

**PROPOSED GOVERNOR'S RESIDENCE IN
KAMARINY SHOWGROUND**

FOR

**THE COUNTY GOVERNMENT OF ELGEIYO
MARAkwET**

BILLS OF QUANTITIES AND TECHNICAL SPECIFICATIONS

JUNE 2015

**PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY
GOVERNMENT OF ELGEIYO MARAKWET**

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SECTION 1 : PRELIMINARIES

		Amount (Kshs)	
A	<u>PRELIMINARIES AND GENERAL CONDITIONS</u>		
	<u>PARTICULAR PRELIMINARIES</u>		
A	<u>PARTIES TO THE CONTRACT</u>		
	<u>EMPLOYER</u> The term " The Employer " wherever used hereinafter and in all contract documents shall mean The County Government of Elgeiyo Markwet P.O Box220 - 30700, ITEN		
B	<u>CONTRACTOR</u> The term " The Contractor " wherever used hereinafter and in all contract documents shall mean the person or persons, partnership, firm or company whose tender for the Works has been accepted, and who has or have signed this Contract and shall include his / their heirs, executors, administrators, assigns, successors or duly appointed representatives		
	<u>CONSULTANTS</u>		
B	<u>ARCHITECT</u> The term " The Architect " wherever used hereinafter and in all contract documents shall mean Afritects Architects, Architects & Project Managers , P.O Box 8096 – 00100, Nairobi		
	<u>PROJECT MANAGER</u> The term " The Project Manager " wherever used hereinafter and in all contract documents shall mean The County Works Officer, Government of Elgeiyo Markwet P.O Box220 - 30700, ITEN		
B	<u>QUANTITY SURVEYOR</u> The term " The Quantity Surveyor " wherever used hereinafter and in all contract documents shall mean -Continental Quantity Surveyors - Africa P.O Box 53034 – 00100, Nairobi		
	<u>STRUCTURAL / CIVIL ENGINEER</u> The term "The Structural / Civil Engineer" wherever used hereinafter and in all contract documents shall mean Edcons (K) Limited, P.O Box 19721 - 00100, NAIROBI.		
	Carried to Collection		

		Amount (Kshs)	
A	<u>SITE</u> The site of the works is in Kamariny Showground, Iten in Elkeiyo Marakwet County The proposed works generally construction of a 1 no. massionette The Contractor is strongly advised to examine the drawings and visit the site by appointment with the Employer and thoroughly acquaint himself therewith as to its nature, position, means of access, position of power and water supplies, nature and position of any existing buildings or any other matter which may affect his tender. No claims arising from his failure to comply with this recommendation will be considered. The Contractor shall obtain the approval of the Architect on the sitting of all temporary buildings, spoil heaps, temporary paths and storage areas for materials. The Contractor must obtain the Architect's approval and directions regarding the use of any materials found on the site. When such material is used, credit shall be allowed against the measured quantity in the Bills of Quantities, unless otherwise agreed.		
B	<u>EXISTING SITE CONDITIONS</u> The site is located in Kamariny Showground , Iten in Elkeiyo Marakwet County. The site shall be accessed through the main access road		
C	<u>DESCRIPTION OF WORKS</u> The works to be executed under this contract comprises the construction of :- A 1 no. massionette comprising of : lower ground, ground , first and attic floors with a Gross floor area - 1250sqm <i>Details description of the works:-</i> <i>Substructure</i> Construction of reinforced concrete strip footings,columns and bases on foundation <i>Frame</i> Superstructure comprises of a reinforced concrete frame , solid slabs ,hollow pot slabs and staircase <i>Roof</i> Roofing consist of a Pitched roof with decra roofing tiles and UPVC downpipes ; <i>Doors and windows</i> External doors shall range from Aluminium sliding doors to mahogany panel doors : internal doors shall be mahogany panel and solid core flush doors Windows shall be wooden windows on external walls		
	Carried to Collection		

		Amount (Kshs)	
	<i>Finishes</i> Floor finishes shall range from ceramic floor tiles, cut mazeras to wood block flooring on all floors .External wall finishes shall be render and paint and cut mazeras facing. Internal wall finishes will be plaster and paint ; Glazed ceramic wall tiles to wet areas . Ceiling finishes will be plaster and paint to soffits and chipboard ceiling <i>Services installations</i> All Mechanical and Electrical installations to be executed by nominated sub contractors <i>External works</i> External works shall comprise of the following:- Boundary wall, drive ways, parking, foul drainage works, storm water drainage and basic landscaping <i>Swimming pool</i> The swimming pool works shall be executed by specialist sub contractor		
A	<u>WORKING AND STORAGE SPACE</u> Working and storage space will be confined to the area designated by the Architect within the plot boundary unless otherwise directed. The contractor shall prior to mobilising the site, get approval from the Architect on his site layout		
B	<u>ACCESS TO SITE</u> Access will be as directed by the Client The Contractor will be responsible for obtaining approvals from the Employer and the relevant authorities, including the police, in all matters relating to access to the site, and will be responsible and liable for any requirements of such Authorities. (SEE GENERAL CONDITIONS)		
C	<u>CONTRACTORS SUPERINTENDENCE</u> The Contractor shall constantly keep on the Works a literate English-speaking Agent or Representative, competent and experienced in the kind of work involved who shall give his whole time to the superintendence of the Works. Such Agent or Representative shall receive, on behalf of the Contractor, directions and instructions from the Architect and such directions and instructions shall be deemed to be given to the Contractor. The Agent shall not be replaced without the specific approval of the Architect.		
D	<u>CONTRACTOR'S OFFICE AND SHEDS</u> The Contractor shall erect and maintain temporary office accommodation for his own use and ample temporary water tight sheds for the proper storage of materials and for the use of artisans, including removal on completion or when ordered. Floors of sheds shall be at least 150 mm above ground level.		
	Carried to Collection		

		Amount (Kshs)	
A	<u>SERVICES FOR CONSULTANTS</u> The Contractor shall provide, erect and maintain a raised lock-up office, adequate to comfortably accommodate a site agents office, CoW, a meeting room and any other office facility that is necessary within the site The office shall be furnished with tables and chairs, pin boards, drawing table and drawers for laying out drawings.		
B	<u>SANITATION</u> The Contractor shall provide the necessary water closet for his staff and workmen to the requirements and satisfaction of the Health Authorities and maintain the same in a thoroughly clean and sanitary condition and pay all conservancy fees during the period of the works and remove on completion.		
C	<u>HOARDING</u> Hoarding shall be constructed in corrugated iron sheet (G32) fixed on timber posts and framing; approximately 280m x 2.5 m high		
D	<u>SIGN BOARD</u> The Contractor shall provide one signboard which shall be of an approved size. The lettering on the same for the display of the Employer, Main Contractor's name, Architect and other Consultants shall be printed to the Architect's design. The signboard shall be maintained in good condition throughout the contract period and removed upon completion.		
E	<u>VALUE ADDED TAX</u> The Contractor's attention is drawn to the Finance Act 1993 which requires payment by the Contractor of Value Added Tax on construction services rendered The Contractor's unit rates must therefore be <u>inclusive</u> of V.A.T and any other costs which may arise from compliance with the provisions of the said Act		
F	<u>PRICING OF ITEMS OF PRELIMINARIES</u> Wherever in the contractor's priced bills of quantities no price appears against an item of preliminaries, the value of such items shall be deemed to be included in the price for other items in the Bills of Quantities		
	Carried to Collection		

		Amount (Kshs)	
A	<u>DEFINITIONS AND ABBREVIATIONS</u> <u>WORKS</u> The term "the works" wherever used hereinafter and in all Contract documents shall mean all or any portion of the works, materials and articles wherever the same are being manufactured or prepared which are to be used in the execution of this Contract and whether the same be on the Site of the Building or not. It shall also be deemed to include the work of all other contractors and sub-contractors engaged on the works and of all variations. <u>CONTRACT</u> The term "the Contract" wherever used hereinafter and in all Contract documents shall mean the Tender, Articles of Agreement and Conditions of Contract, Form of Bond, Drawings and priced and signed Bills of Quantities. <u>DEFINITION OF TERMS</u> Throughout these Bills of Quantities, units of measurements and terms are abbreviated and shall be interpreted as follows: "LM" - Shall mean Linear metre "SM" - Shall mean Square metre "CM" - Shall mean Cubic metre "LF" - Shall mean Linear foot "SF" - Shall mean Square foot "CF" - Shall mean Cubic foot "LBS" - Shall mean Pounds (avoirdupois) "KG" - Shall mean Kilograms "NR" - Shall mean Number "NO." - Shall mean Number "PRS" - Shall mean Pairs "M" - Shall mean Metre "MM" - Shall mean Millimeter "R.H.S" - Shall mean Rectangular Hollow section "B.S" - Shall mean current British Standard Specifications published by the British Standards Institution, 2 Park Street, London W.I. England. "Ditto" - Shall mean the whole of the proceeding description except as qualified in the description in which it occurs. Where it occurs in description of proceeding items it shall mean the same as in the first description of the series in which it occurs except as qualified in the description concerned. Where it occurs in brackets it shall mean the whole of the preceding description which is contained within the appropriate brackets. "Approved/ selected" - Means approved/selected by or to the approval of the Architect "As directed" - Means as directed by the Architect		
	Carried to Collection		

		Amount (Kshs)	
A	<u>DEFINITION OF TERMS - CONT'D</u> "(M.S)" - Shall mean measured separately "P.C" - Shall mean Prime Cost "V.A.T" - Value Added Tax "100-200mm" - Shall mean exceeding 100mm but not exceeding 200mm girth and all items described in this manner shall be similarly construed "Necessary/ proper" - Shall mean necessary or proper in the opinion of the Architect Singular and Plural - Words used in singular in all contract documents shall also include the plural and vice versa where the contents so requires "Sub-contractor" - Wherever used herein and in all contract documents shall mean all specialists "Nominated Sub- Contractor / Supplier" - Shall mean all specialist contractors engaged by the employer or approved by the Architect for proper execution of the work or supply of goods and services necessary for the works		
B	<u>DRAWINGS</u> The Drawings used in preparing these Bills of Quantities are available and may be inspected at the offices of the Architect during official working hours		
C	<u>PROGRESS SCHEDULE</u> Before commencing any work, the Contractor shall prepare and maintain an approved Time and Progress chart, showing clearly the periods allowed for the various sections of the works		
	Carried to Collection		

		Amount (Kshs)	
A	<u>FORM OF CONTRACT</u> The form of Contract will be "Agreement and Conditions of Contract for Building Works" (1999) edition as published by The Joint Building Council, Kenya with sanctioning of the Architectural Association of Kenya and The Kenya Association of Building and Civil Engineering Contractors applicable where quantities form part of the contract and the Conditions of Contract are those attached hereto. A copy of the Contract agreement, Form of Bond and Drawings may be inspected at the office of the Architect. If the contractor considers that compliance with any of the conditions of Contract of which the headings are set out hereunder involves expense to him which is not included elsewhere in his prices, he shall set down opposite any such conditions the value he attaches hereto. <u>CONDITIONS OF CONTRACT</u>		
B	<u>Definition</u>	<u>Clause No. 1.0</u>	
C	<u>Articles of Agreement</u>	<u>Clause No. 2.0</u>	
D	<u>General obligations of the Employer</u>	<u>Clause No. 3.0</u>	
E	<u>General obligations of the Contractor</u>	<u>Clause No. 4.0</u>	
F	<u>General obligations of the Architect</u>	<u>Clause No. 5.0</u>	
G	<u>General obligations of the Quantity Surveyor</u>	<u>Clause No. 6.0</u>	
A	<u>Contract documents</u> (i) A list of the Drawings from which the contract Bills were prepared is available in and may be obtained, on request, from the office of the Architect (ii) Contractors may examine all the Drawings and satisfy themselves regarding all details as no claim by reason of ignorance in this connection will be entertained (iii) The Contractor shall satisfy himself as to the correctness of all Drawings and measurements. If the Contractor finds any discrepancy in the Drawings or between the Drawings, Contract Specifications and the Bills of Quantities he shall immediately refer the same to the Architect who will decide which one shall be followed (iv) Figured dimensions will be used in preference to scales mentioned on or attached to any drawing (v) The Contractor is to take the necessary particulars for ordering his materials and work from the drawings and the work in progress and not use the Bills Quantities for that purpose	<u>Clause No. 7.0</u>	
	Carried to Collection		

		Amount (Kshs)	
A	<u>Contract Bills and Contract Price</u> <u>Clause 8.0</u> (i) Bills of Quantities shall be priced in ink (ii) The Contract Bills have been prepared in accordance with the Standard Method of Measurement of Building Works, Third Edition, Metric, 2008, published by the Architectural Association of Kenya, Chapter of Quantity Surveyors, which is available for inspection at the office of the Quantity Surveyors during working hours (iii) Any unauthorized alteration or qualification made to the text of the Bills of Quantities may cause the Tender to be disqualified and will in any case be ignored		
B	<u>Contract Bills and Contract Price</u> <u>Clause 8.0 Cont'd</u> (iv) All items of measured work shall be priced in detail and tenders containing lump sums to cover trades or groups of work must be broken down to show the price of each item before they will be accepted. Lump sums to cover several items of Preliminaries likewise shall be broken if so required. (v) The rates set down by the Contractor against each item in these Bills of Quantities shall, unless there is a separate item for extra labour, cutting and waste, be held to include for waste on materials, carriage cartage, carrying in and return of empties, hoisting, setting fittings and fixing in position, marking and all other labours and everything else necessary for the proper completion of each item and for establishment charges and profit (vi) The Contractor shall be deemed to have made allowance in his prices generally to cover items of preliminaries, expenses in connection with P.C. Sums or other item, if these have not been priced against the respective items (vii) Two blank and one priced copy of these Bills of Quantities shall be furnished free of charge to the Contractor for his own use. One copy shall be kept on the works until the completion of the works thereof, and the Architect and Quantity Surveyor shall at all reasonable times have access to the same.		
C	<u>Contractors site agent and other staff</u> <u>Clause No. 9.0</u>		
D	<u>Clerk of works</u> <u>Clause No. 10.0</u>		
E	<u>Liability against injury to persons and property</u> <u>Clause No. 11.0</u>		
F	<u>Insurance against injury to persons and property property)</u> <u>Clause No. 12.0</u> These risks shall be covered by the Contractor's Third party Policy with an indemnity of not less than Kshs.1,000,000/- for any one accident or series of accidents arising from the same event un-limited in aggregate		
	Carried to Collection		

		Amount (Kshs)	
A	<u>Insurance of the works</u> <u>(Contractors liability)</u> <u>Clause No. 13.0</u> The contractor is required to insure the works under this clause		
B	<u>Insurance of the works</u> <u>(Employer's liability)</u> <u>Clause No. 14.0</u> The provisions under the whole of this clause shall be deleted		
C	<u>Insurance of works (Works of alterations)</u> <u>Clause No. 15.0</u> The provisions under the whole of this clause shall be deleted <u>Insurance of works (Works of alterations)</u> <u>Clause No. 15.0 - cont"d</u> <u>NOTES:</u> In addition to the Conditions of Contract and the requirements contained in the foregoing Clauses the Employer shall include in the insurance policies described above full indemnity for the following items and shall allow for all costs thereof (a) The contract Works and Temporary Works erected in the performance of this Contract to the value of not less than the contract Sum. (b) The Materials on site (c) The Contractor's plant, tools and equipment (d) Professional Fees to be calculated at Ten Percent (10%) of the Contract Sum (e) Escalation/inflation on (b) above for an Indemnity of not less than 15% of the Contract Sum (f) Spare parts, fuel, stores, provisions and property of employees Policy to include and Indemnify the following SPECIAL CLAUSES: (g) Automatic reinstatement of loss. (h) Damage to any existing property (i) The Maintenance period of Six (6) months (j) The fluctuation Clause (k) All site Sub-Contractors (l) All cross liabilities (m) The Principals Clause Any EXCESS Cover required shall be at the sole discretion of the insured for example for any or all of the following:- Storm, flood, subsidence, collapse, etc. Plant and equipment claims, Third Party Claims, Goods in Transit Claims, Or any other claim		
	Carried to Collection		

		Amount (Kshs)	
A	<u>Performance Bond</u> <u>Clause 16</u> 16.2 Sub-clause 16.2 shall be deleted. <u>CONDITIONS OF CONTRACT (CONT'D)</u>		
B	<u>Compliance with regulations, notices, etc</u> <u>Clause 17.0</u> (i) The contractor shall indemnify the Employer against all penalties incurred by reason of the non-observance of any such statutory obligations (ii) The Contractor must also make himself fully acquainted with current Ordinances and government, and other regulations regarding the movement, housing security and control, labour camps, etc. He must abide by same and allow for extra expense in this connection.		
C	<u>Programme of works</u> <u>Clause 18.0</u>		
D	<u>Access to the works</u> <u>Clause 19.0</u> <u>Possession of site and commencement of works</u> <u>Clause 20.0</u> Sub-clause 20.2 - The last sentence shall be amended as follows: 20.2appendix to these conditions as date for practical completion or such other date as arises by virtue of extension of time granted under clause 36 of these conditions		
E	<u>Leveling and setting out</u> <u>Clause 21.0</u>		
F	<u>Architects instructions</u> <u>Clause 22.0</u> Sub-clause 22.5 shall be amended as follows: 22.5 - Any instructions given, issued directly by the Employer to the contractor shall be of no immediate effect but the Contractor shall request the Architect in writing for confirmation thereof within seven days, failure to which the Contractor shall confirm the same in writing in the manner as provided for in sub-clause 22.4. If confirmed by the contractor, such instruction shall be deemed to be Architect's instructions.		
G	<u>Specifications of goods, material and workmanship</u> <u>Clause 23.0</u>		
H	<u>Samples and tests</u> <u>Clause 24.0</u> The Contractor shall furnish at his own cost and expense of samples of materials workmanship or any tests that may be called for by the Architect for approval or rejection and for any further samples or tests in case of rejection until they are approved by the Architect unless otherwise provided for herein		
	Carried to Collection		

		Amount (Kshs)	
	<u>CONDITIONS OF CONTRACT (CONT'D)</u>		
A	<u>Royalties and Patent Rights</u> <u>Clause 25.0</u>		
B	<u>Assignment</u> <u>Clause 26.0</u>		
C	<u>Subletting</u> <u>Clause 27.0</u>		
D	<u>Suspension of work by the Architect</u> <u>Clause 28.0</u>		
E	<u>Suspension of work by the Contractor</u> <u>Clause 29.0</u>		
F	<u>Variations</u> <u>Clause 30.0</u> (i) Where the Architect orders for Dayworks in accordance with Clause 30.6.3.1 of the conditions of contract, the following rates shall be used. (a) Labour: Add% to the basic minimum wage rate per hour (b) Materials: Add% to the cost of materials delivered to site (c) Machinery/plant: Add% Ditto (i) The percentage additions shall cover all insurance, use of small tools and non-mechanical plant, sharpening tools, water, watching, lighting, establishment and overhead charges and profits. (ii) All Day work sheets must be signed by the Architect and the Contractor or other authorized representative.		
G	<u>Nominated sub-contractors</u> <u>Clause 31.0</u> (i) The Contractor shall be responsible for giving all necessary directions to all Sub-Contractors, ascertaining their requirements, coordinating their work and arranging for them to be on Site at the proper time for the orderly progress of the Works. He shall place all orders with Nominated Sub-Contractors clearly on his own behalf and shall not pledge the credit of the Employer either directly or indirectly. In No case shall the Contractor be deemed to be the agent of the Employer nor shall there be created any privity of contract between the Employer and the nominated Sub-Contractor. The contractor must enter into a written Sub-Contract using an approved form and must deposit with the Architect signed copies thereof. (ii) The contractor shall accept responsibility for providing the following services for Nominated Sub-Contractor, all as per clause B19 (b) of the Standard Method of Measurement of Building works mentioned hereinbefore		
	Carried to Collection		

		Amount (Kshs)	
A	<u>Nominated sub-contractors</u> <u>Clause 31.0 - Cont'd</u> The following services shall be regarded as general attendance: (a) Allow use, for the purpose of the Sub-contractor works, of any standing scaffolding belonging to or provided by the Contractor while it remains so erected upon the site. Provided that no warranty or other liability on the part of the contractor or of his other sub-contractors shall be created or implied in regard to the fitness, condition or suitability of the said scaffolding. (b) Provision of water, lighting, watching and attendance for the purpose of the Sub-Contract works. (c) Allow use of sanitary accommodation, mess rooms, welfare facilities (d) Provision of space for office accommodation and for storage of plant and materials (e) Clearing away rubbish produced by them		
B	<u>Special Attendance</u> The following services shall be regarded as special attendance (a) Unloading and storing (b) Hoisting (c) Placing in position (d) Providing power (e) The cost of any necessary alteration to or re-erection of the Contractor's ordinary scaffolding which may be required by them to carry out their work. (iii) The foregoing services are described as "Allow for general attendance". Allow for special attendance as appropriate. (iv) Nominated Sub-Contractor's shall be responsible for:- (a) Special scaffolding (b) Provision, erection and removal of workshops, sheds or other buildings for their employees and workmen (b) Provision of all necessary plant, tools, materials and equipment, etc., necessary to carry out and complete their work.		
C	<u>Nominated Suppliers</u> <u>Clause 32.0</u> (i) The Contractor shall be responsible for placing all orders for materials or goods with Nominated Suppliers clearly on his own behalf and shall not pledge the credit of the Employer either directly or indirectly. He shall arrange for delivery of all materials or goods at the proper time for the orderly progress of the works		
	Carried to Collection		

