

Chapter-Two

Construction laws and Regulations

by: **Emebet .A**

▶ Introduction to Law

▶ Definition of Law

- ▶ law is defined as “ a set of general statements aimed at regulating choices in possible human behavior that is defined or recognized, publicized and sanctioned or rewarded by the State.
- ▶ Law is, therefore, a Social Rule enacted or promulgated by the State to regulate the behavior of the Society ;

Nature of the Law

- ✓ Law is Obligatory
- ✓ Law is Established by Public Authority
- ✓ Law is Sanctioned by Public Force

Function of the Law

- ▶ Law is a System of Social Control ;
;It controls the relationship between the State and its Subjects (by means of Public Law) and the relationship between the Subjects themselves (by means of Private Law);
- ▶ Law is a Method of Dispute Settlement
; This is done through the Court System.

CONSTRUCTION LAWS AND REGULATIONS

- ▶ Codes, laws, regulations, and acts govern construction works
- ▶ Standards, Specifications, Norms etc facilitate and standardize construction works
- ▶ Depending on needs, life styles, cultures, civilization status, etc the terms of these regulations and standards vary from country to country, province to province, municipality to municipality

Major regulations in construction

- ▶ In most cases, the following are the major issues covered in these systems:
 - Regulations and proclamations on who is responsible for specific sectors.
 - **Road sector: ERA**
 - **Power sector: EPCCO**
 - **Water sector: MoWR**
 - **Building sector MoWUD, municipalities, etc**
 - Planning regulations,
 - Environmental protection regulations,
 - Waste and waste management and contamination regulations.

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- Health and safety regulations,
 - Bidding laws and regulations dealing with administration of disputes in construction,
 - Property ownership right laws,
 - Regulations on registered professionals and construction enterprises and administration of construction project quality,

Importance of the regulations and standards

- ▶ Reduce the **vulnerability of the built environment to risk & facilitate practices and protect stakeholders' interests**
- ▶ **Improve the living standards and safety of the citizens**
 - ✓ **Urban planning regulations**
 - ✓ **Waste handling regulations**
 - ✓ **Building safety regulations and codes**
 - ✓ **Fire safety codes**

Importance of the regulations and standards

- Increase the efficiency and quality of the construction built environment
 - ✓ Professional licensing regulations,
 - ✓ Occupational health and safety regulations,
 - ✓ Material and machinery standardization
- Ensure fair trade within the sector and guarantee protection for investment
 - ✓ Bidding and tendering laws and regulations
 - ✓ Rules in contract administration
 - ✓ Property ownership rights

Importance of the regulations and standards

- Ensure uniformity and continuity of operation
 - ✓ Following a standard codes and procedure helps
 - ❑ Promote imports and exports of construction products and services
 - ❑ Transfer of Technology
 - ❑ Increase reliability to the industry to investors
 - ✓ Having a standard documentation and plan in licensing helps
 - ❑ Improves efficiency and avoids corruption and nepotism
 - ❑ Gives base for professional maintenance scheme and security access
- Ensure safety and the environment protection

Codes and Regulations

Ethiopian context

- ▶ Parliament
- ▶ Ministry of Infrastructure
 - ▶ Ministry of Works and Urban Development
 - ▶ ERA, IUHDPO, etc
 - ▶ Ministry of Water Resources
 - ▶ Ministry of Mining and Energy
 - ▶ EEPCo
- ▶ Provincial infrastructure departments
- ▶ Municipalities

❖ major governing bodies of construction:

- ▶ The **MoWUD**, the party mandated to regulate and promulgate laws, codes, standards, etc meant to promote efficiency, transparency, accountability as well as growth in the industry; Etc.
- ▶ **Municipalities**: Bodies who are given the mandate to look after urban housing construction and its associated legalities;

- ▶ The **MoWR**; is the party mandated to overlook water sector development programs;
- ▶ The **ERA**: Besides being a major client of the road sector by itself, the ERA is the party mandated to look after the road sector construction works;

Major standards and regulations

► **Procurement & Contract related:**

- Proclamation 430/2005
- The PPA SBDs
- The MWoUD's standard condition of contracts
- The ERA's NCB's and ICB's documents

► **International ones**

- **FIDIC procurement and contracting documents**
- **the bank harmonized version of FIDIC**
- **the EDF conditions of contracts**

Major standards and regulations

- ▶ **Standard codes and specification related**
 - ▶ The Ethiopian Building Code Standards
 - ▶ Standard technical specifications for building construction by MoWUD, BaTCoDA
 - ▶ Technical Specifications for Road Works (ERA)
- ▶ **Internationals**
 - ▶ BS, ASTM, AASHTO, ACI, Euro code, TRL specs, etc are also quite in common use.

