

DEPARTMENT OF QUANTITY SURVEYING. TAKING-OFF FOR THE PROPOSED MEDIUM SCALE BUILDING.

(A CASE OF STUDY OF TAKING-OFF FOR PROPOSED THREE (3) BEDROOM BUNGALOW
FOR OLUBIYO OLUFEMI AT OBAGBAJA ESTATE, ALIARA, ILORIN, ILORIN WEST LOCAL
FOR OLUBIYO OLUFEMI AT OBAGBAJA ESTATE.

BY

ND/23/QTS/PT/0007 ND/23/QTS/PT/0008 ND/23/QTS/PT/0009 ND/23/QTS/PT/0010

ND/23/QTS/PT/0011

ND/23/QTS/PT/0018

SUBMITTEDTO

THE DEPARTMENT OF QUANTITY SURVEYING INSTITUTE OF ENVIRONMENTAL STUDIES (IES) KWARA STATE POLYTECHNIC ILORIN, KWARA STATE

IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF NATIONAL DIPLOMA (ND) IN DEPARTMENT OF QUANTITY SURVEYING.

JULY,2025.

CERTIFICATION

This is to certify that, SULYMAN ABDULQODIR OLAYINKA, YUSUF ABDULMALIK AYINDE, BABATUNDE ABDULQUDUS BOLAKALE, OLUGBILE SAMAD FOLORUNSHO, OVALA FLORENCE, JIMOH MURITALA ABIODUN, Have successfully completed the practical project work in partial fulfillment and requirement for Award of National Diploma in Quantity Surveying department, Institute of environmental studies, Kwara state polytechnic, Ilorin.

QS.MUSTAPHA LUKMAN	8/08/2025 DATE
(Project Supervisor)	DATE
	-
QS.SIDIQ LATEEF	DATE
(HEAD OF DEPARTMENT)	
EXTERNAL EXAMINER	DATE
QS ZAKARI MAHMUD TSARAGI	
	1/4
STUDENT	DATE

DEDICATION

This project work is dedicated to Almighty God for seeing me through my stay in Kwara State Polytechnic and it also dedicated to my Parents.

ACKNOWLEDGEMENT

My profound gratitude goes to God forgiving me the privilege to complete this course,

and particular my project successfully despite all the obstacles in my path.

My appreciate goes to my parent, and everyone who are in support from one way or the

other.

My appreciation goes to my project supervisor QS MUSTAPHA LUKMAN despite his

tight schedule still found us precious time to go through my taking off sheet and write up,

a big thanks to all our lecturers and non-academic staff may God bless and reward you all

abundantly.

OLUGBILE SAMAD FOLORUNSHO

ND/23/QTS/PT/0010

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ABSTRACT

This project focuses on preliminary activities that led to preparation of draft Bill of quantity for proposed three Bedroom Bungalow Building located at Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, Kwara State. Meanwhile, this is to prepare pre-constructional cost on any proposed project and understanding the process of site investigation and to understand the Construction Company/ industry.

CHAPTER ONE

1.0 BACKGROUND INFORMATION

This project is based on proposed residential development and take-off project residential development for Olubiyo Olufemi , Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, Kwara State, is one of the 36 states in Nigeria, in which Ilorin is the capital. But our project for the proposed residential development for Olubiyo Olufemi, Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, Kwara State.

The design team on consultancy, services headed by the architects, civil engineers, who carry out the design, this process is a planned office works into the requirement of the client. The production of a building in a more economical, quick and orderly manner, other professionals function along side with the architect for the cost implication and preparation of bill of quantities (BOQs).

The expected professional needed at the stage is the quantity Surveyor. His Concern is the economic of all resources Such as labour, plant materials and the financial aspect in order to produce building in the quick and economical manner because many buildings today have not been completed.

1.1 DESCRIPTION OF WORKS

This project consist of construction and erection of the proposed residential development for Olubiyo Olufemi, Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, (wara State.

he residential development and take off project residential development for Olubiyo lufemi, Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, Kwara ate of about 28.78in length, 10.50 widths

The construction is formed on reinforced concrete pad foundation and framed structure. The suspended floor is of reinforced concrete slab (150mm thick). The walls are 225mmthick concrete block.

The roofing used is long span aluminum roofing sheet fixed a roofing structure, purchase, Electrical etc.

1.2 AIM AMD OBJECTIVES

The major aim of the study is to estimate and budget for a proposed residential development for Olubiyo Olufemi , Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, Kwara State.

OBJECTIVES

To understand bill operation I.e taking-off process, abstract bill drafting and pricing.

To understand the process of site feasibility report.

To understand the process of given pre - constructed cost of any proposed project.

The scope of the project is to prepare a draft bill of quantities for a proposed residential development for Olubiyo Olufemi , Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, Kwara State.

However, the limitation may not be accurate as a result of:

A:Inability to conduct proper site investigation

B: Inability to conduct the architect that designs the project.

CHAPTER TWO

SITE REPORT

2.0 TITLE

The proposed building project for proposed residential development for Olubiyo Olufemi ,

Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, Kwara State.

2.1 LOCATION

The site is situated at Ilorin West Local Government, The site is a loamy soil type, the site is best described as loamy soil also, the site is sloppy

2.2SITE DESCRIPTION

Nature of the land: the proposed land is of loamy soil in nature with sloppy surface.

This reducing the possibility of increase in construction cost due to strip foundation.

2.3 ACCESSIBILITY

The site is located at Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, Kwara State: therefore, there is an existing road, which leads to the site.

2.4 AVAILABILITY AND PROXIMITY OF RESOURSES

Proximity means the closeness of materials to the proposed site. The construction resources include the following:

I. PLANT

Also, necessary plant needed for this proposed project is readily available here in llorin township, such plant include, Bulldozer, scraper, electric generator, concrete mixer vibrator Compacting machine etc.

ii. MATERIALS

The white materials necessary for this proposed building project for a proposed residential development for Olubiyo Olufemi, Obagbaja Estate, Aliara, Ilorin., Ilorin West Local Government Area, Kwara State, which is very available in Ilorin metropolis

However, all the materials needed for the execution of this proposed project is little but removed from the site of work Thus, a reasonable amount is to be set aside for the transportation of materials, which will eventually increase the constructional cost in general.

EXTENET OF PRELIMINARIES REQUIRED

Extent preliminaries have a great effect on construction, such preliminaries are explained below

 SETTING OUT: In setting out, site clearance is necessary by cutting down for tree and hedges top soil excavation before and making the provision of setting out instrument such as profile pegs, measuring tape etc. before the commencement of site operation.

