SSIGL 27

NATIONAL GUIDELINES

For Small Scale Irrigation Development in Ethiopia

Contract Administration

November 2018

Addis Ababa

MINISTRY OF AGRICULTURE

National Guidelines for Small Scale Irrigation Development in Ethiopia

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DISCLAIMER

Ministry of Agriculture through the Consultant and core reviewers from all relevant stakeholders included the information to provide the contemporary approach about the subject matter. The information contained in the guidelines is obtained from sources believed tested and reliable and are augmented based on practical experiences. While it is believed that the guideline is enriched with professional advice, for it to be successful, needs services of competent professionals from all respective disciplines. It is believed, the guidelines presented herein are sound and to the expected standard. However, we hereby disclaim any liability, loss or risk taken by individuals, groups, or organization who does not act on the information contained herein as appropriate to the specific SSI site condition.

FORWARD

Ministry of Agriculture, based on the national strategic directions is striving to meet its commitments in which modernizing agriculture is on top of its highest priorities to sustain the rapid, broad-based and fair economic growth and development of the country. To date, major efforts have been made to remodel several important strategies and national guidelines by its major programs and projects.

While efforts have been made to create access to irrigation water and promoting sustainable irrigation development, several barriers are still hindering the implementation process and the performance of the schemes. The major technical constrains starts from poor planning and identification, study, design, construction, operation, and maintenance. One of the main reasons behind this outstanding challenge, in addition to the capacity limitations, is that SSIPs have been studied and designed using many ad-hoc procedures and technical guidelines developed by various local and international institutions.

Despite having several guidelines and manuals developed by different entities such as MoA (IDD)-1986, ESRDF-1997, MoWIE-2002 and JICA/OIDA-2014, still the irrigation professionals follow their own public sources and expertise to fill some important gaps. A number of disparities, constraints and outstanding issues in the study and design procedures, criteria and assumptions have been causing huge variations in all vital aspects of SSI study, design and implementation from region to region and among professionals within the same region and institutions due mainly to the lack of agreed standard technical guidelines. Hence, the SSI Directorate with AGP financial support, led by Generation consultant (GIRDC) and with active involvement of national and regional stakeholders and international development partners, these new and comprehensive national guidelines have been developed.

The SSID guidelines have been developed by addressing all key features in a comprehensive and participatory manner at all levels. The guidelines are believed to be responsive to the prevalent study and design contentious issues; and efforts have been made to make the guidelines simple, flexible and adaptable to almost all regional contexts including concerned partner institution interests. The outlines of the guidelines cover all aspects of irrigation development including project initiation, planning, organizations, site identification and prioritization, feasibility studies and detail designs, contract administration and management, scheme operation, maintenance and management.

Enforceability, standardization, social and environmental safeguard mechanisms are well mainstreamed in the guidelines, hence they shall be used as a guiding framework for engineers and other experts engaged in all SSI development phases. The views and actual procedures of all relevant diverse government bodies, research and higher learning institutions, private companies and development partners has been immensely and thoroughly considered to ensure that all stakeholders are aligned and can work together towards a common goal. Appropriately, the guidelines will be familiarized to the entire stakeholders working in the irrigation development. Besides, significant number of experts in the corresponding subject matter will be effectively trained nationwide; and the guidelines will be tested practically on actual new and developing projects for due consideration of possible improvement. Hence, hereinafter, all involved stakeholders including government & non-governmental organizations, development partners, enterprises, institutions, consultants and individuals in Ethiopia have to adhere to these comprehensive national guidelines in all cases and at all level whilst if any overlooked components are found, it should be documented and communicated to MOA to bring them up-to-date.

Therefore, I congratulate all parties involved in the success of this effort, and urge partners and stakeholders to show a similar level of engagement in the implementation and stick to the guidelines over the coming years.

H.E. Dr. Kaba Urgessa
State Minister, Ministry of Agriculture

SMALL SCALE IRRIGATION DEVELOPMENT VISION

Transforming agricultural production from its dependence on rain-fed practices by creating reliable irrigation system in which smallholder farmers have access to at least one option of water source to increase production and productivity as well as enhance resilience to climate change and thereby ensure food security, maintain increasing income and sustain economic growth.

ACKNOWLEDGEMENTS

The preparation of SSIGLs required extensive inputs from all stakeholders and development partners. Accordingly many professionals from government and development partners have contributed to the realization of the guidelines. To this end MOA would like to extend sincere acknowledgement to all institutions and individuals who have been involved in the review of these SSIGLs for their comprehensive participation, invaluable inputs and encouragement to the completion of the guidelines. There are just too many collaborators involved to name exhaustively and congratulate individually, as many experts from Federal, regional states and development partners have been involved in one way or another in the preparation of the guidelines. The contribution of all of them who actively involved in the development of these SSIGLs is gratefully acknowledged. The Ministry believes that their contributions will be truly appreciated by the users for many years to come.

The Ministry would like to extend its appreciation and gratitude to the following contributors:

- Agriculture Growth Program (AGP) of the MoA for financing the development and publication of the guidelines.
- The National Agriculture Water Management Platform (NAWMP) for overseeing, guidance and playing key supervisory and quality control roles in the overall preparation process and for the devotion of its members in reviewing and providing invaluable technical inputs to enrich the guidelines.
- Federal Government and Regional States organizations and their staff for their untiring effort in reviewing the guidelines and providing constructive suggestions, recommendations and comments.
- National and international development partners for their unreserved efforts in reviewing the guidelines and providing constructive comments which invaluably improved the quality of the guidelines.
- Small-scale and Micro Irrigation Support Project (SMIS) and its team for making all efforts to have quality GLs developed as envisioned by the Ministry.

The MOA would also like to extend its high gratitude and sincere thanks to AGP's multi development partners including the International Development Association (IDA)/World Bank, the Canada Department of Foreign Affairs, Trade and Development (DFATD), the United States Agency for International Development (USAID), the Netherlands, the European Commission (EC), the Spanish Agency for International Development (AECID), the Global Agriculture and Food Security Program (GAFSP), the Italy International Development Cooperation, the Food and Agriculture Organization (FAO) and the United Nations Development Program (UNDP).

Moreover, the Ministry would like to express its gratitude to Generation Integrated Rural Development Consultant (GIRDC) and its staff whose determined efforts to the development of these SSIGLs have been invaluable. GIRDC and its team drafted and finalized all the contents of the SSIGLs as per stakeholder suggestions, recommendations and concerns. The MoA recognizes the patience, diligence, tireless, extensive and selfless dedication of the GIRDC and its staff who made this assignment possible.

Finally, we owe courtesy to all national and International source materials cited and referred but unintentionally not cited.

Ministry of Agriculture

DEDICATIONS

The National Guidelines for Small Scale Irrigation Development are dedicated to Ethiopian smallholder farmers, agro-pastoralists, pastoralists, to equip them with appropriate irrigation technology as we envision them empowered and transformed.

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ACRONYMS

AGP	Agricultural Growth Program
AutoCAD	Automatic Computer-Aided Design
BOQ	Bill of Quantities
CACS	Contract administration and construction supervision
ConMIS	Construction Management Information System
CQS	Selection Based on Consultant's Qualification
CST	Construction Supervision Team
CVs	Curriculum Vitae
EPC	Engineering, Procurement and Construction
EPCM	Engineering, Procurement and Construction Management
ETB	Ethiopian Birr
FBS	Fixed Budget Selection
FDRE	Federal Democratic Republic of Ethiopia
FIDIC	Fédération Internationale des Ingénieurs-Conseils
GCC	General Condition of Contract
GIRDC	Generation Integrated Rural Development Consultant
GL	Guideline
IC	Selection for Individual Consultant
KPIs	Key Performance Indicators
LCS	Least Cost Selection
MoANR	Ministry of Agriculture and Natural Resource
MS-Project	Micro Soft Project
NCB	National Commutative Biddings
PBOQ	Priced Bill of Quantities
PCC	Particular Condition of Contract
PMBOK	Project Management Body of Knowledge
PMC	Project Management Contractor
PPA	Public Procurement Agency
QBS	Quality Based Selection
QCBS	Quality & Cost Based Selection
RE	Resident Engineer
REOI	Request for Expression of Interest
ROW	Right of Way
SBD	Standard Bid Document
SCC	Specific Condition of Contract
SS	Small Scale
SSID	Small Scale Irrigation Development
SSIGL	Small Scale Irrigation Guideline
SSIP	Small Scale Irrigation Project
SSS	Single Sources Selection
TIN	Tax Identification Number
TOR	Term of Reference
VAT	Value Added Tax
VO	Variation Order
WB	World Bank

PREFACE

While irrigation development is at the top of the government's priority agendas as it is key to boost production and improve food security as well as to provide inputs for industrial development. Accordingly, irrigated land in different scales has been aggressively expanding from time to time. To this end, to enhance quality delivery of small-scale irrigation development planning, implementation and management, it has been decided to develop standard SSI guidelines that must be nationally applied. In September 2017 the Ministry of Agriculture (MoA) had entrusted Generation Integrated Rural Development Consultant (GIRDC) to prepare the National Small-scale Irrigation Development Guidelines (SSIGLs).

Preparation of the SSIGLs for enhancing development of irrigated agriculture is recognized as one of the many core initiatives of the MoA to improve its delivery system and achieve the targets in irrigated agriculture and fulfill its mission for improving agricultural productivity and production. The core objective of developing SSIGLs is to summarize present thinking, knowledge and practices to enable irrigation practitioners to properly plan, implement and manage community managed SSI schemes to develop the full irrigation potential in a sustainable manner.

As the SSIGLs are prepared based on national and international knowledge, experiences and practices, and describe current and recommended practice and set out the national standard guides and procedures for SSI development, they serve as a source of information and provide guidance. Hence, it is believed that the SSIGLs will contribute to ensuring the quality and timely delivery, operation and maintenance of SSI schemes in the country. The SSIGLs attempt to explain and illustrate the important concepts, considerations and procedures in SSI planning, implementation and management; and shall be used as a guiding framework for professionals engaged in SSI development. Illustrative examples from within the country have been added to enable the users understand the contents, methodologies presented in the SSIGLs.

The intended audiences of the SSIGLs are government organizations, NGOs, CSOs and the private sector involved in SSI development. Professionally, the SSIGLs will be beneficial for experienced and junior planners, experts, contractors, consultants, suppliers, investors, operators and managers of SSI schemes. The SSIGLs will also serve as a useful reference for academia and researchers involved and interested in SSI development. The SSIGLs will guide to ensure that; planning, implementation and management of SSI projects is formalized and set procedures and processes to be followed. As the SSIGLs provide information and guides they must be always fully considered and applied by adapting them to the local specific requirements.

In cognizance with the need for quality SSIGLs, the MoA has duly considered quality assurance and control during preparation of the guidelines. Accordingly, the outlines, contents and scope of the SSIGLs were thoroughly discussed, reviewed and modified by NAWMP members (senior professionals from public, national and international stakeholder) with key stakeholders in many consultative meetings and workshops. Moreover, at each milestone of SSIGL preparation, resource persons from all stakeholders reviewed and confirmed that SSIGLs have met the demands and expectations of users.

Moreover, the Ministry has mobilized resource persons from key Federal, National Regional States level stakeholders and international development partners for review, validation and endorsement of the SSIGLs.

Several hundreds of experienced professionals (who are very qualified experts in their respective fields) from government institutions, relevant private sector and international development partners have significantly contributed to the preparation of the SSIGLs. They have been involved in all aspects of the development of SSIGLs throughout the preparation process. The preparation process included a number of consultation meetings and workshops: (i) workshop to review inception report, (ii) workshop on findings of review of existing guidelines/manuals and proposed contents of the SSIGLs, (iii) meetings to review zero draft SSI GLs, (iv) review workshop on draft SSI GLs, (v) small group review meetings on thematic areas, (vi) small group consultation meetings on its final presentation of contents and layout, (vii) consultation mini-workshops in the National States on semi-final versions of the SSIGLs, and (viii) final write-shop for the appraisal and approval of the final versions of SSIGLs.

The deliberations, concerns, suggestions and comments received from professionals have been duly considered and incorporated by the GIRD Consultant in the final SSIGLs.

There are 34 separate guidelines which are categorized into the following five parts concurrent to SSI development phases:

Part-I. Project Initiation, Planning and Organization Guideline which deals with key considerations and procedures on planning and organization of SSI development projects.

Part-II. Site Identification and Prioritization Guideline which treats physical potential identification and prioritization of investment projects. It presents SSI site selection process and prioritization criteria.

Part-III. Feasibility Study and Detail Design Guidelines for SSID dealing with feasibility study and design concepts, approaches, considerations, requirements and procedures in the study and design of SSI systems.

Part-IV. Contract Administration and Construction Management Guidelines for SSI development presents the considerations, requirements, and procedures involved in construction of works, construction supervision and contract administration.

Part-V. SSI Scheme Management, Operation and Maintenance Guidelines which covers SSI Scheme management and operation.

Moreover, Tools for Small Scale Irrigation development are also prepared as part of SSIGLs.

It is strongly believed and expected that; the SSIGLs will be quickly applied by all stakeholders involved in SSI development and others as appropriate following the dissemination and familiarization process of the guidelines in order to ensure efficient, productive and sustainable irrigation development.

The SSIGLs are envisioned to be updated by incorporating new technologies and experiences including research findings. Therefore, any suggestions, concerns, recommendations and comments on the SSIGLs are highly appreciated and welcome for future updates as per the attached format below. Furthermore, despite efforts in making all types of editorial works, there may still errors, which similarly shall be handled in future undated versions.

UPDATING AND REVISIONS OF GUIDELINES

The GLs are intended as an up-to-date or a live document enabling revisions, to be updated periodically to incorporate improvements, when and where necessary; may be due to evolving demands, technological changes and changing policies, and regulatory frameworks. Planning, study and design of SSI development interventions is a dynamic process. Advancements in these aspects are necessary to cope up with the changing environment and advancing techniques. Also, based on observation feedbacks and experiences gained during application and implementation of the guidelines, there might be a need to update the requirements, provisions and procedures, as appropriate. Besides, day-by-day, water is becoming more and more valuable. Hence, for efficient water development, utilization and management will have to be designed, planned and constructed with a new set up of mind to keep pace with the changing needs of the time. It may, therefore, be necessary to take up the work of further revision of these GLs.

This current version of the GLs has particular reference to the prevailing conditions in Ethiopia and reflects the experience gained through activities within the sub-sector during subsequent years. This is the first version of the SSI development GLs. This version shall be used as a starting point for future update, revision and improvement. Future updating and revisions to the GLs are anticipated as part of the process of strengthening the standards for planning, study, design, construction, operation and management SSI development in the country.

Completion of the review and updating of the GLs shall be undertaken in close consultation with the federal and regional irrigation institutions and other stakeholders in the irrigation sub-sector including the contracting and consulting industry.

In summary, significant changes to criteria, procedures or any other relevant issues related to technological changes, new policies or revised laws should be incorporated into the GLs from their date of effectiveness. Other minor changes that will not significantly affect the whole nature of the GLs may be accumulated and made periodically. When changes are made and approved, new page(s) incorporating the revision, together with the revision date, will be issued and inserted into the relevant GL section.

All suggestions to improve the GLs should be made in accordance with the following procedures:

I. Users of the GLs must register on the MOA website: Website: www.moa.gov.et
II. Proposed changes should be outlined on the GLs Change Form and forwarded with a covering letter or email of its need and purpose to the Ministry.
III. Agreed changes will be approved by the Ministry on recommendation from the Small-scale Irrigation Directorate and/or other responsible government body.
IV. The release date of the new version will be notified to all registered users and authorities.

Users are kindly requested to present their concerns, suggestions, recommendations and comments for future updates including any omissions and/or obvious errors by completing the following revisions form and submitting it to the Ministry. The Ministry shall appraise such requests for revision and will determine if an update to the guide is justified and necessary; and when such updates will be published. Revisions may take the form of replacement or additional pages. Upon receipt, revision pages are to be incorporated in the GLs and all superseded pages removed.

Suggested Revisions Request Form (Official Letter or Email)

To: ----------
From: ----------
Date: ----------
Description of suggested updates/changes: Include GL code and title, section title and # (heading/subheading #), and page #.

GL Code and Title	Date	Sections/ Heading/Subheading/ Pages/Table/Figure	Explanation	Comments (proposed change)

Note that be specific and include suggested language if possible and include additional sheets for comments, reference materials, charts or graphics.

GLs Change Action

Suggested Change	Recommended Action	Authorized by	Date

Director for SSI Directorate**: _____Date: _____**

The following table helps to track initial issuance of the guidelines and subsequent Updates/Versions and Revisions (Registration of Amendments/Updates).

Revision Register

Version/Issue/Revision No	Reference/Revised Sections/Pages/topics	Description of revision (Comments)	Authorized by	Date

1 INTRODUCTION

1.1 SCOPE OF THE GUIDELINE

This guideline has been produced for the administration of contracts for small scale irrigation projects preparation and implementation in Ethiopia. This compressive technical guideline can fill the existing identified contract administration technical gaps.

The guideline is intended to assist in improving the effectiveness and efficiency of preparation and implementation of small scale irrigation development projects, and long-term sustainability of irrigation development activities. It is also prepared to provide essential guidance in administrating the contract throughout the project life phase by phase.

The scope of this guideline is, therefore, limited to administration of the consultancy service contract during project preparation and implementation phases; and works and supply contract during project implementation phase focusing on small scale irrigation development projects.

1.2 OBJECTIVE OF THE GUIDELINE

The objective of the guideline is to summarize and harmonize present contract administration thinking and practices during project preparation and implementation phases. It helps to guide the Implementing Agencies how to administer contract during small scale irrigation projects preparation and implementation phases.

1.3 SETTING OF THE GUIDELINE

Contract administration guideline for small scale irrigation development addresses the issues in detail chapter by chapter. There are fifteen chapters having the following its own contents: -

Chapter one presents introduction of the guideline and deals with the scope, objective and setting out of the guideline. Chapter two deals with contract and contract management in small scale irrigation development that presents definition of contract, types of consultancy services contracts, types of construction contracts, types of supply contracts, project contracting strategy, standard forms of contract, contract administration and contract management principles in detail.

Chapter three deals with procurement in small scale irrigation development mainly focusing on definition, basic procurement policies, procurement types, common procurement process, and methods of procurement.

Chapter four deals with contract agreements in small scale irrigation development namely Consultancy service contract agreement (study and design service contract agreement in one hand and contract administration and construction supervision service contract agreement), works contract agreement and supply contract agreement.

Chapter five presents contract management planning and enactment in small scale irrigation development. Chapter six deals with study and design service contract establishment, whereas, chapter seven presents its implementation. Chapter eight deals with contract administration and construction supervision service contract establishment, whereas, chapter nine presents its implementation.

Chapter ten deals with work contract establishment, whereas, chapter eleven presents its implementation. Chapter twelve deals with supply contract establishment, whereas, chapter thirteen presents its implementation.

Chapter fourteen deals with extracting contract responsibilities. Finally, construction management software's that are currently applied by the engineers assigned in construction industry are discussed on chapter fifteen.

2 CONTRACT AND CONTRACT MANAGEMENT IN SSID

2.1 DEFINITION OF CONTRACT

According to the PMBOK guide (2008), a contract is a mutually binding legal agreement that obligates the seller (the Consultant/Contractor/Supplier) to provide the specified products, services or results and obligates the buyer (Client) to compensate the seller (the Consultant/ Contractor/Supplier).

Irrigation development contract is a binding legal agreement that obligates the Consultant, the Contractor and sometimes the Supplier to provide service (study and design, contract administration, supervision or other service), works and material or equipment supply respectively and obligates the client to compensate them.

In general contracts in small scale irrigation development can be categorized in to three:

I. Consultancy Services Contracts
II. Construction (Works) contracts
III. Supply contracts

2.2 TYPES OF CONSULTANCY SERVICES CONTRACTS

There are five types of contracts for consultancy services used in small scale irrigation development as discussed here.

2.2.1 Lump-sum contract

This type of contract is used mainly for assignments in which the scope and the duration of the services and the required output of the consultants are clearly defined. It is widely used for planning and feasibility studies, environmental studies, detailed design of standard or common structures, preparation of data processing systems, and so forth.

It is commonly used for undertaking of feasibility study and detail design of small scale irrigation development preparation. Payments are linked to outputs (deliverables) in the agreed stages: such as inception, interim, draft feasibility study and design, and final feasibility study and detail engineering design report stages.

The contract shall include a fixed price for the activities to be carried out by the consultant and shall not be subject to any price adjustment, except extras or change orders that affect the scope and methodology in the contract. Lump-sum contracts are easy to administer because they operate on the principle of fixed price for a fixed scope, and payments are due on clearly specified outputs and milestones.

2.2.2 Time-based contract

This type of contract is appropriate when it is difficult to define or fix the scope and the duration of the services. Definition and fixation of the scope and the duration of the services may be difficult as the result of either of the followings but not limited to: -

- When the services are related and/or dependent to activities carried out by others for which the completion period may vary, or

- When the input of the consultants required for attaining the objectives of the assignment is difficult to assess.

It is widely used for complex studies, contract administration and supervision of construction, advisory services, and training assignments.

Payments are based on agreed hourly, daily, weekly, or monthly rates for experts (who are normally named in the contract) and on reimbursable items using actual expenses and/or agreed unit prices. The rates for experts include remuneration, social costs, overhead, profit, and, where appropriate, special allowances.

Time-based contract shall include a ceiling amount of total payments to be made to the consultants. It needs to be closely monitored and administered by the client to ensure that the assignment is progressing satisfactorily and that payments claimed by the consultants are appropriate.

2.2.3 Retainer and/or Contingency (Success) Fee Contract

Retainer and contingency fee contracts are widely used when consultants (banks or financial firms) are preparing companies for sales or mergers of firms, notably in privatization operations.

The remuneration of the consultant includes a retainer and a success fee, the latter being normally expressed as a percentage of the sale price of the assets.

2.2.4 Percentage contract

These contracts are commonly used for procurement and inspection service providers. Percentage contracts directly relate the fees paid to the consultant to the estimated or actual project construction cost, or the cost of the good procured or inspected.

The contracts are negotiated on the basis of market norms for the services and/or estimated person-month costs for the services, or competitively bid. It should be borne in mind that in the case of architectural or engineering services, percentage contracts implicitly lack incentive for economic design and are hence discouraged.

Therefore, the use of such a contract for architectural services is recommended only if it is based on a fixed target cost and covers precisely defined services (but not, for example, works supervision).

2.2.5 Indefinite Delivery Contract (IDCs) or price agreement

Indefinite delivery contracts are used when borrowers need to have quick and continuing access to “on call” specialized advisory services for a particular activity, the extent and timing of which cannot be defined in advance.

Indefinite delivery contracts are commonly used to retain “advisers”, expert adjudicators, members of panels, or experts to participate in the design or implementation of sub-projects or complex tasks during the execution of Bank-financed projects (for example, dam panel, dispute resolution boards, institutional reforms, procurement advice, technical troubleshooting, evaluation of safeguard issues, and so forth), normally for a period of at least a year.

The services are offered by qualified firms through a list of proposed experts they commit to make available in letters of intent in response to a REOI setting selection criteria focusing on the relevant qualifications and expertise of the required experts.

Borrowers shall then establish a long list of qualified experts. The borrower and the firms agree on pre-established fee rates to be paid for the experts and on standard conditions of contract, and payments are made on the basis of the time actually spent.

Experts shall be selected from the long list on the basis of a "call off" request with specific TOR for the assignment, based on the qualitative evaluation/comparison of the CVs of the proposed experts or the fees level, and a specific contract is signed for each assignment.

2.3 TYPES OF CONSTRUCTION CONTRACTS

According to Article 2610 of Ethiopia civil code, a construction contract as "a contract of work and labor is a contract whereby one party, the contractor, undertakes to produce a given result, under his own responsibility, in consideration of a remuneration that the other party, the client, undertakes to pay him".

There are many different types of construction contracts, distinguished primarily by the method of determining the final contract price. The type of contract chosen may depend on several factors, including the identity and relationship of the owner and contractor (if any); the completeness of the design and its complexity; the type of work being done; and the need or desire for competitive pricing.

Construction contract broadly classified as (1) Fixed-Price Contracts, (2) Cost-Reimbursable Contracts, and (3) Guaranteed Maximum Price Contracts. The details of each construction contracts are presented below.

2.3.1 Fixed-price contracts

Fixed-Price Contracts categorized as (i) Lump Sum Contract, (ii) Unit-Price Contract (Measured contract), and (iii) Fixed-Price Incentive Contracts. The details of each type of fixed-price contracts are as presented below.

2.3.1.1 Lump sum contract

Lump Sum Contract is one form of Fixed-Price Contract in which the contractor agrees to do specified construction for a fixed price set forth in the contract. The only changes allowed to the fixed price are for extras or change orders. It is commonly used in small scale irrigation works contract in conjunction with Unit-Price Contract (Measured Contract).

2.3.1.2 Unit-price contract

Unit-Price Contract is another form of Fixed-Price Contract in which it sets for the price for each unit of works constructed. The unit may be, for example, a square meter of clearing, a cubic meter of excavation, a cubic meter of masonry, a cubic meter of concrete. The contract may specify a particular number of units needed. For example, if the contract is for excavation, it might state that the excavator will be paid 45 ETB per cubic meter of normal soil excavated to a depth not

exceeding 150cm from the site. Anything can be measured in units can be the basis of a unit-price contract. Unit-Price Contract can be called Measured Contract.

Unit-Price Contracts or Measured Contracts are most often used in small scale irrigation construction contracts, such as earthworks, masonry works, concrete works, pipelines, and other activities where it is difficult to calculate actual quantities in advance.

2.3.1.3 Fixed-price incentive contract

Fixed-price incentive contract is a fixed-price contract that provides for adjusting profit and establishing a final contract price by application of a formula based on the relationship of total final negotiated cost to total target cost. The final price may be subject to a price ceiling, negotiated at the time of entering into contract. The concept can be structure in either of two forms, example, firm target price or successive target prices. A fixed-price incentive contract is appropriate when a firm-price contract is not suitable.

2.3.2 Cost-reimbursable contracts

Cost-reimbursable contracts are cost-plus contracts in which the contractor is paid its actual costs of the construction plus a specified markup to cover overhead and profit. Typically, the contract defines costs including all expenses incurred in the construction, including expenses for materials, wages for labor, temporary facilities, and subcontractors and suppliers. The contract may specifies what are not eligible costs for reimbursement purposes.

Cost-plus contracts are appropriate where, due to an incomplete or very complex design, a contractor would be unable to give a lump-sum price without including a large contingency for unknown factors.

Cost-Reimbursable Contracts comprises (a) Time and Materials or Cost-Plus-Percentage-of-cost, (b) Cost-plus-Fixed-Fee, and (c) Cost-Plus-Incentive-Fee. The details of each type of cost-reimbursable contracts are as presented below.

2.3.2.1 Time and materials or cost-plus-percentage of cost contract

In this type of contract, the contractor is paid its actual costs plus a specified percentage of those costs for overhead. Thus, the contract would specifically exclude actual overhead expenses from the definition of eligible costs. The total costs and the overhead is then added a specified percentage for profit.

2.3.2.2 Cost-plus-Fixed-Fee Contract

In this type of contract, the contractor is paid its actual costs plus a fixed fee that is set in advance. The contract may or may not specify that costs include a set daily rate for overhead.

2.3.2.3 Cost-plus-incentive-fee contract

In this type of payment structure, the contract specifies time and quality criteria. If the contractor meets those criteria, it is paid its costs plus a set fee. If the contractor exceeds those criteria, perhaps by completing the job early, the contractor is paid an additional fee based on a scale set forth in the contract. If the contractor does not meet those criteria, the fee is less. This type of fee arrangement encourages early, quality work.

2.3.3 Guaranteed maximum price contracts

A guaranteed maximum price contract is a variation of the cost-plus contract. In this type of contract, the owner and contractor agree that the project will not cost the owner more than a set price, the guaranteed maximum. The contractor is paid on a cost-plus fixed fee or percentage of cost basis, but in no even more than the set maximum price.

For instance, assume that a contract specifies a guaranteed maximum price of 5,000,000.00ETB and the cost-plus basis turns out to be 4,000,000.00ETB. Under a 50/50 percent split, the contractor would be entitled to 4,500,000.00ETB for its work.

Guaranteed maximum price contracts give contractors great incentive to keep costs as reasonable as possible to ensure themselves as much profit as possible. They also encourage contractors to value engineer to the project.

2.4 TYPES OF SUPPLY CONTRACTS

Currently, there are eleven contract types available to professional purchasing personnel. These are(1) Firm Fixed Type Contract, (2) Fixed Price Escalation Contract, (3) Fixed Price Incentive Contract, (4) Fixed Price Redetermination Contract, (5) Cost/Cost Sharing Contract, (6) Cost plus Incentive Contract, (7) Cost plus Award Fee Contract, (8) Cost plus Fixed Fee Contract, (9) Time and Materials Contract, (10) Letter Subcontract, and (11) Indefinite Delivery Contract.

The firm fixed price contract is used more often than any other type. Many buyers are uncomfortable with most any other type of contract. On occasion another type of contract can be used to better advantage for both the buyer and the supplier.

This section meant to explain what contract types are available in order that a good choice for each individual situation is made. Here, the contracts discussed starting with the one over which the buyer has the most control and ending with the one which provides the least contractual protection.

2.4.1 Firm fixed type contract

Firm Fixed Type Contract is the type of supply contract used for items purchased which are easily defined and have established pricing when using a firm fixed contract, the buyer agrees to pay a fixed price for a fixed quantity of goods (i.e. 27 Birr each for 100 units). In this example the buyer is obligated to pay 2,700 Birr once the goods are delivered and deemed to be correct and of acceptable quality. This type of contract provides the buyer with the most control of supply contract than another types discussed in this guideline.

2.4.2 Fixed price escalation contract

Fixed price escalation contracts are typically used when purchasing material which will be delivered over a period of several years. The agreed upon escalation clause will protect both the buyer and the supplier from material and labor fluctuations and can deal with cost decreases as well as increases. An escalation clause usually is an agreement that the contract will be adjusted once a year to reflect the difference in labor or material or some percentage of the unit price of each element. For example, the buyer and the supplier agree upon labor and material indices as shown by certain economic indicators (i.e. labor could be those shown on the Bureau of Labor

Statistics (BLS) Report). Material fluctuations might be noted by current market costs on an agreed upon date or those published by some agency measuring such data. Additionally, the contract might note that 60% of the unit price would be adjusted for labor and 40% for material.

Agreements can vary from that discussed in the preceding paragraph to a simple statement noting that the contract will be adjusted 3% per year for its duration. The important concept to remember in using this type of contract is to be sure that the adjustment factors are fair and will allow both buyer and seller an opportunity for a reasonable contract arrangement. The adjustment clause must be clearly written and utilize appropriate indices. For instance, if you are using labor indices for a machine shop contract the indices should reflect labor rates for machine shop personnel rather than labor rates for utility workers.

2.4.3 Fixed Price Incentive Contract

This type of contracting arrangement should be used for purchasing any item which is difficult to define or has never been produced in the past. It will protect the buyer from contracting at a very high price to cover any and all of the supplier's areas of uncertainty. It requires that the buyer and the supplier establish the following contract criteria:

1. A maximum contract price.
2. A target contract price.
3. A fee.
4. A sharing formula.

An example of a fixed price incentive contract could be as follows:

1. Maximum price – 1100 Birr
2. Target price – 900 Birr
3. Fee – 90 Birr
4. Sharing formula - 50/50

The supplier does not get any part of the fee until the costs fall below the maximum. Overruns and under runs of the target are shared per the sharing formula and added to or subtracted from the fee. Resulting payments for various cost results would be as shown below:

COST	FEE	PRICE
1200 Birr	---	1100 Birr
1100 Birr	---	1100 Birr
1000 Birr	40 Birr	1040 Birr
900 Birr	90 Birr	990 Birr
800 Birr	140 Birr	940 Birr
700 Birr	190 Birr	890 Birr

As you can see once the supplier can produce the item at a cost of 800 Birr she/he will realize a profit of 17.5% and at 700Birr she/he profit becomes 27.5%. This provides a good incentive to become more efficient and control costs.

When utilizing this type of contract, it is important that agreed upon costs are included as part of the contract negotiation. Also, the supplier must agree to demonstrate all costs with invoices and time cards as well as be able to allow validation of hourly wages paid and overhead calculations.

2.4.4 Fixed price redetermination contract

This type of contract is used more often by government agencies than private industry. It is employed when the initial procurement of goods can be priced but due to material or labor fluctuation subsequent deliveries cannot be firm priced. It provides for negotiated upward or downward adjustments at stated times during the contract. A second type of contract usage allows the renegotiation to be done after contract completion. Its use is discouraged because the supplier might not control costs carefully when s/he will be allowed to demonstrate actual "after the fact" and be reimbursed. It requires special approval for use by government agencies.