Major standards and regulations

- ▶ Norms
 - ▶ The EBCA standard productivity, the BaTCoDA productivity standard and the MWoUD's Ethiopian Construction Productivity (buildings)
 - ▶ The ERA's CMS
 - ▶ The ERA's EMS

Major standards and regulations

- ▶ Construction Services Practices and Ownerships
 - ▶ Ethiopian Building Proclamations
 - ▶ Building Permit Regulation (Addis Ababa)
 - ▶ The Property Ownership Law (the CIVIL Code and the Condominium proclamations)

Major standards and regulations

- ▶ Others
 - ▶ labor laws (employment laws)
 - ▶ Health and safety regulations,
 - ▶ Environmental protection acts, etc

International Law of contract

- The common Parties & Stakeholders in the Construction Contract are contractor and employer
- ▶ The contractor could be:
 - ▶ General contractor or joint venture, i.e. in terms of organizational form;
 - ▶ Domestic or local or foreign or international, i.e. in terms of nationality;
 - ▶ Private or public, i.e. in terms of ownership;
 - ▶ Only constructor or both designer & contractor, i.e. in terms of contractual obligation;
- ▶ The employer could be:-
 - Public or private or community

- different standard conditions of contract are developed by certain institutions or recommended by international financing or development institutions;
 - ▶ **FIDIC;** is developed by an international federation of national association of independent consulting engineers.
 - ▶ Its full name is Federation International Des Ingenieurs-Conseils ;

FIDIC.....

- ▶ It was founded in 1913 by five national associations of independent consulting engineers within Europe;
- ▶ The objectives were to promote in common the professional interests of the member associations and to disseminate information of interest to members of its component national associations;
- ▶ It has begun to prepare & disseminate standard conditions of contract since 1957 for international use.

- Typical tender (contract) documents in the international Construction Contract & divided in to legal, commercial & technical parts.

- **The Legal Part**

- The Contract Agreement;
- The (latest) Minutes of Meeting, if any;
- The Letter of Acceptance(Award);
- The Tender (NB: Including the Appendix to Tender, if any);
- The Special Conditions of Contract;
- The General Conditions of Contract;
- Others, if any

► The Commercial Part

- The Performance Security Form;
- The Payment Security Form;
- The Advance Payment Guarantee Form;
- The Bid Security Form;
- The Insurance Forms;
- The Retention Money Security Form;
- Others, if any

The Technical Part

- ▶ The Technical Specifications;
- ▶ The Drawing;
- ▶ The Bill of Quantities;
- ▶ Schedule of Requirements, if any;
- ▶ Others, if any;

LOCAL CONSTRUCTION Contract...

- ❖ **Under this part of the Course, we shall try to cover, the issue of**
- ❖ The Standard Conditions of Contracts in use in Ethiopia i.e. the Conditions of Contract:Of the MoWUD(Ministry of Works & Urban Development); and
- ❖ PPA (Public Procurement Agency) under the Ministry of Finance & Economic Development).

- ✦ The MoWUD Conditions of Contract are important local conditions of contract. The current one is valid since 1994. Such conditions of contract is highly resembles that of FIDIC's conditions of contract. It applies for civil engineering works.
- ✦ The PPA Conditions of Contract are recent one. They have been issued in January 2006. They are applicable to all possible sorts of public procurement.

The PPA Standard Conditions of Contract

- ▶ The PPA, under its legal mandate provided under The Public Procurement Proclamation, it has prepared & issued certain standard tender & contract documents for the purpose of public procurement.
- ▶ The conditions of contract are applicable to the procurements of the federal government.