		Amount (Kshs)	
A	<u>Nominated Suppliers</u> <u>Clause 32.0 - Cont'd</u> (ii) Contractor shall take delivery anywhere in Nairobi, of all materials or goods supplied by Nominated Suppliers and shall sign a receipt as having received them in good order and condition. He shall off load, transport to site, unload, hoist, provide safe storage and thereafter be responsible for any loss or damage or replacement of any such lost or damaged articles at his own expense and shall return empty cases if so required. (iii) Provision is made in these Bills of Quantities following each appropriate P.C. Sum for the cost of the foregoing services against items reading "Take delivery and fix only". (iv) All payments by the contractor for materials or goods supplied must be in full and shall be paid within 30 days of the end of the month during which delivery is made		
B	<u>Works by other persons engaged by the Employer</u> <u>Clause 33.0</u>		
C	<u>Payments</u> <u>Clause 34.0</u> Sub-clause 34.15 shall be deleted		
D	<u>Fluctuations</u> <u>Clause 35.0</u> This is a FIXED PRICE contract and all provisions of clause 35.00 shall not apply		
E	<u>Extension of time</u> <u>Clause 36.0</u>		
F	<u>Loss and expense caused by disturbance of regular progress of the works</u> <u>Clause 37.0</u>		
G	<u>Termination of the contract by the Employer</u> <u>Clause 38.0</u>		
H	<u>Termination of the contract by the Contractor</u> <u>Clause 39.0</u>		
J	<u>Termination of the contract by either party</u> <u>Clause 40.0</u>		
K	<u>Practical completion and defects liability period</u> <u>Clause 41.0</u>		
L	<u>Sectional completion</u> <u>Clause 42.0</u>		
M	<u>Damages for delay in completion</u> <u>Clause 43.0</u>		
N	<u>Antiquities and other objects of value</u> <u>Clause 44.0</u>		
O	<u>Settlement of disputes</u> <u>Clause 45.0</u>		
	Carried to Collection		

		Amount (Kshs)	
A	<u>CONDITIONS OF CONTRACT (CONT'D)</u> <u>PARTICULAR INSERTIONS TO BE MADE IN APPENDIX TO CONDITIONS OF CONTRACT</u> The following are the insertions to be made in appendix to the conditions of Contract: <u>Clause 13.0:</u> Percentage to cover professional fees for insurance purposes only.....Ten Percent (10%) of Contract Sum <u>Clause 16.1:</u> Name of Contractor's surety..... <u>Clause 16.1:</u> Amount of surety.....Ten Percent (10%) of Contract Sum <u>Clause 16.2:</u> Name of Employer's surety.....Not Applicable (N/A) <u>Clause 16.2:</u> Amount of surety.....Not Applicable (N/A) <u>Clause 18.1:</u> Period for submission of programme.....Within two (2 No.) weeks of contract signing <u>Clause 20.1:</u> Date for possession of site.....To be agreed with the Employer <u>Clause 20.2:</u> Contract period.....To be indicated by Contractor <u>Clause 20.2:</u> Date for practical completion.....To be indicated by Contractor <u>Clauses 31.14, 32.4.5, 34.6:</u> Name of bank for purposes of interest calculation.....Central Bank of Kenya <u>Clause 34.1:</u> Interval for application for Payment Certificates.....Monthly <u>Clause 34.12:</u> Percentage of certified value retained.....Ten Percent (10%) <u>Clause 34.12:</u> Limit of retention fund.....Ten Percent (5%) of Contract Sum <u>Clause 34.15:</u> Periods for release of interest on retention money to contractor.....Not Applicable (N/A) <u>Clause 34.17:</u> Period of final measurement and valuation.....Six (6 No.) months from date for Practical Completion <u>Clause 41.6:</u> Defects liability period.....Six (6 No.) Months from date for Practical Completion <u>Clause 43.1:</u> Damages for delay in completion (K.Shs 20,000/-) per week or part thereof		
	Carried to Collection		

		Amount (Kshs)	
	<u>GENERAL PRELIMINARIES</u>		
A	<u>SUFFICIENCY OF TENDER</u> The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices stated in the priced Bills of quantities which rates and prices shall cover all his obligations the Contract and all matters and things necessary for the proper completion and maintenance of the Works.		
B	<u>STAMP CHARGES</u> The contractor shall allow for the payment of all Stamp Charges in connection with the Performance Bond and Contract Agreement.		
C	<u>PROGRAMME AND PROGRESS SCHEDULE</u> The successful tenderer shall be required before signing the contract to submit to the Architect an acceptable time and progress schedule setting out the order in which the works are to be carried out. Upon signing the contract for the works the contractor shall within two weeks draw up a time and progress schedule setting out the order in which the works are to be carried out with the appropriate dates thereof including the work of Nominated Sub-Contractors. This Time and progress Schedule is to be agreed with the Architect and no deviation from the order set out in this Schedule will be permitted without the written consent of the Architect. The Main Contractor will be responsible for arranging the above Programme with all Sub-Contractors including the Nominated Sub-Contractors and Nominated Suppliers. One copy of the Schedule is to be handed to the Architect and a further copy to be retained on site in which progress shall be recorded at regular agreed intervals by the Contractor and produced in up to date form at all site meetings. Should any circumstances arise affecting the schedule, the chart shall be amended or modified as necessary by agreement with the Architect and all parties shall be informed. Under no circumstances shall any payments be made to the contractor without full compliance with this provision		
D	<u>FIGURED DIMENSIONS</u> Figured dimensions are to be followed in preference to dimensions scaled from the drawings, but whenever possible dimensions are to be taken on the site or from the buildings. Before any work is commenced by Sub-Contractors or Specialists firms, dimensions must be checked on the site and/ or buildings and agreed with the Contractor, irrespective of the comparable responsibility for the accuracy of such dimensions.		
	Carried to Collection		

		Amount (Kshs)	
A	<u>PROVISIONAL WORKS</u> All work described as "Provisional" in these Bills of Quantities is subject to remeasurement in order to ascertain the actual quantity executed All "Provisional" and other work liable to adjustment under this Contract shall be left uncovered for a reasonable time to allow all measurements needed for such adjustment to be taken by the Quantity Surveyor. Immediately the work is ready for measurement the Contractor shall give notice to the Quantity Surveyor. If the Contractor makes default in these respects, he shall, if the Quantity Surveyor so directs, uncover the work to enable measurements to be taken and afterwards reinstate at his own expense.		
B	<u>MATERIALS AND WORKMANSHIP</u> All materials shall be new unless otherwise directed or permitted by the Architect and in all cases where the quality of goods or materials is not described or otherwise specified are to be the best quality obtainable in the ordinary meaning of the word "best" and not merely a trade signification of that word. All materials and workmanship shall unless otherwise specified or described conform to the appropriate Kenya Bureau of Standards or British Standards Institution Specification current at the date of tender. The Contractor shall order all materials required to be obtained from overseas immediately after the Contract is signed and shall also order materials to be obtained from local sources as early as necessary to ensure that such materials are on site when required for use in the works. The Contractor shall be responsible for and shall replace or make good at his own expense any materials lost or damaged. The Works throughout shall be executed by skilled workmen well versed in their respective trades. The Contractor shall order materials to be obtained from local sources as early as necessary to ensure that such materials are on site when required for use in the works.		
C	<u>REJECTED WORKMANSHIP OR MATERIALS</u> Any workmanship or materials not complying with the specific requirements or approved samples or which have been damaged, contaminated or have deteriorated, must be immediately removed from the Site and replaced at the Contractor's expense		
D	<u>PROPRIETARY MATERIALS</u> Where proprietary materials are specified in the Specification, the Contractor may propose the use of materials from other manufacture, but of equal quality, for approval by the Architect. All materials and goods, where specified to be obtained from a particular manufacturer or supplier are to be used or fixed strictly in accordance with their printed instructions.		
	Carried to Collection		

		Amount (Kshs)	
A	<u>PLANTS, TOOLS AND SCAFFOLDING</u> The Contractor shall provide all necessary hoists, tackle, plant, vehicles, tools and appliances of every description for the due and satisfactory completion of the works and shall remove same on completion and provide, erect and maintain all temporary scaffolding sufficiently strong and efficient for the due performance of the Works, including Sub-Contractor's works, provide special scaffolding as required by Sub-Contractors, alter and adapt all scaffolding as and when required during the works and remove on completion and make good. All such plant, tools and scaffolding shall comply with all regulations whether general or local in force throughout the period of the contract and shall be altered and adapted during the Contract as may be necessary to comply with any amendments in or additions to such regulations. <u>NOTE:</u> <u>Scaffolding is not measured hereinafter, and the Contractor must allow here in his Tender for the same</u> No timber used for scaffolding, formwork or temporary works of any kind shall be used afterwards in the permanent work.		
B	<u>SIGN FOR MATERIALS SUPPLIED</u> The contractor will be required to sign a receipt for all articles and materials supplied by the Employer at the time of taking delivery thereof, as having received them in good order and condition, and will thereafter be responsible for any loss or damage and for replacements of any such losses or damage to articles and/or materials which will be supplied by the Employer at current market prices including Customs Duty, all to the Contractor's own cost and expense, to the satisfaction of the Architect		
C	<u>STORAGE OF MATERIALS</u> The contractor shall provide at his own risk and cost where directed on the site weather-proof lockup sheds for the safe storage and custody of materials for the works and for the use of workmen engaged thereon and shall remove such sheds and make good damaged or disturbed surfaces upon completion to the satisfaction of the Architect. (SEE PARTICULAR PRELIMINARIES) Nominated Sub-Contractors are to be made liable for the cost of any storage or other accommodation provided specially for their use.		
D	<u>SAMPLES</u> The contractor shall furnish at his own cost any samples of materials or workmanship including concrete test cubes required for the works that may be called for by the Architect for his approval or rejection until such samples are approved by the Architect and the Architect may reject any materials or workmanship, not, in his opinion, up to approved samples. The procedure for submitting samples of materials for testing and the method of marking for identification shall be as laid down by the Architect. The Contractor shall allow in his Tender for such samples except those in connection with Nominated Sub-contractor's work.		
	Carried to Collection		

		Amount (Kshs)	
A	<u>TESTING</u> Allow for testing all installations required to be tested and provide everything necessary for this purpose and leave in perfect working order to the satisfaction of the Architect or Local Authority. Allow for all expenses in connection with testing of materials as specified hereunder including the supply and preparation of materials, their packing and conveyance to the nearest Materials Testing Laboratory, charges, etc. The contractor shall allow for other testing of materials apart from the above required by these specifications and he shall be responsible for all expenses incurred in completing such tests, including costs of labour, materials, equipment, transport and charges of the testing authority etc		
B	<u>SUPERVISION AND WORKING HOURS</u> The works shall be executed under the direction and to the entire satisfaction of the Architect in all respects who shall at all times during normal working hours have access to the works and to the yards and workshops of the Contractor and Sub-Contractors or other places where work is being prepared for the Contract. The working hours shall be those generally worked by good employers in the Building and civil Engineering Trades in the Republic of Kenya. No work shall be carried out at night or on gazetted holidays unless the Architect shall so direct.		
C	<u>EXISTING SERVICES</u> Prior to commencement of any work the Contractor is to ascertain on site or from the relevant Authorities the exact position, depth and level of all existing electric cables, water pipes or other services on site or in the area and he shall make whatever provisions may be required by the Architect or Authorities concerned for the support and protection of such services. Any damage or disturbance caused to any service shall be reported immediately to the Architect and the relevant Authority and shall be made good to the satisfaction of such relevant authority at the contractor's expense.		
D	<u>SITE DIARY</u> A double foolscap size stiff covered ruled book should be kept available at all times upon the site. Entries made in the site diary by the Architect or his duly appointed representatives shall be deemed to be the Architect's instructions given in writing and the contractor shall confirm the same to the Architect within seven clear working days. All persons entering the working area on whatever business shall be instructed by the contractor to record their visit in the site diary giving their name, address and reasons for visiting the site		
	Carried to Collection		

		Amount (Kshs)	
A	<u>GOVERNMENT ACTS REGARDING WORKFORCE, ETC</u> Allow for complying with all Government Acts, Orders and Regulations in connection with the Employment of labour and other matters related to the execution of the works The tender price must include for all costs arising or resulting from compliance with any Act, Order or Regulation relating to Insurances, Pensions, Holidays safety, health or welfare of work people. The Contractor must duly acquaint himself with current Acts and Regulations, including Police Regulations regarding the movement, housing, security and control of labour, labour camps, passes for transport, etc. It is most important that the Contractor, before tendering, shall obtain from the relevant authority the fullest information regarding all such regulations and/or restrictions which may affect the organization of the works, supply and control of labour, etc., and allow accordingly in his tender No claim in respect of want of knowledge in this connection will be entertained or allowed		
B	<u>SECURITY OF WORKS, ETC</u> The Contractor shall be entirely responsible and liable for the security of all works, stores, materials, plant, personnel, etc., both his own and Sub-Contractor's and must provide all necessary watching, lighting and other precautions as necessary to ensure security against theft, loss or damage and the protection of the public. Maximum precautions must be exercised to uphold security in the vicinity of the Works. The Contractor shall comply with all instructions of the Architect with regard to the upholding of security arrangements.		
C	<u>TRANSPORT TO AND FROM THE SITE</u> The Contractor shall include in his prices for the transport of materials, workmen, etc., to and from the Site of the proposed Works, at such hours and by such routes as are permitted by the relevant Authorities.		
D	<u>PUBLIC AND PRIVATE ROADS AND PAVEMENTS</u> The Contractor will be required throughout the execution of the Works to maintain and make good, at his own expense any damage he may cause to the present public and private road surfaces and pavements arising from or consequent upon the execution of the works, to the satisfaction of the Local or other Authority and the Architect.		
	Carried to Collection		

		Amount (Kshs)	
A	<u>WORKS AND SITE TO BE DELIVERED UP CLEAN</u> The Contractor shall upon completion of the Works, at his own expense, remove and clear away all surplus excavated material, scaffolding, plant, rubbish and unused material and shall leave the whole of the site and Works in a clean and tidy state to the satisfaction of the Employer, including clearing away and making good all traces of temporary access roads, offices, sheds, camps, etc. Clean and flush all gutters, rainwater and waste pipes, manholes and drains , wash (except where such treatment might cause damage) and clean all sanitary fittings, glass (inside and outside) and any other parts of the works which may so require remove all marks, blemishes, stains and defects from joinery fittings and decorated surfaces generally, polish door furniture and bright parts of metalwork and leave the whole of the buildings watertight, clean, perfect and fit for occupation to the approval of the Architect. Particular care shall be taken to leave all floors and windows clean and to remove all paint and cement stains. He shall also at the discretion of the Employer remove all rubbish and dirt as it accumulates during the contract period.		
B	<u>OCCUPATION CERTIFICATE</u> At the completion of the Works or Section thereof, the Contractor shall apply for and obtain an Occupation Certificate from the Local Authority and see that it is duly completed and signed in accordance with conditions laid down by current By-laws. The Contractor is advised take note of the phasing requirements of the project and allow the necessary number of Occupation Certificates as required.		
C	<u>DISTURBANCE OR NUISANCE</u> The Contractor shall allow for taking all necessary precautions in the order and execution of the works so as to avoid causing disturbance to the occupants of any existing buildings on or adjacent to the Works and to the public and for complying with the Architect's instructions in this respect.		
D	<u>ACCESS TO SITE AND TEMPORARY ROADS</u> Means of access to the site shall be agreed with the Architect prior to commencement of the work and the Contractor must allow for building any necessary temporary access roads for the transport of the materials, plant and workmen as may be required for the complete execution of the works including the provision of temporary culverts, crossings, bridges, or any other means of gaining access to the site. Upon completion of the Works, the Contractor shall remove such temporary access roads, temporary culverts, bridges, etc, make good and reinstate all works and surfaces disturbed to the satisfaction of the Architect.		
	Carried to Collection		

		Amount (Kshs)	
A	<u>TRESPASS, DAMAGE AND CARE OF WORKS</u> The contractor shall prevent any trespass on the adjoining property and he shall take all reasonable precautions during the progress of the Contract to prevent any damage to the adjoining property or public or private roadways and to prevent material, plant, rubbish, debris, etc., collecting on the adjoining property or roadways. Should the Contractor wish to erect scaffolding on or make use of adjoining property he shall obtain prior permission from the Architect and clear away at completion of his work or when directed and make good any damage to the Architect's satisfaction. Except as provided for in the Conditions of Contract, the Contractor shall be held responsible for the care of Works generally until their completion, including all works executed and materials deposited on the site by himself or Sub-Contractors or suppliers, together with all risks arising from weather, carelessness of operatives, damage or loss by theft, or by other cause and he shall make good all such damage or loss at his own expense. The contractor will be responsible for the protection of adjoining buildings, boundary walls, fences, services either overhead or underground and for the making good of or paying for all damage thereto, should such be caused in the course of buildings operations. The Contractor shall allow for making good all damage to the roads, kerbs, surface water channels, etc., occasioned by heavy traffic, delivery of materials and building operations generally to the entire satisfaction of the Architect and shall be responsible for observing any By-Law or Authority regarding keeping the road free from mud, filth, etc., arising out of the execution of the Works. The contractor shall at all times observe any police regulations including those regarding the loading and unloading of or waiting by vehicles on the public highway and the Contract Sum shall be deemed to include for strict compliance therewith.		
B	<u>SERVICES FOR CONSULTANTS</u> The Contractor shall provide, erect and maintain where directed on site and afterwards dismantle a Site office of the type noted in the Particular Preliminaries complete with furniture. (SEE PARTICULAR PRELIMINARIES) He shall provide, erect and maintain a lockup Western type water closet for the sole use of the Consultants, including making temporary connections to drain where applicable to the satisfaction of the Government and Medical Officers of Health and shall provide the services of cleaner and pay all conservancy charges and keep both office and closet in a clean and sanitary condition and dismantle and make good disturbed surfaces to the satisfaction of the Architect on completion of the works. <u>The office and closet shall be completed before the contractor is permitted to commence the works.</u>		
	Carried to Collection		

		Amount (Kshs)	
A	<u>WATER AND ELECTRICITY SUPPLY FOR THE WORKS</u> Unless otherwise stated in the Particular Preliminaries hereof, the following requirements shall apply:- The Contractor shall provide at his own risk and cost all necessary water, electric light and power required for use in the works. No guarantee is given or implied that mains power will always be available and the Contractor must make arrangements at his own cost and expense for providing temporary power. The contractor must make his own arrangements for connection to the nearest suitable water main and for metering and paying for the water used. The Contractor must also provide temporary storage tanks and meters as required at his own cost and clear away when no longer required and make good on completion to the entire satisfaction of the Architect. The Contractor shall pay all charges in connection therewith. No guarantee is given or implied that sufficient water will be available from the main and the Contractor must make his own arrangements for augmenting this supply at his own cost and expenses		
B	<u>SANITATION OF THE WORKS</u> The sanitation of the works shall be arranged and maintained by the Contractor to the satisfaction of the Local Authorities, Labour Department and the Architect. (SEE PARTICULAR PRELIMINARIES)		
C	<u>PROVISIONAL SUMS</u> The term "Provisional Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A Item A7 (i) of the Standard Method of Measurement. Such sums are net and no addition shall be made to them for profit.		
D	<u>PRIME COST (OR P.C) SUMS</u> The term "Prime Cost Sum" or "P.C. Sum" wherever used in these Bills of Quantities shall have the meaning stated in Section A Item A7 (ii) of the Standard Method of Measurement mentioned in Clause No .8 of the conditions of contract Persons or firms nominated by the Architect to execute work or to provide and fix materials or goods as stated in the Conditions of Contract are described herein as Nominated Sub - Contractors. Persons or firms so nominated to supply goods or materials are described herein as <u>Nominated Suppliers</u>.		
E	<u>ADJUSTMENT OF PRIME COST SUMS</u> In the final account all P.C. Sums shall be deducted and the amount properly expended upon the Architect's order in respect of each of them added to the Contract Sum. The Contractor shall produce to the Architect such quotations, invoices or bills properly receipted as may be necessary to show the actual details of the Sums paid by the contractor.		
	Carried to Collection		

		Amount (Kshs)	
A	<u>ADJUSTMENT OF PRIME COST SUMS - CONT'D</u> Items of profit on P.C Sums shall be adjusted in the final account pro-rata to the actual amount paid. Items of "attendance" following P.C. Sums shall <u>be adjusted pro-rata to the physical extent of the work executed (not pro-rata to the amount paid)</u> and this shall apply even though the Contractor's priced Bill shows a percentage in the rate column in respect of them Should the Contractor be permitted to tender and his tender be accepted for any work for which a P.C. Sum is included in these Bills of Quantities, profit and attendance will be allowed at the same rate as it would be if the works were executed by a Nominated Sub-Contractor.		
B	<u>ADJUSTMENT OF PROVISIONAL SUMS</u> In the final account, all Provisional Sums shall be deducted and the value of the work properly executed in respect of them upon the Architect's order added to the Contract Sum. Such work shall be valued as described for Variation in Clause No. 30 of the Conditions of Contract, but should any part of the work be executed by a Nominated Sub-contractor or any articles for the work supplied by a Nominated Supplier, the value of such work or article shall be treated as a P.C. Sum and profit and attendance comparable to that contained in the priced Bills of Quantities for similar items added.		
C	<u>NOMINATED SUB-CONTRACTORS AND SUPPLIERS</u> When any work is ordered by the Architect to be executed by Nominated Sub-Contractors, the Contractor shall enter into sub-Contracts as described in Clause No. 31 of the Conditions of Contract and shall thereafter be responsible for such Sub-Contractors in every respect. In particular it shall be the Contractor's responsibility to ensure that each Sub-Contractor commences and completes the work in such manner and is ready on the site with his materials, labour and special plant at such time so as to conform with the Works programme Before placing any orders with Nominated Sub-Contractors or Nominated Suppliers, the Contractor must ascertain that the terms and conditions of the quotations and the date of delivery of materials or execution of work comply with the terms of the Contract and the Works Programme. <u>Builder's work</u> in connection with the Nominated Sub-Contractor's work and making good afterwards has been measured in the Bills of Quantities <u>The cost of taking delivery and fixing only materials including those to be obtained</u> from Nominated Suppliers which are covered by Prime Cost or Provisional Sums shall include for taking delivery where directed, checking with invoices or indents, reporting and claiming damages for shortages and damaged goods, defraying demurrage, signing for as having been received in good order, loading, handling, transporting to site, unloading, insuring, storing, covering and pro-protecting until the time of fixing, unpacking, replacing anything lost or damaged, sorting, assembling, hoisting, distributing or conveying to required levels or positions, cutting, wastage, and fixing as described. Unless otherwise described, the Contractor is to provide for such Sub-Contractors any or all of the above facilities.		
	Carried to Collection		

