a Geodileica Total Station.

The Purchase Cost

✓ The purchase price is $10,000, payable now.
✓ The Total Station is expected to last 8 years if it is properly maintained (Maintenance costs amount to $500 per year).
✓ At the end of eight years, you can expect $1,000 salvage value.

Cost Savings

✓ Time for 15 more jobs per year @ $200 contribution margin = $3,000
✓ No longer repairing old Total Station = $1,000 per year.

Additional Costs

✓ Training Costs = $1,000 in year one and $500 in year two
✓ Additional Insurance Costs = $500 per year because of increased workload.

CHART 1

	Now	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
Purchase	-$10,000								
Maint.		-$500	-$500	-$500	-$500	-$500	-$500	-$500	-$500
Salvage									+$1,000
Training		-$1,000	-$500						
Insurance		-$500	-$500	-$500	-$500	-$500	-$500	-$500	-$500
Savings		$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000
Benefit	-$10,000	$2,000	$2,500	$3,000	$3,000	$3,000	$3,000	$3,000	$4,000
PV factor @ 12%	1.00	0.89	0.80	0.71	0.64	0.57	0.51	0.45	0.40
Benefit x PV	-$10,000	$1,780	$2,000	$2,130	$1,920	$1,710	$1,530	$1,350	$1,600
Net Present Value	-$10,000	-$8,220	-$6,220	-$4,090	-$2,170	-$460	$1,070	$2,420	***$4,020***

In the above chart, Brad Brooks has added all his cost savings and subtracted all of his cash outflows (Row "Benefit").

Finding PV factors

Since Brad knows his Cost of Capital *(see Weighted Average Cost of Capital)* is approximately 12%, he discounted the cash flows for the eight years of the project. The present value factor can be found in any Present Value Table in most finance books, on an HP Financial Calculator, or any computer spreadsheet program.

Time Value of Money

The row marked "Benefit x PV" shows the discounted cash flow values. For example, $3,000 in six years from now is the same as $1,530 today at a rate of 12%.

Go or No Go

The row marked "Net Present Value" is simply accumulated cash inflows and outflows of the project. A project should be taken on if the NET PRESENT VALUE is greater than zero (which it is, $4,020) and rejected if it is zero or less.

What does NPV mean?

Simply put, a NET PRESENT VALUE of $4,020 tells you that this project will contribute $4,020 to the value of the company (if your assumptions hold true).

Lease instead of Purchase

Suppose you considered leasing the Total Station instead of purchasing it. The Geodileica representative wants $2,000 down and $1,500 over six years. You will be responsible for maintenance costs. There is, of course, no salvage value.

Using the same approach:

CHART 2

	Now	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
Payments	-$2,000	-$1,500	-$1,500	-$1,500	-$1,500	-$1,500	-$1,500		
Maint.		-$500	-$500	-$500	-$500	-$500	-$500		
Salvage									
Training		-$1,000	-$500						
Insurance		-$500	-$500	-$500	-$500	-$500	-$500		
Savings		$4,000	$4,000	$4,000	$4,000	$4,000	$4,000		
Benefit	-$2,000	$500	$1,000	$1,500	$1,500	$1,500	$1,500		
PV factor @ 12%	1.00	0.89	0.80	0.71	0.64	0.57	0.51		
Benefit x PV	-$2,000	$445	$800	$1,065	$960	$855	$765		
Net Present Value	-$2,000	-$1,555	-$755	$310	$1,270	$2,125	$2,890		

In this example... Purchase rather than lease

Although leasing the total station is also a good decision (because it has a positive Net Present Value of $2,890), purchasing makes more sense in this case because it has a greater NPV. ($4,020 versus $2,890).

NPV accomodates different time horizons

Even though the purchase option is over 8 years and the lease option is over 6 years, NPV (P stands for PRESENT) allows us to compare. We are comparing apples with apples.

TAXES AND NET PRESENT VALUE

To date, we have not considered taxes. If Brad Brooks' firm was not subject to tax, then our analysis could stop now.

We don't get to keep all the extra profit!

However, if Brooks' firm is profitable, Revenue Canada will have its share of the extra profit created from the purchase of the Total Station.

Therefore, we must factor in taxation into our Net Present Value Equation.

Marginal Tax Rate

Suppose Brad Brooks' marginal tax rate is 45%. Then, the relevant equation becomes:

$$\text{NPV(after tax)} = \text{NPV(before tax)} * (1-t)$$

Where "t" is the marginal tax rate.

See what happens when we add two more rows to our chart (based on Chart 1):

CHART 3

	Now	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8
Benefit	-$10,000	$2,000	$2,500	$3,000	$3,000	$3,000	$3,000	$3,000	$4,000
PV @ 12%	1.00	0.89	0.80	0.71	0.64	0.57	0.51	0.45	0.40
Benefit x PV	-$10,000	$1,780	$2,000	$2,130	$1,920	$1,710	$1,530	$1,350	$1,600
Tx @45%		$801	$900	$959	$864	$769	$689	$607	$720
Benefit - Tax		$979	$1,100	$1,171	$1,056	$941	$841	$743	$880
NPV (After tax)	-$10,000	-$9,021	-$7,921	-$6,750	-$5,694	-$4,753	-$3,912	-$3,169	-$2,289

All of a sudden, because of taxes, the NPV has changed from positive to negative.

Now, the signal is that you should NOT proceed with purchasing the total station.

With taxes, the decision is NO GO

But there may be hope yet!

CAPITAL COST ALLOWANCE

In financial accounting, the expense of a capital investment is called Depreciation. An accountant or bookkeeper can expense the capital investment using a number of different methods (straight-line, double declining balance) depending on the expected life of the investment and its salvage value.

Depreciation expense not permitted for tax purposes

Revenue Canada wants to collect as much tax revenue as it can. If a firm was able to expense the *entire* amount of its capital investment right away, the firm could claim enough depreciation to cover its revenues and never pay a cent in tax. Therefore, Revenue Canada does not allow Depreciation for tax purposes.

Revenue Canada assigns assets CCA class and CCA rate

Instead, it allows a system called CAPITAL COST ALLOWANCE (CCA) - which is really a form of accelerated depreciation. Revenue Canada has grouped all depreciable assets into a series of classes and assigned them a CCA rate.

Half-year rule

Suppose the total station mentioned above falls into Class 8 which Revenue Canada says has a CCA rate of 20%. This means that Brad Brooks can claim 20% of the assets in that class as expenses (except in the first year of owning the total station when he can only claim one-half, or 10%).

For example, suppose Brad purchases the $10,000 Total Station. Assuming there are no other assets in the Class 8 pool of assets, this is what Class 8 would look like:

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5 +
Balance in Class 8 at beginning of year	*nil*	$9,000	$7,200	$5,760	...
Addition	$10,000				
CCA taken	$1,000	$1,800	$1,440	$1,152	...
Balance in pool at end of year	$9,000	$7,200	$5,760	$4,608	...

CCA on declining balance only

Notice that Brad can only take 20% of the opening balance as CCA and not 20% of the original purchase price.

Also note that he can claim only 10% the year he purchases the asset.

Disposal of Asset

For the purposes of this discussion, let's leave what happens when the asset is sold to another time.

CCA reduces taxable income

Capital Cost Allowance is a means of shielding tax from Revenue Canada according to Revenue Canada's rules.

Suppose Brad Brooks decided for financial reporting purposes to show straight-line depreciation of $1,000 on the total station for 10 years. However, he can only claim for tax purposes the maximum Capital Cost Allowance.

How does CCA affect his taxable income?

	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5 +
Income before tax	$12,000	$11,000	$15,000	$6,000	...
Add: depreciation[2]	$1,000	$1,000	$1,000	$1,000	
Taxable Income before CCA	$13,000	$12,000	$16,000	$7,000	
CCA taken	$1,000	$1,800	$1,440	$1,152	
Taxable Income	$12,000	$10,200	$14,560	$5,848	

Tax Shield effect has monetary value

By purchasing any asset where CCA is taken, the firm is able to reduce its taxable income. This "shielding" of tax creates value for the firm and encourages firms to purchase capital equipment.

[2] And any other expenses deducted on the books which are not allowed for income tax purposes.

How big is the tax shield effect?

So how does CCA affect Brad Brooks' decision to buy the Total Station or not?

Fortunately, there is a formula that calculates the value of the tax shield. It is:

Present Value of Tax Shield formula

PRESENT VALUE OF TAX SHIELD =

$$pvts = i \times t \times \left(\frac{c}{c+r}\right) \times \left(\frac{2+r}{2 \times (1+r)}\right)$$

Where
I = the net addition (or deduction) from the CCA pool
t = rate of taxation
c = CCA rate
r = required after-tax rate of return

Example

In our example, the net addition for the purchase of the Total Station is $10,000; the tax rate is assumed to be 45%; the CCA rate is 20% and the required after-tax rate of return (Wacc) is 12%.

Therefore, the Present Value of the Tax Shield is:

$$pvts = \$10{,}000 \times 0.45 \times \left(\frac{.20}{.20+0.12}\right) \times \left(\frac{2+0.12}{2 \times (1+0.12)}\right)$$

$$pvts = \$4{,}500 \times \left(\frac{.20}{.32}\right) \times \left(\frac{2.12}{2.24}\right)$$

Brooks shields this amount ☞

$$pvts = \$2{,}661.83$$

This number tells Brad Brooks that by claiming CCA the firm is able to (in present value terms) shield $2,661.83 from Revenue Canada and keep it within the firm.

Add PVTS to NPV (after-tax)

Now, by adding the PRESENT VALUE of the TAX SHIELD to the NPV of AFTER-TAX SAVINGS (Chart 3), Brad can determine the overall value of the investment to the firm.

Because of CCA, the signal in this case is GO!

OVERALL VALUE = \$2661.83 + (-\$2,289)

= \$372.83

Again, indications are (since the NPV of all future cash flows is positive) that purchasing the total station will create value for the firm and Brad Brooks should proceed.

SUMMARY OF THE CAPITAL PURCHASE DECISION

1. **Determine:**
   the cost of purchasing (or leasing) the piece of equipment;
   the payment schedule;
   the number of years the equipment will be in use;
   the salvage value at the end of the equipment's life.

2. **Estimate the Cost Savings, including:**
   productivity savings from doing work better or being able to do more jobs;[3]
   savings from not having to repair old equipment or purchase other types of new equipment;

3. **Estimate the Additional Costs, including:**
   training staff on new equipment;
   additional maintenance and insurance costs;
   additional equipment costs;
   interest costs if loan required for purchase.

4. **Determine Cost of Capital and Marginal Tax Rate** (if not done so already);

5. **Calculate Net Present Value of after tax savings**
   (using a chart or spreadsheet similar to Chart 3);

---

[3] You may not think that you are going to get more jobs because of your decision to purchase a piece of equipment but consider the number of jobs you may LOSE to your competition because you have not upgraded to the newest model.

This is also a form of cost savings!

6. **Calculate Present Value of Tax Shield;**

7. **Add NPV of after-tax savings and Present Value of Tax Shield.** If the sum is greater than zero, then the signal is "GO". If the sum is less than zero, then the signal is "NO GO".

8. **Review all assumptions**. Are there any non-financial issues you have not considered? How sensitive is your Go/No Go decision to your assumptions? (ie: will your decision change if your cost of capital is higher?)

VALUATION

Purpose of this section

The purpose of this module is to give the business manager a framework for estimating the value of a business for purchase or sale.

Estimating the value of a company is probably the most difficult aspect of financial planning. It is so difficult because you must make a number of informed guesses before arriving at an estimated value.

Objective: Receive fair price

And still, both the purchaser and the seller wish to ensure that they are receiving a fair price for the sale of the firm.

Consult with experts before finalizing any deal

It is absolutely crucial before finalizing any deal that you consult with your lawyer and accountant. They are experts in their fields and have more experience in valuation than almost any other group of people.

But before you call in the experts, you want to know if the offer to buy your company is in the ballpark or not!

Underlying Valuation Principle:

The principle in determining the value of a business is to estimate the annual cash income after taxes from the acquisition.

$$Value = \frac{AnnualCashIncome}{1+WACC} + \frac{ACI}{(1+WACC)^2} + \frac{ACI}{(1+WACC)^3} + \ldots$$

where WACC is the Weighted Average Cost of Capital

it is important to remember that what happened to the firm in the past is irrelevant unless it has an impact on future earnings. For example, the fact that a business that had a 50% Return on Capital Employed (ROCE) five years ago is absolutely irrelevant. If the new owner thinks he/she can duplicate that feat, that is relevant!

The point is: you must be *future-oriented*!

And that is where the difficulty in valuation arises.

What Is Annual Cash Income?

The numerator (Annual Cash Income) is is fundamental to the equation. You must estimate the annual cash income to the firm over the next, approximately, 10 years.

Focus on CASH not Net Profit

Annual Cash Income is the incremental increase (or decrease) in cash (and other liquid securities such as accounts receivables over the course of one year).

Annual Cash Income is ***not*** "net income" as stated on financial statements. The Net Income figure includes expenses (which were paid for by cash last year) but not expenditures (cash paid out this year but not reflected on this year's financial statements) due to standard accounting procedures. For example:

Net Income (after interest & taxes but before dividends)	$13,837
Add: Depreciation Expense (and any other non-cash items)	$ 6,429
Subtract: New Investments (cash paid out but does not appear as expense on income statement)	$11,000
Annual Cash Income	$ 9,266

You want to focus on "Cash Income" instead of "Net Income" so that you get an accurate picture of what the *business* will provide to you *financially*. After all, you expect the business to generate cash for you, don't you?

It is very easy to have an inflated net income but it can hide the fact that you have had to spend thousands of dollars to replace aging equipment and that you really don't have as much cash inflow as it appeared.

Estimating Annual Cash Income

Now that you know what Annual Cash Income is, how do you estimate it?

There are many factors to consider. However, they all relate to the future of the business and its competitive advantages.

Always assume that the business will carry on as a going concern and that assets will not be sold as part of a liquidation sale.

Here is a list of a few criteria you may want to consider.

NON-FINANCIAL CRITERIA

1. What are the KEY SUCCESS FACTORS in this business? (such as, quality, price, timeliness, etc.)
2. What are its STRENGTHS?
3. What are its WEAKNESSES?
4. Are there any OPPORTUNITIES in the industry?
5. Are there any THREATS to the industry?

6. What is the DEMAND risk?
7. What is the SUPPLY risk?

8. Do we have a Unique Selling Proposition?
9. Who are our COMPETITORS? (other survey firms, title insurance, etc.)
10. Is there a NON-COMPETITION AGREEMENT with previous owner?

11. What is MANAGEMENT's capabilities, both the seller's and buyer's? (history of management, reactive/proactive to change, management style, management policies)

12. Does management have a STRATEGIC PLAN and BUDGET?

13. What is this company's HISTORY?
14. Does it have a reputation for QUALITY?
15. Does the firm name/owner have a good strong REPUTATION in the community?
16. What is the ECONOMIC CLIMATE? (political policies, boom/bust, interest rates housing starts, etc.)
17. Why is the OWNER SELLING? Am I PREPARED to make the sacrifice to run the business?

FINANCIAL CRITERIA

1. Does the investment have the ABILITY TO REPAY?
2. What COLLATERAL has the firm put up for financing? What collateral may have to be put up in the future?
3. What is the firm's FINANCIAL HISTORY?
4. What is the firm's COST STRUCTURE? (fixed costs to variable costs, wage rates, receivables paid on time, etc)
5. What is the firm's PROFITABILITY?
6. What are the value of the firm's ASSETS (will you be forced to purchase new equipment)?
7. Are you assuming existing firm's LIABILITIES (including potential insurance claims)? Are there any Liens or other legal impediments to the sale of the business?
8. Is the firm GROWING? (sales, profit, asset, or equity growth)
9. Is the firm STABLE? (debt/equity ratio)
10. Is the firm LIQUID? (cash position, now and over a period of time)
11. Is the firm financially EFFICIENT? (cash-to-cash gap, collecting A/R)

They are informed guesses

The assumptions that you make here will determine what you expect future cash revenues and cash expenses to be.

- but guesses nonetheless.

No two people will make the same set of assumptions.

No set of assumptions will be entirely correct; you must make informed guesses.

However, most new business owners make common errors when making assumptions. They are:

Common Fallacies in Business Valuation

"Now that I'm the owner, I'll automatically be able to increase sales (without incurring any extra expenses)."

"Now that I'm the owner, I'll be able to trim the fat and cut expenses."

"Revenues will keep going up. (Gee, I never expected this recession)."

"I don't plan to spend any money on computer upgrades or equipment replacement."

While these statements sound silly in this form, many new business owners fail to incorporate them in their budgeting.

Don't do yourself a disservice...

In order to answer the non-financial questions, you will have to take some time to consider how the business fits within the survey profession and within the community you intend to serve.

