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CONTRACTOR MANAGEMENT GUIDELINES

CONSISTING OF

- 1 ESTABLISHING A CONSTRUCTION BUSINESS
- 2 OPERATING A CONSTRUCTION BUSINESS
- 3 EXECUTING A CONSTRUCTION PROJECT

SECTION 2

OPERATING A CONSTRUCTION BUSINESS

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SECTION 2.1: SECURING RESOURCES

MONEY

The owners of a construction business (contractor) may use their own money (equity capital), borrow capital from the bank or other source to start a construction business (see section 2.2). This money/capital is used by the business to acquire resources, e.g. materials, labour, and plant. The business owners need to use this money/capital effectively to obtain a good return on their investment, otherwise they could invest their money/capital in other forms of investment products which will yield higher returns on their money. The profits made (retained profits) by the construction business should be ploughed back into the business to reduce the amount of money that needs to be borrowed from banks or other sources.

The most well-known lending institutions are banks, whose primary business is lending money to individuals and companies by charging interest on the loan amount. Borrowing money from banks is expensive. In addition to the interest charged, banks add services fees for each service that they provide. For example, on cheque accounts, banks charge a minimum service fee per month for each cheque issued.

A bank overdraft is a very useful source of income for the bank. Interest is calculated on the daily balance on the overdraft amount, i.e. the amount of money owed to the bank. If on one day R10 000 is owed and the overdraft rate is 20% the interest that will be charged on that day will be $10\,000 \times 20\% \times 1/365 = R5,48$.

The banks add this interest charge to a construction business' account once a month. The interest is compounded every month. That is, the interest is added to the overdraft on a monthly basis and interest is then charged on the new total amount. In this way, interest is charged on interest. For example, if R10 000 is borrowed at a flat rate of 20% interest on January 1st and is repaid on December 31st of the same year, the annual interest is R2 000. The same calculation if interest is charged on interest (compound interest) the interest charges will be R2 213,35.

Other aspects that impact upon a construction business' cash flow and overdraft limits are:

- Prompt payment from clients for work completed.
- Limiting spending to the absolute minimum and paying as late as payment conditions permit, e.g. payment to material suppliers and plant hiring companies.
- Optimising ordering of material, i.e. don't order materials too early and order only that which is required at that point in time.
- Building up of cash reserves by resisting the temptation to spend.
- Choosing not to tender for work where the contractor cannot be competitive due to the cost of money, e.g. where the client says in the tender "payment within 45 days" or "payment within 60 days" and the contractor has insufficient credit, such terms of payments could be extremely prohibitive.

Apart from the banks, there are other organisations such as Khula Enterprises Limited that can be approached for support. Contractors should be extremely careful of money lenders as they are permitted in terms of the law to charge a much higher interest rate than the banks.

The contractor needs to consider the advantages of credit, as a slightly higher price with credit facilities may be a better option when procuring resources. Even if the price from a supplier looks good initially it may not be the best deal.

Most people go into business to make money, that is, they want to take money out of the business. In order for money to be taken out of a business, there has to be money in the business that is not owed to anybody. The temptation to take money out of the business apart from your salary, while the business has debts, must be resisted.

Construction businesses should try to use their own money and save the interest and bank charges in order to remain competitive.

Contractors need to:

- Make sure that they know exactly how much money is needed for a contract.
- Negotiate to get the best possible interest rate on borrowings.
- Know how the interest rate will be calculated (per month, etc.).
- Know what the bank charges will be.
- Make assumptions as to when a client is likely to pay.
- Calculate the cost of money before submitting a tender.

MATERIAL SUPPLIES

Contractors should procure materials of the **right** quality delivered **on time** at the **cheapest price**. All three of these requirements are extremely important. There is no point in getting materials at a low price if they are rejected once they are received, delivered to a site or built into the works. Materials not delivered on time may delay the works and prove to be very costly. Contractors should accordingly resist procuring on price alone. It is imperative that the required quality, quantity and time for delivery are established and understood before approaching a supplier. At the same time these requirements need to be clearly communicated to the supplier when ordering materials or obtaining a quotation for tender purposes.

It should also be established whether or not the materials are to be delivered or collected and what storage capacity is available to receive the materials. It may also be necessary to establish whether the supplier is a VAT vendor, and it is important to know whether or not VAT is included in the quoted price.

The most common credit period is 30 days. This normally means that payment is required 30 days from the date on the statement. Suppliers usually deliver materials on a particular day and will invoice immediately. Towards the end of that month the supplier sends out a statement with a summary of all the invoices sent and all monies received from the contractor during that month. Thirty days credit means that a contractor has 30 days from the date of this statement to pay, failing which they could well be charged interest by the supplier and lose the right to claim any discounts.

Ideally, materials should be ordered so that they can be built into the project within a month of delivery. This will allow the cost of the materials to be included in the payment certificate that is presented to the client for payment. It is even possible that the client will pay the certificate before the contractor has to pay the suppliers of the materials. Should this occur, the contractor will be able to buy materials without having to use or increase borrowings. In effect, the client's money may then be used as bridging finance to fund the business. Contractors should be aware that if they order materials that they are not able to build into the works within that month, then the payment from the client may not cover the cost of those materials, and they may have to pay the supplier or risk losing the credit facility from that supplier.

In addition to credit, suppliers should be asked for discounts. There are two main forms of discount: trade discount and settlement discount. Trade discounts are granted to the contractor and settlement discounts are granted if monies owed are paid on time.

Trade discount is taken off the price to begin with. The suppliers often have a "list price", which is generally not confidential. What is confidential is the discount they give a contractor off the list price. The discount that suppliers will give depends on how the supplier rates the contractor as a client (i.e. what is the risk of non-payment), and how good the contractor is at negotiating. The supplier could allow a contractor a settlement discount, which is normally 2,5% for payment within 30 days. The discount is only allowed by the supplier if the contractor pays his account on time. The settlement discount is then deducted by the contractor from the amount shown on the statement, provided payment is made on time.

Positive credit references are needed to get more credit. Suppliers ask contractors for trade references when credit applications are made. These are companies from whom a contractor has purchased materials on credit in the past. It is a good idea to buy materials from different suppliers to build up a list of credible references.

Credit is not everything, but it is extremely important to obtain it providing that the contractor can manage it correctly. Credit means that materials can be ordered and only paid for after a certain period of time following delivery has elapsed.

Late payments may attract interest charges. In addition, in the event of late payment, the supplier could refuse to give a contractor a credit reference or could give a negative one.

EQUIPMENT

Equipment may be:

- Bought for cash, in which case the contractor owns, maintains and insures the equipment and employs operators to use the equipment.
- Leased in accordance with an agreement whereby the contractor pays a certain amount, normally monthly, towards the purchase price of the equipment, maintains and ensures the equipment and employs operators to use the equipment (the contractor may own the equipment after the lease period is completed).
- Hiring/renting from a reputable equipment-hire company at an agreed hourly, daily, weekly or monthly rate, with or without an operator, with the responsibility for maintenance lying with the hire company.

The factors that determine how equipment is acquired depends on various factors including the cost (including maintenance and insurances), cash reserves, how long the equipment is to be used, the availability of the equipment, the frequency of use and what deal is offered.

When hiring equipment, it is important to establish the following:

- The minimum number of hours that must be paid for per day where the hire is on an hourly basis.
- Whether the hire rate includes the operator.
- Whether the rate includes fuels and oils (this is referred to as "wet" if it does and "dry" if it doesn't).
- What tools are regarded as part of the equipment to be hired and what must be hired or purchased in addition, e.g. when a compressor is hired, the attachments such as chipping hammers, clay spades, moil points, ground engaging tools (GET) and cutting edges must be hired or bought separately.
- What will happen in the event of damage to the equipment, for example, damage to tyres, body damage, windscreen damage, etc.
- What (if anything) is covered under the hirer's insurance.
- What happens in the event of injury or death of the operator, or injury and death caused by the operator, and damage to property caused by the operator if the contractor provides the operator or if the hirer provides the operator.
- Whether the minimum daily hire time is applicable on rainy days.
- Whether the equipment can be booked off-hire for a period when it is not working on a site, or does the hire company offer standing-time rates lower than the normal working rates.
- What will happen in the case of the breakdown of the equipment, e.g. how long will the hirer take to get it fixed or will the hirer supply replacement equipment.
- How much is the cost of transport of the equipment to and from the site.
- What the operator's overtime conditions are and whether or not accommodation and transport to the site is to be provided every day or when the operator does overtime or not at all.
- The notification time of putting the equipment off hire.
- What insurance should, or must, be taken out.

The leasing of equipment allows it to be bought over a period of time. At the end of the lease period the ownership is usually transferred, sometimes for a lump sum (residual amount). The question of ownership and the payment of residual amounts need to be understood before entering into a lease agreement.

Equipment should always be hired from a reputable equipment-hire company, individual or organisation. A good equipment-hire company should be able to provide the following:

- A good service (as they often specialise in specific types of equipment).
- Well-maintained equipment in good condition.
- Advice on the equipment required for certain jobs, such as size of loader, TLB, etc. required, and whether or not they should be tracked or rubber tyred.
- Excellent operators with experience, skill and knowledge.

Remember, the clock is always ticking. Keeping the formwork or scaffolding for an extra day costs money unless a deal has been made in advance with the supplier.

It is often better on projects with long durations to buy the items that can become consumables, such as formwork and wedges, as these often get lost and buying them can be more cost effective.

Building up good relations with subcontractors is important.

FORMWORK AND SCAFFOLDING SUPPLIERS

Formwork and scaffolding suppliers are often able to assist a contractor with the preparation of tenders if approached to do so. They should:

- Determine the quantities of scaffolding that is required and the weekly hire costs based on the drawings and the areas for which scaffolding is required.
- Assist with the planning of the work and provide a price for the most economical formwork solution for a project, based on the programme and drawings, including the time for re-use of the same formwork for different parts of the project.

When hiring scaffolding and formwork, the following is important:

- Make sure that the formwork is checked on and off site as the contractor will be held liable if a piece of equipment, frame, etc. is damaged or lost; this is especially important for small items such as clips.
- Consider asking your supplier to check that the formwork and scaffolding have been correctly assembled before casting concrete or putting a load onto it.
- Check that the supplier will deliver and collect the scaffolding and formwork.
- Make sure that allowance is made in tenders for overruns, damage and the costly cleaning of the equipment, e.g. the shutter pans, props on which concrete has splashed, etc.
- Make sure that the price includes for the oiling of the boards and pans with shutter oil.
- Use of the correct oils on the shutter as incorrect oils can spoil the surface finish or cause the concrete to stick to the shutter and require the surface to be plastered over.

PEOPLE

For small and micro enterprises, it may be possible to run an office from your home. In such a case, the owner/member of the business is often responsible for office management, administration, statutory and voluntary registrations, salaries and wages and a host of other activities associated with a head office. There is nothing wrong with a managing member or business owner engaging specialist individuals who are more technically, financially or administratively qualified than they are, conceivably even earning more money for a given period than the managing member themselves.

Labour can be employed on construction sites as temporary employees on a contract basis for a period of time on a particular site or permanent employees who are transferred from site to site. Staff needs to be recruited and trained.

Appropriately qualified or competent technical and supervisory site staff needs to be employed or engaged for all projects. No compromise on the quality of these human resources can ever be accommodated, as the cost of re-work (including demolition and cartage, new materials and repeat labour, overall downtime and extended time) is not provided for in any budget. The costs of rework erodes the profit that has been provided for in a contract.

SUBCONTRACTORS

Subcontractors are an important resource and can provide a contractor with capabilities and capacities that it may not possess. Instead of hiring people specifically to do the work, it is sometimes easier to subcontract a company that specialises in that field to come and do the work for the contractor.

SECTION 2.2: FINANCIAL MANAGEMENT

FINANCING A CONSTRUCTION BUSINESS

A successful contractor needs not only to have the necessary resources to perform construction works but should also have access to sufficient money in order to run its daily operations. Money is needed to start up a business and more money is needed to run a business. The intention of any business should be to take the initial investment (capital) and to use it effectively to bring in a return to the investor.

The business must make sure that the money invested is put to the best possible use to make as much profit as possible. To do this, a business plan is used to identify how much money is needed and when. Such a plan will enable the owner to predict with some certainty whether the business will make a profit or a loss. Managing finances cannot be left to the contractor's appointed accountant - the decisions made by the owner(s) on how the construction business operates will have a financial implication for the business. The owners take the risk of losing that money if the construction business is badly managed and are compensated for this risk by their share of the profits that are made. If the business is sold, then they will want their share of the value of the business at the time it is sold.

SOURCING FINANCE

Once the owner has identified how much money is required, he will have to make sure that he can provide it at the right time. Usually, the owner does not have enough capital to cover the requirements, especially when starting out, and will have to find it. There are three basic sources of funds:

- **Equity Capital** - the money the owner or other interested party puts into the business when it starts in order to get it going.
- **Borrowed Capital** - money that the owner borrows in order to increase the business' ability to perform construction projects.
- **Retained Profits** - money that the owner leaves in the business in order to grow its capacity to do construction projects.

The owners of a business always bear the first share of the risk. This is money that the owners invest in the business in return for a share in the profits that the business might make in the longer term. This **Equity Capital** is made up of money put in by the owners of the business, as well as money that other investors are prepared to put at risk in the belief that they will see a share of the profits of the successful business in the long term.

Borrowed Capital normally comes in the form of a bank loan that is secured by the owners of the business. This comes at a cost and the amount of interest that is due should be factored in when the estimates of the amount of money required are done. Bank loans and overdrafts are normally short to medium-term loans that the bank reserves the right to ask for repayment of the entire amount with very little notice. Long-term loans are offered by some of the development institutions in order to support smaller businesses in speeding up their growth. In all circumstances, there is a requirement for the borrowers (owners) to provide collateral for the amount that they borrow. This is often in the form of the owners' personal assets, such as a house or other property, which the bank will take ownership of and sell to cover the amount of the loan that is not repaid. Borrowing money is expensive and it puts the collateral at risk.

Retained Profits are the best way of growing a business. Instead of the owners taking out all the profits for their own personal use, by leaving some of the profits within the business they are investing more into the business, enabling the business to perform larger projects and growing its capability.

Money is the lifeblood of a business. It must flow to keep the business alive.

The value of a business grows with Retained Profits.

Operating a business is risky. There are many factors that impact on whether a business survives or not.

Remember that the loan must be fully repaid, along with the interest charged.

Advance payments can alleviate cash-flow problems, but they do not increase profits by themselves. They save the construction business money he would have paid in interest and the client will want a saving to facilitate this.

Record keeping and accounts is like feeling the business' pulse.

A construction business is made up of the sum of all the projects it has on its books plus the office overheads.

It is essential to keep a balance between requirements for working capital and investment in fixed assets.

Cash flow is king! Without cash the business cannot survive.

Sometimes, clients will agree to advance payments for work that is to be performed on a project. These mobilisation advances are essentially a short-term loan from the client, and mostly require the contractor to obtain an advance payment bond from another institution such as a bank. The advance payment is repaid out of the money that the contractor earns whilst doing the project, generally in monthly instalments. All the advance payments are paid back in this way before the end of the contract.

KEEPING RECORDS AND ACCOUNTS

A business must keep track of where its money comes from and what it is used for. It is essential that a business implements a proper accounting system, since it will indicate very quickly whether the business is sound and in good health, and whether there is appropriate financial control over the business. When applying for loans this is the first thing that a bank will ask for.

It is not just the business that needs to account for the money. Each individual project should have its own financial system so that the construction business can keep control of costs as well as the income that will come from the project. Each project's accounts are combined with the office overheads to produce the construction business' overall financial status. These financial control systems can be simple or complex, but must provide the information required to keep expenditure to less than the income.

FIXED ASSETS AND WORKING CAPITAL

Fixed assets have a relatively long life and are permanent in nature. Fixed assets are items such as land and buildings, plant and machinery. It is important not to tie up too much of the business' capital in fixed assets, since there will not be enough available to perform the work.

Working capital is the money that flows through the business. This is money that is used to buy the materials or equipment, or pay wages and salaries or subcontractors' invoices until such time as the client pays the contractor for the work that has been completed. This is the money that is used to run the business. The business must have sufficient working capital to ensure that the work can continue until the client pays for the work that has been done. Very often a late payment by the client can cause the business to run out of money to pay wages, pay suppliers for materials and other commitments, and eventually stopping the work.

CASH FLOW

Cash flow is the term used to describe the amount of working capital that a business has at any point in time. This is a reflection of the changing balance in the business' bank account. Contractors should evaluate a client's payment record, and allow for any delays in payment in their calculations for working capital on a project.

Project cash flow is calculated from the project costs compared to the project income. The net cash flow is the difference between the two figures. The contractor's cash-flow requirement is simply the cash-flow requirements of all the different projects added together, plus the overhead costs for the office premises and support staff. By keeping this up-to-date, the contractor can forecast how much working capital will be needed to fund the operations, as well as the ability to repay loans or when they will be able to buy new equipment. The cash-flow analysis is essential to operating a construction business. Without cash to pay for wages, materials, equipment hire, etc. the contractor is out of business.

