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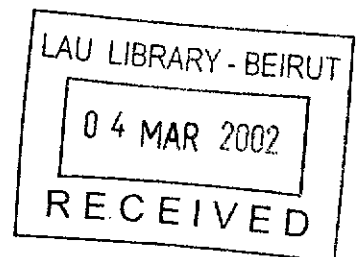
CONSTRUCTION FINANCING AND
BONDING BY BANKS

A Research Topic

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Management

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CHAPTER 1

INTRODUCTION

The construction industry, like any other, has through evolution and technological advance become increasingly complex . Always a high-risk business, it has thus become ever riskier .

Banking loans offered to contractors could be one of the most risky banking operations . In fact, and though it underlies great risks, banks should be ready to offer appropriate loans for the following reasons :

a) Contracting sector, mainly construction is considered a basic industrial sector that allows banks to extend loans .

b) The existence of many large and powerful institutes that deals with contracting and are worthy to acquire banking facilities .

c) Banks duty is to finance this industry due to its influence on National Economy .

Not so very long ago, the involvement of banks and bankers in construction projects was mainly limited to providing working capital and performance and advance payment bonds to their known and traditional customers . The chances of bankers needing to know about the complexities of a particular project were not very great .

Statement Of The Problem

Today all this has changed dramatically . Projects are extremely varied and sometimes of an enormous size and com-

plexity and often get into difficulties .

Construction companies are equally varied and sometimes of an enormous size and complexity and often get into difficulties .

Banks are now in a very competitive market and a greatly expanding market . The result is that the involvement of banks in a project often needs to be most extensive, consisting of :

a) Project finance to building owners or construction companies ;

b) Export credit financing in conjunction with government agencies :

(i) Raising letters of credit ;

(ii) Bid bonds ;

(iii) Performance bonds ;

(iv) Advance payment guarantees ;

(v) Retention bonds ;

(vi) Maintenance bonds ;

(vii) Transport bonds ;

(viii) Provision of working capital to contractors ;

(ix) Overdrafts or bank loans (unplanned) ; and even sometimes as equity participants (planned or unplanned) .

As a result ; it is essential that bankers, even though may employ consultants and advisors on their behalf, need to know and understand the fundamental principle of contracting construction .

The fundamental principles on any project are the same but the views and opinions upon these principles will vary depending upon who amongst the numerous people involved in a project is advising them .

A typical project may consist of:

- i) The building owner who can be a developer, investor, and user or a combination of all three;
- ii) Possibly a project manager or construction manager;
- iii) Design consultants consisting of architects, engineers and various specialities ;
- iv) Contractors and subcontractors ;
- v) Last, but not least, the bankers .

Statement Of The Purpose

The principal aim of this project is to relay the fundamentals, principal problems and remedies as related to construction projects . As stated, the items are seen in different ways by different people .

When projects and/or contractors get into financial difficulties, there are usually the following alternatives open to building owners, contractors and bankers :

- 1) Do nothing and see what happens ;
- 2) Precipitate a crisis by calling in bonds and guarantees or not extending loans ;
- 3) Support of the contractor by providing additional management or resources ;

4). Replacing the contractor .

Item 1) and 2) really required no further discussion .
Once the decision has been made, that is the end of the problem . Alternatives 3) and 4) offer numerous choices and methods to the decision maker .

The contractor can be supported managerially by somehow providing additional construction management or project management outside his organization . His cash flow problems can be assisted . Direct guarantees to suppliers and subcontractors can be given, who may then be ready and willing to perform in a better manner .

In the event that replacing the contractor is necessary, this may well be a decision involving you as bankers, as well as the building client or owner .

It may be that a straightforward replacement under the same form of contract is not the best answer, and this should be considered by us in more detail at a later stage, perhaps during the decision periods .

None of the alternatives open to the decision maker when a project or contractor is in difficulty will give a perfect solution, but in order to give whatever is decided upon the best chance of success, the construction process must be understood .

So, two points must be mentioned here :

- 1) Understand the construction process as a whole .
- 2) Be able to consider and appreciate the critical factors

in a construction project or construction company which will assist you in making your decisions viz a viz your involvement as bankers in whatever form this may take .

Performance Objectives

The author of this study attempted to achieve the following performance objectives :

(1) To provide bankers with an appreciation of construction procedures and problems, and how they can affect financing and bonding .

(2) To describe and illustrate method of appraising contractor's technical capabilities and financial strength for the purpose of determining suitability for financial support, bonding, etc, ...

(3) To suggest methods of monitoring contractor's performance when banks are responsible for the financing and for bonds/guarantees on construction projects .

Organization Of The Study

1) A general review of the construction process from inception to commissioning of the project and completion of all contractual and financial obligations .

2) Identify and discuss each point of interaction with banking system - e.g. : construction finance, bonding, letters of credit, etc,...

3) Financial analysis of typical construction contract :

- Analysis of cash flow ;
- Risk evaluation ;
- Resource allocation ;
- Project budget ;
- Financial controls .

4) From the above facts, consider the major themes of the project development based on :

- a) ~~Criteria for appraising contractors while consider-~~
ing their applications for borrowing and bonding ; and
- b) Monitoring contractor's financial performance .

CHAPTER 2

PRESENTATION AND ANALYSIS OF THE RESULTS

A) Contractor's Difficulties Or Problems :

I - Introduction .

It is to consider here the problems experienced by contractors at this present time, and to study the ways of dealing with them .

These problems however, are not recent ones but have occurred throughout history since construction began .

Formerly, difficulties of financing occurred with the owners of prestigious projects, who relied on the heavy taxation of their subjects to fund their dreams . The arrangements then were for the perpetrators of these projects to build the work themselves employing direct slave labour (there are those in the construction industry who would say that this aspect has not changed !) . Usually, these projects were badly financed and took many years or even centuries to complete .

History shows that during the Industrial Revolution, particularly with the expansion of communications railways, canals, bridges etc,... the problems in the construction industry were very similar to those of modern times, with a few men becoming very rich very quickly whilst the majority went bankrupt through payments not being honoured, or inadequate pricing of the work . Things were in fact, very much the same jungle at that time as they are today .

In the last two or three decades the rapid advance of tech-

nology has greatly increased the risk to contractors . This has partially been offset by the advent of proper management establishment, financial controls, and computerized techniques . Frequently however, theoretical advancement has outstripped the capability of construction techniques . The results are seen in road pavements breaking up, (Laboratory analysis dictate certain pavement thicknesses, which fail in practice due to the inability of the construction team to work within these tolerances), failed bridges (box girders), and various other types of failures .

The Sydney Opera House is an example of construction disaster, where the design simply could not be built. The original contractor I believe went bankrupt and a firm of consultants was brought into modify the design . The original foundations were largely demolished, and a modified structure redesigned and built .^{"1"}

In fact, technical failures are not restricted to current times either . Either Telford or Burnel was experimenting with the construction of arch bridges by making the arches as flat as possible to achieve graceful lines in the structure and to avoid excessively high embankment approaches .

II - Types of problems :^{"2"}

Now we will mention some problems which are commonly experienced by contractors in the sense that many events can negatively impact the capital adequacy and thus the borrowing capa-

city of contractor :

1) Loss jobs : Probably very few contractors have not had at least one loss job, whether from poor bidding, poor field supervision, bad labor conditions, inclement weather, cost escalations, poor material deliveries, subcontractor performance failures, difficult relationships with owners or architects, or combinations of these problems .

2) Inadequate construction volume : This can result in inadequate gross profits to cover overhead and can create operating losses . It can also cause the contractor to start bidding more closely, sharing his bid prices to get sorely needed volume and thus increase the risk of taking on unprofitable contract work .

3) Too much volume : This can spread supervisory management too thin, in which case the construction company may lose control of its field work and can result in profit erosion or actual losses . It can further create financial stress as the company's capital may be inadequate to finance the higher levels of work in progress, receivables, and retentions required to carry the higher work load . Bank loans may be inadequate to make up the difference, especially if the bank should get nervous about the level of debts being carried and possible loss of control on the field work .

4) Overhead expenses too high : An inordinately high overhead creates a need to take on volume and can result in the problems outlined above .

5) Slow or poor-quality receivables : Probably the largest asset on the balance sheet of most contractors is accounts receivable . The contractor should select his customers carefully to avoid the possibility of an uncollectible receivable . On most private construction he should know the source of the owner's financing and should not hesitate to verify his independently, either directly or through his own bank . Beyond this, he should be careful how he handles his lien waivers, as these may end up being the ultimate source of collection of his receivables, no matter how carefully he screens his customers . Finally, he should use strong and persistent collection efforts because, as we all know "the squeaky wheel gets the grease".

6) Overinvestment in fixed assets : Some contractors carry too large an investment in equipment or in other fixed assets such as their office building, leasehold improvements, or the equipment yard . Rental options should constantly be considered to reduce the potential long-term risks of ownership, such as servicing the debt involved, reduction of working capital, and possible capital loss on ultimate disposal of the fixed assets .

7) The wrong kind of joint ventures : Joint ventures can be helpful in spreading risk, in having another source to check estimates, and possibly in eliminating a potential competitor for the job involved . On the other hand, joint ventures are essentially partnerships and they can be a source of severe problems if (1) the contractor's joint-venture is weak financially and cannot make his cash or equipment contributions ; (2) the partners do not have a clear understanding of their individual rights and duties; or (3) there is poor communication between the partners leading to a lack of control and direction .

8) Investments in outside ventures : The business should not have any important portion of its capital tied up in an outside and unrelated activity . This simply reduces the company's working capital - often reducing the cash flow and the credit availability - and, furthermore, makes it more difficult for the banker to fully comprehend the business and thus take care of his financial needs .

9) Entering into a new line of construction with inadequate knowledge : The bankruptcy courts are replete with instances of contractors going into bankruptcy after failing at a type of construction they knew nothing about. Excavators have lost money in paving work, road builders

have dropped millions on sewage-treatment work, high-rise builders have lost money on hospitals, and so forth. Diversification is fine, but only after rigorous examination of the new business, its problems and hazards, and only if based on experience gleaned from handling smaller jobs which would not create serious problems if unsuccessful .

10) Entering new geographical areas without adequate knowledge : This can occur domestically and internationally and can result in some tragic losses because of unfamiliarity with local customs, labor relations, labor productivity, etc, ...

III - Rules for successful contracting : "3"

Successful contractors are not created in a day, or by the successful completion of one or two contracts. The really successful ones are molded by years of experience gained through combatting the elements, economic and labor problems, wars and depressions . Such contractors have had to fight their way back to the top, sometimes more than once, after suffering severe reserves . Fire tempers steel . Adversity tempers good contractors .

Summarized below are the simple rules which, if followed, will help a contractor prepare to meet the adverse problems he is bound to face at various times in his career . These

rules will, in fact, assist you, as the contractor, in avoiding situations that could lead to disaster .

1) Have a C.P.A. set up an efficient cost-accounting system that will keep you abreast of your contract costs and enable you to stop losses before they ruin the job and possibly you, the contractor .

2) Keep your financial condition liquid so that you can meet emergencies without the necessity of calling on others for financial assistance . You should not tie up too much money in equipment . Enough is enough . Anything more is a weight around your neck . Cash is a good "ace in the hole" .

3) Invest your money in assets that, in time of need, can be liquidated quickly . Mortgaged real estate or non income-bearing real estate cannot always be liquidated without loss .

4) Purchase substantial business life insurance on all your key personnel . This is particularly advisable on individual operators, solely owned coporations, and partnerships .

5) Keep your volume of work within your financing and loss-absorbing power so that you will not be entirely

wiped out by a contract loss and unable to start anew .

" Make haste slowly but surely " .

6) Keep your organization compact and intact . Thus, you will know each man's capabilities after he has been with you for years . You cannot always rely or depend on strangers . When business is poor, you can " carry " a tight organization . In good times you can always expand by hiring temporary help .

7) Pay your subcontractors and material men promptly and discount your bills if possible . In addition to saving you 1 or 2 percent, you will build up your credit, and, when you need it, your suppliers and subs will give you a " break " .

8) Stay out of disputes and lawsuits wherever possible . If you can compromise or arbitrate a dispute, it is far cheaper for you than going to court . Credit reporting agencies always note the number of lawsuits, attachments, and judgments recorded against contractors; and material suppliers, surety companies, and banks always receive copies for their credit files .

9) Consult with your lawyer before you get into trouble - not afterward . More and more frequently architects and

engineers are using the contract terms as a means of foisting onto the contractor responsibility for things which the owner, architects, and engineers should rightfully assure .

10) Last, but far from the least, recognize your surety, your insurance agent or broker, and your banker as integral parts of your organization . They should never be too busy to consult with and advise you . They all play an important part in your operation and success . Three of them, and they can be a real asset to you if you will let them assist you .

B) Evaluation Of Contractors ⁴ :

I - Characteristics of contractors .

Contractors come from many walks of life, though to be sure the majority of those who start, lacking proper training and experience and a flair for management, have little chance of success .

The lure and romance of contracting, like the lure of finding gold or oil, attract many hardy optimists . When one drops out through lack of finances or training plus experience or natural aptitude, there are two to take his place . Thus the field is always overcrowded . Competition, though more intense at some times than at others ; is always keen , and the

weak are soon weeded out . Like the old couplet about settling the West a hundred years ago : "The cowards never started and the weak died on the way" .

Successful contractors are a breed apart and their histories make colorful monuments to their ingenuity . Many, starting from scratch without money or training, climbed to the top by sheer courage and hard work, learning as they went along . Some were shovel rumers, art skimmers, carpenters, steel tiers, plumbers or concrete workers . Some were civil or mechanical engineers, attracted from a safe profession to its more dangerous and exciting cousin . Even a few lawyers, timekeepers, and accountants took to the construction field and became outstanding contractors . They all, however, shared the same characteristics : optimism, courage, basic good judgement, and willingness to work .

II - Classification of contractors . "5"

The marketing manager is the one who goes around the market place attempting to create business generally from already established, well-known contractors, i.e., ones who you are prepared to have a look at in terms of taking an exposure . Some banks have an in-house facility which keeps a regular track record of may be the top contractors in the country . They know exactly how they are getting on or are to immediately take a risk situation without any evaluation, you don't have to, it is already there .

A number of banks will always look towards lending, bonding or guaranteeing for the year-book of companies, and ensure by virtue of the magnitude and financial standing, there is actually no problem so therefore simply approach them, you have a situation already established . With such contractors you have established facilities lines, they are already negotiated, they are secured by guarantees from the contractor . Then you come into the area of where there is no identifiable risk, it is a borderline case, the risks are totally unidentified and therefore whilst the financial reassurance is there, there is no real reason why you should not proceed . There is a question mark because, from a track record point of view and from a management point of view, one or two things don't stack up .

So these are the areas which we must look for how you should tackle approaching evaluating the contractors where your risk is not identified and you are totally dependent on the contractors performance on the project . We have the situation of sub-contractors under the heading of "Classification" because from time to time we are approached by sub-contractors who also have to evaluate in a very similar fashion to the main contractors . I think the most important factor when we're talking about sub-contractors is that in most cases, are forced to have a back to back bonding arrangement with the main contractor . The most important point to make here is that from a banker's point of view, I would look at that situa-

tion but the very first question to ask is "Will your bond be called only if the main contractor's bond is called ?"

I think that is we're approached by as many contractors as we are, we sometimes attempt to get a sub-contractor in a situation where we're able to call his bond regardless of whether our bond is called or not but this is commercial business . From a banker's point of view this is not good business .

III - Evaluation process .⁶

Before starting to evaluate a contractor, we will first tend to state the stages of approach to banks, which are :

- Pre-established contractors
- Project by project approach pre-tender
- Invitation to joint syndication
- Lead bank in syndication
- Subsequent to tender - credit lines

In evaluation a contractor we must look for the following :

1) Financial standing :

- Balance sheet and bonding capacity; we must look for the balance sheet strength and liquidity of the company .

Bonding of the contract always carried by banks, thus providing security .

- Payment record to subcontractors / suppliers
- Extend of current work load and exposure
- Company history and reputation .

2) Management structure:

- Senior management presentation
- Company management structure
- Contract disciplines - analyzing projects
- Site management policy
- Reporting systems
- Procedures manual - standardized approach
- Accountancy/ financial control and reporting stance

i.e., on montly basis to see how the project is going .

3) Managerial evaluation:

- Evaluation criteria, i.e., from which basis we must look to it, managerial capability .
- Fast track concept i.e., managerial design and schedule skill .
- Negotiated contract and the available information about designing .
- Competitive tender .
- Corporate location .
- Staffing level / outside consultants, do they have in them managerial skill and full range of skill .
- Preconstructing value and engineering capability (structural, mechanical, engineering and scheduling staff and thus controlling cost during the construction) .
- Scheduling procedures and this depends upon the general

contract .

- Subcontractor relationship and this depends on the ability and willingness of general contractors to arrange the target schedules and completion dates, record of payment and actual managerial skill with subcontractors and the relation in case of claims with the developer .
- Change orders procedures : methodology under change orders of the contract procedure in pricing .
- Past projects record : past record of construction project, completion of projects .