To answer the financial questions, you will need access to the firm's financial statements (both current and past) and be prepared to do some rudimentary financial analysis so that you will be able to project reasonable cash flows.

This is especially important if you are the proposed purchaser. It is absolutely essential that you have access to the firm's financial statements. It is equally essential that you get an accurate view of the firm's fixed assets (Is their equipment in desperate need of repair?)

In other words, you must physically visit and inspect the workplace of your proposed investment. You must see the firm's financial statements. A purchaser is doing himself a disservice if he relies solely on the (biased) opinions of the current owner (even if the current owner is a friend).

Estimate Cash Flows For How Long?

If estimating cash flows for your first year of operation is difficult, estimating them for your tenth year is that much more difficult.

Some people recommend estimating cash flows for 3-5 years; some for as long as 20 years.

One complete boom/bust cycle

I prefer ten years because your assumptions can still be fairly realistic and, over ten years, you will have gone through one entire boom/bust cycle. Despite this assertion, the longer you are able to estimate cash flows reasonably, the more reasonable your valuation figure will be.

The boom/bust cycle of the economy is the most natural, inevitable, unalterable truth about economics. By estimating cash flows for ten years, you will have a sense that your business will be able to survive both the good AND bad times.

Brad Brooks' Example

Brad Brooks received a phone call on Friday afternoon from one of his colleagues with whom he'd graduated with at Erindale College. Brad's friend was tired of working at the Government Ministry and wanted to work in private practice. Would Brad consider selling his firm to his friend?

Brad's friend offered him $100,000 for the business. Was this a good deal?

Over the weekend, Brad sat down at his computer and estimated his Annual Cash Income over the next 10 years. Here's what his spreadsheet looked like:

Now that Brad had a series of cash flows, he knew he had to discount them by his (weighted-average) cost of capital to take into account the time value of money (that is, receiving $100 today is worth more than receiving $100 one year from now).

Brad had determined what his weighted average cost of capital was earlier when he made his buy-rent decision.

Brad's assumptions

Brad's firm showed a net loss in 1992 and 1993 but 1994 seemed encouraging to him. Brad felt that 1995 would be even better and that 2000 would be his best year in terms of net profit. However, Brad also knew that he would likely have to make major capital purchases in 1996 to replace his old equipment that he purchased in 1991. Unfortunately, he felt that he would likely have to replace the whole thing again in 2000.

Brad calculates estimated value of the firm

Taking all of his information into account, he determined that the future value of the business was $11,784. He added $85,226 of his current cash on hand (and liquid securities). Finally, he knew that he had $26,918 in accounts receivable of which he was sure he would be able to collect at least 80% (or, $21,534) of it.

By adding all these figures together, he arrived at a value of $118,544.

(Note that we are assuming in this example that Brad's friend is going to assume all assets and liabilities. If he doesn't, then it will affect the estimated value of the business.)

What does the value mean?

What does $118,544 mean? It means that Brad would make more money (ie. be better off) if he could sell the business for $118,544 or more.

If Brad's friend had used the same assumptions, it means that Brad's friend would make money on the investment if he were able to buy the business for less than $118,544.

Of course, it is highly unlikely they used the same assumptions (or had access to the same information).

Starting point for negotiation

The $118,544 figure is only a starting point for negotiation. The actual selling price may be quite different but at least Brad could get a sense of whether he was getting a good deal or not.

Personal considerations

Brad will want to consider other factors too, such as:

* how much he enjoys (or hates) running his own business;
* what else he would do if he didn't run his own business;
* changing strategies to increase value of business.
* personal tax consequences

Negotiating issues

If Brad did decide to sell, he would have to negotiate:

What *exactly* is the purchaser buying?
Terms of payment
(cash sale, share purchase, dissolution of business and start-up of new business)
Payment over what length of time;
Non-competition agreements;
Assumption of liabilities;

And, of course, his lawyer and accountant should review the terms of the agreement, verify Brad's assumptions because of their expertise and formalize the sale agreement. In some cases, the purchaser may wish to have an audit conducted before the sale is finalized.

In this case, however, Brad decided he enjoyed having his own business and decided not to sell.

SUMMARY

1. **Forecast** Annual Cash Income
   Take Net Income after tax and add back in depreciation and subtract new investments based on your assumptions about the firm's potential performance.

2. Forecast Annual Cash Income **over at least 10 years.**

3. **Get hands on** real (preferably, audited) financial statements and visit the office.

4. Determine weighted average **cost of capital** (if not done so already).

5. Determine estimated **value of firm** (using valuation formula).

6. **What exactly are you buying** (or wish to buy)?

7. **Negotiate.**

8. **Get lawyer and accountant involved to finalize details.**
   You may want to bring in your accountant earlier if it appears that there is a real possibility of closing the deal.

   It will be difficult in some cases to make reasonable estimates (such as depreciation amounts) without the assistance of an accountant.

   There may also be personal tax consequences of buying or selling the business for which you will need professional advice.

SUMMARY of

"DOING THE NUMBERS"

By this time, you should have a grasp on many important and fundamental financial concepts that will, we hope, enable you to manage your operation a little easier.

If nothing else, we hope you appreciate...

there is no reason to be afraid of financial statements or analysis;

the purpose of financial statements is to allow you to make decisions and not to be ruled by them;

and

everything you have just learned is completely useless...

unless you ***take the time*** to develop financial systems suitable to the needs of your firm and make that extra effort to develop realistic assumptions and perform some important financial analysis.

If you do, you will be better off than 90% of the people in business today.

BRAD BROOKS SURVEYING LTD
1994 BUDGET

			% of sales	*ASSUMPTIONS*
REVENUES				
82	SRPRs	$73,800		82 jobs @ $900 each
164	Retracement	$246,000		164 jobs @ $1,500 each
6	Construction	$45,000	93.70%	6 jobs @ $7,500 each
RECOVERED DISBURSEMENTS				
	SIBs/Field Expenses	$6,000		Only recover construction job costs
	Research	$6,300		
	Printing	$3,500		
	Transportation	$2,500		10,000 kms @ $0.25 per km
	Hotels/Meals	$675		Only 45% is recoverable
	Equipment Rentals	$850		
	Blue Stickers	$2,188		
	Sub-Contractors	$2,500	6.30%	Only 63% is recoverable
TOTAL REVENUE		$389,313		
VARIABLE EXPENSES				
	Staff 'A' Wages	$36,212		1 field staff @ $22 per hour
	Staff 'B' Wages	$27,936		1 field staff @ $18 per hour
	Professional Wages	$46,000		1 OLS @ $50 per hour
	SIBs/Field Expenses	$26,500		$50-SRPR/$100-Retrac't/$1,000-Constr'n job
	Research	$6,300		$25 for 180 jobs
	Printing	$3,500		
	Transportation	$24,000		96,000 kms @ $0.25 per km
	Hotels/Meals	$1,500		
	Equipment Rentals	$1,200		special EDM rental
	Blue Stickers	$2,188		$17.50 for 125 plans
	Sub-Contractors	$4,000		
TOTAL VARIABLE EXPENSE		$179,336	46.06%	
CONTRIBUTION MARGIN		$209,977	53.94%	

FIXED EXPENSES

NON-ALLOCATED WAGES		
Field Staff A Wages	$6,006	wages not allocated to specific job
Field Staff B Wages	$2,016	
OLS Wages	$47,400	
Bookkeeper	$2,400	$200 per month
EMPLOYEE BENEFITS		
Unemployment Insurance	$3,311	2.0% of total wages
Canada Pension Plan	$3,311	2.0% of total wages
Employer Health Tax	$1,656	1.0% of total wages
Workers Compensation	$1,242	0.75% of total wages
Group Insurance	$7,451	4.5% of total wages
Group RSP	$4,967	3% of total wages
Vacation Pay	$2,887	4.0% of staff wages
LICENSE/MEMBERSHIP FEES		
License (OLS) fees	$915	
C of A fee	$325	
ISTO dues	$150	
CIG dues	$100	
Annual Corporate filing	$50	
INSURANCE		
Professional Liability	$1,500	up 15% from previous year
Car Insurance	$2,400	$200 per month
Theft/Fire Insurance	$300	
Life Insurance	$150	
NON-CASH EXPENSES		
Bad Debt Expense	$27,252	7% of revenues
Depreciation Expense	$22,000	depreciation on computers, total stations etc.
PREMISES		
Office	$3,600	$300 per month
Hydro (heat, light, power)	$1,100	$91.67 per month
Telephone/Fax/Cell phone	$3,000	$250 per month
Postage	$800	$66.67 per month
Courier	$1,200	$100 per month
Photocopier Lease	$2,400	$200 per month
Storage	$1,200	$100 per month for storing survey records

PROMOTION			
Advertising	$1,200		$100 for Yellow pages ad per month
Christmas Cards	$250		$1.25 per card for 200 cards
Prospective Clients	$1,500		
BANK			
Bank Transaction Charges	$450		
Audit Fees	$1,000		audit by local C.A.
TRAINING			
Training Seminars	$500		Attending three seminars per year
Educational Publications	$100		
Certification Training	$400		St. John Ambulance first aid training
NON-CAPITAL EQUIPMENT			
Maintenance Expenses	$3,000		for computers, total stations, autos
Other non-capital supplies	$2,000		
ADMINISTRATIVE			
Stationery	$1,500		
Computer supplies	$1,000		
OTHER			
Legal	$1,000		
Miscellaneous	$1,000		
Loan Principal	$6,186		
TOTAL FIXED EXPENSES	$172,175	44.23%	
EARNINGS BEFORE INTEREST & TAX	$37,802	9.71%	
Loan Interest	$4,013		5 yr, $40,000 loan @ 10%
Taxes	$17,011		45% of EBIT
EARNINGS AFTER TAX	$16,778	4.31%	

BRAD BROOKS SURVEYING LTD.
CAPITAL PURCHASE SPREADSHEET

		Year ->	1	2	3	4	5	6	7	8	9	10
	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*
Net Profit	($9,288)	$12,671	$37,802	$49,245	$50,164	$58,996	$67,221	$85,215	$71,625	$54,338	$27,300	$11,146
Less: Taxes @45%	$0	$5,702	$17,011	$22,160	$22,574	$26,548	$30,249	$38,347	$32,231	$24,452	$12,285	$5,016
Add: Depreciation	$1,280	$1,024	$10,819	$28,655	$35,424	$33,339	$34,172	$37,337	$37,370	$39,896	$46,917	$47,533
Less: New Investments	$0	$0	$100,000	$100,000	$25,000	$25,000	$50,000	$50,000	$25,000	$75,000	$75,000	$25,000
ANNUAL CASH INCOME	($8,008)	$7,993	($68,390)	($44,260)	$38,014	$40,787	$21,143	$34,205	$51,764	($5,218)	($13,068)	$28,664

Present Value of Annual Cash $11,784

Weighted Average Cost of Capital *12.00%*

CAPITAL COST ALLOWANCE - CLASS 8

		Year ->	1	2	3	4	5	6	7	8	9	10
	1993	*1994*	*1995*	*1996*	*1997*	*1998*	*1999*	*2000*	*2001*	*2002*	*2003*	*2004*
Opening CCA Balance	$6,400	$5,120	$4,096	$93,277	$164,621	$154,197	$145,858	$161,686	$174,349	$161,979	$197,083	$225,167
Acquisitions	$0	$0	$100,000	$100,000	$25,000	$25,000	$50,000	$50,000	$25,000	$75,000	$75,000	$25,000
Depreciation	$1,280	$1,024	$10,819	$28,655	$35,424	$33,339	$34,172	$37,337	$37,370	$39,896	$46,917	$47,533
Closing CCA Balance	$5,120	$4,096	$93,277	$164,621	$154,197	$145,858	$161,686	$174,349	$161,979	$197,083	$225,167	$202,633

CASH FLOW STATEMENT
FOR BRAD BROOKS SURVEYING LTD.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
SRPR (# of jobs)	2	3	5	9	12	13	11	9	7	6	4	1
Retrc't	2	5	8	13	17	22	25	28	19	14	8	3
Construct'n	0	0	0	2	1	2	0	1	0	0	0	0
	$13,000	$3,000	$4,800	$10,200	$16,500	$27,600	$51,300	$52,200	$62,400	$50,100	$42,300	$26,400
Recovered Disbursements	$0	$0	$230	$578	$1,050	$3,349	$3,787	$5,866	$2,495	$3,820	$1,902	$1,221
less:no paids	($1,100)	$0	($1,500)	($500)	($2,600)	($1,800)	($3,400)	($5,200)	($3,750)	($4,200)	($1,300)	($1,900)
GROSS CASH INFLOW	$11,900	$3,000	$3,530	$10,278	$14,950	$29,149	$51,687	$52,866	$61,145	$49,720	$42,902	$25,721
Allocable Wages	$3,502	$6,076	$9,216	$11,002	$12,592	$12,152	$13,094	$11,822	$11,728	$9,486	$7,440	$2,038
Other Variable	$956	$1,612	$3,188	$10,136	$8,657	$10,974	$8,329	$10,569	$6,126	$4,980	$2,818	$931
Non-Allocable Wages	$2,736	$4,726	$4,908	$5,348	$5,722	$4,940	$5,144	$5,696	$5,712	$4,640	$4,588	$3,662
Employee Benefits	$2,129	$1,458	$1,915	$2,221	$2,491	$2,323	$2,480	$2,381	$2,371	$1,915	$1,626	$2,344
Licenses/Dues	$1,340	$0	$0	$200	$0	$0	$0	$0	$0	$0	$0	$0
Insurance	$250	$200	$400	$200	$250	$200	$1,750	$200	$250	$200	$250	$200
Capital Purchases	$0	$0	$0	$0	$0	$0	$2,500	$0	$0	$0	$0	$0
Premises	$1,108	$1,108	$1,108	$1,108	$1,108	$1,108	$1,108	$1,108	$1,108	$1,108	$1,108	$1,108
Promotion	$325	$125	$250	$650	$250	$50	$350	$50	$300	$325	$25	$250
Bank & Audit Fees	$0	$0	$1,045	$45	$45	$45	$45	$45	$45	$45	$45	$45
Training	$70	$250	$200	$0	$0	$0	$0	$50	$0	$230	$200	$0
Maintenance	$208	$208	$708	$208	$1,208	$708	$708	$208	$208	$208	$208	$208
Administrative	$425	$0	$425	$0	$425	$0	$425	$0	$425	$0	$375	$0
Other	$0	$0	$1,000	$0	$0	$0	$0	$0	$0	$0	$1,000	$0
Loan Repayment	$850	$850	$850	$850	$850	$850	$850	$850	$850	$850	$850	$849
GST remitted to RevCan	$8,164	$0	$0	$1,290	$0	$0	$3,806	$0	$0	$11,599	$0	$0
Net Cash Inflow/Outflow	($10,164)	($13,613)	($21,683)	($22,980)	($18,649)	($4,201)	$11,097	$19,886	$32,022	$14,134	$22,368	$14,086
Opening Cash	$85,226	$75,062	$61,449	$39,767	$16,787	($1,862)	($6,062)	$5,035	$24,921	$56,943	$71,077	$93,445
Transactions	($10,164)	($13,613)	($21,683)	($22,980)	($18,649)	($4,201)	$11,097	$19,886	$32,022	$14,134	$22,368	$14,086
Closing Cash	$75,062	$61,449	$39,767	$16,787	($1,862)	($6,062)	$5,035	$24,921	$56,943	$71,077	$93,445	$107,531

EXECUTIVE SUMMARY

Describe your business and the purpose of this plan.

Summarize your financial requirements and the sources you plan to obtain money from.

Show, in the chart below, the major uses to which you will apply the money once you obtain it.

USAGE	AMOUNT APPLIED

If you are looking for outside funding, describe why money should be invested in your business. Include your expected return on investment in your company and how and when you plan to repay it.

FORM 2

COMPANY PROFILE

BUSINESS NAME AND ADDRESS: ______________________________

____

TELEPHONE: ______________________ TYPE OF ORGANIZATION: ______________________

REGISTRATIONS AND LICENSES

TYPE	DATE ISSUED	NUMBER
1.		
2.		

COMPANY MANAGEMENT

NAME	POSITION	% OF BUSINESS OWNED
1.		
2.		
3.		

COMPANY ADVISORS

NAME AND ADDRESS	ROLE	% OF BUSINESS OWNED
1.		
2.		
3.		
4.		

FORM 3

THE MARKET

	SIZE OF MARKET REGIONS (#s units)					
SERVICES/ (name/group)	REGION 1	REGION 2	REGION 3	REGION 4	TOT. OF ALL REGIONS	GROWTH (%/year)
1.						
2.						
3.						
4.						

FORM 4

TRENDS

MAJOR TRENDS	PLANNED RESPONSE
1.	1.
2.	2.
3.	3.