- ▶ The Standard Conditions of Contract cover the following types of procurement.
- ▶ These are Standard Conditions of Contract for the procurement of:-
 - ▶ Consultancy Services;
 - ▶ Non-consultancy Services;
 - ▶ Works;
 - ▶ Goods;
 - ▶ Including Simple Request for Quotations & Local Purchase Order;

Procurement of Works

- ▶ The Standard Conditions of Contract for the purpose of the procurement of Works have been prepared for International Competitive Bidding (ICB) & National Competitive Bidding (NCB), separately.
- ▶ User's Guide has been also prepared, separately, both for the ICB & the NCB.
- ▶ The Conditions of Contract have been also prepared both in Amharic & English language.

- ▶ The conditions of contract are based on Design-Bid-Build project delivery system.
- ▶ The type of contract could be based on BOQ, in which case it becomes measurement based.
- ▶ Or based on Activities Schedule, in which case it becomes lump sum.
- ▶ The role of the engineer is envisaged.

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- ▶ The PPA documenta is divided in to the following three parts, namely,
 - ▶ Bidding Procedure and documentation;
 - ▶ Schedule of Requirements; and
 - ▶ Contract;

Bidding Procedure & Documentation

- ▶ Under this part, the following are included, namely,
 - ▶ Section 1 Instruction To Tenderers(ITB);
 - ▶ General part;
 - ▶ Bidding Documents;
 - ▶ Preparation of Bids;
 - ▶ Submission of Bids;
 - ▶ Bid Opening & Evaluation;
 - ▶ Award of Contract;
 - ▶ Section 2 Bid Data Sheet(BDS)

- ▶ Section 3 Evaluation & Qualification Criteria (EQC)
 - ▶ Average Annual Volume of Construction Work;
 - ▶ Experience as Prime Contractor;
 - ▶ Acquisition of essential Equipment(by way of ownership, hire or lease);
 - ▶ Personnel;
 - ▶ Liquid Assets and/or Credit Facilities;
 - ▶ The issue of Joint Venture;

- ▶ Section 4 Bidding Forms
 - ▶ Bid Submission Form;
 - ▶ Priced Schedules (BOQ or Schedule of Activities);
 - ▶ Bid Security;
 - ▶ Qualification Information;
- ▶ Section 5 Eligible Countries

- ▶ **Schedule of Requirements & Documentation**

- ▶ Section 6 Schedule of Requirements

- ▶ Scope of Works;
 - ▶ Technical Specification;
 - ▶ Drawings;
 - ▶ Bill of Quantities or Activity Schedule;

Contract & Contract Documentation

- ▶ Under this part, the following are included.
 - ▶ Section 7 General Conditions of Contract (GCC)
 - ▶ The GCC is composed of 62 Clauses.
 - ▶ It contains the following parts.
 - ▶ General; (Clause 1-26)
 - ▶ Time Control; (Clause 27-32)
 - ▶ Quality Control; (Clause 33-36)
 - ▶ Cost Control; (Clause 37-54)
 - ▶ Finishing the Contract; (Clause 55-62)

General

(Clause 1-Clause 26)

Letter of Acceptance

- ▶ A Letter of Acceptance means the formal acceptance, signed by the Employer, of a contractor's Letter of Tender.
- ▶ This offer and acceptance constitute a legally binding agreement of the Parties to enter into a Contract Agreement

Tender Security

- ▶ A Tender Security (alternatively called a Tender Bond) is provided by each of the tenderers. It entitles the Employer to monetary compensation from the successful tenderer in the event that he:
 - ✓ withdraws his tender after the latest time specified for its submission and before its period of expiry;
 - ✓ refuses to accept the correction of errors in his tender in accordance with the tender conditions.