		Amount (Kshs)	
A	<u>ATTENDANCE UPON NOMINATED SUB-CONTRACTORS</u> The term "general attendance" or "special attendance" following P.C. Sums for Nominated Sub-contractors work in these Bills of Quantities shall be deemed to include all items as are defined on Pages 2/11 and 2/12 herein respectively		
B	<u>DIRECT CONTRACTS</u> Notwithstanding the foregoing Conditions, the Employer reserves the right to place a "Direct Contract" for any goods or services required in the works which are to be executed by the Contractor or are covered by a P.C Sum in the Bills of Quantities and to pay for the same directly. In case of P.C. sums, the profit relative to P.C. Sum in the priced Bills of Quantities will be adjusted as described for P.C. Sums and allowed.		
C	<u>ATTENDANCE UPON OTHER TRADESMEN, ETC</u> The Contractor shall allow for the attendance upon other tradesmen and shall afford such persons employed for the execution of any work not included in this Contract every facility for carrying out their work and also for the use of his ordinary scaffolding. The Contractor, shall be required to charge separately for existing any special scaffolding for them. The contractor shall perform such cutting away for and making good after work of such tradesmen or persons as may be ordered by the Architect and such contractors the work will be measured and paid for to the extent executed and at rates provided in these Bills.		
D	The Contractor shall insure as required in Clauses Nos. 12.0 and 13.0 of the Conditions of Contract and as further amplified in these General Conditions. No payment on account of the work executed will be made to the Contractor until he has satisfied the Architect either by production of an Insurance Policy or an Insurance Certificate that the provisions of the foregoing Insurance Clauses have been complied with in all respects. Thereafter the architect shall from time to time ascertain that premiums are duly paid up by the Contractor who shall, if called upon to do so, produce receipted premiums renewals for the Architect's inspection.		
E	<u>ALTERATIONS TO BILLS, PRICING, ETC.</u> Any unauthorized alteration or qualification made to the text of the Bills of Quantities may cause the Tenderer to be disqualified and will in any case be ignored. The contractor shall be deemed to have allowed in his prices generally to cover any items against which no price has been inserted in the priced Bills of Quantities. Lump sums to cover any items of Preliminaries shall be broken down if so required by the Quantity Surveyor		
	Carried to Collection		

		Amount (Kshs)	
A	<u>BLASTING OPERATIONS</u> Blasting will only be allowed with the express permission of the Architect in writing. All blasting operations shall be carried out at Contractor's sole risk and cost in accordance with any Government regulations in force for the time being and any special regulations laid down by the Architect governing the use and storage of explosives,		
B	<u>MATERIALS ARISING FROM EXCAVATIONS</u> Materials of any kind obtained from the excavations shall be property of the Employer. Unless the Architect directs otherwise, such materials shall be dealt with as provided in the Contract. Such materials shall only be used in the works, in substitution of materials which the Contractor would otherwise have had to supply, with the Authority of the Employer and permission of the Architect, should such permission be given the Contractor shall make due allowance for the value of the materials so used at a price to be agreed between him and the Quantity Surveyor.		
C	<u>PROTECTION OF THE WORKS</u> Provide protection of the whole of the works contained in the Bills of Quantities including casing up, covering or such other means as may be necessary to avoid damage to the satisfaction of the Architect and remove such protection when no longer required and make good any damage which may nevertheless have been done at completion free of cost to the Employer.		
D	<u>REMOVAL OF RUBBISH, ETC.</u> Remove all rubbish and debris from the building and site as it accumulates and at completion of the works and remove all plant, scaffolding and unused materials at completion.		
E	<u>TRAINING OR OTHER LEVY</u> The Contractor's attention is drawn to Legal Notices which require payment by the Contractor of a Training Levy and the Contractor shall allow in the Preliminaries of this Contract for all costs arising or resulting therefrom.		
F	<u>STANDARDS LEVY</u> The Contractor's attention is drawn to Legal Notices which require payment by the Contractor of a Standards Levy to the Kenya Bureau of Standards. The Contractor shall allow in the Preliminaries of this Contract for all costs arising or resulting therefrom.		
G	<u>FAIR WAGES</u> The contractor shall furnish to the Architect for inspection, if called upon to do so, such particulars of the rate of wages, working hours and conditions of labour		
	Carried to Collection		

[illegible]

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF
ELGEIYO MARAKWET

		Amount (Kshs)	
	<u>COLLECTION</u> Page No. 1/1 Page No. 1/2 Page No. 1/3 Page No. 1/4 Page No. 1/5 Page No. 1/6 Page No. 1/7 Page No. 1/8 Page No. 1/9 Page No. 1/10 Page No. 1/11 Page No. 1/12 Page No. 1/13 Page No. 1/14 Page No. 1/15 Page No. 1/16 Page No. 1/17 Page No. 1/18 Page No. 1/19 Page No. 1/20 Page No. 1/21 Page No. 1/22 Page No. 1/23 Page No. 1/24 Page No. 1/25 Page No. 1/26		
	Carried to General Summary		

SECTION 2 : SPECIFICATIONS

SECTION. TWO

SPECIFICATIONS

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EXCAVATION AND EARTHWORK

The Contractor shall comply with the requirements of the latest edition of the following Codes of Practice and / or British Standards, including any amendments thereto.

Code of Practice

Site investigations	B.S.	5930
Earthworks	B.S.	6031
Foundations	B.S.	8004
Protection of building against water from the ground	C.P.102, B.S.	8102

The Contractor shall visit the site and ascertain for himself the nature of the soil to be excavated. The rates for excavation shall include excavating in any type of material or made up ground excluding rock as defined below.

Setting out shall be approved before work is commenced.

Generally clear the site of all shrubs and trees, grub up roots and fill the holes with red earth.

Excavation for bases and strip foundations shall be to the widths, depth, and levels shown on the Architects and/or Engineer's drawings. Rates shall be deemed to include for whatsoever alternative method the Contractor chooses to adopt.

The Engineer shall be called to inspect the completed excavations. The Contractor shall keep all excavations dry and free from rain or other surface water.

Excavations made below required levels shall be filled with Mass Concrete (1:4:8) or grade C/10 at the Contractor's expense.

Rates for filling or disposal of earth shall include for any double handling, except that resulting from a written order by the Architect and/or Engineer to deposit earth in temporary spoil heaps pending its final disposal. Filling shall be in approved filling material to required levels in specified layers carefully rammed and consolidated.

Disposal of all surplus excavated material shall be as instructed and rates shall include for loading and wheeling off the site to a tip to be provided by the Contractor.

Hardcore shall be stone, coarse gravel or other inert material broken to pass through a 125mm diameter ring, yielding, when thoroughly consolidated, a freely porous bed and blinded with fine material where intended to receive concrete. Rates for earth filling, hardcore, ashes and similar materials shall include for all temporary retaining boards and for rolling with an 8 – 10 tonne roller unless otherwise described, in layer not exceeding 150mm deep.

Anti-termite treatment shall be fine sprayed using an approved insecticide.

The Contractor shall at his own expense and before commencing excavations ascertain in writing from the City Council and other public bodies, companies and persons who may be affected, the position and depths of their respective ducts, cables, main or piles and appurtenances.

The Contractor shall there upon search and locate such services in order to appropriately prop, protect, underpin, alter, divert, restore and make good all pipes, cables or ducts, poles or wires and their appurtenances disturbed or damaged during the progress of the works or consequent thereof.

Such services as required be removing or altering by virtue of the situation of the permanent work and not the manner in which the work is carried out, shall be so removed or altered at the expense of the Employer.

Rock excavation shall be deemed to mean excavation in such hard material as will necessitate the use of wedges or compressed air equipment.

Blasting will only be allowed with the express permission of the Architect and/or Engineer.

All blasting operations shall be carried out at the Contractor's sole risk and cost in accordance with any Government regulations in force for the time being, and any special regulations laid down by the Architect and/or Engineer governing the use and storage of explosive.

Rates are to include also for destroying any white ants' nests found in the vicinity of the buildings, destroying queen ants, depositing cyanide lumps in holes and tunnels and filling with hardcore and murrum well rammed and sealed.

WALLING

- A. The requirements of the following British Standards and Codes of Practice shall be observed:-

British Standard

- | | | |
|----|---|----------------------------------|
| B. | Bricks and blocks of fired brickwork clay or shale | B.S. 3921 part 2 |
| C. | Concrete bricks and fixing bricks | B.S. 1180 |
| D. | Shapes and dimensions of special bricks | B.S. 4729 |
| E. | Precast concrete blocks (for general use and load bearing walls above damp proof course) | B.S. 2028
1364 type B |
| F. | Precast concrete blocks (for internal non-load bearing walls) | B.S. 1200 table
1 and table 2 |
| G. | Building lines (Hydrated lime) | B.S. 890 part 2 |
| H. | Ready mixed lime : sand for mortar | B.S. 4721 |
| J. | Mortar plasticizers | B.S. 4887 |
| K. | Methods of testing mortars and specification for mortar testing sand | B.S. 4551 |
| L. | Materials for damp-proof courses | B.S. 743 |
| M. | Milled sheet lead and strip for building purposes | B.S. 1178 |
| N. | Metal ties for cavity wall construction (vertical twist type) | B.S. 1243 fig. 1 |
| P. | Structural recommendations for load bearing walls | B. S. 5628 |
| Q. | Stone Walling | B. S. 5390 |
| R. | Masonry - rubble walls | B. S. 5390 |
| S. | Walls are partitions of blocks and slabs C.P. 122 | |
| T. | <u>Water:</u> as specified in "Contract work". | |
| U. | <u>Cement</u> shall be as specified in "Contract work". | |
| V. | <u>Sand</u> shall be as specified in "Contract work" | |
| W. | <u>Lime</u> shall be hydrated limes for cement/lime mortars and comply with B.S. 890, semi-hydraulic class "B" calcium limes. | |
| X. | <u>Concrete blocks</u> shall be solid or hollow blocks to comply with the relevant Standard as previously mentioned and shall be solid hard, true to size and shape and sharp arises. | |

They shall be obtained from an approved manufacturer or manufactured on site in approved block making machines. The mix used shall not be less than (1:9) by volume and maximum size of aggregate shall be 12mm size. The blocks on removal from the machine shall be laid on edge or racks under sheds erected by the contractor and left for 3 days during which period they shall be kept constantly wet.

After this initial period they shall be placed on edge in the open racks and protected by sacking or other approved covering and kept wet for a further 5 days.

Thereafter the blocks shall be left in the same position without wetting for a further 20 days. No blocks shall be used in the works until 28days old and until samples have been tested and approved by the Engineer.

The contractor shall ensure that the blocks are stocked separately in their respective categories in the structure in the position shown on the Drawings.

- A. Stone for walling shall be good hard machine cut equal in standard and quality to "Machine dressed Ruiru Stone". Stone shall be squared, dressed and joints machine dressed on the face. Stone to receive render, shall be so dressed to reduce dubbing-out to a minimum.
- The coursed stone shall not be less than 150mm deep and 305mm long. All stone shall be laid on its natural or quarry bed lines.
- B. Cement sand mortar shall be used for walling and shall be composed of one part Portland Cement and three parts sand (1:3) measured in gauge boxes and thoroughly mixed dry preferably mixing platform with water added afterwards until all parts are completely incorporated and brought to a proper consistency and used within the hour.
- No partially or wholly set mortar will be re-used or re-mixed.
- C. All stone shall be wetted before laying and the top of walling where left off, shall be wetted before re-commencing building, walls to be kept wet 3 days after building.
- D. All blocks and walling to be kept true, plump and level with all perpends vertical and in line and work shall not rise more than three courses above the adjoining work and all such rising are to be properly racked back.
- E. All Contractors must provide proper setting out or storey rods so that all work is coursed to cills, lintels and underside of beams thus reducing horizontal cutting to a minimum.
- F. All walling must be carefully bounded together so that no vertical joint in any one course is nearer than 100mm from the joint in the course above or below.
- G. All walling must be bedded in solid mortar with cross-joints well flushed up at each course as the work proceeds.
- H. To walls less than 190mm thick, the reinforcement shall consist of gauge 24 "Expament" wall reinforcement horizontally in bed joints every alternate course and lapped over "Expament" from column where abutting same.
- J. Rates for walling are to include for reinforcement strips.
- K. Labours on stone walling be deemed to include for redressing the beds of stones on site to the minimum extent necessary to obtain uniformity of coursing and for any redressing of faces necessary to bring the thickness within the tolerance specified.
- L. Rates for walling of any description are to include for all expenses in connection with the provision and conveyance of samples of walling materials.

CONCRETE WORK

CODE OF PRACTICE FOR REINFORCED CONCRETE WORK

All workmanship, materials, tests and performances in connection with reinforced concrete works shall be in conformity with the British Standard Code of Practice C.P. 114:1965 "The Structural Use of Concrete".

FLOOR, WALL AND CEILING FINISHES

A. The requirements of the following British Standards and Codes of Practice of Practice shall be observed:

British Standards

B.	Gypsum building plaster (excluding premixed light weight plasters) part 1 Class B	B.S. 1191
C.	Sands for internal plastering with gypsum plasters	B.S. 1193
D.	Sand for external renderings, internal plastering with lime and Portland Cement, and floor screeds	B.S. 1199 Table 1
E.	Aggregate for granolithic concrete floor finishes	B.S. 1201
F.	Glazed ceramic tiles and tile fittings for internal walls	B.S. 1281
G.	Metal lathing (steel for plastering)	B.S. 1369
H.	Building limes Class A	B.S. 890
J.	Wood block for floors	B.S. 1187

Codes of Practice

K.	Internal plastering	C.P. 211
L.	External rendered finishes	C.P. 221
M.	In-situ floor finishes	C.P. 204
N.	Tile flooring and slab flooring	C.P. 202
P.	Sheet and tile flooring (cock, linoleum, plastics and rubber)	C.P. 203
Q.	Wall tiling	C.P. 212 parts
R.	Care and maintenance of floor surfaces	C.P. 209
S.	<u>NOTE:-</u> The Contractor's attention is drawn to Section "S" of the Standard Method of Measurement.	

Materials and workmanship

- T. Cement shall be as described in "Concrete"
- U. Sand shall comply with the requirements of the Standards mentioned above.
- V. Lime shall be non-hydraulic lime to satisfy the Standards mentioned above. It shall be obtained from an approved source. It must be freshly burnt and shall be slaked at least one month before being used by drenching with water, well broken up and mixed and the wet mixture shall be passed through a sieve of 10 meshes to the square centimetre. Lime putty shall consist of freshly slaked lime as described above saturated with water until semi-fluid and passed through a fine sieve, it shall then be allowed to stand until superfluous water has evaporated and it has come of the consistence of thick paste, in no case for a shorter period of one month before being used during which it must be kept damp and clean and no portion of it allowed to become dry.

FLOOR WALL AND CEILING FINISHES (CNT'D)

Alternatively, hydrated lime with 70% average calcium oxide content may be used and it must be protected from damp until required for use. It shall be soaked to a putty at least 24 hours before use.

- A. All concrete beds of slabs shall be thoroughly brushed clean, hatched if necessary and well wetted and flushed over with a cement and sand (1:1) grout immediately before screeds or paving are laid.

Screeds and cement paving shall be laid in accordance with the relevant British Standards and/or Code of Practice and in alternative bays generally not exceeding 3.0m x 3.0m during any period of 24 hours with neat butt joints and shall be damp cured with sand or sawdust and kept damp for at least 7 days after laying. As bays are formed batten strips must be used to retain the exposed edge of the screed.

Thickness and mixes of screeds are adjusted to suit the various top dressings and the Contractor must first ascertain what finish is intended to each specific area before the work laying screeds is put in hand.

Screeds shall be finished with a wood float for wood blocks and steel trowel for thermoplastic and similar tiles.

- B. All surfaces to be plastered must be brushed clean and well wetted before plaster is applied. Joints of walling shall be raked and concrete hatched to form a key. Care shall be taken to see that paving and plastering do not dry out prematurely. Adequate time intervals must be left between successive coats in two coats work in order that the drying shrinkage of the undercoat may be substantially complete.

- C. Internal Plaster be applied in two coats as follows:

First coat consisting of cement and lime putty (1:10) slain coat finished with a steel trowel to a smooth and even surface. Adequate time interval must be allowed for drying shrinkage of the undercoat. All internal angles shall be pencil-rounded.

All plaster on insulated linings is to be well worked round mesh backing and allowance is to be made for necessary labour and material required in this respect.

- D. External Cement and sand rendering shall consist of cement and sand (1:5) applied on one coat and finished with a wood float.

- E. If required the Contractor shall prepare samples of the screeds, pavings and plastering as directed until quality, texture and finish required is obtained and approved by the Architect, after which all work executed shall conform with the respective approved samples.

- F. All screeds and pavings shall be finished smooth, even and truly level, unless otherwise specified and paving shall be steel trowelled.

- G. Rendering and plastering shall be finished smooth, even and truly level, unless otherwise specified and paving shall be steel trowelled.

- H. Partially or wholly set materials will not be allowed to be used or re-examined. The plaster, etc, mixer must be used within two hours of being combined with water.

- J. Glazed wall tiles shall be cushion edged and satisfy the relevant Standard as mentioned above. Tiles shall be well soaked in water laid with straight horizontal and vertical joints pointed in white cement and cleared down at completion.

Tile joints of 2mm width shall be formed and filled with the bedding mix but using very fine, well screened sand, care shall be observed during fixing.

The fixed tiles shall be kept damp for 4 days. Tiles as splash backs to lavatory basins, sinks, and baths shall be fixed with necessary rounded-edges and corner tiles.

Rates for linear items shall allow for all special fittings and cutting at angles and intersections.

- K. Ceramic floor tiles and fittings shall be non-slip to B.S. 1286 of approved manufacture. Sizes and colours must be approved by the Architect before orders are placed.

- L. Tyrolean rendering shall consist of a backing coat approximately 12mm thick of one part cement with 10% of lime by volume added to the cement and for parts of sand and finishing coat of an approved shade of cement and sand suitable mix applied with a cement spraying machine to the Architect's approval.

All adjoining surfaces shall be masked while spraying.

ROOF SHEETING AND VERTICAL CLADDING

Roof sheeting shall be IT5 box profile pre-painted steel sheets (Gauge 28 for Roof Sheeting) as manufactured by MABATI ROLLING MILLS LIMITED, P O BOX 271-00204, ATHI RIVER, KENYA and shall be laid and fixed strictly in accordance with the manufacturers printed instructions. Where roof pitches shown on the drawings are flatter than the manufacturers printed recommendations, the contractor shall seek the manufacturer's recommendations for sealing the overlaps for waterproofing, and these recommendations shall be submitted to the Engineer for approval. The contractor shall allow for these waterproofing works in his rates for roof sheeting. The pre-painted finish is to be Alkyd urea type stoving enamel consisting of two coats to the external face and one to the internal face to a colour scheme to the approval of the Engineer.

The sheets shall be fixed to timber purlins or rafters using capped nails as per manufacturer's specifications and to be approved by the engineer. Holes through the sheets shall be made by nails hammered into the purlins or rafters. No damaged or scratched pre-painted sheets will be accepted on site; any such sheets will have to be replaced at the Contractors expense.

Translucent Sheeting to Roof and Vertical Cladding.

Translucent sheeting shall be "Fibrelite" as manufactured by Specialised Mouldings Limited or Steel Structures Limited or other equal and approved and moulded using the open cast method to match the IT4 or IT5 profile and of a thickness of 1.5mm.

The translucent sheets must be accompanied with a guarantee of a minimum of 7 years lifespan. The sheets will be required to have undergone an ultra violet (U.V) treatment to the approval of the Engineer. Samples of the translucent sheets for use on the works shall be submitted for the approval of the Engineer before the works commence.

Flashing and Roofing Accessories

All flashing and roofing/cladding accessories shall be 18 Gauge Galvanized Mild Steel Sheets bent and curved to the required shapes as shown on the drawings and shall be fixed to the timber or steel "Z" rail purlins with galvanized screws or hooks bolts as previously stated.

All galvanized Steel sheets to be wire brushed to remove any loose scale, dirt or grease, thoroughly cleaned with mordant solution, primed with one coat of zinc chromate and painted with two coats of gloss enamel paint.

PVC Rainwater Pipes

PVC rainwater pipes and fittings are to comply with BS 4576 with solvent welded or rubber ring seal joints.

Pipes are to be cast into concrete or to be fixed to the structure with PVC holder bats built-in or plugged and screwed at maximum 2 metre centres.

Bends, swan necks, discharge chutes and fittings generally are to be fixed where necessary to facilitate the flow of water.

Rainwater outlets shall be PVC suitable for the roof finish in which they occur with domical PVC grating.

Joint Fillers and Sealing Compound

Joint fillers set between the sheet flashings and block work or concrete faces shall be 'Flexcell' or other equal and approved.

Joint sealers around metal window frames between flashings and/or metal sheets and floor 'Flexcell' fillers shall be expandite sealastic oil based mastic or similar approved and applied strictly in accordance with the manufacturer's printed instructions.

GLAZING

- A. The requirements of the following British Standards and Codes of Practice shall be observed: -

British Standards

- B. Glass for glazing B.S. 952
C. Linseed oil putty for use in wooden frames B.S. 544

Codes of Practice

- D. Glazing and fixing of glass for buildings C.P. 152

- E. NOTE: **The Contractor's attention is drawn to section "I" of the Standard Method of Measurement.**

- D. The whole of the glass shall be of the best quality and be free from bubbles; specks, waves flaws or any other defects and shall comply with the requirements of the Standard mentioned above.
- E. All glass is to be accurately cut to fit easily into rebates. Glass shall be well puttied and sprigged with copper springs.
- F. Glazing to wood frames shall be secured with glazing beads fixed with brass cups and screws and wash-leather or approved "Necprene" bedding strips. Putty for glazing in wood frames shall be composed of pure linseed oil and powdered whiting, free from grittiness all in accordance with the Standard mentioned above.
- G. Glazing to metal frames shall be with clips, glass shall be properly back puttied and the front putty finished neatly and cleanly.
- H. Putty for glazing in metal frames shall be quick hard setting tropical putty specially manufactured for use with steel window.
- J. Rebates of metal frames receiving glass shall be prepared and treated with primer for putty prior to glazing and putty shall be primed 10 days after glazing.
- K. Rates for glazing Georgian wire glass shall include for aligning lines in adjoining panes both ways.
- L. Glass panes shall be cut to sizes to fit openings with not more than 1.6mm play all round. Clear sheet shall be ordinary glazing (O Q) quality and polished plate shall be (C C) quality.
- M. Mirrors shall be silver backed and free from flaws and imperfections.
- N. Cut out all cracked or broken glass re-glaze to match and leave perfect on completion. On no account shall windows be cleaned by scraping with glass.