4) Track Record:

- Volume of business/turnover i.e., growth rate .
- Type of work executed i.e., general housing, airport, hospital and bridges .
- Completion certificates for projects executed .
- Current backlog i.e., profitable or not; risky or not .
- Labour stand .
- Plant ownership i.e., if it exists .
- Have any bonds been called .

5) Guarantees / credit lines:

- Bid/advance/performance/retention, and we must remember that bonds should be return back at the end of the project and even if the bond is expired the bond is exposed .

- Sydication situation .
- Assignments .
- Cash margins on bonds .
- Sub-contractor relationship to main construction bond .

6) Tender Evaluation:

- Tender result shows low bid .
 - Tender negotiations .
-
- Potential investigation and profit projection .
 - Check turnover projection .
 - Check cash flow projection and adjust for worst cause .
Eg. 25% on forecast .
 - Retention and final payment release .

7) Bank's Exposure:

- Advanced payment bond should be just pro-rata .
- Performance bond .
- Negative cash flow finance .
- Credit lines and credit facilities .

8) Evaluation of the developer:

- Financial statement and equity position, i.e., the developer should give the bank the details of the project, manner to proceed the cash needs with financial statements .
- Repayment guarantees/ letters of credit, and this depends

on the policy of the bank .

- Management intent and capability :
 - In house staff .
 - External project manager .
 - Reporting procedures .
 - Contingency arrangements .

9) Tender Award:

- Last minute contract amendments .
- Site handover (the start of the clock and is also the start of the bank's exposure) .

10) Project commencements:

- Contractor and bank exposed after the project has commenced .
- "Building the project" & "Monitoring" is dealt with seperately .
- Payment delays causing financial difficulty and bankruptcy .

11) Evaluation of the project:

- Ability of contractor to repay and pay .
- Savings and loans organizations .
- Feasibility study .
- Marketing view .
- Financing and lending policy to meet conversion loans for several years .

C) The Bankers :

I - Legal aspects of bonding business .

Stated in the simplest terms, a contract bond is a guarantee of contractor performance and is the instrument by which a corporate surety company (the guarantor) guarantees the owner of a construction project (the obligee) that the contractor to whom a construction contract has been awarded (the principal) will fulfill the contract in accordance with the plans and specifications and with all attendant financial obligations (such as wages, materials, and subcontracts) having been paid in full^{"7"}. The contract-bond form, as a rule, is a short, concise instrument, referring to the terms of the contract itself and stating that failure of the contract (principal) to properly fulfill all obligations under the contract will cause the surety (guarantor) to intervene in response to the principal's default, nonperformance, or debt to protect the contractual interests of the owner (obligee) and to indemnify the owner in the event of loss, not to exceed the face amount, called the penalty of the bond .

The expansion of international trade in recent years and the dramatic increase in size and importance of some markets have highlighted the need for a more precise definition of rights and practices related to guarantee bonds . The purpose of a guarantee bond is to require protection in a contract to ensure that all the obligations of the seller under it, were fulfilled in full . Thus, a bond is simply a guarantee by a

third party, who for a fee, agrees to accept responsibility for the performance of the seller's obligations . In the event of the seller's default, the third party pays . This, in over-simplified terms, is what a guarantee bond is all about . While guarantee bonds may take, different types, the most commonly requested in the area, are bid bonds, performance bonds and advance payment bonds, all of which are overwhelmingly, in the form of unconditional bonds . Unconditional bonds are payable for any reason in full and on first demand without the buyer having to prove that the seller was in default^{"8"} . In these situations, the seller must decide if he is willing to give the buyer the equivalent of a " blank check" or a "promissory note payable on demand" and line with the concurrent risk involved .

The arrangements of bonds is still a bank's function rather than an insurance company as they are provided almost exclusively by banks, which generally issue them in accordance with the following features :

1) The bank's obligation to pay must be unconditional - the buyer can call the bond upon simple declaration of default by the seller, without proof of the latter's malperformance .

2) The bond must state the maximum amount of the bank's liability .

3) The bond must have a fixed expiry date .

As to the criteria for judging whether to grant a bond or not, there seems to be a consensus among bankers that the contractor's competence is the risk not his bank balance . In a conference held for bankers in London, it has been said that, a banker, in considering an overdraft to a customer, judges him on what he can offer as security . In the case of a contractor's performance bond, however, it is his ability to do the job which must be assessed . If the seller cannot touch him however good his counter - indemnity .

The prudent banker should never put himself in a situation where he must determine questions of law in disputes between the buyer and the seller and judge whether the latter has fulfilled his obligations under a contract . The language of the bond should be such that the demand which triggers the claim should be a bank's demand and not a third party's demand . Any wording that might suggest a possible conditional obligation should be avoided . The bank has no legal obligation to refer a claim under an unconditional bond to the seller before paying it to the buyer . The bank becomes, in effect, a document merchant - he should simply deal with documents and is only required to examine them with reasonable care to ascertain their compliance with the credit and not become involved in disputes between the seller and the buyer . If upon presentation of the documents, the bank satisfies himself that the

documents upon which payment is to be made are in a proper form, the bank is bound to pay under the credit . Thus, in relation to claims under a bond, the banker's primary function should be essentially the financial backer and not the arbiter of the underlying contract "9" .

In the Arab World, while unconditional bonds are heavily weighted in favour of the buyers, they do much to ensure that sellers live up to their contractual obligations of a contract or even simply to disappear with an advanced payment bond, are not uncommon in the region . While at the same time, claims by public buyers do not occur every day the track record of the Arab States is good as such buyers do not make their living by the calling of bonds . They are more generally interested in performance . They want to preserve their reputation and want their project . Than in receiving an amount of cash from the sellers . Accordingly, they are more likely to renegotiate with the sellers than call on the bonds relating to the underlying contracts . Furthermore, such unconditional bonds should not frighten the banks which issued them because they have a financial interest in the seller's assets anyway . If both, the guarantor and the buyer prefer unconditional bonds in the area, it is not surprising that the seller in many cases has had little or no alternative but to agree .

As the bonding system is not being abused and seen in this broader commercial or trade context, the risk of unfair calling in the Arab World becomes negligible . It is not al -

together true, therefore, that bonding conditions in the Arab world are " inequitable " and there is no need for sellers to be " jumpy " and " nervous " about guarantee bonds in the area. The governments of the Arab world may argue that the general bonding requirements in their countries are not unfavourable and may appear less onerous than at first glance seen in broad comparison with those in Europe and U.S.

Their requirements of anything up to 20% and 5% to 10% of advanced payment and performance bonds respectively issued by banks are not large sums in comparison with the bonding requirements in the West in which the liabilities of the insurance companies may run up to a maximum amount equal to 100% of the contract price .

The moral of bonds is to seek good advice and to examine the wording carefully before signing in conjunction with your legal counsel in order to determine the true nature of the commitment . It has often been demonstrated that much litigation could have been avoided if the contracting parties had called more often upon their lawyers when negotiating and drafting bonds used in international contracts . As judges and arbitrators in many cases have stated, there are too few lawyers at the beginning and too many at the end .The specific wording to be used will depend on the form of the bond required . If unconditional bonds are required and the wording is non-negotiable (as is the case of most public buyers in the Arab world), then the seller can assume a stronger defensive posture by

making an effort to negotiate in his contract relating to such bonds, clauses which will offer him some minimal protection from an unfair calling . For example, the contract relating to the bond should contain a force majeure clause to the "10" effect that if the seller cannot perform his duties by reason of events beyond his control, the buyer will not call on the bond and if termination of the underlying contract is caused by force majeure, the buyer will automatically release the bond in question . It is important to note, however, that the most favourable clause in the contract will not protect the seller from having to counter-indemnify the guarantor for a claim made by the buyer under the bond . The reason is that any suggested wording in the contract will not affect the guarantor who is only bound by the terms of the bond, but it can affect the seller who is bound by the terms of the contract . Thus, the purpose of any suggested clause is to strengthen the seller's case in any future arbitration or legal proceeding, whereby the seller will claim that the buyer has called on the bond in breach of the terms of the contract .

In conclusion, as long as the Arab World continues to be a buyer's market, and if foreign sellers wish to compete, they have to accept unconditional bonds as a fact of life "11" . The relaxation on bond requirements in the Arab World will not come soon, - the practice of unconditional bonds in the area show no sign of withering away - per contra, their occurrence in the new law of international trade, is increasing .

II - The Banker's view .

- 1) Introduction
- 2) Types of bank credit
- 3) Hazards of construction financing
- 4) Steps a bank can take to reduce risk factors
 - a) - Basic ingredients in obtaining credit
 - b) - Financial information required
 - c) - Banker's analytical techniques
 - d) - Some managerial financial ratios
 - e) - Banker must have detailed knowledge of cost system
 - f) - How to regulate the financial information to lender
- 5) How much money will the bank lend
- 6) Financing subcontractors
- 7) Syndication alternatives .

1 - Introduction :

There is absolutely no reason why a viable construction company should not be able to obtain adequate and appropriate credit from its bank, and other banks .

So, arranging for financing is the first and paramount necessity facing a contractor . From the very start as a small individual operator or a partner, through all the stages of growth to the largest national or world wide diversified construction organization, the problem of assuring adequate funds

to operate contract commitments, provide for overhead, pay wages and salaries, buy and maintain adequate equipment, purchase supplies and materials, and start behind losses if they occur remains always present . As the company grows larger the problem becomes more complex, but the principles never change .

Almost every article I have ever read on the subject starts off by describing how risky loans to contractors are, how high the bankruptcy rates are in the construction industry, how difficult it is for a contractors to control their costs, and so forth, adnauseam . Admittedly there are difficulties, some of which we shall go over in detail . Despite the problems, nevertheless, the construction industry is huge, and for banks that intelligently accept the challenge, the industry can be a source of lucrative deposit balances, high-quality short-term seasonal working capital loans, profitable equipment financing, project loans, and other auxiliary banking business, such as trust accounts and the like ^{"12"} . Beyond this, there are few psychic benefits for the banker, because contractor customers by and large are enjoyable people to deal with . The key goals for the contractor are to develop a strong relationship with a good bank, to establish a reputation for meeting his obligations, and to maintain a credit worthy business .

We mean by " construction company " : (a) construction contractors (general contractors), (b) subcontractors of

various specialization & type ^{"13"}. Design-build contractors and construction engineering firms are excluded from this discussion and are real estate developers, whose credit needs are based primarily upon real estate values, and building supply companies, which generally utilize rather conventional financing techniques .

It is perhaps unfortunate that, aside from banks, most contractors have few alternative sources of financing, either short-term or long-term . Contractors are generally shut out of the public equity and out of public and private long-term debt markets because of their earnings volatility, their relatively small size, the risk nature of the industry, the lack of a marketable product, and the unorthodox accounting practices typically followed by many in the industry . Commercial finance companies, which normally relish the financing of a company's accounts receivable and inventory, tend to avoid financing a contractor because the nature of its receivables . Among the reasons for this refusal, finance companies cite the many state mechanic's lien laws that frequently give to suppliers lien rights that are superior to a finance company's . Finally, finance companies cite the possible intervening rights of a bonding company on contracts that are bonded by virtue of the bonding company's rights of subrogation ^{"14"} .

A banker faces these same problems when he advances money to contractor . Because the nature of the receivables, they are typically not acceptable collateral, and therefore most

bank loans-except for equipment loans - are made on an unsecured basis .I confess that it is worrisome knowing that, if a loan gets into trouble, we cannot look to having a finance company bail us out, as is often the case with our loans to manufacturing companies or other conventional borrowers .

I hope it is obvious from the above discussion that contractors are uniquely difficult for bankers to finance . So much so that, in a recent survey conducted by Robert Moris Association of Bank Credit, it was found that 48 percent of the banks polled had a policy against making loans to contractors .

This makes it critically important for such a firm to select its bank carefully, avoiding banks that have a such policy, and seeking a strong bank large enough to handle its needs . Even more desirable would be a situation where a contractor would select a bank that actually specializes in financing contractors . Such a bank would have a number of experienced lending officers who understand the operations of their contractor customers and thus can handle their financing needs in a responsible and knowledgeable way "15" .

2 - Types of bank credit :

Many types of bank credit are available . In this paper they are arbitrarily broken down into transaction loans, lines of credit, loan commitments, and letters of credit .

Transaction loans are generally advanced for a specific

transaction and are not made under a prearranged line of credit or other type of credit arrangement . Examples of transaction loans would be a bid check loan, which is used by the contractor when it borrows money to purchase a bid deposit check at the time the contractor is submitting his bid to the owner, usually a public body . The check is returned to the contractor if he is not low bidder; or if he is the low bidder, the check is returned at the time that he provides the owner with a performance bond . Transaction loans for working capital might be used to meet the construction company's payrolls or pay taxes, and are generally short-term loans, that is, they mature in 60 to 90 days and are normally expected to be paid off completely from receivable collections within a one-year period . Equipment loans are generally used to purchase new equipment, thus allowing the contractor to increase or modernize his equipment and improve his efficiency in performing the field work . The latter type of financing is long-term , that is, three to five years, and rests upon the borrower's ability to generate sufficient cash flow - that is, net earnings plus depreciation - to service the debt . Interest rates on short-terms loans range between prime and perhaps 2 percent over prime . Rates on equipment loans are somewhat higher, ranging between prime plus $\frac{1}{2}$ percent to prime plus 3 percent .

A line of credit is an arrangement whereby the bank expresses its willingness to extend credit for various purposes

up to the amount of the line at a certain rate of interest and based upon certain levels of compensating balances . It is generally used for short-term working - capital purposes and is normally established annually, based upon the borrower's year-end audited financial statements along with supporting documents . A line of credit is not generally considered as legally binding because certain events could cause the bank to cancel the line, the principal reason being a deterioration in the borrower's financial condition . Generally, no cost is involved in establishing a line of credit other than that the bank customer is expected to maintain a certain compensating balance requirements .

A loan commitment is normally a formal and legally binding loan agreement setting forth the exact conditions of any borrowings thereunder, and the various covenants that the borrower must conform to during the life of the agreement . Commitments can be either revolving, in which case borrowings can go up and down flexibly without disturbing the original committed amount, or they can be nonrevolving, in which case borrowings are generally taken down in stages and a loan reduction reduces the amount of the available credit . Generally, there is a commitment fee involved, most commonly $\frac{1}{2}$ of 1 percent of the unused portion of the available credit .

Letter of credit, in laymen's language, are credit instruments whereby the issuing bank substitutes its name and its "16" credit for the customer's . The issuing bank is irrevocably or

stand by . Documentary letters of credit involve the sale of goods or services and are often used when the seller wants assurance of payment by a third party, that is, the bank issuing the letter of credit . Typically, once the buyer has established a letter of credit, the seller ships the goods and sends a draft and the required documents through his bank to the issuing bank, which then inspects them to be sure they conform to the terms of the letter . If satisfied, the issuing bank remits to the seller's bank for his credit . A standby letter of credit does not normally involve the physical transfer of goods or services and is often equivalent to a guarantee of the applicant's financial responsibility for performance of a contract . Standby letters of credit can have an expiry from several weeks to several years . They are commonly used in international construction work when foreign governments require a bank performance guarantee equal to a certain percentage - usually 5 percent of the contract price -or require such a guarantee to ensure return of an advance payment should the contractor fail to perform . These advance payments are usually equal to 20 percent of the contract price and decline as the contract is actually performed by the contractor . The bank uses special care in approving such credits; although the construction work may be well within the contractor's capabilities to perform domestically, the work may be impossible to perform under the difficult conditions existing in some foreign countries . Standby letters of credit are included as an

extension of credit when the bank computes its legal limit to any one customer .

3 - Hazards of construction financing :^{"17"}

Contractor financing has been considered hazardous and challenging for many reasons . For one thing, any unsecured loans to a contractor literally stand " last in line " for payment in the event of trouble . Other creditor positions ranking ahead of such bank loans include taxes, wages and materials, both protected by lien rights of subrogation in effect give it a pledge of receivables arising out of contracts covered by performance bonds .

Other characteristics of the construction business that make contractor financing hazardous can be grouped into three broad categories :

- a) Contingencies over which the contractor has no control
- b) Contingencies within the purview of the contractor
- c) Contingencies of time and management .

Contingencies over which the contractor has no control include natural hazards, such as floods (involving extra costs for pumping out or containing water) and unreasonable cold (involving extra costs of protecting the structure from cold so that concrete can be poured, or carrying a job over because it could not be closed in before winter) . This category also covers strikes affecting either suppliers

and their ability to deliver materials on time, or strikes by the contractor's building trade mechanics, as well as outright failure of suppliers to fabricate and deliver the materials at the time required to keep the project on schedule .