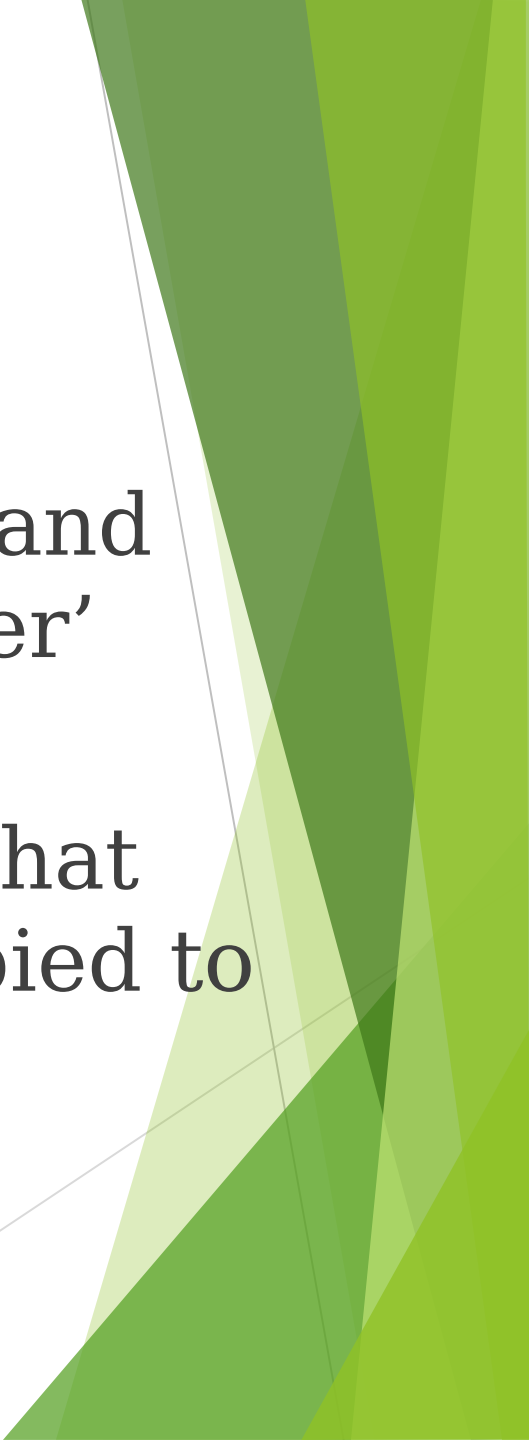
Works Contract Documents Sufficiency & discrepancy

► The Conditions of a Works Contract should state the priority of the various component documents of the Works Contract in order to establish, in the event of discrepancy between them, what takes precedence. The order of precedence may be stated, for example, as:

1. Contract Agreement
2. Letter of Acceptance
3. Completed Form of Tender and Appendix to Tender
4. Conditions of Particular Application
5. General Conditions of Contract
6. Specifications
7. Drawings
8. Priced Bill of Quantities (including Method of Measurement)
9. other Schedules (proposals/undertakings) of the Contractor's Tender

Engineer

- ▶ The “Engineer” is usually defined generically in Conditions of Contract as meaning “the person appointed by the Employer to act as the Engineer for the purposes of the Contract.



► The Engineer must:

- formally delegate duties and authorities to the Engineer' Representative.
- notify the Contractor of that delegation in writing, copied to the Employer.

Contractor's Representative

- ▶ Most forms of contract require that the Contractor shall appoint a Contractor's Representative, and give him authority to act on the Contractor's behalf under the Contract.
- ▶ Further, the Contractor's Representative shall be full-time on Site, give his whole time to directing the Contractor's performance of the Contract, and shall, on behalf of the Contractor, receive instructions and notices from the Engineer.

Commencement Date

- ▶ The Commencement Date marks the start of the Time for Completion, and therefore determines the date by which the Contractor must substantially complete the Works.
- ▶ The signing date of the Works Contract is not necessarily the date for commencement of the Time for Completion of the Works. Most forms of Works Contract (certainly FIDIC) require that the Engineer shall give to the Contractor a Notice of Commencement Date.

Performance Security

- ▶ The Contract will require that the Contractor obtain and provide to the Employer, copied to the Engineer, a Performance Security (also called a Performance Bond).
- ▶ The Performance Security, from a bank or financial institution acceptable to the Employer, entitles the Employer to monetary compensation (to the limit of the amount of the security)

► **Advance Payment Security**

- If the Contract provides for an Advance Payment by the Employer to the Contractor, it will state the amount and currencies in the Appendix to Tender, and should include within the Contract Documents a form of the Advance Payment Security (also called a Bank Guarantee for Advance Payment) to be delivered by the Contractor before he can receive the Advance Payment.