ELECTRICITY: Provision for electricity is by connecting of wires from the nearby poles in the site. And provision for electrical generator shall there is power failure, generator shall be used. These affect the cost on construction.

TEMPORERY FENCE:Temporary fence should be done to cover and protect the material left and kept onsite.

IV. FIRST AID BOX: This is very important in any construction due to some injury that may occur on site, which might be minor or major injuries before going to the hospital.

V. WATER SUPPLY: Water supply will have to be from Ilorin township possibility with the use of tanker and therewill be need for reservoir tank.

SCALFOLDING: There should be a provision forscaffolding because the projectbuilding. so there will be need for scaffolding duringcommencement of the work.

2.5 DEFINITION OF TERMS

- PROVISIONAL SUM: Refers to a sum provided for work orfor cost which can not be easily for seen, defined or detailed at the time the tendering documents are issued.
- PRIME SUM COST: This refers to a sum provided for work orservices to be executed by a nominated sub-contractor.
- 3. BESMM 4 R: Describe "Taking off" as the process in whichdimension are scaled or raid from drawings and entered in arecognized form on a specially ruled paper called dimensionpaper.
- 4. BESMM4 R:- Define "Tender" formal offer to construct and complete the contract work in accordance with the various contract documents for the tender sum.
- 5BESMM4 R:- Define "Bill of Quantities" as one that consist of aschedule of items of work to be carried out render the contractwith quantities entered against each item, prepared accordancewith the standard method of measurement of building works.
- 6.BESMM4 R opened that "contract drawing depict the detailsand scope of the works to be executed under the contract, theymust be prepared in sufficient detail to enable the contractor tosatisfactory only price the bill of quantities.
- According to Willis's is "budgeting" is a targeted financial statementor document of the cost of a proposed construction project.

CHAPTER THREE

3.0 TAKING OFF PROCESS EXPLAINED

The order of taking-off as described [Seeley 1988] largelyfellows the order of construction to simplify the work and to reduce the risk of items being missed, but it's not necessarily thatadopted in standard method of measurement. The measureditems will then subsequently be solved into bill order which canembrace the work section in standard method of measurement to secure uniformity and assist with a number of skin work sections such as 1.5 (excavating and filling) 1.11[mixing, casting turning insitu zone), 1.14[brick andblock walling].

In a simple building the order of taking off could take fromshown in the following schedule, although it will be appreciated that this may be varied to suit individual preferences and specificlocation.

Section of work copied from [BESMM4R]

- Groundwork and substructure or foundation work up to andincluding damp-proof course
 (DPC)
- 2. Brick work including face work
- 3. Block work
- 4. Fireplace, dummy breast and stats (where appropriate),
- 5. Floors (solid and suspended)
- 6. Roots (pitched and flat, including covering and rain waterinstallation)
- 7. Windows, including adjustments of-openings
- 8. Doors, including adjustments of openings

- Fittings and fixtures
- 10. Stairs
- 11.Finishes(walls, ceiling, and floors)
- 12. External walls including. Roads, path, fence, and graced areas.
- 13. Drainage work.

3.1 WASTE CALCULATION

Except in simple cases dimension should not be calculatedmentally. Not only with the risk of error be reduced if the calculations are written down they will be calculated/ checked, butanother person can readily see the origin of the dimension. These preliminary calculations known as "waste calculation" are madeon the right hand side at the description column. They must be written definitely and clearly, and not scribbled as If they were acalculation worked out on scrap paper the term waste are needed for this part of the column might be through simply "useless" but infact implies a means to an end. Every effort must be made to commit to writing the train of thought of the taken-off. Wastecalculation should be limited to these necessary for the clearsetting down of the dimension by the taken off, and should not be the place of squaring.

HOW CERTAIN DIMENSION ARE EVALUATED

LENGTH
91.29
8,050
6,110
14251.29
WIDTH
25.69

		7,200
		5,700
		12925.69
1		

(Copied from building explained by SEELEY 1988)

3.2 DIMENSION

The dimension on measured from the drawings by the take-off using paper ruled as follow:

1 2 3 123 4			

(Derived from will's element of quantity surveying length edition)

The column [No 1 of course normally numbered] has beennumbered here for identification. Hence, the column 1 is called the time using and it is used in the multiplication of figure inmeasurement. Column 2 is described as the dimension column inwhich the measurements are set down as taken from the drawings column 3 is the squaring column, in which are set outthe calculation volumes, areas, etc of the measurement in column

- 2. While lastly, the column 4 is the class frication column in whichis written the description of the work to which the dimension applyand on the extreme right hand side of which [know as waste]preliminary calculations and collection are made. There are fiveforms of dimension in understanding the dimension set down bythe taken off and this include:
- 1. Cubic measurements
- 2. Square or superficial measurements

3.Linear measurements

4. Enumerated items

5.Items

(Ref: opined from Willis's element of quantity surveying tenthedition).

3.3 DESCRIPTION

According to BESMM 4 R who quoted that considerablecare and skill are required to frame adequate and yet at the sametime, concise descriptions. This is probably the most difficultaspect of talking off work and one which the student should takegreat pain in master. The wetting of description forms animportant part of editing the bill.

In addition to covering all the matters detailed in the standard method of measurement of building works [Besmm 4 R] the descriptions must include all the information which the estimator will require to build up a realistic price for the item in question where there is doubt in the mind of the estimator as to the full nature and / or of the item being priced, then the description is lacking in some essential features. Description can

	91.29			
1		12,000		
		13,500		
		11,700		
		4) 37291.29		
		AW = 9322082		
	99.14	under side of coric 12,1050		
	1.00	1010		
	1.01	Excavation, Trendiest width Exceeding		
1.	L	0.30m maximum depth not exceeding	1 1 1	- 1

0.30m maximum depth not exceeding

2.00m

3.4 DEDUCTIONS

Where deduction is to made, the description is preceded bydeduct which is often abbreviated deduct When carelessly writtenhas been known to be mistaken for add. It is of course, important tomake quite clear whether a measurement is to be added ordeducted and some surveyors always put the word "Add" for any description immediately following a deduction, others only when afollowing addition is coupled to the deduction by "& as in theexample below. In taking off on traditional paper, it is important thatall deduction in a series of coupled description are clearly marked "deduct" all doubt whether any description is an add or deducthereby being removed. An example of deductions follows:

1.0Deduct			
2.0	One and half block wall face work one side		
	&		
Deduct			

Emulsion plaster general surface

internally

(Written and drawing taken from Willis' element of quantity surveying tenth edition).