Example of cash flow for a typical six-month contract for R372 460

MONTH	ACTIVITY/ MILESTONE	PROJECT COST R	PROJECT INCOME R	COST HIGHER THAN INCOME R	INCOME HIGHER THAN COST R	NET CASH FLOW R
August	Establish site and start-up	27 250		27 250		-27 250
September		67 520		67 520		-94 770
October		68 760		68 760		-163 530
November	Receive first payment	69 980	32 640	37 340		-200 870
December	Substantially complete	46 270	68 300		22 030	-178 840
January	Finish Snag list	36 220	71 420		35 200	-143 640
February			76 140		76 140	-67 500
March			74 840		74 840	7 340
April	Receive last payment		15 260		15 260	22 600
May						22 600
June	Receive 1st retention release		16 930		16 930	39 530
July						39 530
August						39 530
September						39 530
October						39 530
November						39 530
December	Receive final retention		16 930		16 930	56 460
Total		316 000	372 460		56 460	

This cash flow shows the following:

- The client will pay between 30 and 60 days from date of invoice.
- The project will take six months to perform.
- Retention is 10%, with half of the retention being paid on occupation by the client and the other half at the end of the contract.
- The project will have a profit of R56 460 (or 18%).
- The contractor will require a maximum of R200 870 working capital.
- The contractor will be out of pocket for seven months
- The final profit will only be received 17 months after the project started.

Cash-flow forecasts become even more important when more than one project is being worked on at any point in time.

Example of three contracts running simultaneously (no retention amounts)

CONTRACT	PERIOD	VALUE	ANTICIPATED PROFIT
1	9 months	R1 000 000	R100 000
2	6 months	R80 000	R12 000
3	5 months	R75 000	R5 000

There are many factors that affect cash flow. One late payment can cause a construction business to go out of business.

The projected cash flows for the projects are as follows:

CONTRACT 1									
Month	1	2	3	4	5	6	7	8	9
Payments made by business	50 000	75 000	100 000	135 000	150 000	135 000	100 000	90 000	65 000
Income received	30 000	60 000	100 000	140 000	170 000	150 000	135 000	100 000	115 000
Net income per month	-20 000	-15 000	0	5 000	20 000	15 000	35 000	10 000	50 000
Net cash flow	-20 000	-35 000	-35 000	-30 000	-10 000	5 000	40 000	50 000	100 000

CONTRACT 2							
Month	1	2	3	4	5	6	
Payments made by business	12 000	12 000	12 000	12 000	12 000	8 000	
Income received	5 000	15 000	15 000	15 000	15 000	15 000	
Net income per month	-7 000	3 000	3 000	3 000	3 000	7 000	
Net cash flow	-7 000	-4 000	-1 000	2 000	5 000	12 000	

CONTRACT 3					
Month	1	2	3	4	5
Payments made by business	15 000	20 000	20 000	10 000	5 000
Income received	5 000	15 000	20 000	20 000	15 000
Net income per month	-10 000	-5 000	0	10 000	10 000
Net cash flow	-10 000	-15 000	-15 000	-5 000	5 000

This appears to be a fairly healthy order book.

If Contract 1 starts in January, Contract 2 starts in February and Contract 3 starts in April, the net cash flow for the contractor will look like this:

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Contract 1	-20 000	-35 000	-35 000	-30 000	-10 000	5 000	40 000	50 000	100 000
Contract 2		-7 000	-4 000	-1 000	2 000	5 000	12 000		
Contract 3				-10 000	-15 000	-15 000	-5 000	5 000	
Net cash flow for the business	-20 000	-42 000	-39 000	-41 000	-23 000	-5 000	47 000	55 000	100 000

The contractor has a bank overdraft facility of R65 000, making the contractor's financial situation favourable. The client for Contract 2 does not pay the R5 000 in February, but arrange to pay R20 000 (R5 000 for February and R15 000 for March) in March, which the contractor accepts. The contractor's expenses for February will rise to R47 000. This amount is still within the contractor's bank overdraft limit of R65 000.

At the end of March however, the client says that his mortgage bond has not yet come through and payment will be made in a few days. The amount of money that the contractor has to borrow in March will now increase from R39 000 to R59 000, which is of concern as Contract 3 is scheduled to start.

When the Contract 2 client doesn't pay for the work in April, the contractor is in serious financial trouble. Costs have remained the same and the business has paid out R36 000. The Contract 2 client is still saying that the bond is going to be paid next week. The amount that the contractor has to borrow has now risen to R76 000, i.e. exceeding the bank overdraft limit. This can cause a business to fold.

	JAN	FEB	MAR	APR
Contract 1	-20 000	-35 000	-35 000	-30 000
Contract 2		-12 000	-24 000	-36 000
Contract 3				-10 000
Total	-20 000	-47 000	-59 000	-76 000

The situation could have been managed had the contractor told his client that he would accept the R5 000 at the end of March along with the March payment and if the bond had still not come through, the work will stop until such time that the bond came through. Alternatively the contractor could have advised the client that if he did not pay within 14 days the work will stop. (Whatever is said must be put into writing).

Had this been done, the cash flow would have looked like this:

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Contract 1	-20 000	-35 000	-35 000	-30 000	-10 000	5 000	40 000	50 000	100 000
Contract 2		-12 000	-4 000	-4 000	-4 000	-4 000	-4 000	-4 000	-4 000
Contract 3				-10 000	-15 000	-15 000	-5 000	10 000	10 000
Total	-20 000	-47 000	-39 000	-44 000	-29 000	-14 000	31 000	56 000	106 000

A profit of R106 000 would have been made instead of R1 17 000. The business would have, however, survived.

INVOICING AND TERMS OF PAYMENT

Cash flow is the life blood of any business. It is therefore absolutely essential that all invoices are submitted promptly and the claim for payment is followed up with clients to ensure that the payment is received.

It is also important to understand and agree to the terms of payment, e.g. seven, 14 or 30 days from receipt of invoice before a contract is concluded. Where possible, quotations should include the terms of payment, e.g. within 14 days of invoice.

Failure to ensure a healthy cash flow is the most common cause of business failure. This occurs even if people are excellent at what they do. No money, no business.

The terms of payment have a serious effect on a construction business' cash flow.

SECTION 2.3: MARKETING

MARKETING CONCEPTS

Construction is both a service and a product. A contractor provides a service by satisfying the client's requirements and delivers a product on completion of a project. A contractor's reputation is dependent on clients being satisfied with both the service and the product. This is a team effort and requires every employee to play their part in promoting the capabilities of the contractor and the quality of its product.

The question "where are next year's profits coming from" should be far more important to a contractor than "what was last year's profit". The service rendered during a project and the quality of the product can be marketed to secure future work.

A client's decision to appoint a particular contractor, particularly a private-sector client (or a main contractor when appointing a subcontractor), is based on many factors. Price is not the only factor. Expertise, experience and a track record of satisfied clients can sway a client's decision to award a contract.

Business strategy focuses on the understanding of the forces that shape the construction industry and winning contracts in a competitive environment. Marketing focuses on interpreting the environment in terms of client requirements and satisfying those requirements. Marketing is all about promoting a contractor to the extent that a client moves from being unaware of the contractor to contracting with the contractor on a regular basis.

If clients do not know that a contractor exists or what services it offers, they will never engage with them or contract them to deliver those services. It is essential for a contractor to let the market know that they are there and that they mean business. Marketing is a very varied topic that extends from the glossy media adverts to word-of-mouth.

Marketing can take many forms, from word-of-mouth to door-to-door canvassing, printed flyers, construction signboards, radio or television adverts, sports sponsorships, billboards and adverts on taxis or just a plain brochure and company profile.

PUBLICITY

Publicity can take on many forms and there are many different media to use to get the message across. The important information that should be incorporated includes:

- The name of the business.
- What the business does (and any specialties).
- Where the business is located.
- How the business can be contacted.
- What the business has done in the past.
- What the business is currently busy with.
- Recommendations from previous clients reflecting that the business is the best at that work.
- Why the client should be contracting with this business rather than another one.

It is essential that any information provided is totally accurate. If the client finds something wrong with the promotional material, they will not trust the contractor to perform the work or believe what the contractor claims it can do.

Marketing can make a difference to a contractor's profitability.

Marketing is often confused with selling - they are related but very different. Selling focuses on distributing the product or service that the business offers, whilst marketing focuses on knowing what the client needs and providing the product or service that is needed.

Always ensure that potential clients can contact you.

PROMOTING A CONSTRUCTION BUSINESS

GENERAL CONSIDERATIONS

The marketing of a construction business is very different from the marketing of a supermarket or a product line. Contractors offer a specialised and complex service and therefore need to let their clients know that the service they can deliver is the best or at least better than their competitors. This can take any form, from photographs of work that they have finished, to references from satisfied clients, to glossy brochures which give an overview of the projects they have completed, to videos that describe the problems the contractor overcame in completing a challenging project.

The purpose of promotional activities is to seek out prospective clients and to convert them into actual clients. Advertising can move prospective clients through the stages from “unawareness” to “awareness” and “comprehension”. Personal selling is usually required to move from “comprehension” to “conviction” and ultimately “action” and the signing of a contract.

ADVERTISING AND CORPORATE IDENTITY

The intensity and nature of advertising activities are very dependent upon the following:

- The nature or type of business.
- The competitiveness of the market.
- The stage of the development of the business.

For example, a newly established contractor that supplies and installs roof trusses needs to advertise its services and products to a large potential client base that is unaware of the services and products of such a contractor. Advertising for such a business needs to focus on competence and other competitive advantages to attract an initial set of clients in the form of enquiries.

More established contractors would need to focus their advertising on the range of their services and products to maintain “top of mind” awareness.

Advertising costs money. From simple business cards to television adverts, each advert costs the contractor money. In each business' marketing plan there must be a budget set aside for marketing that can be used to determine what type and extent of marketing can be used. It is also important to identify what the benefit of a particular advertising campaign might be and a benefit-cost ratio should be worked out for each form of advertising. It is pointless to spend money on advertising if it will not help bring in more work opportunities.

IMAGE BUILDING

Once the market has been identified and there is a positive action plan in place to support the contractor's goals, the contractor should then promote their image and make it known. Image building is a form of advertising and it manifests in company colour schemes and logos on letter heads, vehicles, promotional material, signboards and site signage.

Image building is a relatively easy way to increase a contractor's exposure. A contractor whose name is familiar will be more likely to secure work than one that is unknown.

Signage that reflects and complements a contractor's image should be:

- Strategically positioned to ensure maximum exposure.
- Compliant with local by-laws.
- Constructed from durable materials.
- Level, plumb and in good condition.

Visual image is also a powerful marketing tool. Neatly dressed staff projects a positive image. The attitude and behaviour of staff affect a person's impression of how the contractor will handle situations that could lead to enhancing the contractor's image.

Worker performance (productivity, quality and health and safety) can also project a positive image.

Remember, a client is only a contractor's client when the first payment is received.

Choose an advertising method and media that is appropriate and will reach the client effectively.

Increased market share invariably results when a contractor's reputation as a “quality” contractor spreads.

Image can be described as how clients and others perceive a construction business.

The factors that harm a contractor's image include:

- Accidents.
- Late completion.
- Lack of concern for the environment.
- Untidy sites.
- Poor productivity.
- Rework.

Interestingly, these factors also directly affect the profitability of the contractor.

PUBLIC RELATIONS AND CLIENT RECOMMENDATIONS

The contractor's profits over the next year and the next few years depend on client satisfaction, which in turn is dependent upon how well the contract is managed and executed and if it is successfully completed on time and to the required quality.

Probably the most effective marketing tool is word-of-mouth. Once a contractor has successfully performed on a project, they can ask the client to refer them to other clients. Where a new client is found, the contractor can provide references from their previous clients. It is also important to identify potential sources of work and this is often done by talking to potential clients and seeking out new clients.

Other contractors are very often also future clients. Where a contractor secures work that they do not normally do, they subcontract to other contractors. This is a good source of future work and if the contractor performs well as a subcontractor, then the main contractor will call on them to do similar work in the future or refer them to others where similar work is required.

PERSONAL SELLING

The owners, members or company directors need to market the construction business. They are in the best position to do so. They know the construction business' strengths and weaknesses as well as the limitation in capability and what their likely capacity is for new work.

A MARKETING PLAN

A critical element of successful marketing is the preparation of a marketing plan.

When a contractor has determined the sector they wish to operate in, and the clients they wish to provide services to, and what those clients' needs are, he can start planning how to become more visible, attractive and competitive. The marketing plan is similar to the business plan but focuses on how to portray the work, resources, skills and successes of the contractor.

The marketing plan should contain at least:

- The business' present situation.
- The resources available to the business.
- The business' problems and opportunities.
- The actions to be taken.
- The business' objectives.
- The budget for marketing.

One way of doing this is by doing a SWOT analysis - identify the business' strengths, weaknesses, opportunities and threats, and then determining what actions are best for improving the good points and removing or mitigating the poorer areas.

EFFECTIVENESS OF MARKETING CAMPAIGNS

The effectiveness of any marketing campaign must be measured. Work opportunities should be measured before and after the campaign has been implemented so that the benefit can be measured against the cost of the campaign.

Client recommendations are one of the most powerful promotional tools available and need to be nurtured at all costs.

Good references are the most effective way of marketing a contractor.

Learn from each campaign how to do better in the next one.

SECTION 2.4: TENDER CONSIDERATIONS

IDENTIFY THE MARKET SEGMENT

A construction business needs to first identify what market segment they want to operate in and which other construction businesses they will have to compete against. This will be dictated by the skills and resources that the construction business has at its disposal, its strengths, as well as an analysis of where the gaps in the market lie (geographic location, type of work and size of contract).

The construction business must also determine whether it will operate in the private sector, the public sector or in both. Any construction business is offered the opportunity to compete for public sector projects provided that they are registered with the Construction Industry Development Board (cidb) in an appropriate contractor grading designation (see section 1.5). Tenders are normally evaluated on a points scoring system in terms of which points are awarded for price and points are awarded for preference. Sometimes, points are also awarded for the quality (functionality) offered by the construction business. In the private sector, however, clients most often choose who they wish to invite to submit tenders or with whom they wish to negotiate subcontracts.

There is no point in spending enormous amounts of time, cost and effort in setting up a business or in submitting a tender for work in a market where there is an oversupply of construction businesses competing for work or in a market where a client is likely to prefer to do business with a better-known construction business.

There may be barriers to operating in certain sectors that the construction business must overcome in order to be allowed to work, such as the requirements for registration with the Electrical Contractors' Board of South Africa in order to be an electrical contractor, or registration with the NHBRC in order to build new homes (see section 1.5).

IDENTIFY COMPETITORS

It is important for a construction business to understand who their competitors are, so that the business can offer better or different services and thereby secure work ahead of their competitors. If there is a gap in the market, where there are very few other construction businesses, there will be less competition and more opportunities for work. Where there is a market in which there is plenty of work, a construction business may get a share despite the high levels of competition. A construction business should investigate this before contemplating starting up a new business.

FINDING WORK OPPORTUNITIES

Construction businesses have many avenues to pursue to find work opportunities. If they decide to operate in the public sector, they can look for opportunities in the Government Tender Bulletin, newspapers, the cidb I-Tender service on the cidb website (www.cidb.org.za) or check their local municipality's tender notice board. Talking to other construction businesses is also good, since information on work that one construction business does not want to do can be very useful to another construction business. This also opens up subcontracting possibilities.

PRIVATE AND PUBLIC SECTOR TENDERS AND QUOTATIONS

There are differences between the rules that govern the private and public (national and provincial governments, municipalities, public entities, state-owned enterprises and municipal entities) sector in procuring goods, services and works.

The private sector is not required by law to follow any rules relating to procurement (buying) of goods, services or works. They generally choose the lowest price out of all the tenders they receive and will

Public sector and private sector clients operate differently. Construction businesses should choose which sector they wish to operate in, (or both) and position themselves accordingly.

Know your market means:

- **Know your client's needs.**
- **Know what your competition offers.**

Construction businesses can look for opportunities in the Government Tender Bulletin, newspapers, the cidb I-Tender service on the cidb website (www.cidb.org.za) or check their local municipality's tender notice board.

Look for work opportunities as well as opportunities to promote the business for the future.

choose a higher price only if they do not feel confident that the company with the lowest price can do a proper job. They are also free to negotiate contracts or to invite a limited number of construction businesses to submit tenders or quotations based on whatever criteria they choose.

The public sector has many rules that govern the way in which they can procure goods, services or works. The constitution requires that any procurement by a public sector client must be fair, equitable, transparent, competitive and cost effective (see sections 2.5 and 2.6).

The documentation used to invite quotations and tenders in the public sector is very similar; the differences in the two processes being how they are advertised and who is authorised to award the contract. Construction businesses are required to submit tender offers on the form of offer and acceptance (see section 2.5) whenever quotations or tenders are called for and written contracts are entered into with a public sector client.

The cidb promotes a uniform procurement system. Some private sector clients, particularly those that are publicly listed companies, follow some of the public sector rules. Most contractors will either negotiate subcontracts with subcontractors or invite the construction businesses that they consider able to deliver the required service to submit quotations.

Procedures in the private sector where the cidb Standard for Uniformity in Construction Procurement is not applied (see section 2.5) are much less formal with the differences between the calling for quotations and tenders being very different. Typically tenders are invited in terms of a standard form of contract, scope of work, form of tender and stated conditions of tender and only a brief scope of work is provided where quotations are sought. Quotes are accepted verbally or in writing by the issuing of a letter of acceptance.

Construction businesses are advised to stipulate that their quotation is conditional upon the client entering into a written contract based on a specified standard form of contract. Construction businesses should stipulate on their quotations for how long the quotation is valid (e.g. one month), after which the business reserves the right to review the price.

To be successful, a construction business must know the procurement rules of their clients and prospective clients and abide by them in order for their tender submissions to be evaluated and to be awarded contracts.

OBTAINING INFORMATION ON TENDER OPPORTUNITIES

The Notice and Invitation to Tender (first page of a tender document prepared in accordance with the requirements of the cidb Standard for Uniformity in Construction Procurement (see section 2.5)) should contain at least the following information:

- A reference number.
- The name of the employer.
- The title of the proposed contract.
- A brief description of the supplies and services or engineering and construction works which are required.
- The closing date and time for the submission of tenders.
- The date, time and place of the compulsory clarification meeting, if any.
- The time and place for collecting the procurement documents.

