



सत्यमेव जयते

MINISTRY OF RURAL DEVELOPMENT

RURAL ROAD MAINTENANCE TRAINING MODULES FOR FIELD ENGINEERS

Module-9 CONTRACT MANAGEMENT





Ministry of Rural Development

RURAL ROAD MAINTENANCE TRAINING MODULES FOR FIELD ENGINEERS

Module-9 Contract Management



This training module is produced through a collaborative effort between the International Labour Organization and the National Rural Road Development Agency under the technical assistance component of the World Bank supported Rural Roads Project-II of Pradhan Mantri Gram Sadak Yojana Project (PMGSY).

Contents:

- Common types of road contracts
- Standard Contract Documents
- Procurement of Contracts
- Management of Contracts
- Effective Contract Management

Learning Objective:

At the end of this Module you are expected:

- To have understanding of the procurement procedure of works
- To manage the work contracts more efficiently

Acknowledgement

The following publications were also used as reference materials:

- Managing Maintenance of Rural Roads in India, ILO/NRRDA, January 2015

Foreword

Pradhan Mantri Gram Sadak Yojana (PMGSY), was launched in December, 2000 as a special intervention of the Government of India with the broad objective of ensuring sustainable poverty reduction. The scheme aims to provide good quality all-weather single connectivity to every eligible habitation. Rural roads are a state subject under the Constitution and as such are the basic responsibility of the states. However under the PMGSY, the construction of good quality and well-engineered roads are fully funded by the central government. Maintenance of these roads is the responsibility of the states. The year 2013 saw the launch of PMGSY-II with the objectives of consolidating the existing rural road network and upgrading existing rural roads that provide connectivity to rural growth centres. PMGSY-II envisages sharing of construction costs between the Centre and the states with maintenance costs continuing to be funded fully by the states.

Over the last 14 years, the PMGSY has carved out a place for itself as a programme characterised by creation of good quality assets, effective management and technical proficiency by the National Rural Road Development Agency (NRRDA), along with capable state road agencies. For implementation and operations, the involved agencies have been supported with detailed documentation in the form of programme guidelines, an operations manual, standard bidding documents, specifications, a standard data book, a procurement and contracts management manual and the Quality Assurance Hand Book with support from the Indian Roads Congress. These documents have also contributed significantly towards effective implementation of PMGSY and even for mainstreaming good practices in other rural roads programmes being executed by the states from their own resources.

An area of concern has been lack of regular maintenance as per the “Programme Guidelines”. However, in recent years, there has been increased awareness and commitment to maintenance by the states. The tempo needs to be sustained and further accelerated.

Under the technical assistance component of the World Bank supported Rural Roads Project-II, the International Labour Organization (ILO), in collaboration with NRRDA has prepared a manual “Managing Maintenance of Rural Roads in India”. This initiated the execution of maintenance works and the development of these training modules for engineers and contractors associated with rural road maintenance works. To strengthen such activities in the participating states of RRP-II, a series of training of trainers workshops were arranged at national and state level based on the course material developed.

The training modules broadly cover the principles for maintenance management of rural roads, planning and execution of common maintenance interventions to ensure reliable transport services and safety to users and the local communities served by the rural roads, and arrangements for monitoring the performance of contractors engaged for the task.

I would like to acknowledge the support of all those associated with the development of these training modules, especially the ILO and its technical assistance team, Mr. Htun Hlaing, Mr. Bjorn Johannessen and the project's Rural Roads Maintenance Engineers. I would also place on record the valuable suggestions of my colleagues Ms. Manju Rajpal, IAS, (ex Director – RC), Mr. R. Basavaraja, Director NRRDA, Mr. S. S. Bhatia, Deputy Director, NRRDA, Mr. A. K. Sharma, Consultant World Bank and senior engineers as well as secretaries from State Governments in bringing the document to its present shape.

I sincerely believe, the training modules would be found useful for the states in their efforts to secure adequate maintenance of all rural roads, not merely the PMGSY roads and improve maintenance practices so that benefits of access continue to remain available for our rural people on a sustainable basis.

(Rajesh Bhushan, IAS)
JS (RC) & DG, NRRDA
Ministry of Rural Development
Government of India

October, 2015



Introduction to Training Modules

The purpose of this training manual is to provide technical management staff and contractors with appropriate guidelines for the effective management of road maintenance works. The training modules are based on the manual “Managing Maintenance of Rural Roads in India”. These modules broadly cover the principles for maintenance management of rural roads, planning and execution of common maintenance interventions to ensure reliable transport services and safety to users and the local communities served by the rural roads. The arrangements for monitoring the performance of contractors engaged for the task are also covered in these modules.

This manual is broken down into the following categories composed of different modules:

Module 1: INTRODUCTION

Module 2: TECHNICAL CONSIDERATIONS AND IMPLEMENTATION ARRANGEMENTS

Module 3: FINANCING RURAL ROAD MAINTENANCE

Module 4: PLANNING, INSPECTION, REPORTING AND MONITORING

Module 5: APPROPRIATE SETTING OUT TECHNIQUES

Module 6: HAND TOOLS, EQUIPMENT & CONSTRUCTION MATERIALS

Module 7: ROUTINE MAINTENANCE WORK METHODS

Module 8: OCCUPATIONAL HEALTH & SAFETY, ENVIRONMENTAL ISSUES AND DECENT WORK

Module 9: CONTRACT MANAGEMENT

The trainer may decide to conduct a full course consisting of all the nine modules or may selectively conduct specific modules depending on the needs of the target group.

As a general advice the trainer should:

- **Encourage active participation**

There is sometimes a tendency of the trainer to act like a teacher in school and to read or lecture directly from the course material. This behaviour should be avoided. Trainees remember information better if they participate actively in discussions and if there is a free exchange of views and of questions between everyone participating in the course.

- **Guiding the discussion**

There are times during a discussion when everyone wants to speak at the same time. When such situations arise, the trainer should insist that the group listen to one person at the time. If one speaker hijacks the floor too long, the trainer needs to interrupt, pointing out that other participants may also want to speak.

- **Listen attentively**

Equal attention should be paid to each speaker. Listen attentively and let the speaker understand that ideas and opinions expressed are both interesting and relevant. It is sometimes useful to take a brief note of participants' suggestions while they are speaking, noting them down on a flipchart or blackboard. A summary of these notes may prove useful for later discussions.

- **Emphasise important points**

Each time the participants make an important point or expresses an interesting opinion, the trainer should draw the group's attention to it by repeating the idea in simple terms which are understood by the majority of the trainees.

- **Preparing the sessions**

When trainees only listen to a description of how a particular job should be done, they are likely to forget what they heard. If however, they actually carry out the task concerned, they will remember how to do it. For this reason, every effort should be made to include as many practical exercises and demonstrations as possible, be they carried out on the worksite or in the training room. Practical sessions should always be carefully planned in advance.