3.5: SQUARING

A checked made of the waste calculation and their correct transferto the dimension. The dimension are then calculated or "squared" and where bracketed together are totaled subtracting any dedication that follow immediately. The squares and costs are then checked and ticked (Copied from element of quantity surveying by Willistenth edition).

3.6 ABSTRACTING

In spliting up the building into its constituent parts formeasurements, the taker-off follow a systematic method but therehas to be a repetition of the same group of dimensions there will beitems that will appear in different sections of the bills which is usually divided according to the sections of the SMM (Standard Method of Measurements).

Under the traditional method of processing dimension, thefunction of the abstract was to collect similar items together and toclassify them primarily into the SMM sections and subsequentlyaccording to certain accepted rules of order and arrangement, to putthem in a suitable sequence for writing the bill The abstract wasprepared by coping the description and squared dimension from thetaken-off into abstract paper in a tabulated form as nearly aspracticable in the order of the bills.

The need for an abstract was eliminated by the use of the cutand shuffle system. The principles behind the abstract were retained but the order was affected by noting each item on a separate slip of paper and sorting them into the correct order, as described.

(Copied Willis' element of quantity surveying tenth edition)

3.7 ABSTRACTIONS

2. Jst

Under this traditional method of taking off abstraction can be extensively used to shorten description and individual words.

However, in the case of cut and shuffle taking-off such abbreviationare restricted to solve slip description in the examples that followabbreviation have been kept to a minimum.

A special note might perhaps be made here of the abbreviations "ab" for "as before". Where this is used and mightrefer to more than one item it always refers to the last types of 44.door measures, if there had been several different varieties of however, there is any doubt it is also best to add to the briefdescription sufficient for it to be identified or to say '44mm' door abcol. 146. The reference in the column number being a definite guideother abbreviations also includes;

1. Med - Medium

3. Jt - Joint

Joist

4. Irreg - Irregular

5. Mo - Moulded

6. Ov'll - Over all

7. O.b - one brick

8. m/ce - Mortice

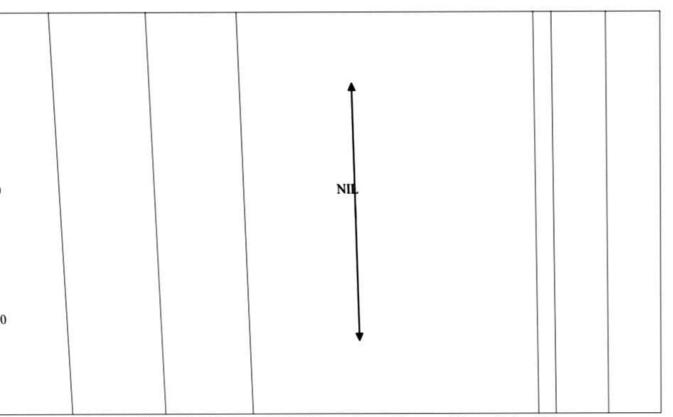
9. A.b.d - as before described

3.8 NILLING

Nilling is simply defined as the method of canceling wrongcalculation or writings during taking-off process. Instead ofcrossing or shouting the calculated or written item "Willis' best inthis process, there are three listed areas where Nilling is used isapplied in taking off which include;

- i. On waste educations
- ii. On figured dimension
- iii. And on figured descriptions

An example of Niling on a dimension sheet on taking off drawnbelow:



Bill of quantities usually known as the BOQ contains required complete analysis of labour, materials and plants required, contained outlined and defected in the architects and civil engineer drawings and details and accurately representing the work to be executed and obtaining the cost of a proposed project before it is been carried out

PURPOSE/ FUNCTION OF A BILL OF QUANTITY

- First and foremost it enables all contractors tendering for acontract to price on exactly the same information.
- II. It limits the risks element borne by the contractor to the ratebut enters the bill and there by results in move realistic andConnective tenders
- III. It prompts the client and design team to finalize most projectparticular before the bill is prepared and ideally based on fullproduction drawing and project specification
- IV. After being priced it provide a satisfactory basis for thevaluation of various and adjustments to the final account.

V. Priced bills also provide a useful basis for the valuation ofcertified stage payment throughout a contract.

VI. It gives an itemized list of the component point of each part, and could from an approximate checklist for the successful contractor in ordering material and components and accessing L.S requirements of labour and other resourceand in progressing the work.

VII. After being priced, it provides a good basis for theepreparation of cost analysis for use in the cost planning offuture projects

3.10 COMPOSITION ANAD PREPARATION OF BILL OFQUANTITIES

According to Willis's the element quantity surveying 1998.which says the traditional preparation of a bill of, quantitiesdivide itself into two distinct stage which are listed as follows:

- The measurement of the dimension and the completion of the descriptions from the drawing and specification. Thisprocess is commonly known as taking - off.
- the preparation of the bill: this involves the calculation ofvolume, area etc (squaring the dimension) traditionally this, was followed by entering the description and the squareddimension
- on an abstract (abstracting) to (collect descriptions and thesquared dimensions] NILCollect similar items together and present them in a recognizedbill order from this abstract that draft was written (billing).

3.11 STAGES IN BILL OF QUANTITIES

There are four distinct stages in the preparation of a bill ofquantities that are listed below

- Talking- off
- II. Squaring

III. Abstracting

IV. Billing

Conclusively, for a standard and acceptable bill of quantities tobe provided / produced all the above discussions in the chaptermust be carefully dealt with.

3.12 METHOD OF BILL PREPARATION

There is several method of preparing bill but five methods arementioned and explained her.

And these are:

- I. Activity bill method
- II. Annotated bill method
- III. Cut and shuffle method
- IV. Elemental bill method
- V. Nm operational bill method [derived from iv or H. Seeley[1988]

Means while, in the course of this study the section order wasadopted while the bit was prepared in all elemental forma: thereason is that it's the best order to pricing and making enquiries

Also it is suitable on the cost analysis purpose and post contractarrangement. Lastly is the best understanding for any taker - off

EXPLANATION OF THEMETHODABOVE BILLPREPARATION METHOD

ACTIVITY BILL METHOD: This bill was a development of theoperation form list without the separation of labour and materials. Itwas sub- divided into section based on the activities or operationderived from a network analysis The work was measured inaccordance with the standard method although, on site and off siteactivities were usually separated and special equipments and components and the work of nominated specialists could be groupedin [section) NIL} separation bills.