CARPENTRY

- A. The requirements of the following British Standards and Codes of Practice shall be observed:-

British Standards

- | | | | |
|----|---|------|-------------|
| B. | Glossary of terms relating to timber and woodwork | B.S. | 565 |
| C. | Structural timber. Measurement of characteristics affecting strength (softwood) | B.S. | 1860 part 1 |
| D. | Dimensions for softwood | B.S. | 4471 |
| E. | Methods of testing small clear specimens of timber | B.S. | 373 |
| F. | Nails | B.S. | 1202 part 1 |
| G. | Connectors for timber | B.S. | 1579 |
| H. | Glued laminated structural members | B.S. | 4169 |
| J. | Black bolts | B.S. | 916 |

Codes of Practice

- | | | | |
|----|--|------|-----|
| K. | The structural use of timber | C.P. | 112 |
| L. | Preservative treatment for construction timber | C.P. | 98 |
- M. **NOTE: The Contractor's attention is drawn to Section "L" of the Standard Method of Measurement.**
- N. All timber used for carpentry shall be sound, well conditioned, properly seasoned to suit the particular use and free from defects or combination of defects rendering it unsuitable for the purpose intended.
- P. Timber used for carpentry shall be in accordance with the latest approved Grading Rules issued by the Government of Kenya (Legal Notice Number 358). Timber used structurally shall comply with the requirements of the Export Grading Rules made under the Export of Timber Act (Kenya), Second or Select Grade, and also with B.S. 1860.
- Q. The following timber shall be used:
- Podocarpus (podocarpus spp)
 - Cedar (Junperus Procera)
 - Elgon Olive
- R. All timber as it arrives on site shall be inspected by the Contractor, and any timber found not to comply with the specification or not approved must be removed forthwith from the site and only timber that has been approved shall be used.

Tolerances shall conform to the following extracts from the Government of Kenya Grading Rules: -

Softwood Grading: - Strength Grades, first and second grades

Undersizes not allowed

Oversize :- All timber to be sawn by 1/6 per 25mm of thickness and width

Not more than 3mm in thickness and not more than 6mm in width

CARPENTRY (CNT'D)

- A. All timber shall be free of live borer beetle or other insect attack when brought upon the site. The Contractor shall be responsible to the end of maintenance period for executing at his own cost all the work necessary to eradicate insect attack of timber attacked or suspected, notwithstanding that the timber concerned may have already been inspected and passed as fit for use.
- B. Timber shall be seasoned to moisture content of not more than 22%.
- C. All carpentry timbers shall be treated with pressure impregnated "Celcure" or "Tanalith" solution with a minimum wet retention of 5.46kg of dry salt per m². If so required "charge sheets" issued after treatment with "Celcure" or "Tanalith" shall be submitted by the Contractor to the Architect for his retention. All cut ends and other cut faces or timbers sawn after treatment shall be treated before fixing with "Celcure B" or Wolmanol" solution brushed on.

The Contractor's rates for such timber hereinafter must allow for the above treatment.

- D. All grounds shall be podocarpus or other light and approved hardwood.
- E. Nails shall comply with the relevant Standard as above.
- F. Black bolts shall comply with B.S. 916. Rag bolts, coach screws, and others shall comply with B.S. 1494. Where used externally nails and screws shall be sherardized.
- G. Timber shall be delivered early to the site, stored under cover clear of the ground and protected from the sun and dampness.
- H. The Architect shall be given facilities for inspection of all works in progress whether in workshop or on Site. The Contractor is to allow for testing of proto-types of special construction units and the Architect shall be at liberty to select any samples he may require for the purpose of testing i.e for moisture content or identification, species, strength etc such tests will be carried out by the Forestry Department.
- J. The Contractor is to clear out and destroy or remove all cut ends, shavings and other wood waste from all parts of the building and the site generally, as the work proceeds and at conclusions of work.

This is to prevent accidental borer infestation and discourage termites and decay.

- K. All carpenter's work shall be accurately set out in strict accordance with the Drawings and shall be framed together and securely fixed in the best possible manner with properly made joints, all brads, nails, and screws etc shall be provided as necessary directed and approved and the rates shall be deemed to allow these.

All carpenter's work shall be left with sawn faces except where specified to be wrot.

- L. All timber shall be as long as possible in order to minimise joints. Where joints are unavoidable surfaces shall be in contact over the whole area of the joint before fastenings are applied.

No nails, screws and bolts are to be fixed in any split end. If splitting is likely, or is encountered in the course of the work, holes for nails are to be prebored at diameter not exceeding 4/5th of the diameter of the nails. Clenched nails must be bent at right angles to the grain.

- M. Lead holes are to be bored for all screws. When the use of bolts is specified the holes are to be bored from both sides of the timber and are to be of the diameter D/16 where D is the diameter of the bolt. Nuts must be brought up tight but care must be taken to avoid crushing of the timber under washers.

JOINERY

A. The requirements of the following British Standards and Codes of practice shall be observed: -

British Standards

B.	Glossary of terms relating to timber and woodwork	B.S. 565
C.	Dimensions for softwood	B. S. 4471
D.	Quality of timber and workmanship in joinery	B.S. 1186 parts 1 + 2
E.	Methods of testing small clear specimens of timber	B.S. 373
F.	Methods of test for clear plywood	B.S. 4512
G.	Fibre building board (Insulation board - softwood)	B.S. 1142 part 3
H.	Block board and lamin board	B.S. 3444
J.	Pannelled and glazed wood door	B.S. 459 part 1
K.	Plywood manufactured from tropical hardwoods	B.S. 1455
L.	Decorative laminated plastic sheet	B.S. 3794
M.	Flush doors	B.S. 459 part 2
N.	Fire check flush doors and wood and metal frame (¹ / ₂ hour and 1 hour types)	B.S. 459 part 3
P.	Wood door frame and linings	B.S. 1567
Q.	Wood trims (softwood architraves skirtings, quadrants etc)	B.S. 584
R.	Synthetic resin adhesive (phenolic and aminoplastic) for wood	B.S. 1204 parts 1 + 2 type MR
S.	Wood screws	B.S. 1210
T.	Fixing accessories for building purposes (bolts, screws, staples etc)	B.S. 1494 part 2
U.	Felt tapping screws and metallic drive screws	B.S. 4174

Codes of Practice

V.	Timber flooring	C.P. 201
W.	Flooring of wood and wood products	C.P. 201 parts 1 + 2
X.	Doors and windows including frames and <u>linings</u>	C.P. 151

Y. **NOTE: The Contractor's attention is drawn to section "M" of the Standard Method of Measurement**

Z. The timber for joinery shall be as specified in the Export Timber Ordinance of 1951 and obtained from an approved sawmill. All such timber shall be Prime Grade and reasonably straight grained and shall be purchased immediately the contract is signed and is to be open stacked for such further seasoning as may be required.

JOINERY (CNT'D)

Timber which in the opinion of the Architect does not satisfy the Specification in character or Condition or is not suitable for the requirements of the work because of the blemishes it contains shall not be used.

A. The following timber shall be used:

Podocarpus (podocarpus ssp)

Mvuli (Chlorophora Excelsa)

Cedar (Juniperus Procera)

Elgon Olive

Camphor

Mahogany

B. All timber shall be wrot by machine dressing on exposed faces, with all machine marks sanded out, unless otherwise specified.

The dimensions and thickness stated in the Bills of Quantities are nominal (unless otherwise stated), that is to say a maximum of 3mm will be allowed for each wrot face.

C. The joinery shall be worked strictly in accordance with detail Drawings, and is to be framed up and put together as soon as possible and stored in the drying room, for as long as possible before being wedged up. All joints and angles are to be glued and where necessary cross-tongued with hardwood tongues and surfaces finished clean and smooth, with machine marks and sand prepared out before fixing.

Should any of the joinery work shrink, warp, wind or fly unduly before the end of the maintenance period of the contract, the work is to be taken down and new work which may thereby be effected at the Contractor's sole expense.

D. Tolerances in thickness shall conform to the following extracts from Government of Kenya Grading Rules:-

Hardwood Grading: (First and Second Grades)

The following tolerances in thickness will be admitted:-

- (i) 1.6mm over size on pieces up to 25mm in thickness.
- (ii) 3mm over size on pieces over 25mm and up to 51mm in thickness
- (iii) 6mm over size on pieces over 51mm in thickness.
Undersize will not be permitted.

Soft Grading: Appearance Grades (First and Second Grades)

Undersize not allowed.

Oversize: All timber to be sawn oversize by 1.6mm per 25mm of thickness and width. Not more than 3mm in thickness and not more than 6mm in width.

E. Seasoning of Timber shall be to a moisture content of not more than 15%.

F. Pressure impregnation treatment shall be as for "Carpentry".

JOINERY (CNT'D)

- A. Where joinery is described as screwed this is deemed to include sinking the head of the screw and pelling with similar timber, and to grain in with the finished joinery.
- B. All hardwood joinery shall be finished for oil paint, unless otherwise stated.
- C. The rates shall be deemed to allow for all nails and screws and fixing all labour cuttings, notching, halving, morticing, tenoning and wedges except where otherwise provided.
- D. All work described as plugged shall be fixed with screws to plugs formed by drilling concrete walls, etc, with the proper tool of suitable size at 750mm spacing and filling the holes completely with "philplug" rawl plastic or rawlplugs in accordance with the manufacturer's instructions.
- Alternatively and where so agreed by the Architect, hardwood dovetailed fixing slips in preservations and cut and primed or bedded in cement mortar (1:3) may be used.
- E. The rates are to allow for all surfaces of joinery where in contact with walling or plaster, or where otherwise unexpected, being treated before fixing with two coats of approved wood preservative.
- F. Laminated plastic sheeting shall be "Formica" manufactured by Thomas de la Rue and Co. Ltd. or other equal and approved, 1.6mm thick and accurately fixed with approved type waterproof impact adhesive and in the colours selected by the Architect.
- G. Blockboard shall comply with the Standard as mentioned above.
- H. Plywood shall comply with the Standard as mentioned above. Bond Mr. Birch faced both sides unless otherwise stated.
- J. Fibre board shall be 12.7mm "Celotex" or other equal and approved softboard.
- K. All joiner's work shall be accurately set out and framed together as soon after commencement of the building as is practicable but not to be wedged up or glued until the building is ready for fixing same. Any portions that warp, wind or develop shapes or other defects within the maintenance period shall be removed and new fixed in their place together with other work which may be affected thereby, all at Contractor's own expense.
- All work shall be properly mortised, tenoned, housed, shouldered, dovetails, notched primed, branded, etc, as directed and to the satisfaction of the Architect and all glued up with the best quality glue.
- L. Joints in joinery shall be as specified or detailed, and so designed and secured as to resist or compensate for any stresses to which they may be subject. All nails, strings, etc, are to be punched and puttied. Loose joints are to be where provision for shrinkage is necessary; glued joints where shrinkage need not be load-bearing joints or where conditions may be damp must be of the resin type. For non-load bearing joints or where dry conditions may be guaranteed resin or organic glues may be used. All exposed surfaces for joinery shall be wrot and all arises "cased off" by planing and sand preparing to an approved finish suitable to the specified treatment.
- M. 3mm reduction off specified sizes will be allowed to each wrot face except in members 25mm thick or less or where, described as finished sizes in which case joinery shall hold up to the full dimensions.
- N. In Fixing all beads, fillets and small members shall be fixed with round or oval brads or nails well punched in and stopped. All large members shall be fixed with screws. Brass screws shall be used for fixing of all hardwoods, to the heads let in and pelted over with wood pellets to match the grain.
- P. Rates shall include for bedding frames, sills etc. in mortar or dressing surfaces of walls etc. in lieu.
- Q. Round wood plugs shall not be used, and screws or plugs shall be spaced at 750mm centres.
- R. All fixed joinery which in the opinion of the Architect is liable to become bruised or damaged in any way shall be completely cased and protected by the Contractor at his own expense until completion of works.
- S. Bottom edges of doors shall be painted with one coat of approved primer before fixing.

IRONMONGERY

- A. The requirements of the following British Standards shall be observed:-

British Standards

- | | | |
|----|---|-------------------|
| B. | Hinges | B.S. 1227 part 1A |
| C. | Performance test for locks | B.S. 2088 |
| D. | Letter plates | B.S. 2911 |
| E. | Performance requirements for hardware
for domestic furniture | B.S. 4112 |

- F. **NOTE:** **The Contractor's attention is drawn to Section "M" of the Standard Method of Measurement.**

- G. All locks and ironmongery shall be fixed with screws etc. to match, before woodwork is painted, handles shall be removed, carefully stored and refixed after completion of painting and locks oiled and left in perfect working order. All keys shall be labelled with the door references on labels before handing to the Architect on completion. All ironmongery shall be carefully protected until completion of the work and any damage is to be made good at the Contractor's expense.
- H. Rates shall allow for easing and adjusting all doors etc. and for lubricating all locks, hinges etc. and leave in perfect condition.
- J. Where descriptions of fixing ironmongery include catalogue numbers, such items shall be obtained from the specified manufacturers if at all possible.
- K. Rates shall include for labelling all key with door references as directed by the Architect.

METAL WORK

- A. The requirements of the following British Standards and Codes of Practice shall be observed:

British Standards

- | | | |
|----|--|----------------------|
| B. | Structural steel, Hot rolled sections | B.S. 4 part 1 |
| C. | Structural steel, Hot rolled hollow section | B.S. 4 part 2 |
| D. | Black hip and countersunk bolts and units | B.S. 325 |
| E. | Black Bolts, screws and nuts | B.S. 916 |
| F. | Self tapping screws and metallic drive screws | B.S. 4174 |
| G. | Metal washers for general engineering purposes | B.S. 3410 |
| H. | Expanded metal (steel) for general purposes | B.S. 405 |
| J. | Aluminium and aluminium alloy Sections for general engineering purposes and addendum | B.S. 1161 |
| K. | Metal - ore welding of structural steel tubes | B.S. 938 |
| L. | Metal - ore welding of mild steel | B.S. 1856 |
| M. | Hot dip galvanized coating on iron and steel articles | B.S. 729 part 1 |
| N. | Wrot aluminium and aluminium alloy | B.S. 1474 |
| P. | Steel windows (Domestic and similar buildings) | B.S. 990 parts 1 + 2 |

Codes of Practice

- | | | |
|----|---|-----------|
| Q. | Metal railings and balustrades | C.P. 499 |
| R. | Composite construction in structural steel and concrete | C.P. 117 |
| S. | Protection of iron and steel structure from corrosion | C.P. 2008 |
| T. | Cleaning and preparation of metal surfaces | C.P. 3012 |

- U. **NOTE: The Contractor's attention is drawn to Section "P" of the Standard Method of Measurement.**

- V. Iron and steel where galvanised shall comply with the requirements of B.S. 729, part 1 entirely coated with zinc after fabrication by complete immersion in zinc bath in one operation and all excess carefully removed. The finished surface shall be clean uniform.
- W. All work in aluminium shall comply with the requirements of the Standards mentioned above.
- X. All smithing and bending shall be soundly and neatly executed care being taken not to overheat.
- Y. All straps, bolts and similar work shall be forged neat and clean from the anvil.
- Z. All welded connections shall be ground to a smooth finish and rates shall be deemed to allow for this.
- AA. Steel windows shall comply with the requirements of the Standard mentioned above and shall be fixed in accordance with manufacturer's instructions.
- AB. All mild steel except galvanized shall be cleaned of rust and scale, painted one coat red priming paint before delivery to site and rates shall include for this.

ELECTRICAL INSTALLATIONS

- A. NOTE: - **The Contractor's attention is drawn to Section "R" of the Standard Method of Measurement.**
- B. All electrical work shall be carried out under close supervision of a licensed operative of an approved firm of registered Electrical Contractor.
- C. All Electrical work shall be executed in strict accordance with the latest editions of the British Standards and other Government Regulations.
- D. The main Contractor shall at all time co-ordinate his own work and that of all Sub-Contractors with the work of the Electrical Sub-Contractor.
- E. Special care shall be exercised to ensure that all necessary cable trenches are completed before other subsequent floors, paths etc. including the provision of cable ducts, chases, sinkings and the like.
- F. No patching up of floors, pavings, plasterwork etc. will be permitted and where work has to be rebuilt or -re-executed due to lack of planning of Sub-Contractor's work, the Contractor will be held responsible for all costs and expenses arising therefrom.

PLUMBING AND ENGINEERING INSTALLATIONS

A. The requirements of the following British Standards Codes of Practice shall be observed.

British Standards

B.	Cast iron spigot and socket soil, waste and ventilating pipes (sand and spun) and fittings	B.S. 416
C.	Copper and copper alloy tubes (for water, gas and sanitation)	B.S.2871 part 1
D.	Capillary and compression fittings of copper and copper alloy	B.S. 864 part 1
E.	Copper and copper alloy traps	B.S. 1184
F.	Unplasticised p.v.c. rainwater goods	B.S. 3974
G.	Pipe supports	B.S. 3974
H.	Fixing accessories for building purposes (gutter bolts, pipe brackets)	B.S. 1494
J.	Draw-off taps and stop valves for water services (screw down pattern)	B.S. 1010
K.	Ball valves (excluding float)	B.S.1212 parts 1+2
L.	Floats for ball valves (plastics) for cold water	B.S. 2456
M.	W.C. flushing cisterns	B.S.1125
N.	Galvanised mild steel cisterns, covers, tanks and cylinders	B.S.417 part 1 + 2
P.	Pitch-impregnated Fibre pipes and fittings	B.S. 2760
Q.	Steel cubes and tubulars	B.S. 1387
R.	Unplasticized P.V.C. soil and ventilating pipe, Fittings and accessories	B.S.4514
S.	Unplasticized P.V.C. pipes for cold water services	B.S.3505
T.	Malleable cast iron and cast copper alloy, Screwed pipe fittings	B.S. 143 and 256

PAINTING AND DECORATING

A. The requirements of the following British Standards and Codes of Practice shall be observed:

British Standards

B.	Lead based priming paints	B. S. 2521 + 2523
C.	Calcium plumbate priming paints	B. S. 3698
D.	Ready mixed aluminium priming paints for woodwork	B. S. 4756
E.	Knotting	B. S. 1336
F.	Treatment of plywood with preservatives	B. S. 3842
G.	Paint colours for building purposes	B. S. 4800
H.	Colours for building and decorative paints	B. S. 2660
J.	Red-Oxide linseed oil priming paint	B. S. 2524
K.	Undercoating and finishing paints	B. S. 2525 - 7
L.	Oil stains	B. S. 1215

Codes of Practice

M.	Painting for buildings	C. P. 231
N.	Cleaning and preparation of metal surfaces	C. P. 3012

NOTE: The Contractor's attention is drawn to Section "U" of the Standard Method of Measurement.

- P. All Work under this trade must be executed by an approved specialist unless otherwise permitted.
- Q. The Contractor's programme in this area shall be so arranged that all other trades are completed and away from the area to be painted prior to the commencement of painting. Before painting the Contractor must remove all concrete and mortar droppings and the like from all work to be decorated and remove all stains and obtain uniform colour to work to be oiled and polished.
- R. All plaster, metal, wood or other surfaces which are to receive finishes of paint, stain, polish, distemper or paint work of any description are to be carefully inspected by the Contractor before he allows any of his painters to commence work. The Contractor will be held solely responsible for all defective work as a result of his painters failure to insist on receiving from the other trades surfaces in the proper condition to allow first class finishes to the various kinds specified being applied to them
- All painting and decorating schemes shall be carried out in colours selected by the Architect.
- S. Paints shall be ready mixed, oil based priming paint and shall comply with the requirements of the relevant above-mentioned standards.
- T. The oil shall comply with the requirements of B. S. 1251.
- U. All materials shall be of the best quality and shall be of an approved proprietary brand selected from the latest Schedule of Approved Paints issued by the Ministry of Works.
- V. Materials to be applied externally shall be of exterior quality and / or recommended by the manufacturers for external use

PAINTING AND DECORATING (CNT'D)

- A. Materials shall be delivered to site intact in the original sealed drums or tins and shall be mixed and applied strictly in accordance with the manufacturer's instructions and to the approval of the Architect.
- B. Unless specifically instructed or approved by the Architect, no paints, distemper e.t.c are to be thinned or otherwise adulterated, but are to be used as supplied by the Manufacturers and direct from the tins.
- C. If required by the Architect the Contractor shall provide at his own expense samples of paints etc. with containers and cases to be forwarded, carriage paid, by the Contractor for analysis to a laboratory.
- D. The priming, undercoats, and finishing coats shall each be of differing tints and the priming and undercoat shall be the correct brands and tins to suit the respective finishing coats, in accordance with the manufacturer's instructions. All finishing coats shall be of colours and tints selected by the Architect. The Architect must approve each coat before the next coat is applied.
- E. Each coat shall be properly dry and in the case of oil or enamel paints shall be well rubbed down with the fine glass paper before the next coat is applied. The paintwork shall be finished smooth and free from brush marks.
- F. Colour cards of all paints etc. shall be submitted to, and samples prepared for approval of the Architect before laying on, and such samples, when approved, shall become the standard for the Works.
- G. All paints, emulsion paints, and distempers shall be applied by means of a brush of spray gun or rollers of an approved type, where so agreed by the Architect.
- H. No painting is to be done in wet weather or on surface, which are not thoroughly dry.
- J. Woodwork to be painted shall be rubbed down and all knots and resin pockets shall be scorched back and coated with knotting. After priming all nail holes and other imperfections shall be stopped and the whole surface be rubbed down and all dust brushed off. The surface of woodwork shall be lightly sand papered between the coats.
- K. All woodwork in contact with walling or plaster shall be treated after cutting and preparation but before assembly or fixing with one coat of "Timside" wood preservative manufactured by Timsales, P. O. Box 18080 - 00500, Nairobi. The solution is to be brushed on all faces of all timbers, unless exposed to view and painted. The Contractor shall note that this solution is poisonous and shall take all necessary precautions and instruct his workmen accordingly.
- L. Wax polish shall be furniture polish of an approved brand, and wood surfaces shall be allowed to dry for a minimum period of six weeks, stopped with approved plaster compound stopping and rubbed down flushes as necessary, and then the thoroughly, brushed down and left free from all afflorescence, dirt dust immediately prior to decorating.
- M. Plaster surfaces which are to be finished with emulsion, oil or enamel paint, shall be primed with an alkali resisting primer complying with the particular paint manufacturer's specification and applied in accordance with their instructions.
- N. Fibre board or similar surfaces shall be lightly brushed down to remove all dirt, dust and loose particles and have all nail holes or other defects stopped with an approved plaster compound stopping rubbed down flushed and left with a texture to match surrounding material and shall receive one coat petrifying liquid at last.