Encompassed in the second category are the risks of inherent in the contractor's own field that he might not be able to anticipate or that he could overlook through inexperience . For example, soil and rock conditions are a fundamental determinant of cost in the laying of foundations, sewers, or anchors for bridges and dams . If water is present underground, expensive and time-consuming pumping and sheathing techniques may be required before any foundations can be poured . The contractor who has not anticipated such conditions, or who has not incorporated a " water clause " into the contract, must bear all such extra costs himself . Such oversights by the contractor can mean the difference between a healthy profit on a contract or a disastrous loss .

The third category usually involves two basic risks, time and poor management, which affect all types of contractors because of the inherent nature of their work . A contract usually involves a fairly long period generally a year or more, between submission of the bid and completion . During this interim, prices of materials or the scale of wages paid to the building trades may rise substantially, or the productivity of labor may decrease . Many large, well-run construction companies were plagued by such problems in the severely inflationary

period of the late 1960's . Of course, such problems are reflected in the company's profit statement .

Construction companies often engage in several projects concurrently . Although this practice helps spread the risk of some loss over a wider base and improves revenues and cash flows, it makes the construction company susceptible to differing standards of management among the projects .

If the company allots more attention and better managers to one project, perhaps because of its size or importance, labor working on other projects quickly senses this neglect and poor production per man may result . Lack of coordination or neglect can cause poor delivery schedules and necessitate expensive overtime shifts to bring the project up to schedule. Delegation of authority often does not work well in the construction industry . The complexity and interrelationship of the tasks involved, coupled with the critical time element, demand constant attention and coordination by management . A seemingly insignificant bottleneck in one area can quickly bring the whole project to a grinding and expensive halt .

In spite of all mentioned above, there are numerous reasons why banks are willing to extend construction financing in spite of the hazards . Some construction loans are written at higher interest rates than general commercial lending, and this compensates at least in part for their greater risk .

Construction financing often develops relationships between the bank and the contractor which lead to other corporate

and personal banking relationships . Such construction loans are instrumental in developing new business and industry within the bank's geographical market . This development manifests itself to the bank in terms of increased payrolls in the area, hence increased savings and new accounts . A bank invariably benefits from new business development in its areas .

4 - Steps a bank can take to reduce the risks factors : "18"

Given the inherent risks of construction loans and their substantial revenues for a participating bank, one asks what steps, if any, a bank can take to lessen the risk factor in lending to the contractor . Several protective evaluations greatly reduce the risk of a future write-off, and any bank can and should make these before comiting itself to a construction loan .

a) Basic ingredients in obtaining credit .

After certain very fundamental points are emphasized a construction company will find it easier to obtain a fair hearing and elicit a positive attitude from the bank .

First and foremost, the contractor must be a financially sound, viable company with a reasonably large working capital, net worth, and profitable operations in order to make the banker feel comfortable in lending money to it . Ordinarily, no amount of talking, pleasant personality, entertainment, or " good moves " by the contractor will convince the banker if

the credit is shaky . The financial condition must be presented in believable terms, that is, by a certified public accountant who is experienced in the construction business . The source of repayment of the loan should be clearly explained, should be logical, and should be supported by the facts .

The second basic factor is the credibility of the borrower . Obviously nothing is more important in developing a strong relationship than that the banker have deep trust in the contractor's revealing all the facts, both good and bad . The contractor should be sure to live up to every commitment, keep his word, and be scrupulously honest in his dealings at all times .

The bank will depend almost entirely on the honesty of the contractor for most of the information on which it bases its credit judgment . The nature of a construction company makes it difficult for a bank to audit and verify much of the financial information provided, so he must depend entirely on the contractor to complete the project according to specifications, to pay his suppliers, and to collect final payment in full so that he is able to retrieve the loan .

The organization of the borrower must be analyzed as well. Is the company a one-man organization or does it have depth ? Would the death of one individual, most likely the owner, paralyze the firm? Good record keeping and sound financial management are desirable and provide some protection to the lender, but they are expensive . Overhead can be excessive for the size

of the company and unwarranted for the type of project in question, or it can be inadequate for the size and complexity of the projects undertaken .

Next, the construction firm should try to be important to the bank, that is, the firm should be a customer that is profitable to the bank and one that the bank would hate to lose to a competitor . Typically, a bank's analysis of customer profitability focuses almost exclusively upon the level of collected demand deposit balances carried . These balances should earn the bank enough to profitably cover the cost of the check processing and other operating costs associated with the account . In addition, to the extent that there is credit involved, these balances should be fully compensating, that is, they should average some agreed-upon percentage of the credit. . At the time a credit facility is negotiated, the borrower and the bank usually reach such an understanding as to the level of compensating balances . Typically, they would be " ten and ten ", that is, the borrower would be expected to maintain over one year an average collected balance equal to 10 percent of the line of credit plus 10 percent of borrowings under that line . To the extent that the customer is deficient in meeting his obligations on both credit-related compensating balances to cover activity costs, the bank will frequently charge a fee . It is entirely appropriate for a bank customer to request an analysis of his account relationship from the bank, and he should study this analysis to determine just how

profitable he is to his bank . It is just possible that he may have more leverage with the bank than he thinks .

Once the contractor has met these criteria, he is well on his way to obtaining bank financing . The banker, if not actually eager to lend him money, is at least receptive to any reasonable request from a good customer whom he trusts and whose banking business he would hate to lose to a competitor . The next step for the contractor is to sit down with his

banker and review his financing needs, cite the expected source of repayment, and for him to lay out in sufficient detail the financial condition of the company . In making his credit analysis, the banker will focus his attention primarily upon the capital adequacy of the borrower, both the sufficiency of his working capital and of his equity capital . As the banker reviews the financial statements, he will make an overall judgement as to the amount of capital available to cushion against a possible set back from operating losses or from unexpected deterioration in some of the assets on the balance sheet-either of which could jeopardize the ultimate collection of his loan .

b) Financial information required .

Obviously, the banker's primary source of information is the financial statements of the borrowing entity . The contractor should routinely furnish the bank with a year-end audited financial statement, bearing an unqualified opinion from a

certified public accountant fully conversant with the construction industry . Many bankers - including the writer - like to meet the accountant personally to make sure that such is the case . During the times that borrowings are outstanding, the contractor should furnish quarterly financial statements which normally are internally prepared . At the heart of any financial analysis is a careful and through review of contractor's schedule of contracts in progress which, to be meaningful, must be dated the same date as the financial statement and must tie in to the statement . Beyond this, the bank often require agings of accounts receivable and accounts payable, a complete schedule of equipment along with a current appraisal and a cash flow projection .

c) Banker's analytical techniques . "19"

The financial condition and responsibility of the borrower are another protective evaluation to be made by the bank . There is no room for the unexperienced or careless loan officer in this regard . The loan officer must realize from the outset that financial statement and accounting practices of contractors vary widely and can't be judged by the standards or techniques applied to manufacturing companies .

The financial information submitted allows the banker to start his analysis of the borrower's capital adequacy . Basic to this analysis is the need for the banker to understand the accounting method being used, normally either the completed -

contract basics of accounting, under which no income is recognized on a contract until it is completed, or the percentage of completion method which allows recognition of income as the contract is being performed . Many companies advantageously combine the two methods by reporting income on a percentage of completion basis and by paying taxes on a completed contract basis, thus utilizing the advantages of both . Proper accounting requires immediately reporting of any losses when they are known, regardless of the accounting method being used . The banker's initial review of the company's operating history will indicate how successfully management has performed, and thus how profitable the business is likely to be in the future . At this point, the contractor should be able to intelligently and realistically explain to the banker exactly what happened in past years and how it was reflected on the financial statements . Next, the banker will quickly check the balance sheet to get in mind the size of the company's net worth, its debt-to-worth ratio, and its working capital position in order to get a " feel " for its general size, capital adequacy, and its debt burden . The next step is for him to review the schedule of contracts in progress which is a very important document and which really tells the most critical facts about the ability of the contractor to service present and future debts . The banker will pay particular attention to individual jobs where costs exceed billings in order to satisfy himself that these costs are truly reimbursable and

not actually losses in disguise . He will carefully review the anticipated gross profits with the job and will compare the anticipated gross profits with the company's general corporate overhead to determine the outlook for net annual profit or loss . As the future unfolds, the banker will monitor these actual results and compare them to projected results, thus gaining insight into the accuracy of the contractor's past forecasts . At this point, the banker will often look long and hard at the company's level of overhead expenses and form a general opinion of whether they are too high in relation to, first, his ability to obtain enough volume at sufficiently high profit margins to cover this overhead and, secondly, whether with the company's present capital it can comfortably cover the debts involved in handling the required amount of volume .

Assuming the banker is still interested in pursuing the possibilities of a loan, we know that he will turn back to the balance sheet and critically review each individual asset . For example, how much of the cash shown is under the control of a bonding company to prevent its diversion to an unbonded job ? Or how much is pledged as cash collateral to a bank for a loan or for a letter of credit and is thus unavailable for general corporate use ? The banker will study the accounts receivable to assure himself that they are current and due from financially responsible entities . Retained percentages may be carried as a current asset even though they may be due only upon completion of jobs that may have two or three years

to run and therefore do not truly represent cash available to the contractor to pay its current debts . Claims for extra compensation, unless approved in writing by the owner or his authorized agent, may be severely discounted or never paid at all . In today's inflationary economy, construction equipment is likely to hold its value rather well be worth more than its carrying value, but management may have an inflated opinion of what it would bring on the open market after the costs of repair, painting and sales commissions . To the extent that the company is carrying investments in nonoperating assets, the banker will analyze the values involved and, on any significant joint venture, investments or advances, he will want to review the terms of the joint venture agreement, its financial statement, and projections for profit or losses .

On the liability side of the balance sheet, the banker will look at the accounts payable to satisfy himself they are not materially past due . If it is general contractor's statement he is reviewing, the banker will check to be sure that amounts and sub-contractors, both progress billings and retentions, are not larger than the progress billings and retentions due to the general contractor, thus satisfying himself that his customer is not taking money due his subcontractors and using it for other purposes . The liability known as " billings in excess of costs " on uncompleted contracts is usually carried as a current debt . Generally, this liability arises when a contractor unbalances his bid to accelerate his

cash flow early in the job, or it represents unrecognized earnings . Thus, the item is not truly a debt, eventhough in the former case, the contractor must be aware that he will need to have some cash to finance the less profitable phases of the unbalanced bid job . Eventhough it is a liability on the balance sheet, most knowledgeable bankers are pleased to see a large " deferred-income " item, as this is sometimes called, because it represents intelligent cash-flow planning by the construction company, or unrecognized earnings, or both .

" Deferred taxes " can be a significant liability when a contractor is on a percentage-of-completion basis for payment of taxes . Deferred-tax liability is an attractive source of non-interest-bearing financing from the U.S. government, a rare commodity indeed . In order to understand the contractor's cash requirements to make these tax payments in future years, however, the banker must review the composition of this item and also the contractor's estimated completion schedule of present work on the books .

The analysis of the financial statement is important, but it is perhaps just as important for the banker to obtain a clear idea of what the contractor's reputation is in the trade . He learns this from his contracts in the industry, from general views that he may have picked up in social conversations with owners, architects subcontractors suppliers, and competitors . This will be a very important ingredient in his decision of whether to finance his customer .

d) Some meaningful financial ratios . "20"

Lenders and creditors have historically used certain financial ratios as short-cuts to analyzing the debt-paying ability of their customers . Obviously, these are only general guidelines and not necessarily applicable to any specific situation . In as much as construction firms have somewhat different characteristics than normal, the ratios are also somewhat different .

Current ratio, that is, the ratio of current assets to current liabilities, is often targeted at 2:1, but for a contractor it is less than this and could easily be 1.75:1 without indicating any liquidity problems .

The quick ratio, that is, the ratio of cash-plus receivables to current debt, is usually targeted at 1:1, but for a contractor should normally be at least 1.25:1 .

Debt-to-worth ratio, that is, the ratio of total debts to equity, is often targeted at 1:1 goal, but for contractors can reach much higher levels, sometimes as much as 20:1, and still not indicate trouble . Its comfort level depends upon composition of the debts, and how rapidly they must be paid . If, for example, debts are composed primarily of subcontractor obligations due only upon payment to the general by the owner, then the subcontractors cannot legally press for payment . This ignores the problem that sometimes arises in such cases when a financially weak subcontractor, who may not be able to continue working indefinitely without getting paid, might .

require cash advances from the general to meet his payrolls .

The gross-profit ratio, that is, the ratio of gross-profit to total revenues, is normally rather low in the construction industry, as is the net-profit ratio . For general contractors the former is seldom about 10 percent and often around 5 percent, and the latter is generally 1 to 2 percent net after taxes . For subcontractors, the ratios are often higher, approximating 15 percent gross and 2 to 3 percent net .

More important in judging the true value of a business is the percentage return on equity, that is, the ratio of net income to average net worth . Here a contractor should measure up to any other company in any other industry, in fact, it should theoretically exceed returns available in other industries because of the heavy risks involved in construction . An acceptable return is perhaps 10 percent per year, but some contractors earn 15 to 25 percent on their equity without taking inordinate business risks . If the average return on invested capital is less than 5 percent, though should be given to liquidity the company and simply investing the capital in risk-free government securities or other high-grade investments .

e) Banker must have detailed knowledge of cost system "21"

Another problem arises when the bankers tries to analyse work in progress on financial statements without a detailed knowledge of the cost system used . Even with well-prepared,

audited figures, an entirely different picture of the contractor's financial standing can be obtained, depending upon the method used to prepare the report (i.e., percentage of completion method VS. completed contract method, or allocation of overhead to job VS. allocation of fiscal year-end, to name a few methods) . Every contractor, regardless of size must have a good, workable cost system so that he knows where he stands on his work in progress at all times . This is becoming mandatory for any contractor if he is going to survive and progress under the conditions prevailing to day .

Assuming that a contractor has an adequate cost system, his work in progress data can still be misleading, because the sale price is generally set first, by the contract, and the ultimate cost is determined only when the job is completed . The point easily overlooked is the effect that this basic fact has on the contractor's profit-and-loss statement and balance sheet . All profits on unfinished contracts must be estimated, and accuracy is largely dependent upon the type of the job and the stage of completion . Although the unfinished construction contract may hold the key to the true financial position of a contractor, most audits provide only abbreviated schedules of work in progress .

Work in progress figures are also greatly influenced by the accounting method used . Although there are two recognized methods to be used in the preparation of contractor's statements - (1) completed contracts and (2) percentage of comple-

tion - it should not be overlooked that auditors tend to compute that costs incurred to date are in proportion to the billing, with the difference reflecting profit . This is often far from reality, because overbilling in some segments of the industry is a common and normal way of doing business . The banker must realize that when this practice is followed, the anticipated profit or over billings appear in the current asset section, distorting the true working capital position and invalidating any ratios developed from these figures .

Some loan officers are of the opinion that contractors cannot overbill because their estimates must be approved by the architect, engineer, or some governmental body . However, this view over-looks the fact that the contractor can obtain a substantial amount of overbilling on a contract by unbalancing his bid through front-end loading or over-estimating the percentage completed . Such overbilling may not be detected by normal examination of estimates .

f) Steps taken to regulate financial information to contractors "22" .

Bankers and other contractors have taken steps to regulate the financial information they receive from contractors in an effort to overcome many of the inherent difficulties of contractor's statements . The Robert Moris Associates have led the vanguard in this area . This group of commercial bankers

has done much to assist the development of meaningful financial data on this industry for use of its members . Figures 7-11-1 and 7-11-2 are two of the forms which they have developed out of their analysis of construction accounting .

The basic function of these forms is to clarify financial information through more complete disclosure and greater detail than would be obtained in traditional financial statements . Figure 7-11-1 contains a detailed balance sheet of company operations . This balance sheet has been carefully designed to segment "assets due from completed contracts" and "assets due from uncompleted contracts", since the latter asset category may never be fully realized .

Another worth-while distinction is made between land and buildings used in the business and those not used in the business . Land and buildings in these categories may by subject to entirely different depreciation schedules because they have unrelated useful lives and salvage values . When the land and buildings are categorized in this way, the lender has a more accurate picture of the company's important noncash expenses, i.e., depreciation and future replacement costs .

Figure 7-11-1, (see exhibit at the end) contracts in progress, contributes important information regarding profit and loss to date computed on uncompleted contracts compared with estimated, profit or loss on the contract balance of the projects in progress . This exhibit makes it more difficult for the contractor, perhaps, inadvertently, to realize a pro-

fit in one year on an uncompleted project which is later completed at a loss . If a project is completed at a loss, this loss ought to be reflected over the entire period in which the project was in progress . This is consisted with the accounting principle of a periodic matching of costs and revenues for any project . This form reduces the possibility of inadequate or uncorrected accounting procedures that allow a company to show a profit for three years and a great loss for the fourth year on a four-year job .

Unless some great, unforeseen costs arose in the fourth year, such an accounting would be incorrect and misleading because the company actually was losing money on the job from its start .

The various schedules of 7-11-1 are designed to indicate the unencumbered value of different assets and the maturity schedule of the encumbrances . This information enables the lender to compute the liquidity value of the company's assets and the amount of additional collateral the company can provide . In addition, the various maturity schedules provide a longer-range view of the company's liquidity position . If a company had a large amount of debt falling due at one time and most of its assets were already pledged as collateral, it might face the possibility of default, illiquidity, and possible bankruptcy unless it arranged some further cash infusion .