[Copied from Seeley 1988 building quantity explained]

ANNOTATED BILL METHOD: it is possible for the bill ofquantities to gives the contractor full details of the quantity typesand quantity of materials and labour. Never the less, there are always some billed items whose location in the works is not readily identifiable and it is most useful to leave a note against them in the bill giving their location. This approach has resulted in the production of annotated bill.

Annotation may be prepared in a separate document from the bill of quantities or they may be bound in at the back of the bill. This provides the clearest and most helpful method.

OPERATION BILL METHOD: This was developing by theebuilding research establishment the 1960's and they sub – divided the work into site done by a distinct from Tracie's or element.

Operation was defined as work done by a man, or by gang of mensome definite stage in the building process. It involved infundamental divergence from a traditional bill, with the separation of labour and materials items and required significant changes in the rules of measurement prescribed in the standard method.

Operational bill were both bulky and costly to produce. Onother hand typing and printing of the bill could be stated at earlierstage and there was a reduction in the amount of editingnecessary (derived from Seeley 1988 building quantities explained).

ELEMENTAL BILL METHOD: This bill method is divided intoappropriate building elements instead of the normal worksections. Hence excavating and filling mixing walling are replacedby such bill headings as substructure, external walls internal wallsand floors. There are benefits to be gained by using RICS buildingcost information services (BICS]Element and sub elements to secure standardization and assistwith planning and cost analysis work.

Copied from Seeley 1988 building quantities explained].

CUT AND SHUFFLE BILL METHOD: the system was developed in the early 1960's and by the late 1970's was probably one of themost widely used methods of entering dimension and description has been aptly described as a rationalized traditional procedure. Unlike abstracting and building there is no universally accepted format and many different paper rulings and methods of implementations are used in different offices.

The cut and shuffle system is designed eliminate the preparation and checking of the abstract and draft bl Hence there is only one major written operation namely taking off compared with the drawing to illustrate a normal cut and shuffle paper and ruling is below

3.13 RULES OF BILL

The order if billed terms will be the same as in e abstract as far as practicable and they will generally follow the order and terminology item to be price in the bill is referenced by letters and number in first column It will be noticed that all work in the below description are written in full.

Wrought Mahogany

	Starting, picture eails, architects and the like	0	
F	25×150 mould: screwed with bass cup and		
	screw:		
	Plugged to mansory	71	m
G	Extra over for mittres	16	nr
н	Extra over for ends	12	nr
N	25× 20 ditto	22	m
K	Extra over for mitres	8	nr
Taken from Seeley 19	98 building quantities explained		

CHAPTER FIVE

SUMMARY RECOMMENDATION AND CONCLUSION

5.0 SUMMARY

The research was carried out to estimate and budget for a proposed student Hostel project A case study of college Development and take off project residential development for pastor Paul, Ilorin south local govt. area Ilorin kwara state.

5.1 CONCLUSION

Conclusion, we observed that estimating and budgeting for residential development for pastor Paul, Ilorin south local govt. area Ilorin kwara state.

- A. . It enables a basis for the valuation of variations, which often Occur during the progress of the work.
- B. It enables all contractors to tender for a contract to price exactly the same information with a minimum of effort.
- C. It gives an itemized list of the component of the building with a full description and the quantity of each part and this may assist successful contractor in ordering materials and accessing his labour requirement for the contractor.
- D. It serve as a Guideline for any contractors
- E. After items are been priced, it provides a good basis for an analysis which subsequently will be of use on future contract in cost planning work.
- F. Fully described and accurately represent the quantity of the workers to be carried out.

5.2 RECOMMENDATION

From the analysis of death in chapter of the project, the following recommendation should be made

- a. The quantity surveyor should provide an estimate during the preliminary stage of the project in order to forecast it's likely cost
- b. It is important in order not to overestimate, proper estimating procedure should be used and the layout of the estimated should be clear and logical

PROPOSED DEVELOPMENT OF RESIDENTIAL BUILDING

FOR **OLUBIYO OLUFEMI**

OBAGBAJA ESTATE, ALIARA, ILORIN, ILORIN WEST LOCAL GOVERNMENT AREA, KWARA STATE.

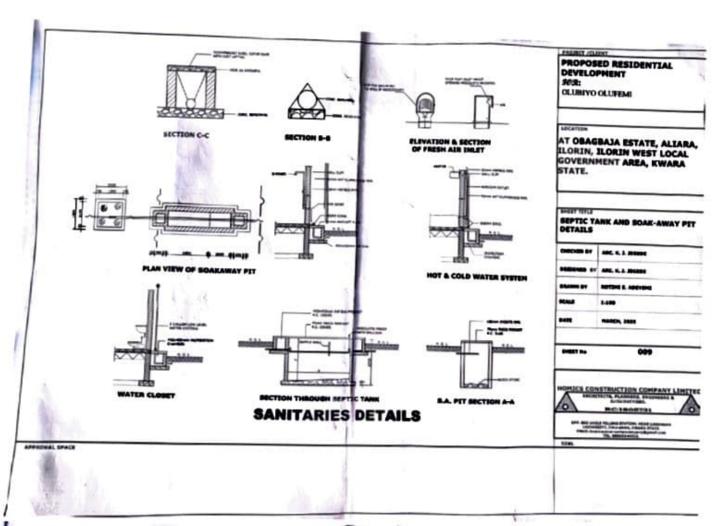
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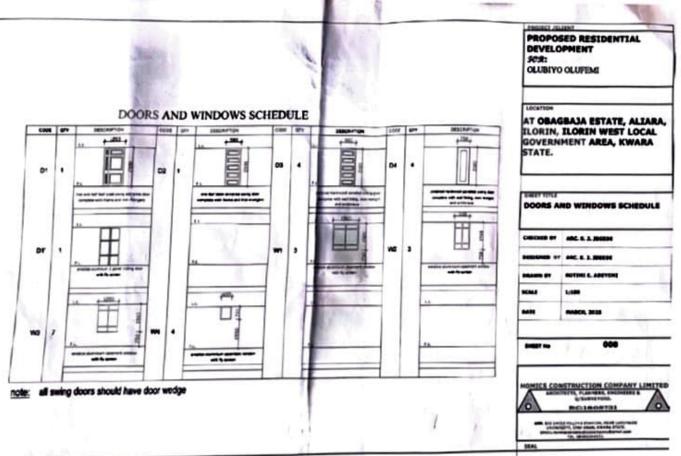
MARCH, 2025