This notice may also:

- Contain the name and contact particulars of a person to whom queries in relation to the tender may be directed.
- Establish the cidb contractor grading requirements.
- Briefly describe any eligibility criteria, deposits payable for procurement documentation and preferences, if any, that are offered.

Tender documents are normally available from the time they are advertised until the day the tenders are due. It is important to collect procurement documents as soon as possible to allow as much time as possible to prepare the tender offer.

Tender advertisements in the media contain some or all of the above information. This information enables prospective tenderers to make informed decisions regarding the tender opportunity. Construction businesses should not pursue tendering opportunities outside of their cidb contractor grading designations (see sections 1.5 and 2.6) or where they don't satisfy any stated eligibility criteria. If they do so, the employer will not evaluate their tender. Estimates of these requirements are provided in the Tender Notice and Invitation to Tender. Eligibility criteria are stated in Clause F.2.1 of the Tender Data where use is made of the cidb Standard Conditions of Tender.

An employer is not permitted in terms of the Construction Industry Development Regulations to award a public sector construction works contract to a construction business that does not satisfy the required cidb contractor grading requirements (see sections 1.5 and 2.6).

When collecting a tender document, it is important to sign and fill in the construction business' contact particulars in any register that the employer may have. This will allow the employer to inform the construction business if the closing date for the tender is extended or to issue addenda (changes to the tender document).

ANALYSING THE REQUIREMENTS OF THE TENDER DOCUMENTS

A construction business should read through the entire tender document as soon as possible after the documents have been collected from the client or the client's agents. **Documents formatted and compiled in accordance with the requirements of the cidb Standard for Uniformity in Construction Procurement have a standard structure of component documents with standard contents and are divided into three basic components (see section 2.6):**

- Tendering procedures that contain only information that pertains to the submission and evaluation of the tender in terms of the cidb Standard Conditions of Tender.
- Returnable documents that the tenderer (construction business) is required to complete.
- The draft contract that sets out the terms and conditions of the contract that will ultimately be concluded with the successful tenderer.

The construction business should carefully read through the documents and make notes of deadlines for submission, documents that must be provided with the tender (tax clearance certificates, CVs, company profiles, etc.) and make sure that what the client wants is clearly understood.

The returnable documents include the pricing section as well as forms that request certain specific information, such as those relating to preferences, resources to execute the contract and previous work experience.

The draft contract needs to be understood - the rights, risks and obligations (see section 2.8) as well as the manner in which the contractor is to be paid (see section 2.7).

ANALYSING THE OPPORTUNITY FOR PROFIT

The construction business should confirm whether or not it is able to perform the work that is required by the client, and if so, easily or with difficulty. Experience in work of a similar nature should provide the answers to these critical questions.

However, work that is easy is not always profitable. The construction business also needs to evaluate whether or not it will be more competitive than its competitors in performing the work while still making a reasonable profit after the contract is finished.

An accurate estimate of what the likely cost of the works might be needs to be made before a tender offer can be made (see section 2.9). Estimating is the process of predicting the costs of carrying out the work. Tendering is the subsequent commercial process of making an offer based upon these estimated costs, plus an element of profit and if necessary, risk.

The Construction Industry Development Board Act, 2000, prohibits the award of a public sector construction works contract to an unregistered contractor.

It is important to establish at the earliest possible stage which documents need to be submitted with a tender. Failure to do so may mean that the tender cannot be completed by the closing date for tender submissions.

The drawings and specifications provide estimators with how the job is to be built and what resources are required.

The estimate should take into account the methods of building or construction to be used and all the circumstances that may affect the carrying out and completion of the work. A reliable estimate can only be achieved by analysing each operation into simple elements and estimating the cost methodically and accurately (see section 2.9).

On larger projects, it may be necessary or prudent to draw up a preliminary programme or bar chart in order to get a better understanding of the sequences and timing of operations.

The estimator must be aware of important project specific aspects as they may affect the estimates. These include:

- Commencement and completion dates.
- Client requirements for phasing or staging completion.
- Other requirements regarding the sequencing of work.
- Work to be carried out by others.
- Work to be subcontracted.
- Site conditions.
- Key items or materials requiring firm delivery arrangements.

The scope of work, which includes the specifications and drawings, will indicate the following:

- The required quantity of work.
- The required quality of the finish and standard of workmanship.
- If operations are repetitive.
- If excessive or detailed setting out is required.
- The required degree of accuracy and tolerances.
- If the design is intricate or straightforward.
- If special skills will be needed.
- If any special construction sequence is necessary.
- If the operation:
 - is within the experience of the existing employees;
 - requires special instruction or training; and
 - will require the employment of additional trained personnel.
- The accessibility of the site.
- Height or depth of work.
- Any double handling of material.
- Restrictions in working, e.g. occupational health and safety requirements, requirements for subcontracting portions of the works, employment of local labour.

The tender programme, if produced, will indicate the following:

- The time available for activities on the site.
- If work will be continuous or intermittent.
- The degree of interdependency of activities, trades and operations.
- The relative proportions of supervisory, skilled and unskilled employees that are required and the size of work teams.
- The timing and extent of equipment that needs to be sourced or provided.

A visit to the site and its surroundings will provide an indication of:

- The travelling costs that are likely to be associated with the site.
- Physical conditions and any restrictions likely to be encountered.

A review of the scope of work, the tender programme and a visit to the site may indicate that the contract is unattractive to the construction business, in which case the construction business should decide not to submit a tender.

- Site layout, storage and unloading facilities.
- The likely skill, experience and availability of local labour.

Once the construction business is satisfied that it can provide the client with what the client requires, the risks associated with the contract need to be assessed, e.g. rain, heavy traffic, labour disputes, material suppliers not delivering, etc. Each of these risks needs to be evaluated in order to arrive at an informed decision as to whether or not to submit a tender (see section 2.9).

The construction business needs to take into account all of the above when estimating what the cost of the works is likely to be and what level of risk allowance should be made.

Construction businesses should not tender for work where the business is:

- Unlikely to make a profit.
- Not confident that it can perform the works.
- Unlikely to be competitive.

CLARIFICATION MEETING

Many clients provide a clarification meeting (site inspection or briefing session) before the closing of tenders. All tenderers are required to attend compulsory clarification meetings failing which their tender submission will not be evaluated by clients. The tender advertisements and tender documents provide details of the time and place where these meetings are to be held and indicate whether or not the meeting is compulsory.

Clarification meetings that take place on site (site inspections) allow prospective tenderers to familiarise themselves with the site conditions and gives the client or the clients representative the opportunity to inform tenderers of particular client requirements, site conditions, ground conditions, where waste may be dumped, materials may be borrowed or camps and offices may be established, as well as environmental issues, such as sensitive wetland areas or access to the site.

Site inspections provide the construction business with an opportunity to obtain answers to questions such as:

- Where is the site?
- What are the site conditions?
- How can the site be accessed?
- What are the soil conditions on the site?
- What services (water, electricity, etc.) are available on the site?
- Where can unwanted or surplus soil, rubble and rubbish be disposed of?
- What are the arrangements for site security, if any?
- What are the local conditions relating to labour and the supply of materials?

A briefing session will generally cover issues that do not necessarily have to be discussed on site or where the site is not accessible for some reason. These issues are normally discussed at the client's premises and give tenderers an opportunity to clarify any points that they are not completely comfortable with.

When the site inspection or briefing session is compulsory, it is essential that the construction business either records its presence on the register that the client passes around or gets the client's representative to sign the form provided for this purpose in the tender documents. Without this clear confirmation, a construction business' tender will become invalid, even if it did attend the meeting, since there is no way for the client to remember each person at the meeting. The onus lies on the construction business to provide the proof of attendance.

The purpose of a site visit is to find out as much as possible about the conditions on site and how they may affect the construction process. This allows the construction business to assess their risks and to make an informed risk allowance in the tender offer.

MAKING A TENDER SUBMISSION

A construction business should carefully read the conditions of tender and observe the following when submitting a tender offer:

- Confirm that the eligibility criteria are complied with.
- Attend the clarification meeting, if any.
- Follow the instructions for:
 - pricing the tender offer;
 - submitting a tender offer; and
 - submitting alternative offers.
- Ensure that the tender offer is received by the employer before the closing time for tenders.

Section 2.6 provides further information where the cidb Standard Conditions of Tender are used and the cidb Register of Contractors is applied in the procurement.

The construction business must complete all the documents that the employer requests. Where documents have been formatted and compiled in accordance with the cidb's Standard for Uniformity in Construction Procurement, the list of returnable documents lists all the documents that have to be completed or submitted. This list is a useful checklist. Construction businesses should study this list carefully and ensure that everything that needs to be completed is filled in and signed and that everything that needs to be submitted is included in the tender submission.

The construction business should draw up its own checklist of documents that have to be completed where documents are not formatted and compiled in accordance with the cidb Standard for Uniformity in Construction Procurement.

T2.1 LIST OF RETURNABLE DOCUMENTS

The tenderer must complete the following returnable documents:

1. Returnable Schedules required for tender evaluation purposes
2. Other documents required for tender evaluation purposes
3. Returnable Schedules that will be incorporated into the contract
4. Other documents that will be incorporated into the contract
5. C1.1 Offer and acceptance
6. C1.2 Contract Data (Part 2)
7. C2.2 Bill of quantity

Often the client will base his evaluation on a construction business' experience in performing work of a similar nature and will require descriptions of the work that a construction business has previously done and who the previous clients were, along with contactable references that allows the client to confirm how the construction business actually performed.

This information may be used to demonstrate a construction business' capability of performing the work. Alternatively it may be used in the scoring of tender submissions where quality forms part of the score. Construction businesses are advised to provide comprehensive submissions where the information is used to score tenderers as the evaluators can only score the information that is provided to them in the tender submissions.

The construction business should also confirm how many copies of documents and which certificates need to be included in the tender submission. **These requirements may be found in the following clauses of the Tender Data where the cidb Standard Conditions of Tender are used:**

- Clause F.2.13.3 - number of copies.
- Clause F.2.20 - securities, bonds and guarantees.
- Clause F.2.23 - certificates.

Construction businesses, may in their tender offers, propose deviations to the client's requirements or exclude some of the client's requirements by qualifying their tender offers in order to remove unacceptable or onerous requirements. Such deviations and qualifications may, however, not be acceptable to the client. **The cidb Standard Conditions of Tender in Clause F.3.8.2 only permit deviations and qualifications which:**

- Don't detrimentally affect the scope, quality or performance of the works.
- Significantly change the client's or construction business' risks and responsibilities under the contract.
- Affect the competitive position of tenderers complying with the client's requirements.

Construction businesses must be cautious when proposing deviations and qualifications in their tender offers.

Copies of the tender submission should be made so that any queries raised by the client or his agents during the evaluation of tenders may be answered.

TENDER CHECKLIST

One of the most important aids that a construction business (intending to contract either as a main contractor or subcontractor) can have at tender stage is a **tender checklist**. The purpose of such a list is to act as a reminder to tenderers of particular issues for consideration when preparing tenders.

1. **Work:** What is the nature and extent of the work that the tenderer is required to undertake?
 - Is the tenderer responsible for any portion of the design of the work?
 - Is the location, start date and probable duration of the project known?
 - Can this contract be undertaken given the construction business' current and foreseeable contractual commitments, resources and work load?
2. **Form of contract:** Is the contract a standard form of contract or subcontract recommended by the **cidb** (see section 2.8) or are there any amendments or variations to the standard conditions of contract?
 - What is the risk associated with signing an "unknown" form of contract or an extensively modified form of contract on issues such as payment terms, administrative procedures, procedures relating to practical and final completion, resolution of disputes, claims procedures, interest on overdue payments, the contractor's right to suspend the works for default on payment, claims for extension of time, recovery of costs due to client delay, etc.
3. **Tender period:** Can the tenderer prepare and submit a tender in the time allowed?
4. **Client:** Is the client an acceptable credit risk? Is the client known to be slow in making payments?
5. **Scope of work:** What are the works that are to be provided and any other requirements and constraints relating to the manner in which the contract work is to be performed?
 - Are the specifications clear and comprehensive?
 - What are the acceptance criteria, if any, for the works and components thereof?
 - Do the drawings that are provided clearly establish what is required?
 - How difficult is it to comply with the constraints relating to the manner in which the works are to be performed, e.g. program constraints, local resource requirements quality management systems, etc.?
 - Can the works be constructed in accordance with the drawings and specifications?
 - What is the quality of the information provided in the scope of work?
 - How complete is the information?
6. **Payment terms and pricing strategy:**
 - Are the pricing strategy or payment terms attractive?
 - Can the construction business finance the works within the required pricing strategy, payment terms and levels of retention monies at the various stages of the contract?
 - Is there sufficient compensation for late payment by the client?
7. **Performance bonds:** Is a performance bond required?
 - What is the amount of the performance bond?
8. **Price escalation:** Is the contract price subject to adjustment to allow for price inflation?
 - Are the formula for and the indices relating to price adjustment known?
9. **Insurance:** What are the requirements for insurance that will affect the tendered price?
10. **Dispute resolution:** If a dispute arises, what is the method of resolution? Mediation, adjudication, litigation, arbitration, etc?
11. **Penalties for late completion:** What are the penalties for late completion and are they excessively high?

SECTION 2.5: PUBLIC CONSTRUCTION PROCUREMENT SYSTEM

cidb STANDARD FOR UNIFORMITY IN CONSTRUCTION PROCUREMENT

Public sector procurement is regulated through the Constitution of the Republic of South Africa (Act 106 of 1996), the Public Finance Management Act of 1996, the Municipal Finance Management Act of 2003, the Preferential Procurement Policy Framework Act of 2000, and a number of other pieces of legislation. The Constitution requires that any procurement by a public sector client (employer) must be fair, equitable, transparent, competitive and cost-effective.

Public sector clients (national and provincial departments, municipalities and state-owned enterprises) are required in terms of the Construction Industry Development Board Act, 2000, to procure construction works in accordance with the cidb Standard for Uniformity in Construction Procurement.

Private sector clients are not required to procure construction works in accordance with the Standard for Uniformity in Construction Procurement. Many private sector clients, however, choose to do so.

This Standard for Uniformity in Construction Procurement establishes minimum requirements that:

- Promote cost efficiencies through the adoption of a uniform structure for construction procurement documents and standard component documents, and generic and uniform solicitation procedures.
- Provide transparent, fair and equitable procurement methods and procedures in critical areas in the solicitation process.
- Ensure that the forms of contract that are used are fair and equitable to the parties to a contract.
- Enable risk, responsibilities and obligations to be clearly identified.

PROCUREMENT PROCEDURES

The Standard for Uniformity in Construction Procurement establishes a number of standard procurement procedures that enable clients to contract with the contractors. The procedures that are commonly encountered in construction works are:

- Open procedure.
- Qualified procedure.
- Quotation procedure.

In the **open procedure** an employer advertises a tender using the cidb I-Tender service (see www.cidb.org.za) and, if necessary, in the Government Tender Bulletin (www.treasury.gov.za or www.info.gov.za/documents/tenders/index.htm) or in other media such as newspapers. Contractors who are registered with the cidb in the required contractor grading designation (see section 1.5 for information on the cidb contractor grading system), or are capable of being so registered by the time that tenders are evaluated, may submit tenders in response to this invitation.

In the **qualified procedure**, an employer advertises a call for expressions of interest using the cidb I-Tender service (see www.cidb.org.za) and, if necessary, in the Government Tender Bulletin (www.treasury.gov.za or www.info.gov.za/documents/tenders/index.htm) or in other media such as newspapers. Contractors who are registered with the cidb in the required contractor grading designation (see section 1.5 for information on the cidb contractor grading system), or are capable of being registered not later than 21 days after the closing date for submission, may make submissions in response to this invitation. The employer evaluates submissions in terms of the evaluation criteria stated in the submission data. Thereafter only those that qualify or are shortlisted to submit tenders in terms of the stated evaluation criteria, are invited to submit tender offers.

There is a great difference between the rules that govern the private and public sector in procuring goods, services and works from the public.

- The private sector is not required by law to follow any rules relating to procurement (buying) of goods, services or works other than the cidb Code of Conduct for the Parties engaged in Procurement. They generally choose the lowest price out of all the tenders they receive and will choose a higher price only if they do not feel confident that the company with the lowest price can do a proper job.
- The public sector is, however, governed by many rules that govern the way in which they can procure goods, services or works.

cidb registered contractors, depending upon their grading designation, either get an SMS or e-mail notification of tenders invited in the contractor grading designations that they are registered in.

A searchable database of all tenders invited through the I-Tender system is available on the cidb website.

Contractors are not required to submit financial offers where expressions of interest are called for. They are usually invited to submit their credentials so that they may be:

- Prequalified to submit a tender.
- Admitted to an electronic database which is used to nominate those who will be invited to submit tenders.

The qualified procedure is usually used in large and complex projects or on projects that require a high degree of specialised inputs or where skills and expertise are not readily available.

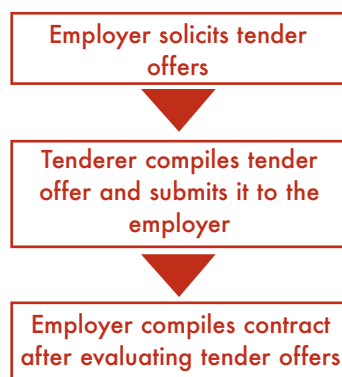
In the **quotation procedure**, tender offers are solicited from not less than three tenders in any manner the organisation chooses, subject to the procedures being fair, equitable, transparent, competitive and cost-effective. The quotation procedure may only be used by national and provincial departments, municipalities and municipal entities where the value of the contract including VAT is estimated to be less than a value determined by National Treasury.