2.4.5 Cost/cost sharing contract

Cost and cost sharing contracts are appropriate when a new product will be developed which the supplier may be able to market elsewhere. This allows the supplier to have all their costs paid while developing a new product. Cost contracts are also often accepted by universities or other non-profit organizations. A cost sharing contract might be used when the supplier is not assured of a future market for the product or the supplier is not sure how large the market will be.

As with the fixed price incentive contract, the buyer must negotiate which costs will be covered. The supplier must allow the buyer to verify all costs and overhead rates. Close monitoring of this type of contract is essential to assure that waste is kept to a minimum.

2.4.6 Cost plus incentive contract

Sometimes it is impossible to agree on a fixed price incentive contract because the item is so loosely defined that even a maximum price cannot be determined. The buyer may then agree to pay all costs but would like to have some incentives for the supplier to operate efficiently. This can be done by agreeing to pay all agreed upon costs. The contract will include all the elements of the fixed price incentive contract. It provides the supplier with assurance that all their costs will be covered and still provides some incentive to reduce such expenditures. As with all cost type contracts agreed upon costs and a method of rate verification must be negotiated prior to contract agreement.

2.4.7 Cost plus award fee contract

Not a popular type contract. This type contract allows the buyer to pay all agreed upon costs and add an amount of money as an "award" or fee at contract completion. The amount is completely decided by the buyer "after the fact."

2.4.8 Cost plus fixed fee contract

This is the final type of cost contract. The supplier will again be reimbursed for all agreed upon costs. At the time of negotiation, a fixed amount of money is negotiated which will be paid in addition to verified costs. This type of contract is used when the supplier has some idea of what costs will be but is unwilling to take a firm fixed contract without putting a large amount of fee in the contract to cover various contingencies that might occur.

2.4.9 Time and materials contract

A time and material contract is usually used for repair contracts. Until recently it was customary to include a "not to exceed" amount on the contract. Many firms used half the cost of a new unit to calculate the "not to exceed" value of the contract. Currently, it is more common to only place an amount on the contract that covers repair evaluation costs. A note is included which requires that the supplier contact the buyer and obtain approval prior to the repair being completed. This allows the buyer to decide if the repairs should be done or if the unit should be scrapped.

On occasion a time and materials type contract is utilized by an independent contractor hired to complete a particular activity. In this case it is a fine line as to whether to utilize time and material or a cost type contract. Either would have the same effect. Profit in this type of contract is usually built into the contractor's hourly rate.

2.4.10 Letter subcontract

On occasion a large contract must be started before final negotiations are complete in order to assure delivery to a particular time schedule. When this situation arises it may require the use of a letter subcontract. Such a contract essentially releases initial work with a "not to exceed figure." The "not to exceed" amount is typically no more than 40% of the proposed price. It also contains a number of important contractual clauses such as an agreement to complete negotiations prior to completion of 40% of the total effort. Other special clauses as deemed necessary are included to protect both the supplier and the buyer. The contract effort at the time of placement is usually well defined and often completion milestones and preliminary progress payments are included.

2.4.11 Indefinite delivery contract

An indefinite delivery contract is employed when the buyer is not sure of the production schedule or the quantity of material needed. There are three types of contracts employed:

1. Definite Quantity Contract
2. Requirements Contracts
3. Indefinite Quantity Contract

When using the definite quantity contract delivery is not specified. Requirements contracts are those where your requirements are placed showing only a minimum quantity, which is guaranteed. This type of contract cannot be terminated at no charge as long as performance is acceptable. Indefinite quantity contracts provide that during a given period of time the buyer will place requirements with a specific supplier. Quantities and delivery dates are unknown, however minimum and maximum quantities are specified.

Often we find management most uncomfortable with any but firm fixed price contracts even when other types of contracting might allow us advantageous price and delivery. The choice should be advantageous to both the buyer and the supplier. It is our job as good buyers to alert them to all the possible alternatives.

2.5 PROJECT CONTRACTING STRATEGY

There are four processes in project contracting strategy using FIDIC conditions of contract for construction that determines how services are to be provided. These processes are: -

- Engineering (E),
- Procurement (P),
- Construction (C), and
- Management (M).

Decisions on how services are to be provided, and the legal and commercial arrangement for their provision, should be made as early in the project life cycle. The way in which the engineering, procurement, construction and management services are grouped and provided to a project is called the delivery vehicle that determines the project contracting strategy to which commercial and contractual terms and conditions can be applied. Examples of Delivery Vehicles include:

- Engineering, Procurement and Construction (EPC),
- Engineering, Procurement and Construction Management (EPCM),
- Project Management Contractor (PMC), and
- Combinations of EPC and EPCM.

2.6 STANDARD FORMS OF CONTRACT

According to FIDIC there are four new standards form of contracts used in construction as discussed here under.

2.6.1 Contract for construction

It is recommended for building or engineering works designed by the employer or by s/his representative, the engineer. Under the usual arrangements for this type of contract, the contractor constructs the works in accordance with a design provided by the employer. However, the works may include some elements of contractor-designed civil, mechanical, electrical and/or construction works. It is the most commonly used contract form used for irrigation construction.

2.6.2 Contract for plant and design-build

This is recommended for the provision of electrical and/or mechanical plant, and for the design and execution of building or engineering works. Under the usual arrangements for this types of contract, the contractor designs and provides, in accordance with the employer's requirements, plant and/or other works: which may include any combination of civil, mechanical, electrical and/or construction works. It is advisable for pressurized irrigation system such as sprinkler and drip Irrigation System that uses pump for water abstraction system.

2.6.3 Contract for EPC/turnkey projects

This may be suitable for the provision on a turnkey basis of a process or power plant, of a factory or similar facility, or of an infrastructure project or other type of development, where (i) a higher degree of certainty of final price and time is required, and (ii) the contractor takes total responsibility for the design and execution of the project, with little involvement of the employer. Under the usual arrangements for turnkey projects, the contractor carries out all the Engineering, Procurement and Construction (EPC), providing a fully-equipped facility, ready for operational (at the "turn of the key"). It can be used for fast truck project implementation with experienced Contractors familiar with sophisticated risk management techniques.

2.6.4 Short form of contract

It is recommended for building or engineering works of relatively small capital value. Depending on the type of work and the circumstances, this form may also be suitable for contracts of greater value, particularly for relatively simple or repetitive work or work of short duration. Under the usual arrangements for this type of contract, the contractor constructs the works in accordance with a design provided by the employer or by s/he representative (if any), but this form may also be suitable for a contract which includes, or wholly comprises, contractor-designed civil, mechanical, electrical and/or construction works.

2.7 CONTRACT ADMINISTRATION

Contract administration in this guideline is defined as administrative activities that usually associated with handling of contracts, such as invitation to tender, tender evaluation, award of contract, contract implementation, measurement of work completed, and computation of payments. It also includes monitoring contract relationship, addressing related problems, incorporating necessary changes or modifications in the contract, ensuring both parties meet or exceed each other's expectations, and actively interacting with the consultant/contractor to achieve the contract's objective(s). Contract administration is also called contract management.

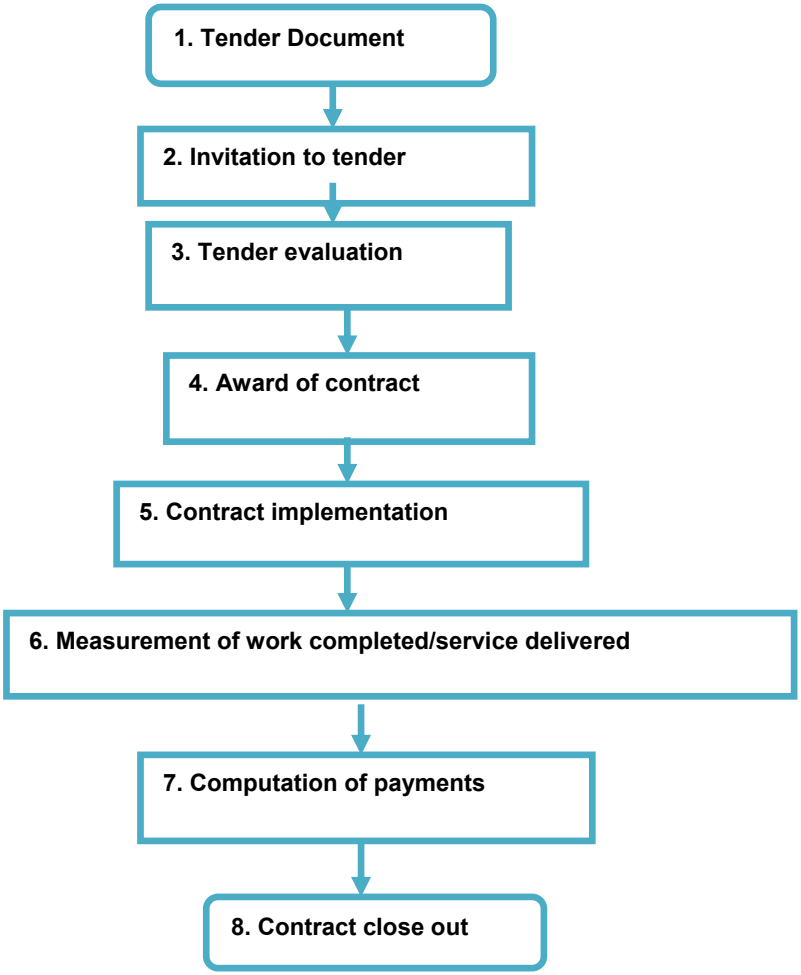


Figure 2-1: List of contract administration activities with respect to their order

2.8 CONTRACT MANAGEMENT PRINCIPLES

Generally, Contract Management is about ensuring both parties to fully satisfy their respective obligations in efficient and effective manner so that they can attain the objectives demanded by the contract.

Ethiopian draft public procurement guideline (2011) states “Effective management of contracts is essential to ensure that the objectives of the procurement process are achieved and that all contractual obligations and activities are completed efficiently by both parties to the contract”.

There are basic principles for successful contract management. The major principles are illustrated below:

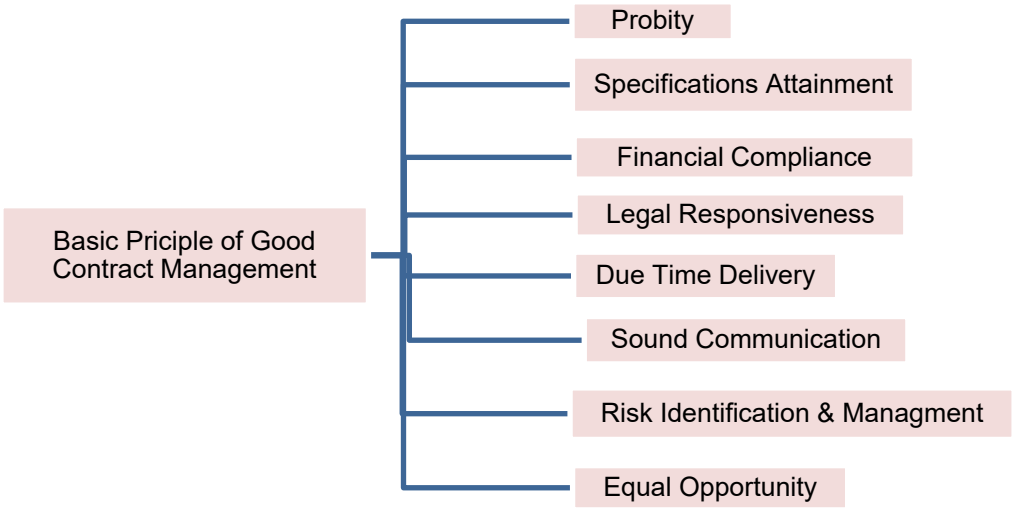


Figure 2-2: Major contract management principles

Case 1 Contract Type Selection

Suppose X SSIP is identified in one of National Regional State of Ethiopia located at remote area. According to the identification and reconnaissance level study, the project is proposed to have the following system components: -

- Three surface pump for irrigation water abstraction;
- Generator;
- Pipe for conveyance system;
- Civil works for delivery, distribution, and other irrigation and social structures;
- Earth works;
- Access roads; and
- Etc.

As an engineer in that region, the sector manager required your piece of advice, how to select and establish contract to materialize the above project. What are the issues you are going to give attention and propose the contract(s)?

Possible Advice

The client is advised to establish and implement the following contracts one after the other in the course of the aforesaid project life. These are: -

1. Lump Sum Contract for detail study and engineering detail design service that has to be concluded between the client and the selected Consultant/The Engineer.
2. Time Based Contract for Contract Administration and Construction Supervision Service that has to be concluded between the client and the selected Consultant/Engineer.
3. Measured Contract (including Lump Sum Contract as required for some item) for construction works of project that has to be concluded between the client and the selected contractor.
4. Lump Sum Contract for supply, installation, testing and commissioning of surface pumps and its accessories, generator and its accessories, pipe and fittings, and other goods designed and recommended for the project that has to be concluded between the client and the selected contractor/supplier. It can be a part of the above contract mentioned under 3 or it can be stand-alone contract as mentioned here.

3 PROCUREMENT IN SMALL SCALE IRRIGATION DEVELOPMENT

3.1 DEFINITION OF PROCUREMENT

It is the act of obtaining goods, works, consultancy or other services through purchasing, hiring or by any other contractual means.

It is the process of need identification, purchase planning, standard determination, specification development, supplier selection, forming contract, contract execution & management insuring that all goods are delivered/works completed/services rendered by project completion date.

3.2 BASIC PROCUREMENT POLICES

The basic procurement policies are the following but not limited to: -

- To ensure that goods and services needed are procured with due attention to economy and efficiency;
- To ensure that public fund is used to buy only those goods and services needed for national development;
- To give all qualified bidders an equal opportunity to compete for contracts;
- To encourage development of local contractors and manufacturers; and
- To ensure that the procurement process is transparent.

3.3 TYPES OF PROCUREMENT

There are a minimum of three types of procurements as discussed here in below.

3.3.1 Procurement of goods

Goods can be defined as all of the equipment, machinery, commodities and/or other materials which the supplier is required to supply to the purchaser under the contract.

3.3.2 Procurement of consultancy services

Consultant means a particular type of contractor who is engaged to provide recommendations or specialist or professional advice (or more generally non-manual services) to assist or influence Government's decision making.

Services means the professional, technical, advisory, or maintenance obligations of the Supplier under a Contract for the provision of Services. Types of consulting services may be grouped as follows.

Project Services		Advisory Services
Preparation Services	**Implementation Services**	
Sector studies	Tender documents	Strategy and policy
Master plans	Procurement assistance	Regulation
Feasibility studies	Construction supervision	Institutional reform
Design studies	Project management	Capacity building
Specialist studies	Integrated solutions	Management and leadership
	Training	Information technology

In this guideline, feasibility studies and design studies, and tender document preparation services are considered in Study and Design Service. Construction supervision and project management are considered in Contract Administration and Construction Supervision Service.

3.3.3 Procurement of works

Works means the construction, installation, maintenance, refurbishment, repair and related activities required under a contract for the provision of works as defined in the contract.

3.4 COMMON PROCUREMENT PROCESS

The following is the common procurement process adapted in irrigation development.

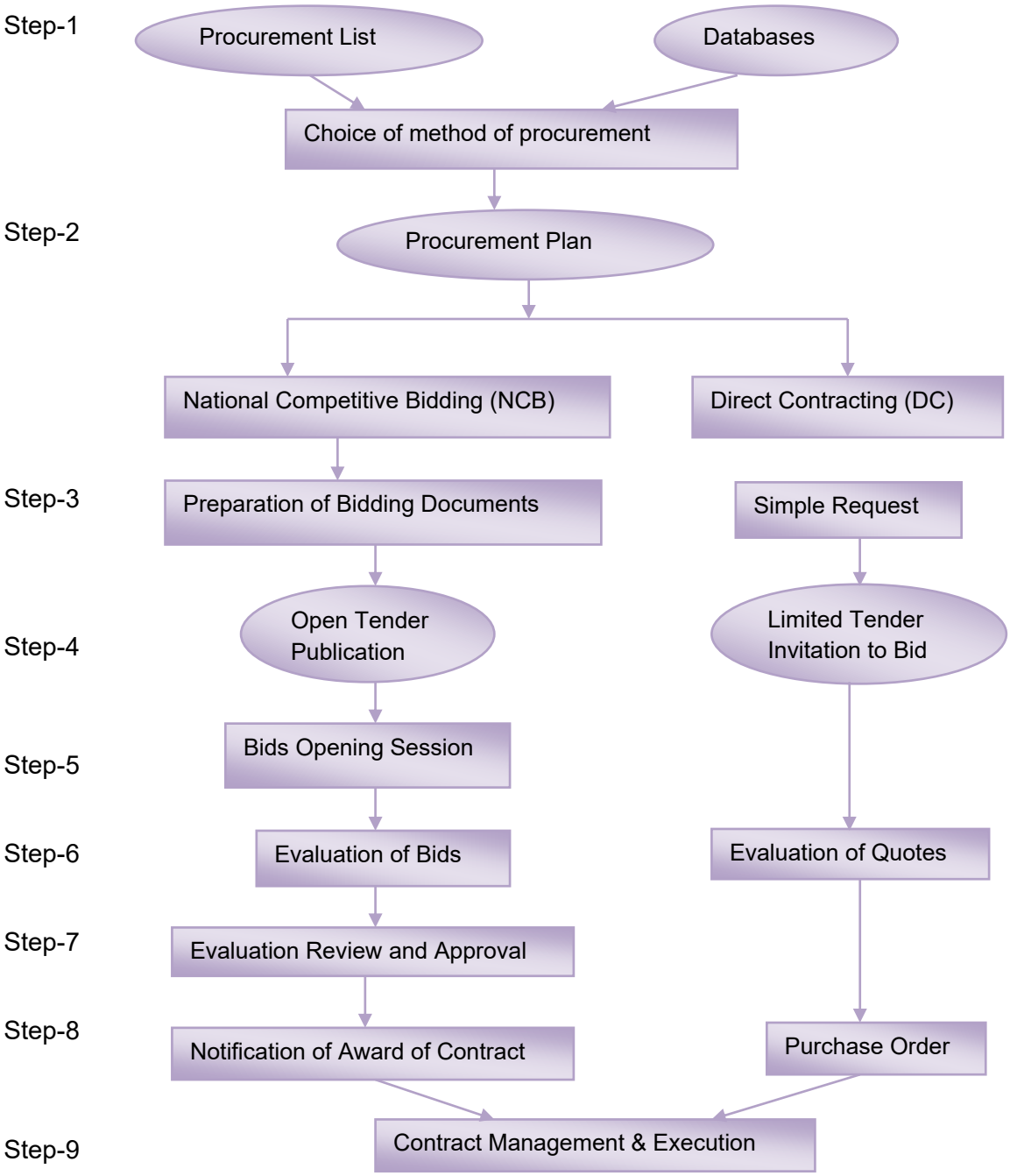


Figure 3-1: Flow chart-procurement process for the acquisition of goods, services and works

3.5 METHODS OF PROCUREMENT

There are six methods of procurement according to “The FDRE, Ministry of Finance and Economic Development Procurement Directives, 2010”. These are

1. Open bidding
2. Two-stage bidding
3. Request for proposals
4. Restricted bidding
5. Request for quotations; and
6. Direct procurement

For detail refer the Procurement Directives and Guidelines of The FDRE, Ministry of Finance and Economic Development as well as International Financing Institution such as Multilateral Development Partners and Bilateral Development Partners as appropriate.

4 CONTRACT AGREMMENTS IN SMALL SCALE IRRIGATION DEVELOPMENT

There are different types of contract agreements that small scale irrigation development owner/employer/client enter with project implementer's consultant, contractor and/or supplier. These are: -

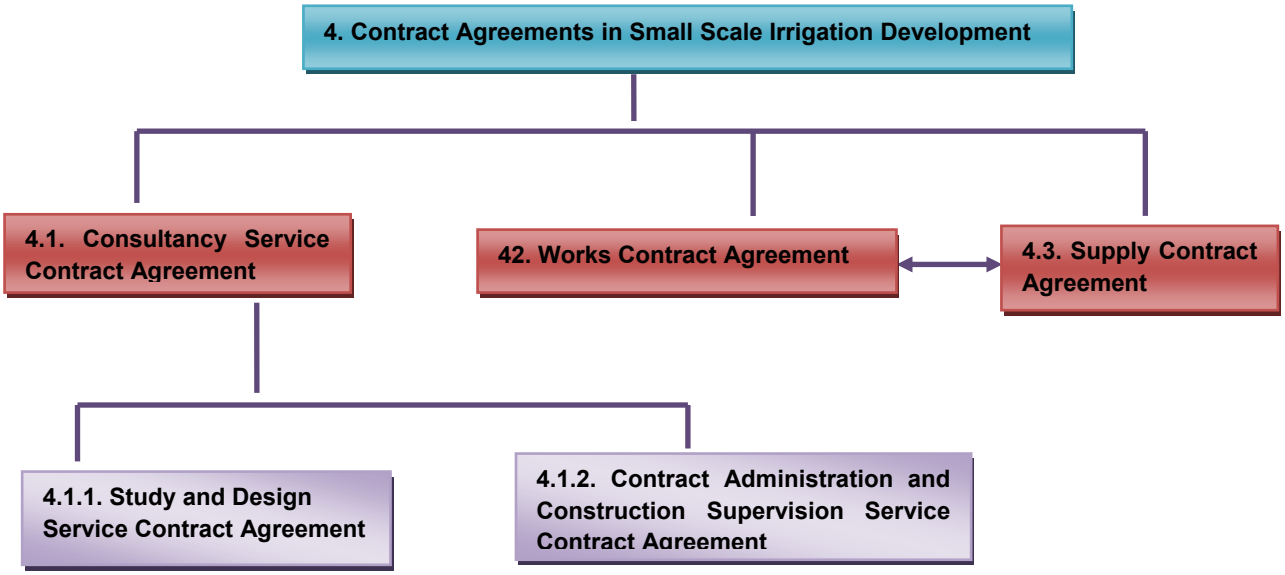


Figure 4-1: List of different types of contract agreements in small scale irrigation project life

4.1 CONSULTANCY SERVICE CONTRACT AGREEMENT

Consultancy Service Contract Agreement is an agreement entered into between Client and Consultant/Engineer to undertake either project preparation or implementation services. Generally, consultancy service contract agreement in small scale irrigation development lays on the following two contract agreements namely: -

- Study and Design Service Contract Agreement (during project preparation phase), and
- Contract Administration and Construction Supervision Service Contract Agreement (during project implementation phase).

4.1.1 Study and design service contract agreement

Study and design service contract agreement is project preparation service contract made between client and consultant/engineer for undertaking of pre/feasibility study and detail design of small scale irrigation development preparation. Here, the assignment of the consultant includes preparation of reports, design drawings, bills of quantities, tender documents as per term of reference.

It is mostly **lump-sum** type of contract. Payments are linked to outputs (deliverables) in the agreed stages: such as inception, interim, draft feasibility study and design, and final feasibility study and detail engineering design report stages. The milestones or stages in SSIP study and design and the respective deliverables are as tabulated below.

Study and Design Sage	Deliverables with payment request	Remarks
Inception	▪ Field assessment report ▪ TOR amendment proposal if any ▪ Work schedule	
Interim	▪ Field work accomplishment completion report ▪ Primary and secondary data ▪ Work schedule	Client is expected to assign expert(s) for quality assurance during data collection.
Draft Feasibility Study and Preliminary Engineering Design	▪ Draft report of all discipline ▪ Draft design drawings ▪ Draft specification and bill of quantity ▪ Work schedule	
Final Feasibility Study and Detail Engineering Design Report	▪ Final report of all discipline ▪ Final design drawings ▪ Final specification and bill of quantity ▪ Tender document ▪ Construction schedule	

4.1.2 CACS service contract agreement

Contract Administration and Construction Supervision Service Contract agreement is project implementation service contract agreement made between client and consultant/engineer for undertaking of contract administration and construction supervision of small scale irrigation development implementation.

It is mostly a type of Time-Based Contracts. Payments are based on agreed monthly rates for experts (who are normally named in the contract) and on reimbursable items using actual expenses and/or agreed unit prices.

4.2 WORKS CONTRACT AGREEMENT

Works Contract agreement is project implementation contract agreement made between client and contractor for undertaking of construction of small scale irrigation development implementation. Works contract agreement comprises both **measured contract** and **lump sum contract** types most commonly in small scale irrigation construction.

Measured contract, in works contract, is the contract in which the client and contractor agree on only the unit rate. In measured contract, project is broken down to activity items, with quantities and unit rate against each item. The Contractor's tender will be based on unit rates and prices against each item and the contractor will be paid against measured work done item by item. The total works will be quantified upon the completion of the work. The unit price provides less certainty to the owner as to the final project cost but also reduces the prospect of windfall to the contractor. The contractor on his part will focus on productivity, since the risk of unknown has been substantially reduced. Payments are based on agreed unit rate on priced bill quantity.

Lump sum contract, in works contract, is contact under which the project owner/client agrees to pay a contractor a specified amount, for completing an agreed scope of work (e.g. involving a variety of items of work which are based on drawings and specifications set out in the contract) without requiring a measurement of quantities involved. Here the Contractor is entitled to be paid a fixed price for completing all works described in the tender. The Contractor's obligation is taken to

include all work considered incidental to the completion of the contract, whether or not such item of work is included in the contract document. Payments are based on priced bill of quantity.

It is not preferable for civil engineering works because of the following drawbacks, which may substantially change the scope of the work to be carried out by the Contractor.

- Un avoidable unforeseen incidental items may occur in the tender,
- Lump sum contract may not allow to cover risks such as enforceable conditions, and
- Existence of errors in the contract documents.

In lump sum contract, low productivity rates, rising prices and unforeseen conditions are the contractors risk and not the employers. Hence, due to this high risk involved, contractors are generally reluctant to carry out works under this type of contract.

Even, owners are as a common practice are not well served by lump sum contracts due to the likelihood of endless disputes following disagreements on how to interpret the various stipulations presented in the contract documents.

In case of construction of small scale irrigation project, lump sum contract can be used as along with measured contract for specialized item of works such as: -

- *allowance for resources mobilization and demobilization;*
- *dewatering of open trench and excavation using pumps;*
- *supply and erection of the specified project indicator post; and*
- *Provision of as built drawings.*

4.3 SUPPLY CONTRACT AGREEMENT

Supply Contract agreement is project implementation contract agreement made between client and contractor/supplier for undertaking of construction of small scale irrigation development implementation. It is **lump sum contract** type of contract for the supply of electro-mechanical equipments (Pumps and Accessories, Generators, Transformer, Pipes and fittings, etc), construction materials, and machineries (rental base), and others. In Supply Contract the final payment effected up on delivery of goods as per specification and the contract should be closed accordingly.

Based on type and location of water source as well as water application method, a given small scale irrigation development may have supply components in addition of civil works. It is highly advisable to outsource the whole project activities (Civil Works and Supply) for a competent single contractor as usual.

Table 4-1: Summary Table for the Most Commonly Used Standard Contract Forms in SSID

Standard Contract Forms	Applicability	Specific Requirement
Lump-Sum	Study and Design Service Contract	• Defined Scope of assignments • Defined duration • Clearly defined output of the consultants • Payments are linked to deliverables • Can be fixed price
	Works Contract	• a fixed sum for execution of defined work in stipulated time according to the drawing, design & specifications Demerits • Work must be defined accurately; specifications must be fully specified
	Supply Contract	• Defined specification and drawings for the required goods. • Defined Scope of assignments ○ Supply, installation, testing, commissioning, and others • Defined duration and location
Time-Based	Contract Administration and Construction Supervision Service Contract	• Difficult to define or fix the scope • Difficult to fix the duration of the services because they are related to activities carried out by a contractor. • Payments are based on agreed monthly rates for experts (who are normally named in the contract) and on reimbursable items using actual expenses and/or agreed unit prices. • The contract shall include a ceiling amount of total payments that has to be made to the consultants.
Admeasurements	Works Contract	• Unit Price / Schedule Contract • Based on items of the Works described in the Bill of Quantities. • Payment is based on detailed measurement of executed works Demerits Unbalanced tender (flawed high/ low unit rate)

5 CONTRACT MANAGEMENT PLANNING AND ENACTMENT IN SSID

5.1 PLANNING CONTRACT MANAGEMENT

Contract management planning is not something to be started after an agreement is entered into, instead it is something to commence in the procurement planning phase and continues right through evaluation and contract negotiation. It is advised always to involve or consult contract managers in procurement process.

During planning phase, consider the following vital concerns:

- Review of procurement/award outcome
- Contract Establishment
- Determining Contract Management Approach
- Identifying & Managing Risks

5.1.1 Review of procurement outcome

Under the planning phase reviewing of the procurement using check points listed below.

- If there is substantial errors or issues (unit, quantity, specifications, TOR that may create Contractual problem,
- Appropriate time allocation for the works/service, and
- Expiry date of the bid security to plant the contract agreement day.

Note: - use Appendix Part IV/GL 27/A-1: Procurement Outcome Review Format.

5.1.2 Contract establishment

Contract establishment is a process of entering into “an agreement made between two or more parties which is enforceable by law to provide something in return for something else from a second party”. The following should be fulfilled before any contract establishment and signing.

- Understand the type of Contract (Lump-sum/ Admeasurements/Time Based),
- Organize the contract document,
  - Agreement,
  - Letter of Acceptance,
  - Contractor’s evaluated Bid,
  - Particular Conditions of Contract,
  - General Conditions of Contract,
  - Specifications/TOR,
  - Drawings,
  - Priced Bill of Quantities, and
  - Any other document listed in the PCC as forming part of the Contract.
- Collect Performance Security from the contractor, and
- Collect revised & approved Schedule from the contractor/consultant.

The following work flow assists contract establishment:

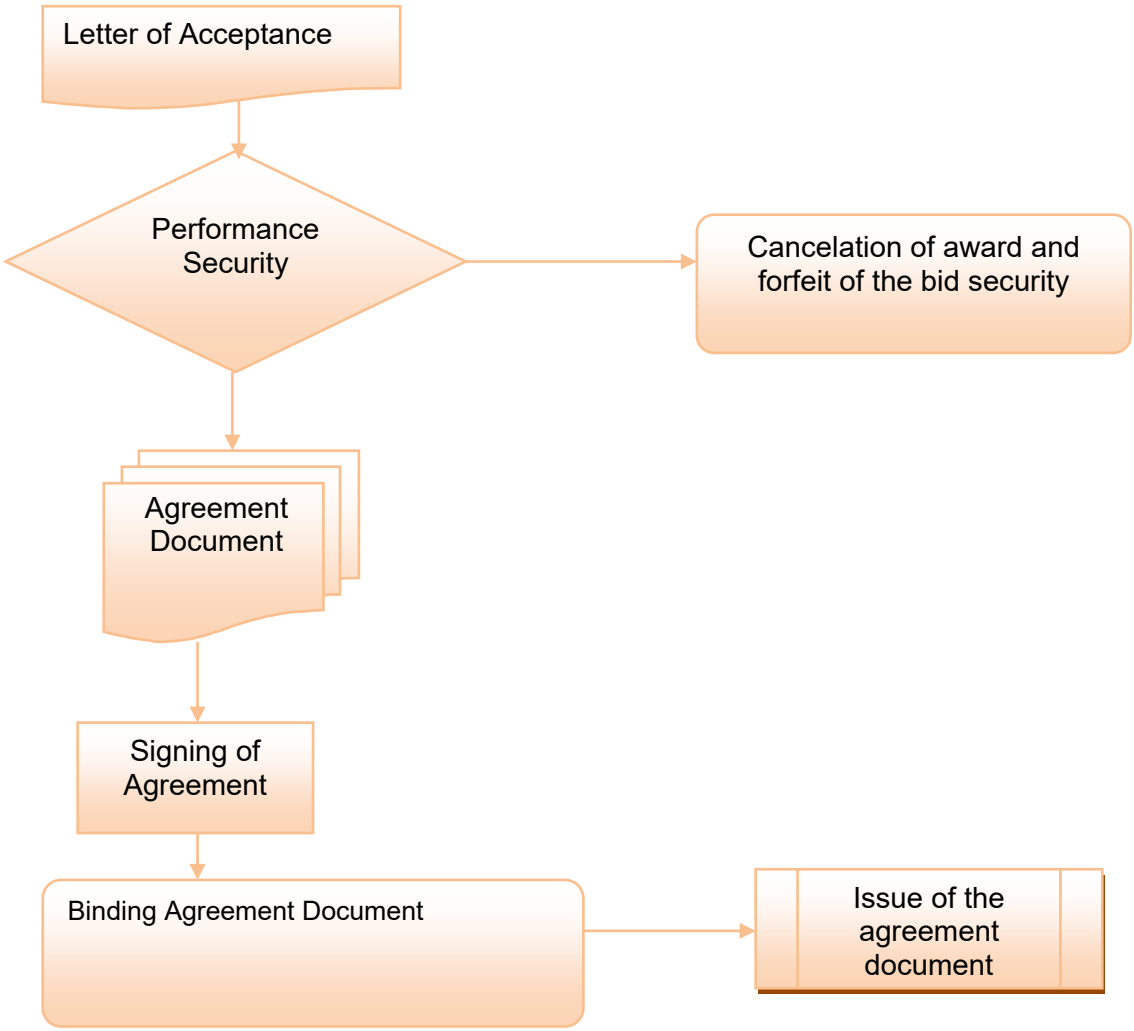


Figure 5-1: Agreement establishment flow chart

5.1.3 Determining the contract management approach

The contract management approach or modality can be by independent consultant, own force, freelancer individual or other based on the complexity, budget/cost, scale of risk and other determining issues. Always it is advisable to decide critically on the modality. Especially for small scale irrigation, if the contract management is outsourced it is advised to do it in cluster approach- grouping a number of projects in to one cluster and outsource it.