Employer

- ▶ Has responsibilities to:
 - ▶ **Pay** the due payments for the contractor;
 - ▶ **Provide the site** and right of access to it in due time;
 - ▶ Look into the **statutory aspects** of the construction such as permission to construct, custom clearance etc;
 - ▶ Employer's personnel and other contractors to cooperate with

Power of Engineer

- ▶ His authorities can be limited [by specifying matters he needs to get approval from the Employer.
- ✦ Care must be taken not to stifle the engineer's performance by overly limiting his authorities
- ✦ Most issues limited are:
 - ✦ Consenting with contractor to the sub-letting of part of the works
 - ✦ Certifying additional cost determined
 - ✦ Awarding an extension of time

- ▶ Certifying payment if the **contract price** will be exceeded;
- ▶ Issuing any taking-over certificate;
- ▶ Authorising the use of provisional sums in **excess of the monetary limit** for variations;
- ▶ Certifying additional payment
- ▶ Issuing Defect Liability Certificate

Engineer's approval

- ▶ In most cases the Engineer's approval doesn't relieve the contractor of his duties.
- ▶ Even the engineer's approval of as built drawings may not relieve the contractor of his duties if work wasn't executed accordingly

Sub contract

- ▶ Subletting
 - ▶ Usually not allowed to sublet the whole work
 - ▶ Is to be held **responsible for the performance** of his subcontractors;
 - ▶ Require Engineers approval and without the approval of the Employer in writing.

Risks

- ▶ Employer's (Excepted) force majeure risks
 - ▶ War, hostilities, rebellion, revolution etc
 - ▶ entitle the contractor for Excusable delays or Excusable compensable delays
 - ▶ Contractor is not normally required to insure for such risks
 - ▶ However, some of these risks are insurable (eg defaults from designer),
- ▶ Employer can insure for such risks but can also provide the premium to

Insurance of work

- ▶ Under PPA, Contractor need to insure
 - ▶ Loss of or damage to the Works, Plant, and Materials;
 - ▶ Loss of or damage to Equipment;
 - ▶ Loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
 - ▶ Personal injury or death.

Cost of Insurance

- ▶ Premium is an amount to be paid for a contract of insurance
- ▶ Contractor's should include cost of insurance in their tender
- ▶ they should be provided details of information , excess levels etc

Site inspection and tender sufficiency

- ▶ The contractor inspect the site before tender satisfy, that is
 - ❖ **Hydrological and climatic conditions**
 - ❖ **Availability of resource and skill**
 - ❖ **The nature of work and availability of material**

Time Control

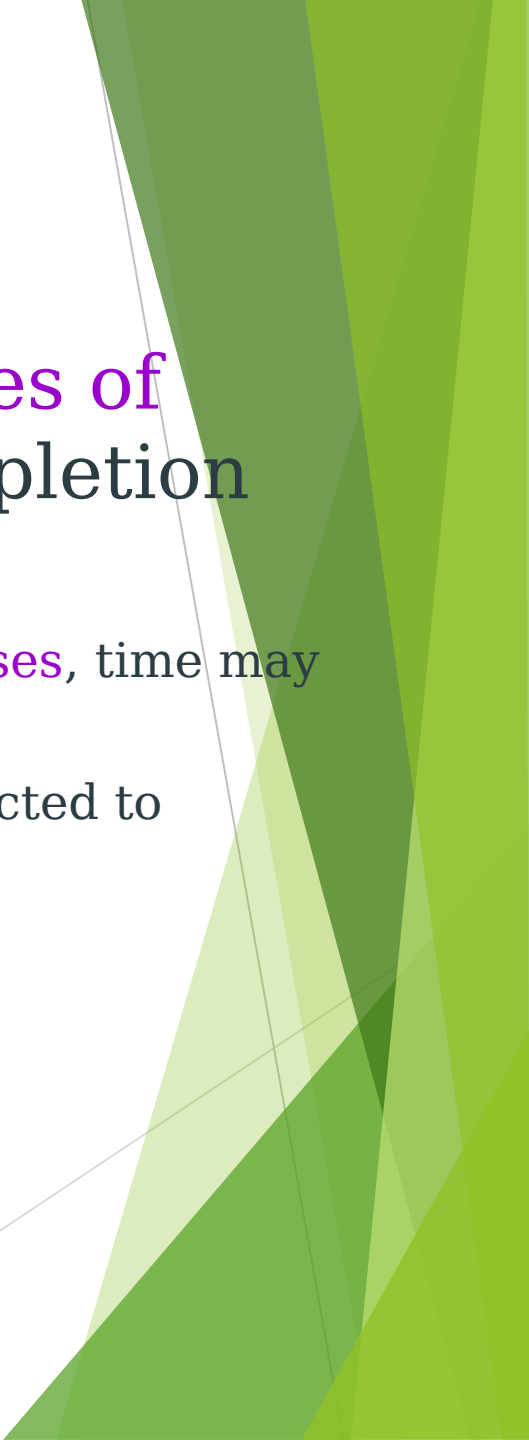
(Clause 27-Clause 32)