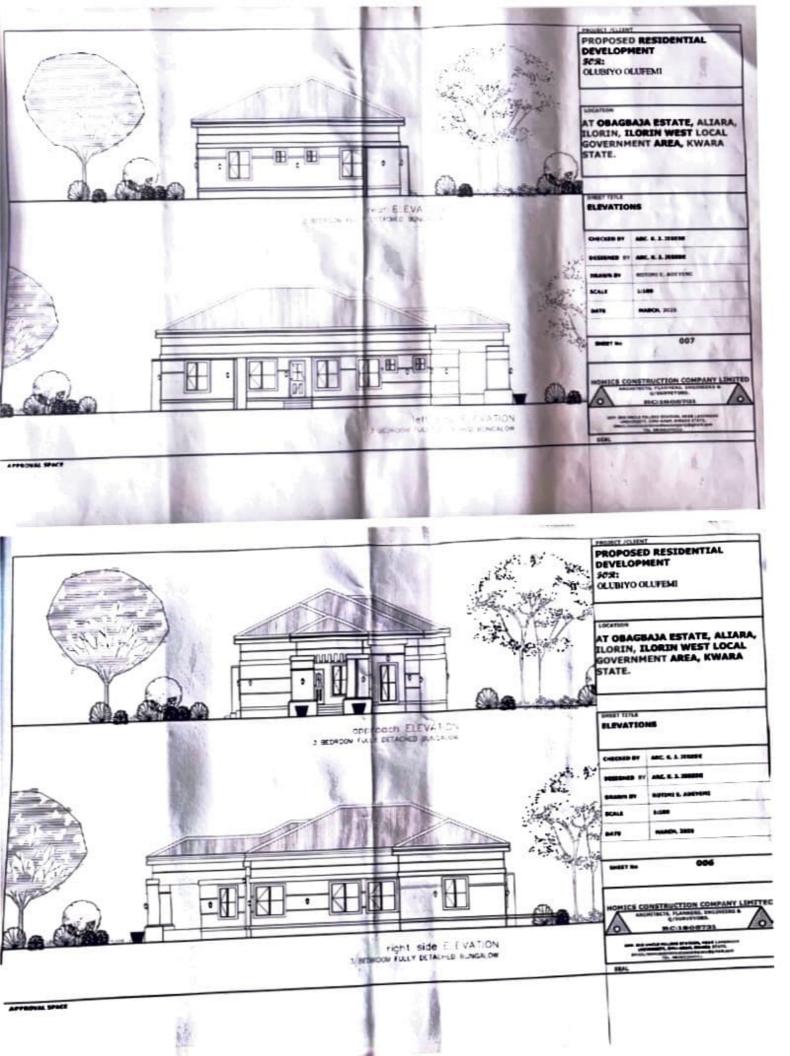
HOMICS CONSTRUCTION COMPANY LIMITED

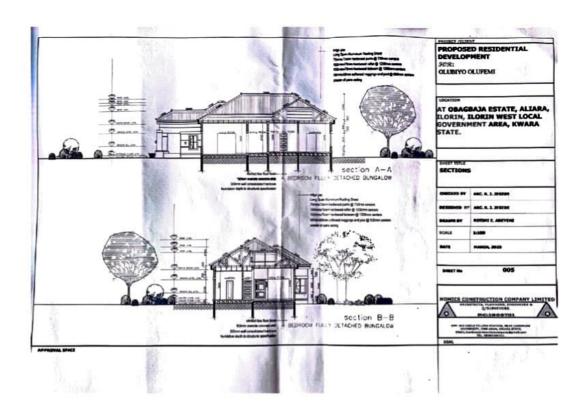
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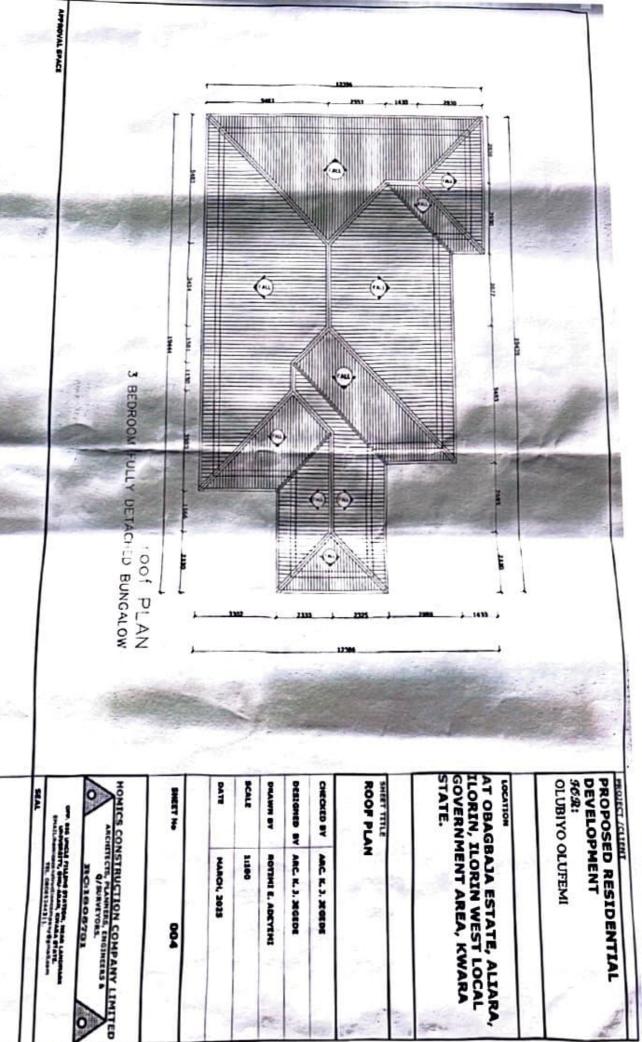
UNCLE FILLING STATION, NEAR LANDMARK UNIVERSITY, OMU-ARAN,