- **Recapping**

A discussion is more than just a conversation. A subject is discussed with an aim in mind. It may occasionally be worthwhile recapping the topic considered and recalling the aim of the discussion by intervening from time to time to give a brief summary of the main points dealt with so far.

- **Questioning**

An important role of the trainer is to ensure that the atmosphere during training is sufficiently relaxed to allow participants to feel at ease to speak freely. Questions set by the trainer should not be regarded by the trainees as tests. Often there is no strict "right or wrong" answer to a question, except for mathematics. Questions should simply give your trainees the opportunity to put forward their individual points of view.

Table of Contents

9. CONTRACT MANAGEMENT	1
9.1 INTRODUCTION	1
9.2 COMMON FORMS OF ROAD CONTRACTS	1
9.2.1 BoQ Contract (Item Rate Contract)	1
9.2.2 Lump Sum Contract	2
9.2.3 Performance Based Contract	2
9.2.4 Petty Contracts	3
9.2.5 Retainer Contract	3
9.2.6 Community Contracting	5
9.2.7 Force Account	5
9.2.8 Pilot Contracts under PMGSY RRP-II for Routine Maintenance	5
9.3 PURPOSE OF CONTRACT DOCUMENT	6
9.4 STANDARD CONTRACT DOCUMENTS	6
9.5 PROCUREMENT OF CONTRACTS	7
9.5.1 Public Notification of Works Available for Outsourcing	10
9.5.2 Sale of Bid Document	10
9.5.3 Eligible Bidders	10
9.5.4 Qualification of Bidders	10
9.5.5 One Bid per Bidder	11
9.5.6 Site Visit by Bidders	11
9.5.7 Pre-Bid Meeting	11
9.5.8 Amendment of Bid Document	13
9.5.9 Submission of Bid	13
9.5.10 Bid Opening	13
9.5.11 Bid Validity	13
9.5.12 Bid Data Sheet (BDS)	13
9.5.13 Bid Security (Earnest Money)	14
9.5.14 Performance Security	14
9.5.15 Award of Contract	14

9.6	CONTRACT MANAGEMENT OF WORKS	14
9.6.1	Key Stakeholders of Contract	14
9.6.2	Conditions of Contract	16
9.6.3	Priority of Contract Documents	16
9.6.4	Contractors General Responsibility	17
9.6.5	Possession of Site	17
9.6.6	Taking Over of Site	17
9.6.7	Defect Liability Period (DLP)	17
9.6.8	Variations	18
9.6.9	Extension of Time	18
9.6.10	Payments	18
9.6.11	Quality Control	20
9.6.12	Duty Exemptions	20
9.6.13	Dispute Resolution	21
9.6.14	Communication During Contract	21
9.6.15	Safety, Security and Environment	21
9.6.16	Insurance of Work, Equipment and Persons	22
9.6.17	Protection of Environment	22
9.6.18	Compliance with Labour Regulations	22
9.6.19	Monitoring Site Meetings	22
9.7	KEY POINTS FOR EFFECTIVE CONTRACT MANAGEMENT	24
ANNEX 1:	<i>Weightage Assigned to Defects for Releasing Payments in Period II</i>	27
ANNEX 2:	<i>FIDIC Forms of Contract</i>	28
ANNEX 3:	<i>Sample Invitation For Bids (IFB)</i>	29

Contract Management

9.1 INTRODUCTION

Due to limited institutional capacity with the client department to execute planned works, the most suitable option is to outsource the execution of these works to a third party. Earlier only road construction works or major maintenance works such as rehabilitation, renewal of surface were tendered but with the continuous decrease in the number of departmental labour, now even the routine maintenance works are also being carried out by engaging Contractors in many States.

For contracting any identified works, a contract agreement is signed between the Employer (the client department, mostly represented by the Chief Engineer) and the selected Contractor (through competitive bidding). The contract agreement is mutually binding legal document that obligates the Contractor to execute specific works and obligates the Employer (or Client) to provide monetary compensation for these executed works. Entering into an agreement for execution of works is one method of allocating the responsibility of managing or sharing potential risks.

Most States (and departments) have policies and procedures specifically defining the procurement rules and have specific instructions on how the procured contracts would be administrated by the Engineering staff (Executive Engineer and below).

The intent of this training module is to expose the Engineering staff to whole life cycle of procurement which is generally followed, with a brief introduction on various options available for contracting, an overview of the procurement process including the bid documents, and generic conditions of a works contract. Concluding part covers the guidelines for effective management of such contracts by the Engineering Staff, listing roles and responsibilities of the managing staff, some do's and don'ts during execution of contract and the role of effective communication in contract management.

9.2 COMMON FORMS OF ROAD CONTRACTS

9.2.1 BoQ Contract (Item Rate Contract)

BoQ or item rate contract is the most common form of contract in civil Engineering projects. The quantities of the items of work expected to be executed under the contract are estimated, and tabulated in the bid document as Bill of Quantities (BoQ). The bidder provides its rates (unit price) against

each item when submitting the bid. The bidder who quotes lowest aggregated rate gets the Contract.

Payment of works in a BoQ contract is based on unit rates agreed for each of the work activities and the Contractor is at any given time paid only for the quantity of the completed works.

For this type of Contract, Engineer's assessment of the activities (in number) under the scope of the Contract is very important. In case of inaccurate estimation of the quantities, some bidder may submit an 'unbalanced bid' when it discovers large difference between its estimation of work and the client's estimates of these quantities. The risk of inaccurate estimation of works is covered by provision of 'Variation' clause in the contract, but this is allowed only subject to certain conditions and limits. Also the client has option of seeking additional performance security for 'unbalanced' items.

9.2.2 Lump Sum Contract

In a lump sum contract, the client agrees to pay a specified amount to Contractor on completion of some predefined stage or milestone during the execution of the work. In this case cost break down or the quantities of the executed work are not required for payment.

It is called a Lump Sum because the Contractor is required to submit a total (lump sum) price instead of bidding on individual items. A lump sum contract is the mostly used on projects with a well-defined scope.

In this type of Contract, the complete design of the project before start , estimation of the quantities and the knowledge of effective unit prices (at the time of execution) of the activities which constitute the completion of a stage or milestone, by the Engineer (and the Contractor) is very important. The client has reduced risk in this type of Contract and has essentially assigned most of the risk to the Contractor. If the actual cost of the project is underestimated, the underestimated cost will reduce the Contractor's profit by that amount. An overestimate has an opposite effect, but may reduce the chance of being his being lowest bidder for the project.

9.2.3 Performance Based Contract

Performance base maintenance contracts have in recent years become an increasingly popular approach to road maintenance. The basic principle is to define a desired performance standard to which the road needs to be maintained during a certain period of time instead of specifying a contract based on quantified volumes of work. The Contractor is paid a specified amount, irrespective of the inputs, if the pre-defined conditions or standards are met with.