Quotations are usually advertised in local media. Alternatively contractors that are registered on a database (prequalified listing) are invited to submit quotations.

Sometimes, a negotiated procedure is used to obtain a tender from a single tenderer. This usually occurs under the following circumstances:

- An emergency has arisen that is so extreme as to warrant the negotiated procedure being pursued.
- The service or works being procured are largely identical to works previously executed by that contractor and it is not in the public interest to solicit other tenders.
- Only one contractor is identified as possessing the necessary experience and qualifications or products to provide the required service or works.

Private sector clients frequently negotiate contracts with the contractor of their choice where long-term relationships exist. Alternatively, in order to obtain competitive prices, they make use of the open, qualified or quotation procedure.



STRUCTURE OF PROCUREMENT DOCUMENTS

Procurement documents are used to solicit tender offers and form the basis for a contract.

The Standard for Uniformity in Construction Procurement provides a series of standard headings of component documents based on an “offer” and “acceptance” process.

Procurement documents comprise several component documents dealing with different topics grouped together in a logical sequence. The first cluster of documents contains only those documents that are relevant to the tender stage:

Contractors may either download the Government Tender Bulletin from the web or receive it through the post at a nominal cost.

Calls for expressions of interest when used to pre-qualify or shortlist tenderers, provide the market with an advance warning of a tendering opportunity and give respondents time to become compliant with any of the prequalification criteria. This procedure ensures that:

- Tenders are only received from tenderers who potentially have the necessary capabilities and capacities to perform the contact.
- A manageable number of respondents are invited to submit tender offers (usually not less than five).

The negotiated procedure may be used where the following are present or imminent:

- Human injury or death.
- Human suffering or deprivation of human rights.
- Serious damage to property or financial loss.
- Injury, suffering or death to livestock or other animals.
- Serious environmental damage or degradation or interruption of essential services.

Tender documents may be compiled in three parts:

- T1: Tendering procedures.
- T2: Returnable documents.
- C: Draft contract.

In this approach, the employer will compile the contract using some of the returnable documents and the draft contract.

Alternatively, the employer may structure the document as follows in a single document:

- T1.1 Tender Notice and Invitation to Tender.
- T1.2 Tender Data.
- T2.1 List of Returnable Documents.
- T2.2 Returnable Schedules.
- C1.1 Form of Offer and Acceptance.
- C1.2 Contract Data.
- C1.3 Forms of Securities.
- C1.4 Forms for Adjudicators Appointment
- C2.1 Pricing Instructions.
- C2.2 Activity Schedule/ Bill of Quantities.
- C3 Scope of Work.
- C4 Site Information.

The document that is issued for tender purposes becomes the contract once the employer complete the acceptance portion of the Form of Offer and Acceptance.

CONTENTS		FUNCTION AND BROAD OUTLINE OF CONTENTS
NUMBER	HEADING	

Part T1: Tendering procedures

T1.1	Tender Notice and Invitation to Tender	Alerts tenderers to the nature of the supplies, services and engineering and construction works required by the employer and should contain sufficient information to enable them to respond appropriately.
T1.2	Tender Data	States what the applicable conditions of tender are and where they may be found. Tender data also provides the variables for standardised conditions of tender.

Part T2: Returnable documents

T2.1	List of Returnable Documents	Ensures that everything the employer requires a tenderer to submit with his tender is included in, or returned with his tender submission.
T2.2	Returnable Schedules	Contains documents that the tenderer is required to complete for the purpose of evaluating tenders and other schedules which upon acceptance become part of the subsequent contract.

The second cluster includes those documents that relate to the contract that will be created upon the acceptance of the tender.

CONTENTS		BROAD OUTLINE OF CONTENTS
NUMBER	HEADING	

Part C1: Agreements and contract data

C1.1	Form of Offer and Acceptance	Formalises the legal process of offer and acceptance.
C1.2	Contracts Data	States the applicable conditions of contract and associated contract specific data that collectively describe the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the contract.

Part C2: Pricing data

C2.1	Pricing Instructions	Provides the criteria and assumptions that it will be assumed (in the contract) that the tenderer has taken into account when developing his prices or target in the case of target and cost reimbursable contracts.
C2.2	Activity Schedule/Bill of Quantities	Records the contractor's prices for providing supplies/services/engineering and construction works that are described elsewhere in a specification within the Scope of Work section of the contract.

Part C3: Scope of work

C3	Scope of Work	Specifies and describes the supplies, services, or engineering and construction works that are to be provided and any other requirements and constraints relating to the manner in which the contract work is to be performed.
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Part C4: Site information (engineering and construction works contracts only)

C4	Site Information	Describes the site as at the time of tender to enable the tenderer to price his tender and to decide upon his method of working, programming and risks.
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The Standard for Uniformity in Construction Procurement requires that these headings be used with procurement documents (tender and contract).

Procurement documents capture the choices made by the client for the conducting of the process of offer and acceptance in the **tender data**. They capture the allocation of risks, liabilities and obligations of the parties, the procedures for the administration of the contract and the manner in which disputes may be resolved in the **contract data**. They also provide the basis for the following:

- Paying the contractor in the **pricing data**.
- Specifying any measurable, tangible, verifiable outcome, result or item that must be produced or completed (deliverable) and the constraints in doing so in the **scope of work**.

- In the case of construction works, communicating the outcomes of surveys to tenderers in the **site information**, e.g. soil and ground conditions, the location and state of buildings or facilities that contractors may be expected to use or may be affected by the contractor's activities, environmental conditions, the number and location of people who may be affected by the works, availability of materials, etc.

Contractors who are familiar with the standardised procurement documents of an organisation will only need to read the project specific sections for any specific project in order to know what the organisation requires. On the other hand, contractors who are not familiar with an organisation's standardised documents can quickly locate information that they may require if they have a working knowledge of the framework for the formatting and compilation of procurement documents provided in the Standard for Uniformity in Construction Procurement.

STANDARD FORMS OF CONTRACT

The conditions of a contract establish the risks, liabilities and obligations of the contracting parties and the procedures for the administration of the contract. They can be either purpose written for a particular project (bespoke contract) or they can be standardised in such a manner that they can be applied to a wide range of projects through project-specific data (form of contract).

Standard forms of contract that are published by industry-based organisations were negotiated over several years between different stakeholders and are fair to both the parties who have signed the contract. **The Standard for Uniformity in Construction Procurement limits the range of forms of contract in use in the public sector in South Africa to the following:**

- FIDIC (French Initials for International Federation of Consulting Engineers) (1999) (Short contract and Red, Yellow and Silver Books).
- General Conditions of Contract for Construction Works (GCC).
- JBCC Series 2000 (Principal Building Agreement and Minor Works Agreement).
- New Engineering Contract (NEC3) (Engineering and Construction Contract and Engineering and Construction Short Contract).

Purpose written and other forms of contract are not permitted.

STANDARD CONDITIONS OF TENDER

The **cidb** Standard Conditions of Tender contained in the Standard for Uniformity in Construction Procurement standardise the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. They are generic in nature and are made project specific through choices that are made by the employer in developing the Tender Data associated with a specific project.

CLAUSE NUMBER	
	<p>The conditions of tender are the Standard Conditions of Tender as contained in Annex F of the cidb Standard for Uniformity in Construction Procurement.</p> <p>The Standard Conditions of Tender for Procurement make several references to the tender data for details that apply specifically to this tender. The tender data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender.</p> <p>Each item of data given below is cross-referenced to the clause in the standard conditions of tender to which it mainly applies.</p>
F.1.1	The employer is ...

The commonly encountered pricing strategies include:

- Lump sum.
- Activity schedules.
- Bills of quantities.
- Cost reimbursable.
- Target cost.
- Schedules of rates.

(See section 2.5.)

Standard forms of contract may be purchased from the following organisations:

JBCC:

ASAQS (011) 315 4140

MBSA (011) 805 6611 and regional offices

SAIA (011) 486 0684 and regional offices

CESA (011) 463 2022

GCC2004:

CESA (011) 463 2022

SAICE (011) 805-5947

SAFCEC (011) 455-1700

FIDIC:

CESA (011) 463 2022

SAFCEC (011) 455-1700

NEC:

SAICE (011) 805-5947

ECS (011) 803 3008

These conditions of tender establish a tenderer's obligations in submitting a tender and the employer's undertakings in soliciting and evaluating tender offers. They establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures.

The conditions of tender also do the following:

- Bind the employer and tenderer to behave in a particular manner.
- Establish what a tenderer must do to submit a compliant (responsive) tender.
- Make known to tenderers the criteria by which the tenderer will be evaluated.
- Establish the manner in which the employer will conduct the process of offer and acceptance.
- Provide the necessary feedback to tenderers on the outcomes of the process.

STRUCTURE OF DOCUMENTS ASSOCIATED WITH A CALL FOR EXPRESSIONS OF INTEREST

The groups of documents where expressions of interest are called for should comprise those documents that are relevant to the admission to an electronic database or to those required to shortlist or pre-qualify (or both) tenderers so that they may be invited to submit tender offers in respect of a particular procurement.

CONTENTS		FUNCTION AND BROAD OUTLINE OF CONTENTS
NUMBER	HEADING	
Part E1: Submission procedures		
E1.1	Notice and invitation to submit an expression of interest	Alerts respondents to submit their credentials in order to be admitted to an electronic database or to be invited to submit tenders should they satisfy stated criteria. This document should contain sufficient information to enable them to respond appropriately.
E1.2	Submission data	States what the applicable conditions for the calling for expressions of interest are and where they may be found. Submission data also provide the variables for standardised conditions for the calling for expressions of interest.
Part E2: Returnable documents		
E2.1	List of returnable documents	Ensures that everything the employer requires a respondent to include in his submission is included in or returned with such a submission.
E2.2	Submission schedules	Contains documents that the respondent is required to complete for the purpose of evaluating submissions.
Part E3: Indicative scope of work (where appropriate)		
E3	Indicative scope of work	Indicates to respondents what the contract is likely to entail so that they can make an informed decision as to whether or not they wish to respond and if so, to structure their submission around the likely demands of the project.

STANDARD CONDITIONS FOR THE CALLING FOR EXPRESSIONS OF INTEREST

Standard Conditions for the Calling for Expressions of Interest are provided in Annex H of the *ciddb* Standard for Uniformity in Construction Procurement to standardise the procurement processes, methods and procedures where calls for expressions of interest are made.

These conditions establish the rules from the time a call for an expression of interest is advertised to the time that any submission is evaluated. They are generic in nature and are made procurement specific through Submission Data in much the same way that the Standard Conditions of Tender are made tender specific through the Tender Data.

An expression of interest is a request for tenderers to register their interest in undertaking a specific contract or to participate in a project or programme and to submit their credentials so they may, in terms of the organisation's procurement procedures, be invited to submit a tender offer should they qualify or be selected to do so.

SOUTH AFRICAN NATIONAL STANDARDS IDENTIFIED IN THE SCOPE OF WORK

The scope of work specifies and describes the construction works which are to be provided and any other requirements and constraints relating to the manner in which the contract work is to be performed. Many of these requirements can be standardised and are covered in South African National Standards. Procurement documents establish requirements for the construction and management of the works by simply making reference to them, e.g. the masonry wall shall be constructed in accordance with the requirements of SANS 2001-CM1.

cidb CODE OF CONDUCT FOR THE PARTIES ENGAGED IN CONSTRUCTION PROCUREMENT

The cidb Code of Conduct for the Parties engaged in Construction Procurement requires that the parties in any public or private construction-related procurement should comply in their dealings with each other as follows:

- Behave equitably, honestly and transparently.
- Discharge duties and obligations timeously and with integrity.
- Comply with all applicable legislation and associated regulations.
- Satisfy all relevant requirements established in procurement documents.
- Avoid conflicts of interest.
- Not maliciously or recklessly injure or attempt to injure the reputation of another party.

The Board is empowered by the Construction Industry Development Board Act to enforce this code of conduct. The Board may fine those who breach the code of conduct in an amount not exceeding R100 000 or remove their names from the Register of Contractors for a period of time.

THE PROMOTION OF ADMINISTRATIVE JUSTICE ACT

Decisions made in the public sector regarding actions taken in the evaluation and award of a contract is an administrative decision, and as such is subject to the Promotion of Administrative Justice Act, 2000 (Act 3 of 2000). The Act gives effect to the rights provided for the Bill of Rights in Section 33 of the Constitution (Act 108 of 1996), namely that everyone has the right to administrative action that is lawful, reasonable and fair and must be furnished with written reasons where their rights have been adversely affected by administrative action. The Constitution also provides for the review of administrative action by a court, or where appropriate, an impartial tribunal, and imposes a duty on the state to give effect to the rights provided for.

The Act establishes fair administrative procedures, permits those affected by unfair administrative action to request written reasons for such administrative action within 90 days of, or when they became aware of, such actions and requires administrators to respond within 90 days of receipt of such requests. Administrative actions are presumed to be taken without good cause where an administrator fails to respond within the prescribed period. The Act also provides for procedures for the judicial review of administrative actions and remedies in proceedings for judicial review including the prohibition of an administrator from acting in a particular manner, setting aside the administrative action, correcting the defective action and the ordering of the administrator to pay compensation.

Contractors accordingly have the right to challenge decisions made by officials and their agents regarding any aspects of procurement in terms of this Act should they have reason to believe that such a decision is biased, unfair, contrary to the conditions of tender or incorrect.

standards
SouthAfrica
(a division of SABS)

Copies of these national standards may be purchased from Standards South Africa's head office in Pretoria (Tel: 012 428 7911) or from their regional offices. Alternatively they can be purchased and downloaded in electronic format from the SABS Standards Web store - see www.sabs.co.za

THE PUBLIC PROTECTOR

The Public Protector Act (Act 23 of 1994) permits the public to raise issues and empowers the Public Protector, acting as an ombudsman, to investigate, report on and take the necessary remedial action on any conduct in state affairs or in the public administration, which is alleged or suspected, to be improper or to result in any impropriety or prejudice.

PREVENTION AND COMBATING OF CORRUPT ACTIVITIES ACT

The Prevention and Combating of Corrupt Activities Act, 2004 (Act No. 12 of 2004), which is applicable to both the public and private sector, makes corruption and related activities an offence.

Corrupt activities giving rise to offences include the following:

- Improperly influencing in any way the promotion, execution, procurement or retention of any contract.
- The fixing of the price, consideration or other monies stipulated or otherwise provided for in any contract.
- Manipulating by any means the award of a tender.
- Manipulating by any means the outcome of an auction.
- Public officers having a private interest in a contract connected with the public body that employs them except where the interest is in a stock exchange listed company or their conditions of employment do not prohibit such involvement in a contract.

The direct or indirect offering or receiving of gratifications underlies the above-mentioned corrupt activities. Gratification in terms of the Act includes:

- Money, whether in cash or otherwise.
- Any donation, gift, loan, fee, reward, valuable security, property or interest in property of any description, whether movable or immovable or any other similar advantage.
- The avoidance of a loss, liability, penalty, forfeiture, punishment or other disadvantage.
- Any office, status, honour, employment, contract of employment or services, any agreement to give employment or render services in any capacity and residential or holiday accommodation.
- Any payment, release, discharge or liquidation of any loan, obligation or other liability whether in whole or in part.
- Any forbearance to demand any money or money's worth or valuable thing.
- Any other service or favour or advantage of any description, including protection from any penalty or disability incurred or apprehended or from any action or proceedings of a disciplinary, civil or criminal nature, whether or not already instituted, and includes the exercise or the forbearance from the exercise of any right or any official power or duty.
- Any right or privilege.
- Any real or pretended aid, vote, consent, influence or abstention from voting.
- Any valuable consideration or benefit of any kind, including any discount, commission, rebate, bonus, deduction or percentage.

The Act also makes it an offence to be an accessory to or after the above-mentioned offences as well as to attempt, conspire or induce another person to commit such offences.

Persons convicted of an offence may be fined or imprisoned. The Act also allows the courts to impose an additional fine equal to five times the value of the gratification, and in the case of offences in respect of corrupt activities relating to contracts and the procuring and withdrawal of tenders, to order that the particulars of the convicted person or firm be put on a Register of Tender Defaulters that will be open to the public. In terms of the Act, National Treasury must determine the period of restriction (not less than five years and more than 10 years) and may in addition terminate any agreement with the person

or enterprise concerned. Clients must disqualify and ignore all tenders received from such persons and enterprises.

The Act places a duty of care on accounting officers and accounting authorities to report known or suspected cases of corruption to a police officer, failing which, they are guilty of an offence.

SECTION 2.6: TENDERING FOR PUBLIC SECTOR WORK

REQUIREMENTS FOR PUBLIC SECTOR CONSTRUCTION PROCUREMENT

Public sector procurement is regulated through a number of pieces of legislation. **Construction procurement in the public sector, apart from being regulated in terms of general legislation governing public procurement, is also regulated through the following cidb prescripts that have been issued in terms of the Construction Industry Development Board Act of 2000:**

- cidb Code of Conduct for the Parties engaged in Construction Procurement.
- cidb Standard for Uniformity in Construction Procurement.

These prescripts are applicable to all organs of state, i.e. all national and provincial departments, constitutional institutions, public entities, municipalities and municipal entities (see section 2.4).

UNDERSTANDING THE cidb STANDARD CONDITIONS OF TENDER

The cidb Standard Conditions of Tender contained in the Standard for Uniformity in Construction Procurement standardise the procurement processes, methods and procedures from the time that tenders are invited to the time that a contract is awarded. These conditions of tender establish a tenderer's obligations in submitting a tender and the employer's (client's) undertakings in soliciting and evaluating tender offers. As such, they establish the rules from the time a tender is advertised to the time that a contract is awarded and require employers to conduct the process of offer and acceptance in terms of a set of standard procedures (see section 2.4).