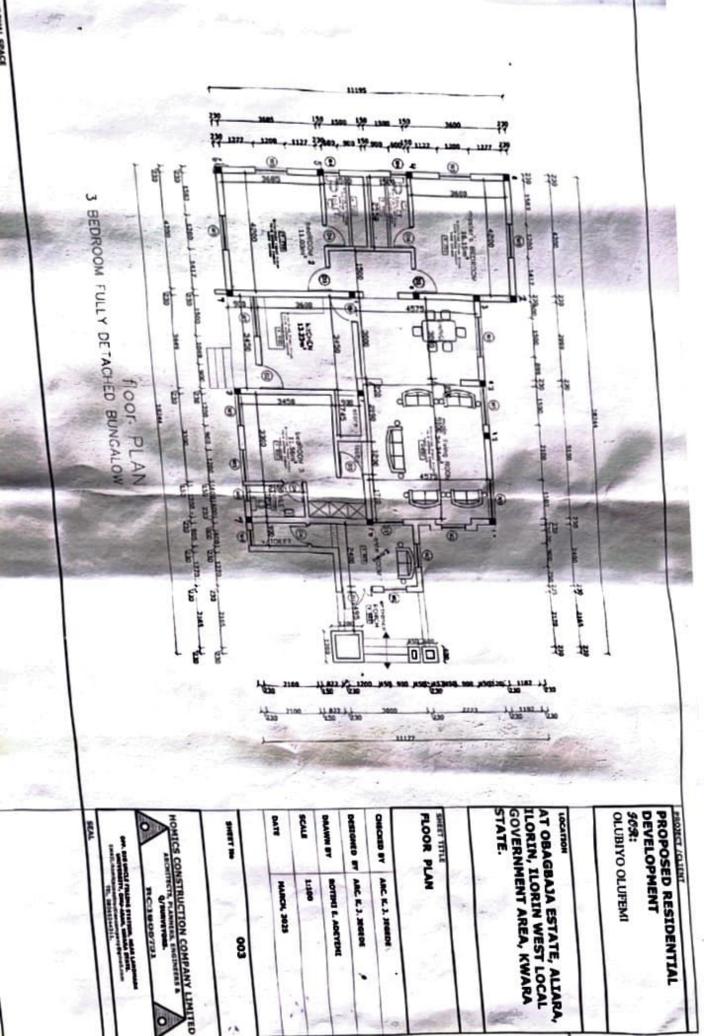


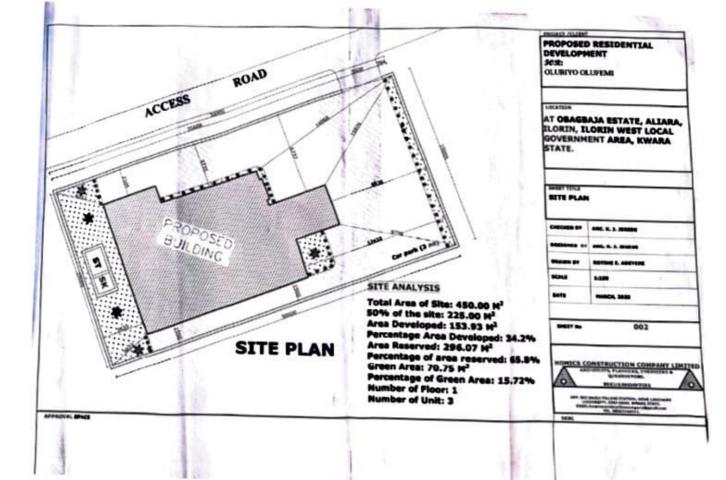


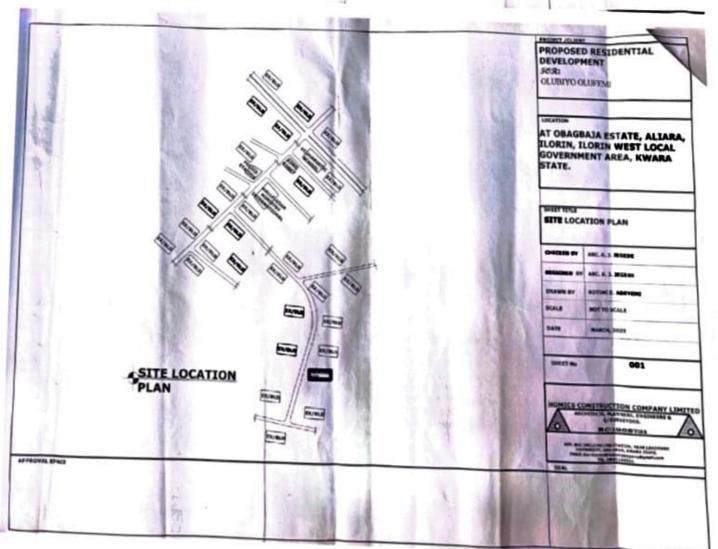












	- Manufacture country
Ditto of ways	1 20 1.08 lobby 2
1.20	3.15 3.30 11.32 Bedrooms
2.1: 7.52 03	2.40 7.20 Ard room
970-25	1.20 2.52 Toilet
15.30	0.70 1.87 Visitus Toilet
Floor Angres	3.00 4.00 Entrance
32 mm officer Const	# HOOKBOXEMM
and Edding to seem	VIRONY Commentor
Sub Segund finings	firm of approveded and protect on
(1-28:1 2-13)	Separately you conting
3.60 K.D. Maples Bedison	Cooper estate with skilling in
1.00 7.65 Trilot	Gostin while height
7.69 1500 Bedroom 2	Alct welth (1.22+100
3-23 50 495 long	Protection
2:00 N.34 Dinning	Protest end works
7-6- 12-42 Kitchen	Water Section of
5.12 4 56 23.26 Cun, Room	
175 160 Store	

			DESCRIPTION	T	D	S	DESCRIPTION
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			3000	1	10.80		3000
	10-15		4 535	1	200	22.48	10,000
	15.15	45.45	15,150	1	3		10,000
	3.00		10,10	1			No.
				1			Vistors Toilet
			Mayne Bedroom	1			2100
			4200	1			900
	400 204		2000	1	6.00	10.0	2/3000
	14-40		2/2200		3.00	18.00	6000
	3.00	43.20	14,400	1			stroilet L
	1		Bedroom 2				2550
			4200	1,	8.10		2/4050
	- 1		3685		3.20	Ma e.	
	15:77		2/3885		3.00	24.84	8100
	3.00	47-31	15,220				
4							Total 2
			kisted en				1200
			3450		6.60		2100
		6	3600		3-00	19.80	273000
	14.10		2/7050				6600
	3-60	42-30	14100				
							1066
	4		Store				1200
			900				900
			1745		4.20	12.40	2/9100
	5.27		12,645		3-00		4200
1	3.00	15.97	5,290			42093	-7200
			1				