In this type of Contract, the assessment of the activities under contract, actual estimation of the quantities of items of expected work, the setting up of performance criteria and conditions for payment is very important.

A copy of a set of performance criteria specified for one of the pilot contracts in ILO-PMGSY project is placed at Annex 1.

9.2.4 Petty Contracts

When dealing with activities such as off-carriageway maintenance, the volume of works and contract amounts are much smaller, and may not justify the use of the comprehensive contracts intended for larger civil works projects. Due to the limited size of these contracts, a simplified system can be applied. In such a case petty (very small) contracts can be an effective arrangement for smaller simple works dispersed over a large geographical which can be let through direct selection (with limited competition), applying standardized unit rates and simplified contract documents.

9.2.5 Retainer Contract

Retainer contracts with an agreed schedule of rates are sometimes used for establishing a standby arrangement for dealing with emergency maintenance works such as major landslides and washouts which require immediate action in order to restore access as well as limiting the extent of damages. In emergent situation there is a need to quickly mobilize resources to reopen the road. In the past, force account units in the public works departments took care of emergency works. In recent years, these units have often been disbanded and the agencies totally rely on private Contractors to carry out maintenance.

In such instances, it may take too long time to secure agreements with Contractors through the standard tendering process. Instead, the technical agencies can call for tenders on work activities that are commonly required in order to deal with emergency situations. These tenders essentially consist of priced unit rates for the activities normally required in order to repair road sections that has become impassable as a result of sudden severe damages. Retainer contracts are only utilized when an emergency occurs and are normally organized once a year, preferably in advance of the season during which major damages are likely to occur.

When a major incidence has occurred, the road agency can then quickly mobilise a Contractor who have already submitted unit prices for emergency works. Technical staff from the road agency then carries out a rapid assessment of the works required and estimate the quantities of work. The total cost of works is then calculated on the basis of these quantities together with the already agreed unit prices.



9.2.6 Community Contracting

Community contracting has become a popular arrangement for minor works that are targeted towards a limited group of beneficiaries such as a village or a particular neighbourhood in an urban setting. It is an approach often championed by development agencies in order to secure a high level of local participation by the end users in all stages of the project from conception, planning to works implementation.

A common feature in community contracting is that there are normally no formal contracting firms involved in the works. Instead, the role of the Contractor is replaced by the community, which takes charge of the works, relying on local labour and individuals who possess the necessary trade skills. In some instances, these groups are later recognized as a “Contractor” and also utilized during the maintenance and operation phase of a project.

While acknowledging the limited technical skills and capacity of local communities operating as a Contractor, there is still a need to follow the basic concepts of contracting. This includes establishing a contract agreement in which the works are properly quantified and priced. Equally, this arrangement also requires clearly defined procedures for supervision, measurement and payment of works – similar to conventional contracting of civil works.

9.2.7 Force Account

Force account refers to maintenance activities undertaken by the Client using its own departmental labour and machinery. Gangs of departmental labour maintains stretches of roads in their sections, and the material and machinery for carrying out maintenance activities was provided by the department. This was a very effective option for routine maintenance of roads, and this practice was in use in almost all State public works departments about 15 ~ 20 years ago. But in recent times use of force account for routine maintenance is limited to only few States (e.g. HP) as the intake of regular labour in departments has substantially decreased and more and more works are being outsourced.

9.2.8 Pilot Contracts under PMGSY RRP-II for Routine Maintenance

Under RRP-II (Rural Roads Project-II), NRRDA has assigned ILO to test two models of contracting for routine maintenance of rural roads (PMGSY roads after 5 year DLP and other Non-PMGSY rural roads). These are Performance Based Maintenance Contracts (PBMC), and Community Contracts. ILO has produced a draft of SBD for PBMC, which is being tested in Himachal Pradesh and Uttarakhand. ILO is also in process of drafting Contract agreement / MoUs for facilitating Community Contracting (for off carriageway maintenance) in Bihar and Uttar Pradesh.

9.3 PURPOSE OF CONTRACT DOCUMENT

The Contract Documents define the materials and products and how they are installed together with all the management procedures.

A Contract Document may also be seen as a Tender Document with the blanks filled in and the Form of Agreement signed by the parties to the contract. The contents of the Contract depends on the contents of the Tender Document and the nature of the tender.

They contain all the documents necessary to define;

- the Works for construction,
- the conditions pertaining to the contract and
- are binding on both the Employer and Contractor.

9.4 STANDARD CONTRACT DOCUMENTS

Government agencies usually rely on standard documents when preparing a public works contract. These documents form part of the government procurement regulations and as such must be adhered to. Making use of standardized documents, simplifies contracts management. As the same procedures are applied again and again, department staff and Contractors are familiar with the prevailing regulations and conditions applied in the contracts.

For the construction of rural roads under PMGSY, NRRDA has issued a Standard Bidding Document (SBD). The document follows the format of the MOST (Ministry of Surface Transport) Bidding Document, which is similar to the format for National Competitive Bidding (NCB) for Works (India Version) as approved by the Ministry of Finance for World Bank funded projects. This Bid document is available at PMGSY website (<http://pmgsy.nic.in>). Multinational Development Banks including the World Bank, uses FIDIC's (Refer Annex 2) MDB Harmonized Edition of the Construction Contract for their projects.

For the construction of other rural roads (Non PMGSY) from the State funding/schemes, respective States use their own Standard Bidding Documents or Contract formats. Now most of the States have started using the template of PMGSY SBD for these works.

Maintenance of the constructed works under PMGSY is responsibility of the same Contractor for a period of 5 years after construction, hence terms and conditions for maintenance of PMGSY roads during this period are also included in the aforementioned PMGSY SBD.

Maintenance of PMGSY roads after 5 years maintenance period (also termed as 5 years DLP), and other rural roads in the State is undertaken

by the department(s) having jurisdiction of rural roads in that State. These works are also procured/contracted by the States using their own Bidding Documents / Templates.