Remember that:

- Contractors are bound to act in accordance with the cidb when preparing and submitting tenders and engaging with the employer during the tender process (see Clause F.1.1 of the cidb Standard Conditions of Tender).
- The contractors may only communicate with the employer's agent who is named in the Tender Data during the tender process associated with a particular tender (see Clause F.1.4).
- Communications between the contractor and the employer are to be in writing and in English (see Clause F.1.4).
- The employer will usually not pay for any of the costs associated with the preparation of tenders (see Clause F.2.2).
- It is the contractor's responsibility to check that the documents are complete. (The Tender Data entered against Clause F.1.2 will list the documents comprising the tender. Check that all the sections have been included in the tender document and each section has no missing pages).
- The contractor is responsible for the following:
 - Making use of the latest versions of the conditions of contract, specifications and standards that are referenced in the tender documents when preparing a tender (see Clause F.2.5).
 - Acknowledging the receipt of any addenda (amendments) to the tender document issued by the employer (see Clause F.2.6).

cidb Code of Conduct for all Parties involved in Construction Procurement

- Behave equitably, honestly and transparently.
- Discharge duties and obligations timeously and with integrity.
- Comply with all applicable legislation and associated regulations.
- Satisfy all relevant requirements established in procurement documents.
- Avoid conflicts of interest.
- Not maliciously or recklessly injure or attempt to injure the reputation of another party.

Clause F.2.1 (eligibility) allows the employer to set criteria in the Tender Data relating to a tenderer's capacity and capability to perform the contract. Only those tenderers that satisfy such criteria are permitted to submit a tender offer.

- Requesting clarifications from the employer regarding the intent and meaning of the tender documents (see Clause F.2.8).
- Obtaining advice on the adequacy of any insurance cover provided by the employer (see Clause F.2.9).
- Alterations made by the contractor to the tender to correct errors in completing the submission must be initialled by the person responsible for signing the offer portion of the Form of Offer and Acceptance (see Clause F.2.11).
- The contractor must ensure that all the information or data that is requested is submitted in the form that is required (see Clause F.2.14).
- The contractor must provide clarifications and other material that has a bearing on the tender offer in response to requests raised by the employer within the time frames stated by the employer (see Clauses F.2.17 and F.2.18).
- The employer may negotiate the final terms of the tender with the contractor that is identified in terms of a competitive selection process (see Clause F.2.17).

SUBMITTING A COMPLIANT (RESPONSIVE) TENDER OFFER

The activities that are associated with the submission of a compliant (responsive) tender are:

1. Confirm that the eligibility criteria are complied with (Clause F.2.1)

Contractors must satisfy the eligibility criteria that are stated in the Tender Data in order to have their tenders evaluated.

Eligibility criteria are frequently highlighted in the Tender Notice and Invitation to Tender. Contractors are advised not to obtain tender documents if they are not in a position to satisfy eligibility criteria as there is no point in spending time and energy on preparing and submitting a tender if the business cannot satisfy the eligibility criteria.

All public sector tenders for construction works require that only those contractors who are registered with the cidb in an appropriate contractor grading designation are eligible to have their tenders evaluated. The Tender Notice and Invitation to Tender gives an indication of the grading requirements while the Tender Data states the exact requirements.

The Construction Industry Development Regulations disallows the evaluation of tender offers from registered contractors who tender above their designated tender value range (except where the margin by which the tender value range is exceeded is reasonable) and are not registered in the required class of construction works.

What this regulation means is that a contractor must be registered in the class of construction works stipulated in the Tender Data. They should tender an amount inclusive of VAT within the limits of the tender value range associated with their contractor grading designation in order to ensure that their tender offer is evaluated. They may tender above their tender value range, but are not guaranteed that the employer will evaluate their tender offer unless the margin by which they exceed the limits is very low (say 5 to 10%).

This regulation accordingly provides the employer with some discretion to evaluate tenders that are just above the threshold associated with a contractor grading designation and to award a contract to a contractor outside of its tender value range provided that the employer is satisfied that the contractor has the capabilities and capacity to perform the contract.

DESCRIBING CONTRACTOR GRADING DESIGNATIONS

Two letters depicting the **class of construction works** (general building, civil engineering, electrical engineering, mechanical engineering or specialist category) in which the contractor is registered.

Designates potentially emerging status, if applicable.



Single number representing a registered contractor's capability to undertake a contract in a particular **class of construction works** within a specified **tender value range**.

TENDER VALUE RANGE DESIGNATION	RANGE OF TENDER VALUES	
	GREATER THAN	LESS THAN OR EQUAL TO
1	R 0	R 200 000
2	R 200 000	R 650 000
3	R 650 000	R 2 000 000
4	R 2 000 000	R 4 000 000
5	R 4 000 000	R 6 500 000
6	R 6 500 000	R 13 000 000
7	R 13 000 000	R 40 000 000
8	R 40 000 000	R 130 000 000
9	R 130 000 000	No limit

The Construction Industry Development Regulations permit employers to evaluate tender offers received from unregistered contractors who are considered to be capable of being registered in the required contractor grading designation prior to the evaluation of tenders. What this means is that contractors must have made an application that is complete in all respects to the cidb for registration in a contractor grading designation by the time that employers start comparing tender offers. The contract will, however, not be awarded to a contractor unless it is registered.

The regulations do allow a registered potentially emerging enterprise to be awarded a contract in one contractor grading designation higher than they are registered, provided that the employer:

- Is satisfied that the contractor has the potential to develop into and qualify for registration in a higher grade.
- Ensures that financial, management or other support is provided to that contractor to enable the contractor to successfully execute the contract.

Employers must indicate whether this provision will be applied in the Tender Notice and Invitation to Tender and in the Tender Data.

Joint ventures need not be registered with the cidb if all the partners in a joint venture are registered with the cidb and the lead partner is registered in the required class of construction works. The contractor grading designation of such a joint venture is calculated by using the calculator on the registers section cidb website www.cidb.org.za. The “effective” contractor grading designation calculated by the calculator is the contractor grading designation of the joint venture.

Alternatively, the table for deemed contractor grading designations for joint ventures may be used. Higher contractor grading designations may in some instances be obtained from the cidb calculator.

2. Attend the clarification meeting (Clause F.2.7)

The employer may make the clarification (site) meeting compulsory for tenderers to attend. Failure to attend a compulsory clarification meeting will result in a tender not being considered. It is important for a contractor to attend any compulsory clarification meeting if it intends submitting a tender offer.

Details of the place and time of the clarification meetings are to be found in the Tender Notice and Invitation to Tender.

3. Follow the instructions for pricing the tender offer (Clause F.2.10)

The contractors must base their price on all duties, taxes (other than VAT) and any other levies payable as they were 14 days before the closing time for tenders. VAT must be shown separately.

The prices must be fixed (not subject to price adjustment due to inflation or increases or decreases in the prices of certain commodities), unless the Contract Data makes provision for price adjustment.

The prices tendered must be in Rand unless otherwise specified in the Tender Data.

4. Follow instructions when submitting alternative offers (Clause F.2.12)

Unless otherwise stated in the Tender Data, an alternative tender offer may only be submitted if a fully compliant tender offer that satisfies the requirements of the procurement documents is also submitted. Accordingly, a contractor must be prepared to construct the works in accordance with the specifications provided in the procurement documents, if it wants to submit an alternative tender.

The Tender Data may prohibit the submission of any alternative offer. Alternatively the Tender Data may permit the submission of an alternative offer provided that it complies with specified criteria

The contractor grading designations that are shown in the Tender Notice and Invitation to Tender provide an indication of what the likely requirements are. They are usually on the low side so that eligible contractors are not unfairly excluded due to estimates being inaccurate or where the estimated value is close to a tender value range threshold.

DEEMED CONTRACTOR GRADING DESIGNATIONS IN JOINT VENTURES

JOINT VENTURE DESIGNATION	DESIGNATIONS OF REGISTERED CONTRACTORS (PARTNERS) IN JOINT VENTURE
3	3 partners in designation 2
4	3 partners in designation 3
5	2 partners in designation 4 or 1 partner in designation 4 and 2 partners in designation 3
6	2 partners in designation 5 or 1 partner in designation 5 and 2 partners in designation 4
7	2 partners in designation 6 or 1 partner in designation 6 and 2 partners in designation 5
8	3 partners in designation 7
9	3 partners in designation 8

Note: Lead partner must be registered in required class of work

Clarification or site meetings provide tenderers with an opportunity to raise points of clarity with the employer. Such meetings enable employers to obtain the names and addresses of potential tenderers. It provides tenderers with an opportunity to see who they are likely to be tendering against.

A contractor should carefully study the Tender Data that deals with the submission of an alternative tender before considering the submission of an alternative tender.

The List of Returnable Documents that is found in Part 2 of the procurement documents indicates which documents are to be completed and which certificates are to be submitted as part of the tender submission.

without having to submit a tender based on that specified in the scope of work of the procurement documents.

5. Follow instructions in submitting a tender offer (Clause F.2.13)

Contractors must ensure that they comply with the following:

- Submit an offer for the whole of the works unless the Tender Data state that this is unnecessary.
- Return all returnable documents after they have been completed in their entirety either electronically or in black ink.
- Submit the number of copies stated in the Tender Data.
- Sign the original and all copies of the tender offer.
- State which of the signatories in a joint venture is the lead partner who may be held liable for the tender offer.
- Seal the original and each copy in a package marked as “original” or “copy”.
- State their names and addresses as well as any specific information stated in the Tender Data on each and every package that is submitted.
- Seal the original tender and copy packages in an outer package that states the employer's address and identification details as stated in the Tender Data.

6. Ensure that the tender offer is received by the employer before the closing time for tenders (Clause F.2.15)

Tenders received after the closing time for tenders will be returned unopened even if they are one minute late!

Employers may be requested to extend the closing time for tenders should they issue addenda to allow tenderers to take into account any changes in requirements. Contractors should consider requesting an extension to the closing data should the employer issue addenda that significantly change requirements within one week of the closing date.

7. Consider extending the tender validity period (Clause 2.16)

The conditions of tender hold tender offers valid for an acceptance period stated in the tender data (normally eight weeks and in exceptional circumstances up to 12 weeks). If the employer has not awarded a contract during this period, the employer may request tenderers to extend this period as it is unfair to hold a tenderer for lengthy periods without providing them with an opportunity to withdraw their tender.

Contractors are not obliged to extend the validity period and are permitted to make such extension subject to price escalation being provided for the extended validity period if such provisions are not already provided for. (Most contracts use the month during which the tenders closed as the base month to calculate price escalation.) It must, however, be remembered that any price adjustment will be reflected in the evaluation of the competitiveness of their tender offer.

BASIS UPON WHICH THE EMPLOYER WILL EVALUATE TENDERS

Employers will process and evaluate tenders in accordance with the conditions of tender. Employers will accordingly:

1. Open and record tender offers received

- i) Open tender offers immediately after the closing time for receipt of tender submissions in the presence of tenderers' agents and announce and record pertinent data, if (see Clauses F.3.4 and F.2.13):
 - submitted in sealed envelopes;
 - annotated with the required particulars; and
 - placed in the nominated tender box or delivered to the specified place for receipt of tender submissions.
- ii) Make available name, price and preferences claimed to interested parties who request such information.
- iii) Return unopened tenders that are (see Clauses F.3.3, F.3.8 and F.1.5):
 - received late;
 - by a method other than the prescribed method; or
 - only one tender submission is received and the employer decides to call for fresh tender submissions.
- iv) Consider declaring as non-responsive tender offers not received in the form required (see Clause F.2.14).
- v) Reject all tender offers submitted by telegraph, telex, facsimile or e-mail, unless stated otherwise in the tender data (see Clause F.2.13).

2. Determine whether or not tender offers are complete

- i) Compare tender submission against list of returnable documents (document T2.1) contained in the procurement document and identify schedules and component documents that have not been returned or are incomplete (see Clauses F.3.8, F.2.13, F.2.14, F.2.18, F.2.6).
- ii) Request tenderers to complete incomplete documents (only if such information does not change or effect the competitive position of a tenderer) within a reasonable period of time so that their tenders are capable of being evaluated. (Tenderers may not provide additional information that is integral to the tender offer, i.e. amend their financial offer (methods 1 to 4), preferences claimed (method 2 or 4) or quality offered (method 3 or 4).)
- iii) Record what is incomplete in each tender offer, i.e. what is incomplete regarding the financial offer, quality offered and preference claimed.
- iv) Confirm that tenderers took account of any addenda that is issued (see Clause F.2.6).

3. Determine whether or not tender offers are responsive

- i) Confirm compliance with all the requirements of the Standard Conditions of Tender, i.e. that:
 - Eligibility criteria are complied with (see Clause F.2.1).
 - The tenderer attended compulsory site/clarification meetings, if any (see Clause F.2.7).
 - The tenderer has observed pricing instructions (see Clause F.2.10).
 - Alteration, if any, comply with instructions (see Clause F.2.11).
 - Conditions attached to alternative tender offers where alternative tenders have been submitted, have been met (see Clause F.2.12).
 - The tender offer covers the scope of work contained in the procurement document and, where applicable, meets the performance or functional requirements of the specifications or is equivalent in performance to that specified.
 - The tenderer has signed the form of offer and acceptance (see Clause F.2.13).
 - Access to premises for inspections, tests and analysis as provided for in the tender data was provided (see Clause F.2.19).
 - The securities, bonds, guarantees, policies and certificates of insurance required have been submitted (see Clause F.2.20).
 - The required certificates have been submitted (see Clause F.2.23).
- ii) Identify areas of non-compliance with the terms, conditions and scope of work, and determine if any deviation is material using the test for material deviation provided in Clause F.3.8.
- iii) Review all qualifications made to the offer and determine if any of them are material using the test for material qualification provided in Clause F.3.8.
- iv) Declare tender offers non-responsive and reject them as such should they (see F.3.8):
 - Fail to comply with the requirements of i) above.
 - Fail to provide additional information that is requested by the due date (see clause F.2.18).
 - Not have a signed and completed form of offer and acceptance.
 - Contain material deviations or qualifications.
- v) Record reasons for declaring a tender to be non-responsive.

4. Evaluate tender offers (see Clause F.3.11)

- i) Identify parameters included in the returnable documents that have a bearing on the financial offer, e.g. life cycle costs, contract period, requirement for price escalation, etc. and quantify their impact on the financial offer.

- ii) Reduce all tender offers to a common base, i.e. to comparative offers.
- iii) Judge the reasonableness of financial offers and reject all tender offers with unrealistic financial offers.
- iv) Confirm that tenderers are eligible for the preferences claimed in the preference schedule or the reasonableness of any tendered contract participation goal (or both). (No preferences may be granted to incomplete claims for preferences.)
- v) Score the financial offer of all responsive tender offers received to two decimal points using the appropriate formulae. (Score incomplete quality submissions in so far as they may be scored.)
- vi) Score quality for each of the categories stated in the tender data and calculate the total score for quality and record score.
- vii) Eliminate tender offers that do not score the minimum number of points for quality stated in the tender data.
- viii) Award tender evaluation points for the category of preference or in proportion to the tendered contract participation goal to each eligible tenderer (or both), in the manner described in the relevant Preferencing Schedule.
- ix) Total tender evaluation points in accordance with requirements in the Tender Data and rank tenderers.

5. Determine if there are any grounds for disqualification (see Clause F.3.7)

Determine whether or not the highest ranked or scoring tenderer has been engaged in corrupt or fraudulent practices and if so, instantly disqualify the tenderer.

6. Determine acceptability of preferred tenderer

- i) Confirm that the highest ranked or scoring tenderer (preferred tenderer):
 - Is not under any restrictions, or has principals who are under any restrictions from participating in public procurement.
 - Can demonstrate that the tenderer possesses the necessary professional and technical qualifications, professional and technical competence, financial resources, equipment and other physical facilities, managerial capability, reliability, experience and reputation, and the personnel to perform the contract.
 - Has legal capacity to enter into a contract.
 - Is not insolvent, in receivership, bankrupt or being wound up, or has its affairs administered by a court or a judicial officer, has suspended its business activities, or is subject to legal procedures in respect of any of the foregoing.
 - Satisfies legal requirements.
 - Does not have conflicts of interest that may impact on the tenderer's ability to perform the contract in the best interests of the employer.
- ii) Review financial offer of the preferred tenderer and correct discrepancies between totals and calculations or summations in accordance with the provisions of F.3.9.
- iii) Perform a risk analysis on the preferred tenderer to ascertain if any of the following, as relevant, present an unacceptable commercial risk to the employer:
 - unduly high or unduly low tendered rates or amounts in the tender offer;
 - contract data provided by the employer; or
 - the contents of the tender returnables that are to be included in the contract.
- iv) Approach tenderer to amend any part of the tender submission that presents an unacceptable commercial risk, if relevant (see also Annexure D).
- v) Clarify any matter that could give rise to ambiguity in a contract arising from the tender offer (see Clause F.3.10).
- vi) Recommend highest ranked tenderer or tenderer with the most evaluation points for the award of the contract or if found to be unsatisfactory, undertake an analysis on the next highest ranked tenderer and so on until such time as a tenderer satisfies the risk assessment (see Clause F.3.11).

A recommendation will be made to a tender committee who will review the evaluation and the reasons for overlooking a tender and make a recommendation regarding its award. The person designated by the employer in terms of the Supply Chain Management policy will then sign the acceptance portion of the Form of Offer and Acceptance on the tender that is to be awarded the contract.

By signing the acceptance portion of the Form of Offer and Acceptance, the Employer enters into a contract with the successful tenderer. The contract commences once the tenderer, now the Contractor, receives a signed copy of the Form of Offer and Acceptance.