In addition, it is advisable to establish clear communication modality (Letter, email, Fax, tele, diary, reporting format & duration) for better contract management placement.

5.1.4 Contract management risk identification

Identify potential risks of the contract (like front loading, unsound rates, financial capacity, experience related risk, etc.) and arrange risk mitigation plan for identified contract risks before and in course of contract establishment and implementation.

5.2 CONTRACT MANAGEMENT ENACTMENT

The main contract management implementation subjects or procedures mainly include the following:

i. Managing Contract Mobilization
ii. Managing Contract Documentation and Record Keeping
iii. Managing Conditions of Contract
iv. Managing Roles and Responsibilities
v. Managing Relationships and Communication
vi. Managing Costs
vii. Managing Contract Variations
viii. Managing Contract Disputes
ix. Managing Contract Performance
x. Contract Monitoring
xi. Managing Ethics in Contract
xii. Managing Contract Completion

5.2.1 Managing contract mobilization

Contract mobilization is a move from the paper agreement stage to materializing or objectivising the agreement at ground level. Successful contract mobilisation can ensure that the 'building blocks' for a successful contract are created. While the written contract is a record of each party's obligations and responsibilities, it is not designed as a day to day operational management document for the contract.

The Contract manager/expert is demanded to prepare a day to day operational contract management document that can assist the project contract management to be easy and piecemeal. This document guides the client, contractor/consultant and the contract manager.

Table 5-1: Contract mobilization checklist (office use)

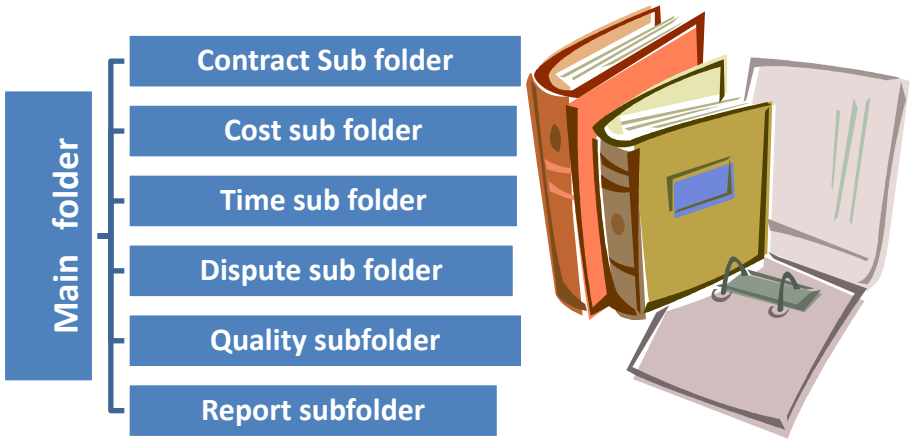
Mobilisation	Action	When done make a mark (X)	Remark
Document	Distribute Contract documents to Contractor / Client (Region. Zone, District - Legal section, Relevant departments)		
	Establish Contract file in the name of the project		
	Organize the Contract file - Collate received Securities (Performance, Advance and others documents		
Site Handover	Site handover format preparation		
	• Beneficiary and locally area administrative & line office courtesy call		
	• Camp site handover		
	• Headwork and Main structure		
	• Bench Marks		
	• Access road if applicable		
Communication & Relationship	• Establish reporting structure and formats		
	• Contractor contract management personnel acceptance		
	• Establish meeting schedules		
	• Establish communication protocols (diary, memos, letters, email. FAX, telephone calls etc.)		

5.2.2 Managing documentation and record keeping

In contract administration the hub is documentation and updating record keeping. Documentation covers collecting, collating, and updating. Each and every formal communication between or among client, contractor, consultant and contract manager has to be collected and organized. Formats and checklists assist this indispensable work (Appendix Part IV/GL27/A-5: Documentation and Record Summary Keeping Format). In documentation and record keeping the following documents and records need unique accentuates:

- ***Contract (changes, amendments and finish):*** This is about when the contract started, ordered delay or accelerated, when and why amendments are done, intended completion date.
- ***Cost:*** Contract price, Advance and interim payments, variations, compensation events, retentions, liquidated damages and securities
- ***Time:***(Delay and extension)
- ***Dispute:*** When the parties are in disagreement in interpretation of contract, deliverables, payment approved and is not able to resolve it without resorting to a formal mechanism.
- ***Quality:*** This is an input from the technical supervisor (Engineer) about the quality in attaining the contract specification, working methodology, workmanship even person power quality as mentioned in the contract.
- ***Report:*** Contract management reports are mandatory; whether there are significant issues or not Contract management report should be issued every month with the project progress report.

Note: -The following foddering system can be adapted.



5.2.3 Managing conditions of contract

Sometimes it is difficult to understood and manage all conditions of contract for complex projects, whereas in small irrigation development the GCC & PCC are not that much difficult if properly monitored. The following flow shows methodology in understanding the GCC and PCC conditions:

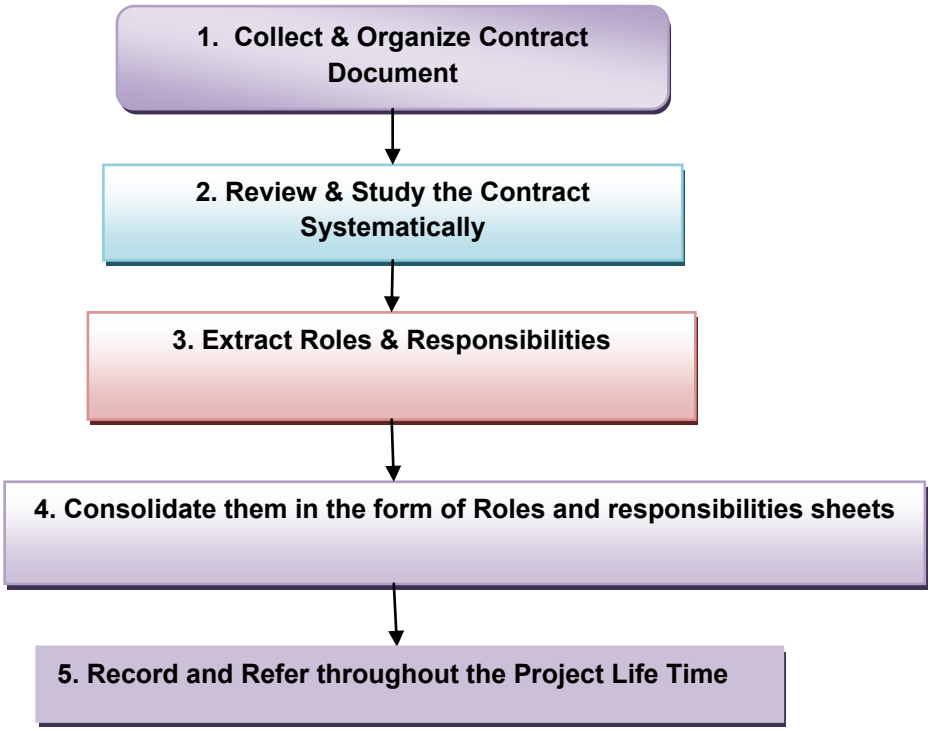


Figure 5-2: Flow diagram main contract item extraction flow

Tool to extract Responsibilities:
Read the contract again & again from cover to cover in order to identify certain key responsibilities, called **"control responsibilities**,
Mark responsibilities allocated to each participant with colored pen/markers in which one colour of marker should be used to denote each responsibility of a given party.
Consolidate each party responsibility to one place.

5.2.4 Managing roles and responsibilities of parties

In contract management, one of the main challenges is to assign and demarcate roles and responsibilities of contract mangers and experts. Unless this is done in explicit way, the contract management will fail. The roles and responsibilities depend on complexity, risk, budget and other factors. The contract manager (or team) must:

- Have a detailed knowledge of the governing contract and other relevant issues
- Actively participate in the tender process or have a full handover from the staff responsible for the tendering/contract award.
- Have the appropriate contract management skills, budget oriented, and professional expertise to manage the contract and resolve any issues.
- Hold the necessary delegated authority to monitor the financials and ensure variations are appropriately approved by Procurement and in accordance laws, regulations and directives.

Table 5-2: Contract manager role

Area of Responsibility	Contract Manager Role
Preliminary stage	▪ Ensure signed contract is in place between both parties ▪ Ensure a contract file is maintained ▪ Review the bid result to understand risks and challenges (arithmetic check, unit rate, specification, and its completeness of bid document) ▪ Study the contract systematically (understand, identify supersede-consecutives, inconsistencies, and glaring error) ▪ Understand responsibilities of the parties ▪ Build a confidence on the assignment and the contract issues by reading and consulting experienced personnel on the subject matter.
Management	▪ Day to day management of the Consultant/ Contractor ▪ Perform regular operational meetings with Consultant/Contractor ▪ Resolve operational issues as they arise ▪ Monitor performance data and Address non-conformance ▪ Ensure payment certificates comply with contracted rates ▪ Ensure payment is made to Consultant/ Contractor within payment terms ▪ Ensure two-way communication with the supplier. Facilitate resolution of unresolved issues that occur in between review meetings by: ▪ Facilitate strategic contract review meetings to determine future of contract at expiry (e.g.: contract extension, new tender process etc.)
Contract Administration	▪ Participate in the establishment of and understand the operation of the Contract and Consultant/ Contractor Plan ▪ Check each job order compliance to Contract ▪ Organise Contract Request and facilitate response ▪ Advise the supervision team of any changes in scope/specification/deliverables ▪ Negotiate changes in scope/product/service and associated terms and pricing in consultation with the contract manager ▪ Bringing the client & Supplier together to solve issues ▪ Ensuring agreement on action plans ▪ Facilitate improvement plans stemming from regular contract review meetings to ensure Supplier performing at expected levels
Compliance and Monitoring	▪ Comply with contract terms ▪ Monitor deliverables ▪ Engage with Consultant/ Contractor to resolve community generated complaints
Continuous Improvement	▪ Formulate, implement and monitor improvement plans stemming from regular contract review meetings and noncompliance issues to ensure Consultant/ Contractor is performing at expected levels
Contract Review – Lessons Learnt	▪ Participate in strategic contract review to determine future of contract at expiry

5.2.5 Managing relationships and communication

Relation is about concern, dealing, contacts, connections and interactions about the project contract. This relationship should have a modality and system. Managing relationship commences at the early stage of the contract establishment. The relationship may not be the same for all contractors/consultants, but the following are the main:

Table 5-3: Relationship management and communication

Main Activities in Relationships	Description
Formulate Relationship Modality	Person –Person, electronically, paper work
Brief the Communication method	▪ Report – official format & time limit ▪ Payment – Official format ▪ Letter – Official procedures ▪ E-mail – information exchange & briefing – not binding, it should be followed by official letter within four days from issuance of the e-mail. ▪ Telephone- emergency, information exchange – not binding - it should be followed by official letter. ▪ Memos –internal notice
Contact personnel	• Officially assigned by the contractor/ consultant/client • Known office address • Known telephone, email - registration
Mandate/responsibility	• Clearly understood

5.2.6 Managing costs

One of the key elements in contract administration is cost control. Cost is based on the contract type. Almost all of Ethiopian SSI construction projects belong to the admeasurements category. *Costs in this category requires an understanding of contract price, changes in the contract price, variations, payment, compensation events, retention, liquidated damages, advance payments, securities, and others.*

5.2.6.1 Management of advance payment

This payment, most of the time, is the first payment from the client to the contractor/consultant. Advance payment effecting procedures, time, and prior requirements should be well understood by all parties. Monitoring the advance payment utilization of the contractor/consultant by the client is very essential.

For example, according to the GCC-contract or agreement document taken regarding advance payment it states: “The Contractor is to use the advance payment only to pay for equipment, plant, materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.” Accordingly, advance payment utilization should be one of the monitored items.

5.2.6.2 Management of interim payment

Payments paid based on the executed work/service in the midst of the assignment are called interim payments. Interim payments request, approval and effecting should have a standard flow procedure in managing a cost. This flow should be effective to hasten the project efficiency.

An agreed and accepted method would be established with the contractor/consultant for carrying out the necessary measurements, calculations and certifications required for interim.

Interim Payment Certificates are useful in maintaining liquidity for the contractor. Therefore, the contract manger is not expected unnecessarily to reject whole sections of works claimed by the Contractor, but make amendments in accordance to the agreement.

Note that interim payment can be effect up to the agreed proportion of the total contract price minus the agreed proportion for retention and liquidation damage. For example, if the agreed retention money is 5 percent and liquidation damage up to 10 percent of the total contract amount, interim payment can be effect up to the 85 percent of the total contract price

5.2.7 Managing contract variations

Provisions to allow and regulate acceptable contract variations (based on the funding agency policy) should be a standard feature of all contracts. The ability to vary the contract should be controlled by the Client at early stage before entering into a contract, else it will craft contract management predicament. Contract variations are expected to occur in defined and unseen circumstances. It is an accepted practice to entertain variations based on agreement entered between the client & Contractor/ Consultant/ Supplier. Variation Order and approval form is shown in the list of Variation request and Approval Form.

Any proposed variations should be assessed to ensure that they do not breach legislation, procurement policy and financial delegation of supervisors, responsible personnel & managers. The reasons for the variation should be clearly documented. Managers should be involved in negotiating significant variations.

Variations should not be used to mask poor performance or serious underlying problems and the effect on original timeframes, deliverables and value for money should be assessed. If the effects are significant, senior management and other stakeholders may need to be consulted and/or advised.

Changes to contractual arrangements have the potential to affect the scope and viability of the contract for either or both parties and making substantive variations to a contract will require some of the actions and issues involved in developing the original contract. They should therefore be planned accordingly.

A variation is a formal amendment to the terms and conditions within or outside the intent of the Contract. A variation is a change to the original scope of work which has been agreed by both parties. The effect of the variation will have implications on time, cost and quality.
Variations may include the following to Contract will be required for the following:

- Change in scope of work including Volume (positive and negative)
- Change in execution of the work– Methodology & method statements
- Change in resources or facilities required
- Revision of rates
- Extension of the duration of the contract
- Settlement of a claim arising from the contract

Before deciding Contract Variations Check the followings:

- Understand the source of variation and as much as possible agree with the client & contractor
- If it is not an imitable variation, think way of minimizing its risk on the project cost, time, quality and intended goal.
- Think critically in the overall project context and mind design change/modification can solve the problem, if not mind omission of other uncritical structures before ordering or approval.
- Don’t delay critical variation decisions so that it incurs cost on the client.

5.2.8 Managing contract disputes

During the contract management phase, a disagreement becomes a dispute when it is not possible for the parties to resolve it without resorting to a formal resolution mechanism. Generally, what a dispute is and when it's deemed to have occurred is defined in the contract, often in a dispute resolution clause.

Many disagreements and disputes arise when the parties cannot agree on issues related to the interpretation of contract provisions, the definition of deliverables, meeting performance standards and/or the effect of unexpected events. It is important that any possibility of dispute or an actual dispute be recognized at an early stage and addressed as quickly as possible amicably. Avoiding the escalation of disagreements can impact on contract deliverables and reduce the costs to both parties especially the client (b/s the end users benefit will be delayed or hampered).

However, where a dispute arises, the Contract Manager's role is to protect the Client interests in all cases. There should be clear governance processes in place to manage contract disputes, including the roles and responsibilities of the Contract Manager, Procurement and Senior Management. The forms of dispute resolution can include the following:

Table 5-4: Forms of dispute resolution

Negotiation	Negotiating between the Client and the Contractor/Consultant is the most common approach to resolving disagreements and disputes. The intention of the negotiation is to reach a mutually acceptable solution, where both sides consider they have gained the best possible result in the circumstances. It is important that one party does not consider they have been unduly pressured to agree to a particular solution as a result of the negotiation as this can lead to an escalation or reappearance of the dispute at a later stage.
Mediation	Mediation involves the use of a neutral third party to assist in resolving the dispute. The mediator does not impose a decision on the parties in the way a court or arbitrator does, but instead seeks to help the parties resolve the dispute themselves. Mediation is usually regarded as a faster, less formal and less costly process than court proceedings or arbitration.
Arbitration	The aim of arbitration is to obtain a final and enforceable result without the costs, delays and the formalities of litigation.
Litigation	Litigation is the act or process of contesting a lawsuit or seeking redress through the courts. It can be an expensive and time consuming procedure and is generally taken when other avenues of dispute resolution have not been successful or are not available. Other approaches to resolving disputes or Supplier defaults should therefore be considered prior to litigation. Ethiopian Chambers of commerce is widely adapted arbitral tribunal organ.

5.2.9 Managing contract performance

Contract manager should ensure the contract is well understood and attained by the parties. In addition, S/he has to ensure whether the parties are on the right truck of their roles and responsibilities of the contract. The following checklist enables to track the performance management (Table 4-5). The performance assessment result should be communicated if possible per month if not per quarter for the parties.

Table 5-5: Contract performance management checklist

Checklist	Indicators
Standards	Compliance or noncompliance documentation (Example: specification of materials, quality, mix ratio, drawing etc.)
Tolerance	Documenting the acceptable deviation on each deliverable – structurally, hydraulically (dimensions, velocities, slopes etc.), cost, time
Review meetings	Conducted or not, evaluating encouraging feedbacks
Reports	Timeliness, completeness, quality

Besides, the following key indicators listed in Table 5.6 shall be used while monitoring & control of contract performance in small scale irrigation development.

Table 5-6: Contract performance management key indicators by contract type

Type of Contract	Key Indicators
Consultancy Services Contract	➢ ***Timely delivery*** of key outputs ➢ ***Responsiveness*** to reasonable requests ➢ The ***quality*** services of services provided
Supplies Contract	➢ The ***timeliness*** of delivery ➢ ***Quantity*** delivered ➢ Compliance with ***specifications***
Works Contract	➢ ***Timeliness*** of each stage of the works ➢ Compliance with the ***specifications, drawings, bill of works,*** and ***intended purposes.*** ➢ The ***quality*** of the works

5.2.10 Contract monitoring

Contract monitoring focuses on collecting and analyzing information to provide assurance to the Client that progress is being made in line with agreed timeframes and towards providing the contract deliverables. Key Performance Indicators (KPIs) should be clearly set within the contract and then measured, reported and monitored on a regular basis.

Regardless of how the contract monitoring is performed, accountability for accepting contract deliverables remains with the Client. Information provided by a contractor/consultant for monitoring purposes should be reviewed and audited, as necessary, to ensure its accuracy and reliability. It can also often be tested by capturing feedback from end-users regarding the quality of the works and services they have received.

It is important to focus monitoring activity on key deliverables; very detailed monitoring can be both costly and unnecessary and unduly shift the focus away from achieving contract outcomes. This may mean establishing priorities for what will be measured at specific time intervals. Collecting too much information is also costly and the Client may not have the resources to analyze it to assess performance adequately. Some of the deliverables that should be monitored include headwork, canals, structure, Night storage, electro mechanical equipment etc.

The main indicators for monitoring can be:

- Cost – Actual in relation to the Contract
- Time – Planned in relation to the actual
- Compliance to Specification – Design/Contract in relation to the actual
- Construction methodology and method statement –
- Construction materials – machinery, equipment, tools and instruments.

- Workmanship – Actually mobilized contractor & consultant staff Vs with tender offer/
- Dimensions – drawing/design in relation to the actual
- Shape – Drawing/design in relation to the actual
- Compliance with Drawing/ specification in relation to the actual
- Compliance with the bill of works
- Operation (user satisfaction) – Functionality, efficiency.

Contract Monitoring Format can be used for monitoring:

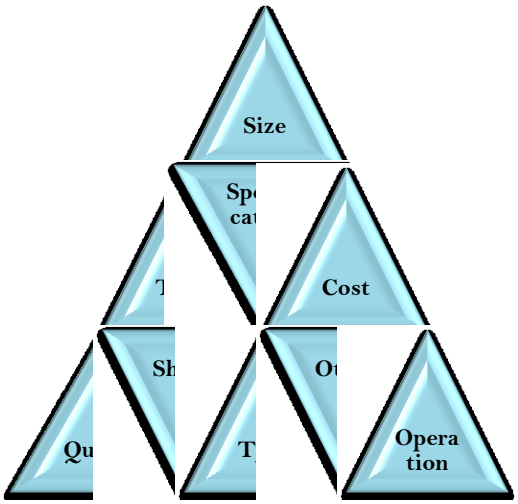


Figure 5-3: Contract monitoring indicators

5.2.11 Managing ethical contract business conduct and conflict of interest

The relationship between/among client/consultant/contractor is a critical element of achieving the required outcomes and issues associated with ethical behavior are most likely to arise in this context.

Judgments on ethical issues will often involve a number of potentially competing considerations including the need to comply with client procurement policy and legislative guidelines while maintaining a constructive working relationship with the contractor/consultant.

In line with the contract agreement and procurement policy, the recommended approach is to decline all offers of gifts or benefits, no matter how small or seemingly harmless. Some organizations have code of conduct on this matter.

5.2.12 Managing contract completion

The most common way a contract ends is where each party performs according to the terms of the contract, that is, the contract is discharged through due performance. Acceptance implies that the works delivered have met the agreed contract.

Contracts for the provision of services may specify an end date when all contract deliverables have to be provided. The contract ends through due performance if the services are delivered in line with contract standards by the due date. In works contracts, contract closure should be completed as soon as defect liability is completed. The following check list guides the contract completion:

No	Checklist	Yes/No	Remark
1	Deliverables review		
2	Documents required for contract completion (as built drawing, O&M, diary & others)		
3	Unsettled claim		
4	Advance deduction completed		
5	Defect liability security on place		
6	Site handover/takeover		
7			
8			
9			
10	Retention managed		
11	Contract closing meeting & minutes		
12	Final payment addressed		

6 STUDY AND DESIGN SERVICE CONTRACT ESTABLISHMENT

Study and design service comprises project initiation, identification and investment prioritization, feasibility study and detail design activities. Here the client shall prepare term of reference (TOR) based on the nature of identified project and finally establish Study and Design Contract.

The Three are different procurement approaches for study and design service such as open bid, short list, and others. During the procurement process invitation or request for expression of interest should be one of the requirements to assist the pre-qualification assessment.

Pre-contract activities for study and design service are as discussed hereunder in small scale irrigation preparation phase.

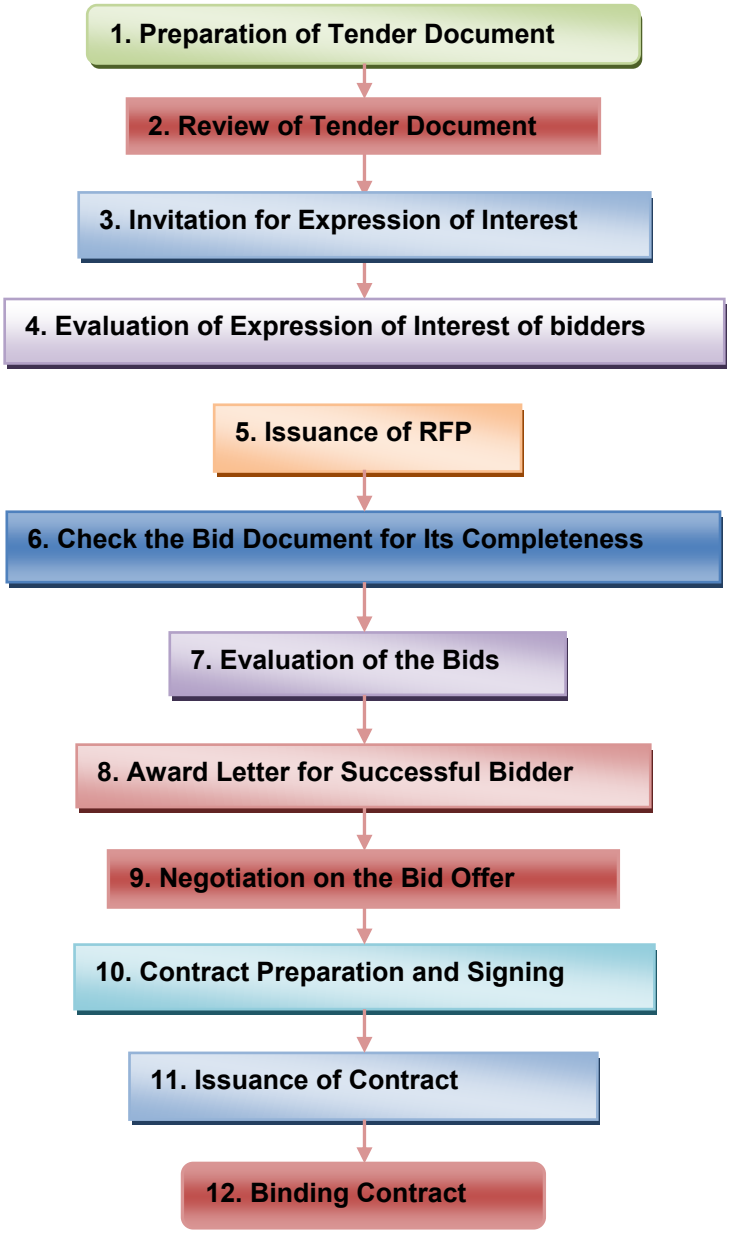


Figure 6-1: Procedure for study and design service contract establishment

1. Preparation of Tender Document

The standard bid document for the procurement of Study and Design Service divided into three parts and nine separate sections. Generally, it is structured as: -

Part 1- Bidding Procedures
- Section 1 – Instructions to Bidders
- Section 2 – Bid Data Sheet
- Section 3 – Evaluation Criteria
- Section 4 – Bidding Forms
- Section 5 – Eligible Countries

Part 2 - Schedule of Requirement
- Section 6 – Terms of Reference

Part 3 - Contract
- Section 7 – General Conditions of Contract
- Section 8 – Special Conditions of Contract
- Section 9 – Contract Forms

It should be made either of the following and the latest version based on the nature of the fund.

- The Federal Democratic Republic of Ethiopia, Standard Bid Document (SBD), For Procurement of Consultancy Service, For National Commutative Biddings (NCB) prepared by Public Procurement Agency (PPA), January 2006, Addis Ababa, Ethiopia.
- Consulting services manual 2006: a comprehensive guide to the selection of consultants at the World Bank.
- Guidelines Selection and Employment of Consultants under IBRD Loans and IDA Credits & Grants by World Bank Borrowers, January 2011.

2. Review of Tender Document

The contract engineer should review the tender document for its completeness of each part and sections contents, the detail of each sections and conformity to the procurement procedure and methods. Special attention shall be given while reviewing terms of reference that clearly describe the scope, approach, methods, staffing, deliverables, scheduling and mode of payments.

3. Invitation for Expression of Interest

The procuring entity may advertise the opportunity to invite consultancy firms to express interest in being invited to bid. This can be done with a letter, News Paper, and other legal forms according to the PPA or World Bank Procurement Directives. Use Standard Format for Notices seeking Expressions of Interest attaché in the annex.

4. Evaluation of Expression of Interest of bidders

The client should review the qualification of consultants who submitted expression of interest and gives first consideration to those processing the best qualifications for the proposed assignment. The client should develop a short list based on the funding agency procurement directives (Example, PPA 2006 advices 3 to 7 bidders, whereas, World Bank advices the first 6 short listed consultants). Detail evaluation should be undertaken according to evaluation of the bids stated below.

5. Issuance of RFP

The procuring entity should prepare and send RFP to short listed consultants. During the preparation of RFP, the client, should use funding agencies SRFP. The SRFP consist letter of invitation, information to consultant including data sheet, technical proposal, and financial proposal, TOR, and standard forms of contracts.

The client should give enough time for selected bidders to prepare their proposal. (Example, WB advises 4 weeks for very simple assignment and up to 3 months for complex assignment).

6. Check the Bid Document for Its Completeness

The procuring entity should check the completeness of the bid document submitted by the consultant; legal registration (Business License, Professional Registration, VAT and TIN Registration), Relevancy, Eligibility, Tax Clearance from Inland Revenue Authority.

7. Evaluation of the Bids

For Consultancy Services different selection procedures can be used and each requires slightly different information in Section 3 of tender document. According to PPA 2006, the four selection procedures permitted are Quality & Cost Based Selection, (QCBS), Quality Based Selection, (QBS), Fixed Budget Selection, (FBS), and Least Cost Selection, (LCS). Whereas, World Bank additional recommends Selection Based on Consultant's Qualification (CQS), Single Sources Selection (SSS), and Selection for Individual Consultant (IC).

The Procuring Entities should evaluate the bid offer based on evaluation criteria forming the bid document and finally prepare evaluation report.

The evaluation criteria for procurement of **Study and Design Service** shall consider the followings company profile information but not limited to: -

- Working capital and annual turnover (Audited Financial Statement),
- Grade,
- Years in the business,
- Lend and litigation,
- Debarring (Black listed),
- Person power,
- Vehicle,
- Instruments, and
- Certificate of performance.

8. Award Letter for Successful Bidder

Upon completion of the tender evaluation, the Tender Evaluation Committee shall be requested to make a Contract Award recommendation to the head of the Procuring Entity. Decision should be made by the general manager of the procuring entity based on the evaluation report whether bid process and the selected bid offer is accepted or rejected.

The following procedure is required before award decision is made:

- The head of the Procuring Entity makes a contract award decision.
- The Procuring Entity notifies all Bidders of the results of the evaluation.
- After a period of specified working days (Example, 5 working days according to PPA 2006), if no complaint has been received by the Procuring Entity, the PE awards the contract by either issuing a Letter of Acceptance to the successful bidder or signing a contract (which is often done following the successful conclusion of any negotiations).

9. Negotiation on the Bid Offer

For consultancy services, negotiations are often held with the recommended Bidder, to finalize all technical details, prior to placing the contract. Negotiations are normally held with the recommended Bidder to settle any minor matters arising from the proposal or clarifications (if required) based on the rule and regulation of the procurement directives.

10. Contract Agreement Preparation and Signing

The procuring entity shall prepare contract agreement document and both the client and consultant should sign by the respective official delegates and stamp by the respective archives. Witnesses from the client and consultant sides should sign accordingly. Both the client and consultant legal advisers shall endorse its compatibility with the set conditions of contract by signing on the contract document. Both client and consultant delegates shall put their initials on each contract document pages.

11. Issuance of Contract

The signed contract document should be issued by the client to the contractor and any other stakeholders.

12. Binding Contract

The signed and distributed contract agreement document form binding contract between client and consultant starting from the date of its issuance. It should be referred throughout the project life so that the contract can be practiced accordingly.

The following Types of Guarantee/Security shall be fulfilled before signing Study and Design Service Contract. These are: -

a. Bid Security CPO
   - CPO (fixed amount, two (2) percent of the offered total amount, or amount specified in the Bid Data Sheet, BDS)
b. Performance Security
   - CPO (10 % of the offered total amount, or amount specified in the Bid Data Sheet, BDS)
c. Advance Payment Guarantee
   - Equivalent of the advance payment in the form of Bank Guarantee.
d. Provisional Indemnity
   - Unconditional insurance bond from certified financial institution.

7 STUDY AND DESIGN SERVICE CONTRACT IMPLEMENTATION

7.1 GENERAL

The main contract administration activities at study and design phase is to make sure the consultant firm is responding according to the entered agreement to provide the deliverables in intended quality within the agreed time frame and agreed budget.

The client strictly follows the approach and method, timeliness and quality of deliverables such as inception report, interim report (mainly focused on collected data quality, sufficiency, and type), draft report, and final report including technical specifications, final design drawings, construction plan and schedule according to the TOR. In addition, the client should collect and evaluate monthly progress report. The client should conduct review workshop at inception, interim (if required), and draft reporting stages.

It should be implemented in accordance to *Part III: Feasibility Study and Detail Design Guidelines for SSID*.

The client should effect the payment in accordance to the agreed payment modality. The study and design service contract should be concluded after final approval of the following deliverables but not limited to:

- Feasibility study report for different disciplines,
- Detail engineering design report,
- Technical specification,
- Drawings,
- Tender document, and
- Construction plan and schedule

The project should closeout by effecting the final payment and issuing certificate of assignment completion to the consultant.