FORM 5

POLITICAL AND LEGAL

ISSUE DESCRIPTION	RISK FACTOR	COMPANY RESPONSE

FORM 6

COMPETITION

NAME OF COMPETITOR	SIZE OF COMPANY (sales in $)	PRICING POLICY (description)	MARKET SHARE (%)	DESCRIBE COMPETITIVE ADVANTAGES
1.				
2.				
3.				
4.				

FORM 7

BARRIERS

BARRIER DESCRIPTION	PLANNED RESPONSE
1.	1.
2.	2.
3.	3.
4.	4.

FORM 8

TARGET SALES

SERVICE	DOWNTOWN MARKET SIZE UNITS	REGIONAL TARGET MARKET SHARE % OF UNITS	TARGET SALES	
			UNITS	DOLLARS
1.				
2.				
3.				
4.				
TOTAL				

FORM 9

PRICING

LIST OF SERVICES	VOLUME PRICE($)	CUSTOMER PRICE($)
1.		
2.		
3.		
4.		

FORM 10

FUTURE SALES

	SALES FORECASTS FOR THE NEXT TWO YEARS ($000s)					
	OPTIMISTIC		PESSIMISTIC		MOST LIKELY	
SERVICE	YEAR ONE	YEAR TWO	YEAR ONE	YEAR TWO	YEAR ONE	YEAR TWO
1.						
2.						
3.						
4.						
TOTAL SALES SELLING EXPENSES						

FORM 11

SALES ORGANIZATION

QUESTIONS	PLANNED RESPONSE
1.Number of offices or delivery sites	
2.Number of salespersons	
3.Number of sales management staff	
4.Average sales per salesperson	

FORM 12 BASIC

CUSTOMER ANALYSIS

	BUYING CRITERIA		
CUSTOMER GROUP	PRIMARY	SECONDARY	OTHER
1.			
2.			
3.			
4.			

FORM 13

MAJOR CUSTOMER GROUP SALES FORECAST

SERVICE	MAJOR CUSTOMER GROUPS	SALES TO CUSTOMERS ($) YEAR ONE	LIKELIHOOD OF SUCCESS
1.	1. 2. 3.		
2.	1. 2. 3.		
3.	1. 2. 3.		
4.	1. 2. 3.		

FORM 14

PROMOTIONAL PROGRAM

METHOD OF PROMOTION	PLAN TO USE	DESCRIPTION
Point of purchase display		
Brochures		
Discounts		
Coupons		

FORM 15

ADVERTISING PROGRAM

SERVICE	ADVERTISING OBJECTIVES	PRIMARY ADVERTISING METHODS
1.		
2.		
3.		
4.		

FORM 16

PROMOTIONAL AND ADVERTISING BUGET

	NEXT TWO YEARS ($'s)	
DESCRIPTION	YEAR ONE	YEAR TWO
TOTAL		

FORM 17

FACILITIES

	YEAR ONE			YEAR TWO
	FACILITY ONE	FACILITY TWO	TOTAL COSTS	TOTAL COSTS
OWNED OR LEASED:				
LEASING COSTS:				
LEASEHOLD IMPROVEMENTS: (capital cost)				
FURNITURE & FIXTURES: (capital cost)				
UTILITIES:				
TELEPHONE:				
INSURANCE:				
OFFICE SUPPLIES:				
TOTAL:				
INCLUDING: CAPITAL COSTS				
EXPENSES:				

FORM 18

EQUIPMENT

		COST	
LIST EQUIPMENT REQUIRED	RATIONALE	YEAR ONE	YEAR TWO

FORM 19

SUPPLIES

		COST	
LIST EQUIPMENT REQUIRED	RATIONALE	YEAR ONE	YEAR TWO

FORM 20

EMPLOYEE PLAN

JOB TITLE	FUNCTIONS	NO. OF PEOPLE YEAR ONE	NO. OF PEOPLE YEAR TWO
TOTAL STAFF			

FORM 21

ORGANIZATION CHART

FORM 22

COMPENSATION AND BENEFITS

JOB TITLE	SALARY OR HOURLY	COMPENSATION PER POSITION	BENEFITS*	YEAR ONE TOTAL	YEAR TWO TOTAL

* *Including car allowance*

FORM 23

INCOME STATEMENT

	YEAR ONE	YEAR TWO
a) SALES		
b) DIRECT EXPENSES		
c) SALES EXPENSES		
d) ADMINISTRATION EXPENSES		
e) DEPRECIATION		
INTEREST EXPENSE		
PROFIT BEFORE TAX		
f) TAXES PAYABLE		
NET INCOME AFTER TAX		

FORM 24

CASH FLOW STATEMENT

	MONTHLY CASH INLOW AND OUTFLOW ($000S) YEAR ONE											
ITEM	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
Cash Received												
Investment												
Equity Source												
Total Cash In												
Lease												
Leasehold Improvements												
Furniture & Fixtures												
Equipment Purchased												
Supplies												
Advertising & Promotion												
Office Expenses												
Wages												
Salaries												
Interest Expense												
Taxes												
Long Term Debt Repayment												
Total Cash Out												
Surplus (Deficit)												

FORM 25

PROJECTED BALANCE SHEET

ASSETS	YEAR ONE	YEAR TWO
CURRENT		
CASH (a)		
ACCOUNTS RECEIVABLE (b)		
INVENTORY (c)		
OTHER		
FIXED		
AT COST (d)		
(LESS DEPRECIATION) (e)		
NET FIXED ASSETS (f)		
OTHER (g)		
TANGIBLE		
INTANGIBLE		
TOTAL ASSETS		

LIABILITIES AND EQUITY	YEAR ONE	YEAR TWO
CURRENT		
SHORT-TERM DEBT (h)		
ACCOUNTS PAYABLE (i)		
LONG TERM DEBT (h)		
DEFERRED TAXES (j)		
TOTAL LIABILITIES		
OWNERS/SHAREHOLDERS CAPITAL (k)		
RETAINED EARNINGS (l)		
TOTAL EQUITY		
TOTAL LIABILITIES AND EQUITY		

Letters (a) to (l) indicate references to help prepare the balance sheet, which are found on pages 38, 40 and 42.

FORM 26

FIXED ASSETS

FIXED ASSET	PURCHASE DATE (m/y)	COST	SOURCE OF FUNDS[1]	REASONS FOR PURCHASE
ADDITIONAL DETAILS:				

1 Identify name of lending institution if debt incurred, "retained earnings", or equity sources.

FORM 27

DEPRECIATION SCHEDULE

TYPE OF ASSET	ANNUAL DEPRECIATION RATE
LAND	
BUILDINGS	
PLANT AND EQUIPMENT	
OFFICE EQUIPMENT	
OTHER:	

FORM 28

DEBT SUMMARY

REF. NO.	NAME OF BANK/ INVESTOR	AMOUNT OF AVAILABLE CREDIT ($)	INTEREST RATE (%) and DATE (m/y)	DESCRIBE SECURITY FOR LOAN	TERM (Short, Long)
1.					
2.					
GRAND TOTALS					

FORM 29

LOAN BALANCES

	LENDING INSTITUTION (Interest Rate)	
PRINCIPAL OUTSTANDING AT BEGINNING OF YEAR 1 A		
YEAR 1 PRINCIPAL REPAYMENT B		
INTEREST EXPENSE YEAR 1 A x ___%		
PRINCIPAL OUTSTANDING AT BEGINNING OF YEAR 2 A - B		
YEAR 2 PRINCIPAL REPAYMENT		
INTEREST EXPENSE YEAR 2 (A - B) x ___%		

FORM 30

FINANCIAL PERFORMANCE INDICATORS

FINANCIAL RATIO (Formula)	YEAR ONE	YEAR TWO
RETURN ON INVESTMENT (%) (net income after tax/total equity x 100)		
NET PROFIT TO SALES (%) (net income after tax/sales x 100)		
CURRENT RATIO (current assets/current liabilities)		
AVERAGE AGE ACCOUNTS RECEIVABLE (days) (365 x avg. accounts receivable/sales)		
AVERAGE AGE ACCOUNTS PAYABLE (days) (365 x avg. accounts payable/cost of direct materials)		
AVERAGE AGE OF INVENTORY (days) (365 x avg. inventory/cost of direct materials)		
DEBT TO EQUITY RATIO (total liabs./total equity)		
INTEREST COVERAGE RATIO (net income before deducting interest and tax/interest payments)		
SALES GROWTH (%) (sales increase/prev. sales x 100)		
PROFIT GROWTH (%) (profit increase/prev. profit x 100)		
ASSET GROWTH (%) (asset increase/ prev. assets x 100)		
FIXED COST PERCENTAGE (%) (fixed costs/total costs x 100)		
VARIABLE COST PERCENTAGE (%) (variable costs/total costs x 100)		

FORM 31

LONG RANGE PLANNING

CORPORATE GOALS AND OBJECTIVES:

MAJOR MILESTONES:

ADDITIONAL MANAGEMENT, PRODUCTION OR MARKETING SKILLS REQUIRED:

OTHER ASSISTANCE (NON FINANCIAL) REQUIRED:

BUSINESS & THE LAW

CONTRACTS

Brad has to hire a mapping consultant and 2 independent cutters before signing the client's contract. What must he consider in drafting a contract ?

____

____

____

____

____

____

The most commonly encountered contractual documents for a surveyor are;

1.______________________________

2.______________________________

3.______________________________

4.______________________________

A unique variation to the common contractual relationship is the Standing Offer or Occasional Services Contract. The key features are:

____

____

____

____

____

It was suggested that this seminar should provide a standard contract for survey services. The general consumer will probably sign this form as a matter of course. They have been enured by signing for everything. I find business clients are of 2 minds. They are either loathe to sign anything that looks like it was prepared by a lawyer, or they insist you sign a contract prepared by their lawyer. Governments will dictate the form of contract to be signed and the terms and conditions for payment. The best you can hope for is that their contract references your proposal thereby including your detailed explanation of the Scope of Work.

We have included a draft of a possible contract style. However I suggest you will get more willing signatures by preparing a polished proposal that subtley includes all of the key contract terms.

AGREEMENT
FOR
PROFESSIONAL LAND SURVEYING SERVICES

This sample Agreement has been prepared by TSPS Legal Counsel as a guide for attorneys representing TSPS members. It is not intended to take the place of individual legal advice. The use of this form by a TSPS member automatically releases the Society from any liability related to such use.

This agreement is made and entered into between ______________________________ (Surveyor) and ________________________ (Client) effective this _________ day of ____________________, 19____.

Client and Surveyor agree as follows:

1. Services Performed By Surveyor. Surveyor agrees to perform the services set forth on Exhibit "A" attached hereto and incorporated herein by this referece ("services").

2. Compensation By Client. Client agrees to compensate Surveyor for said services according to the schedule of payments attached hereto as Exhibit "B" and incorporated herein by this reference ("schedule").

3. Property. The property upon which the services hereinafter described are to be performed is located at

   ____

   ____

   Assessors Parcel No. ________________________ ("the property").

4. Documents Provided By Client. - Client agrees to provide Surveyor with any and all documents necessary to identify the ownership, location and condition of the property to be surveyed, including, but not limited to, deeds, maps, title information, and permits; and to obtain for Surveyor the authorization of the owner to enter upon the property for the purpose of conducting Surveyor's work thereon.

5. Ownership of Work Product. Client acknowledges that all original papers, documents, maps, surveys, and other work product of Surveyor, and copies thereof, produced by Surveyor pursuant to this Agreement, except documents which are required to be filed with public agencies, shall remain the property of Surveyor and the Surveyor has the unrestricted right to use any such work product for any purpose whatsoever without the consent of Client. Client further acknowledges that Client's right to utilize the services and work product performed pursuant to this Agreement will continue only so long as Client is not in default pursuant to the terms and conditions of this Agreement and Client has performed all obligations under this Agreement.

6. Use of Work Product. Client agrees not to use or permit any other person to use maps, exhibits, legal descriptions, surveys, or other work product ("work product") prepared by Surveyor, except for the following purpose:

   ____

   ____

   ____

   Client further agrees that the work product prepared by Surveyor may not be altered or reproduced in any way nor used on any other project or for any purpose other than as specifically authorized herein by Surveyor. Surveyor agrees to provide copies of the work product enumerated below to Client as follows:

   ____

   ____

   Copyright. The parties agree that all protections of the United States and Texas copyright laws shall be applicable to the work product to the benefit of Surveyor, including common law and statutory law, whether or not such work product actually is so copyrighted, and without regard to whether or not such copyright actually applies to such work product.

AGREEMENT
FOR
PROFESSIONAL LAND SURVEYING SERVICES
(continued)

8. Billing. All fees and other charges attributable to this Agreement will be billed by Surveyor monthly and shall be due and payable by Client at the time of billing at the address of Surveyor listed below unless otherwise specified in this Agreement.

9. Suspension or Termination of Performance. In addition to any other rights Surveyor may have for default of Client, if Client fails to pay Surveyor within thiry (30) days after invoices are rendered, Client agrees Surveyor shall have the right to consider such default in payment a material breach of this Agreement, and, upon written notice, the duties, obligations, and responsibilities of Surveyor under this Agreement may be suspended or terminated at Surveyor's sole option.

10. Additional Services. Client agrees that if services not specified in this Agreement are provided at Client's request, Client shall timely pay for all such services as extra work at the rates set forth in Exhibit "C" attached hereto and by this reference incorportated herein.

11. Payment of Costs. Client shall pay all costs, such as transportation expenses, zoning application fees, blueprint and reproduction costs, aerial topography fees, etc., unless otherwise expressly agreed herein by the parties.

12. Delays. Surveyor is not responsible for delay caused by activities or factors beyond Surveyor's control, including but not limited to, delays caused by strikes, lockouts, work slowdowns or stoppages, accidents, acts of nature, failure of Client to timely furnish information or approve or disaprove Surveyor's work, or faulty performance by Client or others, including contractors and governmental agencies.

Attorney's Fees. If Client or Surveyor is a prevailing party in any legal proceeding brought under or with relation to this Agreement, such party shall be entitled to recover from the non-prevailing party all costs of such proceeding and reasonable attorney's fees.

14. Arbitration. All claims, disputes, and other matters in question arising out of or relating to this Agreement shall be submitted to binding arbitration and the parties hereto agree to execute and/or obtain the execution of all documents as may be necessary to submit such matters to arbitration. Unless otherwise agreed by the parties, said arbitration shall be in accordance with the rules and regulations of the American Arbitration Association.

15. Contractual Lien to Secure Payment. Client grants to Surveyor a contractual lien in addition to all constitutional, statutory, and equitable liens that may exist, on the property and all improvements thereon to secure payment of all compensation due Surveyor by Client as provided herein. Client grants Surveyor the authority and right to file a copy of this Agreement in the Records of the County where the property is located to give notice of Surveyor's lien rights.

16. Governing Law. This Agreement shall be construed and enforced in accordance with the laws of Texas.

17. Entire Agreement of Parties. This contract contains the entire agreement of the parties and cannot be changed except by their written agreement.

18. Special Provisions. ______________________________

CLIENT	SURVEYOR
____________________	____________________
____________________	By ____________________
Title ____________________	Title ____________________
Address ____________________	Address ____________________
City ____________ State ________	City ____________ State ________
Telephone ____________________	Telephone ____________________
Facsimile ____________________	Facsimile ____________________

EXHIBIT A
(May be included with contract)

This Exhibit may include:

- ❑ certifications
- ❑ detailed scope of service
- ❑ accuracy standards
- ❑ time for performance
- ❑ number of prints
- ❑ format of the funished product
- ❑ etc.

Sealed Document Notation

It appears that the unauthorized reproduction and use of sealed documents continues to be a problem in the marketplace. It has been suggested that TSPS should draft a "Note" for inclusion on the original sealed document which might deter this practice. The following are three (3) samples that you may wish to consider: (Note - these samples are only guidelines that are suggested for use.)

I. This plat should be assumed to contain unauthorized alterations unless it contains an impression seal and original signature. The certification contained on this document shall not apply to any copies.

II. Only those prints containing the raised Surveyor's seal should be considered official and relied upon by the user. This document is prepared specifically for the parties designated hereon. Modification, alteration, duplication, or use without the consent of ________________ is prohibited. Copyright 1994 ______________. All rights reserved.

This plat should be assumed to be invalid unless it bears an original "LIVE" signature. The certification shown hereon does not apply to any copies.

SUB-CONSULTANT AGREEMENT
(STUDIES/REPORTS)

File Number: ______________

Date: ______________

B E T W E E N:

Sub-Consultant: ______________ ______________ ("Sub")

-and-

Consultant: ______________ ______________ ("Consultant")

Client: ______________ ("Client")

Project Name: ______________ ("Project")

Project Location: ______________ ("Project")

Consultant Address: ______________

Sub Address: ______________

Consultant Telephone: (416) ______________

Fax: (416) ______________

Sub Telephone: (416) ______________

Fax: (416) ______________

Consultant Contact Person: ______________

Sub Contact Person: ______________

Commencement Date: ______________

Completion Date: ______________

DESCRIPTION OF SERVICES: In accordance with (check √ as appropriate)

[xx] Letter(s) dated ______________ attached as Schedule(s) A.