PAINTING AND DECORATING (CNT'D)

- A. All metal surfaces shall be thoroughly brushed down with wire brushes and scraped where necessary to remove all scale, rust etc. immediately prior to decorating. Where severe rust exists and if approved by the Architect a proprietary de-rusting solution may be used in accordance with the manufacturer's instructions.
- B. Shop primed and unprimed surfaces shall be given one coat of metal chromate primer.
- C. Galvanised surfaces shall be treated before painting with an approved proprietary mordant or de-greasing solution before priming.
- D. Coated surfaces already treated with bituminous solution shall be scrapped to remove soft parts and then receive two isolating coats of aluminium primer or other approved anti-tar primer.
- E. Existing painted and decorated surfaces shall be prepared as described above. Painted plaster, metal or wood surfaces shall be rubbed down to expose the material beneath and old paint burnt off with blowtorches if necessary in the Architect's opinion.
- F. Emulsion paint on ceilings and all undercoats of emulsion paint and complete oil painting on walls shall be completed before p.v.c. flooring is laid. Final coats of emulsion paints on wall shall be applied after such flooring has been laid complete.
- G. Three coats of emulsion paint shall be applied to receiving surfaces using a thinning medium or water only if and as recommended by the manufacturer. An approved plaster primer tinted to match may be substituted for the first coat.
- H. Enamel paint shall be applied in two undercoats and one finishing coat after preparation and priming as specified above.
- J. All ironmongery shall be removed from joinery steel windows and louvres before painting is commenced and shall be cleaned and renovated if necessary and refixed after completion of painting.
- K. Rates for painting shall be deemed to include for preparing and priming surfaces above described.
- L. Rates of paint, distemper etc. shall allow for covering up all floors, fittings, etc. with dust sheets when executing the work and for removing, covering when no longer required and for cleaning off, touching up and leaving perfect at completion.

SECTION 3 : BUILDING WORKS

BILL NO. 1 - SUBSTRUCTURE

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>1 - SUBSTRUCTURE (ALL PROVISIONAL)</u>					
	<u>Site Preparation</u>					
A	Clear site of all grass,bushes ,shrubs and undergrowth and burn all arisings	701	Sm			
	<u>Excavation and Earthwork</u>					
B	Excavate oversite, 200mm deep (average); commencing at existing ground level and wheel and deposit on site as in spoil heaps as directed	800	Sm			
C	Excavate for basement commencing at stripped level, not exceeding 1.50 metres deep	196	Cm			
D	Ditto commencing at excavated level, 1.50 metres but not exceeding 3.00 metres deep	196	Cm			
E	Excavate trenches for foundation strip footing commencing at excavated level, not exceeding 1.50 metres deep	341	Cm			
F	Ditto commencing at excavated level, 1.50 metres but not exceeding 3.00 metres deep	61	Cm			
G	Excavate pits to receive bases commencing at excavated level, not exceeding 1.50 metres deep	60	Cm			
H	Extra over all excavations for excavating in rock: irrespective of type or location; levelling bottom of excavation	69	Cm			
J	Return, fill and ram selected excavated materials around foundations	343	Cm			
K	Load and cart away surplus excavated materials	119	Cm			
	<u>Planking and Strutting</u>					
L	Allow for planking and strutting to uphold sides of excavations as required		Item			
	<u>Disposal of Water</u>					
M	Allow for keeping all excavations free of water		Item			
	<u>Hardcore or The Like</u>					
N	Approved hardcore fill well packed and compacted in layers not exceeding 150mm thick	183	Cm			
P	50mm thick quarry dust blinding on surfaces of hardcore	673	Sm			
	<u>Carried to Collection</u>					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>1 - SUBSTRUCTURE (ALL PROVISIONAL)</u>					
	<u>Anti-termite Treatment</u>					
	<u>Chemical anti-termite treatment executed completed by an approved specialist under a ten year guarantee to:</u>					
A	Surfaces of filling	673	Sm			
	<u>Damp Proof Membranes</u>					
	<u>Polythene sheeting; 1000 gauge; 150 mm laps; laid on:</u>					
B	Surfaces of hardcore filling to receive concrete	673	Sm			
	<u>Concrete Work</u>					
	<u>Plain in-situ concrete; class 15/20 (1:3:6 mix); using ordinary portland cement in:</u>					
C	50mm thick blinding under strip footings	227	Sm			
D	Ditto but column bases	40	Sm			
	<u>Reinforced vibrated in-situ concrete; class 25/20 (1:1.5:3 mix) using ordinary portland cement in:</u>					
E	Foundation strip footings	54	Cm			
F	Columns bases	12	Cm			
G	Substructure columns	3	Cm			
H	200mm thick retaining wall	42	Sm			
J	150mm thick floor bed	673	Sm			
	<u>Sawn formwork to:</u>					
K	Vertical sides of strip footings	109	Sm			
L	Ditto but curved on plan	39	Sm			
M	Vertical sides of retaining walls	39	Sm			
N	Ditto but curved	45	Sm			
P	Sides of column bases	29	Sm			
Q	Vertical sides of substructure columns	36	Sm			
R	Ditto but curved edges of columns	14	Sm			
S	Edges of floor bed and steps over 75mm but not exceeding 150mm wide	284	Lm			
	<u>Carried to Collection</u>					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

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PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>1 - SUBSTRUCTURE (ALL PROVISIONAL)</u> COLLECTION 1 Page No. 3/1/1 2 Page No. 3/1/2 3 Page No. 3/1/3					
	Carried to Summary					

BILL NO. 2 : LOWER GROUND FLOOR

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>2A - FRAME</u>					
	<u>Concrete Work</u>					
	<u>Reinforced vibrated in-situ concrete; class 25/20 (1:1.5:3 mix) using ordinary portland cement in:</u>					
A	Beams	4	Cm			
B	200mm thick retaining wall	72	Sm			
	<u>Formwork</u>					
	<u>Wrought formwork to provide a fair face finish</u>					
C	Sides and soffits of beams	33	Sm			
D	Ditto but Curved	21	Sm			
E	Sides of retaining wall	66	Sm			
F	Ditto curved on plan	77	Sm			
	<u>Reinforcement (Provisional)</u>					
	<u>High tensile square twisted mild steel reinforcement bars to B.S. 4461, including spacer blocks, cutting, tying and bending</u>					
G	8 - 16mm diameter bars	2,128	Kg			
	<u>Waterproofing</u>					
	<u>"Penetron" or approved equivalent waterproofing; 1.4 -1.6 kg/m2; applied in strict accordance with the manufacturer's printed instructions; under 10 years guarantee; to:</u>					
H	Retaining wall	72	Sm			
	Carried to Summary					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2B - UPPER FLOORS</u>				
	<u>Concrete Work</u>				
	<u>Reinforced vibrated in-situ concrete; class 25/20 (1:1.5:3 mix) using ordinary portland cement in:</u>				
A	150 mm thick solid suspended slab <u>Hollow block suspended construction comprising 300mm wide x 225mm deep x 380mm long hollow pots with and including 150mm wide intermediate ribs in concrete class 25/20 and 75mm topping in similar concrete including working around reinforcement (measured separately), all as described:-</u>	106	Sm		
B	375mm Thick Suspended slab <u>Mesh Fabric Reinforcement to B.S. 4483 and setting in concrete with 300mm side and end laps (measured nett - allow for laps)</u>	62	Sm		
C	Fabric Ref. A142, weighing 2.22 Kg/m ² , in topping to hollow block construction. <u>Formwork</u> <u>Wrought formwork to provide a fair face finish to:</u>	62	Sm		
D	Soffites of solid suspended slabs	167	Sm		
E	Edges of slab over 75mm but not exceeding 150mm wide	70	Lm		
F	Ditto but curved on plan	26	Lm		
	<u>Reinforcement (Provisional)</u>				
	<u>High tensile square twisted mild steel reinforcement bars to B.S. 4461, including spacer blocks, cutting, tying and bending</u>				
G	8 - 16mm diameter bars	1,797	Kg		
	Carried to Summary				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>2D - STAIRS</u>					
	<u>Concrete Work</u>					
	<u>Reinforced vibrated in-situ concrete; class 25/20 (1:1.5:3 mix) using ordinary portland cement in:</u>					
A	Steps and waist	5	Cm			
	<u>Formwork</u>					
	<u>Wrought formwork to provide a fair face finish to:</u>					
B	Sloping soffites of stairs	14	Sm			
C	Edges of risers	68	Lm			
D	Open end of string 375mm wide (extreme) including forming profile for treads and risers	27	Lm			
	<u>Reinforcement (Provisional)</u>					
	<u>High tensile square twisted mild steel reinforcement bars to B.S. 4461, including spacer blocks, cutting, tying and bending</u>					
E	10mm bars	156	Kg			
F	12mm bars	234	Kg			
	<u>Stair Finishes</u>					
	<u>20mm Thick cement and sand (1:4) screed to:</u>					
G	250mm wide treads ditto	65	Lm			
H	150mm high risers ditto	68	Lm			
	Carried to Collection					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2D - STAIRS</u>				
	<u>Tiles: Slab or Block Finishings</u>				
	<u>10mm thick Colored non-slip ceramic floor tiles as approved by the Architect fixed with approved adhesive : on cement and sand screed (m/s)including raking cutting : jointed and pointed in matching colour proprietary grout</u>				
A	275mm treads	65	Lm		
B	150mm high risers ditto	68	Lm		
C	Ditto to open strings : 375 mm wide (extreme) : cut to profile of treads and risers	27	Lm		
	<u>15mm thick cement/lime/sand (1:1:6) plaster as described to:</u>				
D	Sloping soffites of stairs	14	Sm		
	<u>Metalwork</u>				
E	900mm high balustrade railing comprising of 40mm diameter circular hollow section(CHS) standards at 1000mm centres; one end fish-tailed and grouted into concrete; 75x50mm wrot vanished mahogany top railing with and including screwing to 30x3mm flat bars : and 4No x 20mm circular hollow section (CHS) intermediate rails welded onto standards; including one coat red oxide primer before fixing; all to architects details	27	Lm		
	<u>Painting and Decorating</u>				
	<u>Prepare and apply three coats first quality silk vinyl plastic emulsion paint to:</u>				
F	Sloping soffites of stairs	14	Sm		
	Carried to Collection				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>2D - STAIRS</u>					
	<u>Prepare and apply three coats of gloss oil paint to metal surfaces</u>					
A	General surfaces of balustrades (both sides measured flat)	48	Sm			
	<u>Prepare and apply three coats "two pack" matt polyurethane clear finish on timber</u>					
B	Surfaces over 100mm but not exceeding 200mm girth	27	Lm			
	Carried to Collection					
	<u>COLLECTION</u>					
1	Page No. 3/2/3					
2	Page No. 3/2/4					
3	Page No. 3/2/5					
	Carried to Summary					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>2E - EXTERNAL WALLS</u>					
	<u>Walling</u>					
	<u>Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar</u>					
A	200mm thick walls reinforced with 20 gauge x 25mm wide hoop iron in every alternate course	78	Sm			
	<u>Damp Proof Courses</u>					
	<u>B.S 743; type A; bitumen hessian base; 150 mm laps; under walls; including levelling bed with cement mortar (1:4)</u>					
B	200mm wide	37	Lm			
	<u>In-situ Finishings</u>					
	<u>Key Pointing</u>					
C	Key pointing to achieve neat recessed horizontal and flush vertical joints	60	Sm			
	<u>Mazeras Cladding</u>					
D	50mm thick approved mazeras facing built against concrete or masonry surfaces: in cement and sand (1:4) mortar	21	Sm			
	<u>Cement and sand (1:4) render as before described</u>					
E	20mm thick to concrete or masonry surfaces with wood float finish	21	Sm			
	<u>Painting and Decorating</u>					
	<u>Prepare and apply one undercoat and two finishing coats first quality plastic emulsion paint to</u>					
F	Rendered concrete or masonry surfaces, externally	21	Sm			
	Carried to Summary					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>2F - WINDOWS & EXTERNAL DOORS</u>					
	<u>Concrete Work</u>					
	<u>Precast concrete: Class 20/20: including all formwork, hoisting into position and bedding and pointing in cement and sand (1:4) mortar</u>					
A	150 x 75mm (overall) weathered and throated window cill, fair faced on all exposed surfaces	10	Lm			
	<u>Windows</u>					
	<u>Fabricate and fix the following purpose made hardwood timber casement windows consisting of 150x50mm outer framing and all sub-frames and mullions with outer framing fixed to reinforced concrete or masonry; infilled with and including 4mm thick glazing complete with appropriate fixing beading and all necessary iron mongery, bedding in water proof cement mortar and pointing in approved mastic externally :all prepared for painting and to architects detail</u>					
B	Window size 2200 x 1500 mm high overall	2	Nr			
C	Window size 1500 x 900 mm high overall	3	Nr			
	<u>Joinery</u>					
	<u>Approved treated wrot mahogany (prime grade)</u>					
D	50 x 50mm batten, plugged	5	Lm			
E	150 x 25mm window board	9	Lm			
F	Pelmet box size 150mm wide x 150 mm high (overall); 150 x 25mm top with two labours: 150 x 25mm front with four labours and moulded: fixed to and including 50 x 50mm bearer plugged	5	Lm			
G	Extra over ditto for stopped ends size 150 x 150 x 25mm	4	Nr			
	Carried to Collection					

Item	Description	Qty	Unit	Rate	Amount	
	<u>2F - WINDOWS & EXTERNAL DOORS</u>					
	<u>Aluminium Door</u>					
	<u>Supply and fix the following purpose made powder coated aluminium sliding door consisting of heavy duty (minimum 2.0mm thick) aluminium section size 50x75mm outer framing and all vertical & horizontal middle framing with outer framing bolted to reinforced concrete and/or masonry walling (m.s) as "Booth Manufacturing Africa Ltd" Catalogue or other equal and approved infilled with 5mm thick clear glazing complete with appropriate fixing brackets and all necessary iron mongery, bedding in water proof cement mortar and pointing in approved mastic externally as per architects Details</u>					
A	Door size 5100 x 2400mm high overall: comprising 4no. Size 1700 x 2100mm sliding leaves,	2	Nr			
	<u>Painting and Decorating</u>					
	<u>Prepare and apply one coat approved aluminium primer on woodwork before fixing:</u>					
B	Surfaces not exceeding 100mm girth	5	Lm			
C	Surfaces over 100mm but not exceeding 200 mm girth	9	Lm			
	<u>Prepare and apply three coats polyurethane clear varnish on timber</u>					
D	General surfaces	21	Sm			
E	Surfaces over 100 but not exceeding 200mm girth	9	Lm			
F	Ditto not exceeding 100mm girth	5	Lm			
	<u>Carried to Collection</u>					
	<u>COLLECTION</u>					
1	Page No. 3/2/7					
2	Page No. 3/2/8					
	<u>Carried to Summary</u>					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

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PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>2H - INTERNAL DOORS</u>					
	<u>Concrete Work</u>					
	<u>Precast concrete: Class 25/20: including all formwork, hoisting into position and bedding and pointing in cement and sand (1:4) mortar</u>					
A	200 x 300 mm lintel with four 12 mm diameter high tensile steel bars and 8 mm diameter mild steel links at 200mm centres	10	Lm			
	<u>Joinery</u>					
	<u>Approved treated wrot mahogany (prime grade)</u>					
B	150 x 50mm rebated frame, plugged	6	Lm			
C	150 x 50mm rebated transome	2	Lm			
D	100 x 50mm rebated frame, plugged	35	Lm			
E	75 x 25 mm moulded architrave: ditto	76	Lm			
F	25 x 25mm quadrant beading, plugged	6	Lm			
	<u>Supply and fix the following 45mm thick standard flush doors; solid core; faced on both sides with 6mm thick mahogany veneer : hardwood lipped all round; All as per the Architect's details</u>					
G	Door size 800 x 2100mm high overall	7	Nr			
	<u>Supply and fix the following 45mm thick mahogany panel door ; All as per the Architect's details</u>					
H	Door size 1500 x 2400mm high overall: comprising 2no. Equal leaves and 1500 x 300mm fanlight	1	Nr			
	<u>Ironmongery</u>					
	<u>Supply and fix the following ironmongery as per "Union" or other equal and approved manufacturer complete with hand levers and fixing with matching screws</u>					
J	Three lever mortice lock and handle	1	Nr			
K	Two lever mortice lock and handle	7	Nr			
L	100mm steel butt hinges	12	Prs			
M	38mm diameter brass door stopper rawl bolted onto wall or floor	8	Nr			
	Carried to Collection					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>2H - INTERNAL DOORS</u>					
	<u>Painting and Decorating</u>					
	<u>Prepare and apply one coat aluminium primer on woodwork before fixing:</u>					
A	Surfaces over 100mm but not exceeding 200 mm girth	6	Lm			
B	Ditto, not exceeding 100 mm girth	118	Lm			
	<u>Prepare and apply three coats polyurethane clear varnish on timber</u>					
C	General surfaces	15	Sm			
D	Surfaces over 100 but not exceeding 200mm girth	41	Lm			
E	Ditto not exceeding 100mm girth	83	Lm			
	Carried to Collection					
	<u>COLLECTION</u>					
1	Page No. 3/2/10					
2	Page No. 3/2/11					
	Carried to Summary					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

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PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount	
	<u>3B - FLOOR FINISHES</u>					
	<u>Beds or Backing</u>					
	<u>Cement and sand (1:4) backing</u>					
A	25mm thick : wood float finish to receive new finish	286	Sm			
	<u>Tiles: Slab or Block Finishings</u>					
B	10mm thick approved non slip coloured ceramic floor tiles: bedded and jointed in cement and sand (1:4) mortar, including pointing with matching coloured grout	90	Sm			
C	100 x 20mm thick ditto, skirting rounded at top and coved at junction with floor	19	Lm			
	<u>Cut mazeras</u>					
D	20mm thick approved cut "Mazeras" stone paving; bedded and jointed in cement and sand (1:4) mortar, including pointing with matching coloured grout	54	Sm			
E	100 x 20mm thick ditto, skirting rounded at top and coved at junction with floor	17	Lm			
	<u>Joinery</u>					
	<u>Wood block finish</u>					
F	20mm thick approved hardwood woodblock flooring, fixed with approved adhesive to screed (m.s), including sanding to approval	142	Sm			
G	100 x 20mm thick ditto, skirting rounded at top and coved at junction with floor	36	Lm			
H	Ditto but curved	35	Lm			
	<u>Painting and Decoration</u>					
	<u>Prepare and apply one coat aluminium primer on woodwork before fixing:</u>					
J	Surfaces over 100mm but not exceeding 200mm girth	71	Lm			
K	General surfaces of wood blocks	142	Sm			
	<u>Prepare and apply three coats "two pack" matt polyurethane clear finish on timber</u>					
L	General surfaces	142	Sm			
M	Surfaces over 100mm but not exceeding 200mm girth	71	Lm			
	Carried to Summary					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

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PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF
ELGEIYO MARAKWET

SUMMARY : LOWER GROUND FLOOR

Element	Description	Page No.	Amount (Kshs)
2A	Frame	3/2/1	
2B	Upper Floors	3/2/2	
2D	Stairs	3/2/5	
2E	External Walls	3/2/6	
2F	Windows & External Doors	3/2/8	
2G	Internal Walls &Partitions	3/2/9	
2H	Internal Doors	3/2/11	
3A	Internal Wall Finishes	3/2/12	
3B	Floor Finishes	3/2/13	
3C	Ceiling Finishes	3/2/14	
	TOTAL FOR LOWER GROUND FLOOR CARRIED TO GENERAL SUMMARY		

BILL NO. 3 : GROUND FLOOR

[illegible]

Item	Description	Qty	Unit	Rate	Amount
	<u>2B - UPPER FLOORS</u>				
	<u>Concrete Work</u>				
	<u>Reinforced vibrated in-situ concrete; class 25/20 (1:1.5:3 mix) using ordinary portland cement in:</u>				
A	150 mm thick solid suspended slab	39	Sm		
	<u>Hollow block suspended construction comprising 300mm wide x 225mm deep x 380mm long hollow pots with and including 150mm wide intermediate ribs in concrete class 25/20 and 75mm topping in similar concrete including working around reinforcement (measured separately), all as described:-</u>				
B	375mm Thick Suspended slab	349	Sm		
	<u>Mesh Fabric Reinforcement to B.S. 4483 and setting in concrete with 300mm side and end laps (measured nett - allow for laps)</u>				
C	Fabric Ref. A142, weighing 2.22 Kg/m ² , in topping to hollow block construction.	349	Sm		
	<u>Formwork</u>				
	<u>Wrought formwork to provide a fair face finish to:</u>				
D	Soffites of solid suspended slabs	388	Sm		
E	Edges of slab over 75mm but not exceeding 150mm wide	175	Lm		
F	Ditto but curved on plan	43	Lm		
	<u>Reinforcement (Provisional)</u>				
	<u>High tensile square twisted mild steel reinforcement bars to B.S. 4461, including spacer blocks, cutting, tying and bending</u>				
G	8 - 16mm diameter bars	3,862	Kg		
	Carried to Summary				

[illegible]

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

[illegible]

Item	Description	Qty	Unit	Rate	Amount	
	<u>2D - STAIRS</u>					
	<u>Metalwork</u>					
A	900mm high balustrade railing comprising of 40mm diameter circular hollow section(CHS) standards at 1000mm centres; one end fish-tailed and grouted into concrete; 75x50mm wrot vanished mahogany top railing with and including screwing to 30x3mm flat bars : and 4No x 20mm circular hollow section (CHS) intermediate rails welded onto standards; including one coat red oxide primer before fixing; all to architects details	16	Lm			
	<u>Painting and Decorating</u>					
	<u>Prepare and apply three coats first quality silk vinyl plastic emulsion paint to:</u>					
B	Plastered soffites of landing	6	Sm			
C	Ditto but sloping soffites of stairs	21	Sm			
	<u>Prepare and apply three coats of gloss oil paint to metal surfaces</u>					
D	General surfaces of balustrades (both sides measured flat)	29	Sm			
	<u>Prepare and apply three coats "two pack" matt polyurethane clear finish on timber</u>					
E	Surfaces over 100mm but not exceeding 200mm girth	16	Lm			
	Carried to Collection					
	<u>COLLECTION</u>					
1	Page No. 3/3/3					
2	Page No. 3/3/4					
3	Page No. 3/3/5					
	Carried to Summary					