9.5 PROCUREMENT OF CONTRACTS

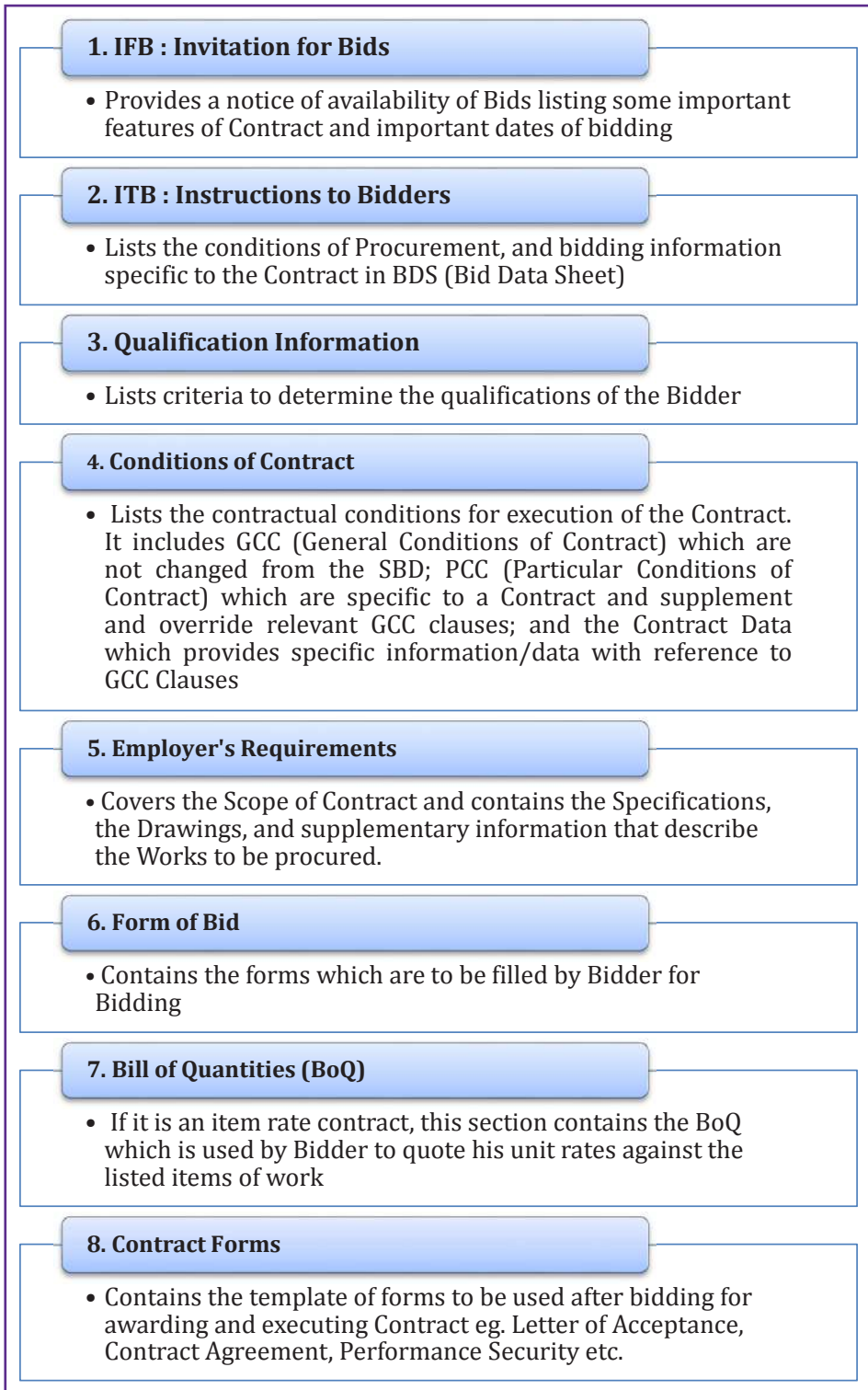
Standard civil works contracts are designed to cater for a certain size of works. The larger and more complicated projects use more comprehensive documents. Smaller works contracts, such as the ones issued for routine road maintenance works, do not need the same level of sophistication and therefore contain less clauses and regulations. Experience shows that the smallest jobs can be managed using simplified documents, thereby reducing the time necessary for contract preparation. Still, the contract would define the type and amount of works to be carried out and linking payment to the progress of work.

The procurement of works is preceded by assessment of the scope of work (Employer's requirements), estimation of the costs, and the administrative approval / technical sanction from a competent authority to undertake these works. Thereafter for each work or package of works a Bid Document / Contract Document is prepared at the Division (PIU) level, for which inputs come from the respective Sub Divisions and the concerned branches (Drawing / Administrative) of the Division office. In most cases, the work to be executed under each contract is tabulated in the form of BoQ (Bill of Quantities) in the Bid Document (Refer Section 9.2 for different form of contracts).

Procurement is undertaken by the Division office using the approved Bid documents for that work/package.

The ITB (Instructions to Bidders) section of the Bid document lists out methodology, terms/conditions and other information specifying how the Employer intends to undertake procurement of works.

Figure 1: *Sections of a bid document*





9.5.1 Public Notification of Works Available for Outsourcing

A public notification (mostly an advertisement in Newspaper) is issued which specifies the name /brief detail of the work(s) available for out sourcing, estimated costs, important dates of procurement (start date of availability of bid, last date of bid submission, date of bid opening, date of pre-bid etc.) and contact details of the concerned office.

The Bid Document also carries a copy of the detailed notification termed as IFB (Invitation for Bids). In some cases, Client advertises the entire IFB in the press/media. These days with the advent of E-procurement the Bid notice is also placed on the Client's website.

A specimen of the IFB is placed at Annex 3.

9.5.2 Sale of Bid Document

The Bid document is issued to the interested/prospective Contractors against a specified payment. [*Mostly, the cost of the Bid Document depends on the approximate cost of the bid work and the targeted category of the Contractors*]. For the works procured under e-procurement, the Contractor has the option of downloading the Bid document from the Employer's website, and deposit bid document cost at the time of Bid submission. In case the bid submission is also online, the Contractor uploads a copy of the demand draft of the value equal to cost of the bid document, and submits the original draft at the time of submission of technical documents.

9.5.3 Eligible Bidders

The ITB specifies the eligibility criteria of the Bidders who can submit the Bids. For normal PWD Contracts, the Contractors registered with the PWD (mostly any State PWD and the Central PWD registered Contractors) are eligible. For the World Bank funded procurement, generally the Bidding is open to all Bidders except for the Bidders from the countries debarred by UN Security Council.

Depending on the requirement of the Contract, the Employer may allow or not allow participation of a Joint Venture in the Bidding.

9.5.4 Qualification of Bidders

The Employer seeks information and documents from prospective Bidder to prove that he is qualified to undertake the works under Contract. This is generally based on Bidders experience in executing similar works, and Bidders financial capability to manage the Contract. In most cases the Employer seeks details of the following:

- i. Registration of the Bidder with PWD / CPWD
- ii. Registration of Bidder's company as per law of the country
- iii. Financial turnover of the Bidder's company (Generally it is equal to the value of the work to be Contracted)
- iv. Amount of total works, and works of similar nature executed by the Bidder in a specified period (The qualifying criteria depends on the nature and importance of work, and is generally one single work of 80% of the value of work to be contracted having been completed in last 5 years)

Apart from above, the Employer also checks the reputation of Bidders in managing disputes on previous contracts.

The qualifying information is sought from Bidder on the templates provided in Section 3 of Bid - 'Qualification Information'.

The documents to be appended in support of qualification are certified copies of the requested information. The Employer can seek the original documents at the time of Bid evaluation.

9.5.5 One Bid per Bidder

For any Contract the Bidder can submit only one bid, otherwise the submitted bids are not considered for evaluation.