Ť	D	5	DESCRIPTION	T	D	5	DESCRIPTION
			n-1 33,235				External Wall
		7 3	32,540		97-99		L = 18240
		Cot.	relet letered		300	176-61	
		5	5.248				58,892
			2,5 66 7,838				Ditto operago
	7.00 264		, 460		1-20	1-44	B1
			88,184	3	1.50	4.50	141
3/	.5%	Dist	gangs	3)	0.90	4.05	
	.0 6:	21 24,		7)	1.20		
	50 40	5 1/1		4)	0.60	12.60	
	.20	, الما				1.68	
4	70 1.6						Internal Hall
Ī	1.20				18:30		Ruom Light
4	0.90				3 00	54.90	8/5/50
	70						Bedrooms 3201
	0.75				30	40-51	7450
1	1-10 6-3	100					276250
	-	2					

	DESCRIPTION
Stirrup to link ylan	3/1/0.92 35 70 Wi
L = 230	3/00.9: 27-60 2/2
Ens 3/51 53	*/190.92 42-28 W.
4/ 180	1/1072 73-12 NY
720	30-92 11-04 D/
Adl Hot. 200	190-92 9-20 02
720	9/19/0.92 34.80 53
	V170-72 36.50 04
W. = 200/2400	26974 × 0-61240
12+12 1300	
16 = 201/180	165.20
9+1 =10N	Roof Benn
Wo = 200 Join	
The state of the s	Reinforconst Concur
#1+1=1200	(1:210) Concrete in
114 = 2091500	took been
871 = 900	11.165 1.1.17
	Extend 57,938
1) = 200/2100	94.21 Internal 33,225
11+1=12~	0.30 3000
D2 = 200/1800	2.23 6.50
9+1=10nr	94,213
D3 = 200 Tiere	Block Work in
9-11=10n.	Super Afrecture
DH = 200 JIGO	225mm Woch
	Galeral 57,929
9+1=10m	Lass Hardenas
low the girl relations	Concrete
Schoole	13
11-11/13 2-0-07	35,278
A COMPANY OF THE PARTY OF THE P	

T	D	5	DESCRIPTION	T	D	5	DESCRIPTION
	1.20 8.23 0.23	009	D2 L 2 900 P3 % 1880		2.40	3-21	6-d1 1-d2
7	1680 0.17 0.23	0.38	53 L = 900 10 % 900 1800		1.50	4.14	W.s.
4	1-69 6-23 6-23	0.35 2-7 ₀	B4 L = 950 Add 2/100 900 1650	y	0.61 1.60 0.61 1.60	1-24	
			Form Work to	4	-		DH
			3 23.				Reinforcement in 11 lintel 12mm Light tentile reinforcement box in
			3/2 = 2 690 Sour deceded formula to sides and suffet of Untel (1.11:15.1.10)	20	1.00	21.6	1.13
	13	2-40 0-64	(11,721,14)	44	1.65	28.80	Di Di Di

	Account Atom		• DESCRIPTION
	Supo Structure		Cookefe la Column
	Grade In Columbas)	16	Relatorce Ingita
	Concrete in becomblished	3.00	Concrete 11214
	com (m)	0.23	exclosing minimum
	Concrete in real bear	(2) 0.23	2.54 Strength of 21 Kes
	Form Work		In 28 days
	Form West to Silk of		
	Coloner (rt)		(1-11:512-1-1)
	Sorm Work to solve of		
	Suffit (otal secon (no)		Form Work do Sile
	pide of routhern(m)		of Column
	Reinforcement Kylhous		230
	Rentorconnet in Colon		232
	Kytten		2/460
	Actinforcement in line		920
	been kyllen	100	
	Relater Concept in cont	73.00	Soun freeted Som
	bean hoffen	0.92	44-16 Column
	Stirruplicaks ky Has		(1.11)1.13.1)
	Concrete in (lintel (4))		1.(1:1.13.1)
1	Relator Conest In (1961) Hydrus		Reinforcement in
1	0		Column.
	Block work 23/ wom		A CONTRACTOR OF THE PARTY OF TH
	Door and while at		
	Finishing		Con 25 2,950
	6/		add
	Well Shirting (m)		2/1/1 288
	(elling Swany (r)		and 527
	floor finithing (m)	164	
	Philips	9/2.54	226.55 12 mm Ligs yield relationed
	Decomption	201	mal 12 har to all yield relationed
			No-886k3
			7-0-18-7-3

0.23 Brekalli, to present entire production prist on
57-90 Depte Depte Brekelling to premium portant production print on
general gusface of

-	-	5	DESCRIPTION	Ť	D	5	DESCRIPTION
1	D	-	Base Sype #				High yield Steelber
			3 4				lean & both Colors
4	0.15	30.00	even .				Ma / 12hol-
4	-		50 50				x0.617kgl-
4	2.69		400 550				237.40 XO-CN
	0.94		288 288				20.15
		41.96	838				201
			-	l			
				1			Hir Mish
			Link /sting	l			BRC fastile Some
			- 5		18-24		strengen 2.92kg/n'
- 4					-	-	laid as detailed in
						1	Menufectoral princed
			16				(1.11:371)
			Con-Case = 25mm	ı			V
			leigh a 225				Mansory
			1011 3/25 50				Black Work to State
			4/175	1			Structure
			912	ı			External anti= 57.9%
			Land For 200				Internal Girth = 33,255
			Land ton goomm	ı			height = 1500
	i i			ı			100 150
			No Required	ı		1	0/c = 234
1/10		279.40	L= 2800	1			1200
10	1.70	279.40	See 300	1	57.91		Wheated hollow sand
				ı	1.20	625	Exist block est, filly
			12.541	ı	37.24		with Conute (15/10) 43
			€ 1341 = 14.	ı	1 20	32.5	17 Brook proceed be duled and
				ı		109.	on spined to Court and grand
				1			Structure for to foundate
	1						(1.14:1-2.1.1)
							Herait Trial

T	D	5	DESCRIPTION	T	D	5	DESCRIPTION
54 × × ×	1.20	4.50	Form Work Stales Of Chame Bree Stales of Column Lage A. C. Shame Light Width = 400mm (1.11:3-1-00)				Reinforcement To Column longes
2)	18-24	-	Edges of Overthe bed Sour form work to colors of horizontal (overthe concrete hed) The Sources high width = 1500000 (1-11-14-1-0)				Reinforcement details (lingth & Spacing provide by-the Structure) engineer litge girel steel bors 12 me & Lot en Column bases Rose Lo
7	0.70	20.52	Sides of Isolated Column Sides of Column L 125 W 225 2/450 900				100 Add Look 269 468 Basi tyre2.
							1200 50 1150 230 1430