Figure 7-11-2 (see exhibit 2 at the end) provides detailed information regarding the contracts in progress, with

an emphasis on the relationship between the costs incurred and the revenues generated by each project . The casual observer might feel that these forms indicated an over-emphasis on work in progress . However, in light of the small capitalization of many construction firms in comparison with manufacturing firms and the special illiquid nature of a construction company's assets, it is possible for a poorly managed company to get into trouble despite an increasing volume of business due to inadequate cash-flow and a heavy debt structure . In the case of bankruptcy, the institution which provided the construction financing might find itself having to write off the loan completely because the partially completed project had no market value .

These forms and the explanation of their function should further strengthen the position which has already been made : that the lender should judge a company's credit worthiness only with reference to statements audited by a C.P.A. who knows the construction industry well . The audit statements, at least on a quarterly basis, and the lender should demand frequent and detailed job progress reports . Of course, as stated previously, the paramount consideration is still the integrity of the borrower .

The loan officer involved with construction financing should be familiar with the several types of accounting systems

that can be used to draw up contracts . These various systems have different ramifications for the construction company and hence for the bank's loan . Each has certain advantages and disadvantages over the other . However, one may be preferable to another, depending on the characteristics of the particular company in question . The alert bank officer should be able to recognize the best system for his borrower and consider the ramifications of that system on the loan .

5 - How much money will the bank lend :

As we conclude our discussion of bank-loans, I hope it has become apparent that there is more "art" than "science" involved in a banker's credit judgement . We have tried to explain how a contractor can get to a position where he will get a fair hearing from his bank . This is by being a valued customer, by living up to his word, by providing the banker with understandable current financial statements, by maintaining his financial affairs in reasonably good shape, and by maintaining a good general reputation . The banker can do the most penetrating financial analysis, but the analyzing amounts to nothing if the owner of the business is dishonest or if he panics when adversity strikes .

In responding to a request for credit, the banker will have certain guidelines in mind . He will not be particularly anxious to lend the contractor more than the amount of his working capital, nor will he be likely to make a loan which

is larger than the contractor's net worth . He may make these advances, however, if he is convinced that there are overriding considerations, the most important being that he sees a reasonably certain source of ultimate repayment . Another possible reason for advancing larger sums would be that the banker is trapped into lending more money to a company that already owes the bank a lot of money and the banker feels that is necessary to make further advances to recover his original loan . Obviously, there are limits to such arrangements .

One equipment loans, he will be looking for a collateral margin of at least 20 percent and for cash-flow coverage - that is, earnings plus depreciation - of at least double the debt service requirements .

6 - Financing subcontractors : "23"

Frequently it becomes necessary or advisable for the prime contractor to assist in financing one or more of his subcontractors on a project . It may be that the subcontractor has good credit and can put up a bond for his portion of the work, but he may find it inconvenient or impossible because of other commitments or contemplated commitments to provide all the cash to operate the specific portion of the job he has offered to sub . In general practice, the prime contractor makes the subcontractor wait for his pay until he himself receives the money on the monthly or periodic estimate covering his own work, as well as the subcontractor's work . He also in most cases with-

holds the same percentage from the subcontractor's estimate as the owner with-holds from the entire estimate, and does not pay the subcontractor the retained percentage until the work is completed and accepted by the owner - or at least the portion for which the subcontractor is responsible .

When the subcontractor is able to furnish a valid payment and performance bond, there is no basic objection to the prime contractor assisting the subcontractor in his financing .

This is usually done by paying his payrolls and payroll charges for him, as well as purchasing his supplies and materials or at least paying for those the subcontractor has purchased. The prime contractor will bill the subcontractor for the cost of these services and deduct the charges from the amount owned under the contract . This procedure has some actual advantages in that the prime contractor is still protected under the bond, and he has the additional advantage of being certain that items which could become lineable against the work if not paid have actually been paid, and will not delay the final payment on the contract .

All too frequently a prime contractor may be persuaded to award a subcontract by reason of lower price, previous acquaintance, or some other reason, and the subcontractor cannot furnish bond . In this case the prime contractor has taken on full responsibility for this portion of the work as well his own . He does not have a valid subcontract and should not consider the arrangement as such . There may be a valid

reason, such as unusual skill on a technical portion of the work, past employment creating special confidence, or some other factor, which makes the prime contractor willing to go along, considering the price paid above whatever the final cost turns out to be as a bonus . He should however, consider the arrangement for what it is - payment for supervision of a portion of the work . It is not a subcontract and should not be called one .

7 - Syndication alternatives :

Syndicated loan is the single most important financing vehicle in the world today .A syndication differs from a direct commercial loan in that a number of banks participate at the outset . Consequently, the loan must be packaged and structured so that the loan satisfies the demands of the individual participating banks (lenders) and the needs for the borrower . The task of fulfilling these two requirements is the principal responsibility of the " Syndication Leader " . "24"

The reasons for the creation and development of syndicated loans are : (1) the need of borrowers to have readily available sources of funds ; (2) the increasing size of individual loans ; (3) the desire to spread risks involved in making large, specialized loans ; (4) the attractiveness of management fees ; (5) the publicity for participating banks, and (6) the desire to form profitable working relationships with other banks .

For years bankers have been issuing stand-by letters of credit for their clients against a simple application form and indemnity which together rarely ran to more than one or two pages in length . If occasionally project size dedicated that the risk be shared among a few banks, rarely did the parties feel the need for normal documentation to govern the operation of the facility and the co-ordination required among the parties . The client normally expected merely to execute however many individual indemnities were required, with each bank issuing its share of the guarantees . The only challenge seemed to be make sure that all the pieces ended up together on the contracting minister's desk at the appointed hour .

Meanwhile, in the construction industry camp, the response to the advent of the syndicated bank guarantee ran from ecstasy to boredom . Most of the world's larger construction companies still maintained sufficient bank lines to accomodate their bonding needs . But in the ensuing two years, as project size has ballooned, more and more companies have been faced with the need of syndication .

To know more about syndication, we will approach the subject through the following points : "25"

A) Objectives of syndication are :

- 1- Increasing assessing entire bonding risk
- 2- Increasing bank counter - indemnified by syndicate of banks
- 3- Increasing bank selling - sub- participation without recourse .

B) Areas that requires attention when arranging syndication :

- 1- Credit analysis
- 2- Tuning
- 3- Bank constraints
- 4- Pricing
- 5- Syndicate structure
- 6- Documentation
- 7- Exchange risk or currency availability
- 8- Bridge facilities .

C) Information needed by participant to evaluate risk :

- 1- The contractor and the subcontractor
- 2- Knowing the project
- 3- Environment
- 4- Security :
 - cash collateral
 - contract proceeds assignment
 - export credit support
 - customer bank guarantees

D) Pricing :

One of the most difficult tasks in structuring the syndicated loan is fixing the price at a marketable level : Helping the borrower to relate this price to the best alternative sources of funds is the responsibility of the syndicate leader .

Pricing variables include:

i) Transaction risk :

- risk of the project
- risk of contractor
- sub-contractor's risk .

ii) Security/support:

- may be cash margin
- price bank guarantees
- other corporate/personal guarantee
- assignment of contract proceeds or export credit insurance .

iii) Syndication complexity:

- nature of counter - indemnity (clean or qualified)
- counter participation basis (number of participating banks)
- credit is syndicated in the open market or privately placed .

iv) Competitive market:

- evaluate pricing of transactions of comparable size
- risk and complexity
- available alternatives .

E) Exchange risks :

- credit exposure when converted to a bank's home own currency can actually increase
- provision for special cash collateral account funded by the contractor
- stand-by credit line designed to enable the contractor to ride through such aberrations until the market returns to its normality
- usage of forward/swap techniques .

F) Summary of risks in contracting finance :

- Types of risks :

1) Nature of guarantees :

- open-ended, final maturity, demand extension on payment
- no protection for banks against capricious calls
- the bank will pay if called after expiry date

2) Delays in the project; and this will lead to increase cost which is due to :

- delivery of site location
- condition of terrains

- variation orders
- Materials :
 - if not available locally
 - deliveries
 - alternative of things go wrong
 - high cost of internal prices
- Labour
- Equipment

- Organization management :
 - Lack of knowledge of cost contracts environmental and cultural differences
 - Efficient management and cost control/distribution of profits
 - External factors
 - Competetive situation including unrealistic bidding
 - Hidden costs not properly accounted .

G) Fees :

Commitment fees are often included in the structuring of the medium-term loan for the period of time the loan remains undrawn . For example, a fee could be $\frac{1}{2}$ percent per annum on the undrawn portion of the loan, such fee to begin accruing from the day the loan agreement is signed . As the loan draws down, the commitment commission ceases to accure on that portion of the loan and the agreed interst rate commences to accure . This

fee is negotiable and is usually prorated among the participating banks .

Management fees are usually charged by syndicate leaders. A one-time fee, normally payable at the time of signing, it is based on the total amount of the loan (i.e., $\frac{1}{2}$ percent flat on LBP ...) . The management fee is the subject of negotiation with the borrower . Many factors such as size of the loan, complexity of the loan, the syndicate leader's relationship with the borrower, and competition in the market for the borrower's business are considered in the negotiations . Sometimes for particularly large participation . In most cases, however, the fee is not shared and information concerned it is not made available to the syndicate participants .

D) Building the project :

I - Introduction .

We will approach this subject under the following headings: "26"

- 1) Pre-tender input
- 2) Post tender
- 3) Construction phase :
 - Contractual/commercial control
 - Preliminary handover
 - Maintenance period
 - Final handover .

1) Pre-tender input :

This is where the builder has some input, the preparation of the estimate in the form of agreeing the method of construction, the management structure of the project and the number of people . All these factors of course are very relevant to the estimator and form the basis of the pricing of preliminary items. Site layout is also very important, which forms the basis of an organised approach ~~of the execution~~ of the execution of the project and the location of the on-site production facilities . This is the whole basis of how you are going to go about the project and that in itself has a large bearing on how you prepare the tender and on the outcome of the tender . Similarly, with the preparation of the plant lists indicating sufficient data to enable a fast decision to be made . Do you have sufficient plant? Do you own or do you buy a second hand plant? Do

you buy a new plant, or do you adopt a lease-hire arrangement in order to assist your cash flow?

The preparation of labour forecasts, have a dual function. We estimate the price of a job in normal fashion . Having priced it, you will then be able to abstract the labour element and arrive at a number of man months required to do the project . In parallel with that we have a planner who would plan out the number of men months for production areas and you have a comparison .

You produce at this stage, turnover and cash flow projections for the project, which is also very important sometimes from a bank's point of view . The bank will require to see such documents if you are looking for finance . Most projects on the current market have a negative cash flow and therefore unless you produce this at the tender stage . As a contractor you cannot price the cost of that negative finance. You produce the programme and the philosophy of the programme . It may well be that the tender documentation gives you a start date and a commencement date, and all you really have to do is indicate how you are going to build the project within the tender dates . On the other hand, sometimes you are not given a completion date and then the expertise is different . You are competing with other contractors, not only on price, but on time and one has to be very careful that you do not over-commit yourself . Above all else, we have the onerous contractual conditions . In our company, we do not simply leave

this to a legal expert, we incorporate the builder's point of view because he has experienced the sort of problems that exist .

2) Post tender :

In the Post-Tender stage, the tender has gone in and you have received a Letter on Intent . You have to start thinking very clearly how you negotiate with the client out of some of the onerous conditions which you are not able to prequalify in the tender . This negotiation is your last chance to do anything about your contractual exposure .

Then the Contract Award. You are then at the stage of either receiving advance payment and the clock is starting or you are waiting for the site to be handed over, at which point you will receive the advance payment . At that point in time, the Project Report File which incorporates all the logic of the tender preparation is then given to the Project Manager and that becomes the basic performance criteria on which he is expected to be monitored . So he starts with the background of the project . You then have to register and obtain a licence .

3) Construction phase :

- Control disciplines . "27"

In the construction phase, we have the control disciplines which have been created during the tender . Under the heading of Planning you have critical path network analysis, timescale

networks, bar charts, short term programmes and the question of production planning management . The programme is produced on the basis quantities, output, labour, and that is how we monitor the project . The definition is that it is a graphical illustration of the project execution module by the implementation of rules of module which ensure that all dependencies and inter-relationships of activities are taken into account . We go from that into computerisation, a different subject entirely .

The submittal approval process is very difficult . It is a major discipline because, although it is not a contractual situation, you can never really use it on most government contracts to substantiate a claim for time, but what you can do is if you're given it and you, the contractor, are performing and are clearly adamant that the client is not performing, it gives you a better position when you come to make negotiations for an extension .

Labour Control and Plant Control: this is done on a plan actual basis, neatly, accumulatively and regularly monitored . Procurement is also monitored . We have a procurement programme, we monitor approvals and deliveries, contractor shipping . We know exactly where we are with all items that have to be supplied .

Turnover Graph and Cash Flow . It is a discipline that needs to be properly read, it needs to be properly adjusted from information provided from which proper senior management

policy decisions can be made .

Senior Management Site Visits . This is a discipline on all parties, the discipline of the senior management is also discipline on the site . It is the site management's opportunity of raising any problems they have got but cannot perform because materials have not arrived on time, etc .

Reporting Systems are also very important . You have a Site Reporting System where the site detailed report goes to the regional office or head office and they refine that report and the report follow-on and items which most senior management will be interested in . The Corporate Report is mostly financial and items of major importance .

Acting on Reports . Of course, most reports are no good if the action is historic . The action has to be immediate.

- Contractual Commercial Control : "28"

Having established the rules of measurement and payment and various contractual conditions, at the pre-tender stage, this is a document which summarises your liabilities, how you should go about protecting yourself . The Project Manager on his site can use this to ensure, having established these guidelines, that they maximise the best potential they can from the project . We produce a claims file .

A claims file is again on the project . Government department claims never get recognised until the end of the day . The only way you can help yourself is to finish off with a claims

file recording all your detailed reasons, and, if at the end of the day, with the background of a project completed on time or reasonably on time, in good quality and to a good standard, you can at a very senior level go to the government and sit down to negotiate, and you can, in fact, achieve part of your argument . This does not happen as the job proceeds . This will happen at the end of the day . This is what I call, end of day settlement and negotiation .

Change Orders were mentioned earlier on . The client will want change orders but he will have a system within the Government which means any change order cannot be formally issued for a period of 2-3 months or maybe there is no budget this year and you will wait maybe 6 months to a year in order to get the change order . If he still wants the work done he will tell you, and he will give you a letter to proceed with the work and he will evaluate the work as it goes on . But without the formal change order you are still very vulnerable .

Evaluations . You must see that these are done promptly because if those early payments are delayed, so the evaluation is going to be delayed and it will increase your delay in payment processing . There are very difficult obstacles in processing of payment within government departments . Everybody wishes to have a hand in it and instead of going through one department it finishes up going through ten departments and in each department there is an obstacle .

Defective Material Certified . It is very important for

you to understand this in advance .

- Preliminary Hand-Over :

The detailed lists are called snagging punch lists, for each area of the building to ensure that when your completion date arrives you are ready for inspection by the Consultant .

The Inspection Procedure is very important . The philosophy behind it is to have a clear sharp building, sharp presentation and sometimes you will get a reasonable handover . If you start off with an untidy situation you will have no chance. "29"

The preparation detailed lists is very important . Having inspected the project and having agreed on items you've got to do, that is what you should stick to doing . Unfortunately, 9 times out of 10 when you go back, the client will find that he's missed something or will add more things to it .

Negotiated Deals with the Client : Very important this . When you come to this stage of preliminary handover, this is usually when you have liquidated damages . If you haven't achieved this preliminary handover by the date in the contract, then you could be cased with damages . It is very important to get the client's representatives to understand this situation and he will try to make deals with you : "OK, we will give you a handover but by the way we would like a few extra things done at no cost" .

As-Built Drawings: We do this progressively throughout the job because again usually until these are presented you

cannot achieve the final payment .

Operations and Maintenance Manuals : this is again a contractual requirement, and Staff Training - these can be very onerous . You have to be very careful with it and consider at the tender stage .

Payment Status - Final Payment : this is usually again withheld until final handover has been achieved one year after the project has been preliminary handed over and you have told the client in writing "I have no further claims", which means that you have claims the client will string on, because he knows he owes you money and he is in a very good negotiating position .

The question of Retention : this also can depend on your final handover and depend on the production of all O and M Manuals and As-Built Drawings .

- Maintenance Periods : "30"

It is very important to know at the tendering stage what the agreement is . Do you have to consider fair wear and tear, what is the definition of it, what are you liable for? Are you on call for the year after you've handed the job over? What sort of commitment do you have, have you costed for this, have you priced for it? Do you have to have a presence on site, etc...