9.5.6 Site Visit by Bidders

In order to make its assessment for bidding, if the bidder is allowed to visit the site of works but the cost of visit and associated expenses for data collection etc. is borne by the Bidder.

9.5.7 Pre-Bid Meeting

During Bidding period, the Employer facilitates a meeting with all the bidders who have purchased the bidding document to answer any queries related to Bidding and the proposed Contract. The responses of Employer are provided to all the bidders (even if they are not present in this meeting) who have purchased the Bid document, without disclosing which bidder had raised the query.

The pre-bid meeting should be held early, e.g., two to three weeks after the availability of the tender document. This allows potential bidders time to thoroughly review the tender documents and gives enough time to prepare their proposals once they have received important clarifications, if applicable. The tendering process should also allow for written requests for clarification or comments, but this should be limited to a certain deadline.



9.5.8 Amendment of Bid Document

If required, the Employer can make modification / amendment to issued Bid Document before close of bidding date. This is notified by issuing a corrigendum / addendum in the same medium where the original Bid Notice was given. The Employer also extends the deadline of bid submission, allow bidders to account for changes made. Generally at least two weeks' time is given. The Employer needs to notify all the bidders who have purchased the bid document about the issued corrigendum / addendum.

9.5.9 Submission of Bid

The Bidder prepares his Bid using only the purchased version of the Bid Document. The rates of the items are quoted (if its item rate contract) in the BoQ provided in Bid, and the total quoted price of Bidder for that Contract is provide in Letter of Bid. Generally following are part of the submitted bid.

- i. Form (letter) of bid
- ii. Bid Security
- iii. Qualification information with supporting documents and undertakings
- iv. Purchased Bid document, filling the information where indicated

9.5.10 Bid Opening

On the specified date and time, the Employer opens the bids received by the deadline and reads the Bid prices quoted by respective Bidders. This is done in the presence of the Bidders and/or their representatives. Other documents such as availability of the requested Bid Security, its validity dates, the demand draft for Bid document (if downloaded from website) etc. are also confirmed. A record of the proceedings is prepared, and shared with all the participating Bidders.

9.5.11 Bid Validity

The Employer requires that the submitted Bid should be valid till the time procurement process is complete, and the Contract is awarded to the successful Bidder. Normally this period is taken as 90 days after the deadline date for bid submission. On expiry of original Bid validity period, the Employer can seek the extension of the Bid validity from the Bidder but the Bidder has prerogative to agree to such extension.

9.5.12 Bid Data Sheet (BDS)

BDS contains specific data for the Works to be procured and complement, amend, or supplement the provisions in the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions in BDS prevail over those in Instructions to Bidders.

9.5.13 Bid Security (Earnest Money)

The Employer seeks a Bid Security from the participating bidders which normally is 1% to 2% of the estimated cost of works under the Contract. The Bid Security can be in the shape of a Fixed Deposit Receipt or Demand Draft, and in general has validity of 45 days beyond the Bid validity period. All Bidders are refunded their bid security, after the successful Bidder submits the Performance Security to the Employer and signs the Contract agreement. In some cases, the Bid Security of the successful bidder is converted as part of the required Performance Security.

9.5.14 Performance Security

The Contractor is to provide performance security for the proper performance of the contract. Generally it is 5% of the contract price, and is kept valid till the completion of defects liability period. Performance security is obtained from the Contractor in the form of Bank Guarantee, on a format annexed with the Bid Document. Performance security is to be provided by Contractor within 28 days (or as decided by Employer) of the receipt of the Letter of Acceptance from Employer.

If circumstances arise during the execution of the contract which requires realization of Performance Security, the Employer is required to notify the Contractor stating the nature of the default in respect of which claim is being made by Employer against Contractor.

9.5.15 Award of Contract

The Contract is awarded to the lowest evaluated bid/tender, assuming it is substantially responsive. The successful bidder is notified in writing, in the form of Letter of Acceptance. All other bidders are also informed about the Employers decision on award of Contract.

In some States/Departments, Letter of Acceptance amounts to contract even though acceptance letters refers to a formal contract to be drawn up afterwards.

The formal agreement is signed within 28 days (or as decided by the Employer) along with submission of performance security.

Employer has right to accept or reject any or all bids and even to annul the bidding process any time prior to award of contract.

9.6 CONTRACT MANAGEMENT OF WORKS

9.6.1 Key Stakeholders of Contract

Three key stakeholders of any works contract are (i) Employer, (ii) Contractor and (iii) Engineer. First two are signatories (parties) of the Contract agreement,

while the Engineer is the entity which facilitates management of the contract (generally) on behalf of the Employer.

Employer

Employer means the person named as such in BDS or Contract Data, and the legal successor in the title to such person.

Normally in Public Works Contracts in India, the Employer is the Chief Engineer acting on behalf of the Governor of the State

Engineer

Engineer means the person appointed by the Employer to act as Engineer for the purpose of the Contract. He can be a departmental officer (generally Executive Engineer) or a PMC (Project management consultant). The Engineer represents the Employer to carry out duties as specified in the conditions of Contract. On some issues the Engineer may require to seek prior approval of the Employer, such as cost increase or time extension. The Engineer has no authority to relieve the Contractor of any of its obligations under the contract, but has authority to act in an emergency. The Engineer may delegate to his representative any of his duties and authorities. The Engineer's approval does not absolve the Contractor of his duties and responsibilities under the contract. The Engineer shall instruct in writing and oral instructions shall be confirmed by written communication. The Engineer shall act impartially on all matter entrusted to him.

Contractor

Contractor means the person whose tender has been accepted by the Employer and the legal successor in title to such person.

Contractor or Contracting Agency is responsible for execution of the listed Works under the Contract against some agreed amount of payments, subject to specified terms and conditions of the agreement.

Sub-Contractor

Sub-Contractor means any person/agency named in the contract or proposed by the Contractor as a sub-Contractor to whom a part of work has been sub contracted with the consent of Engineer and the legal successor in title to such person.

If allowed in the Contract, the Contractor can Sub Contract some works to another Contractor. This happens mostly in cases where specialised jobs are required to be undertaken within the contract. The Contractor cannot subcontract the whole of the Works.

Consent to Sub-Contract does not relieve the contractor from any of his obligations and liabilities from that part of work. The Contractor is completely responsible for the acts, defaults and neglects of any subcontractor.

Generally, the contractor is not required to obtain consent for:

- a. The provision of labour
- b. The purchase of materials
- c. The sub-contracting of any part of the Works for which the Subcontractor is named in the Contract.

9.6.2 Conditions of Contract

Normally, there are two sub-groups of conditions of a Works Contract

- i. General Conditions (GC or GCC)
- ii. Particular Conditions (PC or PCC)

General Conditions of Contract are not changed from the conditions provided in the base Contract Document (mostly FIDIC Contract template or Client departments own SBD). These are to be applied to any Project without change. Particular Conditions are amended General conditions supposed to take care of issues specific to any given project, but within the limits clearly set out by Client department.