T D	S	DESCRIPTION	T	D	5	DESCRIPTION
1.20 1.20 1.20 0.45 0.46 0.46	0.58	Concrete in Column Base Reinforced insitus Concrete mix (112'4- 22mmay) to Colomo Lose; exceeding them thick is structure (1-11-2-2-2)	ľ	0.23		Vertical Work Concrete to Column Depth = 1050 Lest Whitey 150 So Und Goo Add 450 1200 Returned Insitu Concrete mix (1:2:4- 20mnggg) Vertical work
57:9 33:23 0:15		Concrete in allers He Plate Inside Goods Mix (11216 - 20 mays) Lorizontal work in overstee Led n-e 300 mm offick in Structure Fruredon Unbinded Underse (1-11-2-1-1)		6.23	1.21	Information colors Existenced (1.11.5.2.1.1)

T	D 5	DESCRIPTION	T D	5	DESCRIPTION
3.	5 1.7	Bedroom	0.23 0.23 0.05	0.04	CBI
2.1	5 1.0	s Art wom	0.05 0.45	0.07	CB2
0 10	0-3	r Toilet 2	0.05	0.01	CB3
0-15	0 -21	Visita Tollat	0.60	0-02	СВН
5.12	18.63			0-14	Coosed in fundation
		D.P.M	57.99		Plain losite Controle mix(1:216-Jonneys) 2300methick pour Jon
18.21		Polythers loosens high dorsity polythers with proving members	33.25	9.10	or egainst enote sufer (1.11.1-1-2-1)
ģ		Insite Concrete what	8-23	5.20	
		Mass Concrete, Concrete in building			
		Plain Insitu Concrete Mix (12418—22mmgg)	,		
	1 1	50mm ethick provided or against the Easte Sentice (1-11-1-1-2-17			
		(1-11-11-217			

D S	DESCRIPTION	T	D	5	DESCRIPTION
	17,495+15,740 33,235 Width of Excaust				Imported filling. Note: Offendation layout adopted for the Messurement for filling to make up level 150mm
	3/325 2 675mm Depte 1,050		4.20	2.27	Hickory Imparted laterite (my by 0-1870) (1.5:12.1.1) Master Baltonni
	Conde 450 Topant 150		2 · 55 1 · 50 1 · 15	1-15	Toilet 1
57 . 9r	Excavele for founded		3.69 0.15 3.23	2.5	3 Bedroom
	92 Ptripped less notexess 2-vomm depp	4	0.15	0.9	o loby 2
33-25	\$ (1.5:6.2.1		3-00	0	
0.30 6	.78 Fire of thickness exceeds	~	0.15	-11.5	
	5000m (1.5.11.2.2	>	5.10	3.	47 Room
			0.1	5 0.	24 store
			0.5	6	.16 6th 2

-	D	5	DESCRIPTION	T	D	5	DESCRIPTION
÷			Site (Tegrace				Strip foundation
			Clear site of bushis				No.22
			Cutton down 12.1.				8 2 2
			and Setall frees and				17 1902
			CAN				
			awy for six				1 th.
			(1.5/4/1.0)				4
							1-1
			I W				A Day
			18,244 11,195				(Arragina)
			and the				6750mm
			The state of the s				External Girty
	18.61		450 450				L 18.249
	11.65	217.74	18,694 11,645				
			(217.74)				11, 175
			(21114)				2/27,878
				1			101 90
			\$				Carno his
ı			C				57,978
١			Exeruely Negatisti				
ı			dopsoil every depte			1	Internal Girth
١			note executly outsin	ı			# V
١			(1.5.5.1.0)	1			1600 1500
1			l A	1			2557
			Refoling excuseted	1			600 3490
			Freil Leto temporary	1			600
1	18167		portion beginning	1			2190 120e
	11.65		cliphance from softe	1			1205
1	0.15	326	Cue 30m				1200 520
1			32.66				1415
_	_						12455 18740

T	D	5	DESCRIPTION	T	D	5	DESCRIPTION
			Taking-off for				* Deep front Members
- 1		(Martitles for a				Insidu Concrete Wark
		19	ropered Rented and				Marine Control of the
		1	willing for				Mass Concrete
			DEURINO BLUTEM		- 1		- Concrete in buildings
		e.	ecated at Objection				· Concrete in found day
		枪	profe of the live				- Concrete in Column Sons
		L.	est beat court area				CONTRACTOR AND ADDRESS OF THE PARTY OF THE P
- 1		K	Warm State. In				Cit in Step bead
		9	ccordence do				The Married or Park 1 1 1 1
		L	ESMMUR				Lacretto In Cotania
		77	speed by				Form Work
			Trone '				- Sides of Column base
		h	Indeir sta				La lupe, I
			ate!				Edges at OVO SHE be !
							- Edge of Styled (1)
		1	aking-off 114				* Reinforcement
			Acres of recture				-To Columbiase (4)
			Executing and filling				STA C.L. CU
		le:	gite Clan				To Column (4)
			The street of th				- link (story) ()
		100	Con He				- Wire Mest
			THE COLUMN TO A STATE OF				Massey
		100	Day (Not)				* Black Wark (m)
		1	oundation for all				Wall - External
		- 2	Herp foundation (not)				
			disposal (MY)				L boteomal
		1	Sec- wated materials				- Hep
			The state of				Firstings
			Sack Alling (no)				# Hell Anithuga
			art alling (NP)				explered rendering
			mywed Elling				Decuration
		-1	atorta Rilling (mi)				
		-1	andere Elly (no)			1	Stricting of general
	- 4	1	(ve)				- Wall (m')

			The state of the s			DESCRIPTION
			Ceilling finished	3.60	14.34	Dinnies
			Plan Fendering flatting	3.45	12.42	kitch w
			to horizoned State		23-24	Civing Room
			exceeding Conso with	1.75	1.60	geore
			d 1.28.7.200	3.45	1.08	lesty
			Fyre and apply	3.00	11-39	Belian)
			Place roudering to	2.10	7.20	Art room
			Congestal Suffit of Suppended State;	2.10		Usiters Toilet
			guest of & visite	3.00	4.50	Contrance
			Sportland emulsions	13.0	123 30	
			Seal of suspended			
	4.26		wide			
4	0 - 5-5		Masters Bedroom			
	420	15:50				
	3.23		lothy			