- Final Hand-Over : "31"

When you come to the Final Handover, which is usually one year after you've actually completed the project on the contractual date, again it is very onerous . Unfortunately, a lot of contractors have projects which have been finished but they have not been handed over for a period of 2/3 years after because the client does not really wish to take over the building. It is not a critical department, it is not a scope for which it needs to be finished at a certain time . He just doesn't need to take it over, he hasn't organised his maintenance so he will not take it over . This is a very difficult area because all your money is outstanding . The Defects List is produced at that final handover - you must go through it quickly and promptly and again be wary of client deals . When you've done the defects list it is not uncommon to then go and advise the client that you have completed all the defects, will he please come along and inspect the project . You will go along to inspect the project and find that you're doing another snagging list around every department of the building and he asks the resident directors or managers "Do you have any problems"?

Again, the client is holding the purse strings so you are in a very bad negotiable position .

II - The stages for building the project are "32"

- Planning
- Executing
- Monitoring (knowing & telling)
- Correcting

1) Introduction :

Talk will deal with what to look for to determine whether any particular contract is being competently executed, what information should be produced from site, and the actions that could be taken in adverse situations . Clearly this will be a general talk as the procedures to be applied will vary from one contract to another, depending upon size, complexity and repetitiveness .

2) Responsibilities :

- 1 - Clearly defined responsibilities between site & H.O.
- 2 - Site management responsibilities :
 - a) Planning
 - b) Executing
 - c) Monitoring - (weekly basis)
 - d) Deciding - with H.O.

a) Planning :

- 1) Should be done by site personnel (independent)
- 2) Check with estimator

3) Agree with H.O.

Should include :

- 1) Scheduling requirements of :
 - Labour (consider availability)
 - Plant (consider standardization, spares availability)
 - Materials (noting key dates for approvals)
 - Sub-contractors (what to sub-contract)

- 2) Contractor design work :
 - Permanent works
 - Temporary works

- 3) Construction program :
 - Master program
 - 3 month programBy allocating existing
 - Weekly program
 - Daily check

- 4) Drafting master budget and checking against tender allowances

Note : Budget will then be used for monitoring purposes .

b) Executing :

1) Management structure :

Main requirements :

- a) Properly structured
- b) Properly experienced capable people in key roles
- c) Mobile where applicable-but not too mobile !
- d) Duties clearly assigned
- e) Efficient communications system established- weekly meetings/daily inspections .

2) Functions :

- a) To organize work
- b) To control work
- c) To monitor and record
- d) To ensure (including contractual implications)
- e) To administer

c) Monitoring :

1) Actual progress :

Must be monitored on daily/weekly/monthly basis against weekly program, monthly program & overall program respectively & this must be compared by actual cost .

Variations to planned progress must be reported for appropriate action to be taken .

2) Financial achievement :

Should be monitored at site on a weekly basis, from a simple site costing system, by costing resources to cost codes.

This should cover weekly comparisons of labour cost, plant cost and material cost against budget for production actually achieved .

Follows therefore that there must also be weekly measurement . Site Should Always Be First To Know How Well It Is Performing .

It is too late by the end of the month, the end of the year, or even the end of the contract .

Each month, results should be checked from H.O. costing against budget for work done . Should only be small discrepancies between site costing & H.O. accounts . Site costing should be simple .

No use whatsoever checking cost against income, or what is in the bank - (cash flow should predict this any away) . For budget purposes, some items will be related to measured work done .

Others will be related to time, and therefore budget for these should relate to overall percentage completion, rather than number of months elapsed .

Even a detailed monthly computer analysis of valuation will be useless unless it is adjusted to relate to a budget .

Discrepancies between targeted results and actual results must be passed to Senior Management Problems do not vanish !

d) Correcting :

Actions to be taken (may be site or in conjunction with H.O.)

1) Analyse reasons :

Could be :

- a) low productivity
- b) wrong methods
- c) poor supervision
- d) excessive equipment downtime
- e) inadequate resources or wrongly balanced resources
- f) external disruption
- g) wrong targets .

a) Low productivity :

- poor morale
- inexperienced labour
- inaccurate costing
- wasteful use of resources
- excessive costs
- design faults .

b) Wrong methods :

- re-examine methods i.e., what you find is different than what you planned & you must examine why ?

c) Poor supervision :

- inexperienced
- over worked
- wrong attitudes to labour, client, superiors
- personal problems .

d) Excessive equipment downtime :

- worn out plant
- inadequate spares
- poor maintenance .

e) Inadequately balanced resources :

- re-examine methods
- correct imbalance .

f) External disruption :

- try to remove
- claim .

g) Wrong targets :

- revise and rebudget .

Remember : Most costs on site, are time related, apart from materials, hired plant and fuels for machines . Your costs are therefore largely with you on a fixed daily basis . If you suffer a single day without production most of your costs con-

... ..

tinue , all at a total loss .

With most contractor's margins these days you will have to use between one and two months profit or profitable work to pay for that single day's loss .

Progress and not budget is therefore sacrosant . Only if it is management decision to spread a larger loss rather than incur a presesnt one should budget take precedence over progress .

Summary :

Main points to re-emphasize :

- 1) Agree division of responsibilities between H.O. and site .
- 2) Through planning - including budget .
- 3) Establish proper management structure and communications system .
- 4) Monitor progress and financial results .
- 5) Report results, examine solutions and take courageous decisions - can cost be cut ?
 - is input required ?
 - are we paid for what we do ?

2) Project Control .

1) Managerial Control - Project Manager's Role ^{"33"} :

Let us look at the managerial control as imposed by the developer on his project, remembering that his interest goes beyond the pure construction of the project itself . It also covers those areas most important to the developer being the design development, the financial development of a project and the manner in which the funding is being provided and the ultimate disposal of the project for leasing or the sale thereof .

a) The development of the design control :

We look first at the managerial control, the development of the design and the control thereof . On many projects we work on what is called "fast track" system where the full design has not been completed at the time of the commencement of construction . Invariably, the design is not complete, certainly at the time the developer commits to proceed and is rarely complete in its final form at the time that construction commences . Therefore, it is very important that the developers, in the movement from a conceptual design to the final working drawings and the incorporation of that work through to the project itself, expectations regarding the cost and the quality of that work is maintained .

At the same time, the bank will be deeply interested in this process . It again has made its construction finance available based upon a certain set of expectations regarding the final quality of the building . That final quality, in many cases, being the ultimate security that the bank has .

You will see therefore, that at times there may be conflict between the developers' expectations in terms of cost of the final building and the lenders' expectations in terms of the quality of the final building . Both conflicts have to be resolved on a day to day basis as the design is developed . Therefore, the control of design development is something that forms a very large part of the developers' role in the early stages of that design development . It is an area that involves, of course, the design team, invariably the contractor, the project manager and the financial advisers . This is an area of great importance to the developer . Indeed, it cannot be stressed too strongly, that control over that design development to the final cost, bearing in mind that one is already starting on the building, one is already building it and incurring costs . It is something that is of prime importance .

b) The design schedule :

The design schedule, or construction schedule, and the schedule interface with other parties involved in the total project development, is one again that must be accurately con-

trolled . The construction schedule itself, within that construction schedule are key dates which have to be identified and maintained . At the same time those key dates can only be achieved if the design flow fits with them . Therefore, one has to incorporate in the design and construction schedule a series of key interlink dates which will provide information at the appropriate time in order that the construction can proceed effectively . The final part of most private development projects is the incorporation into those projects of those final works that will suit tenancies . Those tenants works must also be accurately incorporated in the total schedule so that there are no gaps and no overlaps .

c) Quality Control :

One has to be careful, and the developer is always careful, to regard his contracts that he has with the contractor and design team very carefully in this area . The basic quality control of the project as far as the developer is concerned must remain within the contractual responsibility of the contractor himself . Certainly, it is the design team's responsibility by observation on site to determine whether the work is being carried out properly in accordance with the design and specifications . It is also important that by too close an inspection and perhaps even an approval process, the base responsibility of the contractor to ensure that the work he is doing meets closely and accurately the dictates of the speci-

fication and drawings is not removed from him .

- Code requirements :

If we look at code requirements, those requirements by law that have to be met in the construction of the building . One has two responsibilities in that area; both of which have to be monitored . Obviously, the basic responsibility of the design team, initially, is to make sure that their design meets local codes . His prime function is to ensure that the base structural elements of the building are being properly put in place in accordance with codes . It is sometimes of value to seek variants agreements from the local authority . If a particular item belonging to the element of the building can be more economically constructed using a material that doesn't fall easily into most code requirements, substantial cost savings may be available by a variance of the code . The developer, however, when considering that, must also consider the banks' input, who may not accept that a variance to the code, while suiting the developers' process, will suit their own ultimate security of the building .

- Compliance with drawings & specifications :

This basically is the responsibility of the contractor, coupled with the observations on site of the design team . The bank, however, will be deeply concerned as to the compliance with drawings and specifications . The bank will almost always employ its own inspector who will visit the site regularly to ensure that the requirements are being met . The developer has

the role of co-ordinating the activities of the contractor and design team and ensuring that their contractual commitments are met . This invariably falls on the project manager to carry out this function .

- The overall project schedule monitoring :

This schedule is not a construction schedule . The project schedule will include the design team activities, their speed and performance, the construction itself, the inclusion in the final building any necessary tenants' work to suit tenants coming in . In the place of a hotel, the inclusion of f.f & e - furniture, fittings and equipment . It will also include the key leasing and sales dates that have to be met, not only to ensure that the final buildings is one that comes on screen when planned but also may very well be a key to the construction loan and perhaps a reduced interest rate but indeed certainly the clearing of that construction loan itself by the introduction of permanent financing . It will also include those key dates with relation to the construction loan itself . Often, this revolves around the first loan disbursement from the lending bank . That first loan disbursement before being made will require a certain list of activities to have been completed and certain guarantees to be in place, certain letters of credit to be in place and the change order situation at that time will have to have been completed .

Looking at that overall project schedule monitoring and in specific terms looking at the construction schedule within

that, the process of looking at delay in determining their resolution is something that concerns developer, contractors and banks very closely . There are two items usually that have to be looked at when a delay occurs . One is how do we get over it, if it is possible, and two - the cause of the delay . There are always arguments as to which should be looked at first . The natural reaction is to look at who caused the delay and where should the blame be laid . One tries to encourage and, indeed, one sees that very widely that that process is reversed and first the prime thing to be looked at is - is this delay something that can be overcome? If it can, let us concentrate our energy on overcoming the delay by either accelerating the work if that is appropriate, accelerating the design flow if that can be done . The seeking of responsibility is usually something that comes later .

The prime purpose of that being that in everybody's interest it would appear that the completion of the project at an early date is more important than spending many weeks or maybe months both determining who is to blame for the delay and perhaps at that very point where you need total and ultimate co-operation, from all parties, setting division between parties so that their prime purpose in life is to defend themselves rather than concern themselves with the progress of the project itself .

e) The interface with construction lender :

- The successful developer works very closely with his bank

and keeps that bank totally informed, and regards the bank as a key member of the development team . Compliance with lender requirements prior to the first loan disbursement is considered extremely important by the developer . If that first loan disbursement does not come through on time, payment are not made, and project progress will suffer considerably and the morale of the project team will dive . Almost certainly, that first project loan disbursement will require that necessary contracts between the developer and various parties are in place and approved by the bank . That all existing change orders instituted into the project before the bank comes in with its first loan disbursement have indeed been approved by the bank . That all necessary guarantees, letters of credit, are in place . It is important, therefore, to involve the bank as the developer does, from the very first moment of construction, irrespective of the fact that the bank's loan may not be required for several months . The equity being used for initial construction payments . The bank, therefore, is involved in all project meetings so that it is aware totally of the progress of the project : The payments that have been made and can see by own involvement that the project is being properly run, properly managed and that the necessary disciplines to ensure resolution of problems have been put in place and are operating effectively .

- The change order procedures : As we said yesterday, projects have change orders - it is a fact of the construction

world . The approval process of those change orders is something that is monitored extremely closely during construction . The various times required by the individual parties, verified check and approved change orders, is carefully established and a procedure set up so that the minimum impact upon the project in terms of any potential delay due to an approval process is minimised . Certain delays are unavoidable . Delays due to approval processes are something that have to be omitted if possible . The bank will always require time to approve a change order . The bank will invariably impose limits as to the number and amount of change orders that can be worked on before it has approved them . Those limits have to be carefully defined and systems set so that one does not have a situation in which the bank has probably insisted in its loan documentation that clauses are written in to the contractor's contract that prevents him from performing on change orders unless the bank has approved them .

f) Design team & contractor observance :

An important part of the developer's role is to ensure through his project manager that workable arrangements between the various parties are carried out so the project runs smoothly . Of course, the observance of contract terms and the ability of people to work together starts with the agreement of a workable contract . What is perfectly acceptable to one party may not be so to the other . One therefore spends a considerable amount of time before the project in setting contract

terms and conditions between the various parties that both dovetail and link together and at the same time provide an atmosphere for people to work effectively together .

Clear responsibility lines, having been shown in those contracts, can then be worked to . Indeed, the project manager and the developer's role is to ensure that all parties do not have to spend enormous amounts of time considering their contract terms and conditions and worrying about whether another party is properly performing their activities . The developer and his project manager are that part of the team that provide the interface between those allowing them each individual specialist organisations to do what they are best capable and qualified to do and not have to worry about whether the other man is performing as he should be performing . That is the worry of the developer and the project manager . The developer also has to set a forum for agreement may from time to time include an agreement that the dispute shall be set aside and later taken either to law or arbitration . The developer will encourage this if he possible can, to ensure that his project continues at the best pace to his final conclusion date . The developer will not wish to see litigation or arbitration introduced during the running of the project .

g) Tenants improvement works :

This particularly affects offices . When an office building is invariably termed complete, from the contractor's point of view . When a relative bare shell is completed . This

office block then will not contain within it at that time, suitable partitions, ceilings, lighting etc, for tenants to move in because at that stage it may very well be that tenants have not been secure . It is important at an early stage to determine whether one's leasing programme can be speeded by incorporating into the base building certain tenants improvement works already . There is a risk involved here . It can be argued that it has been carried out that way and if one can install ceilings, lighting and basic air-conditioning systems, leaving only partitions and final floor covering to be installed when the tenants are known and the requirements can be met .

h) Decision making management :

Decision making management : It has been suggested that decisions are the slowest part of the entire development process . It need not be so . Most base decisions are developer decisions . It is the role of the entire project team to provide for the developer a suitable set of information flow diagrams together with accurate, timely and qualified information which allows the developer to make his decisions in good time with a clear understanding as to why they are required . Regular meetings that run through the entire project process . What decisions are required and why? It is a vital part of the developer's team services to their developer client . Those decisions may very well impact the bank and its loan funds if the bank should be involved in those decisions .

2) Financial Control - Project Management Role :

Looking now at the financial control again from the developer's point of view, we have : "34"

1) The construction budget :

Is that budget set by the developer and the projects manager, which is forecast of what the entire construction cost will be . That is monitored regularly, is updated in respect of future potential changes, potential cost increases . Those potential cost increases must be clearly shown in various categories of those that require a decision on the part of the developer . In other words, costs that need not be incurred with no decision being necessary . What I have to pay for and what I have to decide whether to pay for or not . The contractor's maximum guaranteed cost is that cost that the contractor believes will be his final cost . He may not be aware of potential future changes that his developer is considering and should not be aware . Therefore, those two have to be kept quite separate and not intermingled so that the construction budget is the reflection by the developer and his advisors as to what his final likely exposure in terms of total cost is going to be . Part of that construction budget is the contractor's cost itself .

2) Contractors guaranteed maximum cost :

What is it and how it works . It is, a "Cost plus" form of contract with a guaranteed maximum . It sounds like the best of all possible worlds and the contractor will say, "Here

is my budget estimate, here is my total set of figures and numbers including my profit margins, including my general conditions, costs, including all my sub-contract elements and here at the bottom is the total and that total I guarantee will not be exceeded . Except of course, if you issue me with a change order, and that's where the difficulty arises' .

At the same time, the developer can expect from that guaranteed maximum cost contract that if the final cost of the building is lower than the guaranteed maximum cost, that is all the developer pays . There are various ways of looking at the difference between those two figures ultimately . What the contractor has guaranteed it will cost and the final cost and the final cost of building itself . Savings agreements are put in place where any savings on the project are shared between the contractor and the developer . It provides the contractor with an incentive to maintain savings .

3) The project budget :

Is one that is a much wider budget altogether . It incorporates not only the cost of construction but all the other developing costs and so on . It includes the design, the management of the project itself by its project manager and the developer, the land costs, the legal fees, the borrowing costs, everything . It also contains the suitable contingency to allow for those items that no-one can possibly think of, and that's what a contingency is . A contingency is not an allowance for suspected cost over-runs . A contingency is when

all those allowances have been made and properly built in to the project budget . The contingency is that have we, could we, possibly have forgotten something? Is it going to cost more anyway - that's the purpose of a contingency . That is updated monthly . Is is looked at very closely by both developer and the bank, who will insit on seeing it, on seeing how it is running, whether it is sufficient, whether it contains everything it should contain, whether it is being adjusted both up and down properly in accordance with those construction change orders, changes in interest rates, and so on .