[ ] Proposal(s) dated ______________ attached as Schedule(s) ______________.

[ ] Terms of Reference dated ______________ attached as Schedule ______________.

[ ] Request for Proposal dated ______________ attached as Schedule ______________.

[ ] Other: ______________ attached as Schedule(s) ______________.

FEES/REIMBURSABLE EXPENSES: In accordance with (check √ as appropriate)

[xx] Letter(s) dated ______________ attached as Schedule(s) A.

[ ] Proposal(s) dated ______________ attached as Schedule(s) ______________.

[ ] Terms of Reference dated ______________ attached as Schedule ______________.

[ ] Request for Proposal dated ______________ attached as Schedule ______________.

[ ] Other: ______________ attached as Schedule(s) ______________.

FEE BASIS: [✓] Time Basis [ ] Lump Sum

- Total Estimate of Fees: $______________ (A)
- Total Estimate of Reimbursable Expenses: $ ______________ (B)
- Total Estimate of Fees and Reimbursable Expenses: $ ______________ (A)+(B)
- Reimbursable Expenses at cost plus 5 % administrative fees.

G.S.T will be in addition to these fees.

INSURANCE REQUIREMENTS: (check √ as appropriate)

[ ] Comprehensive General . . . . : $________________

[ ] Automobile . . . . : $________________

[ ] Professional Liability . . . . : $________________

[ ] Other ____: $________________

ADDITIONAL OR SPECIAL TERMS AND CONDITIONS: In accordance with (check √ as appropriate)

[ ] Prime Agreement (or excerpts thereof) dated ____________ attached as Schedule(s) ____________.

[ ] Letter(s) dated ________________________ attached as Schedule(s) ____________.

[ ] Proposal(s) dated ________________________ attached as Schedule(s) ____________.

[ ] Terms of Reference dated ____________________ attached as Schedule ____________.

[ ] Request for Proposal dated ____________________ attached as Schedule ____________.

[ ] Other: ________________________________ attached as Schedule(s) ____________.

TERMS AND CONDITIONS

ARTICLE 1. DEFINITIONS

1.1 Agreement - is this Sub-Consultant Agreement including any schedules that may be annexed hereto.

1.2 Client - shall mean the party or parties hereinabove described who may have engaged the Consultant for professional services.

1.3 Client's Consultants - shall mean those professional persons or firms providing professional services, or other parties, engaged by the Client directly or indirectly as consultants or as sub-consultants in connection with the Project, but does not include the Consultant as defined herein.

1.4 Commencement Date - is the date when the Services shall commence and the terms and conditions of this Agreement shall apply as of that date and whether or not this Agreement is executed after that date.

1.5 Completion Date - is the date by which the Services will be completed in accordance with this Agreement and is certified completed by the Consultant.

1.6 Sub-Consultant or Sub - shall mean the provider of the Services as hereinabove identified engaged directly by the Consultant.

1.7 Consultant - shall mean the party hereinabove described that is engaged by the Client directly for professional services in connection with the Project.

1.8 Lump Sum - whenever the Sub-Consultant's Fees are calculated on the basis of a Lump Sum, it is the limit of the amount that will be due and payable to the Sub-Consultant which includes Reimbursable Expenses unless otherwise expressly stated, and will not be exceeded except upon written consent of the Consultant.

1.9 Project - shall mean the project as described by name and location above for which the Consultant and Sub-Consultant are retained to perform the Services.

1.10 Prime Agreement - shall mean the agreement between the Client and the Consultant for the Project.

1.11 Time Basis - shall mean the Sub-Consultant's rates, whether hourly, daily or otherwise for the performance of the Services as described hereinabove and which will not be amended or revised except upon written notice and consent of the Consultant.

1.12 Total Estimate of Fees, Total Estimate of Reimbursable Expenses and Total Estimate of Fees and Reimbursable Expenses - represent estimated amounts to complete the Services as described herein and are net of all taxes that may be levied thereon and may not be exceeded except upon written notice and consent of the Consultant.

ARTICLE 2. THE SUB-CONSULTANT'S DUTIES AND RESPONSIBILITIES TO THE CONSULTANT

THE SUB-CONSULTANT SHALL:

2.1 Perform services for the Project (the "Services") as stated under "Description of Services" hereinabove and employ only skilled and competent staff thereon;

2.2 Render Services to the Consultant under this Agreement with that degree of care, skill and diligence normally provided in the performance of Services in respect of Projects of a similar nature to that contemplated by this Agreement at the time and place that such Services are rendered;

2.3 Prepare estimates of the cost and time to perform the Services;

2.4 Coordinate its Services with the requirements of the Consultant as well as with the Client's Consultants and others on the Project and perform its Services at such times in such manner as the Consultant shall direct to permit the Consultant to comply with the Prime Agreem....

2.5 Unless otherwise expressly stated in the scope of Services, comply and observe all laws, rules and regulations, including, but not limited to, the procurement of permits, certificates and approvals from appropriate authorities when required to enable the Sub-Consultant to perform the Services, whether for environmental purposes or otherwise and indemnify the Consultant, its officers, directors, employees, and agents, jointly and severally from and against any claims, prosecutions, or damages (including legal fees) that may be sustained by the Consultant by reason of the failure of the Sub-Consultant to comply with these duties;

2.6 Make changes in the Services to be provided for the Project when requested in writing by the Consultant, and prior to commencing such changes, advise and obtain written approval from the Consultant of any effects of the changes on the Sub-Consultant fees, time schedule, and other matters concerning the Project;

2.7 Upon request, submit to the Consultant for approval, the names, addresses, qualifications and experience and proposed roles of all persons, including principals, to be employed by the Sub-Consultant to provide the Services for the Project and any proposed changes shall be submitted to the Consultant for approval.

2.8 Upon request by the Consultant, provide the Consultant with a written report showing the portion of the Services completed in the preceding month or preceding four weeks.

ARTICLE 3. THE CONSULTANT'S DUTIES AND RESPONSIBILITIES TO THE SUB-CONSULTANT

THE CONSULTANT SHALL:

3.1 Make available to the Sub-Consultant all relevant information or data pertinent to the Project of which the Consultant or its servants or agents should be aware and instruct the Sub-Consultant fully in writing as to the Consultant's total requirements in connection with the Project to enable the Sub-Consultant to carry out its Services hereunder;

3.2 Give prompt consideration to all sketches, drawings, specifications, tenders, proposals, contracts and other documents relating to the Project submitted by the Sub-Consultant, and whenever prompt action is necessary, inform the Sub-Consultant of decisions in such reasonable time so as not to delay the Services of the Sub-Consultant;

3.3 Pay the Sub-Consultant's fees and Reimbursable Expenses, if applicable, pursuant to Article 4;

3.4 Designate in writing an individual to act as liaison representative, such person to have complete and exclusive authority to transmit instructions to and receive information from the Consultant;

3.5 Give prompt written Notice to the Sub-Consultant whenever the Client, the Consultant or its representative becomes aware of any defec deficiencies in the Services which fall within the duties and responsibilities of the Sub-Consultant in this Agreement;

3.7 Arrange and make provision for the Sub-Consultant's entry and ready access to property (public and private) as well as to the Project Location, as necessary to enable the Sub-Consultant to perform the Services.

ARTICLE 4. PAYMENT OF FEES

4.1 Unless otherwise expressly agreed to, the payment by the Consultant for the Services provided by the Sub-Consultant shall be on a Time Basis or Lump Sum as those terms are defined herein, or a combination thereof, all as indicated above and shall be subject to the following conditions:

(a) Invoices: The Sub-Consultant shall submit to the Consultant an invoice every four weeks for the Services provided and for the Reimbursable Expenses incurred by the Sub-Consultant during the previous four weeks ("Invoice"). Such Invoices shall be accompanied by such supporting vouchers as may reasonably be required by the Consultant. When approved for payment by the Consultant, the Sub-Consultant's invoices will be included in the Consultant's next billing to the Client. Payment to the Sub-Consultant is subject to the Consultant receiving payment from the Client and will be made to the Sub-Consultant with ten (10) days of the Consultant receiving payment from the Client. The Consultant may require the Sub-Consultant to provide the Consultant with a clearance certificate indicating that the Sub-Consultant is in good standing with the Workers' Compensation Board applicable, if any, in the jurisdiction governing this Agreement, prior to making payment to the Sub-Consultant and, the Sub-Consultant agrees to indemnify the Consultant for payment of any unpaid assessments and levies or for any other amounts to such Board required to be made by the Sub-Consultant. The Sub-Consultant shall not be entitled to payment in respect of costs and expenses incurred by the Client and/or Consultant in remedying errors and omissions in the Services that are attributable to the Sub-Consultant, its servants or agents, or sub-consultants, or persons for whom the Sub-Consultant had assumed responsibility in performing the Services.

(b) Reimbursable Expenses: The Sub-Consultant shall be entitled to reimbursement by the Consultant for expenses incurred in the performance of its Services for the Project at cost plus the percentage stated above and shall include the following provided same have been approved in advance by the Client:

(i) Reproduction of drawings and documents for reports and for regulatory agencies and utility companies;

(ii) Reasonable travel expenses;

(iii) Communication expenses such as telegrams, telex charges, telefax, long distance telephone calls and freight on drawings, documents, and equipment;

(iv) Reasonable living expenses;

(v) Advertising expenses incidental to the Project;

(vi) Fees and expenses of any specialist sub-consultants when retained by the Sub-Consultant with the approval of the Consultant;

(vii) Rental costs or, if approved by the Consultant, the purchase cost of specialized equipment of a kind not normally rented or owned by the Sub-Consultant;

(viii) Computer, printing and photocopying services;

(ix) Laboratory services;

(x) The expense of increased or special nature insurance policies, that may be required to be maintained at the request of the Client;

(xi) Fees paid for securing approvals, permits or licenses from regulatory agencies having jurisdiction over the Project; and

(xii) Any other expenses reasonably incurred by the Sub-Consultant to carry out its duties under this Agreement.

The Consultant is entitled to copies of any vouchers, receipts or supporting documentation supporting the Reimbursable Expenses.

(c) The Sub-Consultant may be required at the request of the Consultant to prepare or appear in legal proceedings, arbitration or other hearings on behalf of the Consultant provided the Sub-Consultant is compensated therefor on a basis to be determined at that time.

(d) All Invoices shall be delivered to the address as set out above, unless otherwise expressly agreed to, or to such other address as the Consultant may from time to time designate in writing to the Sub-Consultant.

(e) The Sub-Consultant shall maintain or cause to be maintained any and all records, books or other documents relative to its Services, additional services, extra work, cost or expense including time sheets and cost records, alleged breaches of agreement, settlement of claims, or any other matter involving the Sub-Consultant's compensation, and if required for the purposes of the Agreement shall make these documents available at reasonable times to the Consultant and Client and/or their duly authorized representative to examine, review and audit same and who may make copies and take extracts therefrom.

(f) The Sub-Consultant shall afford facilities for audit and inspection at mutually agreeable times and places, and shall provide the Consultant and the Client with such information as the Client may from time to time require with reference to the documents referred to in Section 4.1(e).

(g) The Sub-Consultant shall, unless otherwise specified, keep the documents referred to in Section 4.1(e) available for audit and inspection for a period of at least two years following completion of the Services.

ARTICLE 5. CHANGES, ADDITIONAL SERVICES AND EXTRA COSTS

5.1. Should:

(i) it become necessary for the Sub-Consultant to revise its designs, drawings, plans, study methods or specifications for the Project or any part thereof; or

(ii) perform additional services or is put to any extra work, cost or expenses,

by reason of any act or matter over which the Sub-Consultant has no control, including, without limiting the generality of the foregoing, delays by the Client or Consultant in furnishing information, instructions or decisions, or by the imposition of any taxes from governmental authorities, the Sub-Consultant shall be compensated for such changes, additional services or extra work, cost or expense on a basis to be determined at that time, unless otherwise expressly agreed to between the parties. Before making such changes, performing such additional services or undertaking such extra work or incurring such extra costs or expenses in any significant manner, the Sub-Consultant shall notify the Consultant in writing of its intention to do so and, unless the Consultant approves same in writing the Sub-Consultant shall not be compensated as contemplated herein. If approved, the Sub-Consultant shall keep separate cost records in respect of such changes, additional extra work, or extra costs and expenses.

5.2. Without the consent in writing of the Consultant, the Sub-Consultant may not at any time after the execution of the Agreement or the Commencement Date, vary or alter the Services to extend or increase the Services or delete, reduce or decrease the Services.

ARTICLE 6. TERMINATION AND SUSPENSION

6.1 If:

(i) the Client or Consultant is prohibited from performing the Services in whole or in part, by order of governmental authorities or agencies or a court of competent jurisdiction, or by statutes or regulations thereto;

(ii) the Client is unwilling or unable to proceed with the Project; or

(iii) the Consultant's Services are suspended by the Client at any time for more than sixty (60) days through no fault of the Consultant or Sub-Consultant;

then the Consultant may, without limiting any other right or remedy it may have, by written notice to the Sub-Consultant, terminate this Agreement and the Sub-Consultant shall cease performance of any further Services forthwith without incurring any liability whatsoever to the Sub-Consultant. The Sub-Consultant shall be paid by the Consultant for all Services performed and for all Reimbursable Expenses incurred pursuant to Article 4.1(a) and remaining unpaid as of the effective date of such termination and the Sub-Consultant shall release and discharge the Consultant from any claims it may or hereafter may have against the Consultant.

6.2 (a) The Consultant may take all or any part of the Services out of the Sub-Consultant's hands and may employ such means as the Consultant sees fit to complete such Services in the event that:

(i) the Sub-Consultant becomes bankrupt or insolvent, or a receiving order is made against the Sub-Consultant, or an assignment is made for the benefit of the creditors, or if any order is made, or resolution passed, for the winding up of the Sub-Consultant's affair business, or if the Sub-Consultant takes the benefit of any statute relating to bankrupt or insolvent debtors, or

(ii) the Sub-Consultant fails to perform or is in default of any of the Sub-Consultant's obligations and performance under the Agreement or, in the Consultant's opinion, so fails to make progress as to endanger performance of the Agreement, in accordance with its terms.

(b) If the Services or any part thereof have been taken out of the Sub-Consultant's hands under Section 6.2(a), the Sub-Consultant shall be liable for, and upon demand pay to the Consultant, an amount equal to all loss and damage suffered by the Consultant or the Client by reason of the non-completion of the Services by the Sub-Consultant.

(c) If the Sub-Consultant fails to pay on demand for the loss or damage mentioned in 6.2(b) above, the Consultant shall be entitled to deduct same from any payments due and payable to the Sub-Consultant.

(d) The taking of the Services, or any part thereof, out of the Sub-Consultant's hands does not relieve or discharge the Sub-Consultant from any obligation under the Agreement, or imposed upon the Sub-Consultant by law, in respect of the Services or any part thereof that the Sub-Consultant has performed.

ARTICLE 7. INDEMNITY AND INSURANCE

7.1. The Sub-Consultant shall indemnify, defend and hold harmless the Consultant of and from any and all suits, actions, legal, administrative or arbitration proceedings, claims, demands, damages, penalties, fines, losses, costs and expenses of whatsoever kind or character, or any claims against the Consultant arising or alleged to arise from the acts or omissions of the Sub-Consultant or based upon, occasioned by or attributable to, any injury, infringement of any patent or invention or of any other type of intellectual property from the performance of the Services of the Sub-Consultant, its servants or agents, or persons for whom it had assumed responsibility in the performance, or purported performance of the Services hereunder. Such indemnification shall apply to the fullest extent permitted by law, regardless of fault, negligence or breach of warranty or contract of the Sub-Consultant and shall include the fees and charges of lawyers in defending or advising the Consultant and shall survive the termination of this Agreement. Without limiting the generality of the foregoing, such indemnity shall extend to claims which arise out of the actual or threatened disbursal, discharge, escape, release or saturation (whether sudden or gradual) of any pollutant or hazardous waste in or into the atmosphere, or on, onto, upon, in or into the surface or subsurface soils or water or water courses, persons, objects or any other tangible matter.

7.2. (a) It is acknowledged and agreed by the Sub-Consultant and the Consultant that the Consultant does not represent itself to be and is not in any way knowledgeable or expert regarding pollutants and hazardous waste matters. If the Sub-Consultant's Services involve, directly or indirectly, such matters, it is the Sub-Consultant's responsibility prior to the Commencement Date, to disclose to the Consultant that it is or is not an expert in such matters, and, the Sub-Consultant may be required by the Consultant to identify an expert in pollutants and hazardous waste matters (the "Specialist Consultants"), and such Specialist Consultants shall be engaged directly by the Sub-Cons for the Project unless otherwise expressly agreed to by the Consultant.