Program

- ▶ Often submitted before signing **Agreement Form** and needs to be **approved** by Engineer
- ▶ Mobilization (if applicable) and detailed work programme.
- ▶ The details and time for submission to be stated in the special condition of contract.

Extension of Time

- Disruption Claims
- Prolongation Claims
- Acceleration
- Concurrent Delays
- Successive Delays
- Critical and Non Critical Activities
- Time at Large

- 
- ▶ Usually incorporate **possibilities of extension** of the intended completion time
 - ▶ Otherwise, given the possibility of **change clauses**, time may be put **at large**
 - ▶ Under time at large condition, Contractor expected to complete work in a **reasonable time**

Quality Control

(Clause 33-Clause 36)

Execution of the work

- ▶ Contractor is obliged to perform the work, with due diligence, with strict conformity of the contract (provided that it is legally and physically possible) and to the satisfaction of the Engineer
 - ▶ Work to be in accordance to the drawings and specifications
 - ▶ If specs and drawing are generic, work and material to be of the highest quality-that approved by the Engineer
- ▶ Contractor should care for the work executed and keep it safe
- ▶ The contractor controls the resources and runs the execution of the work;

Key Resource Deployment

- ▶ Contractor is expected to comply with:
 - ▶ Key personnel requirements
 - ▶ Key equipment requirements
 - ▶ Make workmanship to the quality specified
 - ▶ Use the appropriately specified materials
 - ▶ keep the operations safe, etc

Workmanship and Material

- ▶ Contractor is expected to execute the work
 - ▶ Using quality material and workmanship specified for
 - ▶ If, upon inspection, work is not to quality specified contractor will be asked to rectify
 - ▶ Cost of inspection could be covered by contractor if work was faulty

Cost Control

(Clause 37-Clause 54)

Contract Type

- ▶ An Admeasurements Contract with a Bill of Quantities
- ▶ A Lump Sum Contract with an Activity Schedule

Change in BOQ

- ▶ Rate will be adjusted if the increment or decrement of quantity exceeds:
 - ▶ in the Bill of Quantities for the particular item by more than 25%
 - ▶ the change exceeds 5% of the Initial Contract Price.
 - ▶ Both condition have to be satisfied

Variation

- ▶ Increase or decrease the quantity of any work (other than by re-measurement).
- ▶ Omit any such work.
- ▶ Change the character or quality of any such work.
- ▶ Change lines, levels, dimensions.
- ▶ Execute (necessary) additional work.
- ▶ Change the sequence or timing of construction.

- ▶ Variation should be **within the scope of the work**
- ▶ Provide provision for procedures and conditions to **fix rates** of altered items
- ▶ In most cases, **Engineer given the authority** to give change orders and fix rates
- ▶ **Note:** A contractor is **not** required to sign, approve or even agree to a variation order. It is an order to do certain works.