Item	Description	Qty	Unit	Rate	Amount	
	<u>2E - EXTERNAL WALLS</u>					
	<u>Walling</u>					
	<u>Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar</u>					
A	200mm thick walls reinforced with 20 gauge x 25mm wide hoop iron in every alternate course	193	Sm			
B	Ditto curved on plan	110	Sm			
	<u>In-situ Finishings</u>					
	<u>Key Pointing</u>					
C	Key pointing to achieve neat recessed horizontal and flush vertical joints	275	Sm			
	<u>Mazeras facing</u>					
D	50mm thick approved mazeras facing built against concrete or masonry surfaces: in cement and sand (1:4) mortar	21	Sm			
	<u>Cement and sand (1:4) render as before described</u>					
E	20mm thick to concrete or masonry surfaces with wood float finish	46	Sm			
	<u>Mouldings</u>					
F	Extra over for special mouldings on columns to architect's details	27	Sm			
	<u>Metalwork</u>					
G	900mm high railing comprising of 40mm diameter circular hollow section(CHS) standards at 1000mm centres; one end fish-tailed and grouted into concrete; 75x50mm wrot vanished mahogany top railing with and including screwing to 30x3mm flat bars : and 4No x 20mm circular hollow section (CHS) intermediate rails welded onto standards; including one coat red oxide primer before fixing; all to architects details	42	Lm			
	<u>Carried to Collection</u>					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2E - EXTERNAL WALLS</u> <u>Painting and Decorating</u> <u>Prepare and apply one undercoat and two finishing coats first quality plastic emulsion paint to</u>				
A	Rendered concrete or masonry surfaces, externally <u>Prepare and apply three coats of gloss oil paint to metal surfaces</u>	46	Sm		
B	General surfaces of balustrades (both sides measured flat) <u>Prepare and apply three coats "two pack" matt polyurethane clear finish on timber</u>	76	Sm		
C	Surfaces over 100mm but not exceeding 200mm girth	42	Lm		
	Carried to Collection				
	<u>COLLECTION</u> 1 Page No. 3/3/6 2 Page No. 3/3/7				
	Carried to Summary				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2F - WINDOWS & EXTERNAL DOORS</u>				
	<u>Concrete Work</u>				
	<u>Precast concrete: Class 20/20: including all formwork, hoisting into position and bedding and pointing in cement and sand (1:4) mortar</u>				
A	150 x 75mm (overall) weathered and throated window cill, fair faced on all exposed surfaces	55	Lm		
	<u>Joinery</u>				
	<u>Approved treated wrot mahogany (prime grade)</u>				
	<u>Windows</u>				
	<u>Fabricate and fix the following purpose made hardwood timber casement windows consisting of 150x50mm outer framing and all sub-frames and mullions with outer framing fixed to reinforced concrete or masonry; infilled with and including 4mm thick glazing complete with appropriate fixing beading and all necessary iron mongery, bedding in water proof cement mortar and pointing in approved mastic externally :all prepared for painting and to architects detail</u>				
B	Window size 3600 x 1500 mm high overall	2	Nr		
C	Window size 2400 x 1500 mm high overall	2	Nr		
D	Window size 1200 x 1500 mm high overall	8	Nr		
E	Window size 800 x 1500 mm high overall	8	Nr		
F	Window size 600 x 1500 mm high overall	10	Nr		
G	Window size 450 x 1500 mm high overall	6	Nr		
H	Window size 300 x 1500 mm high overall	2	Nr		
J	Window size 2400 x 900 mm high overall	1	Nr		
K	Window size 900 x 900 mm high overall	1	Nr		
L	Window size 600 x 900 mm high overall	3	Nr		
	Carried to Collection				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

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PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

[illegible]

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2F - WINDOWS & EXTERNAL DOORS</u>				
	<u>Painting and Decorating</u>				
	<u>Prepare and apply one coat approved aluminium primer on woodwork before fixing:</u>				
A	Surfaces not exceeding 100mm girth	49	Lm		
B	Surfaces over 100mm but not exceeding 200 mm girth	25	Lm		
	<u>Prepare and apply three coats polyurethane clear varnish on timber</u>				
C	General surfaces	159	Sm		
D	Surfaces over 100 but not exceeding 200mm girth	25	Lm		
E	Ditto not exceeding 100mm girth	49	Lm		
	Carried to Collection				
	<u>COLLECTION</u>				
1	Page No. 3/3/8				
2	Page No. 3/3/9				
3	Page No. 3/3/10				
4	Page No. 3/3/11				
	Carried to Summary				

[illegible]

[illegible]

Item	Description	Qty	Unit	Rate	Amount	
	<u>2H - INTERNAL DOORS</u>					
	<u>Ironmongery</u>					
	<u>Supply and fix the following ironmongery as per "Union" or other equal and approved manufacturer complete with hand levers and fixing with matching screws</u>					
A	Three lever mortice lock and handle	4	Nr			
B	Two lever mortice lock and handle	7	Nr			
C	100mm steel butt hinges	17	Prs			
D	38mm diameter brass door stopper rawl bolted onto wall or floor	11	Nr			
	<u>Painting and Decorating</u>					
	<u>Prepare and apply one coat aluminium primer on woodwork before fixing:</u>					
E	Surfaces over 100mm but not exceeding 200 mm girth	61	Lm			
F	Ditto, not exceeding 100 mm girth	123	Lm			
	<u>Prepare and apply three coats polyurethane clear varnish on timber</u>					
G	General surfaces	46	Sm			
H	Surfaces over 100 but not exceeding 200mm girth	61	Lm			
J	Ditto not exceeding 100mm girth	123	Lm			
	Carried to Collection					
	<u>COLLECTION</u>					
1	Page No. 3/3/13					
2	Page No. 3/3/14					
	Carried to Summary					

Item	Description	Qty	Unit	Rate	Amount
	<u>3A - INTERNAL WALL FINISHES</u>				
	<u>Plaster and Backing</u>				
	<u>Cement/lime/sand (1:1:6) plaster as described</u>				
A	12mm thick to concrete or masonry surfaces	757	Sm		
B	Ditto curved on plan	163	Sm		
C	12mm thick to window or door jambs	25	Sm		
	<u>Cement and sand (1:4) screed in:</u>				
D	15mm thick backing prepared to receive ceramic tiles (m.s)	71	Sm		
E	Ditto curved on plan	11	Sm		
	<u>Tiles; Slab or Block Finishings</u>				
F	250 x 200 x 8mm thick approved coloured glazed ceramic wall tiles, fixed onto screed backing (m.s) with approved adhesive, including pointing with matching coloured grout	71	Sm		
G	Ditto curved on plan	11	Sm		
	<u>Painting and Decorating</u>				
	<u>Prepare and apply three coats first quality silk vinyl plastic emulsion paint to:</u>				
H	Plastered concrete or masonry surfaces	945	Sm		
	Carried to Summary				

Item	Description	Qty	Unit	Rate	Amount	
	<u>3B - FLOOR FINISHES</u>					
	<u>Beds or Backing</u>					
	<u>Cement and sand (1:4) backing</u>					
A	25mm thick : wood float finish to receive new finish	566	Sm			
	<u>Tiles: Slab or Block Finishings</u>					
B	10mm thick approved non slip coloured ceramic floor tiles: bedded and jointed in cement and sand (1:4) mortar, including pointing with matching coloured grout	490	Sm			
C	100 x 20mm thick ditto, skirting rounded at top and coved at junction with floor	233	Lm			
D	Ditto curved on plan	77	Lm			
	<u>Joinery</u>					
	<u>Wood block finish</u>					
E	20mm thick approved hardwood woodblock flooring, fixed with approved adhesive to screed (m.s), including sanding to approval	76	Sm			
F	100 x 20mm thick ditto, skirting rounded at top and coved at junction with floor	21	Lm			
	<u>Painting and Decoration</u>					
	<u>Prepare and apply one coat aluminium primer on woodwork before fixing:</u>					
G	Surfaces over 100mm but not exceeding 200mm girth	21	Lm			
H	General surfaces of wood blocks	76	Sm			
	<u>Prepare and apply three coats "two pack" matt polyurethane clear finish on timber</u>					
J	General surfaces	76	Sm			
K	Surfaces over 100mm but not exceeding 200mm girth	21	Lm			
	Carried to Summary					

Item	Description	Qty	Unit	Rate	Amount	
	<u>3C - CEILING FINISHES</u>					
	<u>Plastering</u>					
	<u>15mm thick cement/lime/sand (1:1:6) plaster as described to:</u>					
A	Concrete soffites	328	Sm			
	<u>Carpentry</u>					
	<u>Treated sawn cypress (general grade)</u>					
B	75 x 50mm cypress, plugged	107	Lm			
C	50 x 50mm cypress	253	Lm			
	<u>Joinery</u>					
	<u>12mm thick chipboard ceiling nailed onto brandering (m.s)</u>					
D	Horizontal suspended ceilings	54	Sm			
E	100 x 25mm moulded cornice: plugged	107	Lm			
	<u>Treated wrot cypress (prime grade)</u>					
	<u>12mm thick x 100 mm wide tongued and grooved boarding: nailed to brandering (m.s)</u>					
F	Horizontal suspended ceilings	36	Sm			
	<u>Painting and Decorating</u>					
	<u>Prepare and apply one coat primer, one undercoat and two coats first quality plastic emulsion paint on:-</u>					
G	Plastered soffites of ceiling	328	Sm			
	<u>Prepare and apply one coat aluminium wood primer on back of timber before fixing</u>					
H	Surfaces not exceeding 100mm girth	107	Lm			
	<u>Prepare and apply one coat primer, one undercoat and two coats first quality plastic emulsion paint on:-</u>					
J	General surfaces of chipboard and tongue annd groove ceiling; horizontal	54	Sm			
K	Surfaces not exceeding 100mm girth	107	Lm			
	Carried to Summary					

Item	Description	Qty	Unit	Rate	Amount	
	<u>4 - FITTINGS & FURNISHINGS</u>					
	<u>Concrete Works</u>					
	<u>Reinforced vibrated in-situ concrete; class 15/20 using ordinary portland cement in:</u>					
A	100mm thick Plinth	22	Sm			
	<u>Reinforced vibrated in-situ concrete; class 20/20 using ordinary portland cement in:</u>					
B	75mm thick in-situ concrete (class 20/20 mm) worktop : including 6 mm diameter mild steel reinforcement bars at 150 mm centers both ways.	17	Sm			
	<u>Sawn formwork : fairfaced finish</u>					
C	Sawn formwork to vertical edge of plinth : 100 mm high	36	Lm			
D	Sawn formwork to : to soffits of worktops	17	Sm			
E	Ditto : vertical edge of worktop over 75 - 150 mm high	28	Lm			
	<u>Beds or Backing</u>					
	<u>Cement and sand (1:4) backing</u>					
F	32mm thick to worktops ; to receive 20mm thick Granite top (m.s)	17	Sm			
G	Ditto but 100mm wide edges to worktops	28	Lm			
	<u>Tiles: Slab or Block Finishings</u>					
H	Supply and fix 10mm thick granite tiles as 'Saj' or approved approved equivalent,bedded and jointed cement and sand (1:4) mortar, including pointing with matching coloured grout	17	Sm			
J	Ditto : to fascia 100mm high	28	Lm			
K	Extra over for forming opening for wash hand basins/ sinks	2	Nr			
	Carried to Summary					

SUMMARY : GROUND FLOOR

[illegible]

BILL NO. 4 : FIRST FLOOR

Item	Description	Qty	Unit	Rate	Amount	
	<u>2A - FRAME</u>					
	<u>Concrete Work</u>					
	<u>Reinforced vibrated in-situ concrete; class 25/20 (1:1.5:3 mix) using ordinary portland cement in:</u>					
	A Beams	4	Cm			
	B Columns	1	Cm			
	<u>Formwork</u>					
	<u>Wrought formwork to provide a fair face finish</u>					
	C Sides of columns	13	Sm			
	D Sides and soffits of beams	53	Sm			
	<u>Reinforcement (Provisional)</u>					
	<u>High tensile square twisted mild steel reinforcement bars to B.S. 4461, including spacer blocks, cutting, tying and bending</u>					
	E 8 - 16mm diameter bars	570	Kg			
	Carried to Summary					

[illegible]

Item	Description	Qty	Unit	Rate	Amount
	<u>2D - STAIRS</u>				
	<u>Concrete Work</u>				
	<u>Reinforced vibrated in-situ concrete; class 25/20 (1:1.5:3 mix) using ordinary portland cement in:</u>				
A	Steps and waist	2	Cm		
B	150mm thick landing	3	Sm		
	<u>Formwork</u>				
	<u>Wrought formwork to provide a fair face finish to:</u>				
C	Soffites of landing	3	Sm		
D	Sloping soffites of stairs	6	Sm		
E	Edges of landings over 75mm but not exceeding 150mm wide	5	Lm		
F	Ditto to risers	23	Lm		
G	Open end of string 375mm wide (extreme) including forming profile for treads and risers	5	Lm		
H	Closed string 275mm wide (extreme) including forming profile for treads and risers	5	Lm		
	<u>Reinforcement (Provisional)</u>				
	<u>High tensile square twisted mild steel reinforcement bars to B.S. 4461, including spacer blocks, cutting, tying and bending</u>				
J	10mm bars	57	Kg		
K	12mm bars	171	Kg		
	Carried to Collection				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

[illegible]

Item	Description	Qty	Unit	Rate	Amount	
	<u>2D - STAIRS</u>					
	<u>Metalwork</u>					
A	900mm high balustrade railing comprising of 40mm diameter circular hollow section(CHS) standards at 1000mm centres; one end fish-tailed and grouted into concrete; 75x50mm wrot vanished mahogany top railing with and including screwing to 30x3mm flat bars : and 4No x 20mm circular hollow section (CHS) intermediate rails welded onto standards; including one coat red oxide primer before fixing; all to architects details	5	Lm			
	<u>Painting and Decorating</u>					
	<u>Prepare and apply three coats first quality silk vinyl plastic emulsion paint to:</u>					
B	Plastered soffites of landing	3	Sm			
C	Ditto but sloping soffites of stairs	6	Sm			
	<u>Prepare and apply three coats of gloss oil paint to metal surfaces</u>					
D	General surfaces of balustrades (both sides measured flat)	10	Sm			
	<u>Prepare and apply three coats "two pack" matt polyurethane clear finish on timber</u>					
E	Surfaces over 100mm but not exceeding 200mm girth	5	Lm			
	Carried to Collection					
	<u>COLLECTION</u>					
1	Page No. 3/4/3					
2	Page No. 3/4/4					
3	Page No. 3/4/5					
	Carried to Summary					

Item	Description	Qty	Unit	Rate	Amount	
	<u>2E - EXTERNAL WALLS</u>					
	<u>Walling</u>					
	<u>Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar</u>					
A	200mm thick walls reinforced with 20 gauge x 25mm wide hoop iron in every alternate course	133	Sm			
B	Ditto curved on plan	113	Sm			
	<u>In-situ Finishings</u>					
	<u>Mazeras facing</u>					
C	50mm thick approved mazeras facing built against concrete or masonry surfaces: in cement and sand (1:4) mortar	21	Sm			
	<u>Cement and sand (1:4) render as before described</u>					
D	20mm thick to concrete or masonry surfaces with wood float finish	125	Sm			
E	Ditto curved on plan	113	Sm			
	<u>Mouldings</u>					
F	Extra over for special mouldings on columns to architect's details	27	Sm			
	<u>Metalwork</u>					
G	900mm high railing comprising of 40mm diameter circular hollow section(CHS) standards at 1000mm centres; one end fish-tailed and grouted into concrete; 75x50mm wrot vanished mahogany top railing with and including screwing to 30x3mm flat bars : and 4No x 20mm circular hollow section (CHS) intermediate rails welded onto standards; including one coat red oxide primer before fixing; all to architects details	30	Lm			
	Carried to Collection					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2E - EXTERNAL WALLS</u> <u>Painting and Decorating</u> <u>Prepare and apply one undercoat and two finishing coats first quality plastic emulsion paint to</u> A Rendered concrete or masonry surfaces, externally <u>Prepare and apply three coats of gloss oil paint to metal surfaces</u> B General surfaces of balustrades (both sides measured flat) <u>Prepare and apply three coats "two pack" matt polyurethane clear finish on timber</u> C Surfaces over 100mm but not exceeding 200mm girth	125	Sm		
		53	Sm		
		30	Lm		
	Carried to Collection				
	<u>COLLECTION</u> 1 Page No. 6/6 2 Page No. 6/7				
	Carried to Summary				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount
A	<u>2F - WINDOWS & EXTERNAL DOORS</u>				
	<u>Concrete Work</u>				
	<u>Precast concrete: Class 20/20: including all formwork, hoisting into position and bedding and pointing in cement and sand (1:4) mortar</u>				
	150 x 75mm (overall) weathered and throated window cill, fair faced on all exposed surfaces	46	Lm		
	<u>Joinery</u>				
	<u>Approved treated wrot mahogany (prime grade)</u>				
	<u>Windows</u>				
	<u>Fabricate and fix the following purpose made hardwood timber casement windows consisting of 150x50mm outer framing and all sub-frames and mullions with outer framing fixed to reinforced concrete or masonry; infilled with and including 4mm thick glazing complete with appropriate fixing beading and all necessary iron mongery, bedding in water proof cement mortar and pointing in approved mastic externally :all prepared for painting and to architects detail</u>				
	B Window size 5000 x 1500 mm high overall	1	Nr		
	C Window size 3600 x 1500 mm high overall	2	Nr		
D	Window size 2400 x 1500 mm high overall	1	Nr		
	E Window size 1800 x 1500 mm high overall	1	Nr		
	F Window size 1400 x 1500 mm high overall	1	Nr		
	G Window size 800 x 1500 mm high overall	8	Nr		
	H Window size 600 x 1500 mm high overall	9	Nr		
	J Window size 1800 x 900 mm high overall	2	Nr		
	Carried to Collection				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2F - WINDOWS & EXTERNAL DOORS</u>				
	<u>Windows cnt'd</u>				
A	Window size 1400 x 900 mm high overall	1	Nr		
B	Window size 900 x 900 mm high overall	1	Nr		
C	Window size 600 x 900 mm high overall	3	Nr		
D	Pelmet box size 150mm wide x 150 mm high (overall); 150 x 25mm top with two labours: 150 x 25mm front with four labours and moulded: fixed to and including 50 x 50mm bearer plugged	30	Lm		
E	Extra over ditto for stopped ends size 150 x 150 x 25mm	28	Nr		
	<u>Painting and Decorating</u>				
	<u>Prepare and apply three coats polyurethane clear varnish on timber</u>				
F	General surfaces	109	Sm		
	<u>Carried to Collection</u>				
	<u>COLLECTION</u>				
1	Page No. 3/4/8				
2	Page No. 3/4/9				
	<u>Carried to Summary</u>				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

[illegible]

Item	Description	Qty	Unit	Rate	Amount	
	<u>2H - INTERNAL DOORS</u>					
	<u>Concrete Work</u>					
	<u>Precast concrete: Class 20/20: including all formwork, hoisting into position and bedding and pointing in cement and sand (1:4) mortar</u>					
A	200 x 300 mm lintel with four 12 mm diameter high tensile steel bars and 8 mm diameter mild steel links at 200mm centres	6	Lm			
	<u>Joinery</u>					
	<u>Approved treated wrot mahogany (prime grade)</u>					
B	150 x 50mm rebated frame, plugged	60	Lm			
C	75 x 25 mm moulded architrave: ditto	60	Lm			
D	25 x 25mm quadrant beading, plugged	60	Lm			
	<u>Supply and fix the following 45mm thick standard flush doors; solid core; faced on both sides with 6mm thick mahogany veneer : hardwood lipped all round; All as per the Architect's details</u>					
E	Door size 900 x 2400mm high overall: comprising 900 x 2100mm leaf, 900 x 300mm fanlight	7	Nr			
F	Door size 800 x 2100mm high overall	4	Nr			
	<u>Ironmongery</u>					
	<u>Supply and fix the following ironmongery as per "Union" or other equal and approved manufacturer complete with hand levers and fixing with matching screws</u>					
G	Three lever mortice lock and handle	7	Nr			
H	Two lever mortice lock and handle	4	Nr			
J	100mm steel butt hinges	17	Prs			
K	38mm diameter brass door stopper rawl bolted onto wall or floor	11	Nr			
	Carried to Collection					

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

SUMMARY : FIRST FLOOR

Element	Description	Page No.	Amount (Kshs)
2A	Frame	3/4/1	
2B	Upper Floors	3/4/2	
2D	Stairs	3/4/5	
2E	External Walls	3/4/6	
2F	Windows & External Doors	3/4/9	
2G	Internal Walls &Partitions	3/4/10	
2H	Internal Doors	3/4/12	
3A	Internal Wall Finishes	3/4/13	
3B	Floor Finishes	3/4/14	
3C	Ceiling Finishes	3/4/15	
4	Fittings & Furnishings	3/4/16	
	TOTAL FOR FIRST FLOOR CARRIED TO GENERAL SUMMARY		

BILL NO. 5 : ATTIC FLOOR & ROOF

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PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2C - ROOF</u>				
	<u>Roof Coverings</u>				
	<u>0.50mm (24 gauge) Thick Aluzinc coated substrate as "Decra" tuftile size 1700x390mm roofing sheets of approved colour or other equal and approved, laid with 75mm laps on and including 50 x 38mm pressure impregnated sawn cypress battens at 350mm (maximum)</u>				
A	Roofing not exceeding 45 degrees from horizontal (37 degrees)	1,243	Sm		
B	Roofing not exceeding 45 degrees from horizontal (45 degrees)	314	Sm		
C	Extra over ditto for raking cutting	1,208	Lm		
	<u>Roofing accessories to match roof covering:</u>				
D	Ridge capping to match roofing covering nailed to rafters m.s	97	Lm		
E	Hip capping ditto	484	Lm		
F	End Capping nailed to verge board (m.s)	94	Lm		
G	600mm wide valley lining	120	Lm		
	<u>Joinery</u>				
	<u>Treated wrot cypress: selected</u>				
	<u>12mm thick tongue and groove eaves lining secretly nailed at 300mm centres with galvanised nails including 50 x 50mm bandering at 600mm centres; 25 x 12mm treated softwood beading to edges</u>				
H	Horizontal suspended eaves finish	260	Sm		
J	Sloping suspended eaves finish	28	Sm		
	<u>Treated wrot cypress (prime grade)</u>				
K	250 x 25 mm fascia or barge board	433	Lm		
	Carried to Collection				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2C - ROOF</u>				
	<u>Structural Timber : All structural roof timber to be treated general grade sawn cypress to approval</u>				
A	150 x 50mm common or jack rafter	441	Lm		
B	Ditto wall plate fixed with and including 200mm long mild steel "J" bolts cast into concrete at 1500mm centres	497	Lm		
C	100 x 50mm underpurlins	435	Lm		
D	150 x 38mm ridge board	97	Lm		
	<u>The following in Truss T1 fabricated and jointed to the Structural Engineer's details, including hoisting and placing in position approximately 3.00 metres above ground level</u>				
E	150 x 50mm rafter	24	Lm		
F	Ditto but tie beam	15	Lm		
G	100 x 50mm tie or strut	13	Lm		
H	Ditto kingpost	4	Lm		
	<u>The following in Truss T2 fabricated and jointed to the Structural Engineer's details, including hoisting and placing in position approximately 6.00 metres above ground level</u>				
J	150 x 50mm rafter	20	Lm		
K	Ditto but tie beam	15	Lm		
L	100 x 50mm kingpost	5	Lm		
	<u>The following in Truss T3 fabricated and jointed to the Structural Engineer's details, including hoisting and placing in position approximately 6.00 metres above ground level</u>				
M	150 x 50mm rafter	3	Lm		
N	Ditto but tie beam	3	Lm		
P	100 x 50mm tie or strut	6	Lm		
	Carried to Collection				