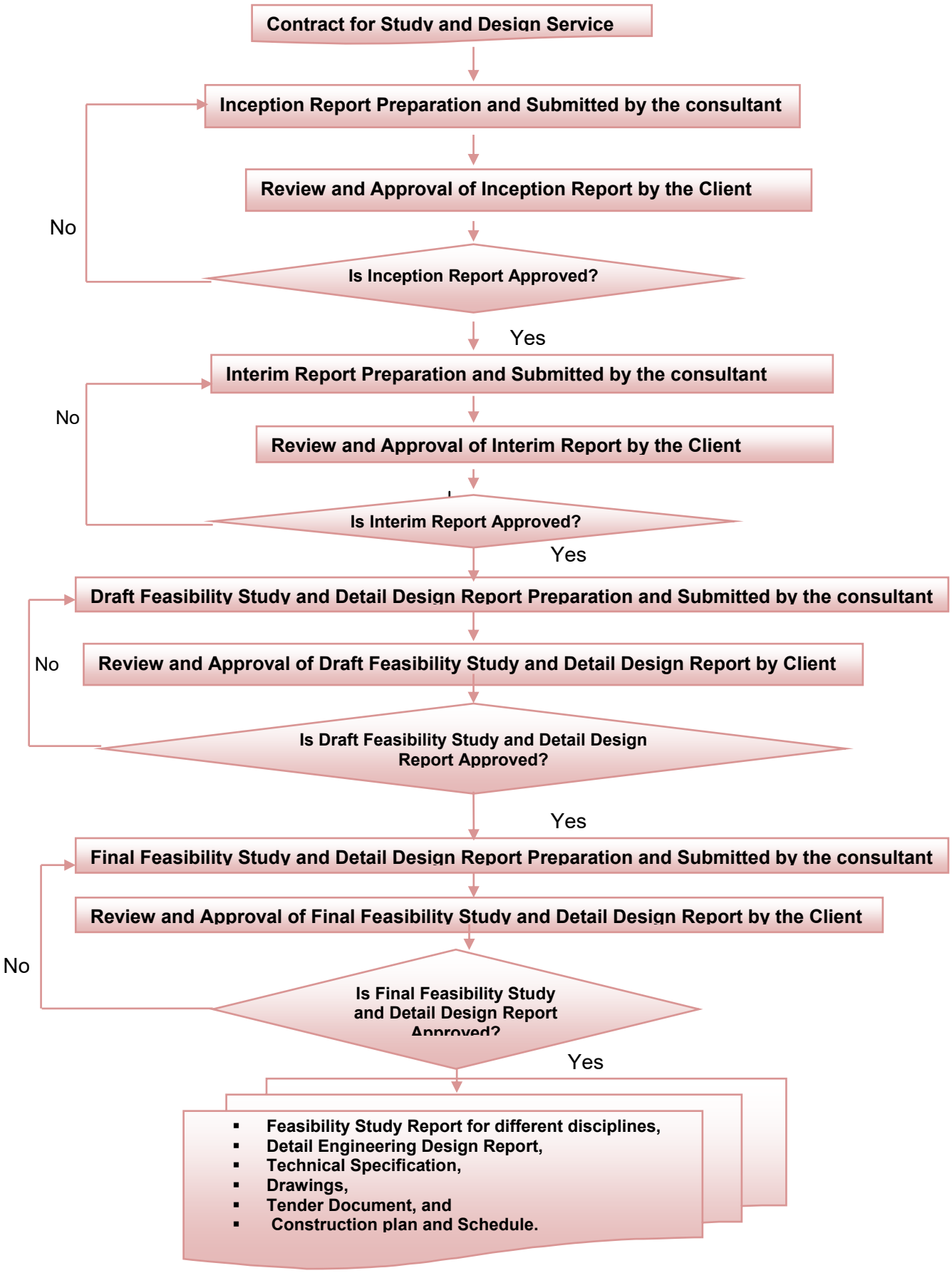


Figure 7-1: List of activities in managing study and design service contract

7.2 PLANNING STUDY AND DESIGN CONTRACT MANAGEMENT

The general contract management planning for small scale irrigation development preparation and implementation is discussed in detail under chapter 6 above. Contract management planning particular to study and design contract is discussed here.

7.2.1 Review study and design contract establishment

The contract manager shall review contract prior to enactment based on the following checklist but not limited to: -.

- Understand the type of contract
- Organize the contract document
  - Agreement,
  - Letter of Acceptance,
  - Consultant's evaluated Bid,
  - Particular Conditions of Contract,
  - General Conditions of Contract,
  - TOR, and
  - Any other document listed in the PCC as forming part of the Contract.
- Collect revised & approved Schedule from the Consultant

7.2.2 Designing study and design contract management strategy

Understanding of the contract, the contract manager should design strategy how to manage the contract according to the agreement entered in to. For example, client head office can delegate Zone and or District Office or can assign a team or an individual expert for managing the implementation of study and design contract.

7.2.3 Study and design contract management risk identification

Identify potential risks of the contract (data quality and quantity, delay, mobilization of key personnel as per the agreement, etc.) and arrange risk mitigation plan for identified contract risks before and in course of contract implementation.

7.3 STUDY AND DESIGN CONTRACT MANAGEMENT ENACTMENT

The main study and design contract management implementation subjects or procedures mainly include the following:

i. Managing Study and Design Contract Mobilization
ii. Managing Study and Design Contract Documentation and Record Keeping
iii. Managing Conditions of Study and Design Contract
iv. Managing Roles and Responsibilities in Study and Design Contract
v. Managing Relationships and Communication in Study and Design Contract
vi. Managing Costs in Study and Design Contract
vii. Managing Study and Design Contract Variations
viii. Managing Study and Design Contract Disputes
ix. Managing Study and Design Contract Performance
x. Study and Design Contract Monitoring
xi. Managing Ethics in Study and Design Contract
xii. Managing Study and Design Contract Completion

7.3.1 Managing study and deign contract mobilization

Contract mobilization is a move from the paper agreement stage to materializing or objectivizing the agreement at ground level. Successful contract mobilization can ensure that the 'building blocks' for a successful contract are created. While the written contract is a record of each party's obligations and responsibilities, it is not designed as a day to day operational management document for the contract.

The contract manager/expert is demanded to prepare a day to day operational contract management document that can assist the project contract management to be easy and piecemeal. This document guides the client, consultant and the contract manager.

Table 7-1: Contract mobilization checklist (office use)

Mobilisation	Action	When done make a mark (X)	Remark
Document	Distribute Contract documents to Consultant/ Client (Region. Zone, District - Legal section, Relevant departments)		
	Establish Contract file in the name of the project		
	Organize the Contract file - Collate received Securities (Advance and others documents)		
Site Handover	Site handover format preparation		
	•Beneficiary and locally area administrative & line office courtesy call		
	•Proposed water source		
	•proposed commendable area		
Communication & Relationship	•Establish reporting structure and formats		
	•Consultant contract management personnel acceptance		
	•Establish meeting schedules		
	•Establish communication protocols (diary, memos, letters, email. FAX, telephone calls etc.)		

7.3.2 Managing study and deign contract documentation and record keeping

Managing documentation and record keeping for study and design contract is as discussed in chapter 6. Particular to this contract the following deliverables shall be documented and recorded properly.

- Progress Report
- Inception Report,
- Design Criteria,
- Interim report including primary and secondary data,
- Draft feasibility report for different disciplines and engineering design reports and drawings,
- Final feasibility report for different disciplines and engineering design reports and drawings
- Tender document, and
- Construction plan and schedule.

7.3.3 Managing conditions of study and deign contract

Managing study and design contract needs an understanding in main conditions of contract, cost, claims &disputes, reports and deliverables.

7.3.3.1 Managing main & particular conditions of study and design contract

Sometimes it is difficult to understood and manage all conditions of contract for complex projects, whereas in small irrigation projects study and design the GCC & PCC are not that much difficult if properly monitored. Use the main contract item extraction flow and tool for extraction of responsibilities explained above under chapter 6.

7.3.3.2 Understanding conditions of study and design contract

The role of the conditions of contract is to clearly state the duties and responsibilities of each of the parties during the implementation of the service. It is a part of contract agreement in study and design of small scale irrigation. There are two forms of conditions of contract namely *General Condition of Contract* (GCC) and *Specific Condition of Contract (SCC)*.

The General Condition of Contract, sometimes called the General Provisions, specifies the manner and the procedures for implementing the provisions of the service contract according to the accepted practices within the construction industry. The General Conditions are intended to govern and regulate the requirements of the formal contract or agreement. It is a part of contract agreement.

The Special Conditions of Contract supplement the GCC by modifying conditions applicable to an individual contract, such as payment terms, the name of the Engineer, amount of security, etc. It is also a part of contract agreement.

Funding agencies prefer different standards of General Conditions of Contract produced by different firms. The most commonly used document is that prepared by the FIDIC (Federation Internationale des Ingénieurs-Conseils) the International Federation of Consulting Engineers.

Currently Ethiopia uses Conditions of study and design Contract of the following: -

1. The Federal Democratic Republic of Ethiopia, Standard Bid Document (SBD), For Procurement of Consultancy Services, Request for Proposals (RFP), For National Commutative Biddings (NCB) prepared by Public Procurement Agency (PPA), July 2011, Addis Ababa, Ethiopia.
2. The FIDIC Client/Consultant Model Agreement, Fourth Edition 2006.

Standard Bidding Document for the Procurement of Consultancy Services, Request for Proposals (RFP) issued by the PPA (Version 1, July 2011) comprises 70 Clauses categorized standard provisions as A. General: - Clause 1 up to Clause 6; B. The Contract: -Clause 7 up to Clause 30; C. Obligations of the Public Body: -Clause 31 up to Clause35; D. Payments to the Consultant: -Clause 36 up to Clause 42; E. Obligations of the Consultant: -Clause 43 up to Clause 55, F. Performance of the Contract: -Clause 56 up to Clause 68, and G. Fairness and Good Faith: -Clause 69 and 70.

The FIDIC Client/Consultant Model Agreement, Fourth Edition 2006 has twenty clauses covering major topics by numerous sub-clauses. Claus 1 deals with general provisions; Clause 2 deals with the client; Clause 3 deals with the consultant; Clause 4 address the commencement, completion,

variation and termination; Clause 5 deals with payment; Clause 6 liabilities; Clause 7 deals with insurance, and Clause 8 deals with disputes and arbitration.

Currently PPA 2011 is used for irrigation project implementation founded by capital budget of the country, whereas, The FIDIC Client/Consultant Model Agreement, Fourth Edition 2006 is widely used for those irrigation project implementation funded by the following Multilateral Development Banks.

- African Development Bank
- Asian Development Bank
- Black Sea Trade and Development Bank
- Caribbean Development Bank
- European Bank for Reconstruction and Development
- Inter-American Development Bank
- International Bank for Reconstruction and Development (The World Bank)
- Islamic Bank for Development Bank
- Nordic Development Fund

In the course of project implementation, the contract engineer of the client expected to understand conditions of contracts as part of contract and make use of it as required. He/she has to familiarize him/herself with the recent version of conditions of contract (PPA Version 1, January 2011 and The FIDIC Client/Consultant Model Agreement, Fourth Edition 2006). He has to read again and again the general and specific conditions made as part of contract agreement of a specific project. Finally, he/she is expected to refer the clause number while dealing and communicating with a respective issue.

7.3.4 Managing study and design contract management roles and responsibilities

In contract management, one of the main challenges is to assign and demarcate roles and responsibilities of contract mangers and experts. Unless this is done in explicit way, the contract management will fail. The roles and responsibilities depend on complexity, risk, budget and other factors. The contract manager (or team) should:

- Have a detailed knowledge of the TOR, governing contract and other relevant issues
- Actively participate in the tender process or have a full handover from the staff responsible for the tendering/contract award.
- Have the appropriate contract management skills, budget oriented, and professional expertise to manage the contract and resolve any issues.
- Hold the necessary delegated authority to monitor the finance and ensure payments are appropriately approved by procurement and in accordance laws, regulations and directives.

Table 7-2: Contract administration role

Area of Responsibility	Contract Manager Role
Preliminary stage	•Ensure signed contract is in place between both parties •Ensure a contract file is maintained •Review the bid result •Study the contract systematically (understand, identify supersede – consecutives, inconsistencies, and glaring error) •Understand responsibilities of the two parties •Build a confidence
Contract Administration	•Day to day management of the Consultant •Perform regular operational meetings with Consultant

Area of Responsibility	Contract Manager Role
	•Resolve operational issues as they arise •Monitor performance data and Address non-conformance •Ensure payment certificates comply with contracted rates •Ensure payment is made to consultant within payment terms •Facilitate resolution of unresolved issues that occur between the parties •Facilitate strategic contract review meetings to determine future of contract at expiry (e.g.: contract extension, new tender process etc.) •Participate in the establishment of and understand the operation of the Contract and Consultant Plan •Check each job order compliance to Contract •Organise Contract Request and facilitate response •Advise the consultant of any changes in scope/design criteria/deliverables •Ensuring agreement on action plans •Facilitate improvement plans stemming from regular contract review meetings to ensure consultant performing at expected levels
Compliance and Monitoring	• Comply with contract terms • Monitor deliverables • Engage with Consultant to resolve community generated complaints
Continuous Improvement	• Formulate, implement and monitor improvement plans stemming from regular contract review meetings and noncompliance issues to ensure Consultant is performing at expected levels
Contract Review – Lessons Learnt	• Participate in strategic contract review to determine future of contract at expiry

7.3.5 Managing relationships and communication in study and deign contract

Regarding to Managing Relationships and Communication of study and design contract refer above in chapter 5.

7.3.6 Managing costs in study and deign contract

Almost all of Ethiopian SSIP study and design service contracts belong to the Lump Sum category. Costs in this category require an understanding of contract price, payment modality in association with deliverables, advance payment, payment certificate based on deliverables, Payments, and others.

Payments in Lump Sum contracts are based on agreed milestones for special deliverables such as Inception report, Interim report, Draft reports, and Final reports.

Advance Payment Management

This payment, most of the time, is the first payment from the client to the consultant. The amount of advance payment, effecting procedures, time, and prior requirements should be well understood by all parties.

The contract manager is expected to make sure:

- Advance payment request is accompanied by an acceptable bank guarantee for the advance payment.
- The period of validity of the Advance Payment Guarantee is within acceptable period of the agreement - at least 30 days longer than the anticipated period for offsetting the advance payment.

- Ensure that any Advance Payment specified in the contract is paid immediately when the Advance Payment Security is received from the Consultant.
- Accordingly, advance payment utilization should be one of the monitored items.

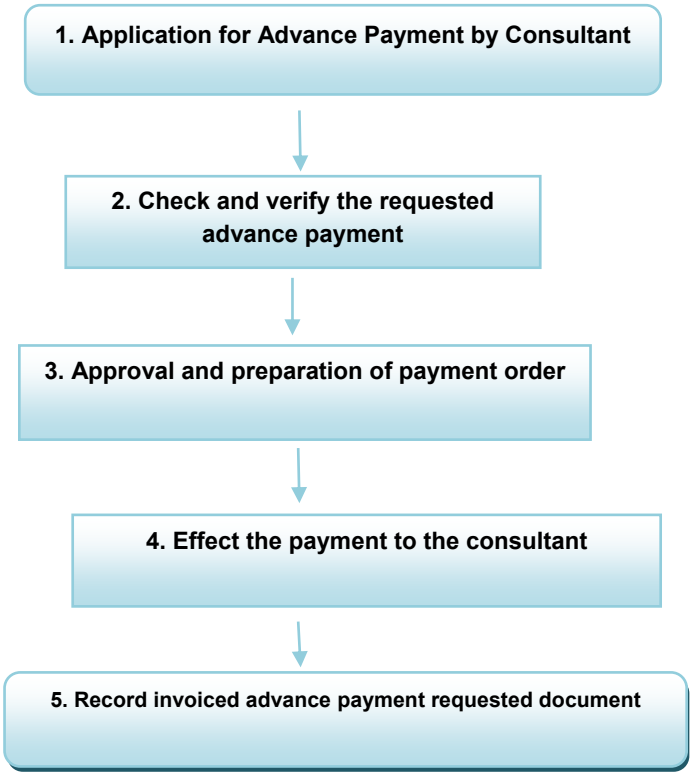


Figure 7-2: Flow diagram advance payment flow

Interim payment

A payment paid based on the executed service in the midst of the assignment (lump sum in this condition) is called interim payments. Each contract has its own drafted payment schedule in the agreement. Interim payments request, approval and effecting should have a standard flow procedure in managing a cost. This flow should be effective to hasten the project efficiency. In interim payment supporting documents to effect the payment and deductions should follow the agreement entered into.

The following theme assists the interim payments:

- Understand the Payment terms for the service contract made according to the contract agreement,
- Understand and ensure the document required to support the payment request, like

➢ Actual inputs provided,
➢ Timesheets,
➢ Reports or other deliverables,
➢ Evidence of reimbursable,
➢ other criteria as specified in the contract,
➢ Understand & implement deduction,
➢ Agreed deductions like repayment for any advance payments, and
➢ Loss recovery if any.

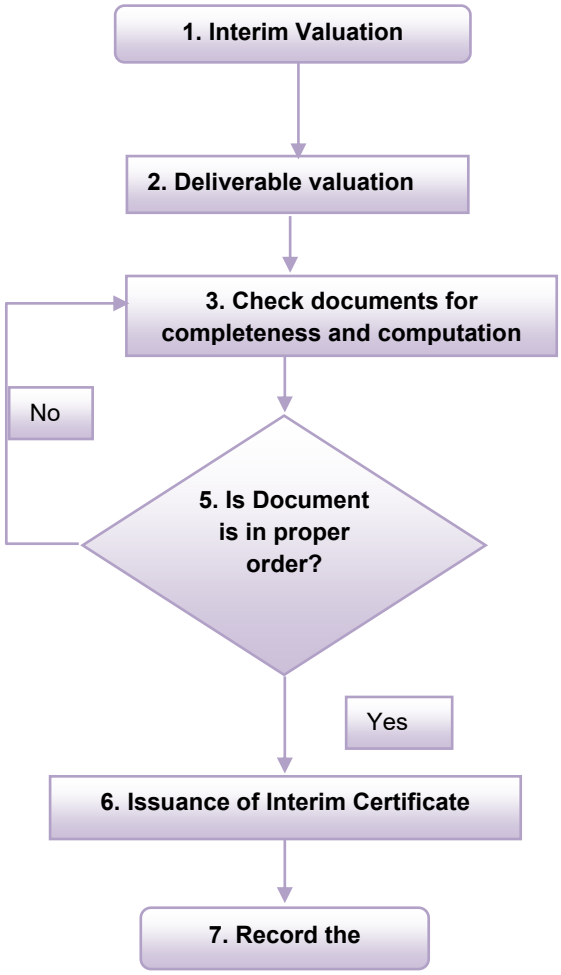


Figure 7-3: Flow diagram Interim payment flow

Final payment

The final payment modality of study and design service should be clearly articulated in the contract document.

The final payment for study and design service contract should be effected after final approval deliverables stated under 7.3.2 above in this guideline.

Note that before effecting final payment, ground truth in the process of site hand over shall be concluded in the presence of representatives from client, consultant, local administrative bodies and beneficiary farmers using appropriate format (*Appendix Part IV/GL 27/F-2 Studied and Designed Project Handover Format*).

Example

The payment schedule modality for study and design service may be considered as: -

- ***Payment No. 1 (Advance Payment)*:** Twenty (20) percent of the lump-sum amount to be paid up on the signing of contract.
- ***Payment No. 2*:** Twenty (20) percent upon submission & approval of Inception Report;
- ***Payment No. 3*:** Twenty (20) percent upon submission & approval of Interim Report;
- ***Payment No. 4*:** Twenty (20) percent upon submission & approval of Draft Final Feasibility and Detail Design Report;
- ***Payment No. 5 (Final Payment)*:** Twenty (20) percent upon submission and acceptance of

7.3.7 Managing study and design contract variations

Regarding to managing contract variations in contract of study and design service contract refer above in 5.2.7.

Generally, contract variation in study and design service contract may be scope change that leads variation on cost and or extension of time for completion of the service.

7.3.8 Managing study and design contract disputes

Regarding to managing contract disputes in contract of study and design contract refer above in 5.2.8.

7.3.9 Managing study and design contract performance

Regarding to managing contract performance in Contract of study and design contract refer above in 5.2.9. Some of performance indicators for study and design contract are: -

- **Timely delivery** of key outputs
- **Responsiveness** to reasonable requests
- **The quality** services of services provided

7.3.10 Managing study and design contract monitoring

Regarding to managing contract performance in Contract of study and design contract refer above in 5.2.10.

7.3.11 Managing ethics in study and design contract

Regarding to managing ethics in contract of study and design contract refer above in 5.2.11. Generally, there should be code of ethics that guides the relation between client and consultant study and design contract.

7.3.12 Managing study and design contract closure

Regarding to managing contract closure or completion of study and design contract refer above in 5.2.12.

8 CACS SERVICE CONTRACT ESTABLISHMENT

Per-contract activities at project construction phase comprise the pre-condition for establishment of contract administration & construction supervision service contract.

The contract administration and construction supervision service contract establishment is similar to the *contract establishment for study and design service*. For detail refer chapter 7 of this guideline.

Similar to Study and Design Service Contract, the following Types of Guarantee/Security shall be fulfilled before signing Contract Administration and Supervision Service Contract. These are: -

i. Bid Security CPO
   - CPO (fixed amount, two (2) percent of the offered total amount, or amount specified in the Bid Data Sheet, BDS)

ii. Performance Security
   - CPO (10 % of the offered total amount, or amount specified in the Bid Data Sheet, BDS)

iii. Advance Payment Guarantee
   - Equivalent of the advance payment in the form of Bank Guarantee.

iv. Provisional Indemnity
   - Unconditional insurance bond from certified financial institution.

9 CACS SERVICE CONTRACT IMPLEMENTATION

During implementation of contract administration and construction supervision service contract, the client should focus on mobilization of the consultant team and logistics as per the contract entered in to.

It should be implemented in accordance with GL 28: Construction Supervision Guideline for SSID.

9.1 PLANNING CACS SERVICE CONTRACT MANAGEMENT

The general contract management planning for small scale irrigation development preparation and implementation is discussed in detail under chapter 6 above. Contract management planning particular to contract administration & construction supervision service contract is discussed here.

9.1.1 Review CACS service contract establishment

The contract manager shall review contract prior to enactment based on the following checklist but not limited to: -.

- Understand the type of contract
- Organize the contract document
  - Agreement,
  - Letter of Acceptance,
  - Consultant's evaluated Bid,
  - Particular Conditions of Contract,
  - General Conditions of Contract,
  - TOR, and
  - Any other document listed in the PCC as forming part of the Contract.
- Collect revised & approved schedule from the consultant

9.1.2 Designing CACS service contract management strategy

Understanding of the contract, the contract manager should design strategy how to manage the contract according to the agreement entered in to. For example, client head office can delegate Zone and or District Office or can assign a team or an individual expert for managing the implementation of contract administration & construction supervision service contract.

9.1.3 CACS service contract management risk identification

Identify potential risks of the contract (delay, mobilization of key personnel and logistics as per the agreement, etc.) and arrange risk mitigation plan for identified contract risks before and in course of contract implementation.

9.2 CACS SERVICE CONTRACT MANAGEMENT ENACTMENT

Similar to study and design contract, the main management implementation CACS service subjects or procedures mainly include the following:

i. Managing CACS Service Contract Mobilization
ii. Managing CACS Service Contract Documentation and Record Keeping
iii. Managing CACS Service Conditions of Contract
iv. Managing Roles and Responsibilities in CACS Service Contract
v. Managing Relationships and Communication in CACS Service Contract
vi. Managing Costs in CACS Service Contract
vii. Managing CACS Service Contract Variations
viii. Managing CACS Service Contract Disputes
ix. Managing CACS Service Contract Performance
x. Contract Monitoring in CACS Service Contract
xi. Managing Ethics in CACS Service Contract
xii. Managing CACS Service Contract Completion

9.2.1 Managing CACS service contract mobilization

Contract mobilization is a move from the paper agreement stage to materializing or objectivizing the agreement at ground level. Successful contract mobilization can ensure that the 'building blocks' for a successful contract are created. While the written contract is a record of each party's obligations and responsibilities, it is not designed as a day to day operational management document for the contract.

The contract manager/expert is demanded to prepare a day to day operational contract management document that can assist the project contract management to be easy and piecemeal. This document guides the client, consultant and the contract manager.

Table 9-1: Contract mobilization checklist (office use)

Mobilisation	Action	When done make a mark (X)	Remark
Document	Distribute Contract documents to Contractor / Client (Region. Zone, District - Legal section, Relevant departments)		
	Establish Contract file in the name of the project		
	Organize the Contract file - Collate received Securities (Advance and others documents)		
Site Handover	Site handover format preparation		
	Beneficiary and locally area administrative & line office courtesy call		
	Camp site handover		
	Headwork and Main structure		
	Bench Marks		
	Quarry sites		
	Access road		
Communication & Relationship	Establish reporting structure and formats		
	Consultant contract management personnel acceptance		
	Establish meeting schedules		
	Establish communication protocols (diary, memos, letters, email. FAX, telephone calls etc.)		

9.2.2 Managing CACS Service Contract Documentation and Record Keeping

Managing documentation and record keeping for study and design contract is as discussed in chapter 6. Particular to this contract the following deliverables shall be documented and recorded properly.

In this service contract, the following major deliverables should be managed in the accordance of the contract agreement:

- Inception/mobilization report,
- Monthly progress report (narrative plus photograph),
- Progress photograph that shows construction progress, material supplied, machinery mobilized and assigned staff if required,
- Quarterly progress report (narrative plus photograph),
- Annual report (narrative plus photograph),
- Change or modification of design, specification, work methodology and others
- Special advices or recommendation
- As built drawing,
- As built photograph focusing major structures of the project,
- Operation and maintenance manuals,
- Test and commissioning report,
- Works contract completion report, and
- Consultancy service completion report.

9.2.3 Managing conditions of CACS service contract

It is similar to managing conditions of contract for study and design contract. For detail refer section 7.2.3 above in this guideline.

9.2.4 Managing CACS service contract management roles and responsibilities

It is similar to managing contract management roles and responsibilities of study and design contract. For detail refer section 7.2.4 above in this guideline.

9.2.5 Managing relationships and communication in CACS service contract

Regarding to Managing Relationships and Communication of CACS Service contract refer above in chapter 5 and section 7.2.5 above in this guideline.

9.2.6 Managing costs in CACS service contract

Almost all of Ethiopian SSIP CACS service contracts belong to the time based category. Costs in this category require an understanding of contract price, payment modality in association with deliverables, advance payment, payment certificate based on deliverables, Payments, and others. Generally, payment for contract administration and construction supervision service fee commonly requested by the consultant and effected by the client in monthly base. Consultancy service fee may include the agreed expenses like: -

1. Professional staff fee,
2. Perdiem cost,
3. Expenses for vehicle rent for supervision work,
4. Expenses for equipment rent for surveying work,
5. Office (equipment, Furniture, & Computers) expenses,
6. Communication costs, and

7. Report production expenses.

9.2.7 Managing CACS service contract variations

Regarding to managing contract variations in contract of CACS service contract refer section 5.2.7 and 7.2.7 above in this guideline.

Generally, contract variation in CACS service contract go with contract variation of works contract that leads variation on cost and or extension of time for completion of the service.

9.2.8 Managing CACS service contract disputes

Regarding to managing contract disputes in contract of CACS service contract refer above in section 5.2.8 above in this guideline.

9.2.9 Managing CACS service contract performance

Regarding to managing contract performance in Contract of CACS service contract refer section 5.2.9above in this guideline.

9.2.10 Managing CACS service contract monitoring

Regarding to managing contract performance in Contract of CACS service contract refer section 5.2.10above in this guideline.

9.2.11 Managing ethics in CACS service contract

Regarding to managing ethics in contract of CACS service contract refer section 5.2.11above in this guideline. Generally, there should be code of ethics that guides the relation between client and consultant study and design contract.

9.2.12 Managing CACS service contract closure

Regarding to managing contract closure or completion of CACS service contract refer section 5.2.12 above in this guideline. The following check list guides the contract completion:

No	Checklist	Yes/No	Remark
1	Deliverables review		
2	Documents required for contract completion (as built drawing, O&M, diary & others)		
3	Unsettled claim		
4	Advance deduction completed		
5	Defect liability security on place		
6	Site handover/takeover		
7			
8			
9			
10			
11	Contract Closing meeting & minutes		
12	Final Payment addressed		

10 WORK CONTRACT ESTABLISHMENT

Per-contract activities at project construction phase comprise the pre-condition for establishment of works contract. In most case both civil works and supply contracts are established by the contract made between client and contractor.

This part discusses the establishment of works contract starting from collecting and organizing of tender document prepared for the intended purpose up to establishing of binding works contract document.

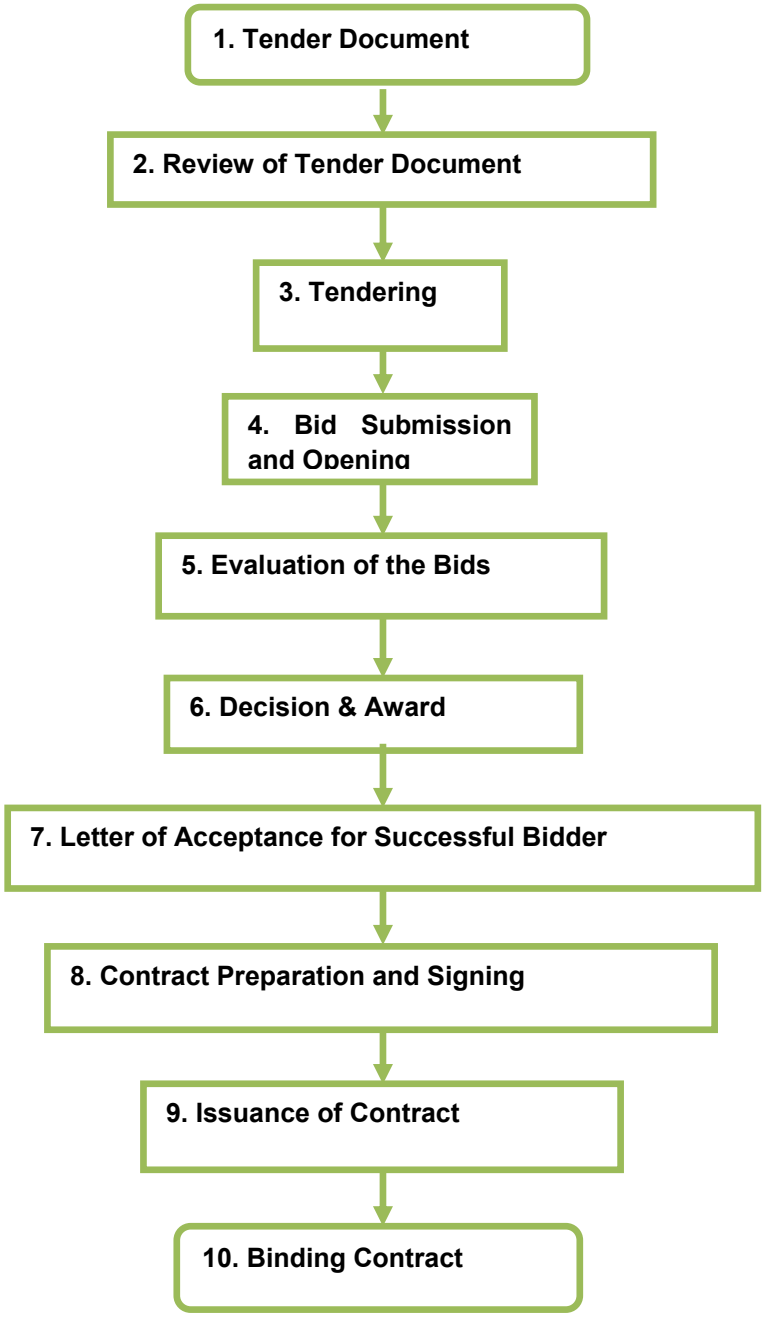


Figure 10-1: Procedure for works contract establishment

The description of Works Contract Establishment procedure and major activities are: -

1. Tender Document

Tender Document for the procurement of **Works** comprises: -

Part 1 - Bidding Procedures
- Section 1 – Instructions to Bidders
- Section 2 – Bid Data Sheet
- Section 3 – Evaluation and Qualification Criteria
- Section 4 – Bidding Forms
- Section 5 – Eligible Countries

Part 2 - Schedule of Requirements
- Section 6(A) – Scope of Works
- Section 6(B) – Technical Specifications
- Section 6(C) – Drawings
- Section 6(D) – Bills of Quantities (or Activities Schedule)

Part 3 - Contract
- Section 7 – General Conditions of Contract
- Section 8 – Special Conditions of Contract
- Section 9 – Contract Forms

It should be made either of the following based on the nature of the fund.