(b) The Consultant shall have no liability to the Sub-Consultant for any reviews, approvals or inspections by the Sub-Consultant or its Specialist Consultants of any aspect of the Project, including but not limited to, the Documents as defined in Article 8.1, and specifically shall not be responsible or liable for the quality, workability or performance of any design or specifications as they relate to pollutants or hazardous wastes recommended or reviewed by the Sub-Consultant or its Specialist Consultants.

(c) Nothing herein shall relieve the Sub-Consultant from its obligations to provide the Services required by this Agreement, and generally as required by standard consulting practice current as of the date of performance of the Services, and nothing herein shall apply to claims, damages, losses or expenses which are finally determined at law to result from the Sub-Consultant's intentionally wrongful acts.

7.3 For all purposes of this Article, pollutants and hazardous wastes shall mean any solid, liquid, gaseous or thermal irritant, contaminant or radioactive substance, including, without limitation, smoke, vapour, soot, fumes, acids, alkalis, chemicals, waste, any product, material or process containing asbestos and pollutants and hazardous wastes as those terms are defined in any federal, provincial or municipal laws.

7.4 Unless expressly waived by the Consultant, the Sub-Consultant shall maintain the policies of insurance as described hereinabove at its own cost and expense:

(a) Comprehensive General Liability Insurance for a limit of not less than the amount stated hereinabove inclusive per occurrence for bodily injury, personal injury, death and damage to property including loss of use thereof;

(b) Automobile Liability Insurance for both owned and non-owned licensed vehicles for a limit of not less than the amount stated hereinabove inclusive per occurrence for bodily injury, death and damage to property including accident benefits;

(c) Professional Liability Insurance for a limit of not less than the amount stated hereinabove covering all loss or damage which may occur arising out of the errors or omissions alleged to have been committed by the Sub-Consultant in connection with the performance of the Services hereunder whether or not such Services have been approved or accepted by the Consultant.

Certificates of the Sub-Consultant's insurance policies must be provided to the Consultant before the Commencement Date. If the Client requests to have the amount of coverage increased or to obtain other special insurance for the Services for the Project, then the Sub-Consultant shall endeavour to obtain such increased or special insurance, if available, at the Client's expense in accordance with Article 4.1(b)(x). The Sub-Consultant shall have the required insurance policies amended to include the Consultant as an additional named insured, and shall not in any way, amend, change or cancel such insurance until thirty (30) days after written notice of such changes or cancellations has been deliv the Consultant.

ARTICLE 8. OWNERSHIP AND USE OF DOCUMENTS, PATENTS AND TRADEMARKS

1. Unless otherwise expressly stated herein, all drawings, plans, models, designs, specifications, reports, photographs, computer software, surveys, calculations, and other data or documents, including computer printouts regardless of the form or media in which they are produced or reproduced, or which are otherwise used in connection with the Project (the "Documents"), and which are prepared by the Sub-Consultant shall be the property of the Consultant free of all claims by the Sub-Consultant of any nature and kind whatsoever, whether or not the Project is commenced or completed, and the Consultant reserves the copyright therein, and they are not to be used on any other project without the prior written consent of the Consultant. The Client and Sub-Consultant are entitled to a copy of the Documents for record and maintenance purposes only in connection with the Project.

8.2. All concepts, products or processes produced by or resulting from the Services rendered by the Sub-Consultant in connection with the Project, or which are otherwise developed or first reduced to practice by the Sub-Consultant or by its sub-consultants in the performance of their services in connection with the Project, and which are patentable, capable of trademark or otherwise, shall be and remain the property of the Sub-Consultant, and its sub-consultants, and other than as hereinafter set forth in Article 8.3 the Client and Consultant shall not use, infringe upon or appropriate such concepts, products or processes without the express written consent of the Sub-Consultant.

8.3. Unless otherwise stated herein, the Client and Consultant shall have a permanent non-exclusive royalty-free licence to use any concept, product or process, which is patentable, capable of trademark or otherwise, produced by or resulting from the Services rendered by the Sub-Consultant or by its sub-consultants in connection with the Project, for the life of the Project, and for no other purpose or Project.

ARTICLE 9. BUILDING CODES, BY-LAWS AND STATUTES

9.1 The Sub-Consultant shall, to the best of its ability, interpret relevant statutes, building codes and by-laws as they apply to the Services and the Project, but it is expressly acknowledged and agreed by the Consultant that as the Project progresses, the interpretation by public authorities may differ from the interpretation of the Sub-Consultant, through no fault of the Sub-Consultant, and any extra costs necessary to conform to the interpretation placed upon same or to conform to changes of differences in interpretation by such authorities, will be paid by the Consultant, in accordance with Article 4.1(a), provided the Sub-Consultant has received a prior approval or authorization from such authorities in respect of such interpretations.

ARTICLE 10. ARBITRATION

10.1 All matters in dispute under this Agreement may, with the concurrence of both the Consultant and Sub-Consultant, be submitted to arbitration by a single Arbitrator appointed jointly by them, which shall be governed by the arbitration laws of the Consultant's Address stated above.

10.2 No one shall be nominated to act as an Arbitrator who is in any way financially interested in the conduct of the Project or in the business affairs of either the Consultant or Sub-Consultant.

3 The award of the Arbitrator shall be final and binding upon the parties.

ARTICLE 11. NOTICES

11.1 Any notice to be given pursuant to this Agreement, unless otherwise expressly provided herein, shall be duly and properly made and given in writing by telefax, personal service, registered or certified mail using the Postal Service facilities available in the location of the Sub-Consultant and Consultant address noted above to the address of the party for whom it is intended as set out above or to such other addresses as the parties may from time to time designate in writing. Mailed notices shall be deemed to have been received forty eight (48) hours after the hour of mailing. Notices by personal service or telefax shall be deemed to be received on the day they are delivered or transmitted.

11.2 Notwithstanding the provisions of Article 11.1, in the event that any notice has been mailed pursuant to Article 11.1 and:

(a) at the time of mailing the Postal Service was in a state of interruption due to strike, lockout or other similar occurrence, or

(b) within the forty-eight hour period referred to Article 11.1, the Postal Service becomes interrupted by any of the causes aforesaid,

such notice will not be deemed to have been mailed or received until seven (7) days after termination of such state of interruption.

ARTICLE 12. INDEPENDENT CONTRACTOR

12.1 The Sub-Consultant shall perform all Services hereunder as an independent contractor, and nothing contained herein shall be deemed to create any association, partnership, joint venture or relationship or principal agent or employer and employee between the parties hereto or any affiliates or subsidiaries thereof, or to provide either party with the right, power, or authority, whether expressed or implied, to create any such duty or obligation on behalf of the party. The Sub-Consultant agrees that any work prepared by the Sub-Consultant under this Agreement shall be considered "work for hire" unless otherwise specified. Unless otherwise expressly agreed to in advance by the Consultant, the Sub-Consultant will not hold itself out as an affiliate of, or partner, joint venturer, co-principal or co-employer with the Consultant or any of the Consultant's subsidiaries or affiliates by reason of this Agreement and that the Sub-Consultant will not knowingly permit any of its employees, agents or representatives to hold themselves out as, or claimed to be, officers or employees of the Consultant or any of the Consultant's subsidiaries or affiliates by reason of this Agreement. In the event the Consultant is adjudicated to be a partner, joint venturer, co-principal or co-employer of or with the Sub-Consultant, the Sub-Consultant shall indemnify and hold harmless the Consultant from and against any and all claims for loss, liability or damages arising therefrom. The Sub-Consultant, when acting as an employer, agrees to be solely responsible for any and all payments and deductions required to be made by law for its employees.

ARTICLE 13. CONFIDENTIAL INFORMATION

13.1 The Sub-Consultant acknowledges and agrees that all tangible and intangible information, including but not limited to, trade secrets and methods of operation, revealed, obtained, or developed in the course of or in connection with the performance of Services under this Agreement shall be considered as confidential and proprietary information unless otherwise expressly stated which shall not be disclosed to any third party, without the prior written consent of the Consultant. This provision shall survive any termination or expiration of this Agreement.

13.2 The Sub-Consultant shall not use and shall keep its employee(s), agent(s) and/or sub-contractor(s) from using the name of the Consul its subsidiaries or affiliates or divulging information identified as confidential in any sales or marketing publication or advertisement or any other third party or entity without the prior written consent of the Consultant.

13.3 Upon termination of this Agreement, and at the Consultant's direction, the Sub-Consultant shall return or destroy all proprietary material of the Consultant and/or Client and material owned by the Consultant and/or Client that is in the care, control or custody of the Sub-Consultant.

ARTICLE 14. GENERAL TERMS

14.1 Time. Time is of the essence. The Sub-Consultant shall perform the Services expeditiously to meet the requirements of the Client and Consultant and shall complete any portion or portions of the Services in such order as the Consultant may require and the Consultant shall have the right to take possession of and use any completed or partially completed portions of the Services notwithstanding any provisions expressed or implied to the contrary.

14.2 Inspection. The Sub-Consultant shall allow the Client, or persons authorized by the Client including the Consultant, the right, at all reasonable times, to inspect or otherwise review the Services performed, or being performed, under the Project and the premises where they are being performed.

14.3 Delays. Neither party shall be liable for delays in the performance of its obligations hereunder due to causes beyond its reasonable control including but not limited to Acts of God, strikes or inability to obtain labour or materials.

14.4 Assignment. Except as set forth in this Agreement, neither party may assign this Agreement without the prior consent in writing of the other. If the Sub-Consultant is an individual and desires to bring in a partner or partners, or if the Sub-Consultant is a partnership which desires to bring in a new partner or partners to share the benefits and obligations of this Agreement, he/she or they may do so by promptly notifying the Consultant in writing of such intended action. If the Sub-Consultant is a partnership, and a partner thereof dies or retires, then the remaining parties therein shall form a new successor partnership to share the benefits and obligations of this Agreement.

14.5 Successors. Subject to Section 14.4 hereof, this Agreement together with all Schedules or modifications, now or hereafter made a part hereof, shall be binding on the respective parties and their respective heirs, legal representatives, successors and permitted assigns.

14.6 Governing Law. This Agreement shall be governed by and administered in accordance with the laws of the location of the Consultant's Address as hereinabove stated.

14.7 Entire Agreement. This Agreement and the Schedules annexed hereto constitute the entire agreement and understanding between the parties and all other prior agreements, arrangements, representations, proposals, understandings, oral or written, are merged into and superseded by the terms of this Agreement.

14.8 Schedules Prevail. If there is a conflict between this Agreement and the Schedules annexed hereto, the terms and conditions of the Schedules shall prevail. The terms and conditions of such Schedules shall apply mutatis mutandis to this Agreement.

14.9 Invalid Provisions. No waiver of any breach of this Agreement shall constitute a waiver of any other breach of the same or other provisions of this Agreement and no waiver shall be effective unless made in writing. In the event that any provision herein shall be illegal of unenforceable, such provision shall be severed and the entire Agreement shall not fail but the balance of the Agreement shall continue in full force and effect.

14.10 Language. Both parties have required that this Agreement be prepared in English. Chacune des parties a exiges qua cette convention soit rediger en anglais.

14.11 Amendments. Unless otherwise expressly stated herein, no amendments or modifications of this Agreement or any provision of this Agreement shall be effective unless in writing and signed by both parties.

14.12 Acknowledgement. The Sub-Consultant acknowledges that it has read this Agreement and agrees to be bound by its terms and conditions and that if the Sub-Consultant is a firm or corporation, represents and warrants that the signature hereinbelow appearing on behalf of the Sub-Consultant is duly authorized by the Sub-Consultant to execute this Agreement on behalf of the Sub-Consultant, and the Sub-Consultant warrants and represents that it has the full authority, capacity and power to enter into this Agreement and, upon execution, this Agreement shall become a binding obligation upon the Sub-Consultant.

IN WITNESS WHEREOF the parties hereto have executed this Agreement on the day and year above written.

SUB-CONSULTANT:

_______________________________ WITNESS**

_______________________________ (Seal)*
Signature

____
Name (please print)

____
Title

CONSULTANT:

____
Signature

____
Name (please print)

____
Title

*If Sub-Consultant is a corporation, affix corporate seal, if available.
**Witness not required if Sub-Consultant is a corporation.

Appendix B: The Elements of a Joint Venture Agreement

A. Organization and Structure of the Joint Venture

1. The scope of the joint venture and arrangements for expansion
   a) specifically identified development projects.
   b) general cooperation with future identification of projects.
   c) The goals of each member should be specifically ascertained.
2. Type of business organization to be selected as joint venture vehicle.

B. Financing the Joint Venture.

1. Amount of initial capital required and how it will be supplied, i.e. money or assets.
2. Means of financing additional working capital and expenses - bank borrowings, including guaranties and mandatory or optional additional capital contributions.
3. Consequences of default in making additional mandatory contributions ("dilution" provisions).
4. How proposals for expansion will be handled. Consequences of failure to agree, consequences of voluntary contributions.
5. Sharing of profits and losses - based on ownership share, capital contribution, stipulated percentage.
6. Sharing of liabilities - joint or several. Cost of defense of claims.
7. a) Appointment of accountants, establishment of accounting procedures,
   b) keeping of and access to books and records by parties,
   c) designation of fiscal year,
   d) bank accounts.
8. Salaries, if any.

C. Management and Control of the Joint Venture

1. Voting rights.
2. Identity, method of selection, and powers and responsibilities of key managerial personnel and their successors.
3. a) Size and constitution of board of directors, management committee or its counterpart, as appropriate
   b) Method of decision-making by board (unanimous, majority or otherwise).
4. Methods of breaking deadlocks (arbitration, buyout or auction, liquidation provisions).
5. Venture policy is determined ordinarily through board of directors, management committee, as appropriate.
6. Activities which may require formal action (new development programs, levels of production, annual budgets, acquisition or surrender of property, claim settlements, guarantees and other similar matters.
7. Transfer of ownership interest (rights of first refusal, exemptions with respect to affiliates, continuing obligations and liabilities of affiliates, appraisal provisions in event of disagreement.
8. Preemptive rights.

D. Employees of the Joint Venture

1. Choice of employees.
2. Establishment of general standards for operator (due diligence, workman like manner, reasonableness, good faith).
3. Compensation of employee.
4. Consequence of breach.
5. Removal proceedings, right to terminate agreement, choice of successor.

E. Marketing of Joint Venture Product

1. Responsibility for marketing decisions (management committee or board of directors, unanimous vote of members, or discretion of employee).

2. Joint marketing. Note antitrust issues.

3. Product supply agreements.

4. Development program - master plan and initial plan.

F. Restrictions on Activities of Members of Joint Venture

1. Competition within specified territory during and subsequent to joint venture.

2. General confidentiality provisions covering all information received in connection with joint venture.

3. "Area-of-interest" provision: any property or interest or other business opportunity acquired by any party to the joint venture or any affiliate thereof must be offered to the joint venture on the same terms and conditions as it was acquired.

4. "Competition" clause: except with respect to joint venture property or area of interest, parties are free to compete as if the joint venture did not exist (limitation of fiduciary duty created by joint venture).

5. Provision for reacquisition by parties of surrendered joint venture property: only parties not involved in disposition may reacquire for own account.

G. Default by Members of Joint Venture

1. Definition of defaults.

2. Consequences of default (monetary penalties, forfeitures, waivers of certain rights, termination of joint venture and others). It is important to have different penalties for different defaults.

3. Indemnification upon default.

H. Proprietary Rights

1. Any special arrangements for supplying patent rights and know-how to the joint venture by members. Need for licensing agreements.

2. Provisions relating to use of trademarks, if any.

3. Provisions relating to disclosure of improvements.

I. Term and Termination of Joint Venture

1. Specify commencement of term. Should be subject to regulatory approvals obtained and other conditions met.

2. Specify:

   a) duration of term.

   b) method of termination or prior agreement to terminate.

   c) method of renewal.

   d) penalties for wrongful withdrawal.

   e) consequences of bankruptcy, death of certain parties and other events.

3. "Hardship Reopener": the provision which allows for modification or termination of joint venture in event of financial hardship to member or operation of joint venture on "non-economic" basis.

4. a) Disposition of assets upon termination, including options to purchase assets, division of proceeds of assets, and buy-out provisions.

   b) Method of evaluation of terminating party's interest.

J. Miscellaneous Considerations

1. Governing law provision.

2. Force majeure provision.

3. Modifications and waivers of joint venture agreements.

4. Arbitration of disputes.

K. Documentation of the Joint Venture

The first step in negotiation of a joint venture generally is the preparation of a brief outline of the basic terms of the proposed venture. This outline, or memorandum of understanding (MOU), is usually not intended as a binding document, but rather as an expression of mutual intent with respect to the basic features of the transaction from a business point of view. The outline provides the basis for the detailed negotiations and for the drafting of the formal joint venture documents.