4) The contractor and consultants payments :

It will again be controlled by the developer and his budget plans . All payments, invariably, will form part of the bnak's interests . The disbursements from the loan account will be in accordance with proper billings, properly received in accordance with the various contracts that exist . Compliance with the contract terms in those billings are vital . The developer knows that once he is in to using construction funds from his lender he must meet the lender's requirements it terms of those billings, dates of billings, timing and the format at a very early stage before the construction loan ever comes into place . The developer will agree with his bank the form of those construction payments, how they are run, the timing .

It is also necessary to monitor, very closely, the payment of loan of inspection fees to the bank itself . Nothing

hurts a developer more than finding he is slow in his payment to his own bank .

5) Drawing from construction loan funds :

The drawing from construction loan funds only really occurs once the construction loan disbursement procedure is in operation . But the bank certainly must be involved in the very early days to ensure that it is satisfied with the procedures being followed . The job of the developer is to prepare those draw requests from its bank and agree with the bank's representatives that they are accurate or the interest rate choice is left to the developer on a monthly basis . Therefore, the developer has to monitor, very carefully, his interest rates and decide which of those two options he will go for .

6) Change orders :

The project manager's and developer's role is to ensure that there is a forum in which change orders can be agreed . Remembering that those change orders have to be agreed by the contractor, the design team, the owner, the developer himself and the bank has to approve them . In respect of change orders the agreement of change order prices probably takes a very large part of the developers' cost control time . Invariably, they have to be worked on the basis of the actual cost of the work plus an agreed percentage . That is fine if the change order requires additional work . If it implies a reduction in work then the difficulty of agreeing the cost of something that

is not going to be done ends up in negotiation . And it is as simple as that .

7) Overall financial forecasts :

They combine with project budget and cash flow so that the developer is aware and the bank is aware that not only total cost of the project but the sequence and speed at which the money is going to be required . Those overall financial forecasts must include a proper contingency and proper allowances and those are different . The allowances are set, for items that one expects will happen . The contingency is provided for everything else which you do not even think about or know about at this time .

8) Additional funds to finance the project :

Finally, as one runs through that process of construction financing and the control of the project and its cost, one sees that one is going to require additional funds to complete the project . That control and forecasting is vital so that one can see at the earliest possible time that possibility exists, and that one may need to approach one's bank to seek additional funds . Most banks will understand and appreciate an early approach so that sufficient time can be given for full evaluation before those loan proceeds and additional funds could be put in place .

E) Monitoring :

I - Monitoring contractor's performance .

Good loan administration requires that covenants and conditions of the loan agreement be monitored on a continuing basis . This section will outline a few of the possible loan controls and the methods of administrating^{"35"} them . We will see also, what should anticipate having to do or see or able to do when we are monitoring an exposure or a facility the bank have extended to a contractor .

Assuming here that there is an agreement whereby we can in fact visit the site and gather the information that is available or should be, on the site .

The monitoring techniques listed below are in order of importance :^{"36"}

1) Mile - Stone dates :

It could be the completion of the receipt of all information that the contractor is due under the contract to, in fact, perform under . It could be the date when the building is supposed to be water tight because after the date he has got expensive finishes coming along, which if he is not water-proof, he is going to be having trouble .

2) Prearranged visits :

They are fairly straight forward, need to be emphasised except that the purpose of them and the purpose of in in fact notifying them are to allow the contractor the knowledge to know that he is being scrutinised, he is being watched and he

is subject to the outcome of those visits .

3) Spasmodic unannounced visits :

Spasmodic, unannounced visits are something else . This is necessary from time to time, not too often, but to avoid the pre-arranged visits becoming a rehearsed arrangement . We all know that if I know my managing director is coming to see my site I make sure it is clean and tidy . I tidy it up, I give a false impression, I mark up a programme the day before he comes and therefore he looks at it, says magnificent, carry on . We have got to avoid that situation where it is dressed up specifically for your visitors . In this paper there is given a format of a site visit report .

4) Visit check list :

One of the most important aspects of a site visit is observation . Just pure overall observation, use your eyes, and your ears and observe the systems that the contractor is using the standard of his equipment, the standard of his facilities . The quality generally . Get an impression of the performance of his site . Look at the tidiness . Is it a tidy site or an untidy site? Measure the morale that exist within his staff and the labour on his site . This is not too difficult and also try and assess the spirit and enthusiasm of his management team and staff . If there is low morale, there is dispirited approach . You could have problems on that site later on . Often this gives the best feeling as to the depth of the monitoring process that has to be carried out .

Now, the progress reporting or the method that the contractor uses varies in many many ways . But I would expect to see going on site all the programmes displayed, these are the work schedules that he is supposed to be performing to . How they are going to do it, from the tender, from the re-evaluation or from a given set of programmes and plans which should be on display . They have to be marked up clearly . They are not always going to work and if they are not working there should be substitute programmes or what you would call short-term programmes to correct any error which has taken place with production . You have to ask why? Why is it behind the programme and the cross-check this with other information . The contractor has to have the facilities and the ability to quickly update the programmes and information for your assessment .

Turnover is the value of money for work he has executed . It is not necessarily the cash he is receiving, the two are slightly different . It is the value of the work executed . We all know the cash you have received is less retention, less advanced payment, less many other things that may be less a mark down by the consultants . So you have to look at the valuation and assess that the accurate turnover is the amount of work that is done . This has to be recorded and shown, again, graphically if possible, on site, in histogram form so that month by month you can see the amount of money, the value of the work executed . The work has also to be shown accumulati-

vely, in a turnover graph so that you can see the historical trend and how that is likely to be projected . The visual impact in these graphs is very important . You must also ask always the question why there is a short-fall in accumulative turnover or in fact monthly turnover .

The cash flow should be readily available so that you are able to look at the degree of plus or minus against the projected plan cash flow . Surplus or deficit it doesn't matter, it is a question of whether he is on programme . Here again you can look at differences . If for example, the contractor is showing himself in front of the programme on the progress schedules but is miles behind in his accumulative turnover, and then his cash flow says that he is O.K., something is wrong somewhere . You then have to find out why there is a disparity between the various sections of information that you have been given to monitor .

Labour and plant . These are relatively important subjects and really quite easy to check . You have heard that the contractor is going to produce his own labour graphs, schedules and trade breakdowns, together with many other items such as production rates, man rates, man months, supervision man rates and man months and so on . It is a question of just checking whether the planned amount is being achieved and then again check that against all the other information . The chart for this is attached . It allows for the planned amount to be put in which can be extract of the original plan data . Then the

contractor can show you by demonstration from his own marked up charts what the actual was for the month in question, accumulatively to date . In plant this varies from site to site because on a building site you probably have a lot more varying types, but of small nature . A civil engineering site is all plant and of a very expensive item and is often forgotten, so fuel has to be looked at seperately; all energy costs in fact .

6) Monthly adjustments of interest rate .

7) Delays :

Delays are a terrible burden on the contractor and perhaps on the bank . Always you have to ask the question "Why?" Why is there a delay ? There are so many reasons, is it design information, or poor production ? Is it non-delivery of equipment and materials ? Is it the weather ? Is it just because of design changes ? These have to be looked at and then the appropriate action taken as to whether there is a cure or not or whether there is a claims situation or for that matter, a greater exposure than originally anticipated .

8) Extensions of time :

It is all very well for a contractor to turn around and say, "Well I have been delayed but it is all right, I am going to apply for an extension of time". He has to do it expeditiously, he has to do it within the terms of the contract .

9) Financial claims :

Often claims are just a difference of opinion between the contractor and the consultant . The contractor will say, "Well, I've done the work I think I'm entitled to a claim" , and the consultant will turn round and say, "Well, that's not right, under clause so and so you have to do it anyway ." Therefore, you have just a difference of opinion and you have to know and understand the contract to enable you to place an interpretation on whether the contractor's claim has validity, whether it has got strength, whether you believe quite irrespective of

whether it is going to have any success later on, whether you believe the contractor is right in making that claim an issue. You have to take into account the record of success in the area, sometimes you know this better than the contractor . Have any client ever been successful with claims of this nature ? Is the client one who pays for claims or is he one who uses them as an offset to liquidated damages . What action can the contractor take and are the claims acknowledged either by the consultant or by you ? All of this has to be assessed by the bankers' representative .

10) Follow-up card system to diarize the due dates for reports . The follow-up card system should ideally be controlled by the file supervisor . At the beginning of each month, the file supervisor must notify each lending officer, in writing, of all of the information required from him during the month . It is the supervisor's responsibility to obtain the data from the lending officer . The lending officer must interface with the contractor, obtain the data, prepare the analysis, resolve problems with the contractor and inform management of any major problems that have arisen .

In monitoring contractor's performance, we must not forget what the contractor is saying, perhaps to his own head office. What is he doing about his own results ? Is the Project Manager optimistic, pessimistic, or is he saying different things to you than to his own head office ? It is also vitally important that we pay attention to forecasts, not bank forecasts, but contractor's forecasts .

II - Remedial management .

The recent worldwide survey of our loan recovery effort indicated that we have in place the organization and procedures to effectively follow collection and recovery of our problem loans and write-offs^{"37"} . Nevertheless we have been requested to set forth some minimum guidelines to assure consistency of approach .

a) Remedial management for problem loans :

When it becomes obvious that a borrower's situation has deteriorated to worse that a formal course of action must be developed .

1 - A specific assignment of responsibility for working out the loan should be made to either a designated lending officer, depending on circumstances .

2 - Establishment of a "suspence department", is not mandatory .

If such a unit is organized, its functions may be limited as desired but its responsibilities must be clearly defined . Among considerations in establishing such a unit are:

a - Number, size and complexity of problem loans .

b - Need to develop legal expertise for work outs and/or liquidations .

c - Desirability of relieving account officers of work-out burden .

d - Availability of trained personel .

3 - Immediate measures should be taken to halt or avoid

further deterioration . Virtually all of the following are considerations in the initiation of credit but must be re-examined to assure our ability to work out successfully :

a) All documentation and collateral relating to the loan should be reviewed and completed as needed . Actually, maintenance of documentation is an on going responsibility, but an extra review when problems arise is desirable .

b) Financial statements should be re-analyzed with the possibility of a liquidation in mind .

c) The potential preferred position of other banks and

lenders should be carefully scrutinized .

d) The personal situation of management and guarantors should be re-examined .

e) Alternative courses of action should be considered and a work-out program developed .

f) Need for special expertise, internal or external, may be appropriate .

g) The lending units should not operate in a vacuum and should seek guidance from any appropriate area of the bank .

4 - Once re-analysis has been completed, a formal corrective action plan should be established with target dates . This may be done in quid fashion enumerating all of the problems to be corrected in one column and then spreading out alternative courses of actions and estimated time to achieve results . Such actions may involve :

a) A retrenchment program with budgets and forecasts closely followed by the lenders .

b) Obtaining additional financial support from credit worthy parties, such as owners, customers, suppliers, relatives, etc, who may have an interest in the continuance of the business .

c) Selling collateral .

d) Obtaining new or additional collateral support .

e) Renegotiating the terms and/or tenor of existing credit facilities .

- f) advancing additional funds .
- g) Seeking the support of appropriate governmental agencies such as development banks .
- h) Take out by another financial institution .
- i) Sale of the business .
- j) Ultimately, reorganization or bankruptcy .

5 - Decisions as to the most beneficial course of action must have the bank's best interest as the prime objective .

6 - It is essential that developments be closely followed and alternative measures implemented if the credit continues to deteriorate .

7 - If corrective actions are not having the desired result considerations must be given to last-resort solutions :

- a) compromise settlement with the borrower
- b) bankruptcy or foreclosure
- c) other forms of legal action, such as swing guarantors.

b) Recording procedures for problem loans :

During the process of working out problems of loans, it is essential to keep adequate records .

1 - A claim record should be established for each designated problem by the lending officer of " suspense dept." showing the gross principal amount, the amount of any write-offs, or reserves which have been made, and the net book value . Additionally, it should show the amount of interest earned not

collected . The record should be kept up to date .

2 - At the same time, a separate control record should be maintained to reflect the total balance of all problem loans listed in the claim record . Any changes in individual claim records should be reflected in the control record . At least quarterly, the control record should be reconciled to an independent proof of the individual claim records .

3 - The monthly classified loan report should, by definition, update the status of loans being handled on a work-out basis . The report should be carefully reviewed by the managers at the H.O.

III - Loan administration : "38"

1) The loan agreement :

This is covered in detail in the underwriting manual, however, it is important to recognize that in a project loan you will probably have no opportunity to restructure the loan, rewrite the agreement, or improve your security once the loan has closed . Good loan administration therefore begins with a good loan agreement, prepared, where possible, by specialized legal counsel .

2) The loan closing :

The closing of a project loan is similar in all respects to closing a corporate term loan with the additional complications of insuring that the mortgage and/or any other security is properly assigned and perfected . As a general rule funds

should not be advanced until this has been accomplished as, it may be difficult or impossible to correct a deficiency once the loan is closed and funds advanced .

3) Disbursing the loan :

A third area of critical importance is the loan advance. Advances usually follow a pre-determined schedule, say monthly or in accordance with a specified stage of construction . At the time of each advance, the lending officer must verify that construction is progressing on schedule, that there are sufficient funds available to complete the job, that no liens have been filed since the last report, that all necessary insurance remains in force and that all required rates or leasing schedules have been met etc. The lending officer will rely on professional assistance from a supervising architect or engineer and legal counsel when authorizing an advance .

Disbursement draw required for the following :

- Actual cost incurred will be examined by the bank investigators on monthly basis .
- Compliance with contractual terms upon parties/purchase agreement .
- Change order status : should be looked carefully and how can impact the budget .
- Additional developer funding requirements on monthly basis developed by the developer .

- Guarantees and letters of credit status should be examined/expiry date .
- Project progress .
- Status of take out financing : It is important part of loan commitment and what alternative to the contractor if the loan is not arranged .
- Remaining loan funds and cost to complete and this depend upon the current budget, amount of loan and equity must at least balancing the budget .
- Requests for additional loan funds to put on place, the bank should aware on that, he must review the possibility exposure of the bank .
- Quality of work : Does it satisfy or not .

4) General loan monitoring :

In addition to the steps that must be taken at the time of each advance, certain general controls are required independent of the specific advance controls . These include; periodic site inspections by the lending officer, periodic review of the terms and conditions of the loan agreement, review of up dated financial information on the agreement, review of up dated financial information on the borrower, verification of insurance coverage, review of sales or rental progress, review of reality and corporate tax receipts, verification that all necessary documentation is in the hands of the branch and properly field etc, ...

5) Loan repayment :

In anticipation of a loan repayment, it is the responsibility of the lending officer to insure that all necessary documents, such as the mortgage, are available and in good order to be released against final payment . In the case of repayment from a third party, such as a take out lender or a purchaser, the lending officer must verify that all terms and conditions of the take-out or sales agreement have been complied with . These might include a sales or rental achievement in case of real estate project, a certificate of occupancy from the appropriate government authority etc ...

CHAPTER 3
CONCLUSIONS, RECOMMENDATIONS AND SUMMARY

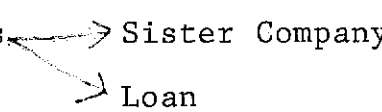
A) CONCLUSIONS

Credits by their nature, are separate transactions from the sales or other contracts on which they are based and banks are in no way concerned with or bound by such contracts .

In dealing with a local project contractor, bankers and contractors should constitute a joint venture in performing a project; Financing depends on the first and executing on the second .

Bankers should not take risks, but prepare a method of facing the calculated risk that may arise . Risk should never be the bank policy, but try always to find a way of reducing risks factors .

There are three types of financing, a bank can choose:

- a) Sub Financing
- b) Sub-contractors 
 - Sister Company
 - Loan
- c) Total Financing

When a bank thinks of lending, the first thing that comes to mind is the great diversity of the subject . Financing needs, local availability of funds, lending practices, documentary and legal considerations, and so on, differ greatly between financial institutions and borrowing companies .

Contractors operating in the same country differs in size, ownership and also in financing needs . Bankers to carve out for itself a part of this vast market, should take into consideration those areas of particular strength where it can competitively offer a time service to local contractors .

It is necessary also for bankers to review their activities and their balance sheets to determine precisely where and to what extent they are taking funding risks . They must try to understand these risks, determine what are the circumstances in which the bank could be badly hurt by them, consider what should be done, to protect the bank in such situation, and establish controls with triggers to limit those risks to acceptable levels .

When a project is completed, bankers and contractors should move to a new situation, after the settlement of the old project's accounts, to a new plant and the performance is repeated .

So, the relation between bankers and contractors is always continuous, and although there is competition in the market, bankers should always know full information about contractors, because contracting sectors, is considered a basic sector banks to invest in .

B) RECOMMENDATIONS.