Changes to the contract are only binding, once it has come into effect, if made in writing and are agreed to by both parties. The Form of Offer and Acceptance expressly states that no amendments to the tender documents are valid unless they are included in the Schedule of Deviations attached to the Form of Offer and Acceptance. As a result, nothing that was discussed or agreed during clarifications will be binding on the parties unless it is included in the Schedule of Deviations.

FORM OF OFFER AND ACCEPTANCE

Offer

Signed (tenderer)

Acceptance

Signed (employer)

Schedule of deviations

SECTION 2.7: PRICING STRATEGIES

UNDERSTANDING THE PRICING STRATEGY OF THE TENDER

The pricing strategy is the method that an employer (client) uses to obtain a price for construction works and to pay the contractor for work completed. There are a number of different pricing strategies.

The employer or his professional team usually decides on which pricing strategy to use for a particular project. The procurement documentation state what pricing strategy will be used.

The contract sets out what the employer's and the contractor's risks are. The contractor prices for all his risks and is entitled to claim costs associated with events that are the employer's risk.

The different pricing strategies place more or less risk on the contractor, depending on how involved the client is in the management and execution of the project.

BILLS OF QUANTITIES

Bills of quantities are the most common form of pricing strategy used where the contractor undertakes construction on the basis of full designs issued by the employer. The employer arranges for the bills of quantities to be prepared, usually in accordance with a standard system of measurement. These bills of quantities break the work down into a number of items that the contractor is required to price. The contractor is paid an amount for work completed based on the rate in the bills of quantities multiplied by the quantity of work completed.

EXAMPLE OF A BILL OF QUANTITIES

ITEM	REF.	DESCRIPTION	UNIT	QTY.	RATE OR %	PRICE

Total for section carried forward to the summary of Bill

SCHEDULES OF RATES

Schedules of rates are used where employers are unsure of the exact quantities that will be required during the contract. Schedules of rates identify the items that will probably be constructed. The contractor is required to submit rates only for each item and is paid an amount for work completed based on the rate in the schedule of rates multiplied by the quantity of work completed.

LUMP SUM PRICES

Lump sum prices are used where the employer pays the contractor a lump sum upon the completion of the contract. (Interim payments are often provided for based on a reasonable estimate of the value of the work completed.)

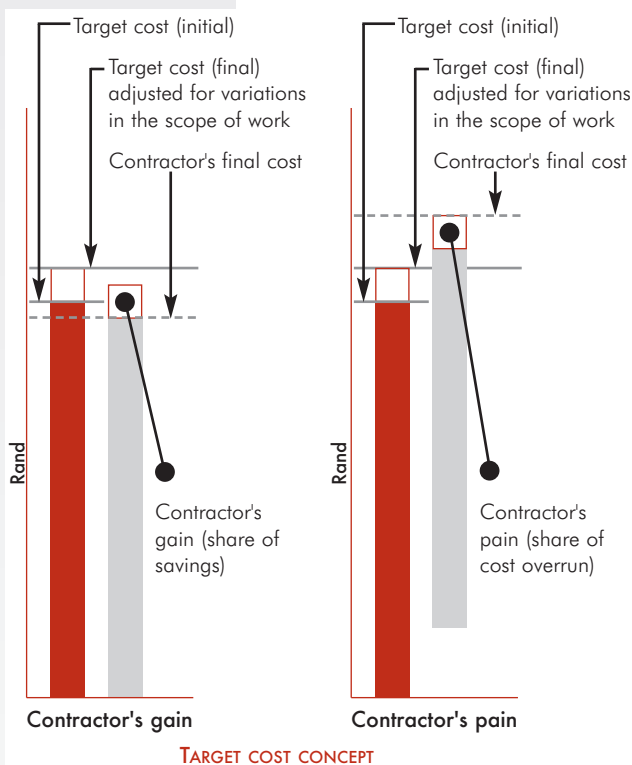
Prices may be fixed or be subject to price adjustment to take account of fluctuations in the cost of labour, equipment, fuel and materials.

ACTIVITY SCHEDULES

Activity schedules are used where the employer or the contractor identifies particular activities that are to be performed during the contract, based on a construction programme and the scope of the work. These activities are captured in an activity schedule. The contractor submits a price for each activity and is paid the amount for an activity when the activity has been completed. (The total of the activity prices is the total price for the contract work.)

COST REIMBURSABLE CONTRACT

In a **cost reimbursable** contract the contractor is paid an agreed percentage fee to cover his overheads and profit and is reimbursed at market related rates for predefined cost items.



TARGET COST CONTRACT

In a **target cost** contract, the contractor is paid his costs as defined in the contract, based on his tendered cost parameters and at the end of the contract, the contractor is paid (or pays) his share of the difference between the agreed target cost and his cost according to an agreed formula. If the final cost is less than the target cost, the contractor is paid his share of the saving. If the final cost is greater than the target cost, the contractor pays his share of the difference. This motivates the contractor to control costs.

The target price is usually agreed at the time that the contract is concluded.

STANDARD PRICING STRATEGIES FOR MAIN CONTRACTORS

The JBCC Principal Building Agreement (PBA) and JBCC Minor Works Agreement (MWA) allow tenders to be based on either a lump sum amount or on bills of quantities. Contractors are required to price the bills of quantities in order to arrive at a contract sum. The rates in the bills of quantities are used as the

basis for paying for additional work that may be required. Alternatively, contractors are required to provide a lump sum for the works and to complete a schedule of rates that provides a basis for paying for any additional work that may be required. Where work is not covered by these rates, new rates with a markup of 10% have to be agreed or the actual cost plus 10% is paid.

The JBCC PBA makes provision for interim payments in lump sum contracts, based upon a reasonable estimate of the works completed and allows bills of quantities to include prime cost amounts (amount included in the contract sum for the delivery cost of materials and goods obtained from a supplier as instructed by the employer's principal agent) and budgetary allowances (sum of money included in the contracts for work intended for execution by the contractor, the extent of which is identified but not detailed). Contractors are required to price their overheads and profit on prime cost amounts but not for budgetary allowances as these items are treated as additional work.

The General Conditions of Contract for Construction Works (GCC) (2004) allow for any pricing strategy that is described in the pricing data. It does contain standard provisions for bills of quantities and the measurement of variations in a similar manner to the JBCC agreements. Where work is not covered by the rates, payment may be made in terms of day works rates and a percentage allowance for overheads and profit tendered and accepted by the contractor.

The JBCC PBA and MWA require that the rates in the bill of quantities be adjusted where additional work or work identified as being provisional is not of a similar character or executed under similar conditions.

The FIDIC Conditions of Contract for Construction for Building and Engineering Works designed by the Employer (Red Book) contains standard provisions for bills of quantities and the measurement of variations in a similar manner to the JBCC agreements and GCC 2004. **These conditions, however, permit a new rate to be determined where items are not specified as “fixed rate items”, e.g.:**

- The measured quantity for an item is increased or decreased by more than 10%.
- This change in quantity multiplied by the rate for the item exceeds 0,01% of the Accepted Contract Value.
- This change in quantity directly changes the cost per unit quantity of the item by more than 1%.

The FIDIC Short Form of Contract, on the other hand, makes provision for payment to be made in terms of a lump sum, a lump sum price with schedule of rates, a lump sum with bill of quantities and remeasurement of the tender bill of quantities. Variations are, as appropriate, based on a lump sum agreed between the employer and contractor, at rates in the contract or based on rates in the contract, new agreed rates or at the day work rates provided for in the contract.

The NEC3 Engineering and Construction Works Contract provides for the following options:

- A: Priced contract with activity schedule.
- B: Priced contract with bill of quantities.
- C: Target contract with activity schedule.
- D: Target contract with bill of quantities.
- E: Cost reimbursable contract.
- F: Management contract.

The NEC3 contract deals with all changes in the scope of work in terms of a compensation procedure. Compensation events are events that are at the employer's risk under the contract and entitle the contractor to an assessment of the effect the event has on the prices and the completion date. Contractors are required to submit a quotation for compensation events based on the contractor's forecast on their impact upon the cost in carrying out the works at the time the event is assessed. Use is made of a cost component schedule with tendered fees and parameters to develop a quotation.

In option A, the contractor takes the bulk of the financial risk while the employer carries some risk through the compensation event procedure. Option B transfers a little more of the risk to the employer who takes a risk of his quantity assessment being changed in final construction. (Any increase or decrease in the bills of quantities is a compensation event if it causes the cost per unit of quantity to change and the rates for the item multiplied by the final total quantity of work is more than 0,5% of the total of prices at the start of the contract.) Options C and D allows for a spread of risk between the priced and cost reimbursable extremes. Adjusting the target share between the employer and contractor will vary the risk between one principally carried by the employer to one principally carried by the contractor, and to any stage in between those extremes. In option E the employer takes the bulk of the risk but has complete flexibility. The contractor does, however, carry some risk as he has to allow for the “disallowed costs”. Option F is a cost reimbursable contract as the contractor is paid costs plus a percentage fee; the cost being the cost of works subcontracted to others and the fees for his management services.

The NEC3 Engineering and Construction Short Contract makes provision for activity schedules and bills of quantities. Quotations are submitted for compensation events, based on market-related costs and the percentages for overheads and profit tendered by the contractor.

GCC 2004 allows the general items (items in the bills of quantities that relate to general obligations, site services and facilities) to be adjusted if the final contract price before any adjustment for escalation exceeds the contract price when the contract was awarded, less any contingency amounts, by 15% or more.

Schedule of cost components

#	COMPONENT	AMOUNT (RANDS)
1	People	R
2	Equipment	R
3	Plant and materials	R
4	Charges	R
5	Manufacture and fabrication	R
6	Design	R
Cost of works not subcontracted		R

Cost of works not subcontracted x direct fee percentage

= R.....Fee 1

Subcontracted amount x subcontracted fee percentage

= R.....Fee 2

Amount due

= defined cost + subcontracted amount + Fee 1 + Fee 2

SECTION 2.8: CONTRACTUAL CONSIDERATIONS

THE FUNDAMENTALS OF A CONSTRUCTION WORKS CONTRACT

A contract is an agreement between two or more people that is enforceable by law. In construction it is an agreement between an employer (client) and a contractor to construct, repair or renovate something, in an agreed time, for an agreed price and to agreed standards.

The contractor may undertake all the work himself or subcontract a portion of the work to others (see section 1.2). The agreement made between the contractor and a subcontractor is called a subcontract. (The main or prime contract is between the contractor and the employer.) In this case, the contractor promises to pay for the part of the work done by the subcontractor and the subcontractor promises to do that part of the work that is specified in the subcontract.

Sometimes there are others involved to assist the employer. These persons are not parties to the contract but are agents of the employer. Agents ensure that the contract is properly carried out and some may give instructions to the contractor.

A right is an entitlement. The employer has a right to have the work done properly, for the agreed price and in the time promised. The contractor is entitled to be paid the agreed price for doing the work. A responsibility is a duty or an obligation. The employer has a responsibility to pay the contractor for doing the work. The contractor has a responsibility to do the work properly for the agreed price and in the time promised.

One party's right creates a responsibility for the other party. When a party does not comply with his responsibilities, it is said that he is in breach of contract. Rights and responsibilities in a contract are enforced by law. This may be either by the courts or by arbitration, depending what is written in the contract.

Sometimes the parties wish to change their rights or responsibilities in the contract. This can only be done if both parties agree to the change and if the change is recorded in writing and signed by both of them. However, when the contract states that an agent can instruct the contractor to do additional work, leave out certain work or change what has to be done, the contractor has to obey that instruction but will get paid extra and be given extra time to do so if the instruction causes him additional cost and delay, and if it was not issued because of the fault of the contractor.

CONCLUDING A CONTRACT

A contract may, in terms of South African law, be entered into in a number of ways. These include:

- Verbal offers.
- Exchange of letters.
- The signing of a formal contract.

For a contract to be legally valid certain conditions have to be met:

- The parties must be legally able to make a contract.
- There must be consensus (a meeting of the minds), i.e. the offer by one party and an unambiguous and unconditional acceptance by the other.
- There can be no force or coercion on either party in making the contract as a contract may be set aside if acceptance has been induced by misrepresentation, mistake, duress or undue influence.
- The object of the contract must be physically and legally possible.
- Each party is contributing something to the contract; the contractor through offering to do the work and the client in agreeing to pay for it.

A contract therefore comes into existence once an offer has been unconditionally accepted.

In construction works contracts, an employer (client) enters into a contract with a contractor. The contractor may in turn enter into a contract with a supplier or service provider or elect to subcontract work to a subcontractor, in which case the contractor becomes the employer.

The employer is responsible for making payments to those entities that are contracted to provide supplies, services or works.

The manner in which a contract comes into existence depends on how the offer and acceptance is made. Sometimes the existence of a contract may well be "implied" by the actions of the parties. For example, a contractor may give a client a quotation for certain work to be done and then be given access to the site by the client. Even though the offer has not been formally accepted, the action of the client indicates the existence of a contract.

CONCLUDING A CONTRACT USING THE cidb PROCEDURES

The following steps typically lead to the formation of a contract between the employer and the contractor where the cidb procedures are followed:

- 1) The employer invites tenderers to submit tender offers using procurement documents compiled in accordance with the requirements of the cidb Standard for Uniformity in Construction Procurement and using a standard form of contract (see sections 2.5 and 2.6).
- 2) Tenderers complete and sign the offer portion of the Form of Offer and Acceptance and make a tender submission in accordance with the requirements of the Tender Data. Generally, the contractor is required to price for all the works described in the tender documents.
- 3) The employer or his agent opens the tenders and usually makes known the names of the tenderers who submitted tenders and tender prices to interested parties.
- 4) The employer or his agent evaluates the tender in accordance with the provisions of the Tender Data and confirms that tenderers have the capability and capacity to perform the contract (see section 2.6).
- 5) The employer or his agent clarifies any outstanding issues with the successful tenderer and compiles the contract. Any amendment agreed to in the process of offer and acceptance is included in the contract, typically in the schedule of deviations contained in the Form of Offer and Acceptance.
- 6) The employer completes and signs the Acceptance portion of the Form of Offer and Acceptance.

The employer's acceptance concludes the contract between the parties. The contract commences once the tenderer receives a signed copy of the Form of Offer and Acceptance. Changes to the contract are only binding once it has come into effect, if made in writing and are agreed to by both parties. The Form of Offer and Acceptance expressly states that no amendments to the tender documents are valid unless they are included in the Schedule of Deviations attached to the Form of Offer and Acceptance. As a result, nothing that was discussed or agreed during clarifications or the finalisation of the contract will be binding on the parties unless it is included in the Schedule of Deviations.

STANDARD CONSTRUCTION WORKS CONTRACTS AND SUBCONTRACTS

A construction works contract needs to record what the employer and contractor agree to. The contract needs to address issues such as:

- The rights, risks and responsibilities of the parties.
- The administrative procedures relating to all aspects of the works.
- The role and authority of any agent that is appointed by the employer.
- A definition of the contract period, when work will start and when it must be completed.
- Progress payments, how often the payments will be made, who will do the assessment, as well as the terms of payment including such things as retention money, if any.
- Whether or not the contractor will be paid for price escalation due to inflation.
- How the contract price is to be adjusted in response to changes in the scope of work made after the contract has been concluded.
- Conditions under which the contract may be terminated.
- Conditions under which the completion date may be extended.
- How disagreements are to be settled.

These items can be recorded in a standard contract prepared by an industry association or professional body. The employer can then choose a standard form of contract that is suitable for the construction works that he wants to be constructed and has administrative procedures that fits in with the way he wishes the works to be managed and administered. The contractor can then tender with confidence if he is familiar with this form of contract. Each of the parties and any agent appointed by the employer all know what they have to do.

When a contractor signs any legal document it is bound by the terms and conditions of the document that has been signed. This applies even if the business has not read the terms. "Let him who signs take care."

FORM OF OFFER AND ACCEPTANCE

Signed (tenderer)

Acceptance

Signed (employer)

A construction contract should in its simplest form describe the following:

- What will be done.
- How long it will take to complete.
- How much and when the employer will pay.
- What will be done if there are changes and delays in the work.
- What work methods and quality will apply.

Conditions of contract for subcontracts differ widely. Ideally, the conditions of subcontract should be similar to that of the main contract. This is only possible where the NEC3 and JBCC forms of contract are used.

The conditions of contract should not be more onerous than that of the main or prime contract.

In a subcontract, the role of the "employer" is performed by the contractor and the role of the "contractor" is performed by the subcontractor.

The cidb requires that the public sector use one of the following standard forms of contract when contracting with main contractors:

- FIDIC (French Initials for International Federation of Consulting Engineers) (1999) (Short contract and Red, Yellow and Silver Books).
- General Conditions of Contract for Construction Works (GCC).
- JBCC Series 2000 (Principal Building Agreement and Minor Works Agreement).
- New Engineering Contract (NEC3) (Engineering and Construction Contract and Engineering and Construction Short Contract).

The cidb promotes the use of the following standard forms of subcontract:

- BIFSA Non-Nominated Subcontract for use with the JBCC Series 2000 Principal Building Agreement.
- BIFSA Standard Subcontract Agreement 1995 edition (Amended 2000), for use with Principal Building Agreements other than the JBCC Principal Building Agreement.
- BIFSA Labour-only subcontract.
- Construction Industry Development Board's Standard Subcontract (labour only).
- The Joint Building Contracts Committee (JBCC Series 2000):
 - Nominated/selected Subcontract Agreement.
 - Engineering General Conditions.
- New Engineering Contract (NEC3):
 - NEC Engineering and Construction Subcontract.
 - NEC Engineering and Construction Short Subcontract.
- SAFCEC General Conditions of Subcontract (2003 edition).

Each of these forms of contract contains generic general conditions that are made project specific through contract data, i.e. a document that states what the variable and project specific information is and clauses which vary, amend or add to the requirements of the general conditions of contract.