Particular Conditions have precedence over respective clauses of the General Conditions.

9.6.3 Priority of Contract Documents

The priority of different documents forming the contract is clearly spelt out for removing any ambiguities or discrepancies, though all documents forming contract are mutually explanatory of one another.

The Contract Documents for works contracts comprise the following documents arranged in the order of preference as per the conditions of contract:

1. The Contract Agreement (Agreement signed between Employer and Contractor),
2. Letter of Acceptance issued by Employer to Contractor,
3. Notice to Proceed with the Work ,
4. Contractor's Bid,
5. Contract Data,
6. Particular Conditions of Contract,
7. General Conditions of Contract,
8. Employer's Requirements (Works and Specifications),

9. The Drawings,
10. Bill of Quantities (BoQ) and
11. Any other document listed in the Contract Data.

9.6.4 Contractors General Responsibility

The Contractor shall design (to the extent required) execute and complete the works and remedy any defects by providing all superintendence, labour materials, Plants, Equipment and other things, as specified or as inferred from the contract.

9.6.5 Possession of Site

Employer has to provide the possession of the site to the contractor as per agreement dates. If it is delayed the contractor can claim time extension and extra cost.

Unforeseeable Site Conditions

Other than climatic conditions, if contractor finds an adverse physical obstruction or condition which is foreseeable by an experienced contractor. The Engineer after consultation with Employer may grant.

- a. The time extension needed for the completion of the effected work
- b. And the amount of cost increase needed by the contractor for the above reason.

9.6.6 Taking Over of Site

Employer takes over the Site from the Contractor after completion of the works under the Contract. Even after taking over, the Contractor has responsibility to remedy any defects to the constructed works during the defined Defect Liability Period.

Substantial Completion Of Parts

If agreed under contract, the Employer can take over any part of the project that has been substantially completed. In big projects, separate time of completion (or milestone) is mentioned which can be taken over on completion. In some circumstances, the Employer takes over major parts of work and the contractor is liable to complete any outstanding work within the defect liability period.

9.6.7 Defect Liability Period (DLP)

In most Contracts a Defects liability period is agreed, during which the Contractor is responsible to rectify any defects or repair any damage to the works constructed by him. DLP starts immediately after the completion

period of the Contract. The Engineer can get the defects rectified at the cost of Contractor if it fails to carry out the required work.

In case substantial completion of some works (or section) in Contract is accepted by the Employer, the DLP for that work (or section) shall start from such acceptance date.

If there is any default on the part of the contractor in carrying out the work of remedy within reasonable time the employer is entitled to employ and pay other contractor whom he thinks suitable to carry out the same work. All the cost incurred for doing the work by the other contractor will deducted from the contractors payments.

9.6.8 Variations

The quantities set out in the bill of Quantities are the estimated quantities of the works and not the actual quantities. There are circumstances during the execution of Contract that the engineer needs to vary the quantity or specification of work and also to omit or add additional work. For the items for which rates are not agreed in Contract, or the percentage of variation is higher than agreed threshold, the engineer is required to fix new rates for variations, additions deletion and alterations. The new rates are worked out on the basis of existing rates in the contract wherever possible otherwise suitable rates are to be worked out by engineer after consultation with contractor and the Employer.

9.6.9 Extension of Time

On receipt of request from the Contractor, the employer can extend the time for completion due to additional works, exceptionally adverse climatic conditions, causes for which the employer is responsible, and agreed circumstances for which Contractor is responsible and were notified by the Contractor.

9.6.10 Payments

Contractor submits monthly (or as per agreed period) statement of money due in the format instructed by the Engineer. The engineer is to certify this payment request within a defined period (28 days in FIDIC SBD) after inspecting and measuring the executed works.

After completion of all works under contract, the contractor submits the final value of all work done. This is done after the issuance of taking over certificate by Employer. The employer not liable to the contractor for any matters beyond claims in the final statement.

In the event of the failure of Employer to make the payment within the time stated in Contract agreement, the Employer shall pay contractor interest at the rate stated in the agreement.



Retention Money

Retention money is deducted from the interim monthly payments of the Contractor during progress of work. Generally it is returned in two stages, (a) 50% of the retention money is returned to Contractor on the completion of whole of the works under Contract and (b) balance 50% after the expiry of Defects Liability period.

Liquidated Damages

If contractor fails to comply with the given time for completion, then contractor has to pay to the employer an agreed amount of liquidated damages. The employer deducts this amount from the payment of the contractor. Still this does not relieve the contractor from his obligations as mentioned in the contract to complete the works. If any section or part of the work is already completed and handed over, the liquidated damages proportionately reduced.

9.6.11 Quality Control

All material, plant and workmanship shall be as described in the contract and according to the engineer's instructions. The contractor shall facilitate the engineer to examine and measure any works.

The Contractor is not supposed to cover any work without the approval of the engineer. He has to inform the Engineer the works which are about to be covered up or put out of view. If required, the contractor shall uncover any part of the works or make openings, as engineer may instruct and shall reinstate such part of the work. If any such part has been covered up or put out of view after compliance and is found to be executed in accordance with the contract, the amount of contractors cost of such uncovering, reinstating and making good shall be provided to the contractor.

The engineer can issue instructions for removal from the site, any material or plant which is not in accordance with the contract and seek its substitution.

The contractor has to supply samples of materials, before incorporation of works for testing as may be required by engineer. Quality control tests can be carried out at the place of manufacture, fabrication or preparation or on the site as required by the engineer.

9.6.12 Duty Exemptions

The World Bank funded Contracts allow for Duty exemption (Excise and Custom) on the goods, material, machinery and equipment intended to be used for execution of a specific Contract. This exemption is allowed by the concerned department after the Contractor's request is agreed and counter signed by the Engineer / Project Director.

9.6.13 Dispute Resolution

If the Contractor believes that a decision taken by the Engineer was either outside the authority given to the Engineer by the Employer or that the decision was wrongly taken, the decision shall be referred to the Adjudicator within 28 days of notification of the Engineer's decision.

The Adjudicator shall give a decision in writing within 56 days of receipt of a notification of a dispute.

Either party (Contractor or Engineer) may refer a decision of the Adjudicator to Arbitration within 28 days of the Adjudicator's written decision. Arbitration shall be under the Indian Arbitration and Conciliation Act, 1996. If neither party refers the dispute to Arbitration within the above 28 days, the Adjudicator's decision will be final and binding on both the parties.

Performance under the contract shall continue notwithstanding the reference to the Adjudicator or Arbitrator, and payments by the Employer to the Contractor will not be withheld unless they are the subject matter of dispute.

9.6.14 Communication During Contract

The language of the contract shall be as specified in the conditions of particular application.