- The Federal Democratic Republic of Ethiopia, Standard Bid Document (SBD), For Procurement of Works, For National Commutative Biddings (NCB) prepared by Public Procurement Agency (PPA), January 2006, Addis Ababa, Ethiopia.
- Standard Bidding Document for procurement of small works, 2015, World Bank.

3. Review of Tender Document

The contract engineer should review the tender document for its completeness of each part and section contents, the detail of each sections and conformity to the procurement procedure and methods. During reviewing the tender document, the procurement entity should insure qualification criteria set can assist in fair and treat all bidders in the same manner.

In addition, it should clearly indicate the requirement such as working capital and annual turnover (Audited Financial Statement), Grade, Years in the business, Lend and litigation, Debarring (Black listed), Person power, Machineries, and Performance Certificate for fair selection of the companies.

Special attention shall be given while reviewing schedule of requirements that needs to clearly describe the scope of the works, technical specifications, drawings, and bills of quantity.

4. Tendering

Tendering should be based on the latest version of either “The Ministry of Finance or Economic Development Procurement Directives” or “World Bank Directives” or others based on the fund of the project implementation.

5. Bid Opening

The bid opining shall be done in accordance to the funding agency procurement directives. The bid opening should be executed by officially delegated bid opening committee at specified place, date and time in the bid document. If there is any change on the bid opening place, date and time the procurement entity shall notify the bidders prior to bid opening.

6. Evaluation of the Bids

The evaluation of the bids should take place according to evaluation criteria forming the bid document. The evaluation methodology may differ based on the latest version directives of the funding agency. For example, currently: -

- WB demands submission of both technical and financial bids offers with one single envelop ("Original", "Copy").
- WB demands compliance (responsive) and noncompliance (nonresponsive) approach, whereas, PPA and others use merit (evaluation point) approach,

6. Award Decision

Upon completion of the tender evaluation, the Tender Evaluation Committee shall be requested to make a Contract Award recommendation to the head of the Procuring Entity. Decision should be made by the general manager of the procuring entity based on the evaluation report whether bid process and the selected bid offer is accepted or rejected.

The following procedure is required before award decision is made:

- The head of the Procuring Entity makes a contract award decision.
- The Procuring Entity notifies all Bidders of the results of the evaluation.
- After a period of specified working days (Example, 5 working days according to PPA 2006), if no complaint has been received by the Procuring Entity, the PE awards the contract by either issuing a Letter of Acceptance to the successful bidder or signing a contract (which is often done following the successful conclusion of any negotiations).

7. Letter Acceptance for Successful Bidder

Before issuance of letter of acceptance, the procuring entity should notify bidders of the result of the evaluation. Client shall notify the results on notice board identifying the bid number and the following information: (a) name of each bidder who submitted a bid; (b) bid prices as read out at bid opening; (c) name and evaluated prices of each bid that was evaluated; (d) name of bidders whose bids were rejected and the reasons for their rejection; and (e) name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.

After doing this, the procuring entity shall prepare and issue letter of acceptance to the successful bidder if no compliant has been received from bidders or after solving bidders compliant.

8. Contract Preparation and Signing

The procuring entity shall prepare contract agreement document and both the client and contractor should sign by the respective official delegates and stamp by the respective archives. Witnesses from the client and contractor sides should sign accordingly. Both the client and contractor legal advisers shall endorse its compatibility with the set conditions of contract by signing on the contract document. Both client and contractor delegates shall put their initials on each contract document pages.

9. Issuance of Contract

The signed contract document should be issued by the client to the contractor and any other stakeholders.

10. Binding Contract

The signed and distributed contract agreement document form binding contract between client and consultant starting from the date of its issuance. It should be referred throughout the project life so that the contract can be practiced accordingly.

The following Types of Guarantee/Security shall be fulfilled before signing Work Contract. These are: -

1. Bid Security CPO
- The bid security shall be a demand guarantee in any of the following forms at the Bidder's option: -
  - an unconditional guarantee issued by a bank or financial institution (such as an insurance, bonding or surety company),
  - certified check,
  - an irrevocable letter of credit,
  - another security specified in the BDS.
2. Performance Security

- Performance Security shall be delivered by the contractor to the employer as stated in ITB of
  - Within the specified date
  - Specified amount
  - Specified currency
  - Forms
    - an unconditional guarantee issued by a bank or financial institution (such as an insurance, bonding or surety company),
    - certified check,
    - an irrevocable letter of credit,
    - Another security specified in the BDS.
  - Remain valid and enforceable until the contractor has executed and completed the works and remedied any defects.
  - Prior to the expiry date, the Contractor shall extend the validity of the Performance Security until the Works have been completed and any defects have been remedied.
3. Advance Payment Guarantee
   - Advance payment guarantee shall be acceptable types:
     - Unconditional bank guarantee
     - Certified check;
     - Unconditional insurance bond
4. Provisional Indemnity
   - Unconditional insurance bond from certified financial institution.

11 WORK CONTRACT IMPLEMENTATION

During implementation of work contract, the client/engineer should focus on mobilization of the contractor team and logistics as per the contract entered in to.

It should be implemented in accordance with GL 29: Construction Guideline for SSID.

11.1 PLANNING WORK CONTRACT MANAGEMENT

The general contract management planning for small scale irrigation development preparation and implementation is discussed in detail under chapter 6 above. Contract management planning particular to work contract is discussed here.

11.1.1 Review work contract establishment

The contract manager shall review work contract prior to enactment based on the following checklist but not limited to: -.

- Understand the type of contract
- Organize the contract document
  - Agreement,
  - Letter of Acceptance,
  - Contractor's evaluated Bid,
  - Particular Conditions of Contract,
  - General Conditions of Contract,
  - Specifications,
  - drawings,
  - Priced Bill of Quantity, and
  - Any other document listed in the PCC as forming part of the Contract.

Collect revised & approved schedule from the Contractor

11.1.2 Designing work contract management strategy

Understanding of the contract, the contract manager should design strategy how to manage the contract according to the agreement entered in to.

The work contract management approach or modality can by independent consultant, own force, freelancer individual or other based on the complexity, budget/cost, scale of risk and other determining issues. Always it is advisable to decide critically on the modality. Especially for small scale irrigation, if the work contract management is outsourced it is advised to do it in cluster approach-grouping a number of projects in to one cluster and outsource it.

In the case of own force work contract management modality, client head office can delegate zone and or district office or can assign a team or an individual expert for managing the implementation of work contract.

11.1.3 Work contract management risk identification

Identify potential risks of the contract (delay, mobilization of key personnel and logistics as per the agreement, etc) and arrange risk mitigation plan for identified contract risks before and in course of contract implementation.

11.2 WORK CONTRACT MANAGEMENT ENACTMENT

Similar to work contract, the main management implementation subjects or procedures mainly include the following:

i. Managing Work Contract Mobilization,
ii. Managing Work Contract Documentation and Record Keeping,
iii. Managing Work Conditions of Contract,
iv. Managing Roles and Responsibilities,
v. Managing Relationships and Communication,
vi. Managing Costs,
vii. Managing Work Contract Variations,
viii. Managing Work Contract Disputes,
ix. Managing Work Contract Performance,
x. Work Contract Monitoring,
xi. Managing Ethics in Work Contract, and
xii. Managing Work Contract Completion.

11.2.1 Managing work contract mobilization

Work contract mobilization should be within the period specified in SCC forming the contract. The project client with or without delegated engineer must utilize the mobilization period to finalize arrangements, which could not be completed before signing of the contract or are still outstanding. The following checklist provides an overview of the mobilization task to be carried out by the client based on the work contract entered into.

MOBILISATION TASKS BY THE CLIENT		
Task	**Purpose**	**Checks and Requirements**
Effect Advance Payment	Enable contractor to mobilize	Advance Payment Bond, money available
Information to local communities	Contractor's mobilization and contract execution	Communities to be briefed on start of construction, employment conditions, access, location and boundary of both permanent and temporary structures, etc.
Prepare and issue construction drawings	Contract execution	Design, details etc. not provided on standard or tender drawings
Mobilize project staff	Project management	Qualifications, terms of employment, camping, transport.
Open separate Project Bank Account	Control of project funds	Provide two authorized and backup signatories
Ensure sufficient cash flow, streamline payment procedures	Efficient contract execution	Limit the number of steps and signatories, provide backup signatories. Set up internal management reports to avoid queries and delays.

MOBILISATION TASKS BY THE CLIENT		
Task	**Purpose**	**Checks and Requirements**
Review or set up accounting system	Control of project funds and payments under each contract	System must capture the costs for each individual contract as well as related costs for consultants etc.
Set up filing system	Accessibility and safekeeping of all contract related correspondence, documents and records.	One file number per contract divided in sections as required. To be kept in locked cabinet.
Reporting and Monitoring System	Control of project management and contract execution	Internal and external reporting and monitoring to capture all aspects of project.
Schedule of meetings	Dissemination of information, discussion and resolution of problems	Project co-ordination meetings, site meetings, staff meetings,
Quality control procedures	Control of contract execution	Acquire equipment and recruit staff, arrange for testing at laboratory.
Roles and functions of staff	Efficient project management	Draft and approve job descriptions
Transport	Supervision	Buy or hire pick-ups, motorbikes
Office space	Project management	Standard office inventory, communications, PC(s), copier, stationary
Site facilities	Supervision	Store, tools and equipment
Access to site and quarries	Contract execution	Quarry acquisition, handing over site to contractor

Similarly, the project contractor must utilize the mobilization period to finalize arrangements, which could not be completed before signing of the contract or are still outstanding. The following checklist provides an overview of the mobilization task to be carried out contractor in accordance with the work contract entered into.

MOBILISATION TASKS BY THE CONTRACTOR		
Task	**Purpose**	**Checks and Requirements**
Provide Advance Payment Bond	Enable mobilization	Insurance policies, dedicated bank account
Provide Insurance Policies	Enable mobilization	Information to insurance company, money for payment
Finalize cash flow analysis and financing arrangements	Enable mobilization and construction	All requirements taken into account: Overheads, staff, labor, materials, tools, equipment, transport, interest payments, equipment lease/hire etc.
Take possession of site	Enable site establishment	Ensure that client has fulfilled his obligations
Mobilize office and site staff	Project and site management	Qualifications, terms of employment, housing, transport
Recruit labourers	Contract execution	Information to local leaders
Open dedicated Project Bank Account	Control of contract proceedings	Provide authorized signatories
Review or set up accounting system	Control of contract proceedings and payments	System must capture all costs and enable cost breakdown on bill items and costs components

MOBILISATION TASKS BY THE CONTRACTOR		
Task	**Purpose**	**Checks and Requirements**
Set up filing system	Accessibility and safekeeping of all contract related correspondence, documents and records.	One file number per contract divided in sections as required. To be kept in locked steel cabinet.
Reporting and Monitoring System	Control of project management and contract execution	Internal and external reporting and monitoring to capture all aspects of project.
Schedule of meetings	Dissemination of information, discussion and resolution of problems	Project co-ordination meetings, site meetings, staff meetings,
Quality control procedures	Control of contract execution	Acquire equipment and recruit staff, arrange for testing at laboratory as required.
Roles and functions of staff	Efficient contract management	Draft and approve job descriptions
Acquire equipment, transport	Contract execution and supervision	Finalize arrangements for procurement, lease or hire
Purchase tools, materials	Contract execution and supervision	Finalize arrangements for supply
Office space	Contract management	Standard office inventory, communications, PC(s), copier, stationary
Site facilities	Contract execution and supervision	Site camp, office, store

11.2.2 Managing work contract documentation and record keeping

Managing documentation and record keeping for work contract is as discussed in chapter 6. Particular to this contract the following deliverables shall be documented and recorded properly.

In this service contract, the following major deliverables should be managed in the accordance of the contract agreement:

- Inception/mobilization report,
- Monthly progress report (narrative plus photograph),
- Progress photograph that shows construction progress, material supplied, machinery mobilized and assigned staff if required,
- Quarterly progress report (narrative plus photograph),
- Annual report (narrative plus photograph),
- Change or modification of design, specification, work methodology and others,
- Special advices or recommendation,
- As built drawing,
- As built photograph focusing major structures of the project,
- Operation and maintenance manuals,
- Test and commissioning report,
- Works contract completion report, and
- Consultancy service completion report.

11.2.3 Managing conditions of work contract

Conditions of contract are a part of work contract agreement in small scale irrigation construction implementation. The role of the conditions of work contract is to clearly state the duties and responsibilities of each of the parties during the implementation of the works. So the contract manager shall understand the conditions of work contract and manage it accordingly.

There are two forms of conditions of work contract namely *General Condition of Contract* (GCC) and *Specific Condition of Contract (SCC)*.

The general condition of work contract, sometimes called the general provisions, specifies the manner and the procedures for implementing the provisions of the construction contract according to the accepted practices within the construction industry. The general conditions are intended to govern and regulate the requirements of the formal contract or agreement. It is a part of contract agreement.

The special conditions of work contract supplement the GCC by modifying conditions applicable to an individual contract, such as payment terms, the name of the Engineer, amount of security, etc. It is also a part of contract agreement.

Funding agencies prefer different standards of General Conditions of Contract produced by different firms. The most commonly used document is that prepared by the FIDIC (Fédération Internationale des Ingénieurs-Conseils) the International Federation of Consulting Engineers.

Currently Ethiopia uses Conditions of Contract for construction of the following: -

1. The Federal Democratic Republic of Ethiopia, Standard Bid Document (SBD), For Procurement of Works, For National Commutative Biddings (NCB) prepared by Public Procurement Agency (PPA), January 2006, Addis Ababa, Ethiopia.
2. The FIDIC Suite of Contracts, RED BOOK (MDB edition): Condition of Contract for Construction, For Building and Engineering Works designed by the Employer, Multilateral Development Banks (MDB) Edition 2005.

Standard Bidding Document for the Procurement of Works issued by the PPA (Version 1, January 2006) comprises 62 Clauses categorized standard provisions as A. General: - Clause 1 up to Clause 26; B. Time Control: -Clause 27 up to Clause 32; C. Quality Control: -Clause 33 up to Clause36; D. Cost Control: -Clause 37 up to Clause 54; and E. Finishing the Contract: -Clause 55 up to Clause 62.

The new Red Book (MDB Edition 2005) has twenty clauses covering major topics by numerous sub-clauses. Claus 1 deals with general provisions; Clause 2 addresses the role of the Employer; Clause 3adresses the position of the engineer; Clause 4 covers the contractor's general obligations including the requirement that in respect of contractor designed works; Clause 5 addresses nominated subcontractor; Clause 6 and 7 address the requirement of personnel, and for contract; Clause 9 deals with test on completion, Clause 10 addresses Employer taking over issues; Clause 11 deals with defect liability; Clause 12 deals with measurement and evaluation; Clause 13 addresses variation and adjustments for changes in legislation and in cost; Clause 14 deals with contract price and payment issues; Clause 15 and 16 provide for termination by the employer and suspension and termination by the contractor respectively. Clause 17 and 18 deal with risk and responsibility, and insurance respectively; Clause 19 is dedicated to force majeure including its definition; and finally the provisions concluded with Clause 20 that deals with claims, disputes and arbitration.

Currently PPA 2006 is used for irrigation project implementation founded by capital budget of the country, whereas, FIDIC Red Book (MDB edition 2005) is widely used for those irrigation project implementation funded by the following Multilateral Development Banks participated in the preparation of this edition of the red book.

- African Development Bank
- Asian Development Bank
- Black Sea Trade and Development Bank
- Caribbean Development Bank
- European Bank for Reconstruction and Development
- Inter-American Development Bank
- International Bank for Reconstruction and Development (The World Bank)
- Islamic Bank for Development Bank
- Nordic Development Fund

In the course of project implementation, the supervisor engineer expected to understand conditions of contracts as part of contract and make use of it as required. S/he has to familiarize himself with the recent version of conditions of contract (PPA Version 1, January 2006 and FIDIC Red Book (MDB edition 2005)). S/he has to read again and again the general and specific conditions made as part of contract agreement of a specific project. Finally, s/he is expected to refer the clause number while dealing and communicating with a respective issue.

During disparity, the documents forming the works contract shall be interpreted in the following order of priority:

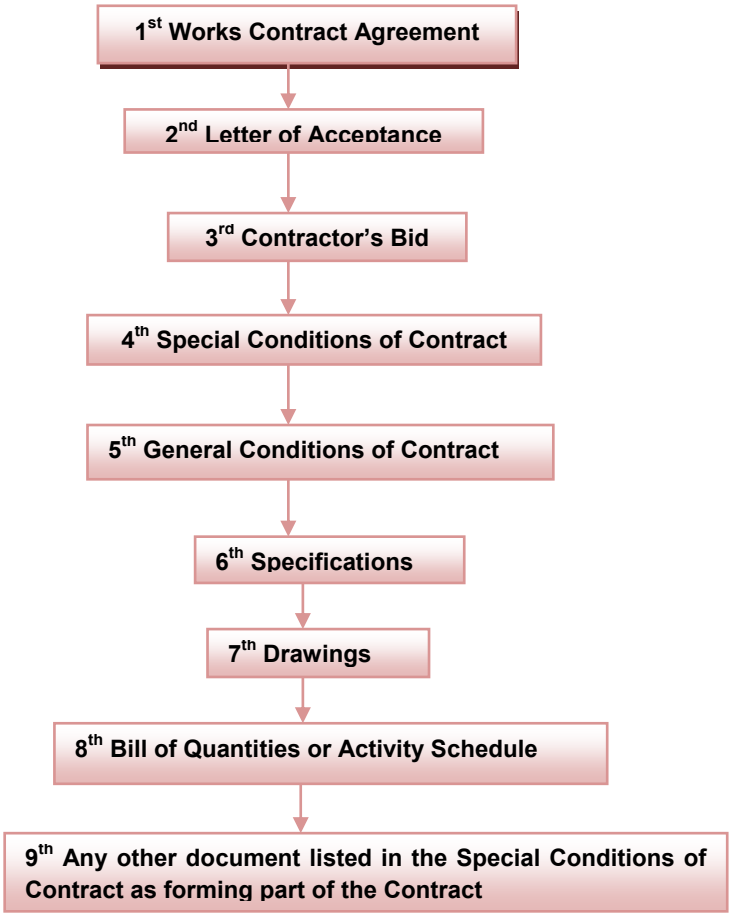


Figure 11-1: Flow chart for interpretation of works contract documents in order of priority

11.2.4 Managing work contract management roles and responsibilities

In contract management, one of the main challenges is to assign and demarcate roles and responsibilities of contract mangers and experts. Unless this is done in explicit way, the contract management will fail. The roles and responsibilities depend on complexity, risk, budget and other factors. The contract manager (or team) should:

- Have a detailed knowledge of the technical specification, drawing, priced bill of quantity, governing contract and other relevant issues
- Actively participate in the tender process or have a full handover from the staff responsible for the tendering/contract award.
- Have the appropriate contract management skills, budget oriented, and professional expertise to manage the contract and resolve any issues.
- Hold the necessary delegated authority to monitor the finance and ensure payments are appropriately approved by procurement and in accordance laws, regulations and directives.

Table 11-1 Work contract administration role

Area of Responsibility	Contract Manager Role
Preliminary stage	▪ Ensure signed contract is in place between both parties ▪ Ensure a contract file is maintained ▪ Review the bid result ▪ Study the contract systematically (understand, identify supersede – consecutives, inconsistencies, and glaring error) ▪ Understand responsibilities of the two parties ▪ Build a confidence
Contract Administration	▪ Day to day management of the Contractor ▪ Perform regular operational meetings with Contractor ▪ Resolve operational issues as they arise ▪ Monitor performance data and Address non-conformance ▪ Ensure payment certificates comply with contracted rates ▪ Ensure payment is made to Contractor within payment terms ▪ Ensure two-way communication with the supplier. Facilitate resolution of unresolved issues that occur in between review meetings by: ▪ Facilitate strategic contract review meetings to determine future of contract at expiry (e.g.: contract extension, new tender process etc.) ▪ Participate in the establishment of and understand the operation of the Contract and Contractor Plan ▪ Check each job order compliance to Contract ▪ Organize Contract Request and facilitate response ▪ Advise the supervision team of any changes in scope/specification/deliverables ▪ Negotiate changes in scope/product/service and associated terms and pricing in consultation with the contract manager ▪ Bringing the client & Supplier together to solve issues ▪ Ensuring agreement on action plans ▪ Facilitate improvement plans stemming from regular contract review meetings to ensure supplier performing at expected levels
Compliance and Monitoring	▪ Comply with contract terms ▪ Monitor deliverables ▪ Engage with Contractor to resolve community generated complaints

Area of Responsibility	Contract Manager Role
Continuous Improvement	▪ Formulate, implement and monitor improvement plans stemming from regular contract review meetings and noncompliance issues to ensure Contractor is performing at expected levels
Contract Review – Lessons Learnt	▪ Participate in strategic contract review to determine future of contract at expiry

The following flow shows methodology in understanding the main and PCC conditions so as to extract the role and responsibilities of parties in work contract: -

The control responsibility summary sheet in work contract should have six columns whose headings should be (1) contract section, (2) description, (3) contractor responsibility (4) employer responsibility, (5) engineer responsibility, and (6) interaction responsibility. Table 11-2 illustrates a blank control responsibility summary sheet.

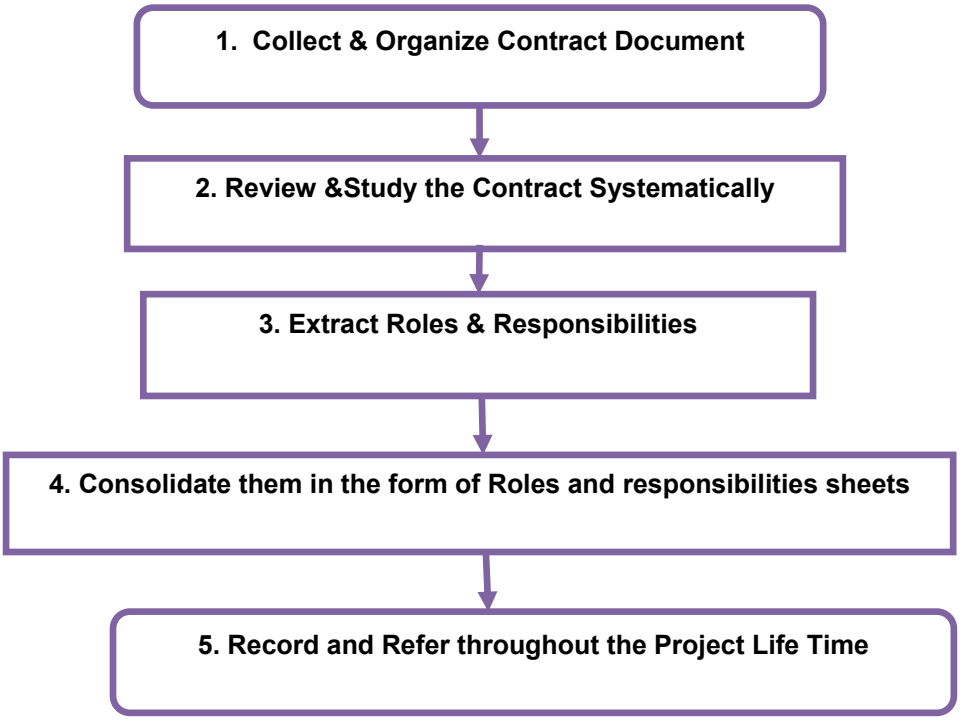


Figure 11-2: Contract role & responsibility identifying conceptual frame

Table 11-2: Work contract role & responsibility recording format

CONTROL RESPONSIBILITY SUMMARY SHEET PROJECT _____ CONTRACTOR _____ Employer _____ ENGINEER _____ _ SHEET ___ OF ____					
(1)	(2)	(3)	(4)	(5)	(6)
Contract Sub-Clause	Description	Contractor Responsibility	Employers Responsibility	Engineer Responsibility	Interaction Responsibility

Note that: -

- The first column should note the section of the contract which defines the responsibility,
- the second column should describe the responsibility in detail sufficient so as not to require reference back to the contract to define it;
- Check-mark the third column if the responsibility is a single responsibility of the contractor;
- The fourth column, a single responsibility of the employer;
- The fifth column, a single responsibility of the engineer; and
- The sixth column, an interaction responsibility of two or more participants.

Transfer all the extracted scattered aggregate of key duties (responsibilities) of project participants to the Control Responsibility Summary Sheet.

11.2.5 Managing relationships and communication in work contract

Regarding to managing relationships and communication of work contract refer above in chapter 6 above in this guideline.

11.2.6 Managing costs in work contract

Almost all of Ethiopian SSIP work contracts belong to the measured category. Costs in this category require an understanding of contract price, agreed unit rate, priced bill of quantities, changes in the contract price, variations, approved measurement recorded on takeoff sheet, advance payment, payment certificate based on approved work performed, Payments, compensation events, retention, liquidated damages, deliverables (like as built drawings, operation and maintenance manuals, tools, equipment and machineries), and others.

Generally, payment for work contract commonly requested by the project contractor approved by contract administrator/construction supervisor/ consultant (based on the contract administration and construction service modality) and effected by the client in monthly base. The work contract payment might be made for the agreed activities like: -

i. Provision of services,
ii. Civil work executed by contractor and approved by the supervisor,
iii. Pipe and fittings supplied by contractor and approved by the supervisor/inspector,
iv. Electro-mechanical equipment and accessories supplied by contractor and approved by the supervisor/inspector,
v. Hydro-mechanical equipment and accessories supplied by contractor and approved by the supervisor/inspector,
vi. Submission of as-built drawings prepared by construction engineer and approved by the supervisor engineer, and
vii. Submission of operation & maintenance manual prepared by construction engineer and approved by the supervisor engineer.

Advance payment management

This payment, most of the time, is the first payment from the client to the contractor. Advance payment effecting procedures, time, and prior requirements should be well understood by all parties. Monitoring the advance payment utilization of the contractor by the client is very essential.

According to the GCC- contract or agreement document taken regarding advance payment it states “The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.” Accordingly, advance payment utilization should be one of the to be monitored item.

Before paying the Advance Payment, the Contractor has to furnish an Advance Payment Security. The maximum amount of the Advance Payment Security is stated in the Bidding Date, which form part of the Instructions to Bidders. However, the Advance Payment Security obeys to conditions specified in the Conditions of Contract. Such conditions concern the form of the guarantee, the duration of the guarantee and the amounts by which the Advance Payment shall be repaid.

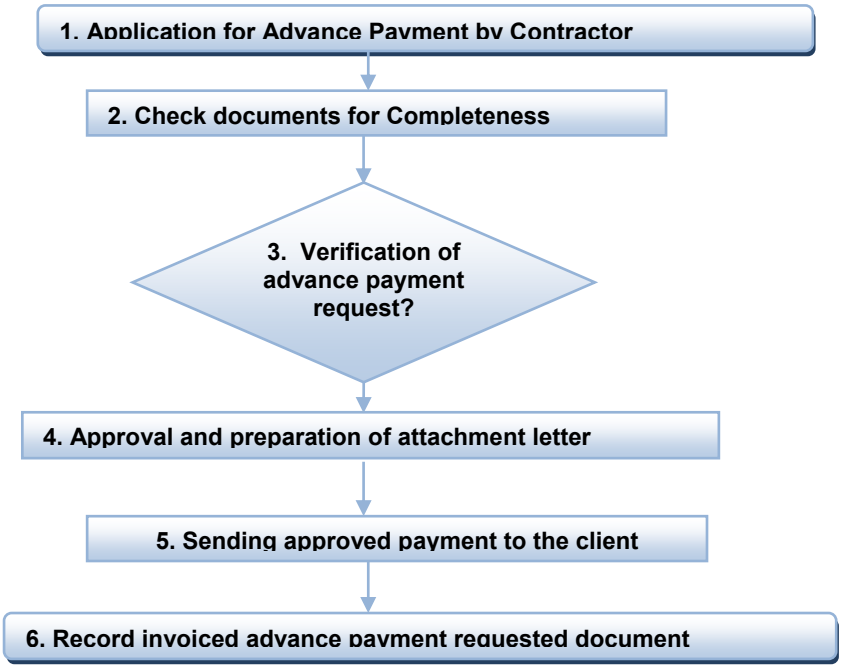


Figure 11-3: Procedure for approval of advance payment

Interim payment

Payments paid based on the executed work in the midst of the work are called interim payments. Interim payments request, approval and effecting should have a standard flow procedure in managing a cost. This flow should be effective to hasten the project efficiency.

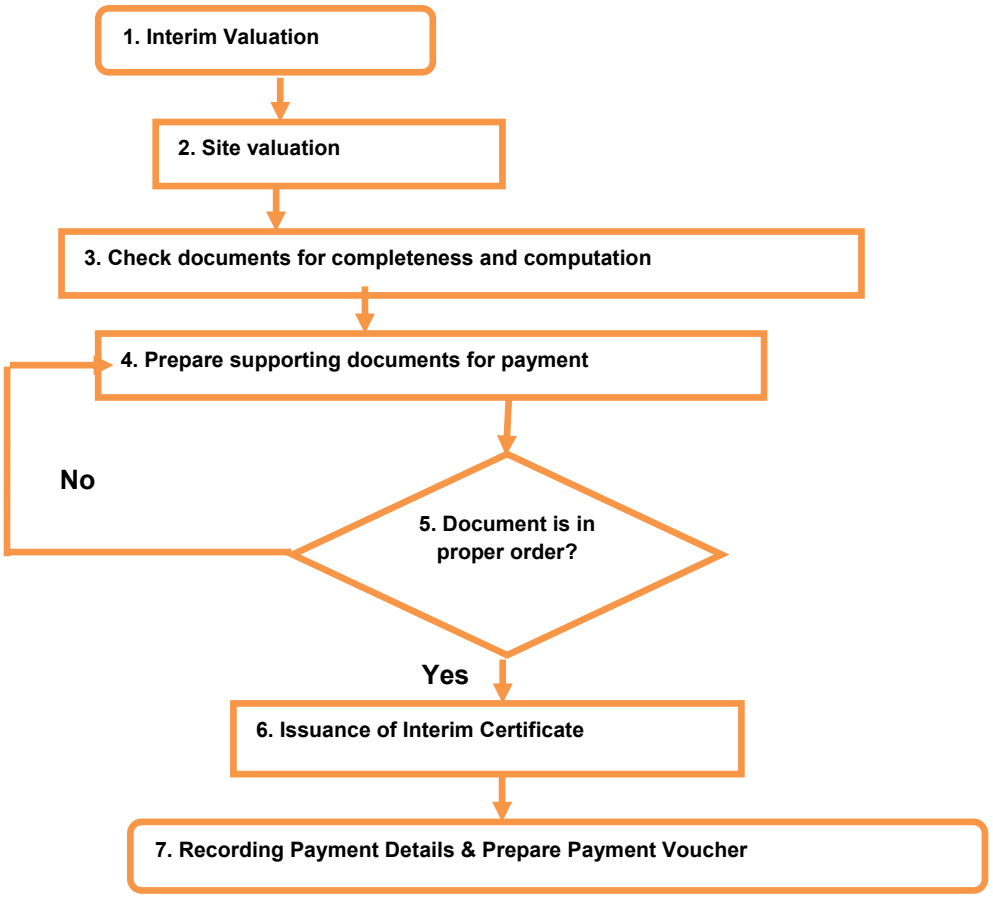


Figure 11-4: Flowchart – interim payment

Description of works contract interim payment approval tasks

1. Interim Valuation

Interim valuations must be carried out at least once a month, unless a Payment Schedule is included in the Contract.

2. Site Valuation

The supervisor shall make Interim Valuation at Site based on the works which have been executed by the Contractor.

3. Check documents for completeness, and computation

Check the attachment of takeoff sheet signed by supervisor engineer, billed item in the bid document, whether there is variation or not, etc.

4. Prepare supporting documents for payment

Upon completion of the valuation, the supervisor should prepare the payment documents. It includes but not limited to: -

- Payment certificate that shows detail works executed with respect to the bill item in the bid offer, and
- Summary of payment certificate that shows amount executed, deductions (retention money of specified amount, specified amount of advance payment to be repaid by the contractor, others if any), and total due to paid for the contractor including VAT.

5. Document is in proper order?

The supervisor finally check that each document is complete and/or in order. Refer to the Checklist for Preparation of Interim Payment. If it is not complete (and/or in order) please repeat Step-4 to prepare the complete document. If it is complete and/or in order, follow Step-6.

6.Issuance of Interim Certificate

If the Interim Payment document is duly completed, and the documents checked and endorsed by the relevant officers, the client empower shall sign and issue the Interim Certificate.

7. Recording Payment Details & Prepare Payment Voucher

Ensure that the correct amount is entered into the vote book. Check that the documents are in order, and ensure that the payment voucher is signed. Payment voucher and supporting documents should be submitted to the relevant to finance department of issuance of payment.