The forms of contract that are promoted by the cidb are fair and equitable in the assigning of rights and obligations to the parties. **Contractors need to carefully consider what are their risks, liabilities and obligations before signing contracts that contain the following:**

- Purpose-written conditions of contract.
- Standard conditions of contract that have been developed by the client.
- Standard forms of contract that are not promoted by the cidb.
- Clauses in the contract data that substantially vary from the general conditions of contract in a standard form of contract.
- Additional conditions in the contract data.

A contractor should give particular attention to conditions of subcontract as the business may frequently be in a weaker position when working as a subcontractor than when working as a main or prime contractor.

TYPICAL FEATURES OF CONSTRUCTION WORKS CONTRACTS FOR MAIN CONTRACTORS

GENERAL

All standard forms of contract have clauses that deal with the following:

- Definitions and interpretation.
- Time.
- Risk and insurance.
- The obligations of the employer.
- Testing and defects.
- The contractor's main responsibilities.
- Payment.

The employer's main obligation is to pay the contractor and to provide the contractor with access to and with use or possession of the site. The employer is also obliged to answer any queries raised by the contractor. The employer may delegate obligations to an agent or employee. The employer may not, however, delegate the obligations to pay the contractor.

The contractor's main obligation is to complete the work in terms of the contract in accordance with the scope of work described in drawings, specifications and the like.

Whether specified in the contract documents or not, it is the contractor's responsibility to provide the works in accordance with all laws, regulations, statutes and by-laws (see Compendium of Legislation affecting construction stakeholders on www.cidb.co.za).

When one goes to a café and asks for a glass of Coca Cola with ice, the assumption is made that one will get a drink that is fizzy, that the glass will be clean before your drink was poured into it, and that the ice cubes will be made from water that was fit for drinking purposes. These assumptions are reasonable assumptions to make and are known as "implied terms". The same is true when a client procures construction works - it is implied that the contractor will execute the work in a workmanlike manner and that the materials incorporated into the works will be in accordance with the specifications, and where there are no specifications, of a reasonable quality and fit for purpose.

Breaches by either party to the contract may result in the contract being cancelled. For example, if the employer does not pay, the contractor is entitled to cancel the contract. On the other hand, should the contractor fail to provide the work in accordance with the provisions of the contract, the employer may cancel the contract.

PERFORMANCE GUARANTEES

Performance guarantees are issued by financial institutions such as a bank and provide for payment of money by the financial institution to the employer should the contractor fail to complete the contract, e.g. should the contractor be in breach of contract and the contract is cancelled or the contractor becomes bankrupt. Most construction works contracts require performance guarantees that pay the employer when the contractor has been in breach of contract and the contract has been cancelled or the contractor has become bankrupt.

INTERIM (MONTHLY) PAYMENTS

A contractor has to make regular payments for labour, materials, equipment and subcontractors during the construction period. To enable him to do this, a construction contract usually provides for "interim payments" to be made each month, based on the estimated amount of work done for that month and materials that the contractor may have bought and that have been delivered to site but not yet built in.

The contractor, in some forms of contract, is required to provide information to the employer's agents to enable him to draw up an "Interim Payment Certificate" that shows the amount to be paid to the contractor by the employer for that month. The employer must pay the contractor the amount shown in the Interim Payment Certificate after the certificate has been issued. If the employer does not pay the amount shown in time, he will be in breach of contract and will have to pay interest to the contractor.

If the employer still does not pay the contractor after the contractor has written to him demanding payment, the contractor may cancel the contract. This however should be done according to the cancellation clauses stipulated in the contract.

VARIATIONS AND PAYMENT MATTERS

The manner in which payments are made arising from changes to the scope of work needs to be understood as this is a fertile ground for disputes if not properly dealt with and can lead to a loss of money. On the other hand, an understanding of how compensation is made can improve the profitability of a project.

If the contractor contracts to provide the entire works for a lump sum, he is obliged to carry out any works which are indispensably necessary for completion, even if not specifically referred to in the contract documents.

Most standard forms of contract permit the employer or the employer's representative to order increases or decreases in any portions of the work, changes to the details of the work or additional work of a similar nature. The empowerment to omit work cannot be used to take away items of work for which the contractor has tendered and then to be contracted to another contractor.

Most standard forms of contract prescribe how the contractor is to be compensated for changes in the scope of work. Some standard forms of contract require that the contractor tender fee percentages, labour rates and equipment hire rates to enable the changes in prices associated with changes in the scope of work to be evaluated (see section 2.6).

RETENTION

Many contracts make provision for retention monies to be withheld from interim payments. Such money is held by the employer to offset costs which may arise from the contractor's failure to fully comply with the contract, including the making good of any defective work.

Typically a percentage of the progress payment is retained up to a stated limit and the total sums retained are released in two stages. The first stage is when the contractor completes the works so that the employer may use the works as intended and the second when the defects liability period expires.

RISK AND INSURANCE

Risk is the chance of something happening that will impact on the outcome of the contract. A contractor faces many risks in a construction works contract. However, by being aware of the risks, understanding the rights and responsibilities contained in the contract, proper planning and making sure the work is done properly the first time, the contractor will be successful and can make a profit.

Insurance is compensation that will be paid by an insurance company to the person or persons who have taken out the insurance if the risk event happens and causes loss. The consequences of a certain risk event happening will be the responsibility of either the employer or the contractor, depending on what the contract states.

It is important to remember that the person who takes out insurance is not always the person who is at risk. This means that, if the employer takes out works insurance, but the contract states that the contractor is responsible if a certain risk event happens, the contractor will have to pay for any loss or damage caused by the risk event that is not compensated for by the insurance payout. Because of this the contractor must satisfy himself that he has proper insurance to cover his risks if the contract states that he is to take out insurance and if the contract makes insurance the employer's responsibility, the employer has taken out sufficient insurance. If the insurance is not sufficient, the contractor must take out additional insurance to ensure that he will be properly covered. The contractor is in no position to "second guess" the additional insurance that could be required.

COMPLETING A CONTRACT

One of the important things that has to be agreed in a contract is when the work has to be finished. When the work has been completed so that, although a few small things remain to be done, the employer can use the works as he intended, the work is said to be "practically complete". When this happens, the employer or his agent typically issues a certificate indicating that the works have reached this stage of completion and provides the contractor with a list of the few small things that still have to be done.

The contract must specify when the work must be practically completed. Should the contractor not complete the contract by this due date, he will be in breach of contract and may have to pay penalties to the employer.

The contractor is required to provide a programme of the works at the start of the contract to the employer as part of the contract.

The programme is important for both the contractor and the employer, because the contractor uses it to plan his work so that he can be sure he will finish the work in time and the employer's agents use it to check the contractor's progress and to take action if the contractor falls behind so that the work is finished by the due date.

When the contractor has finished the work as stipulated in the contract, the works are complete. The contractor is then responsible for fixing any defects that are found for the period stated in the contract. At the end of this period, the contractor is paid all outstanding amounts that are due.

RESOLVING DISAGREEMENTS

The contract will stipulate which form of dispute resolution mechanism will be used in an event of a disagreement/dispute between the parties, i.e. the employer and the contractor. The dispute resolution specified in the contract may be one of the following: mediation, arbitration, adjudication or litigation.

When the contractor disagrees with the employer or an agent (or when they disagree with him), they try firstly to solve the problem themselves. If this fails, either a mediator or adjudicator is called in to settle the dispute. If no agreement is reached, the disagreement is settled by a court of law or by an arbitrator who acts in terms of the South African laws governing arbitration.

A mediator's job is to get the parties to settle their differences and reach agreement. He may use any means to do so and may meet separately with the parties or with both parties. He may help them understand what the problem is and may offer advice to the parties on a solution that may be acceptable to both parties. If agreement is reached, the parties record in writing what they have agreed. If no agreement is reached or it appears to the mediator that the parties cannot reach agreement, a court of law or an arbitrator is requested to settle the disagreement.

An adjudicator's job is to obtain information from both the parties, examine it in terms of what the contract says and make a ruling on it. The adjudicator is required to make the ruling within the time stated in the contract and follow the procedures described in the contract. The contractor and employer have to do what the adjudicator says. If the adjudicator's ruling is that the employer must pay the contractor, then the employer must pay the contractor. If one of the parties does not accept the adjudicator's rulings, he may, after doing what the adjudicator tells him to do, ask a court of law or an arbitrator to finally settle the disagreement.

CONTRACTOR'S LIEN

When one takes a car to a garage to get it repaired, one hands over your keys to the garage. When the car has been repaired and you have paid your money for the repair, the garage gives you your keys back. The garage does not have to give you your keys back until you have paid for the repair in full. The garage has the right of retention, right to hold one's property (i.e. the car), which is also known as a lien, by law until it has been paid.

A lien, or right of retention, is a right conferred by law upon a person who has put money, or money's worth, into a property of another or retaining such property in his possession until he has been paid. In a construction works contract, the employer hands over the site to a contractor.

The contractor is obliged to restore possession of the site to the employer after the completion of the works. However, if the contractor has not been paid, the contractor may by virtue of a lien, remain in possession of the site until such time as the amount due has been paid in full. This only applies if the contractor has not waived his right of lien.

A subcontractor who has not been paid by the main contractor is, however, under normal circumstances not entitled to exercise a lien over the property. The subcontractor's only recourse is to claim payment from the main contractor.

A lien can be a trump card when demanding payment.

The fundamental requirement to ensure that the lien can be exercised is to ensure that full possession of the site is maintained.

SECTION 2.9: PRICING A TENDER

BUILDING UP A TENDER PRICE

Tender prices can be built up by considering a number of components including:

General items: Being the items to cover the charges for compliance with contractual obligations (i.e. insurance; performance guarantees; provision of accommodation, equipment and support for the employer's staff or agents; samples, shop drawings and testing of materials; temporary works; and supervision) and the provision, maintenance and removal of site facilities (accommodation and buildings, services, communications and equipment).

Construction (work) content: Being the price of all the items that are to be constructed or built.

Overheads: Being the operating (every day) expenses incurred in the upkeep of the business and its offices that are not attributable to individual contracts including total cost of office personnel (salaries, allowances, medical aid contributions, pension fund contributions, etc.), office costs (rentals or ownership expenses, building maintenance, telephone, photocopying, etc.), vehicles (ownership costs, hire costs, maintenance, fuel, licensing, etc.) and finance charges.

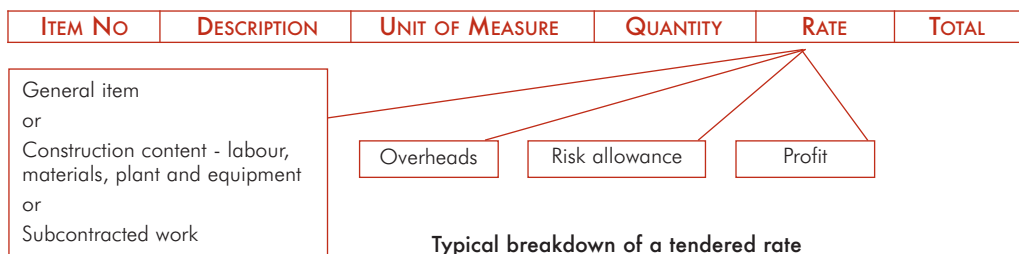
Risk allowance: Being an allowance (contingency) to cover the perceived risk associated with poor estimates of the cost of general items and construction content, inflationary increases in materials, plant, equipment, labour and fuel covered in the contract, bad weather, construction difficulties, community difficulties, delays in payment, poor workmanship, poor tender documentation, completeness of drawings and details, tolerances required, ground conditions, time allowed for completion, etc.

Profit: Being the amount of profit that is added on by a business that does not include any of the above.

The construction content can in turn be broken down into work performed using own resources and work using subcontractors.

Prices may be fixed for a period of time or subject to price escalation, i.e. linked to inflation.

Contractors need to gather data from their previous projects, manufacturers of products and equipment, trade associations and technical publications to enable prices for construction activities to be developed.

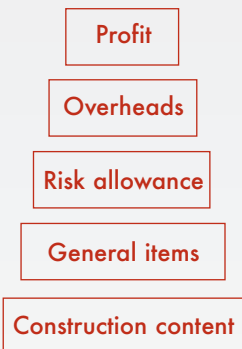


It is more important to get the total price for a project correct rather than the individual rates where bills of quantities are used. The rates in bills of quantities should, however, be a realistic estimate of the price for an item as any increase or decrease in quantities will affect the total amount paid by the employer, and depending upon the form of contract that is used, form the basis for assessing the variations to the contract price arising from any changes to the scope of work.

The pricing of a tender is dependent on the way in which a business is run and operated. A contractor may:

- Do the work with own resources.
- Subcontract all the work.
- Buy materials, subcontract the labour and hire or purchase equipment.

The type of project also plays a part in which method will be used.



Rates are built up by looking at what makes up the item.

ESTIMATING THE QUANTUM OF WORK INVOLVED

The establishment of the quantity of work involved in a contract is a critical activity. The starting point is to summarise all the similar types of work and to calculate from the drawings or obtain the quantity of work required from the bills of quantity, e.g. move 100 000 cubic metres, construct 10 000 square metres of office buildings, or construct 5,6 km of secondary water mains. This gives a good idea of what the contract involves and how much work is required to complete the contract within the required contract period.

The next activity is to break these items down into the different materials, trades or types of work that are required to construct the item. Each of these items should be broken down into the following four main components:

- Labour needed to construct the works.
- Materials (bricks, concrete, pipes, etc.) and plant (machinery, generators, boilers, etc.) which needs to be incorporated into the works.
- Equipment (scaffolding, TLBs, graders, etc.) needed to construct the works.
- Work, if any, to be subcontracted to others.

The amount of labour and equipment for each of these items needs to be estimated and the required quantity of materials and plant quantified from the drawings, specifications and bill descriptions contained in the procurement documents.

Equipment manufacturers have information on the typical productivities of their equipment, e.g. see Caterpillar Performance Handbook. This information enables estimates of the working time required to be made. Estimates of the standing time need to be made from a programme for the activities that require the use of such equipment, based on the proposed method of work.

The establishment of realistic production rates is a major consideration. There is no substitute for comprehensive data and feedback from previous work of a similar nature to the work being priced. It is important to remember that the cost of output depends upon many variables. It is therefore important to consider the conditions that prevailed at the time that the particular recorded cost of output was noted as adjustments need to be made to accommodate the expected conditions that will apply to a site (see section 2.4).

When each item has been broken down into these elements, the contractor should consolidate all the materials into a summary, so that prices for materials and plant may be obtained. Thereafter, the costs of its own workforce and equipment need to be estimated, quotations for plant hire and subcontracted works obtained. Finally, the supervision, personnel, services such as electricity, water and telephones and facilities required to store the materials, secure the equipment when not in use, maintain the equipment in working condition and manage the works need to be identified and costed.

In most contracts less than 20% of the items account for more than 80% of the cost.

The contractor should try to visualise what will be required to do the work and how the works will be constructed. There is an art to estimating.

Great caution must be exercised when a particular type of work is being considered for the first time where reliance is placed on information obtained from sources external to the business.

ACTIVITY	RESOURCE (EXCLUDES TOOLS)	APPROXIMATE DAILY (8 HOUR) OUTPUT
Excavation (manual) in soft material	1 x General Worker	2 - 4 m ³
Excavation (mechanical) in soft intermediate material	Tractor/Loader/Bcktr (TLB)	100 - 200 m ³
Excavation (mechanical) in hard material (rock)	Excavator with Woodpecker	50 - 100 m ³
Carting away within 150 m	1 x General Worker	2 - 5 m ³
Loading on tipper	1 x General Worker	2 - 4 m ³
Clearing and grubbing including carting away	1 x General Worker	15 - 20 m ²
Gabions (fixing and packing)	1 x General Worker	1 m ³
Backfilling including manual compaction per 200 mm	1 x General Worker	3 - 6 m ³
Erect or dismantle scaffolding	1 x General Worker + 0,3 x semi-skilled	3 - 5 m ²
Ordinary single-skin (90 mm) brickwork, open runs	1 x Bricklayer + 1,5 x assistants	10 - 12,5 m ²
Ordinary 90 mm brickwork, with corners, rebates, reveals	1 x Bricklayer + 1,5 x assistants	5 - 7 m ²
90 mm brick facings with pointing	1 x Bricklayer + 1,5 x assistants	3 - 5 m ²
Timber formwork to beams, lintels and walls up to 3 m	1 x Carpenter + 1 x Carpenter's assistant	5 - 10 m ²
Decking formwork including propping and ramps	1 x Carpenter + 1 x Carpenter's assistant	10 - 20 m ²
Mass concrete batching, placement and tamping	1 x 0,10 - 0,20 m ³ Mixer + Vibrator 1 x Charge Hand + 8 x G/W s	7 - 10 m ³
Reinforced concrete batching, placement and vibration	1 x 0,10 - 0,20 m ³ Mixer + Vibrator 1 x Charge Hand + 8 x G/W s	5 - 7 m ³
Steel reinforcement fixing to beams and columns	1 x Steel Fixer + 1 x Fixing assistant	50 kg
Steel reinforcement fixing to floors and slabs	1 x Steel Fixer + 1 x Fixing assistant	100 kg
Plaster/screeds	1 x Tradesman + 1,5 x assistants	5 - 10 m ²
Kerbing, including excavation, concrete haunching, backfill and compact	1 x Tradesman + 2 x assistants	40 - 60 m

NUMBER OF MASONRY UNITS AND VOLUME OF MORTAR REQUIRED

MANUFACTURING DIMENSIONS		NUMBER OF UNITS PER SQUARE METRE OF SINGLE LEAF WALL AREA	MORTAR VOLUME (CUBIC METRE/SQUARE METRE WALL AREA) MANUFACTURING WIDTH OF THE UNIT (MM)			
LENGTH (MM)	HEIGHT (MM)		190	140	90	106
390	190	12,5	0,015	0,011	0,008	-
390	140	16,7	0,017	0,013	-	-
390	90	25	0,025	0,019	0,013	-
290	90	33,3	-	-	0,013	-
190	90	50	-	-	0,013	-
222	72	51	-	-	-	0,018

Notes:

- 1) Wastage on masonry units depends on the nature of the exposed faces and the methods of handling. Generally a figure of 10% is appropriate.
- 2) The volume of mortar should be increased by a factor of 2,5 for brickwork and 1,75 for block work to allow for bulking, poor handling, storage, mortar droppings, etc.
- 3) Approximately six 50 kg pockets of cement and 1,3 cubic metre of sand is required to produce 1 cubic metre of class II mortar.