Communication (all letters, notices and instructions) shall be sent to an accepted address of Contractor, Engineer and Employer, clearly stated in the contract. The address so provided can be changed after giving proper notice of change. Emails or fax to the notified office email id or fax number are also be used for communication. The Notice sent by facsimile (fax) or other electronic means shall be effective on confirmation of the transmission.

Instructions given by the Engineer shall be in writing. If for any reason the Engineer considers gives instruction orally, these should be confirmed in writing within 7 days.

9.6.15 Safety, Security and Environment

The contractor is required to take care of the safety of all persons, his staff and workers and also of the persons visiting site in various capacities and responsibilities for execution / management of the Contract. The contractor is to ensure that its operations on the site do not interfere with the convenience of the public or block the access to others.

He has to maintain at his own cost, all lights, guards, fencing, warning signs required for securing the construction site.

He has to take all reasonable steps to protect the environment, and take steps to control pollution or noise within the prescribed limits (by Contract or by law).

9.6.16 Insurance of Work, Equipment and Persons

The contractor has to take an insurance policy for the damage to works (generally full replacement costs of the works), equipment / machinery at site of work and against death or injury to any person during the performance of the contract (for the amounts indicated in the agreement).

The contractor has to produce evidence of taking these insurances in the beginning of Contract (within the defined time frame). In case of failure to do so, the Employer can take such insurances at the cost of contractor.

9.6.17 Protection of Environment

During continuance of the contract, the Contractor and his sub-Contractors shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in future by the State or Central Government or the local authority.

9.6.18 Compliance with Labour Regulations

During continuance of the Contract, the Contractor and his sub-Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority.

9.6.19 Monitoring Site Meetings

Following the commencement of construction works by the Contractor, Monitoring Site Meetings shall be held on a Monitoring basis. These shall be attended by all the relevant stakeholders to ascertain whether the Contractor is carrying out his/her work in line with gender, environment and workplace health and safety issues contained in the contract documents.

The Monitoring Site Meeting shall be attended by the following:

- Client's representative
- Contractor's representative
- Workers' representative (male and female representation)
- Members of the Entity Works Committee
- Representatives of the community including special interest groups such as women, youth and persons with disabilities
- Representatives of the district, community and workers.

Minutes of the meeting shall be taken by the client's representative who shall produce and distribute to all the relevant stakeholders. Failure to organise and participate in Monitoring Site Meetings may result in poor communication between the contractor and the communities in which construction is undertaken.

Checklist

The following checklist of activities, to be undertaken during the Monitoring Site Meeting, is for guidance only and may not be fully exhaustive.

- Meet with members of the local communities and District stakeholders as a precursor to maintaining good working relationship. The meeting will follow up on mutual obligations by the contractor to the community and by the community to the contractor, including issues relating to gender sensitivity, environment conservation, labour and workplace safety, health issues including HIV/AIDS prevention as agreed in Pre-Tender and Mobilisation Site Meetings.
- Follow up on availability of materials approved by the Client for fill, surfacing, aggregate, sand, water, etc. and whether the Contractor is having any challenges in accessing these materials.
- Revisit security issues related to the Contractor's property and all those workers employed from the local communities.

The following may also be undertaken during the meeting:

- a. Confirm the availability, location, condition and access to sources of materials approved by the Client for fill, surfacing, aggregate, sand, water, etc. and agree with representatives of the local communities modalities for accessing these materials and the cost, if any, thereof.
- b. Locate and acquire storage facilities in the community including the costs involved.
- c. Agree on any measures necessary to ensure security of the Contractor's property and all workers employed from the local communities.
- d. Clarify the mode of operation such as work methods (task allocation and rates, working hours).
- e. To explain the target group eligible for employment. In all cases, it must be stressed that, both men and women are eligible for employment. Explain the likely application of 50% quota system in the recruitment to allow for a ratio of 1 : 1 of women : men or where this is not achievable, at least 30% of the labour force should be women. Emphasise that women's participation should not be restricted to only work that is traditionally associated with women but that it should include supervisory roles and other otherwise "manly" work. Youth and Persons with Disabilities should also be considered as special cases.

- f. Discuss the labour mobilisation strategy and recruitment method for both male and female.
- g. Other issues/matters as the Meeting may consider appropriate.

Provide the local leaders with the Standard Notice of Recruitment (SNR) for display at public places in their respective communities. In this case, local leaders shall include District officials, officials of community and women groups, churches and mosques and youth leaders among others. Standard notices shall be posted to public places such as schools, announcements at market places, trading centres and road junctions, floats Districts notice boards, tree trunks along road sides and at health centres notice boards among others.

9.7 KEY POINTS FOR EFFECTIVE CONTRACT MANAGEMENT

In normal construction works of any road agency (in India), the Contracts on ground are managed by the Assistant Engineer (on behalf of Executive Engineer) supported with a team of Junior Engineers. Though in most cases the field Engineer is not a signatory of the Contract, but by the delegated authority he has the responsibility to supervise the execution of the Contract by the Contractor in such manner that there is no loss to the Government Exchequer and the intended purpose of the Contract is delivered. For effective management of a Contract, some key points for the field Engineer are listed below:

- ✓ Discharges the duties with complete fidelity and uphold the reputation of Engineering profession and the department
- ✓ Always treat Contractor a key stakeholder in success of the Contract
- ✓ Read the Contract Agreement very carefully, and note down which actions AE can take directly and for which actions AE has to take decision / approval of the EE or CE, e.g. following may require approval from Employer:
 - Subletting any part of the work
 - Variation orders
 - Certificate of completion
 - Approval of new rates
- ✗ *Don't simply put the contract on the shelf once signed. Spend time reading and understanding the contract, particularly the contract management and dispute resolution procedures.*
- ✓ Understand the sequence of priority of documents which are part of Contract (refer Section 9.6.3 above)
- ✓ In case of any ambiguity or discrepancy bring the issue in the notice of Executive Engineer or some expert before issuing any instruction to the Contractor

- ✓ Keep note of all the important dates
 - Dates when bidding takes place
 - Date of Pre-Bid meeting
 - Last date of Bid submission
 - Date of Bid opening (In most of the cases, the last date of bid submission and date of bid opening are same)
 - Date of issue of letter of acceptance
 - Date of Contract Agreement
 - Date of Site handover
 - Milestone Dates
 - Date of Completion (Original and extended)
- ✓ Make sure to have a clear timetable of contract meeting, and always agree the agenda in advance
- ✗ *Don't forget to get the feedback of the other party – clear and honest feedback will help develop and sustain a productive relationship and avoid disputes*
- ✗ *Don't ignore to record minutes of each meeting*
- ✓ Keep note of the specific approvals required to be obtained from the Employer (in most case CE) for matters relating to change of scope, price variation and time extension
- ✓ Keep record of daily proceedings, especially the circumstances which may cause delay to Contract. This will help in counting Contractor's Claims.
- ✓ Always monitor the progress of works with a baseline schedule, prepared at the beginning of Contract
- ✓ Always prepare inspection notes. This is very important when the site is handed over to the Contractor
- ✓ Do not delay the inspections, measurements and due certification of the submitted payment certificates by the Contractor
- ✓ Keep note of expiry date of Performance Guarantee. Notify Contractor well in advance
- ✓ Intervene immediately in case of emergency, for the safety of work and workers
- ✓ Correspondence with the Contractor should be formal and precise, quoting the relevant Contract Clauses
- ✓ Use the advancement in IT systems to your advantage. An effective data monitoring system can be invaluable for contract management and can save time and money in the long run if used effectively