The following recommendations, if adopted by both bankers and contractors will contribute to the clarification and better understanding of the relations existing between the mentioned parties :

1) To encourage the creation of Consultant firms in the private sectors which are to include highly specialised staff in the fields of architecture and engineering, law, economics, accounting and finance who can competently conduct feasibility studies with the objective of coming out with the actual costs of any project without any significant diversion . Banks which are actively engaged in the construction activity may set up special departments for this purpose .

These consultants are to present to the project owner and the financing banks copies of their studies which will serve as basis for negotiations with contractors . This group will be involved in all the phases of the project and provide guidance on any aspect of it at all times .

2) It is imperative that works are completed within the time agreed upon in the contract . This will serve two purposes . First, it helps release the bank guarantees connected with the project in question thereby terminating the relationship amongst the contractor, the project owner and the bank. Second, it will permit all parties concerned to undertake new projects as delays in delivery are bound to thwart the initia-

tion of new works in an atmosphere of mutual trust, besides limiting the bank's ability to participate in other projects .

3) The prompt payment for all projects realised according to the conditions of the contract . Delays in payment may increase the costs of the works besides preventing the speedy undertaking of new ones .

4) To abandon the practise of granting contracts to the lowest bidder . Instead, the principle should be adopted to have a realistic appraisal of the cost of a project in order to ensure that it will realize efficiently and in full the purposes the project was to serve . Cheapest prices could produce the worst results .

5) Establishing a :

i) Committee including the Central Bank, Lebanese bank Association and the Syndicate of Contractors which will control and finance the major construction projects, performed by local contractors, especially that needs syndication or a participation of more than one bank .

In case of financing the project by an overseas bank, the local bank will participate by a certain percentage, thus playing the role of controller on behalf of the overseas bank.

ii) An information department to provide banks with all information needed about contractors (Track Record, 3c's, Centrale Des Risque, etc...), and this is of great importance .

iii) Consultant Committee within the bank specialized in extending loans for contractors, and the need of an engineer is a necessity .

iv) A law to regulate the work between contractors and developers .

6) Modernization of regulations governing guarantees, for the purpose of developing the relation between contractors & developers .

7) Availability of the necessary machines & equipments, and deminishing the way put on the efficiency background of the contractors .

8) Improving the ways in which the contractors are being classified . This may be done by putting more weight on :

- a) Financial ability
- b) Moral standing
- c) Contractor history

C) SUMMARY

This research has dealt with important research papers fundamentally connected with economic development and the relation between construction contracts and public and private projects . It scanned through the historical development of such contracts, their present mechanism, their utilization in construction operations, and finally the phases which these contractors undergo . The research also deliberated over the various points of view as regards the planning, feasibility studies and the responsibility of the contractor, on one hand, and the monitoring of the project's process, the application of financial and administrative control throughout the execution of the project and finally, once the project is completed, to ascertain that the execution, satisfactorily implemented the original specifications of the project, on the other .

The research similarly tackled a basic banking activity with respect to the construction industry, i.e., the issuance of letters of guarantee and performance bonds and the difficulties banks may encounter in this field . Furthermore, it studied the relationship between the original contractor and the sub-contractors and the role the commercial banks play in monitoring the execution of any project from all aspects .

In the construction field, financing the work until paid ,

is a prime responsibility of banks . Seldom do current payments from the owner, after withholding a percentage to guarantee completion, provide sufficient funds to pay the operating costs and leave enough margin to pay for equipment, plus the contractor's general overhead .

The contractor must keep his own capital in as highly liquid state as possible in order to cover his overhead, stand behind any losing jobs, and maintain compensating balances with his banks, and the need of a bank loan arises .

The contractor first goes to his bank, furnishes his latest financial statements, and establishes a line of credit or requests a specific credit for use, on the particular job if secured . The bank in this case, requires repayments schedule agreed upon and the money is available if the contractor is successful in his proposal . When the contractor is established and well known to the bank, he may already have a line of credit and may borrow within that line or allocate a portion or all of it for use on the specific project after he has been awarded the work .

The procedure of borrowing only on specific projects is very sound . The bank knows it will be kept currently advised of the progress and financial status of the job, and contractor's cash is conserved for overhead, compensating balances on deposit in the bank of banks that loan on the job, and to maintain adequate reserves to pick up a loss if it occurs .

After arranging his financing, the contractor may next go to his bonding company. Presumably he already has on file his current financial statements and experience record.

The bonding company having been apprised of the entire circumstances, may then decide that available money is sufficient to operate the job as well as allow funds in case of loss to pay lineable debts that may arise against the work.

It should be made clear here, that the bank in loaning the money, may advance it on unsecured notes or may demand that securities, equipment, or real estate be pledged to guarantee the loan. In case of failure or bankruptcy of the contractor, the bank may foreclose on the pledged collateral or, if there is no collateral, must take its place with all the other creditors after the lineable obligations have been paid.

The surety company, on the other hand, guarantees to the owner, public or private, that the job will be completed and that all lineable obligations will be paid. Lien laws may vary considerably in different states, however. In general, labor, fuel, explosives supplies and parts, and materials used up in the work, embedded in or becoming part of the work, are considered lineable obligations against the property and thus charges against the job if not paid by completion. The usual practice in most states is to allow a period of thirty or perhaps sixty days for lien creditors to file against the work. It is these obligations that the bonding company assumes plus guaranteeing completion of the owner.

The contractor likewise, in most states, if not paid in full (excepting disputed claims) in a reasonable time after completion of the work, may also file a lien against the project . This type of lien is not guaranteed by the lending company .

The surety company, having satisfied itself that the contractors available funds are sufficient to perform the proposed work, issues a bid bond to be presented with the contractor's bid proposal . This is a statement but not an outright guarantee that the surety company expects to write the performance and payment bond if the work is awarded to the contractor . It does, however, guarantee to pay the owner a certain sum of money in case the contractor is awarded the work and refuses to sign the contract and furnish the required performance and payment bond . Even the bid bond, however, in some states is not flexible .

Large and well established contractors usually have credit lines and or job credit limits set up in several major banks and often use different banks on geographical basis for job loans , in their particular area . This custom greatly simplifies the entire procedure, and the contractor's financial resources may make the arrangements for financing a job when awarded with a single phone call or letter, followed by sending the bank signed notes for various amounts as needed .

On very large projects, the contractor's financial and bonding arrangements require special procedures . These large

jobs are normally joint ventures .

The most common procedure is for a contractor wishing to ~~sponsor~~^{by} the job to contact one or more contractors with whom he has confidence . It may be that one or more other contractors are also planning on sponsoring the particular project and are putting together a joint venture even though the bid may be several months off . Our contractor in this case, may decide to accept a participation in the proposed venture under another's sponsorship . The procedures in any case are identical up to the period where the work is awarded and the organization, method, plant and equipment is decided .

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APENDIX.

A/ General Review of the Construction Process
=====

1 / Identification of Requirements :
=====

1.1 / Requirements of the project : It differs if it is public owner or private owner. For private, we look if he has money, expert and experience; and the public ; there is responsibility toward the shareholders in the existence of risk, profit, growth rate etc

1.2 / Feazibility Studies : a - Consists of many different items which are: Conceptual design, cost of acquisition, suitability of the sight, selecting the best, marketing, planning and consumer situation, general benefits, cash flow, various recomandations for the future.

b - It can be extensive and experience especially for big projects and help him even to invest (person - investor) and also help the bank to invest his money.

c - The question mark is on the contractor and how to select him ?

1.3 / Local Custom and Practice and requirements :

a - Planning , permission by local government, enviromment (Limitation) sources used, amount of power and water should be taken into consideration.

b - Emigration laws, tarrifs that could raise the cost of the project and this is of a fundamental effect.

c - The design (cost and liability)

d - The need to respect country regulations.

1.4 / Obtain Funds Finance : Where is the money ? Who has it ? Can I get it ? .

- Bank or consortium of banks.

- Government sources if exist.

- Convincing of the contractor's point of view.

1.5 / Marketing the Scheme : Does not necessarily be for all projects, but for high risky ones.

2 / Appointment of Consultants :
=====

2.1 / There is a legal necessity in some countries for the presence of a consultant, because the construction field is getting more difficult.

2.2 / Construction of design brief.

2.3 / The presence of a consultant is good for both. The bank and the owner in the case of controlling contractors performance VS the planned action.

3 / Project Development :
=====

3.1 / Composition of Cost plan :

- How much he wants, what proportions and when, the currency and cost budget.

- It has to be done on a limited design and has to convince contractors and investors . It consists of :

- Land cost
- Construction cost
- Theme of designees
- Consultant and legal cost
- Financing cost
- Overheads
- Profits
- + Contingencies
- + Inflation

3.2 / Monitoring and Control :

- It will be discussed later, but it affects directly the cost plan.

3.3 / Client VS Contractor Conflict of Interest :

- The owner want the minimum cost in order to maximize profits.
- The contractor want to maximize profit in the contract and so minimizing cost.

- From the above we conclude that there is a conflict because each one wants to maximize his profits within a limited prices.

4 / Appointment of Project Manager : =====

Successful project management, regardless of the organization structure is dependent on the skills of the individuals and leaders that manage the projects key function. Project management is not a one person operator, it requires a group of individuals dedicated to the achievement of a specific goal. Normally, project personnel will include :

- Project manager
- An assistant project manager(depending on the project size)
- A project officer
- A project team.

Probably the most difficult decision facing upper -land management is the selection of the project managers. Some managers work best on long duration projects, where decision making can be slow, whereas other may thrive on short duration projects , which can result in consistent pressure.

Though the project manager's previous experience is apt to have been confirmed to a single functional area of business, he must be able to function on the project.

5 / Contractor Selection : =====

5.1 / Pre-qualification :

This technique starts with the promoting authority inviting all interested firms to register their interest and to submit evidence about their financial standing , past experience, and present capacity.

All this information is carefully studied prior to the issue of tender documents, and tenders will not subsequently be accepted from firms who fail to pass this test of pre-qualification.

Cont/...

5.2 / Contractor requirements :

- Contractor must know , if the financial capability to pay on date is available.

- Bonds or cash.

- Knowing all the information about design.

5.3 / Contract time available :

Short or long, it depends on the type of contractor if he is aware of time or not. ?

6 / Types of Construction Contract :

6.1 / Fixed - Price Contracts : It is normally a series of fixed prices, each price being affixed to a particular operation.

There are three forms of fixed price contract, namely, the 1-Schedule of ratios contract 2 - The measure - and - value contract , and 3 - the Lump - Sum - contract.

6.2 / Cost - Reimbursement Contract :

6.3 / Cost - Plus - fixed - Fee Contract .

6.4 / Target - Cost - Plus - Fee Contract .

6.5 / The Turnkey Contract .

6.6 / Revolving - Fund Contract .

7 / Kinds of Constructions :

7.1 / Underground Construction

7.2 / Bridge Construction

7.3 / Water Front Construction

7.4 / Dredging

7.5 / Airport

7.6 / Pipe Lines and Pumping

7.7 / High Way and Railroads

7.8 / Hydro Projects

7.9 / Dam and Control Construction

Cont...

- 7.10 / Water Supply and Sewerage
- 7.11 / Power Projects
- 7.12 / Military Work
- 7.13 / Building Construction
- 7.14 / Industrial Buildings
- 7.15 / Bank Buildings
- 7.16 / Residential Construction

8 / Contracting Risks :

=====

8.1 / Main Contractor Failure :

There are many causes for contractor failure and consequently surety losses . One oldtime contractor, when asked what was the major cause of contractor failure, replied: "Running out of money ". His boiled-down opinion undoubtedly is correct, but surety underwriters want to know why a contractor runs out of money.

Surety statistics indicate the "overexpension", i.e,taking on more work than a contractor's working capital can handle, probably in the major cause of failure in the building field.

Consistent low gidding, subcontract failure, and unforeseen labor troubles also are constant factors in the failure of both building and heavy engineering contractors. Unknown soil conditions have contributed to huge, unanticipated costs that have wrecked many concerns in the heavy construction field. Loss of key personnel , due either death or retirement the inroads made by competitors, has caused a great many failures.

Disadvantages played a leading part in contract losses. In many instances , contractors have diverted progress payments either for personnel use or occasionally for gambling.

In still other cases, contractors have spent anticipated profits before they were earned, only to discover that such profits were wiped out during the course of the work.

Of course the surety underwriter can't forsee all the contingencies; nevertheless, he must keep them in mind and strive to underwrite against the hazards. That is why underwriters, and the agents and brokers through whom they deal, often suggest and commend that a contracting concern

Cont/....

purchase substantial life insurance on its key officers or partners, as well as fidelity blanket bond, on all its employees, and that the subcontractors on the job be bonded. Additional financial support of various types often can offset low bids or unforeseen conditions. All these requirements are a protection only to the surety but also to the contractor.

The above mentioned will lead the contractor to loss of market, loss of business, loss of confidence and reputation.

8.2 / Consultant Failure :

It affects less than that of the contractor, but need not lead to bankruptcy, but a design fault which make damage only.

8.3 / Subconstructor Failure :

The main contractor is responsible for the subcontractor's failure.

8.4 / Inflation - Increased costs :

They are contingenc^{ies}ies risks.

9 / Construction Phase :

=====

9.1 / Post - Contract - Monitor :

Who is going to Monitor? Who is going to take action result from the monitory / the owner must know what action should be taken.

9.2 / Maintenance and Management :

It affects indirectly, the presence of maintenance and management teams will help in the success of the project.

10 / Claims :

=====

It is the most painful rule of the owners and construction process. Who is going to pay the claims ? The outstandings ? and the settlement of the final payment ?

B / Winning the Contract :

=====

In analysing this topic we will study the following :

- A / What factors affects our choice in choosing a contract .
- B / Riskas involved in a contract.
- C / Tender qualifications.

A) a + Different types of contractor

- Contractor A - Local company
- Contractor B - Int'l. contractor
- Contractor C - Combination of A & B
- Contractor D - Say, Saudi / Turkish / European i.e. joint venture.

Assume all four are prequalified - What are their different problems in putting together a competitive tender and successfully executing the work.

b - Types of contract / Project to be priced

- 1 - Negotiation or competitive tender.
- 2 - Lump sum - specification & drawings - Bill of quantities
- 3 - Schedule of rates - Remeasure
- 4 - Contractor design or alternative design
- 5 - Management contract
- 6 - Fee contract
- 7 - Cost plus contract

c - Data to be submitted with tender

Dependent on item b. above, but some specific requirements may be:

- Drawings / specification
- Calculations
- Management structure
- Method statement
- Material samples

Cont...

- Bills of quantity

d - Analysing tender documents issued by the client / Building owner

a) Terms and Conditions - Acceptable / Unacceptable ?

(Legal and operations dept).

b) Quantities - Accuracy - Responsibility for ?

c) Site conditions - Soil survey - Level Grid -
responsibility for ?

d) Payment terms and conditions? and this is very important.

e) Time allowed for tender procedure "Tender" programme.

f) Material quotes - specified in detail - Long lead quotes.

g) Specialist quotes.

h) Appoint tender Co-ordinator.

Items of Principle :

1 - Level of bonds and guarantees

2 - Decision to proceed / not proceed

e - Calculation of tender

1 - Pre qualify

2 - Obtain tender documents

3 - Analyse tender documents

4 - Site Survey / Local conditions

5 - Quantities

6 - Legal / Contractual

7 - Local site conditions and materials

8 - Imported materials

9 - Planning - programme

10 - Method statement

11 - Tender content / Presentation

12 - Financial - Level of bonding

- Local office

- " " "

- Estimating Dept.

- Local office/Operations Dept.

- Taking off

- Legal/Operations Dept.

- Purchasing Dept/Local office

- Purchasing Dept.

- Planning Dept.

- Operations dept.

- Technical services.

- Financial Dept.

Cont/...

Method of pricing :

=====

- Civil Engineering method
- Building method
- Risks

f - Tender Summary

Having quantified risks (where possible) and priced work content we arrive at the tender summary:

COMPANY'S NAME

DATE

TENDER SUMMARY

Labour

Plant

Local material

Imported material

Preliminaries (%)

Escalation (%)

Profits and overheads (%)

Plant residual

Contingencies

Finance costs

Design costs

Local fees

Before ending this point, we must state two important things:

- 1st) Factors involved in the execution of a construction project.
- 2nd) Factors which condition the pricing of a contract.

Cont...

1st :

=====

- 1) The allocation of the job of the plant, machinery and vehicles required to perform the work involved.
- 2) The purchase of the necessary building materials.
- 3) The allocation of a senior engineering and administrative staff to - together with the skilled and semi-skilled artisans and labor personnel to execute the job.

2nd :

=====

- 1) Nature and scope of the works as inscribed in the tender.
- 2) The availability and cost of staff and the degree of skill and output of the available labor force.
- 3) Availability and cost of the plant, machinery and vehicle necessary to perform the work.
- 4) Availability and cost of construction materials, local and foreign.
- 5) Availability of working capital.
- 6) The client, his reputation, solvency, potentially for continuous work, post treatment of contractor's stability of management and previous relations with said client if such exist i.e. Personal, political etc....
- 7) Possibilities for sub - contracting.
- 8) questions of transport and supply on the job.
- 9) Location and availability of public utilities such as facilities for power, water and communication.
- 10) Questions of personnel accomodation such as locating of camps, water and food supply, security etc...
- 11) Other tangential aspects such as weather and terrain conditions.