Payment

- ▶ Contractor shall submit to the Engineer monthly statements .
- ▶ The Employer shall pay the Contractor within 30 days.
- ▶ Interest(at prevailing bank interest rate) for delayed payment by the client
- ▶ Minimum interim amount should be specified

Payment Form

► Work Done

<i>plus</i>	Variations
<i>plus</i>	Dayworks
<i>plus</i>	Contract Price Adjustment (CPA)
<i>less</i>	Retention
<i>plus</i>	Materials on Site (MoS)
<i>less</i>	Advance Payment repayment
<i>plus</i>	Any other amount

Compensation Events

- ▶ Failure to give possession of site
- ▶ Delay in issuing drawing
- ▶ Adverse physical, political or economical conditions
- ▶ Delay in Advance payment .
- ▶ The effects on the Contractor of any of the Employer's Risks.
- ▶ Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.

Contract Price Adjustment

Sub-Clause 47.1.

Increases or decreases to be determined in accordance with Part II (Particular Conditions).

- ✓ recommended for projects lasting over **one year**

- 
- ▶ The Contract may contain, as all standard forms of FIDIC contract do, provision for adjustment of the Contract Price for any increase or decrease in Cost arising from a change in the Laws of the Country made after the “Base Date” defined as the date 28 days prior to the latest date for submission of tenders

Methods of Calculating CPA

- ▶ The most common methods are
 - ▶ Proven Cost Method
 - ▶ Formula Method

Proven Cost Method

Description	Unit	Qty	Basic Price	Current Price	Difference
CPA					
Cement	qt	200	300.00	400.00	
100.00	=20,000.00				
Diesel	l	1000	10	15	5.00
	=5,000.00				

$$200 \times 100 = 20000$$

+

$$1000 \times 5000 = 5000$$

Total CPA for this Month (Birr)

25,000.00

Formula Method

$P_n = a + b \frac{L_n}{L_o} + c \frac{M_n}{M_o} + d \frac{E_n}{E_o} + \text{etc.}$

Where: L_n , M_n , E_n , etc., are the
current cost indices

L_o , M_o , E_o , etc., are the base cost
indices

- ✓ **PPA** uses formula method of
CPA

Retention

- ▶ 5% limit.
- ▶ 50% released at Taking Over.
- ▶ 50% released at Defects Liability Certificate.
- ▶ The contractor can replace it with **Retention Money Guarantee**.

Advance Payment

- ▶ Interest free Up to 30% to the Contractor for mobilization and front end expenses for that specific project

Liquidated Damages

- ❖ FIDIC Clause 47 liquidated damage
- ❖ PPA Clause 49 liquidated damage
 - ▶ Sub-Clause 49.1
 - ▶ Pre agreed amount stated in the Appendix to Bid
 - ▶ Types of damages by the client
 - ▶ The additional cost of supervision consultants.
 - ▶ Benefit obtained from completion of the project

Finishing the Contract

(Clause 55-Clause 62)

Completion

- ▶ Contractor shall request the Engineer to issue a certificate of Completion of the Works.
- ▶ The Employer shall take over the Site and the Works within seven days of the Engineer's issuing a Certificate of Completion

Hand over

- ▶ Upon substantial completion, contractor can ask for taking over certificate
 - ▶ Work need to pass inspection and contractor promises to rectify defects and complete outstanding works during defect liability period
- ▶ Taking over can be partial
- ▶ Final certificate is issued after defect liability period

Final Payment

- ▶ Final payment
 - ▶ Payments after certification of acceptance-after defect liability period
 - ▶ Net balance including retention money
 - ▶ Due within reasonable days of submission of final statement

General and special conditions of contract

General condition of contract

- ▶ A document called the General Conditions is ***an essential part of the contract.***
- ▶ It defines the responsibilities of the parties involved in the contract- the owner and the general contractor.
- ▶ It describes the guide lines that will be used in the administration of the contract