OBTAINING PRICES FROM MATERIAL SUPPLIERS

When pricing a tender it is important to identify which material suppliers will be used, based on price, proximity to the site, delivery times and discounts offered. Always try to obtain at least three quotes for the materials required and use the prices from the supplier that will best suit the project.

When getting prices from material suppliers, the contractor should also bear in mind the following factors that will influence the cost of materials:

- Whether or not the materials will be delivered or will have to be collected.
- Bulk discounts (combining similar materials from multiple contracts).
- Payment terms (accounts that only need to be settled sometime after the materials are delivered).
- Stock levels maintained at the suppliers.
- Returns of unused materials.
- Minimum order sizes and any cost premiums associated with the ordering of small quantities.
- Trade discounts.
- Delivery periods.
- Existing relationships with material suppliers.

In many instances the most obvious choice of a material supplier is not the cheapest or most effective for a contract.

A successful track record with material suppliers is a great asset and allows the contractor to benefit from certain cash flow advantages relating to having accounts with the material suppliers and bulk and early settlement discounts that might be offered when accounts are settled on or before time. This relationship is based on the confidence that the supplier places in the contractor to settle bills in full and on time. Should the contractor default on a single payment or be substantially late in paying bills to one supplier, it may become more difficult to obtain these advantages from other suppliers. In addition, other suppliers might decide to withdraw these privileges and require the upfront payment for materials.

Contractors that don't have a relationship with their supplier must have sufficient start-up capital to be able to pay for materials up front and still continue the works until their payment certificate is settled by the client (see sections 2.1 and 2.2).

Larger material suppliers may provide contractors with better prices than smaller material suppliers since they are able to purchase the materials from the manufacturers in bulk. This bulk discount is often passed on to their customers. Larger material suppliers will also generally always have the required stock and are as such able to deliver immediately. They may also have specials on tools and equipment. Smaller material suppliers, on the other hand, are generally geared to providing a very wide variety of materials and equipment. They are generally more expensive as their storage costs are higher due to a lower turnover in stock.

Very often construction materials are only available directly from the manufacturer. Manufacturers provide materials in bulk to their customers and may not be prepared to offer smaller quantities that may be required for a particular tender. They are also not always geared for deliveries and often require that the materials are collected.

In many instances there will be special items that have to be manufactured to be built into the works. This is where the contractor has to approach the manufacturers to ensure that these items have been correctly priced.

There are many benefits to establishing a relationship with material suppliers. Contractors that do so may enjoy a competitive advantage over their competitors.

Material manufacturers concentrate on the manufacturing process and are generally more difficult to deal with.

ESTABLISHING EQUIPMENT REQUIREMENTS

The nature and quantities of equipment required for a project can only be identified and listed after the contractor has identified the methodology for doing the work. This is achieved by means of a method statement. Decisions must then be made regarding the hiring or purchasing of the required equipment (see section 2.1).

Contractors should first assess their current inventory of equipment to see what is suitable for the project. Questions such as the following need to be asked:

- Is it suited for the work?
- Will it provide the productivity required to finish the work on time?
- Will it break down and cause undue delay to the works?
- What will it cost to repair it, if it is not in perfect order?
- How long will it last? For the duration of the contract? (If not, new equipment might have to be purchased or hired at greater cost part of the way through the contract.)
- What will it cost to maintain or service? What facilities are required to service the equipment?
- Has it been fully paid for? (If not, the repayments and depreciation costs need to be worked out.)

Hiring equipment eliminates the need for a large capital outlay. Hired equipment

CONSIDERATION	BETTER TO HIRE	BETTER TO BUY
Cannot afford to buy	✓	
Item will only be used occasionally	✓	
Item will be used often		✓
It will be possible to hire out the item when it is not being used		✓
An up-to-date model is needed	✓	
An older model will work just as well		✓
Maintenance and repairs are complicated or costly	✓	
The item is low maintenance		✓
A skilled operator is needed	✓	
Special equipment is needed to move it around (e.g. lowbed)	✓	

Although the hire costs may be slightly more expensive than purchase and ownership costs, the hiring of equipment allows the contractor to concentrate on other aspects of their works as the hire company is most often responsible for routine maintenance and the costs of repairs.

It is important when calculating the labour cost to take into account annual and sick leave that will be due to full-time employees or higher rates for contract workers. It is also important to make allowance for overtime rates, the time that the labour is not engaged in productive work for whatever reason and for severance pay.

is immediately available and is often serviced and maintained by the hire company. Usually the equipment is provided with operators (see section 2.1).

Choosing the hire company may be difficult and prices can vary considerably. It is always advisable to hire from reputable companies that have been established for a period of time, since they have a reputation to maintain, and will generally have a large inventory of items to choose from.

Purchasing equipment must be carefully considered before this option is followed. Where a job requires a specific item of equipment that can be used on many other projects, it may be a good idea to purchase equipment. The decision to purchase must not be taken lightly because it can become a large financial commitment if future projects are not secured or if there is no use for the item on other projects.

Where a special item of equipment is needed to complete the works and is not available for hire, the contractor may have to include the cost of purchasing it in the tender. The cost to the contract in this case will be the full cost of the equipment, less the expected selling price once the contract has been completed.

The contractor is advised when purchasing equipment on a once-off project basis to obtain quotes that are valid for the tender period and to ascertain the delivery times for such equipment. If this is not done, the equipment may be more expensive to purchase and, particularly when the equipment is made to order, might arrive too late.

PRICING THE LABOUR REQUIRED FOR A TENDER

Labour costs can constitute a large proportion of the costs for performing the works. Labour costs need to be accurately estimated in terms of the following:

- The cost of the wages, salaries and fringe benefits.
- Payments for bonuses and incentives, overtime, working in special circumstances, special allowance, absence due to sickness and holidays and severance.
- Payments made in relation to travel, subsistence and lodging, relocation, medical examinations and protective clothing.
- Payments for meeting the requirements of the law (e.g. Unemployment Insurance Fund contributions), pensions and life assurance, death benefit, occupational accident benefits, medical aid, vehicle and safety training.
- The number of persons involved in the task.
- Production rates.
- Redundancy of labour on critical tasks.
- Sharing of labour between tasks that are not concurrent.
- Training costs.
- Supervision costs (these are normally priced separately in the contract under the general items).

A charge to cover overheads for staff working on the site should also be considered. Such a charge should include payments for the provision and use of equipment, supplies and services relating to catering, medical facilities and first aid, recreation, sanitation, security, copying, telephone, fax, radio, surveying and setting out, computing and hand tools not powered by compressed air.

It is often easier to draw up the way in which each task will be performed and to allocate categories of labour to perform the work and cost this on a team basis.

The cost of transporting labour to and from the site should be included in the costs for general items.

PRICING THE EQUIPMENT REQUIRED FOR A TENDER

Equipment costs need to be accurately estimated not only in terms of the items of equipment that are required but also in terms of materials, fuels and other consumables that may be required to operate or use the equipment.

Pricing the equipment required for a tender can be viewed in many different ways, depending on whether it is owned, purchased for the project or hired. In all circumstances, there will be mobilisation costs involved to bring the equipment onto site and to take it off again. There will also be standing time, when the construction business is engaged on critical tasks and cannot use the equipment, even though an equipment hire company may still be charging for its use.

Allowances may also need to be made for the following:

- Delivery, erection and removal charges, if applicable.
- Fuel costs, if applicable.
- Operator costs, if applicable, the effect and cost of maintaining the equipment in good working order.
- Any special provisions for unloading and loading.
- Any temporary access roads or temporary works associated with the use or operation of the equipment.
- Any special insurances that may be needed.
- Any supporting equipment needed to operate the equipment, e.g. hoses, breakers and bits associated with a compressor.
- Safety measures that may be required.

The estimator must decide if the equipment is to be allocated to unit rates or against equipment costs in the General Items in the Pricing Data. Equipment is usually allocated against unit rates where such equipment is specific to an activity, e.g. excavation. Equipment such as concrete mixers and hoists, which are used in several activities and for different trades, should be allocated to General Items.

PRICING THE PLANT AND MATERIAL REQUIRED FOR A TENDER

When pricing the work to be performed it is important to price plant and materials correctly.

One major component that is often misjudged is the issue of waste. A reasonable allowance for waste needs to be included in the price for materials as it is virtually impossible to perform certain types of construction works without waste. Savings in the cost of construction can be made if the actual waste is below the allowance provided in the tender.

The main causes of wastage are:

- Off cuts.
- Demolition of work completed due to:
 - Faulty workmanship or poor quality control.
 - Setting out errors.
 - Not understanding quality requirements established in the scope of work.
 - Not working within the specified tolerances.
- Over excavation of excavations and trenches.
- Construction inaccuracies.
- Work methods.
- Substandard materials.
- Breakages in handling and offloading.
- Incorrect storage of materials on site (damage by the weather).
- Malicious damage.
- Pilfering and theft.
- Poor control of stocks in stores.

Equipment comprises items provided by the construction business to provide the construction works. Such items are not incorporated into the construction works.

Plant and materials are items intended to be included in the works.

The allowances for waste should be based on experience gained in previous contracts. Data given in publications and information supplied by manufacturers should be used with caution.

The price for plant and material should also include delivery to the site, providing and removal of packaging, as well as samples and tests. Costs relating to removal of materials surplus to requirements should be included in the costs for general items.

PRICING FOR GENERAL ITEMS

SITE ESTABLISHMENT AND DE-ESTABLISHMENT

Site establishment is an important part of the tender. This cost is normally provided for within the bills of quantities or the activity schedules and constitutes the amount that the construction business requires to establish itself on site.

Examples of items that might be included in site establishment are:

- Accommodation for own staff (offices, stores, storage yards, accommodation, etc.).
- Accommodation for the client's principal agent's or project manager's or engineer's representative.
- Rooms for meetings.
- Notice boards.
- The cost of bringing personnel and equipment to site.
- The cost of providing adequate access roads to the site (if necessary).
- Connections to electricity, water, sewers and telephone lines.
- Ablution facilities (water closets and wash hand basins and possibly urinals and showers).
- The provision of fencing or hoarding around the site.

There is similarly a cost for de-establishment where all temporary accommodation, material and plant surplus to requirements are removed from site. Often tenders will contain two items, namely one for the establishment and one for the removal of items from site. However, if there is only one item, then both establishment and de-establishment need to be priced for under establishment.

Careful thought is required, since this is a direct cost to the contractor and can influence the overall tender price quite substantially if it is not properly calculated.

An aspect that is often overlooked in tenders is the cost of transport. All personnel, plant and equipment need to be brought to site and removed again when their function has been completed. Where the labour will be accommodated on site, transport will not be a significant cost factor. However, if the contractor is not going to provide accommodation, then a transport strategy needs to be developed to make sure the workforce is at work on time.

Contractors often price their tenders on the basis that they will provide their labour with transport to and from work between the site and a designated central place. Alternatively, the labour is provided with a transport allowance as part of their wages and it is their responsibility to get to work on time and home again.

CONTRACTUAL REQUIREMENTS

Contractors need to price for the provision of a performance guarantee or bond and insurances in accordance with the requirements of the contract (see sections 2.4 and 2.8).

HEALTH AND SAFETY REQUIREMENTS

Construction businesses need to price to do all things necessary to comply with the requirements of the Construction Regulations issued in terms of the Health and Safety Act (see section 3.3).

Both electricity and water are usually only provided at one connection point each on a site and it is the contractor's responsibility to lay cables and pipes to the points of use.

TIME-RELATED (RECURRING) ITEMS

Time-related charges relate to the costs of running a construction site that are not included in the price for producing something. Items that need to be considered include:

- The costs of cell phones, faxes, internet and telephones.
- Electricity and water consumption.
- Site security.
- Cleaning and maintenance of facilities.
- Removal of rubbish.
- Consumables (groceries, fuel, photographs, cutting discs, etc.).
- Site staff salaries and wages (site agent, foreman, surveyor, clerks, storemen, night watchmen, drivers, etc.).
- Maintenance of survey and office equipment.
- Site vehicles.
- Access to temporary roads.

START-UP CAPITAL

The critical task for any contractor is to maintain a positive cash flow position, i.e. the cash that flows in is more than the cash that flows out (see section 2.2). This is an ideal position that is seldom realised in the early part of a contract.

In almost every contract, the contractor is required to finance all costs until such time as the first payment is received. This is the most difficult time for any contractor when resources are being mobilised. Most often, the costs will have to be carried through either an overdraft facility at the bank, extended credit periods from suppliers or from cash loans. In all of these cases, there will be interest charged to the contractor on the loaned amount or the overdraft. This is a cost that has to be included in the price for a contract.

ALLOWANCES

Allowances can be applied either differently to individual items or uniformly to all items. Often the profit mark-up is applied in a combination of these two approaches.

RISK

Risk is encountered in all aspects of construction (see section 3.10). A risk allowance enables a contractor to reduce its loss exposure should an event occur.

The contractor needs to identify whether there is an extraordinary risk attached to any particular activity that should be priced in the tender, and if so, what the likelihood is that this risk event will take place. If it is decided that this item is highly likely to occur and that there will be a cost attached to this, a risk allowance should be applied to that activity.

Contractors have been known to have won projects with anticipated high risk at good margins and have found that the risks were not as bad as anticipated and made good money. Conversely, many contractors have not won tenders because they have overestimated the risks involved.

OVERHEADS

Overall mark-ups to cover costs that cannot be attributed directly to a project are applied generally during the finalisation of the tender just before submission. These mark-ups can be done to allow for overhead costs imposed by the costs of running a head office or some other reason, e.g. costs relating to head office support staff such as company payroll administrators, bookkeepers, tendering staff and messengers and costs of computers and software that are common to all contracts.

These overall mark-ups need to be calculated from the experience that the contractor has built up over the past contracts.

A contractor may reduce its risk exposure by carefully choosing its projects, clients and staff.

High reward, high risk. Low reward, low risk.

There is no magic formula for setting the profit margin. In bad times, contractors have priced at "cost" to remain in business whilst in good times, the percentage profit may well be in double figures.

One formula is the Haylett Escalation Formula where the contract is divided into "work groups". Each work group is assigned an index with the base index being the index applicable at the time that tenders closed. Each month these indices are updated and a new index figure given. The increase in price is based on the ratio of the applicable monthly index and the base index.

Alternatively, the contract will provide coefficients for labour, equipment, materials and fuel and specify an index that applies to each of these items. The increase in price is based on the ratio of the applicable monthly index and the base index multiplied by the relevant coefficient.

The importance of having the work must be balanced by the risk involved in getting the contract and being successful in completing the contract with a profit!

Overheads can be estimated by considering what the contractor is going to be doing for the next year and what the likely turnover will be. If the same overheads are to be charged to each contract, the average overhead percentage will be proportional to the ratio of the contract divided by the likely turnover.

There is no certainty, particularly in a growing business that the estimate of the likely turnover will be reached. As a result, it may be advisable to consider a higher overhead than the estimated average. It must be borne in mind that the higher the percentage overheads, the less competitive the contractor is in being awarded contracts. Overheads need to be kept as low as possible.

PROFIT

Profit is profit. It should not include any costs or payments such as salary for the owners of a construction business.

Once all costs and the risk allowance have been decided upon, the profit margin should be looked at, based on what price the contractor thinks that the market can sustain or what price the client will be prepared to pay. Too high a profit margin may result in the tender being awarded to another contractor.

PRICE ESCALATION

The Rand cost of labour, plant and materials all increase over time. An hour of labour is an hour of labour, but wages increase over time. Statistics South Africa reports on the inflation rate of a range of commodities every month and as a year-on-year figure.

These figures are important as a contractor is required to agree prices for plant, material, equipment and labour at the start of a contract. The actual costs to the contractor when these resources are required may be higher than those estimated at the time that the contract was concluded.

The contract may provide for price escalation, in which case, the contractor will be compensated for price inflation in terms of a formula that is stated in the contract. This compensation, particularly in boom periods, may not be sufficient to cover the increases. Where this is believed to be the case, an allowance for under recovery should be made in the risk mark-up.

In some contracts that are typically shorter than one year, the contract may require the contractor to tender a fixed price, i.e. the rates tendered by the contractor must include for price escalation. Where this is the case, the contractor needs to estimate the effect of price inflation on costs based on the projected inflation rate.

FINALISING THE TENDER PRICE

A decision as to what the tender price submitted to a client should be can only be undertaken when estimates of all costs, the risk allowance, the allowance for price escalation, if any, and profit has been established. The finalisation of a tender requires consideration of the following:

- Knowledge of the marketplace.
- The market prices for the type of project that is being tendered for and the costing that has been determined in the build-up of the tender price.
- The risks involved in executing the tender.
- Other commitments within the contractor's organisation.
- Availability of resources.
- How badly the work is needed to keep the workforce employed.

In the last analysis, the tender price that is submitted is a business decision that is based on knowledge of the market, knowledge of the contractor's likely competitors and what the effect of being awarded the contract will have on the business.