The specific arrangements concerning the establishment and operation of the joint venture are normally set forth in a joint venture agreement which covers all aspects of the venture in detail.

Additional documentation may include:

- the organizational documents of the joint venture vehicle,
- patent, know-how, or trademark license agreements,
- technical assistance agreements
- leases,
- construction contracts,
- management contracts,
- and employment contracts for key personnel.

ARCHITECT INC.

SURVEY RELEASE

	Date: September 20, 1994 Project: Mississauga, ON Project No.: 9449

Dear Sirs:

Please accept this document as your authority to undertake the survey requirements checked off in the attached form, for total lump sum compensation of One Thousand and Three Hundred Fifty Dollars and 00/100 ($ 1,350.00).

As Architects, we have made arrangements for this survey as agents of the Client and as such, we are not a principal to the arrangement. Charges are to be directed to the Client for payment with a copy to the undersigned for review purposes only.

Client:

MANAGEMENT SERVICES INC.

Toronto, Ontario M5X 1E3

Signature: ______________________________

Title: Director of Constr. & Development

Sincerely,

COLLECTING YOUR ACCOUNTS

The best way to collect an account is to not have one. How ?

Get paid in full in advance.

Since we seem incapable or unwilling to effect this technique, take a few moments to list a few collection techniques. Beside each, assign a risk rating on a scale of 1 to 10.

Collection Techniques	***Risk Rating***

If you insist on doing business the hard way, what are the real costs of your bad debts?

___

___

___

Is there any reason why we can't agree right now that starting Monday all jobs will have a risk rating of 1 ?

If a client refuses to use my services because I asked for payment in advance I believe that client had no intention of ever paying me. If you write off a $1,000 account how many jobs do you have to do just to break even. Divide $1,000 by the profit on a typical $1,000 job. The result is the number of jobs you need to do.

I find it is better to lose 1 or 2 jobs a year because I asked for money up-front then have to do 10 to 20 more jobs just to recover my losses.

FORM 6

Payment Bond

Bond No. . . . .

Amount $ . . . .

KNOW ALL MEN BY THESE PRESENTS, that we

CONSTRUCTION (ONTARIO) INC.,

hereinafter called "the Principal"

- and -

COMPANY OF CANADA,

hereinafter called "the Surety"

are jointly and severally held and firmly bound unto The Municipality of Metropolitan Toronto and its successors, hereinafter called "the Obligee" as Trustee, each in the sum of NINE HUNDRED AND SIXTY-THREE THOUSAND, FOUR HUNDRED--00/100 DOLLARS ($963,400.00) of lawful money of Canada, to be paid unto the Obligee, for which payment well and truly to be made we the Principal and Surety jointly and severally bind ourselves, and our and each of our respective heirs, executors, administrators, successors and assigns by these presents.

AND WHEREAS by an agreement in writing bearing even date herewith, the Principal has entered into a contract with the Obligee, hereinafter called "the Contract", for the construction of and Site Improvements, Lakeshore Boulevard West, Toronto, Ontario - .Contract No. as more particularly set out therein, which Contract is by reference herein made a part hereof as fully to all intents and purposes as though recited in full herein.

NOW THEREFORE THE CONDITION OF THIS OBLIGATION IS SUCH that if the Principal shall:

(a) at all times make payment to all claimants for all labour, materials or services used or reasonably required for use in the performance of the Contract, or as the same be changed, altered or varied as hereinafter provided, to the satisfaction of the Obligee;

(b) at all times fully indemnify and keep indemnified the Obligee from and against all and any manner of loss, damage, expense, suits, actions, claims, liens, proceedings, demands, awards, payments, and liabilities arising out of or in any manner based upon or attributable to the claims of such persons;

(c) promptly see to the removal from the registered title to the lands on which said construction takes place, of all claims for lien by claimants as aforesaid and all certificates of action in connection therewith; and

FORM 6
(continued)

(d) fully reimburse and repay the Obligee for all outlay, expense, liabilities, or payments, incurred or undertaken to be made by the Obligee attributable to the claims of such persons made pursuant to the Contract or the Construction Lien Act, 1983,

then this obligation shall be void, but otherwise it shall be and remain in full force and effect, subject, however, to the following conditions:

(i) a Claimant for the purpose of this Bond shall be an individual, firm or corporation having a direct contract with the Principal for labour, services, material or any combination thereof used or reasonably required for use in the performance of the Contract;

(ii) labour, material and services shall be construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract;

(iii) an individual, firm or corporation who rents equipment to the Principal to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof, shall be a Claimant only to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract;

(iv) the prevailing industrial value of equipment shall be determined, insofar as it is practicable to do so, in accordance with and in the manner provided for in the latest revised edition of the publication of the Canadian Construction Association titled "Rental Rates on Contractors Equipment" published prior to the period during which the equipment was used in the performance of the Contract;

(v) the Obligee and the Principal shall have the right to change, alter and vary the terms of the Contract, and the Obligee may in its discretion at any time or times take and receive from the Principal any security whatsoever and grant any extension of time thereon or on any liability of the Principal to the Obligee;

(vi) the Principal and the Surety shall not be discharged or released from liability hereunder and such liability shall not be in any way affected by any such changes, alterations, or variations, taking or receiving of security, or extension of time, as aforesaid, or by the exercise by the Obligee of any of the rights or powers reserved to it under the Contract or by its forbearance to exercise any such rights or powers, including (but without restricting the generality of the foregoing) any changes in the extent or nature of the works to be constructed, altered, repaired or maintained under the Contract, or by any dealing, transaction, forbearance or forgiveness which may take place between the Principal and the Obligee;

(vii) every Claimant who has not been paid as provided for under the terms of the Claimant's contract with the Principal, before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, may as a beneficiary of the trust herein provided for, sue on this Bond, prosecute the suit to final judgment for such sum or sums as may be justly due to such Claimant under the terms of his contract with the Principal and have execution thereon, and the Obligee shall not be obliged to do or take any act, action or proceeding against the Surety on behalf of the Claimants, or any of them, to enforce the provisions of this Bond;

(viii) it shall be a condition of the trust provided for in this Bond, that if any act, action or proceeding is taken either in the name of the Obligee or by joining the Obligee as a party to such proceeding, then the Claimants, or any of them, who take such act, action or proceeding shall indemnify and save harmless the Obligee against all costs, charges and expenses or liabilities incurred thereon and any loss or damage resulting to the Obligee by reason thereof;

(ix) no suit or action shall be commenced hereunder by any Claimant:

(a) unless such Claimant shall have given written notice to each of the Principal, the Surety and the Obligee, stating with substantial accuracy the amount claimed,

(A) in respect of any claim for the amount or any portion thereof, required to be held back from the Claimant by the Principal, under either the terms of the Claimant's contract with the Principal or under the Construction Lien Act, 1983, whichever is the greater, within one hundred and twenty (120) days after such Claimant should have been paid in full under the Claimant's contract with the Principal,

(B) in respect of any claim other than for the holdback, or portion thereof, referred to above, within one hundred and twenty (120) days after the date upon which such Claimant did, or performed, the last of the work or labour or furnished the last of the materials for which such claim is made under the Claimant's contract with the Principal,

and such notice may be served

(C) by mailing the same by registered mail in each case to an address at which the intended recipient regularly maintains an office for the transaction of business, or

(D) in any manner in which legal process may be served in Ontario;

(b) after the expiration of one (1) year following the date on which the Principal ceased work on the Contract, including work performed under the guarantees provided in the Contract;

(c) other than in a Court of competent jurisdiction in the Province of Ontario to the jurisdiction of which Court the parties and Claimants shall submit,

but subject to the foregoing term and conditions, the Claimants, or any of them, may use the name of the Obligee to sue on and enforce the provisions of this Bond;

FORM 6
(continued)

(x) the amount of this Bond shall be reduced by, and to the extent of, any payments made in good faith, and in accordance with the provisions hereof, inclusive of the payment by the Surety of Construction Liens which may be filed of record against the subject matter of the Contract, whether or not claim for the amount of such lien be presented under and against this Bond;

(xi) the Surety shall not be liable for a greater sum than the specified penalty of this Bond.

IN WITNESS WHEREOF the Principal and the Surety have signed and sealed this Bond this 25th day of September, 1991.

SIGNED, SEALED AND DELIVERED in the presence of	CONSTRUCTION (ONTARIO) INC.
	C/S
	______________________
	______________________ Principal
	COMPANY OF CANADA.
	C/S
	______________________ Surety

[illegible]

Marshall Macklin Monaghan Ontario Limited

Ontario Land Surveyors

409 Matheson Blvd. E.
Mississauga, Ont. L4Z 2H2
(416) 890-5600

July 24, 1992 File No.

Mr. Ezio Savini
Manager Development Section
Transportation and Works Department
City of Mississauga
300 City Centre Drive
Mississauga, Ontario
L5B 3C1

Dear Mr. Savini

Re: Investments
City Assumption of 43M-

By this letter we advise that our account with Investments is still unpaid.

The balance outstanding including invoices and interest is $948.34. We request that the City of Mississauga not release the developer's letter of credit until our account is satisfied.

For your information the final reposting for assumption has not been performed.

Yours very truly

MARSHALL MACKLIN MONAGHAN ONTARIO LIMITED

G. Bowden

Graham W. Bowden, O.L.S., P.Eng.
Vice President

GWB/sm

cc: Jan Hathway, MMM

LTEZIO

City of Mississauga
300 City Centre Drive
Mississauga, Ontario
L5B 3C1

FAX: (416) 896-5583

File: M- CO

Mr. Graham W. Bowden, O.L.S., P. Eng.
Marshall Macklin Monaghan Ontario Limited
409 Matheson Boulevard East
Mississauga, Ontario
L4Z 2H2

Dear Sir:

Re: Subdivision
R.P. 43M- ,

In response to your letter dated July 24, 1992, please be advised that the subdivision in question will not be assumed, nor the securities released or reduced until the City receives a statutory declaration of payment from the developer.

We believe this is to your satisfaction, however, should you have further concerns, please do not hesitate to contact the undersigned.

Sincerely,

A.K. Orzewiecki, P. Eng.
Development Area Supervisor
896-5830

AKD:dj
1047E

c: E. Savini
P. Marchiori
E. d'Ambrosio (with encl.)

The Regional Municipality of ABC Date

Attention: Regional Chairmen
Town Engineer
Planning Director
Regional Municipality Clerk

Re: <u>Letter of Credit in the Subdivision Process</u>

Dear Sirs:

This letter is a formal request that the services of the Ontario Land Surveyor be included within the letter of credit given to the municipality through a site plan bylaw or a subdivision agreement under the Planning Act.

The Ontario Land Surveyor by legislation has the exclusive license to practice "Cadastral Surveying" in Ontario. In the development of any property the Ontario Land Surveyor is quite often the first professional on the ground to investigate the extent of title. Before a parcel of land can be developed, it must be brought under the Land Titles Act or the Certification of Titles Act. In some instances just as engineers and architects the Ontario Land Surveyor prepares the base topographic information that forms the basis of the draft plan or sketches requiring planning approval.

When the project has planning committee or council's approval to proceed, the Ontario Land Surveyor begins to mark the limits of the new units on the ground. There are many components that the Land Surveyor is involved with during the final approval process of the plan of subdivision, condominium plans, and plans for land division and the provision of various zoning and planning certificates to provide proof of conformance to area and zoning requirements.

As you can appreciate, this can add up to a substantial amount of fees. It is for these reasons we are requesting that the Ontario Land Surveyor be included in the letter of credit similar to the professional engineer.

We would be pleased to provide further information regarding our self governing organization, such as, Mandatory Liability Insurance, Public Protection Fund, periodic Peer Competence Review and many other aspects within our legislation that protect the public.

Yours truly,

LABOUR LAW/WRONGFUL DISMISSAL

BORDEN WEARING
BARRISTERS AND SOLICITORS

J. Paul Wearing, B.A., M.P.A., LL.B
Direct Line: (416) 351-1424

The law firm of Borden Wearing provides legal services to employers exclusively in the area of labour relations and employment law.

Paul Wearing and Perry Borden provide proactive advice, strategic planning and counsel on matters arising under the *Labour Relations Act*, the *Human Rights Code*, the *Employment Standards Act*, the *Occupational Health and Safety Act*, the *Pay Equity Act* and the *Employment Equity Act* to public sector and private sector employers throughout the province of Ontario.

In addition to appearing before the Ontario Labour Relations Board, Employment Standards Referees, Boards of Inquiry convened under the *Human Rights Code* and the Pay Equity Hearings Tribunal, the firm represents clients in the Courts in connection with judicial review applications, wrongful dismissal litigation and injunctions.

330 University Avenue, Suite 507, Toronto, Ontario, M5G 1R7
Telephone: (416) 351-1213
Fax (416) 351-1434

THE BUSINESS OF PROFESSIONAL SURVEYING
EMPLOYMENT LAW PRIMER

There are seven different provincial laws and regulations that can affect how you manage your employees. The list includes:

The Labour Relations Act
The Pay Equity Act
The Employment Standards Act
The Occupational Health and Safety Act
The Human Rights Code
The Employment Equity Act
The Worker's Compensation Act.

It should come as no surprise to you to learn that the Government of Ontario employs a veritable legion of staff to enforce compliance of these statutes, the most notorious being the "Pay Equity Police" who enforce the *Pay Equity Act*, the "Human Rights Police" who enforce the *Human Rights Code* and the "Occupational Health and Safety Police". Accusations of breach of any of these statutes leads to investigation and prosecution before an administrative tribunal or, in the case of the *Occupational Health and Safety Act*, the Courts. Penalties can run in the thousands of dollars.

Significant Features of Labour/Employment Legislation for Employers

Labour Relations Act

Extensive amendments were made to this legislation through the passing of Bill 40 by the Government effective January 1993. The changes to the law make it more difficult for an employer to remain union-free. A "purpose clause" was added expressly defining collective bargaining rights and obligations in such a manner as to render non-compliance a form of discrimination not unlike the prohibited conduct identified in the *Ontario Human Rights Code.*

The scope of the Act and the right to organize was extended to a number of professions including land surveyors. Petitions in opposition to an application for certification are nullified if the petition is filed after the certification application date.

Automatic certification will result if the Labour Board is persuaded that the true wishes of the employees are not likely to be ascertained through the usual organizing campaign. Before the amendments, the Union was required to prove it had membership support adequate for the purposes of collective bargaining.

The rights of picketing employees are not to be interfered with to the point that the these rights prevail over the common law and the *Trespass to Property Act.* The jurisdiction of the courts to hear injunction applications against picketing has been removed and the right to hire replacement workers during a strike or lock-out has been prohibited.

Employment Standards Act

This is one of the oldest statutes regulating the employment relationship. It provides for basic minimum terms and conditions of employment. The topics of interest are minimum wage, overtime pay, hours of work, paid holidays, vacation with pay, pregnancy leave/parental leave, termination of employment, severance pay and Sunday work. The Employment Standards Branch of the Ministry of Labour administers this law. Adjudication of alleged breaches of the Act is conducted by Employment Standards Referees or Provincial Court Judges depending upon the infraction.

Employers and employers' accountants often confuse liability for paying termination pay with severance pay and vice versa. Termination pay is paid to an employee in lieu of notice of termination in accordance with a formula based on the employee's number of years of service as set out Section 57 of the Act. Liability for termination pay is not automatic. There are certain exceptions:

> Employees employed for a definite term or task;
> employees temporarily laid off;

- employees who are guilty of wilful misconduct or disobedience or wilful neglect of duty that has not been condoned by their employer;
- a contract of employment that is, or has become impossible of performance or is frustrated by a fortuitous or unforeseeable event or circumstance; or
- an employee employed in a business or occupation or profession exempted by the Regulations.

Liability to pay severance pay will only arise if the employee being dismissed has five (5) or more years of service and the employer's payroll is $2.5 million or more a year. Severance is based on the employee's number of years of service, with a week payable for every year to a maximum of twenty-six (26) weeks.

Pay Equity Act

This statute represents the first attempt by government anywhere in the world to require public and private sector employers to take proactive steps to investigate and remedy gender discrimination in compensation practices. Employers with ten (10) or more employees must evaluate and compare the work performed by predominantly female job classes to the work performed by the predominantly male job classes in the same establishment. The comparison must be accomplished through the use of a gender neutral comparison system.

The criteria to be applied in determining the value of the work are the skill, effort and responsibility normally required in the performance of the work and the conditions under which it is normally performed. Pay equity is achieved when the job rate for the female job class that is the subject of the comparison is at least equal to the job rate for the male job class in the same establishment where the work performed in the two job classes is of equal or comparable value. The outcome of this exercise is recorded as a pay equity plan.

Employers with between ten (10) and forty-nine (49) employees were required to achieve pay equity by January 1, 1994.

Disputes are investigated by review officers from the Pay Equity Office and adjudicated by the Pay Equity Hearings Tribunal. This Tribunal is a quasi judicial body and its rulings have the force of law.