All these above mentioned factors are taken into consideration and prices for the work are determined within the general conditions of the contract as laid down by the client.

B / Risks involved in a contract :

=====

Tendering and contracting risks can be identified in five major areas :

Cont...

- 1) Political risks
- 2) Economic risks
- 3) Environmental risks
- 4) Contractual risks
- 5) Estimating risks

The risks related to each of the major areas can be listed as follows:

1 / Political Risks

=====

- War / Riot / Strikes
- Change of regime / Government
- New laws / Legislation
- Difference in foreign policies between host country and home country.
- Government structures / adaptation

2 / Economic Risks :

=====

- Inflation
- Currency fluctuation
- Exchange controls
- Bonding and banking facilities - procedures.
- Price stability
- Lack of management expertise
- Availability of subcontractors / subcontractor's defaults
- Obtaining administrative approvals / delay impact on cost escalation.
- Unanticipated taxes and local tax regulations.

3 / Environmental Risks :

=====

- Climatic conditions
- Personnel and labour risks :
 - availability
 - Local customs
 - Physical attack

Cont...

- Housing facilities
- Health facilities / educational
- Availability of materials
- Prevailing customs / traditions
- Ports, roads and transport

4 / Contractual Risks :

=====

As applicable to each set of contract documents.

5 / Estimating Risks :

=====

- Site visit mistakes
- Labour outputs
- Level of supermission
- Logistical miscalculations
- Wrong materials priced
- Contract period
- Cash flow
- Human error

3 / Checklist for letter to cover tender submissions :

=====

- 1 - Provision for alternative design or proposals
- 2 - Design period , payment for design (if applicable)
- 3 - Design information requirements to form part of tender and related to contract programme.
- 4 - Exemption from import duties, taxes (Company and personnel), subsidies on material and plant.
- 5 - Escalation clause if appropriate and origin and reliability of indices to be used - particularly government legislation.
- 6 - Currency of contract and exchange rates.
- 7 - Exclusions from offer comprehensive schedule of excluded items, omitted through lack of information, outside normal activities, too high risk rating etc...

Cont....

- 8 - Possession of site and provision for access to site and the storage of materials and equipment, space for camp facilities or storage off site provided free of charge.
- 9 - The lists of suppliers general literature and data accompanying the tender and indicative of the quality that will be provided, we reserve the right to substitute them with alternative materials and / or suppliers providing the substitutions are of equal quality and fit for the purpose intended.
- 10 - Check specification - issue disclaimer if unacceptable in any way
- 11 - Delays at port in respect of imported materials . Demurrage costs to client's account.
- 12 - Subcontractors and nominated subcontractors. ~~What degree of responsibility is carried by the Main contractor for the performance of subcontractor maintained by the client.~~
- 13 - Alternative subcontractors to those specified.
- 14 - Form of payment for measured work, provision or prime cost items, payment to subcontractors, etc.. Limitations if any
- 15 - Whose responsibility is accuracy in case :
 - Whether contract remeasured
 - Limitations or extent of variations
 - Ceiling price limitations
- 16 - Extension of time allowable for delays for which the contractor cannot be held responsible (including the work of subcontractors) payment for extension of time.
- 17 - Provision for termination of contract for client default or the right to stop work.
- 18 - Notwithstanding any failure on part contractor he is only liable to damages in contract - client has no right to claim consequential loss of profit on other contracts.
- 19 - Arbitration clause and if so by what body, place of arbitration and law of arbitration.
- 20 - offer is based upon current government legislation.
- 21 - War risks (Client)
- 22 - Restrictions on imported labour and materials.
- 23 - Availability of plant hire or purchase. Ownership remains with contractor.
- 24 - Security of payment . Security of contract sum.

Cont...

CONTRACTOR'S FINANCIAL STATEMENT AND SUPPORTING INFORMATION

INDIVIDUAL
 PARTNERSHIP
 CORPORATION

For the purpose of procuring and maintaining credit from time to time in any form whatsoever with the below named Bank, for claims and demands against the undersigned, the undersigned submits the following as being a true and accurate statement of its financial condition on the following date, and agrees that if any change occurs that materially reduces the means or ability of the undersigned to pay all claims or demands against it, the undersigned will immediately and without delay notify the said Bank, and unless the Bank is so notified it may continue to rely upon the statement herein given as a true and accurate statement of the financial condition of the undersigned as of the close of business on the date set forth in the following line.

Statement Date _____ 19____ Submitted To _____
 Submitted By _____
 Date Statement Signed _____ 19____ Signature _____ Title _____

EXHIBIT A: BALANCE SHEET (OMIT CENTS IN ALL EXHIBITS AND SCHEDULES)		ASSETS	
1. Cash (Excluding Items in Line 8).....	SCH. (B)	\$.....	
2. Notes Receivable for Contracts Completed.....	SCH. (A)		
3. Accounts Receivable for Contracts Completed (Excl. Retainage).....	SCH. (A)		
4. Amounts Due on Uncompleted Contracts:			
(a) Approved by Engineers or Architects.....	EXH. (C)		
(b) Subject to Approval of Engineers or Architects.....	EXH. (C)		
(c) Retainage.....	EXH. (C)		
5. Retainage Due on Contracts Completed.....			
6. Labor, Material and Direct Overhead Charged to Jobs (Not Included Above).....			
7. Inventory Not Applicable to Contracts in Progress.....			
8. Deposits for Bids and Other Guarantees.....			
9. Stocks, Bonds and Special Assessment Obligations Received in Payment of Contracts Completed or Uncompleted.....	SCH. (C)		
10. Other Security Investments.....	SCH. (C)		
11. Other Receivables.....			
12. Land and Buildings—Not Used in the Business—Less Reserve For Depreciation.....	SCH. (D)		
—Used in the Business—Less Reserve For Depreciation.....	SCH. (D)		
13. Machinery, Equipment, Vehicles, etc. (Net).....	SCH. (E)		
14. Deferred Charges and Prepaid Expense.....			
15. Other Assets.....			
16.			
TOTAL ASSETS		\$	
		LIABILITIES	
17. Notes Payable to Banks—For Bid Checks.....	SCH. (B)	\$.....	
—Other.....	SCH. (B)		
18. Accounts and/or Notes Payable for Equipment.....	SCH. (E)		
19. Advances or Loans From Officers, Partners, Friends or Relatives.....			
20. Accounts Payable for Material Purchases.....			
21. Accrued Expenses Other Than Federal Income Taxes.....			
22. Federal Income Taxes—Due \$.....		Accrued \$.....	
23. Due to Sub-Contractors—On Uncompleted Contracts.....	EXH. (C)		
—On Completed Contracts.....			
24. Mortgage on Real Estate (Amount Due in Next 12 Mos. \$.....)	SCH. (D)		
25. Other Liabilities*.....			
26.			
TOTAL Lines 17 Thru 26.....		\$	
27. Reserve for Unearned Income OR Profit or Loss to Date on Uncompleted Contracts.....	EXH. (C)		
28. Preferred Stock Outstanding (Par Value \$.....)			
29. Common Stock Outstanding (Par Value \$.....)			
30. Earned Surplus (Net Worth if Not a Corporation).....	EXH. (B)		
31. Capital Surplus.....			
TOTAL Lines 28 Thru 31.....		\$	
		TOTAL LIABILITIES \$	

Carried in Stock by Cadwallader & Johnson, Chicago, Robert Morris Association—Form No. C111H

*See SCH. (H) For Contingent Liabilities.

Figure 7-11-1

EXHIBIT B: PROFIT AND LOSS STATEMENT From _____ 19__ to _____ 19__

1. Contracts Completed During Period.....	\$		
2. Less—Direct Costs Including Material, Labor, Job Overhead and Sub-Contracts.....	\$		
3. Gross Profit on Contracts Completed.....	\$		
4. Other Income.....	\$		
5. Total Income.....	\$		
6. Less—General and Administrative Expense.....	\$		
7. Interest Paid \$.....Other Expense \$.....	\$		
8. Provision for Federal Income Taxes.....	\$		
9. Net Profit or Loss.....	\$		
10. Add—Earned Surplus (Net Worth if Not a Corporation) at Beginning of Period.....	\$		
11. Adjustments (Net) \$.....Dividends or Withdrawals \$.....	\$		
12. Earned Surplus (Net Worth if Not a Corporation) at Close of Period.....	\$		
13. Memo: Depreciation Included in Above Expenses.....	\$		

EXHIBIT C: CONTRACTS IN PROGRESS { Items (1) thru (4) Based on Actual Figures,
Items (5) thru (8) Based on Estimated Figures.

Note: Page Three contains a spread of the individual uncompleted contracts making up the grand total in the column to the right.

GRAND TOTALS ON UNCOMPLETED CONTRACTS TO

DATE _____ 19__

1. TOTAL CONTRACT PRICE.....	\$		
COSTS TO DATE:			
(A) Labor.....	\$		
(B) Material.....	\$		
(C) Direct Overhead Charged to Contract to Date.....	\$		
(D) Paid to Sub-Contractors to Date.....	\$		
(E) Owing to Sub-Contractors.....	\$		
(F).....	\$		
2. Total Items (A) Thru (F).....	\$		
ESTIMATES RECEIVED OR DUE:			
(G) Approved Draws Received.....	\$		
(H) Due and Subject to Draw Pending Architect's or Engineer's Approval.....	\$		
(I) Retainage on (G) and (H).....	\$		
(J).....	\$		
3. Total Items (G) Thru (J).....	\$		
4. PROFIT OR LOSS TO DATE (Total of Line 2 Minus Total of Line 3).....	\$		
5. CONTRACT BALANCE TO BE COMPLETED AFTER STATEMENT DATE.....	\$		
ESTIMATED COST TO COMPLETE CONTRACT:			
(K) Labor.....	\$		
(L) Material.....	\$		
(M) Direct Overhead.....	\$		
(N) Let or to Be Let to Sub-Contractors.....	\$		
(O).....	\$		
6. Total Items (K) Thru (O).....	\$		
7. ESTIMATED DRAWS ON CONTRACT BALANCE (Including Retainage).....	\$		
8. ESTIMATED PROFIT OR LOSS ON CONTRACT BALANCE (Total of Lines 6 Minus 7).....	\$		
9. COST OF EQUIPMENT ACQUIRED TO DATE.....	\$		
10. ESTIMATE OF ADDITIONAL EQUIPMENT NEEDED TO COMPLETE CONTRACT.....	\$		
11. EQUIPMENT RENTALS PAID TO DATE AND INCLUDED IN LINE (C).....	\$		
12. LOCATION OF JOB.....	\$		
13. NATURE OF WORK.....	\$		
14. CONTRACT COMPLETION DATE.....	\$		
15. ORIGINAL CONTRACT PRICE (BID).....	\$		
16. CONTRACT PRICE OF NEXT LOWEST BIDDER.....	\$		
17. ADDITIONS OR EXTRAS TO DATE.....	\$		
18. CREDITS OR OTHER DEDUCTIONS TO DATE.....	\$		
19. INCREASE OR DECREASE IN ORIGINAL PROFIT ESTIMATE BASED ON EXPERIENCE TO DATE.....	\$		
20. State Contract Provisions for Liquidated Damages, Penalties or Bonuses with Respect to Completion Within Specified Time.....	\$		

Figure 7-11-1 (Continued)

SCH. A. ACCOUNTS & NOTES RECEIVABLE FOR COMPLETED CONTRACTS (List 4 Largest—Group Others in Line 5)												
DUE FROM			Original Contract Price			Amount Due Excl. Unapproved Claims			Maturity Date		Claims Not Approved For Payment	
1.....												
2.....												
3.....												
4.....												
5.....												
EXHIBIT C: (Continued): (If you have more than six contracts in progress list the five largest contracts in Columns 1 to 5 and lump all the smaller ones in Column 6).												
Col. FOR WHOM CONTRACT PERFORMED			NAME OF SURETY COMPANY				NAME OF PRINCIPAL SUB-CONTRACTOR					
COL. (1).....												
COL. (2).....												
COL. (3).....												
COL. (4).....												
COL. (5).....												
COL. (6).....												
	COL. (1)	COL. (2)	COL. (3)	COL. (4)	COL. (5)	COL. (6)						
1												
A												
B												
C												
D												
E												
F												
2												
G												
H												
I												
J												
3												
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20												

Figure 7-11-1 (Continued)

NAME OF BANK	CASH ON DEPOSIT	AMOUNT OWING	PORTION COLLATERALIZED-	MAXIMUM BANK LOANS DURING PAST 12 MONTHS

SCH. C. STOCKS, BONDS, ETC.:	UNITS	BOOK VALUE	MARKET VALUE	AMOUNT DEPOSITED AS COLLATERAL OR IN ESCROW (STATE WHICH)
DESCRIPTION				

SCH. D. LAND AND BUILDINGS: (Use asterisk if not used in business). (Use hundreds of dollars).

LOCATION	IMPROVEMENTS	BOOK VALUE	ENCUMBRANCE Amount	Maturity	TITLE RECORDED IN NAME OF

SCH. E. MACHINERY, EQUIPMENT, VEHICLES, ETC.: (Use separate line for each general classification).

No. of Items	DESCRIPTION	AGE Note (1)	PURCHASE PRICE	PRESENT BOOK VALUE	ENCUMBRANCE Note (2)	DATE DUE (Final)

Note (1) If two or more items are lumped give sum of ages. Note (2) Use asterisk if payable monthly.

SCH. F. Principal Contracts Completed Past 3 Years. FOR WHOM PERFORMED	AMOUNT (Omit 000)	SCH. G. PRINCIPAL MATERIAL SUPPLIERS AT PRESENT: NAME AND ADDRESS

SCH. H. CONTINGENT LIABILITIES:

	YES	NO
1. Have any notes or accounts receivable been sold or discounted?.....		
2. Are there any liens for labor or material filed on your work anywhere?.....		
3. Are there any disputes over payment of labor or materials on any contract?.....		
4. Are there any suits or claims or judgments pending or unsettled?.....		
5. Are you endorser or guarantor on any contracts, accounts or notes of others?.....		
6. Do you have any financial interest in a joint venture with other contractors?.....		
7. Are there any other contingent liabilities?.....		

If any known contingent liabilities exist of a nature not set forth in the above questions one to seven inclusive, please attach supplemental schedule giving full particulars. The bank is correct in assuming no other contingent liabilities exist if no such schedule is attached.

Figure 7-11-1 (Continued)

S I T E V I S I T R E P O R T

CONTRACTOR:-

PROJECT:-

DATE OF VISIT:-

Date of Report:-

Prepared by:-

CONTENT OF REPORT

1. SITE VISIT REPORT SUMMARY
2. VISIT OBSERVATIONS & DISCUSSIONS HELD
 - General Establishment
 - Progress/Production
 - Valuations/Turnover
 - Profit Appraisal
 - Cash Flow
 - Payment Delays
 - Labour
 - Plant
 - Delays
 - Extensions
 - Claims
 - Change Orders
 - Design/Working/Shop Drawings/As Built
 - Subcontractors
 - Meeting R.E./Consultants
3. CONCLUSION AND RECOMMENDATIONS

PROJECT :	DATE OF VISIT: PREPARED BY:
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CONTRACTOR: CLIENT: CONSULTANTS:	START DATE: COMPLETION DATE: REVISED COMPLETION DATE: EXTENSION GRANTED:
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<u>FINANCIAL STATUS</u> PROJECT VALUE - VARIATIONS - REV. PROJECT VALUE - COST FORECAST PREV. - COST FORECAST CURRENT - PROJECTED PROFIT/ (LOSS) -	<u>VALUATION</u> NO. - DATE - GROSS VALUE CLIENT - GROSS VALUE INTERNAL - PAYMENTS REC'D TO DATE - PAYMENTS OUTSTANDING -
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FINANCIAL MOVEMENT	<u>MONTH</u>		<u>CUMULATIVE</u>	
	Planned	Actual	Planned	Actual
TURNOVER				
COST				
CASH FLOW				

RESOURCES MOVEMENT	<u>MONTH</u>		<u>CUMULATIVE</u>	
	Planned	Actual	Planned	Actual
SUPERVISION: M/MONTH				
LABOUR: M/MONTH				
S'P/LAB COST				
PLANT COST				

PROGRAMME	<u>MONTH</u>		<u>CUMULATIVE</u>	
	Planned	Actual	Planned	Actual
PROGRESS %				
PRODUCTION MANAGEMENT MAN HRS PER UNIT/PROD. WORKS				

VISIT OBERVATIONS/DISCUSSIONS - AS NOTED OVERLEAF

SIGNATURES - INSPECTION OFFICER

CONTRACTOR'S REPRESENTATIVE