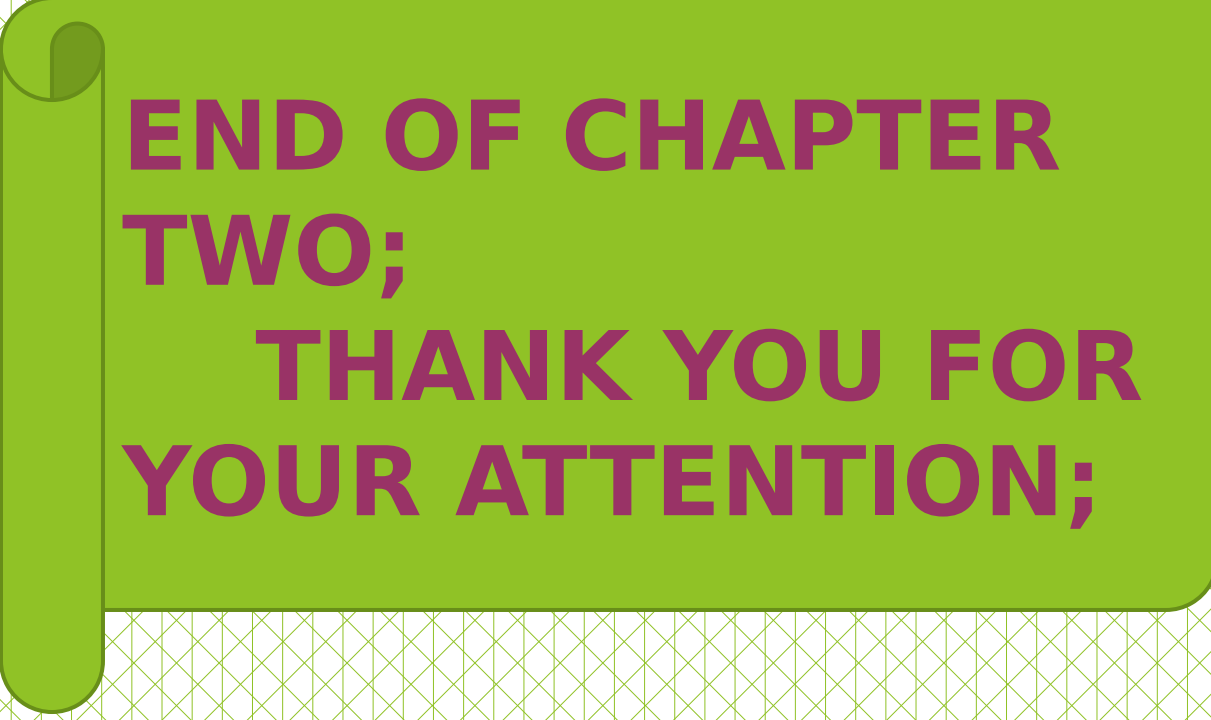
- ▶ Various standard forms of General Conditions have been developed by different organizations. These forms are familiar to all parties concerned, and the wording is not only clearly understood, but has also been tested in the courts.

Supplementary Conditions

- ▶ The Supplementary Conditions are sometimes known as Special Provisions or Special Conditions.
- ▶ The purpose of the Supplementary Conditions is to provide an extension of the General Provisions of the contract to fit the specific project at hand.

- 
- ▶ They serve as amendments or augmentation to the General Conditions.
 - ▶ Items included in the Supplementary Conditions are entirely subject to the discretion of the owner, and may include topics such as:
 - ❖ The number of copies of contract documents to be received by the contractor
 - ❖ Survey information to be provided by the owner
 - ❖ Materials provided by the owner
 - ❖ Changes in insurance requirements
 - ❖ Phasing requirements

- ❖ Site visit
- ❖ Start date of the construction
- ❖ Requirements for security and temporary facilities
- ❖ Procedures for submittal and processing of shop drawings.
- ❖ Cost and schedule reporting requirements
- ❖ Traffic control and street cleaning requirements
- ❖ Responsibilities for testing of materials
- ❖ Actions to be taken in the event of discovery of artifacts



**END OF CHAPTER
TWO;
THANK YOU FOR
YOUR ATTENTION;**



Time allotted 10 min.

- 1. Compare and contrast FIDIC and PPA?? (2)**
- 2. When Compensation Events occurred??(1)**
- 3. What does it mean variation order and what are ways that variation order occur???(1)**
- 4. Describe Liquidated Damage???(1)**