Occupational Health and Safety Act

This law sets standards for workplace safety and imposes responsibility for employee safety primarily on supervisors, owners as well as officers and directors of the company and suppliers of machinery and equipment. A worker has the duty to report to his or her supervisor any contravention of the Act. The existence of defective equipment or protective devices, as well as any hazard to worker health or safety.

An employee has the right to refuse to work if the employee believes that to do so would result in injury. Each workplace must have a joint health and safety committee, the members of the committee are required to monitor the working conditions and if they think it necessary make recommendations to the owner for changes in procedures or safety features of machinery and equipment.

Injuries to employees usually result in charges being laid under the provisions of the Act and penalties for violation of the Act are significant. A corporation convicted of an offence can receive a fine of up to $500,000. Individuals may be charged, in addition to the corporate employer, for failure to carry out their responsibilities as directors or officers or supervisors. Conviction can lead to a fine of up to $25,000 or a maximum of twelve (12) months imprisonment, or both.

The only defence available to an accused charged with a breach of this Act is "due diligence". More particularly, the accused must establish that all reasonable care was exercised in the circumstances to prevent the commission of the offence. This means that employers must be proactive in having preventive measures respecting health and safety in place.

Employment Equity Act

This legislation became law September 1, 1994 and continues the current provincial government's fixation with empowering employees to participate in the management of businesses without regard for the efficiency or productivity of the enterprise.

According to the Minister responsible, Elaine Ziemba, aboriginal people, people with disabilities, members of racial minorities and women are being denied access to job opportunities and promotion because of outdated business practices and systemic barriers. As a result, it is intended that the law will "guide" employers in the development of recruitment, hiring and promotion practices to enhance the opportunities for persons in these groups.

The Minister has stated that a key part of employment equity is the partnership between workers and their employer to ensure that the workplace is fair for all. Presumably this is why in unionized workplaces a "partnership" with the union has been thrust on the employer with the object of collecting workforce information, reviewing the employer's employment policies and practices and preparing an employment equity plan. In union-free environments, the employer is required to inform and educate employees about the principles of employment equity and thereafter consult with them concerning the development, implementation, review and revision of the employment equity plan. The same approach was mandated in the *Pay Equity Act* with arguably disastrous results.

The process leading to the creation of an employment equity plan is a three step exercise requiring the collection of data, analysis of the data collected and application of the results of the analysis to the creation of an employment equity plan.

The CEO of a company must execute a certificate attesting to the fact that he/she has done everything required by the *Employment Equity Act* and Regulations within six (6) months of the beginning of the plan and file same with the Commission.

The Act creates offenses where confidential information collected from employees for the purposes of an employment equity plan is disclosed other than for the purposes of complying with the Act.

It is also an offence to attempt to hinder or interfere with an employee of the Commission in the execution of a warrant or otherwise impede a Commission representative in the course of an audit. Intimidation, coercion or discrimination against any person because that person is exercising or may exercise a right under the Act, or is participating or may participate in a proceeding under the Act, or has made or may make a disclosure required in a proceeding under the Act, or has acted or may act in compliance with the Act, is also an offence.

Persons found guilty of an offence will be liable on conviction to a fine of not more than $50,000.

The obligations of the Act will be phased in. Compliance will become obligatory for employers following a period of time after the effective date which is September 1, 1994. The limitation period for attaining compliance will vary depending on the size and status (private sector/public sector) of the employer.

For a private sector employer with one hundred (100) or more, but fewer than five hundred (500) employees as of September 1, 1994, compliance must be achieved no later than twenty-four (24) months after September 1, 1994. For private sector employers with fifty (50) or more , but fewer than one hundred (100) employees on September 1, 1994, compliance must be achieved no later than thirty-six (36) months after September 1, 1994.

The objectives of this legislation as disclosed in the preamble are clear, however, the implementation of employment equity is complex.

Although the concept of "quotas" is not specifically stated in the Act, the principles of employment equity as revealed in the legislation and the Draft Regulations are open to interpretations that would result in recruitment, employment, and promotion quotas of the designated groups.

The imposition of artificial timetables on employers to achieve recruitment, retention and promotion of members of the designated groups calls into question the employer's responsibility to select the best qualified person for the job. Timetables do not take into account the individual choice of persons in the designated groups not to seek employment or if employed already, to remain in the work force at all.

The specifics of implementation and the standards to be achieved are to be left to regulations drafted by Cabinet. Furthermore, the law contemplates separate situations wherein Cabinet would be allowed the prescribe situation specific regulations. Utilization of this broad power could lead to inconsistent and uneven application of the law.

Human Rights Code

The Code recites a number of prohibited grounds of discrimination that influences the content of job application forms, job interviews and hiring practices, as well as identifying special needs of disabled job applicants and disabled employees. Harassment of employees in the work place by other employees or supervisors is also addressed in the law. The Ontario Human Rights Commission administers the Code. Complaints are investigated by Human Rights Officers. When settlement of complaints cannot be achieved, a Board of Inquiry is appointed and the complaint is adjudicated in a manner analogous to an arbitration hearing.

Employment Contracts

In addition to the above laws, there is the employment contract at common law. The nature of the employment contract is often misunderstood. Many employers mistakenly believe that an employment contract must be in writing in order to be enforceable. This is not the case.

An employment contract exists between you as the employer, and each of your employees, even if you don't recite the terms and conditions in a formal document drafted by a lawyer. The offer of employment sets the basic terms and over time these terms evolve as the employee's length of service grows and his or her responsibilities and compensation are increased. Dismissal of an employee without legal cause (business cause doesn't count) and without notice attracts liability for termination pay and the value of any benefits enjoyed by the employee at the time of dismissal. Courts assess the employer's liability on the basis of what "reasonable notice" of dismissal of the employee should be.

Five factors are evaluated:

- the employee's age,
- length of service,
- position in the company,
- education , and
- the demand for the employee's skill in the marketplace.

In order for the employee to be entitled to any compensation at all, he or she must prove that they have searched diligently to find a job. Feeble attempts at finding new work result in a significant discount of what the court would otherwise award.

INSURANCE

HOW TO AVOID COSTLY MISTAKES IN BUSINESS INSURANCE

Preface

The basic problem you face in buying insurance is deciding how to wisely use the limited number of dollars allocated for insurance to purchase the best possible protection. Although the field of insurance is complicated, developing a sound philosophy of insurance buying is not. We sincerely hope our suggestions help you avoid costly mistakes in buying insurance for your business.

The Most Common Mistakes

In general, costly mistakes in buying insurance fall into two categories: buying too little and buying too much. The first is failure to purchase essential coverages which can leave your firm exposed to an unbearable financial burden.

On the other hand, it is possible to purchase superfluous or redundant coverages, thereby wasting valuable premium dollars. The difficulty in buying the right amount of insurance is compounded by the fact that it is possible make both mistakes at the same time. Many firms ignore essential coverages, leaving gaping holes in their overall protection, while at the same time including coverages against risks that should more appropriately be assumed.

Insurance Buying Guidelines

1. When the possible severity of loss is great, assumption is not feasible, the risk should be insured.

2. When the possible severity of loss is small, the risk should be assumed by your company.

3. When the likelihood of loss is high, risk reduction through loss control techniques is the most appropriate way of dealing with the exposure.

4. The best buys in insurance are those where the probability of loss is low and the potential severity is high.

5. The worst buys in insurance are those where the probability of loss if high and the potential severity is low.

Evaluating Your Risks

This involves measuring the potential size of the possible loss and the ability of the firm to withstand the loss if it does occur. It involves ranking the risks in order of priority.

Any risk that involves a potential loss that could result in bankruptcy ranks in the first category. It makes little difference if bankruptcy results from a liability loss or an uninsured fire loss. Therefore, rather than ranking exposures in some order of importance such as 1, 2, 3, ... and so on, it is more appropriate to rank them into general classifications such as **CRITICAL, IMPORTANT,** and **UNIMPORTANT**.

CRITICAL: Those risks involving possible losses that could result in bankruptcy of the firm. It is *ESSENTIAL* that these risks be covered.

IMPORTANT: Those risks involving possible losses that would not result in bankruptcy, but which would have serious impact on the financial results of the firm. It would be strongly *RECOMMENDED* that these risks be covered to the degree affordable.

UNIMPORTANT: Those risks involving possible losses that would not have a serious impact on the financial position of the firm, and which could be met out of existing assets and treated as operating expenses. Coverage for these risks are *AVAILABLE* as options, and can be purchased if desired and affordable.

But what about the situation in which the cost of even *ESSENTIAL* coverages is too great for the firm's budget? Or the case in which you have purchased all of the *ESSENTIAL* coverages, but cannot afford many of the *RECOMMENDED* coverages? When the available premium dollars cannot provide the *ESSENTIAL* and *RECOMMENDED* coverages you want to carry, the questions becomes "where to cut".

One approach is to assume a part of the loss in connection with the *ESSENTIAL* coverages. You can do this by adding higher deductibles to these coverages, thereby freeing dollars for other coverages that you desire. In many lines of insurance, full coverage is uneconomical because of the high cost of losses. Through the wise use of deductibles, the premium credits granted may permit you to purchase other *RECOMMENDED* coverages.

There are a number of coverages that should be considered when putting together an Insurance Program for a surveying office. Your broker is the best person to review your exposures, and advise appropriate coverages.

The following list is comprised of some suggested coverages that you should discuss with your broker. It is by no means comprehensive, it is simply a basis to begin your review.

* Commercial General Liability
* Property Insurance - for fixed property, or property at specified locations
  - for mobile property
* Business Interruption Coverages
* Valuable Papers
* Electronic Data Processing
* Accounts Receivable
* Boiler & Machinery
* Tenants Legal Liability
* Directors & Officers Liability
* Umbrella Liability
* Auto & Non-Owned Auto
* Crime Insurance - including Employee Dishonesty

RE-ENGINEERING & MANAGING CHANGE

CASE STUDY

Set the scene: You, the OLS, were hired to layout a building.

The building has been laid out incorrectly.

The client has come to your office to discuss the situation.

Cast:	OWNER:	Kevin	OLS:
	PARTY CHIEF:	Graham	CAD Operator: Brian

As we drop in on the meeting room, the conversation sounds like this:

OWNER: My site super says the building is too far from the road.

OLS (to the party chief): The owner has a problem. He says you laid out the building wrong.

PARTY CHIEF: I don't think so, I used the total station.

OLS: How could you screw up again? I've told you a hundred times to check the layout by direct ties.

PARTY CHIEF: I did check it. If you had looked at my notes in the file you would have seen that the checks were done.

OWNER: The building is at the old siting.

OLS: Old siting! Is there a new siting? No one told us!

OWNER: Hey! We did tell you. And the site super specifically asked the party chief to make sure you had the latest drawings.

PARTY CHIEF: I told the super my layout was hot off the computer this morning.

How was I to know there were changes?
I'm just a mushroom - kept in the dark and fed a lot of bullshit.

OWNER: The architect sent you revised drawings 2 days ago.

CAD: Yeah, we got the drawings. But I thought they were just the full set of plans we've been asking for ever since you sent a fax of a portion of the site plan.
How was I to know there were changes?

OLS: Why didn't you tell me you had new drawings? I knew they were coming.

CAD: I would have told you if you had been here. You were out golfing.

OLS: I wasn't golfing, I was marketing, a little business development so to speak.

OWNER: Good idea since you are one client short.

CAD (to party chief): Why didn't you ask if there were changes before you went into the field?

PARTY CHIEF: What? Now I'm supposed to be a bloody mindreader!

OLS: This kind of thing happens far too often. Like it or not there are going to be some changes around here.

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1. Identify the problems.
2. Propose solutions.
3. How will you implement the solutions?

Now it's your turn.

Form groups. Take this situation and answer the 3 questions.

You have 15 minutes to discuss the situation and prepare your answers.

The Case of Brad Brooks Surveying

During one of the slack periods for Brad, he picked up a computer magazine and read about a new Operating System on the market that could process information 30% faster than DOS and was easier to use than Windows.

Brad took the time to visit the local computer store and got a thorough demonstration of the new Operating System by the sales representative. Brad was still unsure about the product so he went to the Computer Exposition at the Metro Toronto Convention Centre. While he was at the show, it seemed like everyone was talking about NOSE (New Operating System Extraordinaire).

That was it. Brad went right back to his local computer store and bought the system - including new accounting and drafting software which could run on NOSE.

It was a little pricey but Brad felt it was worth it because jobs could be done in half the time now. He could cut his price and beat his competition.

Brad installed the system. He thought the bookkeeper, Nancy, would be delighted to have state-of-the-art equipment. She wasn't!

She complained long and hard about having to learn the new system and how it really wasn't as good as Brad and everyone made it out to be. Nancy spent long hours trying to convert the data from the old system to the new. To Brad, it seemed like she was complaining about more than the new system now. Nancy bemoaned the way Brad wanted her to set up the accounts; the fact that there were never any purchase order numbers and on and on.

Brad felt that she would get over it. Besides, he was paying her for more hours anyways, right?

Tony, the draftsman, wasn't any happier. It took him twice as long to prepare a drawing instead of half the time. Brad had never heard Tony swear until he installed the new system. One day, Brad got so fed up with Tony's inability to use the new software that he literally picked up Tony out of his chair, plunked himself down, and did the drawing himself in 30 minutes - based on the knowledge he picked up from the sales rep's demo.

When Brad finished, he wondered why his staff couldn't see why NOSE was such a good idea and the way of the future?

NOTES ON NOSE
WHAT WENT WRONG

1. NOSE really was the way of the future and it soon became the industry standard. He had the right idea but the system was implemented poorly.

2. Brad did not consult with either the draftsman or the bookkeeper to get their input. Both Nancy and Tony resented the fact that their working environment changed without them having any say in the matter.

   They did not know a change was coming and were not prepared for it when it took place.

   If Brad had spoken with them about the reason for the change and how difficult the change might be, then the move to the new operating system would have been less stressful for everyone concerned.

   The change still would not have been easy but it would have been easier to manage.

3. Tony and Nancy wondered what other decisions he was going to make without consulting them. By cutting his price, would wage cuts be next?

4. Whenever Tony encountered a difficult problem with the new drafting software again, he always called on Brad to help. Brad discovered he was busier doing drafting work and checking plans than anything else - and being less productive.

5. Nancy and Tony received no training on the new software - either formal or on-the job.

6. Brad felt that purchasing the new software would give him a competitive advantage that would enable him to cut his price. Brad didn't realize that his competitors were also purchasing the NOSE operating system. It was no competitive advantage at all!

7. Even though Nancy was making more money by working the extra hours, she felt that the extra stress was not worth it.

RE-ENGINEERING

There has been a great deal of discussion over the past few years about "Re-engineering Your Organization". What does it mean?

Re-engineering defined

In its simplest form, re-engineering involves changing fundamental "processes" that will give your organization a stronger competitive advantage.

These "processes" may include changing the pattern of work flow (ie: a job comes in and it goes from the OLS to the Party Chief to the Instrumentperson back to the Party Chief to the Calculator to the Draftsperson to the OLS who sends the revisions back to either the Party Chief or the Draftsperson; Is there room to change this work flow?)

It may also include a fundamental review of how you deal with clients or procedures resulting from changes in new technology or legislation.

Change

Whatever process you decide to review, there are two key elements to "re-engineering".

Fundamental change

First, it involves change.

Second, the change is fundamental.

Everyone must "re-engineer"

Eventually, we will all be forced to "re-engineer". The trick is to anticipate what changes need to be made instead of having it thrust upon you.

but don't confuse a fad with ACTION

"Re-engineering" is a buzzword that is often over-used in business circles much like "Management by Walking Around", "In Search of Excellence", "Thriving on Chaos", "The Information Superhighway." Don't get caught in the trap of following the latest fads in management. Most business fads essentially say the same things:

1. Be creative and innovative.

2. Listen to your employees at least as much as you expect them to listen to you.

3. Relish change; don't resist it.

4. Strive to constantly improve.

THE CHANGE EQUATION

$$AY_{c} = TY_{c} - ISU$$

THE ROLE OF CHANGE

Every organization needs change. You want to change its profitability or growth rate or rate of return or prices or cost structure or the like.

In order to make those types of changes, the organization itself needs to change. It needs to hire more people, lay off staff, introduce new equipment, train staff on new equipment, change business practices, change survey processes.

Why change?

Any moderately successful organization is constantly in the midst of change. Stagnant organizations die.

The sure way to tell that your organization is stagnant, is to have someone ask you or your staff, "Why do you do things that way?" If the answer is, "Because we've always done things that way," you are in big trouble.

The difference between a moderately successful organization and a truly successful one is that moderately successful ones have change thrust upon them (where they struggle along and sometimes don't survive). The truly successful ones enjoy change and actively seek out changes they can make.

The difficulty with change is...