Note that the following documents must form part of 1st payment's documents (unless already submitted under the application for Advance Payment):

i. Letter of Acceptance duly signed and witnessed
ii. Performance Bond, or Letter of Confirmation using Performance Guarantee Sum
iii. Insurance Policies and receipt for insurance policies issued by the insurance company
iv. Contractor's letter stating bank details, and signed by authorized person.
v. Consultant's certification of works done (if using Consultant).

Supervisor engineer shall issue the subsequent interim certificate within specified days from the date of such valuation stating the due amount to the contractor i.e. estimated total value of works executed. Variation of Price (if any) shall be included in the valuation.

Note that where Advance Payment was made, check and ensure that the amount to be recouped is stated in the payment certificate as a contractual deduction. Refer to the Special Provisions to the Conditions of Contract for the recoupment formula to be applied.

Generally, the recoupment of Advance Payments shall be made when the value of works reaches on the agreed percentage of works completed. But as advice it is better to fully recapture before 85%.

An agreed and accepted method would be established with the Contractor for carrying out the necessary measurements, calculations and certifications required for interim.

At monthly intervals or based on the agreement after some progress, the contractor submits to the supervisor or Supervising Consultant a statement or valuation based on the agreed measurements. The statement or valuation must show the estimated value of the measured works executed up to the end of the previous period as well as the estimated value of work completed during the payment time. The valuation once checked and amended by the supervisor or Supervising Consultant, where necessary, is used by the Supervising Consultant to prepare the Interim Payment Certificate. When the Contractor will submit its payment applications with all the measurements, costing calculations and supporting documentation to the supervisor, then the Contract manager verifies the application on the basis of the documentation submitted and site inspection records.

Interim Payment Certificates are useful in maintaining liquidity for the contractor. Therefore, the contract manger is not expected unnecessarily to reject whole sections of works claimed by the Contractor, but make amendments in accordance to the agreement.

The contract manger is not expected to do the whole work of the construction supervisor or the consultant, rather the manager is expected to check if the interim payment is aligning with the contract or not.

Interim payment can be effected up to 85% of the total agreed project cost considering 5% and 10% of the total project cost for retention and liquidated damages respectively. The next payment shall be effected as final payment.

Contract Price Adjustment (CPA)

In projects of reasonably long duration (say > one year) undertaken in areas which suffer from persistent inflation, Employers consider it reasonable to compensate contractors for losses which they might suffer as a result of increases in the prices of labor, materials, fuel, plant etc. There are a number of methods of calculating such CPA. Whichever method is used, it usually provides for both increases and decreases in prices and can accordingly result in either an increase or a decrease in the contract price. Unfortunately, the norm is that CPA tends to be an escalation of the contract price.

Adjustments for changes in legislation

The Contract Price shall be adjusted to take account of any increase or decrease in Cost resulting from a change in the Laws of the Country (including the introduction of new Laws and the repeal or modification of existing Laws) or in the judicial or official governmental interpretation of such Laws, made after the Base Date, which affect the Contractor in the performance of obligations under the Contract.

If the Contractor suffers (or will suffer) delay and/or incurs (or will incur) additional Cost as a result of these changes in the Laws or in such interpretations, made after the Base Date, the Contractor shall give notice to the Engineer and shall be entitled subject to Sub-Clause 20.1 [Contractor's Claims] to:

a) an extension of time for any such delay, if completion is or will be delayed, under Sub-Clause 8.4 [Extension of Time for Completion], and
b) payment of any such Cost, which shall be included in the Contract Price.

After receiving this notice, the Engineer shall proceed in accordance with Sub- Clause 3.5 [Determinations] to agree or determine these matters.

Adjustments for changes in cost

In this Sub-Clause, "table of adjustment data" means the completed table of adjustment data included in the Appendix to Tender. If there is no such table of adjustment data, this Sub-Clause shall not apply.

If this Sub-Clause applies, the amounts payable to the Contractor shall be adjusted for rises or falls in the cost of labour. Goods and other inputs to the Works, by the addition or deduction of the amounts determined by the formulae prescribed in this Sub-Clause. To the extent that full compensation for any rise or fall in Costs is not covered by the provisions of this or other Clauses, the Accepted Contract Amount shall be deemed to have included amounts to cover the contingency of other rises and falls in costs.

The adjustment to be applied to the amount otherwise payable to the Contractor, as valued in accordance with the appropriate Schedule and certified in Payment Certificates, shall be determined from formulae for each of the currencies in which the Contract Price is payable. No adjustment is to be applied to work valued on the basis of Cost or current prices. The formulae shall be of the following general type:

$$Pn = a + b * \frac{Ln}{Lo} + c * \frac{En}{Eo} + d * \frac{Mn}{Mo} + \ldots\ldots$$

where:

"Pn" is the adjustment multiplier to be applied to the estimated contract value in the relevant currency of the work carried out in period "n", this period being a month unless otherwise stated in the Appendix to Tender;

"a" is a fixed coefficient, stated in the relevant table of adjustment data, representing the non-adjustable portion in contractual payments;

"b", "c", "d", ... are coefficients representing the estimated proportion of each cost element related to the execution of the Works, as stated in the relevant table of adjustment data; such tabulated cost elements may be indicative of resources such as labour, equipment and materials;

"Ln", "En", "Mn", ... are the current cost indices or reference prices for period "n", expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the date 49 days prior to the last day of the period (to which the particular Payment Certificate relates); and

"Lo", "Eo", "Mo", … are the base cost indices or reference prices, expressed in the relevant currency of payment, each of which is applicable to the relevant tabulated cost element on the Base Date.

The cost indices or reference prices stated in the table of adjustment data shall be used. If their source is in doubt, it shall be determined by the Engineer. For this purpose, reference shall be made to the values of the indices at stated dates (quoted in the fourth and fifth columns respectively of the table) for the purposes of clarification of the source; although these dates (and thus these values) may not correspond to the base cost indices.

In cases where the "currency of index" (stated in the table) is not the relevant currency of payment, each index shall be converted into the relevant currency of payment at the selling rate, established by the central bank of the Country, of this relevant currency on the above date for which the index is required to be applicable.

Until such time as each current cost index is available, the Engineer shall determine a provisional index for the issue of Interim Payment Certificates. When a current cost index is available, the adjustment shall be recalculated accordingly.

If the Contractor fails to complete the Works within the Time for Completion, adjustment of prices thereafter shall be made using either (i) each index or price applicable on the date 49 days prior to the expiry of the Time for Completion of the Works, or (ii) the current index or price: whichever is more favorable to the Employer.

The weightings (coefficients) for each of the factors of cost stated in the table(s) of adjustment data shall only be adjusted if they have been rendered unreasonable, unbalanced or inapplicable, as a result of Variations.

Generally, the two most common methods of calculating CPA are the following:

Proven cost method

In which the contractor is required, at tender stage, to detail those elements of his costs which he requires to be subject to CPA. These details include the actual cost and supplier of the various elements upon which the tender was based. The contractor is then reimbursed the difference between these “Basic Costs” and the "Actual" invoiced cost of those same items when they are purchased. Although this is the method generally used on EU funded projects it is not the preferred method as it is easily open to abuse.

A typical month's CPA calculation using the Proven Cost Method might be as follows:

Description	Unit	Qty	Basic Price	Current Price	Difference (This IPC)	CPA
Cement	$p_{quintal}$	200	55.00	61.00	6.00	1,200.00
Diesel	l	5000	4.50	5.50	1.00	5,000.00
Total CPA for this Month (Birr)						6,200.00

Formula method

With this method the works, to be undertaken, are mathematically described in a formula. The formula contains a number of factors representative of the various elements of the project at the time of tender and a number of similar factors for the various elements of work at the time that the works are undertaken. By using these factors in the formula a percentage increase in the tendered

value of work done is calculated and the amount resulting from this represents the CPA due to the Contractor. This is the preferred method, where indices are available.

The payment of CPA is effectively a correction of the unit rates to reflect the market prices of materials at that time of purchase/construction. As such, the CPA represents a part of or an addition to the value of work done.

Example Interim Payment Certificate Nº 2 (Single Currency)			
Description	**This Certificate, Birr**	**Previous, Birr**	**Total, Birr**
Work Done as per Bill of Quantities	250.000,00	500.000,00	750.000,00
Add: Variation Orders	*0,00*	*125.000,00*	*125.000,00*
Add: Contract Price Adjustment	***12.500,00***	***25.000,00***	***37.500,00***
Total Payable to Date	262.500,00	650.000,00	912.500,00
Less: Amounts Previously Claimed			650.000,00
Amount Due on this Certificate			262.500,00

Price adjustment can be approved for construction projects having duration greater than 18 months (1 year and 6 months). Most of small scale irrigation projects have less than one (1) year duration as the result it is impossible to make price adjustment. But, if there is any Force Major it can be consider with the consent of all parties using the above methods.

Retention

In addition to the performance security the Employer usually retains a small percentage of all payments made to the Contractor as a further, more readily available or liquid, security. The reason for this additional security is that the performance security is provided by a third party and is considered to be available for “more serious” failures by the Contractor e.g. where the Employer is required to undertake the completion or rectification of the works.

The value of the retained payments is usually limited to between five and ten percent of the contract price. However, in order to create a sizeable fund of retained payments as early in the project as possible it is usual to deduct five per cent of all payments until such time as the limit is reached.

50% of the retention is released when the taking-over certificate is issued and the final 50% when the defects liability certificate is issued. The certificate format easily accommodates this release of retention which is effected by simply reducing the total amount of retention by 50%.

The retention on each IPC is calculated as a percentage of the total value of work done (including variations, day works and CPA) as shown in the example payment certificate below.

Example Interim Payment Certificate Nº 2			
Description	**This Certificate, Birr**	**Previous, Birr**	**Total, Birr**
Work Done as per Bill of Quantities	250.000,00	500.000,00	750.000,00
Add: Variation Orders	*0,00*	*125.000,00*	*125.000,00*
Add: Contract Price Adjustment	*12.500,00*	*25.000,00*	*37.500,00*
Sub-Total	262.500,00	650.000,00	912.500,00
Less: Retention (say) 5%	***13.125,00***	***32.500,00***	***45.625,00***
Total Payable to Date	249.375,00	617.500,00	866.875,00
Less: Amounts Previously Claimed			*617.500,00*
Amount Due on this Certificate			249.375,00

Liquidated damages

Most contracts have fixed durations to allow the client to plan ahead for the use of the particular thing being constructed. However, if the construction of small scale irrigation project is not completed on time, the client may well be liable for the costs incurred by the losses. The type of losses likely to be suffered by the Employer of irrigation projects would be:

- The additional cost of supervision consultant fee;
- Additional costs of the Employer's project engineers traveling to site;
- The interest payable on monies loaned for the project, and
- The benefits that would have been gained by the beneficiaries from expected irrigation development.

It is, therefore, common to include a provision (New FIDIC Clause 8.7) in construction contracts to the effect that if the works are not completed on time the contractor will be held liable for any costs incurred. The files of every project must therefore contain a calculation and explanation of how the liquidated damages have been determined.

Liquidated damages are applied for the period between the contractual completion date and the actual completion date as defined by the taking-over certificate. If the delay in completion does not affect the whole of the Works, the liquidated damages are usually reduced in proportion to the value of work completed. New FIDIC Sub-Clause 8.7 caters for this.

The actual amounts payable for liquidated damages are usually expressed in terms of an amount per day for every day that the completion of the works is delayed. Any such amounts payable for liquidated damages are deducted from the "bottom line" of the payment certificate. It is important to note that the FIDIC conditions of contract allow the Client to deduct these damages without any reference to the Engineer or the Contractor. Obviously, in order to avoid any confusion, the Client should advise both the Engineer and the Contractor when they do deduct these damages.

The Value of Liquidation Damage shall compensate the following losses of irrigation projects because of delay beyond its agreed project completion date:

- The additional cost of Engineer;
- Additional project management costs of the Employer's project engineers traveling to site;
- The interest payable on monies loaned for the project, and
- The benefits that would have been gained by the beneficiaries from expected irrigation development.

Specific condition of contract for each agreement must contain a calculation and explanation of how the liquidated damages have been determined. In general, 0.1% of the total project cost per day up to 10% of the total project cost per day (for about 100days) exercised as compensate for liquidated damages.

11.2.7 Managing work contract variations

Provisions to allow and regulate acceptable contract variations (based on the funding agency policy) should be a standard feature of all contracts. The ability to vary the contract should be controlled by the Client at early stage before entering into a contract, else it will craft contract management predicament. Contract variations are expected to occur in defined and unseen circumstances. It is an accepted practice to entertain variations based on agreement entered between the client & Contractor/Consultant/Supplier. Variation Order and approval form is shown in the list of Appendix X.

Any proposed variations should be assessed to ensure that they do not breach legislation, procurement policy and financial delegation of supervisors, responsible personnel & managers. The reasons for the variation should be clearly documented. Managers should be involved in negotiating significant variations.

Variations should not be used to mask poor performance or serious underlying problems and the effect on original timeframes, deliverables and value for money should be assessed. If the effects are significant, senior management and other stakeholders may need to be consulted and/or advised.

Changes to contractual arrangements have the potential to affect the scope and viability of the contract for either or both parties and making substantive variations to a contract will require some of the actions and issues involved in developing the original contract. They should therefore be planned accordingly.
A variation is a formal amendment to the terms and conditions within or outside the intent of the Contract. A variation is a change to the original scope of work which has been agreed by both parties. The effect of the variation will have implications on time, cost and quality.

Variations may include the following to Contract will be required for the following:

- Change in scope of work including Volume (positive and negative)
- Change in execution of the work – Methodology & method statements
- Change in resources or facilities required
- Revision of rates
- Extension of the duration of the contract
- Settlement of a claim arising from the contract
- Before deciding Contract Variations Check the followings:
- Understand the source of variation and as much as possible agreement should be reached between client & contractor
- If it is not an omittable variation, think way of minimizing its risk on the project cost, time, quality and intended goal.
- Think critically in the overall project context and mind design change/ modification can solve the problem, if not mind omission of other uncritical structures before ordering or approval.

Don't delay critical variation decisions so that it incurs cost on the client.

Cause, effect and contractual requirements of variation made as the result of new works and excess in quantity is summarized in the following table.

Variation as the result of:	Causes	Effect	Contractual Requirement
New Works	Arises of previously unforeseen or unwarranted works during the course of a contract.	New price quotation.	Variations of this nature are required to be formally "included" in the contract by means of a variation order, which is a document which describes the nature, details, cost and timing of the additional works.
Excess in quantity	Invalidity of the tender as quantities either increase or decrease substantially in the event that the quantities of	A revision of the billed rates/contract price	Variations of this nature are formally "included" in the contract by means of a variation order following an exchange of

Variation as the result of:	Causes	Effect	Contractual Requirement
	work vary by more than a specified percentage.		correspondence. The final correspondence is the Engineer's approval of the revised rates.

The variation approval mandate for a given project shall be specified and presented in specific condition of contract **clause 13: Variation and Adjustments** according to "The General Conditions of Contract published by FIDIC First Edition in 1999" for each contract agreement document. But, the following variation approval mandate is commonly adapted on most contract documents of SSID: -

a. For variation value of each agreed billed item less than 25%, and it is less than 5% of the total project cost, project engineer has mandate to approve variation work and can give work instruction to the contractor. But, the engineer shall notify it to the client.
b. For variation value of each agreed billed item greater than 25% and it is also greater than 5% of the total project cost, it should be first approved by the client.

11.2.8 Managing work contract disputes

During the contract management phase, a disagreement becomes a dispute when it is not possible for the parties to resolve it without resorting to a formal resolution mechanism. Generally, what a dispute is and when it's deemed to have occurred is defined in the contract, often in a dispute resolution clause.

Many disagreements and disputes arise when the parties cannot agree on issues related to the interpretation of contract provisions, the definition of deliverables, meeting performance standards and/or the effect of unexpected events. It is important that any possibility of dispute or an actual dispute be recognized at an early stage and addressed as quickly as possible amicably. Avoiding the escalation of disagreements can impact on contract deliverables and reduce the costs to both parties especially the client (b/s the end users benefit will be delayed or hampered).

However, where a dispute arises, the Contract Manager's role is to protect the Client interests in all cases. There should be clear governance processes in place to manage contract disputes, including the roles and responsibilities of the contract manager, procurement and senior management. The form of dispute resolution for work contract is as discussed in 5.2.10 above in this guideline.

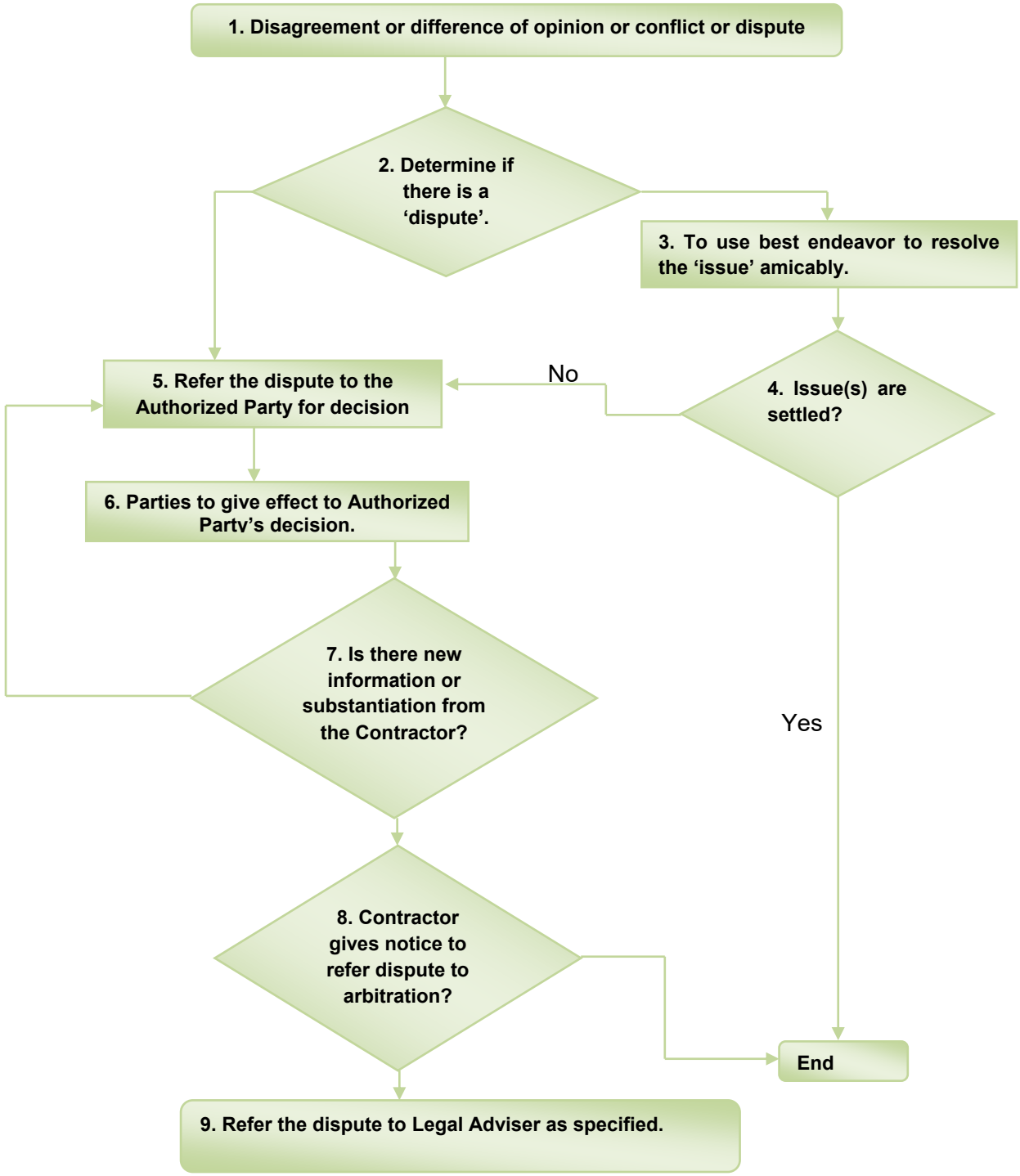


Figure 11-5: Flowchart - dispute management and resolution

Description of tasks for Dispute Management and Resolution

Please refer Flowchart - Dispute Management and Resolution

1. Disagreement or difference of opinion or conflict or dispute?

Disagreement or difference of opinion or conflict or dispute often occurs in projects. The best form of dispute avoidance is the ensure that the appropriate procurement method and form of contract is used, and that the scope of works is clearly and accurately set out in the tender and contract documents.

If practicable, all disagreements or differences of opinion or conflicts should be resolved as soon as possible to avoid any escalation of the issues into a 'dispute'. In dispute management, contemporaneous and complete records are of utmost importance. Therefore, the PT must ensure that records are properly kept and updated, and available when required.

For the purpose of this Manual, a 'dispute' is deemed to have occurred when the disagreement or difference of opinion etc has been formally referred by the Contractor to the Authorized Party under the terms of the contract. All other issues (i.e. disagreements or differences of opinion or conflicts) should be resolved by way of negotiation or amicable settlement as soon as practicable.

2. Determine if there is a 'dispute'

Ascertain if there is in actuality a "dispute", whereby the parties must comply with the contractual procedures and arbitration clause. If there is no dispute, follow Step 3 for Amicable Settlement. If there is a determined go to Step 5.

3. To use best endeavor to resolve the 'issue' amicably

Unless the 'dispute' is formally referred for a decision in accordance with the contract, the PM should use its best Endeavour to resolve the matter by way of negotiation or amicable settlement. Check whether it is amicable settled or not following Step 4.

4. Issue(s) are settled?

Upon settlement, record the agreement reached by the parties. This avoids future disagreement on the same issue. Follow up with the relevant adjustment (if any) to the contract by way of extension of time, Variation or adjustment to the Contract Sum, etc, as the case may be.

If parties are not able to make an amicable settlement, then any party may refer the matter to the Authorized Party under the Contractor for a decision. In this case go to Step 5.

5. Refer the dispute to the Authorized Party for decision

Referral of Dispute for Decision if either party has submitted a formally referred the 'dispute' to be decided by the Authorized Party:

(a) Upon receipt of the Contractor's formal request to refer the dispute to the Authorized Party, the supervisor shall refer the dispute to the officer authorized under the contract (Authorized Party) to make a decision. the supervisor where appropriate to do so, shall advise and assist the Authorized Party in the dispute resolution process.
(b) The Consultant shall prepare the documents setting out the background of the dispute, with sufficient details for the Authorized Party to make a decision.
(c) The Authorized Party is required to make a decision within the time frame stipulated in the contract.
(d) The Authorized Party may refer the dispute to the Claim Committee for a decision.

6. Parties to give effect to Authorized Party's decision

Comply with the decision of the Authorized Party. (If the Contractor is dissatisfied with the Authorized Party's decision, he must nevertheless comply with the decision but may refer the dispute for arbitration.)

Follow up with the relevant adjustment (if any) to the contract by way of extension of time, Variation or adjustment to the Contract Sum, etc., as the case may be. Follow Step 7 to get contractor reaction.

7. Is there new information or substantiation from the Contractor?

Authorized Party May review its own Decision if: -

- the Contractor is dissatisfied with the decision of the Authorized Party, and
- new information or substantiation has come into the attention of the Authorized Party,
- then the Authorized Party may review its earlier decision, or refer such review (of earlier decision) to the Claim Committee for confirmation.
- If there is no information or substantiation from the contractor follow Step 8 for notice of Arbitration. If there is information or substantiation from the contractor go to Step 5 for review of earlier decision.

8. Contractor gives notice to refer dispute to arbitration?

If the contractor doesn't give notice to refer dispute to arbitration, record the agreement reached by the parties and act accordingly.

The Contractor may refer the dispute for arbitration if

- The Authorized Party fails to give a decision within specified days after being requested to do so; or
- The Contractor is dissatisfied with the decision of the Authorized Party. In this case follow Step 9.

9. Refer the dispute to Legal Adviser as specified

Upon receipt of the Contractor's notice to refer a dispute for arbitration (whether or not prior reference was made to the Authorized for a decision), the consultant must notify the client immediately.
The client shall refer the matters to the Legal Adviser at the client office for further advice and action. The matter may then be referred to the Attorney by the Legal Adviser. The consultant shall compile the records and supporting documents relevant to the dispute and as may be required for the arbitral proceedings.

11.2.9 Managing work contract performance

Contract manager should ensure the contract is well understood and attained by the parties. In addition, s/he has to ensure whether the parties are on the right truck of their roles and responsibilities of the contract. The following checklist enables to track the performance management. The performance assessment result should be communicated if possible per month if not per quarter for the parties.

Table 11-3: Performance management checklist

Checklist	Indicators
Standards	Compliance or noncompliance documentation (Example: specification of materials, quality, mix ratio, drawing etc.)
Tolerance	Documenting the acceptable deviation on each deliverable – structurally, hydraulically (dimensions, velocities, slopes etc.), cost, time
Review meetings	Conducted or not, evaluating encouraging feedbacks
Reports	Timeliness, completeness, quality

11.2.10 Managing work contract monitoring

Regarding to managing work contract performance refer section 5.2.10 above in this guideline.

11.2.11 Defects management

Defects Management during Defect Liability Period

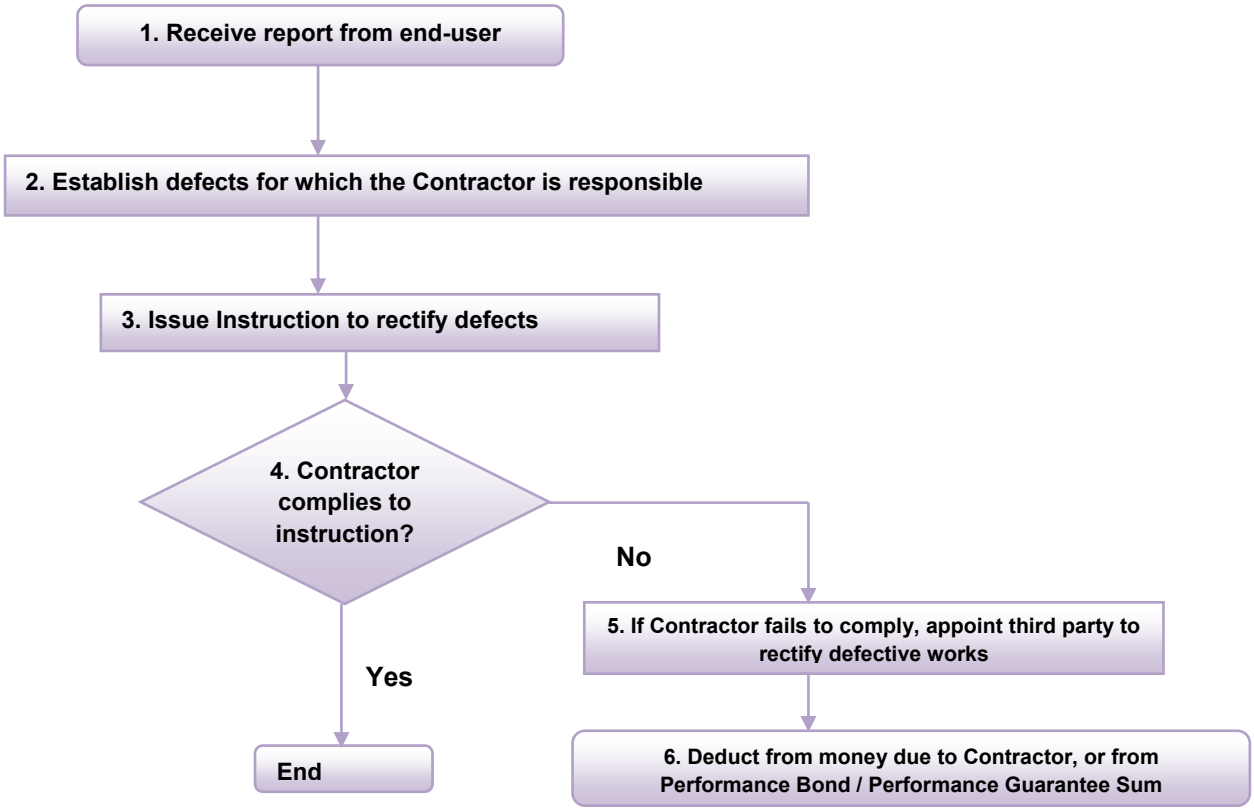


Figure 11-6: Flowchart – defects management during defect liability period

Description of tasks for Defects Management during Defect Liability Period
Please refer Flowchart – Defects Management during Defect Liability Period

1: Receive report from end-user
End-user (e.g. Client-agency, WUA members, Beneficiary Farmers) expected to report the observed defect(s) immediately to supervisor engineer.

2: Establish defects for which the Contractor is responsible
Supervisor engineer shall determine if defects had occurred.

3: Issue instruction to rectify defects

Supervisor engineer shall immediately issue instruction to the Contractor to rectify the defects, with a fair and reasonable time frame to complete the making good of defects. He may issue instructions to rectify defects as many times as necessary during the Defects Liability Period.

4: Contractor complies to instruction?

If the contractor complies to instruction follow his performance in accordance to the contract. If not, follow Step 5.

5: If Contractor fails to comply, appoint third party to rectify defective works

If the contractor refuses or fails to make good the defects within the time stipulated in the supervisor engineer instruction or within reasonable time if none is stated, then the supervisor engineer may appoint third party to rectify the defective works.

6: Deduct from money due to Contractor, or from Performance Bond/Performance Guarantee Sum

If third party executed the defect works, the cost incurred in making good defects due to the failure of the contractor must be recovered from Contractor:

- From monies due or payable to Contractor or
- As deduction of Performance Bond or Performance Guarantee Sum

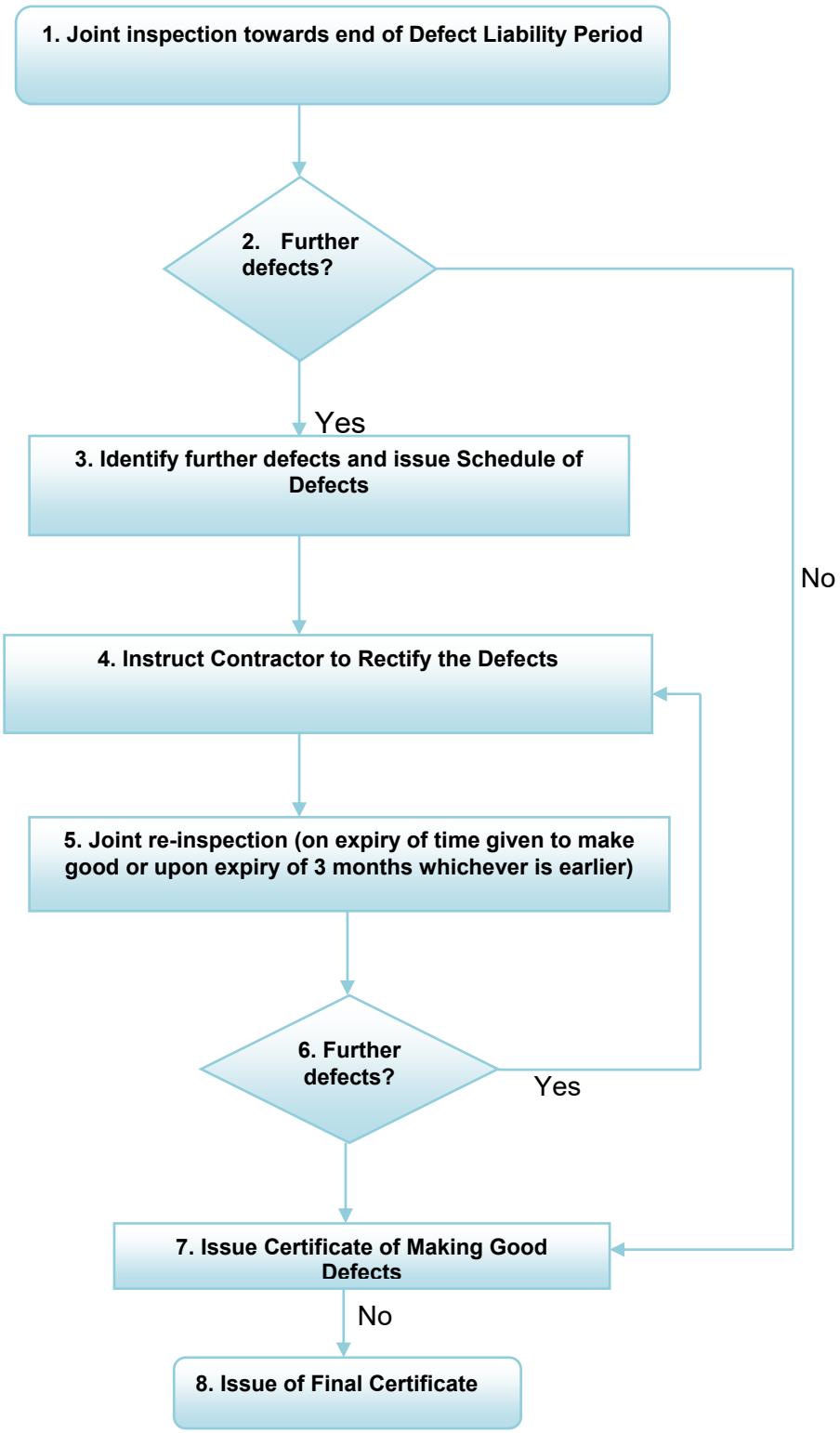


Figure 11-7: Flowchart - defects management at end of defect liability period

Description of tasks for Defects Management at End of Defect Liability Period

Please refer Flowchart - Defects Management at End of Defect Liability Period

Step 1: Joint inspection towards end of Defect Liability Period

Carry out joint inspection together by the representatives from Client, Contractor, beneficiary farmers and other parties involved.