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PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

[illegible]

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

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PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2C - ROOF</u> <u>Painting and Decorating</u> <u>Prepare and apply one coat primer, one undercoat and two coats plastic emulsion paint on woodwork</u>				
A	General surfaces : eaves	260	Sm		
B	Ditto fascia boards : over 225 but not exceeding 300 mm girth	433	Lm		
	Carried to Collection				
	<u>COLLECTION</u> 1 Page No. 3/5/2 2 Page No. 3/5/3 3 Page No. 3/5/4 4 Page No. 3/5/5 5 Page No. 3/5/6 6 Page No. 3/5/7				
	Carried to Summary				

Item	Description	Qty	Unit	Rate	Amount
A	<u>2E - EXTERNAL WALLS</u> <u>Walling</u> <u>Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar</u> 100mm thick walls reinforced with 20 gauge x 25mm wide hoop iron in every alternate course <u>In-situ Finishings</u> <u>Mazeras facing</u>	57	Sm		
B	50mm thick approved mazeras facing built against concrete or masonry surfaces: in cement and sand (1:4) mortar <u>Cement and sand (1:4) render as before described</u>	11	Sm		
C	20mm thick to concrete or masonry surfaces with wood float finish <u>Metalwork</u>	156	Sm		
D	900mm high railing comprising of 40mm diameter circular hollow section(CHS) standards at 1000mm centres; one end fish-tailed and grouted into concrete; 75x50mm wrot vanished mahogany top railing with and including screwing to 30x3mm flat bars : and 4No x 20mm circular hollow section (CHS) intermediate rails welded onto standards; including one coat red oxide primer before fixing; all to architects details	11	Lm		
	Carried to Collection				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

Item	Description	Qty	Unit	Rate	Amount
	<u>2E - EXTERNAL WALLS</u> <u>Painting and Decorating</u> <u>Prepare and apply one undercoat and two finishing coats first quality plastic emulsion paint to</u>				
A	Rendered concrete or masonry surfaces, externally	156	Sm		
	<u>Prepare and apply three coats of gloss oil paint to metal surfaces</u>				
B	General surfaces of balustrades (both sides measured flat)	19	Sm		
	<u>Prepare and apply three coats "two pack" matt polyurethane clear finish on timber</u>				
C	Surfaces over 100mm but not exceeding 200mm girth	11	Lm		
	Carried to Collection				
	<u>COLLECTION</u> 1 Page No. 3/5/8 2 Page No. 3/5/9				
	Carried to Summary				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount
A	<u>2F - WINDOWS & EXTERNAL DOORS</u>				
	<u>Concrete Work</u>				
	<u>Precast concrete: Class 20/20: including all formwork, hoisting into position and bedding and pointing in cement and sand (1:4) mortar</u>				
	150 x 75mm (overall) weathered and throated window cill, fair faced on all exposed surfaces	7	Lm		
	<u>Joinery</u>				
	<u>Approved treated wrot mahogany (prime grade)</u>				
	<u>Windows</u>				
	<u>Fabricate and fix the following purpose made hardwood timber casement windows consisting of 150x50mm outer framing and all sub-frames and mullions with outer framing fixed to reinforced concrete or masonry; infilled with and including 4mm thick glazing complete with appropriate fixing beading and all necessary iron mongery, bedding in water proof cement mortar and pointing in approved mastic externally :all prepared for painting and to architects detail</u>				
B	Window size 5000 x 1500 mm high overall	1	Nr		
C	Window size 1400 x 900 mm high overall	1	Nr		
D	Pelmet box size 150mm wide x 150 mm high (overall); 150 x 25mm top with two labours: 150 x 25mm front with four labours and moulded: fixed to and including 50 x 50mm bearer plugged	5	Lm		
E	Extra over ditto for stopped ends size 150 x 150 x 25mm	2	Nr		
	Carried to Collection				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

Item	Description	Qty	Unit	Rate	Amount
A	<u>2F - WINDOWS & EXTERNAL DOORS</u>				
	<u>Painting and Decorating</u> <u>Prepare and apply three coats polyurethane clear varnish on timber</u> General surfaces	19	Sm		
	Carried to Collection				
1	<u>COLLECTION</u> Page No. 3/5/10				
2	Page No. 3/5/11				
	Carried to Summary				

Item	Description	Qty	Unit	Rate	Amount	
A	<u>2G - INTERNAL WALLS & PARTITIONS</u> <u>Walling</u> <u>Approved local machine cut natural stone walling; bedded and jointed in cement and sand (1:4) mortar</u> 100mm thick walls reinforced with 20 gauge x 25mm wide hoop iron in every alternate course	8	Sm			
	Carried to Summary					

Item	Description	Qty	Unit	Rate	Amount
A	<u>2H - INTERNAL DOORS</u> <u>Concrete Work</u> Precast concrete: Class 20/20; including all formwork, hoisting into position and bedding and pointing in cement and sand (1:4) mortar 200 x 300 mm lintel with four 12 mm diameter high tensile steel bars and 8 mm diameter mild steel links at 200mm centres <u>Joinery</u> Approved treated wrot mahogany (prime grade) 100 x 50mm rebated frame, plugged 75 x 25 mm moulded architrave: ditto Supply and fix the following 45mm thick standard flush doors; solid core; faced on both sides with 6mm thick mahogany veneer : hardwood lipped all round; All as per the Architect's details Door size 800 x 2100mm high overall <u>Ironmongery</u> Supply and fix the following ironmongery as per "Union" or other equal and approved manufacturer complete with hand levers and fixing with matching screws Two lever mortice lock and handle 100mm steel butt hinges 38mm diameter brass door stopper rawl bolted onto wall or floor	1	Lm		
B		5	Lm		
C		10	Lm		
D		1	Nr		
E		1	Nr		
F		2	Prs		
G		1	Nr		
	Carried to Collection				

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

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SUMMARY : ATTIC FLOOR AND ROOF

Element	Description	Page No.	Amount (Kshs)
2A	Frame	3/5/1	
2C	Roof	3/5/7	
2E	External Walls	3/5/9	
2F	Windows & External Doors	3/5/11	
2G	Internal Walls &Partitions	3/5/12	
2H	Internal Doors	3/5/14	
3A	Internal Wall Finishes	3/5/15	
3B	Floor Finishes	3/5/16	
3C	Ceiling Finishes	3/5/17	
	TOTAL FOR ATTIC FLOOR AND ROOF CARRIED TO GENERAL SUMMARY		

SECTION 4 : BUILDING SERVICES

ELECTRICAL INSTALLATIONS

PROPOSED GOVERNORS RESIDENTIAL HOUSE - ELECTRICAL WORKS BILLS OF QUANTITIES.

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ITEM	DESCRIPTION	UNIT	QTY	RATE KSHS	KSHS
3.0	<u>GROUND FLOOR POWER INSTALLATION</u>				
3.1	Supply and install a heavy gauge PVC conduiting of size 1x20mm diameter from the electrical service duct for the meters in the ground floor.	M	6		
3.2	Supply and install a heavy gauge Galvanised Cable tray of size 200x50mm diameter from the electrical service duct.	M	5		
3.3	Supply and install an adaptable box 300X300mm for the DBs using 38mm diameter heavy gauge PVC conduits.	No	3		
3.4	Supply and install recessed 4 way Distribution board incorporating an incomer MCB rated at 100A (without the MCBs).The CU is to be as Merlin Gerlin / Hager or approved equivalent. CUs to be located on each unit as per the drawing.	No	1		
3.5	Supply and install the following miniature circuit breakers (MCB'S) rated at 500Vac for the above Distribution boards.				
	(b) 10A	No	3		
	(c) 20A	No	2		
	(d) 30A	No	2		
	(e) 45A	No	1		
	(e) 63A	No	1		
	(e) 63A	No	1		
3.6	Supply and install Blanking Plates for covering the spare ways in the distribution boards and consumer units.	No	7		
3.7	Supply and install 13Amps twin switched socket outlet point for using 3 x 2.5mm ² PVC insulated copper cables drawn in 20mm diameter PVC heavy gauge conduits laid concealed in the floors and walls but without the outlet plates.	No	20		
3.8	Supply and install White13Amps twin switched socket outlet for the raw power and as MK Cat No. 2757WH, CRABTREE/CLIPSAL e series cat no E25N or approved equivalent.	No	20		
3.90	Supply and install 13Amps single switched socket outlet point for using 3 x 2.5mm ² PVC insulated copper cables drawn in 20mm diameter PVC heavy gauge conduits laid concealed in the floors and walls but without the outlet plates.	No	20		
3.10	Supply and install water heater circuits wired using 2x4mm ² +1.5mm ² ECC PVC insulated copper cables drawn in 20mm diameter PVC heavy gauge conduits but excluding the 20A DP switch.	No	2		
3.11	Supply and install flush mounted 20Amps DP switch complete with a pilot lamp and as MK CatNo 5423WHI,CRABTREE or approved equivalent.	No	2		
3.12	Supply and install a cooker circuit wired using 2x6mmsq+1x2.5mmsq ECC PVC insulated copper cables drawn in 25mm diameter PVC heavy gauge conduits, but excluding the cooker control and connection units.	No	1		
3.13	Supply and install a 45A rated cooker control unit incorporating a 13 Amps switched socket outlet and fitted with pilot lamps and as MK Cat No.506 WHI	No	1		
3.14	Supply and install a cooker connection unit capable of accommodating upto 2x10mmsq cable and as MK Cat 5045 WHIincorporating a 13 amps switched socket outlet and fitted with pilot lamps and as MK Cat No.506 WHI	No	1		
3.15	Supply and install twin data / voice outlet point using 25mm dia PVC heavy gauge conduits complete with a draw wire and blanking plate.	No	1		
3.16	Supply and install television outlet point using 25mm dia PVC heavy gauge conduits complete with a draw wire and blanking plate.	No	2		
3.17	Supply and install television white faceplate and as MK 3521 or approved equivalent.	No	2		
	TOTAL CARRIED FORWARD TO D4				-

ITEM	DESCRIPTION	UNIT	QTY	RATE	KSHS
	SERVANTA QUATERS				
8.0	LIGHTING AND POWER INSTALLATION				
8.1	Supply and install lighting points using 3 x 1.5mm ² PVC insulated Copper cables to be drawn in 20mm diameter PVC heavy gauge conduits concealed in the floors, roof and for one way switching but excluding the fittings and switches. Conduits to be laid during floor casting where necessary	No	11		
8.2	As Item 1.1 above but for two way switching.	No	2		
8.3	Supply and install 10 Amps rated moulded plate switches(white in colour) for flush mounting and as crabtree, clipsal or approved equivalent.				
	(a) Two gang one way	No	1		
	(a) One gang one way	No	8		
	(a) One gang one way	No	2		
8.4	Supply and install the following lighting fittings				
	(b) Safety pendant consisting of a ceiling rose pendant lamp holder and a 300mm long twin core circular heat resistant cord complete with 11W energy saving lamp and a wide brimmed lamp shade as MK Cat No 1189W05 or approved equivalent.	No	6		
	(b) Die-cast aluminium Bulkhead fitting complete with clear glass diffuser and protective wire gauge for 11W energy saving lamp As THORN or approved equivalent (2)	No	3		
	Supply and install recessed 12 way SP consumer unit incorporating an incomer MCB rated at 100A (without the MCBs).The CU is to be as Merlin Gerlin / Hager or approved equivalent. CUs to be located on each unit as per the drawing.	No	1		
	Supply and install the following miniature circuit breakers (MCB'S) rated at 500Vac for the above Distribution boards.				
	(b) 10A (SP)	No	2		
	(c) 20A (SP)	No	6		
	(d) 30A (SP)	No	2		
8.5	Supply and install Blanking Plates for covering the spare ways in the distribution boards and consumer units.	No	2		
8.6	Supply and install 13Amps twin switched socket outlet point for using 3 x 2.5mm ² PVC insulated copper cables drawn in 20mm diameter PVC heavy gauge conduits laid concealed in the floors and walls but without the outlet plates.	No	10		
8.7	Supply and install White13Amps twin switched socket outlet for the raw power and as MK Cat No. 2757WH, CRABTREE/CLIPSAL e series cat no E25N or approved equivalent.	No	10		
8.8	Supply and install 13Amps single switched socket outlet point for using 3 x 2.5mm ² PVC insulated copper cables drawn in 20mm diameter PVC heavy gauge conduits laid concealed in the floors and walls but without the outlet plates.	No	10		
	TOTAL CARRIED FORWARD TO COLLECTION PAGE D9				

D8

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SIGNATURE **DATE**.....

P.I.N No.,..... V.A.T CERTIFICATE No.....

WITNESS..... **ADDRESS.....**

SIGNATURE OF WITNESS..... **DATE.....**

MECHANICAL INSTALLATIONS

SANITARY FITTINGS, PLUMBING & DRAINAGE INSTALLATIONS

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	<u>SANITARY APPLIANCES</u> Priced for supply, delivering to site, storage, handling, installation, testing and commissioning of the following sanitary appliances complete with all the accessories including all connections to the services, waste, jointing to water supply overflows, supports and all plugging and screwing to walls and floors. (i) All sanitary fittings shall be in approved colour. (ii) The Model and Ref No. indicated is only a guide to the type and quality of fittings. (iii) Equivalent and Approved models may be acceptable. Main House WC Close-coupled WC suite 'P'-trap) in approved colour complete with horizontal outlet to BS 3402 with 6/4 litre valveless close coupled ceramic cistern and fittings including siphon, 15mm diameter side inlet ball valve, 20mm diameter side overflow, plastic flush bend, dual flush system, inlet connection, chrome-plated lever and heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as Duravit D Code water closet or equal and approved. DSQ WC Close-coupled WC suite ('P'-trap) in approved colour complete with horizontal outlet to BS 3402 with 6 litre valveless close-coupled ceramic cistern and fittings including siphon, 15mm diameter side inlet ball valve, 20mm diameter side overflow, dual flush system (6 and 4 litres), inlet connection, chrome-plated lever and heavy plastic seat and cover with metal top fixed (chrome plated) hinges. All to be as Nova or Tapis water closet or equal and approved. Main House Toilet Roll Holder Wall mounted chrome plated toilet roll holder with flap as Duravit D Code Accessories or equal and approved. DSQ Toilet Roll Holder Wall mounted chrome plated toilet roll holder with flap as Nova Accessories or equal and approved.				
A		8	No.		
B		1	No.		
C		8	No.		
D		1	No.		
Total C/F to the Next Page					

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	Total B/F From Previous Page				
A	Counter-top Wash hand basin (WHB) Wall hung wash hand basin size 600 x 350mm with one tap hole and chain stay hole, 32mm diameter chrome plated pop up chain waste pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal complete with single lever chrome plated wash hand basin mixer as Hansgrohe Accessories or approved equivalent. The wash hand basin to be as Duravit D Code or equal and approved.	5	No.		
B	Wall hung Wash hand basin (WHB) Wall hung wash hand basin size 500 x 350mm with one tap hole and chain stay hole, 32mm diameter chrome plated pop up chain waste pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal complete with single lever chrome plated wash hand basin mixer as Hansgrohe Accessories or approved equivalent. The wash hand basin to be as Duravit D Code or equal and approved.	4	No.		
C	Wall hung Wash hand basin (WHB) Wall hung wash hand basin size 500 x 350mm with one tap hole and chain stay hole, 32mm diameter chrome plated pop up chain waste pedestal and heavy duty plastic bottle trap (32mm 'P' trap) with 75mm seal complete with single lever chrome plated wash hand basin mixer as Tapis Accessories or approved equivalent. The wash hand basin to be as Nova or equal and approved.	1	No.		
D	Towel Ring Chrome plated 20mm diameter towel ring and brackets as one piece, plugged and screwed into the wall. The fitting shall be as Duravit D Code or equal and approved.	8	No		
E	Towel Ring Chrome plated 20mm diameter towel ring and brackets as one piece, plugged and screwed into the wall. The fitting shall be as Dali or equal and approved.	1	No		
F	Towel Rail Wall mounted chrome plated towel rail as Duravit or equivalent.	12	No		
G	Towel Rail Wall mounted chrome plated towel rail as Yideli or equivalent.	1	No		
	Total C/F to the Next Page				

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	Total B/F From Previous Page				
A	1200x900 Mirror 6mm thick polished plate glass silver backed mirror with bevelled edges, size 900 x 600mm, plugged and screwed to wall with 4No. chrome plated dome capped screws. The mirror shall rest against a layer of 5mm thick foam.	10	No.		
B	Toilet Brush and Holder Toilet Brush and holder as Duravit D Code or equivalent complete with fixing accessory	9	No.		
C	Shower Fittings Single lever 4-way underwall shower diverter with 2No. inlet ports for cold and hot water and 1No. outlet port for the overhead shower and 1No. outlet for spout, complete with chrome plated lever and thread protection, adjustable jet shower head, chrome shower arm and spout. The set to be as Hansgrohe or approved equivalent.	8	No		
D	Shower Fittings Single lever 4-way underwall shower diverter with 2No. inlet ports for cold and hot water and 1No. outlet port for the overhead shower and 1No. outlet for spout, complete with chrome plated lever and thread protection, adjustable jet shower head, chrome shower arm and spout. The set to be as Tapis or approved equivalent.	1	No		
E	Bath tub Bath-tub as Nova 1700x700mm complete with chrome plated grips with two tapholes, chrome plated Combined waste/overflow chain fittings, front panel, End panel, Steel cradles with adjustable feets, Bath diverter mixer and Telephone hand shower, bath spout with adjustable aerator as Tapis or equivalent.	5	No		
F	Corner Bath tub Corner Bathtub as Duravit D-Code 1500 x1500mm bathtub cat with two tapholes, grips,side panels, chrome plated combined pop up waste and overflow fittings, general purpose tubular trap. Steel angle cradles with adjustable feets. hansgrohe Single level bath shower mixer for exposed fittings as Focus s with Croma Variojet hand shower cat no 28513-000.	1	No		
G	Soap Dish Soap Dish as Duravit D Code complete with fixing accessory.	12	No		
	Total C/F to the Next Page				

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	Total B/F From Previous Page				
A	Soap Dish Soap Dish as Yideli complete with fixing accessory.	1	No		
B	Tooth brush tumbler & Holder Tooth Brush Holder and Tumbler as as Duravit D-Code Accessories or equal and approved.	7	No		
C	Kitchen Sink Double bowl, single drainer (DBSD) stainless steel kitchen sink of size 1200 x 500mm. The bowl sizes to be 350 x 350 x 200mm deep complete with chrome plated 40mm waste fittings, plugs, chain stays, overflow, 1No. 15mm diameter chrome plated sink mixer with over-arm swivel spout as Cobra model, heavy duty plastic bottle trap with 75mm deep seal and chain waste fitting. The sink to be as Franke Trendline or approved equivalent.	1	No		
D	Dhobi Sink Dhobi Sink as Pre-cast Terrazzo of dimensions 600mm L x 425mm W x 350mm D complete with Chrome plated bip tap, 40mm Chrome plated waste fittings and 40mm Chrome plated bottle, brackets, stands and all the fixing accessories.	1	No		
E	Wall-mounted Bib Tap Wall mounted chrome plated bib taps as Roca for the laundry area.	1	No		
F	Flexible Tubing 15mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	32	No.		
G	20mm diameter x 300mm long flexible connectors complete with integral chrome plated angle valve as Cobra or equal and approved.	16	No.		
	Sub-total C/F to Price Summar Page				

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	INTERNAL PLUMBING WORKS Supply, deliver, install and test PPR-PN20 pipes and fittings as described and shown on the drawings. Rates must allow for all Metal/plastic threaded adaptors where required for the connection of sanitary fixtures, valves, sockets, sliding and fixed joints, support raceways, isolating sheaths, elastic materials, expansion arms and bends, crossovers, couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	PPR PN20 PIPEWORK				
A	20mm diameter pipework	84	Lm		
B	25mm diameter pipework	79	Lm		
C	32mm diameter pipework	97	Lm		
D	40mm diameter pipework	81	Lm		
E	50mm diameter pipework	18	Lm		
	Extra over tubing for:				
	Bends				
F	20mm diameter bend	63	No.		
G	25mm diameter bend	71	No.		
H	32mm diameter bend	18	No.		
I	40mm diameter bend	12	No.		
J	50mm diameter bend	4	No.		
	Tees				
K	20mm diameter equal tee	22	No.		
L	25mm diameter equal tee	45	No.		
M	32mm diameter equal tee	16	No.		
N	40mm diameter equal tee	9	No.		
O	50mm diameter equal tee	4	No.		
	Reducers				
P	25 x 20mm diameter reducer socket	41	No.		
Q	32 x 20mm diameter reducer socket	10	No.		
R	32 x 25mm diameter reducer socket	22	No.		
S	40 x 20mm diameter reducer socket	5	No.		
	Total C/F to the Next Page				