ANNEX 1: WEIGHTAGE ASSIGNED TO DEFECTS FOR RELEASING PAYMENTS IN PERIOD II

Weightage assigned to Defects for Releasing Payments in Period – II

	Defect	Weightage
1	Pavement	38
	(i) Surface patches* (Due to stripping, ravelling, delamination)	20
	(ii) Potholes	10
	(iii) Surface deformations (all depressed, rutted or corrugated surfaces)	8
	(iv) Surface Bleeding	0
2	Edges & Shoulders	25
	(i) Edge Break	10
	(ii) Deformation / Scouring of Shoulders (Berms)	15
3	Drainage	18
	(i) Surface runoff	0
	(ii) Side drains	8
	(iii) Cross-Drains (Culverts)	10
4	Vegetation Control	2
	(i) Shrubs, Bushes, Grass	1
	(ii) Tree branches	1
5	Road Safety	8
	(i) Blockage on carriageway	1
	(ii) Road Signage & Road Marking	2
	(iii) Railings of Bridges & Parapets of Culverts	4
	(iv) Maintenance of 200m, Km and guard stones	1
6	Side slopes	9
	(i) Landslides/Slips (Hill Side) [Less than 3 cum in each instance]	6
	(ii) Erosion of Slopes (Valley Side) [If damages more than half width of the shoulder]	3

ANNEX 2: FIDIC FORMS OF CONTRACT

F I D I C

FIDIC stands for Federation Internationale Des Ingenieurs Conseils (International Federation of Consulting Engineers) which was founded in 1913. The FIDIC Secretariat is located in Geneva, Switzerland.

FIDIC publishes international standard forms of contracts, to suit various types of Projects and responsibilities associated with its execution.

Construction Contracts:	Red Book
Plant and Design-Build Contract:	Yellow Book
EPC/Turnkey Contract:	Silver Book
Short Form of Contract:	Green Book.

One of the Traditional FIDIC Forms of Contract for Construction works known as Red Book is Conditions of Contract for Works of Civil Engineering Construction (Fourth Edition 1987 amended up to 1992). In 1999 FIDIC issued a revised version of Construction Contract Conditions of Contract for Construction - Design by Employer known as New Red Book.

More information can be accessed at official website of FIDIC - <http://fidic.org/>

ANNEX 3: SAMPLE INVITATION FOR BIDS (IFB)

Invitation for Bids (IFB)

1. The Chief Engineer HPPWD, Shimla Zone at Shimla, HP on behalf of the Governor of Himachal Pradesh invites sealed bids for 'Performance Based Routine maintenance of rural roads in District Solan (Himachal Pradesh)' from the eligible and approved Contractors registered with HPPWD. Non-registered Bidders may submit bid, however, the successful Bidders must get registered in appropriate class with appropriate authorities before signing the contract. Bidding is open to all Bidders as defined in the bidding document. The detail of work is given as under:

S. No.	Package*	Total Length (Km)	Estimated Contract Price (Rs. In Lacs)	Bid Security (Rs.)
Name of Work: Performance Based Routine maintenance of rural roads in District Solan (Himachal Pradesh)				
1	Package 1	18.250	21.30	21300
	Waknaghat to Subathu Road (kms 0/0 to 18/250)			

2. Interested eligible bidders may obtain further information from Executive Engineer, HPPWD Solan, Himachal Pradesh and inspect the bidding documents during office hours [1000 hours to 1700 hours] at the address given below at Sr. No. 10.
3. A complete set of bidding documents in English may be purchased by interested eligible bidders upon the submission of a written application to the address below. Cost of Bid Document is Rs. 1000/- (Rupees One thousand) only per package (non-refundable) in form of demand draft in favour of Executive Engineer, HPPWD Solan Division, Distt. Solan Himachal Pradesh.
4. The bid document is also available online at <https://pmgsytendershp.gov.in> and www.pmgsytenders.gov.in. The bid document can be downloaded free of cost from this site. However, if Bidder submits the bid using bid document downloaded from this site, he is required to submit demand draft towards cost of bid document in favour of Executive Engineer, HPPWD Solan Division, District Solan, Himachal Pradesh during Bid Submission.

Though every effort shall be made to make the Bid document available on this website during the bidding period, the Employer shall not be held liable for any electronic system failure or the failure of the Bidder to access this website.

5. Bids must be delivered to the address below on or before 14 February, 2015 by 11:00 AM. Late bids will be rejected. Bids will be publicly opened in the presence of the bidders' designated representatives and anyone who choose to attend at the address below on 14 February, 2015 at 11:30 AM.
6. All bids must be accompanied by a Bid Security as specified for that package above.
7. If the office happens to be closed on the date of opening of the bids as specified, the bids will be opened on the next working day at the same time and venue.
8. The bids for the work shall remain valid for acceptance for a period not less than ninety days after the deadline date for bid submission.
9. Bidders may bid for any one or more of the Packages mentioned in the table above. To qualify for a package of contracts made up of this and other contracts for which bids are invited in the same IFB, the Bidder must demonstrate having experience and resources sufficient to meet the aggregate of the qualifying criteria for the individual contracts.
10. The address referred to above is:
Attn: Executive Engineer, B & R Division, HPPWD,
Solan, Distt. Solan, H.P.
Himachal Pradesh, India
Tel: 01792- 223811
Fax: 01792- 223811
E-mail: ee-sol-hp@nic.in
Web site: www.pmsgytenders.gov.in, <https://pmsgytendershp.gov.in>
11. Other details can be seen in the bidding documents.

Executive Engineer,
B & R Division, HPPWD,
Solan, Distt. Solan, H.P.

This training module is produced through a collaborative effort between the International Labour Organization and the National Rural Road Development Agency under the technical assistance component of the World Bank supported Rural Roads Project-II of Pradhan Mantri Gram Sadak Yojana Project (PMGSY).



INTERNATIONAL LABOUR ORGANIZATION
ILO DWT for South Asia and Country Office for India
India Habitat Centre
Core 4B, 3rd Floor, Lodhi Road
New Delhi-110 003, INDIA



NATIONAL RURAL ROADS DEVELOPMENT AGENCY
Ministry of Rural Development, Government of India
5th Floor, 15-NBCC Tower
Bhikaji Cama Place
New Delhi-110 066, INDIA