Step 2: Further defects?
Identification of Further Defects (if any) by the parties involved on joint inspection should be done with clear conclusion and recommendation.

Step 3: Identify further defects and issue Schedule of Defects
If there are defects at the end of Defects Liability Period, the supervision engineer prepares the Schedule of Defects and issue it to the Contractor within the specified days after the expiry of DLP.

Step 4: Instruct Contractor Rectify the Defects
Issue the instruction to rectify all defect works completely within a reasonable time. Ensure the duration given to the contractor must not exceed the specified months from the date of issuance the Schedule of Defects.

Step 5: Joint Re-inspection
Carry out the joint re-inspection by the representatives from Client, Contractor, beneficiary farmers and other parties involved on the date of the expiry of rectification period given to Contractor or upon the expiry of period of specified months, whichever is the earlier.

Step 6: Further defects?
Identification of Further Defects (if any) by the parties involved on joint inspection should be done with clear conclusion and recommendation.

Step 7: Issue Certificate of Making Good Defects
Issue the certificate of completion of making good defects if there are no further defects. Ensure the date in such certificate is the date of Contractor completed the rectification of defective works. Ensure the copies to be distributed to:

- Contractor (original)
- Other parties named in certificate (copies)

The client then returns the Performance Bond/Performance Guarantee Sum to the Contractor.

Step 8: Issue of Final Certificate
The supervisor engineer prepares the Final Certificate upon the issuance of Certificate of Completion of Making Good Defects.

11.2.12 Managing ethics in work contract

Regarding to managing ethics in work contract refer section 5.2.11 above in this guideline. Generally, there should be code of ethics that guides the relation between client /consultant and contractor in work contract.

11.2.13 Managing work contract closure

The most common way a contract ends is where each party performs according to the terms of the contract, that is, the contract is discharged through due performance. Acceptance implies that the works delivered have met the agreed contract.

Contracts for the provision of services may specify an end date when all contract deliverables have to be provided. The contract ends through due performance if the services are delivered in line with contract standards by the due date. In works contracts, contract closure should be

completed as soon as defect liability is completed. The following check list guides the contract completion:

No	Checklist	Yes/No	Remark
1	Deliverables review		
2	Documents required for contract completion (as built drawing, O&M, diary & others)		
3	Unsettled claim		
4	Advance deduction completed		
5	Defect liability security on place		
6	Site handover/takeover		
7			
8			
9			
10			
11	Contract Closing meeting & minutes		
12	Final Payment addressed		

Case 2 Claim resoultion based on contract document intrpritation priority

The Contract is for the construction of the civil works for SSI project. The Conditions of Contract are the WB/PPA, 2006 Procurement of small works Designed by the Employer. The works include: (i) Diversion Weir; (ii) Night Storage Reservoir; (iii) main canal; (iv) secondary canals, and V) canal Structures. While reviewing the contract, the following discrepancies have been observed after the Contractor has started the construction works.

i. The specification indicates the main irrigation canal to be trapezoidal in shape and shall be constructed with Stone Masonry structure. It also indicated that the measurement is in linear meter measured along centerline of the canal from the weir to end of the main canal.
ii. The drawing indicates the main irrigation canal to be trapezoidal in shape with a minimum bottom width of 0.3m, height of 0.6m, 0.3m thickness and shall be constructed with masonry structure. It also indicated that design discharge, Q and longitudinal slope of the canal are 308l/s and 1:1500m/m respectively.
iii. In the priced bill of quantity (PBOQ) it has been provided that the width of the main irrigation canal shall be 0.6m width, 0.8m height, and 0.35m thickness.
iv. In the design document it is also indicated that the main canal design discharged is 308l/s to irrigate 200-hectare command area.

The measurement and payment clause of the specification indicates the unit of measurement is in linear meter measured along centerline of the canal from the weir to end of the main canal. You are assigned as the Engineer and the contractor has submitted his claim for your recommendation indicating that the rates quoted in the BOQ is applicable for 0.3m width, 0.55m height, and 0.3m thickness rectangular canal made with Stone Masonry structure.

- What would be your recommendation for the Contractor's argument?
- What would be your technical recommendation/advice to the Employer?

Answer

In order to draw sound recommendation, we have to extract the existing contractual matters and made analysis based on the agreed conditions of contract step by step.

Step-1: Extracting the existing contractual matters

The existing contractual matters are as tabulated under.

Descriptions of Main Irrigation Canal	Contract Documents		
	Specification	Drawing	BOQ
Design Discharge, Q		308l/s	
Longitudinal Slope, m/m		1/1500	
Shape	Trapezoidal	Trapezoidal	Rectangular
Bottom width		0.3m	0.6m
Height		0.6m	0.8m
Wall Thickness		0.3m	0.35m
Material	Stone Masonry	Stone Masonry	Stone Masonry
Unit of measurement	Linear Meter		
Other Dimensions			

Step-2: Checking the design

We have to check specially the hydraulic design of the main canal for the given design data. Hydraulic design parameters based on the data on the drawings.

Design Discharge, l/s	n	b	d	m	A	P	R	S	V	Calculated discharge, l/s
0.308	0.018	0.3	0.6	1	0.54	1.997	0.270398	1500	0.6	0.324

Hydraulic design parameters based on the data on the priced bill of quantity

Design Discharge, l/s	n	b	d	m	A	P	R	S	V	Calculated Discharge, l/s
0.308	0.018	0.6	0.8	0	0.48	2.20	0.218182	1500	0.52	0.250

The hydraulic deign check depicted that the design parameters presented in the design drawing meet the requirement of the specific project. Whereas, the descriptions in the priced bill of quantity doesn't meet the requirement as the result of the calculated discharge is lower than the design discharge.

Step-3: Draw the determinant maters based interpretation priority of the agreement document

Accordingly, the following documents that constitute the Contract Document should be checked and reviewed in the order of its priority.

1. The Contract Agreement,
2. Letter of Acceptance
3. Tender, Appendix to Tender, and Addenda,
4. Conditions of Particular Application,
5. General Conditions of Contract,
6. Particular Specifications,
7. Standard Specification,
8. The Drawings,
9. Priced Bill of Quantities, and
10. Other Documents (Minutes of pre-contract award discussion, etc)

Hence, based on the contract document priorities the determinant contractual matters are as tabulated here.

Descriptions of main irrigation canal	Priority
Design Discharge, Q	308l/s
Longitudinal Slope, m/m	1/1500
Shape	trapezoidal
Bottom width	0.3m
Height	0.6m
Wall Thickness	0.3m
Material	Masonry
Unit of measurement	linear meter

Therefore, the following lesions can be draw from the above case: -

1. Even though, the contractual issue may come as a big deal the main objective of the contract and the structure has to get priority. If you meet the contract to be smooth but failed to attain the objective of the project at last it is loss.
2. In the above case based on contract priority the specification and the drawing prevail the PBOQ, hence, the contractor is obligated to perform the main canal as per the above Table.
3. Whenever contract document is prepared due diligence and attention should be given for more sensitive areas like specification, drawings, and description in the BOQ (Unit of dimension, coherence of description that fits the whole works).

12 SUPPLY CONTRACT ESTABLISHMENT

Per-contract activities at project construction phase comprise the pre-condition for establishment of supply contract. In most case both civil works and supply contracts are established by the contract made between client and contractor.

This part discusses the establishment of supply contract starting from collecting and organizing of tender document prepared for the intended purpose up to establishing of binding supply contract document.

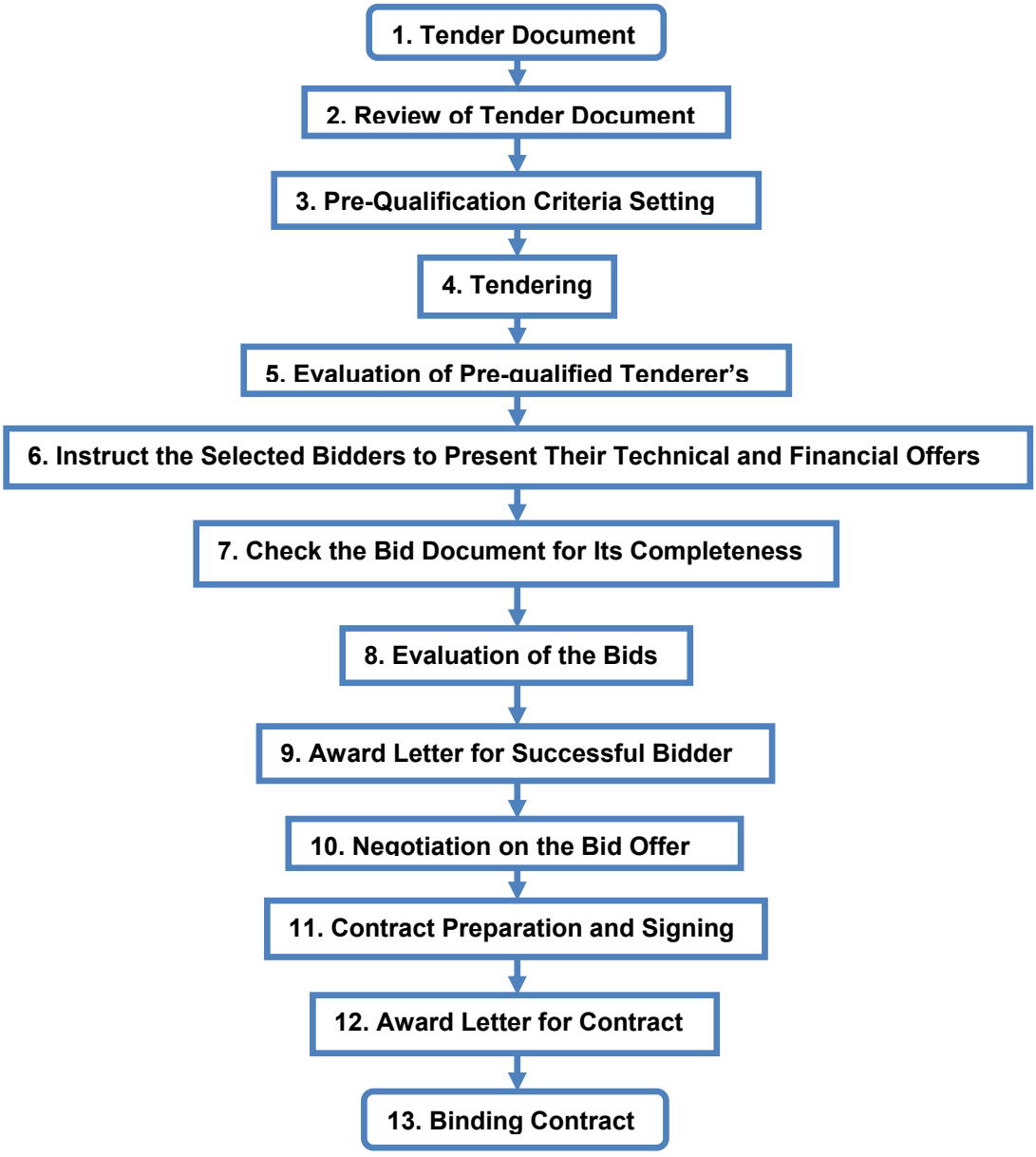


Figure 12-1: Procedure for supply contract establishment

Description of Supply Contract Establishment Activities

1. Tender Document

Tender Document for the procurement of **Goods** comprises: -
Part 1 - Bidding Procedures
Section 1 – Instructions to Bidders
Section 2 – Bid Data Sheet
Section 3 – Evaluation and Qualification Criteria
Section 4 – Bidding Forms
Section 5 – Eligible Countries

Part 2 - Statement of Requirement
Section 6 – Statement of Requirements

Part 3 - Contract
Section 7 – General Conditions of Contract
Section 8 – Special Conditions of Contract
Section 9 – Contract Forms

2. Review of Tender Document

The contract engineer should review the tender document for its completeness of each part and section contents, the detail of each sections and conformity to the procurement procedure and methods. Special attention shall be given while reviewing statement of requirements that needs to clearly describe technical specifications, drawings, and bills of quantity.

3. Pre-Qualification Criteria Setting

Pre-qualification criteria for procurement of goods shall be the followings but not limited to:

- Annual turnover (Audited Financial Statement),
- Years in the business,
- Pervious status,
- Lend and litigation, and
- Debarring (Black listed).

4. Tendering

Tendering should be based on the latest version of either “The Ministry of Finance or Economic Development Procurement Directives” or “World Bank Directives” based on the fund of the project implementation.

5. Evaluation of Pre-Qualified Bidders

Evaluation of pre-qualified bidders for procurement of goods shall be done based on the followings company profile information but not limited to:

- Annual turnover (Audited Financial Statement),
- Years in the business,
- Pervious status,
- Lend and litigation, and
- Debarring (Black listed).

6. Instruct the Selected Bidders to Present Their Technical and Financial Offers

After evaluating the pre-qualified tenders, the contract engineer shall give instruction to submit their technical and financial offers based on the term of reference.

7. Check the Bid Document for Its Completeness

The contract engineer should check the completeness of the bid document submitted by the contractor/supplier.

8. Evaluation of the Bids

The procurement committee and Ad-hoc Technical Evaluation Committee evaluate the bid offer based on evaluation criteria forming the bid document and finally prepare evaluation report. Decision should be made by the general manager of the procuring entity based on the evolution report whether bid process and the selected bid offer is accepted or rejected. After delivery service, availability of deliverables and associated spare parts on stoke, and conformity with the technical specification should have to have relatively higher weight while setting evaluation criteria for the case of electro-mechanical equipment (Pumps and Generators).

9. Award Letter for Successful Bidder

The contract engineer shall prepare and issue award letter for successful bidder after it is approved by the general manager of the procuring entity.

10. Negotiation on the Bid Offer

The procuring entity shall negotiate on the bid offer with the selected bidder (if required) based on the rule and regulation of the procurement directives.

11. Contract Preparation and Signing

The procuring entity shall prepare contract agreement document and both the client and supplier/contractor should sign by the respective official delegates and stamp by the respective archives. Witnesses from the client and supplier/contractor sides should sign accordingly. Both the client and supplier/contractor legal advisers shall endorse its compatibility with the set conditions of contract by signing on the contract document. Both client and supplier/contractor delegates shall put their initials on each contract document pages.

12. Award Letter for Contract

The employer shall award the contract, within the period of the validity of bids, to the bidder who meets the appropriate standards of capability and resources and whose bid has been determined (i) to be substantially responsive to the bidding documents and (ii) to offer the lowest evaluated cost. A bidder shall not be required, as a condition of award, to undertake responsibilities for work not stipulated in the bidding documents or otherwise to modify the bid as originally submitted.

Client shall notify the results on notice board identifying the bid number and the following information: (a) name of each bidder who submitted a bid; (b) bid prices as read out at bid

opening; (c) name and evaluated prices of each bid that was evaluated; (d) name of bidders whose bids were rejected and the reasons for their rejection; and (e) name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded.

13. Binding Contract

The signed and distributed contract agreement document form binding contract between client and supplier/contractor. It should be referred throughout the project life so that the contract practiced accordingly.

Example of Supply Contract Establishment Procedure

1. Bid document
2. Invitation for bid. It may be by News Paper, Radio, TV Media, and Website.
3. Selling of bid document. The following care should be taken while selling the bid document but not limited to: -

- Check trade/business license (photocopy),
- Register the bidder on the form, and
- Selling the bid document for the prequalified bidder by the price announced

4. Supplier submits their bid proposal of: -

- Technical, Non-technical and legal documents (Trade License, VAT Certificate, TIN (Tax Identification Number) Certificate, Tax Clearance from Inland Revenue Authority, Financial Capability, Letter of Authorization from The Manufacturer, Warranty, Original Brochure, Price Validity Period, etc.), and
- Financial Proposal.

5. Bid closing usually 4:00 o'clock at local time by executing the following activities but not limited to: -

- Register all suppliers submitted the bid proposal (on bid collection form), and
- Closing the bid box by procurement committee.

6. Bid opening usually 4:30 o'clock at local time by executing the following activities but not limited to: -

- Opening meeting by procurement committee. The following activities should be done during bid opening meeting but not limited to: -
  - Check the supplier submitted their proposal against their list bought,
  - Registration of bidder's representative on attendance sheet including signature,
  - Opening technical proposal,
  - Signing on each technical proposal documents page by page by procurement committee,
  - The procurement committee Check whether the technical proposal is according to ITB, and
  - Finally, minute of meeting should be prepared by procurement committee, and submitted to the general manager or his delegate for decision.
- Formation of Ad-hoc Technical Evaluation Committee by the general manager or his official delegate by official letter.
- Based on minute of bid opening meeting and decision of the general manager, procurement committee transfer only responsive technical proposals to technical evaluation committee by memo. The memo should be signed and recorded.

- Evaluation of responsive technical proposal by Ad-hoc technical evaluation committee based on the evaluation criteria set on the bid. The weight of technical proposal usually 80%.
- Technical evaluation committee prepares and submits evaluation results to procurement committee. Technical evaluation result report should be signed by each member and recorder accordingly.
- Procurement committee notify technical evolution results to the supplier (either on notice bored or via letter of notification) requesting to submit claim if any within five working days starting from the notification date.
- If the clam is acceptable evaluation of technical proposal will be done again by technical committee, otherwise, the pervious technical evaluation results intact.
- Procurement committee then calls technically fit suppliers to open financial proposals.
- Financial proposal opening meeting will be held by procurement committee. During this meeting the following activities should be done but not limited to: -
  - Undertake attendance sheet of the representatives and their signature,
  - Read out technical evaluation results to the bidder,
  - Opening financial proposal and read out the offered price,
  - Preparing minute of meeting and should be sign by all participants.

Evaluation of financial proposal by procurement committee. Here the following should be analyzed but not limited to: -

- Arithmetic check,
- Determination of evaluation point using the following formula

  Financial Evaluation Point = X/Y*Z

  Where,

  X = Least Price Offered

  Y = Price under Consideration = Price offered by the considered supplier

  Z = Financial Weight set in the bid criteria (usually 20%)

- Procurement committee prepares final evaluation consolidating the technical and financial proposals results and submits to the general manager for decision.
- Based on the decision of the general manager prepare awarded letter if it is acceptable
- If it is rejected by the general manager rebidding will be executed following the aforementioned procedures.

7. Preparation and signing of contract by the procuring entity.

- Authorized persons from both client and supplier sides should sign in the presence of witness. The signed and stamped contract agreements should be issued by the client.

The following Types of Guarantee/Security shall be fulfilled before signing Supply Contract. These are: -

1. Bid Security CPO
   - The bid security shall be a demand guarantee in any of the following forms at the Bidder's option: -
     - Fixed
     - 2%
     - Amount specified in the BDS.
2. Performance Security
   - Usually performance bond 10% of the offer price used as guarantee.
3. Advance Payment Guarantee
   - Advance payment guarantee shall be acceptable types:
     - Unconditional bank guarantee
     - Certified check;
     - Unconditional insurance bond
4. Provisional Indemnity
   - Unconditional insurance bond from certified financial institution.

13 SUPPLY CONTRACT IMPLEMENTATION

Supply contract implemented in such a way that the goods shall be supplied in accordance to specification and the offer of the selected bidder. Technical Inspection Committee may be assigned by general manager during deliver period to control the conformity of supplied goods with the requirement in the bid.

Finally, the contract shall be closeout after the good supplied in accordance to the requirement and offered specification, and the client provide performance certificate to the supplier and effect the final payment accordingly. The supplier is responsible within warranty period to rectify the defect or replace the good, otherwise, forfeit the guarantee. In doing so the contract is closeout.

During implementation of supply contract, the client/engineer should focus on mobilization of the contractor/supplier team and logistics as per the contract entered in to.

13.1 PLANNING SUPPLY CONTRACT MANAGEMENT

The general contract management planning for small scale irrigation development preparation and implementation is discussed in detail under chapter 5 above. Contract management planning particular to supply contract is discussed here.

13.1.1 Review supply contract establishment

The contract manager shall review supply contract prior to enactment based on the following checklist but not limited to: -.

- Understand the type of contract
- Organize the contract document
  - Agreement,
  - Letter of Acceptance,
  - Contractor's/Supplier's evaluated Bid,
  - Particular Conditions of Contract,
  - General Conditions of Contract,
  - Specifications,
  - drawings,
  - Priced Bill of Quantity, and
  - Any other document listed in the PCC as forming part of the Contract.

Collect revised & approved delivery schedule from the Contractor/Supplier.

13.1.2 Designing supply contract management strategy

Understanding of the contract, the contract manager should design strategy how to manage the supply contract according to the agreement entered in to.

The supply contract management approach or modality can by independent consultant, own force, freelancer individual or other based on the complexity, budget/cost, scale of risk and other determining issues. Always it is advisable to decide critically on the modality. Especially for small scale irrigation, the supply contract management is outsourced for the contractor together with the civil works or independent supplier.

13.1.3 Supply contract management risk identification

Identify potential risks of the contract (delay, quality, compliance with specification, etc) and arrange risk mitigation plan for identified contract risks before and in course of supply contract implementation.

13.2 SUPPLY CONTRACT MANAGEMENT ENACTMENT

In supply contract, the main management implementation subjects or procedures mainly include the following:

i. Managing Supply Contract Mobilization,
ii. Managing Supply Contract Documentation and Record Keeping,
iii. Managing Supply Conditions of Contract,
iv. Managing Roles and Responsibilities in Supply Contract,
v. Managing Relationships and Communication in Supply Contract,
vi. Managing Costs in Supply Contract,
vii. Managing Supply Contract Variations,
viii. Managing Supply Contract Disputes,
ix. Managing Supply Contract Performance,
x. Supply Contract Monitoring,
xi. Managing Ethics in Supply Contract, and
xii. Managing Supply Contract Completion.

13.2.1 Managing supply contract mobilization

Contract mobilization is a move from the paper agreement stage to materializing or objectivising the agreement at ground level. Successful contract mobilisation can ensure that the 'building blocks' for a successful contract are created. While the written contract is a record of each party's obligations and responsibilities, it is not designed as a day to day operational management document for the contract.

The Contract manager/expert is demanded to prepare a day to day operational contract management document that can assist the project contract management to be easy and piecemeal. Care should be taken while communicating the sample (if any), warehouse location, etc while managing supply contract mobilization.

13.2.2 Managing supply contract documentation and record keeping

It is discussed above on section 5.2.2.

13.2.3 Managing conditions of supply contract

Currently Ethiopia uses Conditions of Contract of the following: -

1. The Federal Democratic Republic of Ethiopia. Standard Bidding Document (SBD)For Procurement of Goods and Related Services. Public Procurement Agency (PPA). January 2006, Addis Ababa, Ethiopia.
2. STANDARD BIDDING DOCUMENTS for Procurement of Goods. The World Bank. March 2013.

The contract management team member shall have understanding of the general conditions of supply contract written on these standard bidding documents. Besides, s/he has to understand the specific condition on a particular supply contract agreement and act accordingly.

13.2.4 Managing roles and responsibilities of parties in supply contract

It is similar to section 5.2.4 and 11.2.4 presented above in this guideline.

13.2.5 Managing relationships and communication in supply contract

It is similar to section 5.2.5 and 11.2.5presented above in this guideline.

13.2.6 Managing costs in supply contract

Management of supply contract cost shall be in accordance with the payment section of general condition of supply contract entered into.

13.2.7 Managing supply contract variations

It is similar to section 5.2.7 and 11.2.7 presented above in this guideline.

13.2.8 Managing supply contract disputes

It is similar to section 5.2.8 and 11.2.8 presented above in this guideline.

13.2.9 Managing supply contract performance

It is similar to section 5.2.9 and 11.2.9 presented above in this guideline. Some of performance indicators for supply contract are: -

- The ***timeliness*** of delivery,
- ***Quantity*** delivered, and
- Compliance with ***specifications.***

13.2.10 Supply contract monitoring

It is similar to section 5.2.10 and 11.2.10 presented above in this guideline.

13.2.11 Managing ethics in supply contract

It is similar to section 5.2.11 and 11.2.12 presented above in this guideline.

13.2.12 Managing supply contract completion

It is similar to section 5.2.12 presented above in this guideline.

14 EXTRACTING CONTROL RESPONSIBILITIES

The main function of the engineer in works contract is to increase the probability that the project is built by the contractor or contractors in compliance with the contract documents.

He has to control of quality, time and cost of the project equally depend on effective allocation of responsibilities among participants and their performance of their respective duties as clearly stated in the contract document. To do so, the engineer required to identify and extract control responsibilities which either:

- Require action (i.e., require something to be done) by some participant,
- Require interaction by two or more participants, and
- Necessitate the keeping of records to properly record its discharge.

In other words, to evaluate realistically the proposed construction work programmed and the itemized bill of quantities including lump sum breakdown submitted by the contractor, the engineer should concentrate on breaking down the contract documents by abstracting the contractual responsibilities of each participant and determining the construction components of the project sequentially. In breaking down the contract documents, the resident engineer will gain a thorough knowledge and become familiar with the construction details of the project.

Hence, the engineer has to be familiar with a simple, but effective, technique by which the responsibilities set out in the contract be understood, refined, and tabulated according to who is required to act to discharge those responsibilities.

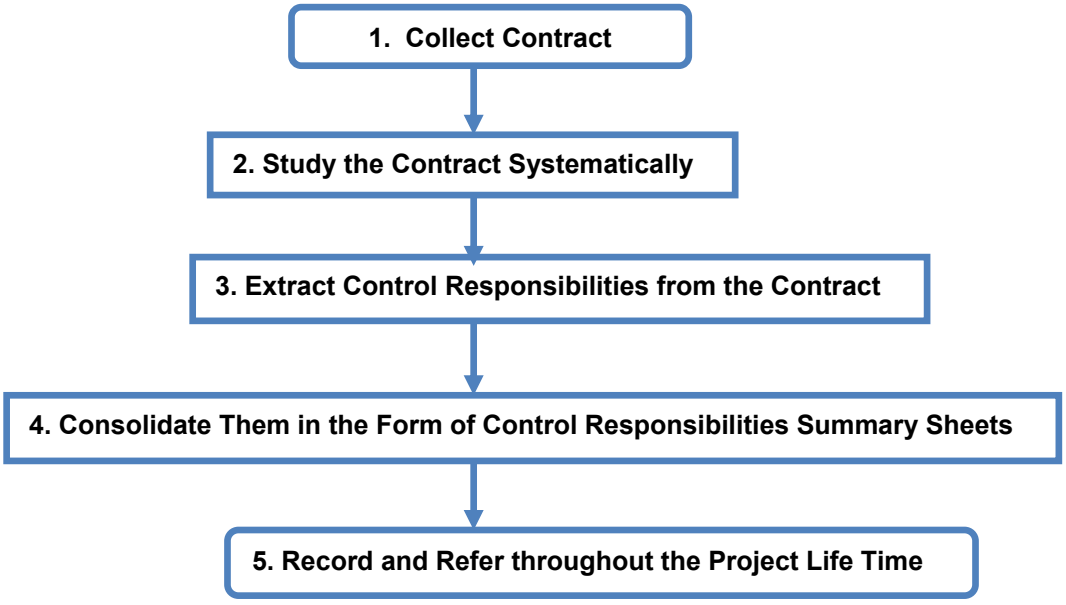


Figure 14-1: Flow chart for procedure of extracting control responsibilities

Detail descriptions of Procedure of Extracting Control Responsibilities:

1. Collect Contract

Engineer has to collect all contract documents.

2. Study the Contract Systematically

Read the conditions of the entire contract reputedly at least a minimum of two times for:

- Understanding how the parts of the contract *documents* fit together, i.e., which parts supersede other parts in the event of inconsistencies, which parts deal with which subjects,
- Understanding the general role of each participant, i.e., how and where the responsibilities of the participants are set out and how the responsibilities of the employer and resident engineer - as set out in the contract - agree with their respective responsibilities as set out in the resident engineer's agreement for services
- Understanding the documents and confirmation - that there is no glaring error in the contract which would impair the success of the Project.

The urge to "quit reading and get on with the project" should be suppressed at all cost, for the engineer; this is the most important stage of the project.

3. Extract Control Responsibilities from the Contract

- Read the contract a final time from cover to cover in order to identify certain key responsibilities, called "control responsibilities,
- Noting responsibilities allocated to each participant with high lighter markers in various colours in which one colour of marker should be used to denote each responsibility of a given participant.
- If, for example, the only participants are the employer, the engineer, and the contractor, each should be assigned a marker colour.
- Next to a responsibility of the engineer, should be highlighted in the engineer's colour; the same procedure should be followed for the other participants.
- Having a scattered aggregate of key duties of project participants.

4. Consolidate them in the Form of Control Responsibilities Summary Sheets

- Prepare Control Responsibilities Summary Sheets

The Control Responsibility Summary Sheet should have seven columns whose headings should be (1) contract section, (2) description, (3) contractor responsibility (4) employer responsibility, (5) engineer responsibility, and (6) interaction responsibility.

Table 14-1: Illustrates a blank control responsibility summary sheet

CONTROL RESPONSIBILITY SUMMARY SHEET PROJECT _____ CONTRACTOR _____ Employer _____ ENGINEER _____ _ SHEET ___ OF ____					
(1)	(2)	(3)	(4)	(5)	(6)
Contract Sub-Clause	Description	Contractor Responsibility	Employers Responsibility	Engineer Responsibility	Interaction Responsibility

Note that: -

- The first column should note the section of the contract which defines the responsibility,
- the second column should describe the responsibility in detail sufficient so as not to require reference back to the contract to define it;
- Check-mark the third column if the responsibility is a single responsibility of the contractor;
- The fourth column, a single responsibility of the employer;
- The fifth column, a single responsibility of the engineer; and
- The sixth column, an interaction responsibility of two or more participants.

Transfer all the extracted scattered aggregate of key duties (responsibilities) of project participants to the Control Responsibility Summary Sheet.

5. Record and Refer throughout the Project Life Time

- The final control responsibility summary sheet that organized key duties (control responsibilities) should be recorded and referred to facilitate construction project administration.

Table 14-2: Some responsibilities of parties in works contract

(1) Contract Sub-Clause	(2) Description	(3) Contractor Responsibility	(4) Employers Responsibility	(5) Engineer Responsibility	(6) Interaction Responsibility
10.1	Security Bond: - Contractor shall provide security bond within 28 days.	x			
14.1	Work Program: - The contractor shall submit for approval work program within 28 days.	1		2	x
14.3	Cash flow: - The contractor shall submit for approval cash flow within 28 days.	1		2	x
25.1	Insurance: - Contractor shall provide evidence of insurance before start of work at site	1	2	3	x

(1) Contract Sub-Clause	(2) Description	(3) Contractor Responsibility	(4) Employers Responsibility	(5) Engineer Responsibility	(6) Interaction Responsibility
41.1	Notice to commence: - The Engineer shall issue notice to commence work.			x	
42.1	Possession of site: - The employer to provide possession of site		x		
57.2	Lump sum breakdown - The contractor shall submit breakdown of lump sum items within 28 days.	1		2	x
53.1	Notices of claim: - The contractor submits written notice of claim within 28 days.	1		2	x
53,3	Details of claim - The contractor shall submit detail account of claim within 28 days.	1		2	x
56.1	Measurement of work	2		1	x
60.1	Contractor's submission of Monthly Interim payment: - The contractor shall submit monthly statements.	1		2	x
60.2	Engineer's submission of The engineer shall submit contractor's monthly statements to the employer within 28 days			1	
60.10	The employer shall pay the contractor within 28 days		x		
51.1	Variations: - The Engineer shall make		2	1	x
51.2	Instructions for variations	2		1	x
2.5	Field instructions	2		1	x

15 CONTRACT ADMINISTRATION SOFTWARE'S

AutoCAD, MS-Project, Primavera Project Planner, and ConMIS Software are construction management software's that currently applied by the engineers assigned in construction industry. The reader should refer *GL 21: Major Application Software's Guideline for SSID* for its detailed presentation and application guidance.

15.1 AUTOCAD

AutoCAD is software program used to made computer-aided design.

15.2 MS-PROJECT

Microsoft Project, the project management software program by Microsoft, is a very handy tool for project managers that help them develop a schedule, assign resources to tasks, track the progress, manage the budget, and analyze workloads for an ongoing project.

