# PDF - THE INFLUENCE OF CONTRACT DRAWING ON BUILDING PROJECT - researchcub.info CHAPTER ONE

# 1.0 INTRODUCTION

Working /contract drawing according to Thomas and Marvin (1978), working drawings are defined to be a communication medium whose purpose is to graphically convey the design requirement for a construction project.

They control the design by indicating the construction in considerable detail; if they are sufficiently detailed, a competent builder can construct the project in accordance with the design and without confusion. Nowadays, many building clients are curious of knowing their probable cost of having a particular building before the commencement of the work.

However, the task of making the cost known to the building client entailed arrays of exercise to be done by the professionals involved, stating from the design stage up to the practical completion of the project, the design stage encompasses various activities, such as, the client brief, site investigation, skeletal design, construction design and finally the contract/working drawings which can be passed to the quantity surveyor and finally issued to the contractor.

These are expected to be the minimum numbers of drawings which give production information showing all relevant information's from consultant transferred to agreed scale, exchanges details and exploiting the values of three dimensional sketches.

The information is read to gather by the client, the estimator and the site agents. Seely (2008), believed that drawing should show the nature and scope of work to be carried out under the contract. They are to be detailed and comprehensive of bill of quantities. It is also to assist the contractor to accurately price and carry out the work satisfactorily.

Drawings are expected to have description and explanatory notes clearly defined, legible and free from abbreviations amplified figured dimension should be inserted in the drawing to ensure maximum accuracy in taking off quantities and in setting out construction work on site.

Turner (2003), referred to the design and quality of the finished work as a major feature of the contract document. Contract drawings should show the positioning of the building members or a supplementary non-contract document. These contract drawings will include: architectural, structural and services.

# 1.1 STATEMENT OF RESEARCH PROBLEM

It has become a regular occurrence nowadays in which we find the project final cost that will overrun the contract sum originally set in contract document due to negligence in the part of the architect and the building professionals to provide enough drawings and information at both the pre-contract and post contract stage. This has posed so many problems on the neck of many clients, by offsetting their initial monetary budget.

More so, many design practitioners has paid little attention to supply of contract drawings. Rather they belief in given instruction and description to the contractor on whatever they felt to be changed, added, omitted etc. in the progress of work, putting the essence of contract drawings behind.

Besides, it is obvious that many contract periods has been affected due to late or incomplete contract drawing or probably incomplete information on the contract drawing given to the contractor. This extends the client rental payment on borrowed properties due to late possession of their own building property. The above problems have contributed greatly to the differences between the initial cost (contract sum) and the

project final cost caused by the building drawings; To contractor it lead to increment in the project and general overhead and reduces his profit, which to the consultants the running cost increment, stress and reduce the consultant prestige.

# 1.2 RESEARCH QUESTIONS

From the above statement of problems confronting this research on the impact of contract drawings on project final cost, the following research questions were deduced

What were the effects of the numbers of contract drawings on the final cost of building project? What are the effects of number of contract drawings used on the time overrun of a building project? Does the use of contract drawings have an important impact on the cost of building project?

# 1.3 AIM AND OBJECTIVES

# 1.3.1 AIM

The aim of this research is to study the influence of contract drawing on building project final cost and to recommend solution that will curb the practice by building professionals.

# 1.3.2 OBJECTIVES

To identify the number of contract drawings used for the procurement of building project? To access the effect of inadequate contract drawings on the final cost of building project. To examine the importance of detailed contract drawings on a building project?

### 1.4 HYPOTHESIS

Based on the objective number one (1) and two (2) hypothesis were formulated as follow:

# **Objective 1**

Ho: The number of contract drawings used has no effect on the final cost of a building project. Hi: The number of contract drawings used has effect on the building project final cost.

# **Objective 2**

Ho: The number of contract drawings used has no effect on the time overrun of building project

Hi: The number of contract drawings used has significant effect on the time overrun of a building project.

# **1.5 JUSTIFICATION OF STUDY**

Oyemade (2002) carried out research on the impact of contract drawings on project final cost, but he failed to emphasis on how the number of contract drawings used affect contract period and the significant of contract drawings in the building industry. The importance of contract drawing is quite obvious in the present building industry. It serves as a convenient medium of communication between the consultant and the contractors, likewise the clients. Drawings are drawn as architectural, structural and services to give whosoever appreciated it the imagination sense of how the building is going to look like, also it would be brought to the mind (practitioners) the likely period of time meant for the execution of such a project. With this, this research work will throw light on the importance of contract drawings, the effect of number of contract drawings used on contract period (time) and also to resist the acceptable hypothesis by Oyemade (2002) with another test to see if it is reliable or not.

# 1.6 LIMITATION AND SCOPE OF THE STUDY

This research has been scheduled to cover residential building project in ilorin, Kwara state, by different consultants and contractors. This is to examine how the numbers of contract drawing issued from the pre-contract to post contract drawings in building project execution and how contract drawings affect contract period.

But this research has been limited to only residential building project executed in ilorin by the government. The reason is that it is very clear to get records of residential buildings by individual clients in ilorin, this is usually possible on the government building project through the help of ministry of housing and urban development, and other government agencies in ilorin.

However, having determined the project cost, then it will be obvious to the client that he has the financial capability of the project. But if not, he may urge the professionals to redesign the drawing to suit his financial capability instead of abandoning or diverting the money into another different line. This helps the building client, professional and the contractors against abandonment of the project.

More so, it reveals the importance of contract drawings in the building industry and also to know that contract drawings can elongate the stipulated contract period set in the bill of quantities, which will eventually bounce back on the contract sum by increasing it to another figure.

#### 1.7 DEFINITION OF TERMS

**1.7.1 COST**: Is the actual expenditure incurred in securing a particular service (tangible or intangible) or a defined property, place or at a particular time.

**1.7.2 DRAWING**: This is known to be a communication medium whose purpose is to graphically convey the design requirement for a construction project.

**1.7.3 BILL OF QUANTITY**: This is the document that includes the analysis of building elements showing the quantities of each element with their unit rate.

**1.7.4 PROJECT**: Is the quantity of building work that is organized carefully and designed to achieve a particular aim,

**1.7.5 VARIATION**: Is an addition or omission of work as originally included in the bill of quantity which is prepared under certain condition of contract.

**1.7.6 FINAL PROJECT COST**: This can be said to be the initial cost i.e it is the cost incurred on a building project starting from the inception up to the practical completion of a project.

**1.7.7 SCALE**: This is a term in building which is numeric figure showing the relationship between the actual sizes of something and a diagram which represent it.

**1.7.8 CLAIM**: Is a request by the contractor for recompense for some loss or expenses that he has suffered or an attempt to avoid the requirement to pay liquidated and ascertain damages.

**1.7.9 FLUNCTUATION:** It is the dramatic increase or decrease in the price of labour plants, and goods after the data of tender.

**1.8.0 TIME OVERRUN**: This is the increase in the length of time originally stipulated for a particular project. **1.8.1 REGRESSION ANALYSIS**: This is a statistical method which test the hypothesis about the linear relationship between to variables and likewise for predictions.

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