The difficulty lies with convincing others (or even yourself) that change is necessary. After all, you're comfortable with everything right now. You are making a decent living and the work is steady. There is a natural human inclination to resist change. But is this the calm before the storm?

You know change is necessary. You have decided to be a change agent for your organization. How are you going to implement successfully a change at your organization?

There have been many grand plans for changing an organization. There have been many elaborate change schemes. Most fail. Hence the equation:

$$AY_c = TY_c - ISU$$

The actual yield (effectiveness) of a change equals the theoretical yield of a change less the implementational screw-ups.

Why change fails

The most common reasons plans for change fail are:

1. An autocratic boss says, "You will change, or else" but employees don't understand the reason or the need for change.

2. You try to change too much all at once and everything collapses around you.

3. You try to change things too quickly. Change requires cooperation and it takes time to earn their cooperation.

4. There is no plan.

THE CHANGE PROCESS

Once you have committed yourself to being a change agent, how do you go about effectively implementing change.

John Howard, Professor at the University of Western Ontario, developed the following framework for instituting change.

Steps for effective change

1. Determine the desired state (after the change)
2. Determine the organization's readiness for change.
3. Prepare the organization for change, establish the need for change. (Unfreeze)
4. Make the change.
5. Stabilize the new behaviour. (Refreeze)

DETERMINING THE DESIRED STATE

What do you want to change?

If you don't know what you want to change, how will you know when you've made the change, how will you know if you've been successful, how will you be able to communicate your ideas with others?

Where possible, make change measurable. For example, set a goal of increasing productivity 10%.

Faddish business people call this "vision".

DETERMINE ORGANIZATION'S READINESS FOR CHANGE

In spite of the need for constant change (and improvement), some times are better than others for trying to implement changes.

For example, it is probably not a good idea to:

a) ask staff to take wage cutbacks if you've just bought a new Cadillac;

b) change to a new system in the middle of the busy season;

c) consult with staff if your banker is arriving in 15 minutes.

Are they ready for change?

Who will support?

Who will resist?

It is a always a good idea (in fact, necessary) to have a strategy for instituting change. With any change, there will always be some resistance. There will always be some people who resist change stronger than others. It is the change agent's job to determine who will resist (and who will support) and how strongly they will resist (or support you).

The important point is that you must have a strategy to implement change successfully; it does not happen on its own.

Must have change strategy

Without a successful change strategy, the intended change is doomed to fail - regardless of the wisdom of the decision. Just because it's a good idea, doesn't mean it will be easy to implement.

UNFREEZING THE ORGANIZATION

Once you have decided on a strategy for implementing change, you must prepare the organization for the change.

Sharing information

This often involves sharing important information with people. The more information people have the less likely they are to resist.

How do you share information? If things are going poorly, tell people that. Share the misery.

If you want people to accept wage cutbacks, explain the company's financial outlook. (If you only share the financial prospects with staff when you need concessions from them, they will resist strongly).

Give people choices

Give people choices. Ask for their input. You may still decide to proceed with your change anyway but people are less resistant if they have plenty of choice. Also, listen to what they have to say. Imposing change will certainly breed resistance.

People will see the worst possible scenario (absolutely paranoid) if they don't have information about the change.

Share with them how the change strategy fits in with the organization's strategic plans.

MAKE THE CHANGE

Once the organization is ready to make the change, now is the time to implement it.

There are some important things to know about making the change.

Four truths about change

a) it will be uncomfortable and awkward;

b) things will get worse before they get better;

c) people will accept the change at different rates of speed;

d) if it is done right, it will be worthwhile.

Making a change of any significance is fraught with danger and may often seem like it is bound to fail.

Remain positive

It is your job as a change agent to remain positive about the change situation.

It is your job to take all necessary precautions to ensure that the change is successful. That is, if possible, start with small change experiments that are bound to be successful.

REFREEZING THE ORGANIZATION

celebrate success!

Once you have reached the desired state (as determined by you in step 1), celebrate the success of the change.

Let everyone know how pleased you are that they have successfully completed a traumatic experience: ***CHANGE.***

WORKING WITH PEOPLE

Business is about people

Whether we realize it or not, business is all about dealing with people.

In surveying, we spend a great deal of our time looking at relevant legislation and case law, equipment repair and new products, and most basic of all: LAND.

However, surveying is also a business because we must deal with people.

The business is a great deal easier to organize if we concentrate on dealing with people more effectively.

Three sets of people

Surveyors deal with three types of people.

Clients/Agents

First, there are clients and their agents. They are homeowners and land developers and realtors and lawyers and government agencies and the like. Without their support, there would be no revenue.

Staff

Second, there is staff. For many surveyors, without the support and cooperation of staff, completing any task would be virtually impossible. Managing a business is difficult enough; you need all the support you can get.

You

Third, there is you - the businessperson. You must take care of yourself. Being a business leader requires a great deal of time and sacrifice. Make an effort to alleviate the stress and rejuvenate yourself. Take the time to think of new ideas and innovations.

MANAGING ONESELF

Managing a business requires a great deal of time, effort and sacrifice. You will be expected to work long hours, deal with incredible pressure, and face conflicting demands (from clients, staff, family, bankers).

Being in business is STRESSFUL

Not only are you expected to be a good surveyor but you are also expected to be a good businessperson.

It is a stressful position.

Deal with the stress

Deal with the stress. Do not ignore it.

There are fantastic stories of people who have become so distressed that one took a shotgun to a Coke machine that wouldn't dispense the pop after gobbling up the coin and another who fought with a waiter at a greasy spoon because they wanted to charge him a dime for two pats of butter on his toast.

They let the stress get to them.

The best ways to deal with stress are through physical activity and/or a hobby which is fun for you to participate in.

For better or worse, alcohol and tobacco are rotten ways to relieve stress. Not only are they ineffective they will also do more damage than anything else. Alcohol is a depressant and an ineffective reliever of stress.

Take time every now and then to rejuvenate yourself. Get away from it all. You might be surprised how much more you can accomplish once you've "escaped" your office.

What are your dreams?

Even though your purpose in getting away is to stop thinking about the business, you may find yourself dreaming about it every now and then - and develop a very innovative, creative, idea. (Your holiday just might have paid for itself.)

Lead by example

When you're back at work, set an example of the type of business leader you want to be. Write down each day what your goals and objectives and dreams are for that day.

First and foremost, lead by example.

MANAGING UP

Whether you work for someone else or hold your own Certificate of Authorization, you have people to whom you must report.

Manage your boss as much as you manage the people "below" you

For people who work for someone else, you must learn to manage your boss. That is, you do not attempt to control your boss but you must know how to accomplish things that you need accomplished by working with your boss.

There are a number of ways of "managing up".

Let's say you want something changed at your office. You develop a change strategy (as noted earlier) but you wonder how you are ever going to convince your boss that it is a good idea.

Develop a good rapport

First, it helps to have a good rapport with your boss. Speak to him or her on a regular basis about is going right or wrong within your organization (but don't pester your boss with Mickey Mouse stories that no one except you cares about).

Second, it helps if you can show the financial benefit of your proposal. If you can show your boss how purchasing a particular product or service will save the organization money in the long run, you have a better chance of succeeding.

Criticize *constructively*

Third, don't be afraid to criticize constructively. Good bosses will admit they do not have all the answers and will ask their staff for advice. The last thing a boss wants to hear is "yes, yes, yes" all the time. Just remember to criticize *constructively.*

What are your boss' dreams?

Fourth, find out what your boss' agenda is. If your boss wants to retire, then he or she will behave differently and expect different things than if he or she is 30 years old and wanting to expand the organization.

Be a problem solver

Fifth, be seen as a problem solver; not a problem creator. Your boss will love you if you can alleviate the headache of management.

It's not easy to manage up. It requires walking a very thin political line. However, you will not get much respect from anyone else if you constantly complain about your boss (what a rotten boss he/she is, how they're driving the company into the ground, how you are being mistreated) if you don't at least speak to your boss and attempt to manage up.

AS AN OWNER

Even an owner has a client to report to

As an owner of a survey practice, there is the tendency to think that you have no one to report to since you are the boss. But...

> the people who keep you're company alive (paying clients) are *your* boss. So how do you *manage* them?

Manage your clients

A client has tremendous power. They make the decision whether to patronize you or not. You want to manage and work with them to ensure they are your clients and not someone else's.

Six principles of customer service

The principles of managing *up* are the same with clients as they are with traditional bosses.

First, speak with your clients at regular intervals as much as possible.

Second, show the client how you can save them money (by purchasing all their survey needs from you).

Third, understand what your client requires from you and question them to make sure that is what they really want.

Fourth, be a problem solver. Your client needs a survey for a reason. Make sure you satisfy their underlying concern (ie: mortgage approval).

Fifth, understand that your client doesn't understand (and likely doesn't care) about the intricacies of surveying. Speak to your client in clear, simple English; not survey-speak.

Customer satisfaction

Sixth, make sure your clients understand what they are getting. Did they purchase a piece of paper with some lines and measurements on it? Or did they purchase the satisfaction of knowing there are *no* encroachments on their property? Or did they purchase a guarantee that the bank would grant the mortgage?

When managing up with clients, customer satisfaction is the key phrase.

MANAGING DOWN

Managing down, or managing your staff, is one of the most important aspects of being a business leader yet it is consistently the one area where managers fail.

Managers expect staff to be replicas of themselves

As managers, we expect our subordinates to behave and think the same way we do (even though our education, backgrounds, day-to-day pressures are different) even though we have more information at our disposal than our employees do. So what happens when employees behave differently? Managers drive them harder. Blame them for everything that goes wrong.

Employees must have stake in the firm

There have been numerous books and articles that explain what to do and how to manage those people that work for you. I am sure you have heard management experts talk about Teamwork and teambuilding and self-directed work groups (especially where Japanese-built automobiles are concerned).

They all stress the importance of making your employees feel like they have a stake in the company and its success.

Get employees to act like owners

Consider the opening paragraph from John Case's article "The Open-Book Managers" (INC., September 1990).

"Many CEOs are adopting a management style based on one simple, radical idea: if you want your employees to act like owners, you've got to give them all the information any owner gets."

Perhaps it is fear or time pressure or insecurity that prevents employers from adopting this simple idea.

The best explanation I have read on managing people comes from Robert Townsend, former CEO of Avis Car Rental, in his 1984 book "Further Up The Organization" (published by Knopf).

Today's firms based on Caesar's legions

"...We're in this mess because for the last two hundred years we've been using the Catholic Church and Caesar's legions as our patterns for creating organizations....

From the behaviour of people in these early industrial organizations we arrived at the following assumptions:

Poor assumptions

1. People hate work.

2. They have to be driven and threatened with punishment to get them to work toward organizational objectives.

3. They like security, aren't ambitious, want to be told what to do, dislike responsibility."

"Bad" workers look like geniuses

"...When I became head of Avis, I was assured that no one at headquarters was any good, and that my first job was to start recruiting a whole new team. Three years later, Hal Geneen, the president of ITT (which had just acquired Avis), after meeting everybody and listening to them in action for a day, said, "I've never seen such depth of management; why, I've already spotted three chief executive officers!" You guessed it. Same people...."

Get to know your people

Participative company attributes

"Get to know your people. What they do well, what they enjoy doing, what their weaknesses and strengths are, and what they want and need to get from their job. And then try to create an organization around your people, not jam your people into those organization-chart rectangles. Organizations work when they maximize the chance that each one, working with others, will get for growth in his job. You can't motivate people. That door is locked from the inside. You can create a climate in which most of your people will motivate themselves to help the company reach its objectives. Like it or not, the only practical act is to adopt participative management assumptions and get going."

Requires patience and understanding

"It isn't easy but what you're really trying to do is come between a man and his family. You want him to enjoy his work so much he comes in on Saturday instead of playing golf or cutting grass."

How do you know if you are really have participative management? Robert Townsend lists these as clues to truly enlightened companies.

1. COMMUNICATION - Visible leaders listening to workers. Informal atmosphere.

2. Few MEETINGS

3. No POLICY MANUALS

4. PROFIT SHARING for everyone

5. SALARY for everyone

6. No SECRETS. Salary information available to anyone and financial reports discussed throughout the company.

7. No TIME CLOCKS

8. People get more pay for LEARNING other jobs and skills after they've mastered their own.

Establishing this type of atmosphere requires patience and understanding. Like any change, it is going to be awkward for everyone at the beginning but will prove worthwhile.

People are not products or machines. They are more like plants and crops. They must be nurtured and watered every now and then. And only then will they grow beyond what you ever expected. It is a radical idea. It requires a radical new approach to dealing with people.

SUMMARY

1. Re-engineering an organization involves changing the way a business operation/process is down in a fundamental manner.

2. Change is uncomfortable for everyone. The first reaction for anyone is to resist the change.

3. You must have a change strategy. Follow the five steps for implementing change.

4. Most change plans fail because of good ideas poorly implemented.

5. MO - Manage Oneself - take time to recharge your batteries; deal with the inherent stress of being a manager.

6. MU - Manage Up - Remember that we all report to someone. We must work WITH these people in order to get our ideas approved and implemented.

7. MD - Manage Down - If we agree no one is an island, then we require the support of many people in order to reach a common goal. Strive to be a participative manager. Employees want to do a good job of which they can be proud.

SMALL TIPS FOR BIG IMPROVEMENTS

For many of us, our opinion of a company is based on small circumstances that will either excite us or annoy us.

How many of us have walked out of a retail store because of a snobby clerk? How many of us have bought a product because we got along well with the salesperson? How many of us have thrown our hands up in frustration after being told "that's not my department"?

Sometimes, it is the little things that count, such as:

1. Always return phone calls. Always.

2. Never send a fax or a letter if you can speak to the person face-to-face.

   If you have to send a fax/letter, let them know that it is being sent.

3. If you use an answering machine, purchase a good quality one. If a real person answers the phone, make sure they speak slowly, clearly and sound so cheerful because an important person just called.

4. All correspondence must be grammatically correct and without spelling errors. You don't allow plans to go out with errors, so why do you let business correspondence.

   Many people don't care about (or are not aware of) poor grammar these days. For those that do care, they believe that poor spelling and grammar will say volumes about the type of organization they are.

   So why not take the time to prepare proper business correspondence.

5. Many times before, the importance of neat dress and proper deportment of surveyors and their staffs have been stressed. It is just as important today.

   The same can be said for the survey office itself.

QUALITY CONTROL/QUALITY ASSURANCE

QUALITY CONTROL - QUALITY ASSURANCE

Everyone uses the phrase **QC/QA** - Quality Control/Quality Assurance. Each phrase has a unique but complimentary meaning. As surveyors we cringe when we hear people misuse the words precise and accurate. People in the TQM business shudder when they hear surveyors interchange QC and QA. Perhaps it is best explained by an example.

Carl, our Executive Director, exercises quality control by checking the performance of key committees and Council. Audrey Maxwell (Office Co-ordinator) exercises quality assurance by making sure Carl does all his jobs.

What is your definition of quality ?

____

____

Who should define what is a quality survey ?

____

____

What is a quality survey ? How is it determined?

Four steps to a quality survey.

How do we make quality happen ?

What Q.C.Q.A. is not. It is not;

What techniques can we employ to effect a quality focus in ourselves and our staff?

Your Corporate Focus

Flow chart the key functions of a typical survey project.

The surveyor's favourite form of QC is the checklist. Checklist the equipment, checklist the vehicle maintenance, checklist the fieldwork and on and on.

The surveyors weak link is Quality Assurance; checking the checking was done.

Now re-draw the key functions of a typical survey project but with a Q C Q A focus.

MANAGING YOUR PROJECTS

MANAGING YOUR PROJECTS

Now that Brad has marketed his services, he has

.... won the RFP

.... established a quality program

How is he going to manage the project ? What should he do first ?

The survey is just part of the overall project. What else must be considered?

I have watched engineers being trained at my office. First, they are taught

how to report what they will do

how to get authorization in writing for what they will do

confirm the person giving the authorization has the authority

list the exclusions to the contract; the extras

report frequently every conversation or field modification

quickly invoice the client

don't give out any drawings until you are paid.

I tried it. I sleep better.

In order for Brad to organize and control all these events, he needs to design and implement a Project Management Plan.

One of the simplest communication tools is the Trip Memo.

All too often on a project we are the last priority. We need to assert ourselves into Project Management. It does not say in the Engineers Act "thou shall't be lord of all thy see." It doesn't say the engineer is God. They think they are God. And sometimes the owner will hire them to act like God. But remember they went to University for four (4) years just like you but their articles consisted of only two (2) years of work, no reports and a take-home mail-order examination.

There is no reason why the Surveyor cannot be the Project Manager. I have had the opportunity on only a few projects to be Project Manager but I can tell you it is exciting and challenging. You may have heard the saying that "A consultant team is like a team of sled dogs working together.

Picture that. But unless you are the lead dog the view is limited."