15.3 PRIMAVERA PROJECT PLANNER

Primavera Project Planner is used for construction planning & scheduling.

15.4 CONMIS SOFTWARE

ConMIS Software used for bill of quantity calculation, take-off sheet analysis, payment certification and report preparation.

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APPENDICES

APPENDIX I: PART IV/GL 27/A CONTRACT MANAGEMENT FORMATS

Appendix Part IV/GL27/A-1: Procurement Outcome Review Format

Name of the Project: _____

No	Reviewed items	Yes/ No	Remark
1	If missed items exist		
2	Unsound unit cost/rate		
3	Undermined or exaggerated quantity		
4	Undefined specifications		
5			
6			
7			
8			
9			
10			

(Use this place to summarize the findings and discuss with the responsible persons on the review result)

_____

_____

_____

_____

Appendix Part IV/GL27/A-2: Contract Mobilization Checking Format

Mobilisation	Action	When done make a mark (X)	Remark
Document	Distribute Contract documents to Contractor/Client (Region. Zone, District - Legal section, Relevant departments)		
	Establish Contract file in the name of the project		
	Organize the Contract file - Collate received Securities (Performance, Advance and others documents		
Site Handover	Site handover format preparation		
	• Beneficiary and locally area administrative & line office courtesy call		
	• Camp site handover		
	• Headwork and Main structure		
	• Bench Marks		
	• Access road if applicable		
Communication & Relationship	• Establish reporting structure and formats		
	• Contractor contract management personnel acceptance		
	• Establish meeting schedules		
	• Establish communication protocols (diary, memos, letters, email. FAX, telephone calls etc.)		

Appendix Part IV/GL27/A-3: Risk Analysis Format

No	Risk	Category (technical/cost/managerial)	Degree (High/Medium /Low)	Mitigation Measures
1	Front loaded			
2	Significantly low cost for			
3				
4				
5				
6				
7				
8				
9				
10				

(Use this place to summarize the risk analysis and mitigation measures after discussing with the responsible persons on the review result)

_____

_____

_____

Appendix Part IV/GL27/A-4: Communication Ledger & Follow-Up Format

Date	Ref Number of Letter	Letter issued by	Main Message/Subject	Response from Client/ Contractor/Consultant/Contract Manager

Appendix Part IV/GL27/A-5: Documentation and Record Summary Keeping Format

Name of the Project _____

I. **Cost**						
Initial Contract Price _____ Advance Paid _____ First Amended Contract Price _____ Second Amended Contract Price _____						
Interim	Payments (ETB)	Variations On Each payment		Retention (__ %)	Liquidated damages	Compensation effect
		Amount (ETB)	%			
1						
2						
3						
Final						

Dispute	(Please write a narrative in the following space when a dispute occurs and how it is resolved – dispute dates / resolved dates and specific issues are important)

Time		
Contract Completion time _____		First Extended Completion Time _____
Second extended Completion time _____	Third extended Completion time _____	Actual Completion time _____

Warnings letter Ref		
Letter RF	date	Subject

Conducted meetings with Contractor		
Venue	date	Subject & minutes

Quality
Use this space if there is quality complain at each interim payment level & where necessary

Appendix Part IV/GL27/A-6: Minutes of Meeting Format (Site/Office)

Venue: _____
Date: _____
Time: _____

No	Participants Full Name	Organization	Position
1			
2			
3			
4			
5			
6			

Meeting Agenda:

1. _____
2. _____
3. _____
4. _____

Result of discussion:

1. _____
2. _____
3. _____
4. _____

Signature of Participants at the end of the meeting:

Appendix Part IV/GL27/A-7: Contract Monitoring Format

Please use this form for Contract monitoring; *(items can be increased or decreased based on the specific project. Monitoring indicator also can be modified)*

No	Item to be Monitored	Compliance to (Yes/No)							Remark
		Size/Dimension	Specification	Time	Cost	Quality	Shape	Type	
1	Head Work								
1.1	Weir body								
1.2	U/S apron								
1.3	D/S apron								
1.4	Wing walls								
1.5	Gates								
2	Conveyance canal								
3	Main Canal								
4	Secondary Canal								
5	Tertiary Canal								
6	Other canals								
7	Structures								
7.1	Drops								
7.2	Division boxes								
7.3	Turnouts								
7.4	Off takes								
7.5	Cross drainages								
7.6	Culverts								
7.7	Level crossing								
7.8	Others								

General Comment: (use this space for detail comments of the monitoring result):

_____

Signature of the monitoring team members /individual:

_____

APPENDIX II: Part IV/GL 27/B Planning and Scheduling Format

Appendix Part IV/GL27/B-1: Physical Work Schedule Format

Project Name:_____
Client:_____
Consultant:_____
Contractor:_____
Physical Work Schedule in Quantity for the year _____ EFY

Item No.	Description	Unit	Contract quantity	Physical Work Plan in Quantity for the year _____ EFY	Physical Work Schedule for the year _____ EFY Monthly Distribution																							
					July		Aug		Sep		Oct		Nov		Dec		Jan		Feb		Mar		Apr		May		June	
					Qt.	%	Qt.	%	Qt.	%	Qt.	%	Qt.	%	Qt.	%	Qt.	%	Qt.	%	Qt.	%	Qt.	%	Qt.	%	Qt.	%

Appendix Part IV/GL27/B-2: Financial Schedule Format

Project Name:_____

Client:_____

Consultant:_____

Contractor:_____

Financial Schedule in ETB for the year _____ EFY

Item No.	Description	Unit	Contract Amount, Birr	Financial Plan in Birr for the year _____ EFY	Financial Schedule for the year _____ EFY Monthly Distribution																							
					July		Aug		Sep		Oct		Nov		Dec		Jan		Feb		Mar		Apr		May		June	
					Amt, Birr	%	Amt, Birr	%	Amt, Birr	%	Amt, Birr	%	Amt, Birr	%	Amt, Birr	%	Amt, Birr	%	Amt, Birr	%	Amt, Birr	%	Amt, Birr	%	Amt, Birr	%	Amt, Birr	%

Appendix Part IV/GL27/B-3: Person power Schedule Format

Project Name:_____
Client:_____
Consultant:_____
Contractor:_____
Person power Schedule in number for the year _____ EFY

Item No.	Description	Unit	Agreed Person power	Person power Plan for the year _____ EFY	Person power Schedule for the year _____ EFY Monthly Distribution											
					July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June

Appendix Part IV/GL27/B-4: Machinery Schedule Format

Project Name:_____
Client:_____
Consultant:_____
Contractor:_____
Machinery Schedule in hours for the year _____ EFY

Item No.	Description	Unit	Agreed Machinery	Machinery Plan for the year _____ EFY	Machinery Schedule in hours for the year _____ EFY Monthly Distribution											
					July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June

Appendix Part IV/GL27/B-5: Construction Material Schedule Format

Project Name:_____
Client:_____
Consultant:_____
Contractor:_____
Construction Material Schedule in Quantity for the year _____ EFY

Item No.	Description	Unit	Agreed Material	Material Plan for the year _____ EFY	Construction Material Schedule in Quantity for the year _____ EFY Monthly Distribution											
					July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June

Appendix Part IV/GL27/B-6: Financial Flow Schedule Format

Project Name:_____
Client:_____
Consultant:_____
Contractor:_____
Financial Flow Schedule in ETB for the year _____ EFY

Item No.	Description	Total Financial Flow Plan (ETB) for the year _____ EFY	Financial Flow Schedule (ETB) Month Distribution											
			July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June
1	Material cost													
2	Machinery cost													
3	Person power Cost													
4	Overhead cost													
5	Others													
	Total cost													

APPENDIX III: Part IV/GL 27/C Payment Format

Appendix Part IV/GL27/C-1 Sample Advance Payment Requesting Letter

Contractor Letter Head

Ref. No: _____
Date: _____

To / Name of the organization/

Subject: -**Request for Advance Payment**

Please allow this letter to serve as our request to receive an advance payment from your organization, / Organization Name/ for a contract our company entered into / Insert contract # ------/ for the Construction/ Consultancy/ supply/. The contract amount including VAT is ETB _____ / number & figure/. Hereby we request a /--% / advance payment, in the amount of Birr_____ / number & figure/.

We understand that costs paid for the advance will be dedicated proportionally from the subsequent payment request. Furthermore, the advance will be deducted from the total amount of reimbursement requested.

Here with, we attached the required amount of Advance security Ref. No _____ dated _____ for the amount of _____ ETB from _____ Bank.

The Company commit itself for full return of the advance payment, in case of any failure to do so and expiration of the security the company will renew the security or will pay back the remaining advance payment in Cash.

If you have any questions or need additional information to process this request, please contact _____ at (_____) _____.

Sincerely, Designated Authorized Representative

(THIS LETTER MUST BE SIGNED BY THE DESIGNATED AUTHORIZED REPRESENTATIVE).

Enclosure: Payment certificate

Appendix Part IV/GL27/C-2 Sample Interim Payment Requesting Letter

Contractor Letter Head

Ref. No._____
Date_____

(Insert the Client/Consultant Name)
(Insert the Client Address)

Ref: - Construction of ***(Insert the Project Name)***

Subject: **Request for Approval of Interim Payment No.------**

It is to be recalled that the contract agreement has been signed between your honored office, ***(Insert Client Name)***, and our firm, ***(Insert Contractors Name)*** for the construction of ***(Insert project Name)*** located in ***(Insert Region Name)***, ***(Insert Zone Name)***, ***(Insert District Name),*** and ***(Insert Kebele Name)*** with contract amount ETB ***(Insert Amount in figure) (Insert Amount in Words)*** only including15% VAT.
Accordingly, we have accomplished ***(Put items of works executed)*** that worth ETB ***(Insert Amount in figure) (Insert Amount in Words)*** only including15% VAT.
Hence, according to GCC/SCC ____ we here by request your good office approval and effect Interim Payment No.__ for the work executed this month that worth ***(Insert Amount in figure) (Insert Amount in Words)*** only including15% VAT.
Please find attached herewith _____ pages of summary of work executed for IPC _____ and other supporting documents.

With regards,
Person in Charge
Position

Enclosure: Payment Certificate

C.C

- ***(Insert Client Name)***
  (Insert the Client Address)
- ***(Insert Name of different internal stockholders)***
-
-

  (Insert the Contractor Name)
  (Insert the Contractor Address)

(THIS LETTER MUST BE SIGNED BY THE DESIGNATED AUTHORIZED REPRESENTATIVE).

Appendix Part IV/GL27/C-3 Sample Interim Payment Approval Letter by Supervisor

Consultant Letter Head

Ref. No._____
Date_____

(Insert the Client Name)
(Insert the Client Address)

Ref: - Construction of ***(Insert the Project Name)***

Subject: **Interim Payment No. ------ for Executed Works**
It is to be recalled that the contract agreement has been concluded between your honored office, ***(Insert Client Name)*** and ***(Insert Contractor Name)*** for the execution of the above captioned contract with contract amount ETB ***(Insert Amount in figure)(Insert Amount in Words)*** only including15% VAT.
The project contractor, ***(Insert Contractor Name)***, requested us approval of Interim Payment No.___ that worth ETB ***(Insert Amount in figure) (Insert Amount in Words)*** only including 15% VAT for the work executed on ***(Insert detailed works executed)*** via letter of Ref. No.: ____ dated ___.

Accordingly, we have checked and approved the payment for the same that amount ETB ***(Insert Amount in figure) (Insert Amount in Words)*** **only including 15% VAT** and sent it for your further action.
Please find attached herewith _____ pages of payment request letters, summary of work executed for IPC _____ and other supporting documents.

With regards,
Person in Charge
Position

Enclosure: Payment Certificate

C.C

- ***(Insert Contractor Name)***
  (Insert the Contractor Address)
- ***(Insert Name of different internal stockholders)***
-
-

  (Insert the Consultant Name)
  (Insert the Consultant Address)

(THIS LETTER MUST BE SIGNED BY THE DESIGNATED AUTHORIZED REPRESENTATIVE)

Appendix Part IV/GL27/C-4 Sample Interim Payment Effecting Letter by Client

Client Letter Head

Ref. No._____
Date_____

Office of Finance
(Insert the Client Name)
(Insert the Client Address)

Ref: - Construction of ***(Insert the Project Name)***

Subject: **Interim Payment No.------ for Executed Works**

It is to be recalled that the contract agreement has been concluded between ***(Insert Client Name)*** and ***(Insert Contractor Name)*** for the execution of the above captioned contract with contract amount ETB ***(Insert Amount in figure) (Insert Amount in Words)*** only including15% VAT.

Accordingly, to the agreement the contractor has submitted its payment request as Interim Payment No.__ via letter of Ref.: _____ dated _____and the construction supervisor by its letter dated _____ Ref.: _____has certified the request as Interim Payment No.__ (IPC---) that amounts ETB ***(Insert Amount in figure) (Insert Amount in Words)*** only including15% VAT payable to the contractor.

After checking the document in accordance to GCC/SCC Clause __ of the contract we have confirmed that the contractor is entitled for payment of ETB ***(Insert Amount in figure)*** only including15% VAT.

Therefore, you are here by authorized to check and process payment to the contractor, ***(Insert Contractors Name)*** ETB ***(Insert Amount in figure) (Insert Amount in Words)*** only including15% VAT.

Please find attached herewith _____ pages of payment request letters, summary of work executed for IPC _____ and other supporting documents.

With regards,
Person in Charge
Position

Enclosure: Payment Certificate

C.C

- ***(Insert Name of different internal stockholders)***
- ***(Insert the Client Name)***
- ***(Insert the Consultant Name)***
  (Insert the Consultant Address)
- ***(Insert Contractor Name)***
  (Insert the Contractor Address)

(THIS LETTER MUST BE SIGNED BY THE DESIGNATED AUTHORIZED REPRESENTATIVE)

APPENDIX IV: Part IV/GL 27/D Reporting Format

Appendix Part IV/GL27/D-1 Monthly Project Information Format

Project Name: _____
Client: _____
Consultant: _____
Contractor: _____

1. General Information
    1.1 Location: _____
    1.2Altitude: _____
    1.3 Weather Condition: _____
    1.4 Working Hours: _____

2. Short and descriptive comparison of work progress against schedule:
_____
_____.

3. Current project status:
_____
_____.

4. Problem encountered:
_____
_____.

5. Measures taken:
_____
_____.

6. Pending issues that needs attention:
_____
_____.

7. Net amount of payment certified during previous time:
_____
_____.

8. Estimated amount of work accomplished during this month:
_____
_____.

9. Others:
_____
_____.

Appendix Part IV/GL27/D-2 Monthly Work Progress Format (Quantity)

Project Name:_____
Client:_____
Consultant:_____
Contractor:_____
Plan Period : _____ Contract Time: _____
Fiscal Year: _____ Utilized time: _____
Commencement date : _____ Remaining contract time: _____
Completion Date: _____ Percentage completion to date: _____

Bill Item No	Activity	Unit	Unit Price' Birr	Agreement Quantity	Previously completed quantity	Accomplished Quantity				To - Date Certified	Difference	Remark
						This month		To - Date		Quantity	Accomp-Certified Quantity	
						Planned	Executed	Planned	Executed			

Remarks: _____.
Prepared by
Name: _____
Signature _____
Date _____

Appendix Part IV/GL27/D-2 Monthly Work Progress Format (Amount)

Project Name:_____
Client:_____
Consultant:_____
Contractor:_____
Plan Period : _____ Contract Time: _____
Fiscal Year: _____ Utilized time: _____
Commencement date : _____ Remaining contract time: _____
Completion Date: _____ Percentage completion to date: _____

Bill Item No	Activity	Unit	Unit Price' Birr	Agreement Amount, Birr	Previously Amount, Birr	Accomplished Amount, Birr				To - Date Certified	Difference (Accomp-Certified)	Remark
						This month		To - Date Amount, Birr		Amount, Birr	Amount, Birr	
						Planned	Executed	Planned	Executed			

Remarks: _____.

Prepared by

Name: _____
Signature _____
Date _____

Appendix Part IV/GL27/D-3 Person power Mobilized to the Site during the Month

Project Name:_____

Client:_____
Consultant:_____
Contractor:_____
Plan Period : _____ Contract Time: _____
Fiscal Year: _____ Utilized time: _____
Commencement date : _____ Remaining contract time: _____
Completion Date: _____ Percentage completion to date: _____

S/No	Description	Unit	Month, Year		
			Plan	Mobilized	%

Remarks: _____.

Prepared by

Name: _____
Signature _____
Date _____

Approved by

Name: _____
Signature _____
Date _____

Appendix Part IV/GL27/D-4 Machinery/Equipment Utilization during the Month

Project Name:_____
Client:_____
Consultant:_____
Contractor:_____

Item No.	Type Of Machinery/Equipment	Plate No.	Capacity	Name of Operator	Total			Operation Hours		Remark
					Available Hrs	Idle Time	Down Time	Bill Item No.	Total	

Remarks: _____.

Prepared by

Name: _____
Signature _____
Date _____

Approved by

Name: _____
Signature _____
Date _____

Appendix Part IV/GL27/D-4 Construction Materials Used during the Month

Project Name:_____
Client:_____
Consultant:_____
Contractor:_____

Item No.	Description	Unit	Total Quantity	Total Cost		Bill Item Number			Remark
							Cost		
				Birr	Cents	Qty.	Birr	Cents	

Remarks: _____.

Prepared by

Name: _____
Signature _____
Date _____

Approved by

Name: _____
Signature _____
Date _____

APPENDIX V: PART IV/GL 27/E CHECK LIST

Appendix Part IV/GL27/E-1 Check List for Bid Security

The following issues shall be strictly examined while dealing with bid security: -

1. The Bidder shall furnish, as part of the Bid, a Bid Security in original form in Ethiopian Birr in the amount specified in the BDS be in the form of
    a. cash,
    b. a certified or payable order,
    c. bank draft,
    d. letter of credit, or
    e. an unconditional bank guarantee
2. Any bid not accompanied by an acceptable Bid Security shall be rejected by the Employer.
3. The Bid Security of unsuccessful bidders will be returned within one week after concluding the contract and after a contract security has been furnished by the successful Bidder.
4. The Bid Security of the successful Bidder will be discharged when the Bidder has signed the contract and furnished the required Contract Security. Most commonly the validity date is 28 days.
5. The Bid Security may be forfeited:
    a. If the Bidder withdraws the Bid after Bid opening during the period of Bid validity;
    b. If the Bidder does not accept the correction of the Bid price, pursuant to Clause 27; or
    c. In the case of a successful Bidder, if the Bidder fails within the specified time limit to:
        i. Sign the contract; or
        ii. Furnish the required Contract/Performance Security.

Note that: - The followings conditions shall be taken in to account while setting amount of bid security.

- Condition of frequently changed the price of procured goods or services,
- Existence of sufficient number of bidders in the sector,
- Not obstacles for bidders to participate on the bids (It may 0.5% - 2% of the bid price),
- Encourage the winner to sign the contract, and
- If the winner fails to sign the contract, it should be sufficient to cover the damage of the procuring entity/client.

Appendix Part IV/GL27/E-2 Check List for Performance Security

The following issues shall be strictly examined while dealing with performance security: -

1. Submission of an acceptable Performance Security by successful bidder is a prerequisite for signing of contract agreement between employer and contractor.
2. Performance security shall be provided before date specified in the contract, but within 21 days of Letter of Acceptance.
3. Performance security amount and form shall be as accepted by Employer as specified in the ITB Notification of Award.
4. If performance security is in the form of Bank Guarantee, it should valid until 28 days after Certificate of Completion date.
5. If performance security is in the form of Performance Bond, it should valid until one (1) year from Certificate of Completion date.
6. The Employer (if already appointed, his Contract Manager) should carefully check the wording of the Performance Security with the wording of the standard form as included in the tender document and the relevant clause of the instructions to bidders. Standard forms for Performance Securities are usually enclosed with the Tender Documents.
7. Once the Performance Security has been submitted, the Employer will notify other bidders that their bid was not successful.
8. If the Performance Guarantee is not submitted within the period of 21 days of receiving the Letter of Acceptance, or the Performance Security is not in accordance with the amount and form stipulated in the Bidding Data, the Employer may cancel the award and forfeit the Bid Security.

Appendix Part IV/GL27/E-3 Check List for Signing Contract Agreement

The following issues shall be strictly examined while dealing with signing contract agreement: -

1. The Employer sends the signed Contract Agreement within a maximum period of 28 days after the Notification of Award with the Letter of Acceptance to the Contractor.
2. Within 21 days, the contractor will sign the Agreement and return it to the Employer.
3. The signed Contract Agreement together with the submitted Performance Security officially constitutes a binding contract between the Employer and the Contractor.

Appendix Part IV/GL27/E-4 Checklist for improving Contract Management, Administration and Compliance

The guiding principles for improving Contract Management, Administration and Compliance are the following but not limited to:

a. Avoid using ambiguous terms
b. Identify risk at planning stage
c. Meet with vendor community
d. Establish contract management team early
e. Maintain open mind when gathering information
f. Seek legal counsel input
g. When documenting compliance issues use direct quotes from solicitation or contract to strength position

Appendix Part IV/GL27/E-5 Checklist for Guiding Principles of Conflict Resolution

Guiding principles of conflict resolution are the following but not limited to: -

1. Think Before Reacting
2. Listen Actively
3. Assure a Fair Process
4. Attack the Problem
5. Accept Responsibility
6. Use Direct Communication
7. Look for Interest
8. Focus on the Future
9. Options for Mutual Gain

Appendix Part IV/GL27/E-6 Checklist for Consequence of inefficient contract management

Consequence of inefficient contract management or contract administration are the following but not limited to:

1. Project Over-Budget,
2. Poor Quality,
3. Delays,
4. Safety Issues,
5. Unsatisfied Client,
6. Disputes,
7. Litigation,
8. Loss of Reputation,
9. Sore Relations

APPENDIX VI: PART IV/GL 27/F PROJECT HANDING OVER FORMAT

Appendix Part IV/GL27/F-1 Site Handover to Commence Study and Design Tasks Format

1. Project Name:
2. Project Location:
   - Administrative Location:
     - Region:
     - Zone:
     - District:
     - PA:
     - Specific Site:
   - Geographic Coordinate of
     - Headwork Site
       - Longitude/East (UTM): ----------
       - Latitude/North (UTM): ----------
       - Altitude (masl): ----------
     - Command Area
       - Longitude/East (UTM): From ---------- to ----------
       - Latitude/North (UTM): From ---------- to ----------
       - Altitude (masl): From ---------- to ----------
3. Accessibility of the site
   - Distance from Addis Ababa to headwork site is (total) _____ (km)
     _____ (km) on asphalt
     _____ (km) on all-weather road
     _____ (km) on dry weather road
     _____ (km) on foot
   - Distance from Zonal Town _____ (km)
   - Distance from District Town _____ (km)
4. Name of Client: ----------
5. Name of Consultant: ----------
6. Month and year of project Study and Design Service Contract Signup: ----------
7. Proposed Command Area: ----------hectare
8. Proposed Total Number of Beneficiaries: ----------HH
9. Total Consultancy Service Fee: ETB ----------
10. Proposed source of water
    - Surface water: (River/Dam/Pond/Natural Lake)
      - River name or another water source name
      - River type: Perennial (all year flow), Intermittent (seasonal flow), Ephemeral (short period flow)
    - Groundwater: (Hand-dug Well/Shallow Well/Deep Well/Spring)
11. Free sketch of
    - Proposed headwork site
    - Proposed command area
    - Proposed main canal route
    - Natural streams along main canal
    - Other features
12. Conclusion

    ----------.

This site handover for study and design tasks effected on: _____.

In the presence of:

On behave of Project Client

Name_____ Signature_____ Date_____

On behave of Project Consultant

Name_____ Signature_____ Date_____

Witness and Signature

1.
2.
3.
4.

Appendix Part IV/GL27/F-2 Studied and Designed Project Handover Format

1. General Aspect of the Project
   - Project Name:
   - Administrative Location:
     - Region:
     - Zone:
     - District:
     - PA:
     - Specific Site:
   - Distance from Towns:
     - District Capital (---) = -------km
     - Zone Capital () = ----------km
     - Country Capital (Addis Ababa) = ------km
   - Geographic Coordinate of
     - Headwork Site
       - Longitude/East (UTM): ----------
       - Latitude/North (UTM): ----------
       - Altitude (amsl): ----------
     - Command Area
       - Longitude/East (UTM): From ---------- to ----------
       - Latitude/North (UTM): From ---------- to ----------
       - Altitude (amsl): From ---------- to ----------
   - Client: ----------
   - Contractor: ----------
   - Consultant: ----------
   - Month and year of project startup: ----------
   - Command Area: ----------hectare
   - Total Number of Beneficiaries: ----------HH
   - Total Consultancy Service Fee: ETB ----------

2. Verification of detail design drawings at site level
   a) Verification of Bench Marks at Headwork and Command area ----------.
   b) Verification of headwork site ----------.
   c) Verification of command area ----------.
   d) Verification of canal system ----------.
   e) Verification of canal and social structures ----------.

3. Design verification at site level

Item No.	Description of project major components	Result of verification							Remark
		Shape	Type	Specification	Length (m)	Width (m)	Depth (m)	Elevation (masl)	
1	Head Work								
1.1	Weir body								
1.2	U/S apron								
1.3	D/S apron								
1.4	Wing walls								
1.5	Gates								
2	Conveyance canal								
3	Main Canal								
4	Secondary Canal								
5	Tertiary Canal								
6	Other canals								
7	Structures								
7.1	Drops								
7.2	Division boxes								
7.3	Turnouts								
7.4	Off takes								
7.5	Bed bars								
7.6	Aqueducts								
7.7	Measuring structures								
7.8	Cross drainages								
7.9	Culverts								
7.10	Bridges								
7.11	Level crossing								
7.12	Others								

Narrative Remarks: ----------

---.

4. Conclusion

   ---.

This studied and designed project hand over effected on: _____.

In the presence of:

On behave of Project Client

Name_____ Signature_____ Date_____

On behave of Project Consultant

Name_____ Signature_____ Date_____

Witness and Signature

1.
2.
3.
4.
5.
6.

Appendix Part IV/GL27/F-3 Format for SSI Project Site Handover to Commence Construction

1. General Aspect of the Project
   - Project Name:
   - Administrative Location:
     - Region:
     - Zone:
     - District:
     - PA:
     - Specific Site:
   - Distance from Towns:
     - District Capital (---) = -------km
     - Zone Capital () = ----------km
     - Country Capital (Addis Ababa) = ------km
   - Geographic Coordinate of
     - Headwork Site
       - Longitude/East (UTM): ----------
       - Latitude/North (UTM): ----------
       - Altitude (masl): ----------
     - Command Area
       - Longitude/East (UTM): From ---------- to ----------
       - Latitude/North (UTM): From ---------- to ----------
       - Altitude (masl): From ---------- to ----------
   - Client: ----------
   - Contractor: ----------
   - Consultant: ----------
   - Month and year of project startup: ----------
   - Command Area: ----------hectare
   - Total Number of Beneficiaries: ----------HH

2. Checking and handing over of detail design drawings at site level
   a) Checking and handing over of Bench Marks at Headwork and Command area ----------.
   b) Checking and handing over of headwork site topographic map and water abstraction system ----------.
   c) Checking and handing over of command area system layout ----------.
   d) Checking and handing over of location orientation and dimension of canal system ----------.
   e) Checking and handing over of location and dimension canal and social structures ----------.

3. Checking and Handing Over of Major Components of the Project at Site Level

Item No.	Description of project major components	Detail of the Structures							Remark
		Shape	Type	Specification	Length (m)	Width (m)	Depth (m)	Elevation (masl)	
1	Head Work								
1.1	Weir body								
1.2	U/S apron								
1.3	D/S apron								
1.4	Wing walls								
1.5	Gates								
2	Conveyance canal								
3	Main Canal								
4	Secondary Canal								
5	Tertiary Canal								
6	Other canals								
7	Structures								
7.1	Drops								
7.2	Division boxes								
7.3	Turnouts								
7.4	Off takes								
7.5	Bed bars								
7.6	Aqueducts								
7.7	Measuring structures								
7.8	Cross drainages								
7.9	Culverts								
7.10	Bridges								
7.11	Level crossing								
7.12	Others								

Narrative Remarks: ----------

---.

4. Conclusion

   ---.

This SSI Project Site Handover to Commence Construction effected on: _____.

In the presence of:

On behave of Project Client

Name_____ Signature_____ Date_____

On behave of Project Consultant/Contractor

Name_____ Signature_____ Date_____

Witness and Signature

1.
2.
3.
4.
5.
6.

Appendix Part IV/GL27/F-4 Constructed Project Handover/Taking over Format

1. General Aspect of the Project
   - Project Name:
   - Administrative Location:
     - Region:
     - Zone:
     - District:
     - PA:
     - Specific Site:
   - Distance from Towns:
     - District Capital (---) = -------km
     - Zone Capital () = ----------km
     - Country Capital (Addis Ababa) = ------km
   - Geographic Coordinate of
     - Headwork Site
       - Longitude/East (UTM): ----------
       - Latitude/North (UTM): ----------
       - Altitude (masl): ----------
     - Command Area
       - Longitude/East (UTM): From ---------- to ----------
       - Latitude/North (UTM): From ---------- to ----------
       - Altitude (masl): From ---------- to ----------
   - Client: ----------
   - Contractor: ----------
   - Consultant: ----------
   - Month and year of project startup: ----------
   - Command Area: ----------hectare
   - Total Number of Beneficiaries: ----------HH
   - Total Investment cost: ETB ----------

2. Project handover status
   ----------.
3. Current status of the project
   ----------.

4. Inspection and testing during project handover process

Item No.	Project major components description	Unit	Contract Quantity	Result of inspection and testing				Remarks
				Length (m)	Width (m)	Depth (m)	Elevation (masl)	
I	**Civil Structures**							
1	Headwork							
2	Canal							
3	Canal Structures							
4	Others							
II	**Electro-Mechanical Equipment**			**Inspected Quantity**	**Supplied**	**Installed**	**Test**	
1	Pump							
2	Generator							
3	Pipe							
4	Others							

Narrative Remarks: ----------

---.

5. Conclusion

   ----------.

This project ---------- hand over effected on: _____

In the presence of:

On behave of Project Client

Name_____ Signature_____ Date_____

On behave of Project Contractor

Name_____ Signature_____ Date_____

On behave of Project Consultant

Name_____ Signature_____ Date_____

Witness and Signature

1.
2.
3.
4.
5.

Appendix Part IV/GL27/F-5 Format for Irrigation Project/Scheme Transferring to the Beneficiary

1. General Aspect of the Project
   - Project Name:
   - Administrative Location:
     - Region:
     - Zone:
     - District:
     - PA:
     - Specific Site:
   - Distance from Towns:
     - District Capital (---) = -------km
     - Zone Capital () = ----------km
     - Country Capital (Addis Ababa) = ------km
   - Geographic Coordinate of
     - Headwork Site
       - Longitude/East (UTM): ----------
       - Latitude/North (UTM): ----------
       - Altitude (masl): ----------
     - Command Area
       - Longitude/East (UTM): From ---------- to ----------
       - Latitude/North (UTM): From ---------- to ----------
       - Altitude (masl): From ---------- to ----------
   - Client: ----------
   - Contractor: ----------
   - Consultant: ----------
   - Project commencement date: ----------
   - Project completion date: ----------
   - Command Area: ----------hectare
   - Total Number of Beneficiaries: ----------HH
     - Male Headed----------
     - Female Headed.....
   - Source of Fund
   - Total Investment cost: ETB ----------
     - Share of Funding Agent: ETB ----------
     - Share of Beneficiary: ETB ----------

2. Statement of consensus about the project with the beneficiaries
   - Land use (present land occupation) ----------.
   - Existing Water Users Association ----------.
   - Existing cooperative organization ----------.
   - Works well be improved and scale up in the future ----------.

3. Substantially or totally completed components of the project

Item No.	Project major components Description	Unit	Quantity	Result of inspection and testing				Remarks
				Length (m)	Width (m)	Depth (m)	Elevation (masl)	
I	**Civil Structures**							
1	Headwork							
2	Canal							
3	Canal Structures							
4	Others							
II	**Electro-Mechanical equipment**			**Inspected Quantity**	**Supplied**	**Installed**	**Test**	
1	Pump							
2	Generator							
3	Pipe							
4	Others							

Narrative Remarks: ----------

---.

4. As built documents transferred to the beneficiary
   - Design document

   - As built drawings

   - Operation and maintenance manual (s)

     ---
5. Execution of training for operators

   ---.
6. Conclusion

   ---.

This scheme transfers to the beneficiary effected on: _____

In the presence of:

On behave of Project Client

Name_____ Signature_____ Date_____

On behave of Project Beneficiary

Name_____ Signature_____ Date_____

On behave of Project Contractor

Name_____ Signature_____ Date_____

On behave of Project Consultant

Name_____ Signature_____ Date_____

Witness and Signature

1.
2.
3.
4.

Prepared by

GIRDC