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	Total B/F From Previous Page				
A	40 x 25mm diameter reducer socket	5	No.		
B	40 x 32mm diameter reducer socket	2	No.		
C	50 x 20mm diameter reducer socket	8	No.		
D	50 x 25mm diameter reducer socket	2	No.		
E	50 x 32mm diameter reducer socket	2	No.		
F	50 x 40mm diameter reducer socket	7	No.		
	Gate Valves				
G	20mm diameter high pressure screw-down full- way non-rising stem gate valve as Peglar.	1	No.		
H	25mm diameter high pressure screw-down full- way non-rising stem gate valve as Peglar.	1	No.		
I	32mm diameter high pressure screw-down full- way non-rising stem gate valve as Peglar.	8	No.		
J	40mm diameter high pressure screw-down full- way non-rising stem gate valve as Peglar.	4	No.		
K	50mm diameter high pressure screw-down full- way non-rising stem gate valve as Peglar.	1	No.		
	Non-return Valves				
L	25mm Non-return Valve as Peglar.	2	No.		
M	32mm Non-return Valve as Peglar.	2	No.		
	Pipe Sockets				
N	20mm diameter PPR-C pipe sockets	24	No.		
O	25mm diameter PPR-C pipe sockets	22	No.		
P	32mm diameter PPR-C pipe sockets	28	No.		
	Pipe Unions				
Q	20mm diameter PPR-C pipe unions	20	No.		
R	25mm diameter PPR-C pipe unions	12	No.		
	Total C/F to the Next Page				

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	Total B/F From Previous Page				
A	32mm diameter PPR-C pipe unions	46	No.		
B	40mm diameter PPR-C pipe unions	18	No.		
C	50mm diameter PPR-C pipe unions	4	No.		
	Male/Female Brass Threaded Adapters/Transition fittings.				
D	20mm diameter brass threaded adapter/transition fittings	20	No.		
E	25mm diameter brass threaded adapter/transition fittings	18	No.		
F	32mm diameter brass threaded adapter/transition fittings	4	No.		
	Water Booster Pump Water Booster Set comprising:- a duplicate set of vertical centrifugal pumps (duty & standby) each of rated flow 3 m ³ /Hr, head 1.5 bar, Power 1.1 kW, 240 V as "Grandfos; with DN flanges complete with 60 litres pressure vessel, pressure gauge and pressure switch; Power control panel assembled from Telemechanique / ABB components comprising the following: Pre selector switch for Auto/manual/off positions , thermal overload relays, Float switches for run dry protection and all connecting wiring and all the neccessary ball valves for proper and smooth operations. Or equal and approved.	1	Set		
	Roof Water Storage Tanks 1,000Litres (220 gallons) PVC water storage tank dimensions 1070mm diameter x 1220mm high with a cover complete with all necessary backnuts,screw thread nipple etc for satisfactory functioning of the system. The tank to be as Toptank or approved equivalent.	3	No.		
	Roof Water Storage Tanks 10,000Litres PVC water storage tank dimensions 2430mm diameter x 2260mm high with a cover complete with all necessary backnuts,screw thread nipple etc for satisfactory functioning of the system. The tank to be as Toptank or approved equivalent.	4	No.		
	Float Valves 32mm float operated valve complete with 4½" diameter high pressure polypropyleneplastic float as as Bricon or approved equivalent.	2	No.		
	Total C/F to the Next Page				

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	Total B/F From Previous Page				
	Water connection				
A	Allow for local Authority water connection including 1-inch water meter	1	item		
	Lockable bib taps				
B	Allow for 15mm diameter locable bib-tap for cleaning the basements	2	item		
	Pipework Sterilization				
C	Allow for flushing out and sterilization of the whole plumbing and storage system with chlorine to the satisfaction of the engineer	1	item		
	Sub-total C/F to Price Summar Page				

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	FOUL WATER INTERNAL DRAINAGE Supply ,deliver and install the following UPVC, MUPVC, soil and waste systems respectively to B.S 5255 with fittings fixed to Manufactures Printed instructions and manufactured by reputable manufacturers. Tenderers must allow in their pipework prices for all the couplings, clippings, connectors, joints etc. as required in the running lengths of pipework and also where necessary, for pipe fixing clips, holder bats plugged and screwed for the proper and satisfactory functioning of the system.				
	MuPVC and uPVC Waste and Soil pipework				
A	100mm diameter heavy gauge golden brown UPVC pipe.	125	Lm		
B	100mm diameter heavy gauge grey mUPVC pipe.	56	Lm		
C	50mm diameter waste pipe.	45	Lm		
D	40mm diameter waste pipe.	10	Lm		
E	32mm diameter waste pipe.	12	Lm		
	Bends				
F	100mm diameter sweep bend	6	No.		
G	50mm diameter sweep bend	3	No.		
H	40mm diameter sweep bend	14	No.		
I	32mm diameter sweep bend	38	No.		
	Tees				
J	100mm diameter sweep tee	8	No.		
K	50mm diameter sweep tee	4	No.		
L	40mm diameter sweep tee	3	No.		
M	32mm diameter sweep tee	9	No.		
	Reducers				
N	50 x 40mm diameter reducer	5	No.		
O	40 x 32mm diameter reducer	5	No.		
	Access Caps/Inspection plug				
P	100mm diameter access cap	4	No.		
	Total C/F to the Next Page				

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	Total B/F From Previous Page				
A	40mm diameter access cap	2	No.		
B	32mm diameter access cap	3	No.		
	Boss Connectors				
C	100 x 50mm diameter boss connector	8	No.		
D	100 x 40mm diameter boss connector	2	No.		
	Floor Trap				
E	100 x 50 x 40 mm diameter 4-way Light Grey floor trap complete with grating cover.	18	No.		
	WC Connectors				
F	100mm diameter WC connector	10	No.		
	Gully Trap				
G	Standard masonry 300 x 300 mm Gully complete with 100mm gully trap and cover.	7	No.		
	Excavations				
H	Excavate trench in hard soil 300mm wide and depth not exceeding 1000mm deep and average 600mm deep. Bed shall be approved by Engineer before laying of pipes. Fill with murrum and compact in layers of 75mm. Cart away surplus soil.	82	LM		
	Inspection Chambers				
I	Construct inspection chamber size 600 x 450mm and averaging 750mm deep constructed in 100mm thick concrete base (1:3:6), approved 150mm block sides rendered all around in cement and sand (1:4). It shall have an approved medium duty cast iron cover and frame as manufactured by E.A Foundry works. Include all necessary excavations, disposal and form work.	16	No.		
	Sub-total C/F to Price Summar Page				

Solar Water Heating

Item	Description	Qty	Unit	Rate (Kshs)	Cost (Kshs)
	The Contractor shall supply material & labour and supply, deliver, install, fix, connect, test, label and commission the works, clean, complete and working to every detail as described in the specifications and on the drawings to the satisfaction of the Consulting Engineers and the client. The Contractor shall supply and install solar panels as described below: The bidder must allow for repair of any damage incurred in the course of their works. Solar Water Heater Indirect solar water hating System (NB: Suitable for heating mineralised water): 2No. 2.0 square metres solar collector complete with insulation, absorber coating is an anodised black nickel selective surface, especially at high operating temperature standard. 1No. 300 liters H/W high pressure solar cylinder featuring an enamel coated steel storage tank, a magnisium sacrificial anode and a powder coated steel outer insulation casing complete with heat exchanger inside the tank and a separated flow of pure water. 1x3kw immersion heaters with inlet and outlet fittings. screwed brass outlets for solar panels. Pipe work between panels and Solar cylinder complete with G.I fitting etc. . Automatic Air- vent. --- Stands for solar panels. sloping iron sheet roof underlay , Mountings and any other necessary fittings.				
A		1	No.		
B	Pipwork Heat Resistant pipework connection around the panel upto water cylinders complete with all the valves and other accessories as per the enginee's details.	1	item		
C	Electrical Connection Allow for electrical connection from the nearest power source. This includes MCB protection, 20Amp DP control	1	item		
Total for Solar Water Heating C/F to Main Summary Page					

MAIN SUMMARY PAGE

Item	Description		Cost (Kshs)
1	Sub-contract Preliminaries and General Items		
2	Sub-total for Sanitary Fittings		
2	Sub-total for Plumbing Installations		
3	Sub-total for Drainage Installations		
5	Sub-total for Solar Water Heating Installations		
6	Total Without VAT		
7	Add: 16% VAT		
8	Total Cost Inclusive of 16% VAT Carried Forward to Form of Tender		

Amount in words.....

.....

Tenderer's Name and Stamp

.....

Address

Period To Execute The Works

Tenderer's V.A.T No

Tenderer's P.I.N No

Telephone No.

Mobile No.

Tenderer's Signature Date

Witness Signature Date.....

SECTION 5 : PRIME COST AND PROVISIONAL SUMS

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO
MARAKWET

[illegible]

GENERAL SUMMARY

PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET

GENERAL SUMMARY

	DESCRIPTION	PAGE NO.	AMOUNT (KSH)
SECTION. 1	PRELIMINARIES	1/27	
SECTION. 2	SPECIFICATIONS	2/20	
SECTION 3	BUILDING WORKS		
BILL NO. 1	SUBSTRUCTURES	3/1/4	
BILL NO. 2	LOWER GROUND FLOOR	3/2/15	
BILL NO. 3	GROUND FLOOR	3/3/19	
BILL NO. 4	FIRST FLOOR	3/4/17	
BILL NO. 5	ATTIC FLOOR & ROOF	3/5/18	
SECTION 4	BUILDING SERVICES		
	ELECTRICAL INSTALLATIONS	D10	
	MECHANICAL INSTALLATIONS	Page 12	
SECTION 5	PROVISIONAL SUMS	5/1	
	ADD : CONTINGENCIES		2,000,000.00

TOTAL CARRIED TO FORM OF TENDER	KSHS.	
--	--------------	--

.....
[SIGNATURE AND NAME OF CONTRACTOR]

.....
[SIGNATURE AND NAME OF EMPLOYER]

.....
[DATE]

.....
[DATE]

WITNESSED BY:

WITNESSED BY:

.....
[SIGNATURE OF WITNESS]

.....
[SIGNATURE OF WITNESS]

.....
[NAME]

.....
[NAME]

.....
[DATE]

DAYWORKS

**PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY
FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET**

Day Works Sheet

Labour

		Qty	Qty	Rate	Unit	Amount
		Days	Hrs			
1	Block mason				Per/Hour	
2	Carpenters				Per/Hour	
3	Helpers				Per/Hour	
4	Painters				Per/Hour	
5	Plaster Mason				Per/Hour	
6	Steel Fixer				Per/Hour	
7	Supervisors				Per/Hour	
8	Tile layer				Per/Hour	
9	Tile Supervisor				Per/Hour	
10	Joinery Carpenter				Per/Hour	
11	Joinery Supervisor				Per/Hour	
12	Window fabricator				Per/Hour	
13	Alluminium Supervisor				Per/Hour	
14	Contracts coordinator				Per/Hour	
15	General Foreman				Per/Hour	
16	Foreman				Per/Hour	
17	Dumper Operator				Per/Hour	
18	Mixer Operator				Per/Hour	
19	Bucket hoist operator				Per/Hour	
20	mechanic				Per/Hour	
21	Storekeeper				Per/Hour	
22	Secretary				Per/Hour	
23	Office cleaner				Per/Hour	
24	Safety Officer				Per/Hour	
25	Watchman				Per/Hour	
26	Staff cook				Per/Hour	
27	Cook Helper				Per/Hour	
28	Engineer				Per/Hour	
29	Welder				Per/Hour	
				Net		
				Add %		
				Sub-total		

**PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY
FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET**

Day Works Sheet

Material

	Item	Qty		Rate	Unit	Amount
1	Y8				Kg	
2	Y10				Kg	
3	Y12				Kg	
4	Y16				Kg	
5	Y20				Kg	
6	Y25				Kg	
7	Y32				Kg	
8	chemical Anchor				Kg	
9	Bonding Agent				Ltr	
10	Binding wire				Kg	
11	18mm marine ply				SM	
12	Nails				Kg	
13	Mould oil				Ltr	
14	Cement 42.5 grade				Bag	
15	Cement 32.5 grade				Bag	
16	Sand				Ton	
17	Ballast				Ton	
18	Admixture				Ltr	
19	Water				Per Day	
20	Lime				Bag	
21	Blocks 8"				No	
22	Blocks 6"				No	
23	Blocks 4"				No	
24	Tikha stones				No	
25	Egg shell paint				Ltr	
26	Weather guard				Ltr	
27	Smootex				Kg	
28	Roller				No	
29	Brush				No	
30	Sand paper				Roll	
31	Tiles 101				SM	
32	Tiles 102				SM	
33	Tiles 103				SM	
34	Tiles 104				SM	
35	Tiles 4319				SM	
36	Tiles 5002				SM	
37	Tiles 7501				SM	
38	Tiles 7502				SM	
39	Tiles 7503				SM	

40	Tiles 7504				SM	
41	Tiles 7505				SM	
42	Tiles 7506				SM	
43	Tiles 7507				SM	
44	Tiles 7508				SM	
45	Tiles 7541				SM	
46	Tiles 7561				SM	
47	Tiles 7563				SM	
48	Tiles 2040				SM	
49	Tiles 2041				SM	
50	Grout				Kg	
51	Gypsum board				SM	
52	Hardcore				Ton	
53	Sika-1				Ltr	
54	Window Glass				SM	
55	Master flex 700				KG	
56	Water Tank				trip	
57	Non Shrink Mortar				KG	
58	Monseal Bond				KG	
59	Window cill				LM	
60	Quartrant for Doors				LM	
61	Architrave for Doors				LM	
62	Cover Matt Emulsion				LTR	
63	Plaster Board				SM	
64	100 x 50 wood				LM	
65	75 x 50 wood				LM	
66	1 1/2" screws				PKT	
67	3" screws				PKT	
68	Welding rods				Pcs	
69	Masking Tape 2"				Pcs	
70	black polythene				Roll	
71	Gypsum Filler				KG	
72	Chicken mesh				Roll	
				Net		
				Add %		
				Sub-total		

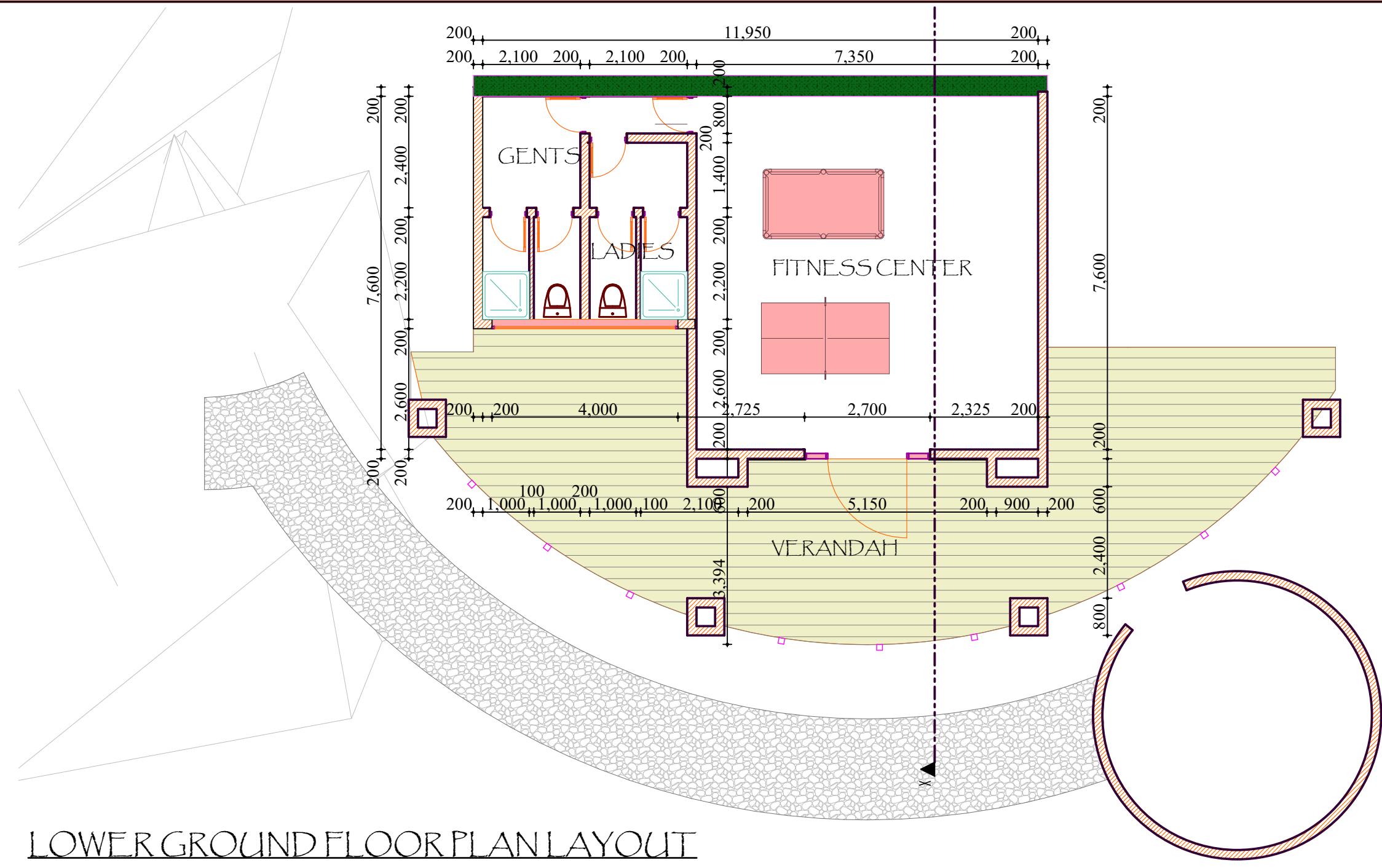
**PROPOSED GOVERNOR'S RESIDENCE IN KAMARINY SHOWGROUND FOR THE COUNTY
FOR THE COUNTY GOVERNMENT OF ELGEIYO MARAKWET**

Day Works Sheet

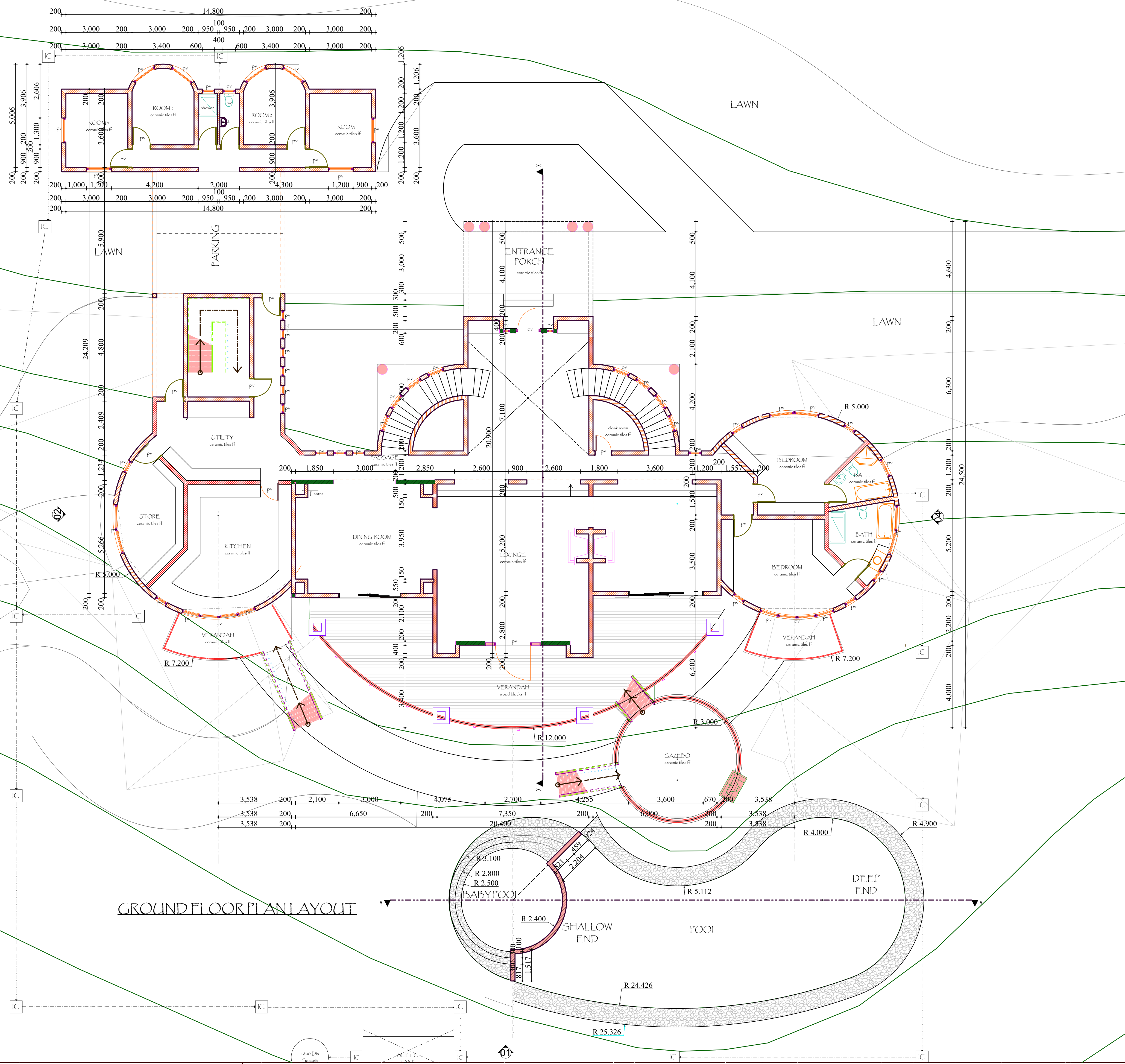
Plant & Equipment

	Item	Qty		Rate	Unit	Amount
1	Grinders				Per/Day	
2	Breakers				Per/Day	
3	Scaffolding				SM	
4	Drill machines				Per/Day	
5	Cordless drill				Per/Day	
6	Bending machine				Per/Day	
7	Cutting machine				Per/Day	
8	T Jacks				Per/Day	
9	Circular saw				Per/Day	
10	Mixer				Per/Day	
11	Dumper				Per/Day	
12	Vibrator				Per/Day	
13	Tile cutter manual				Per/Day	
14	Tile cutter electric				Per/Day	
15	Bucket hoist				Per/Day	
16	Dumping Vehicle				Per/Trip	
17	Compressor machine (full set)				Per/Day	
18	Welding machine				Per/Day	
				Net		
				Add %		
				Sub-total		

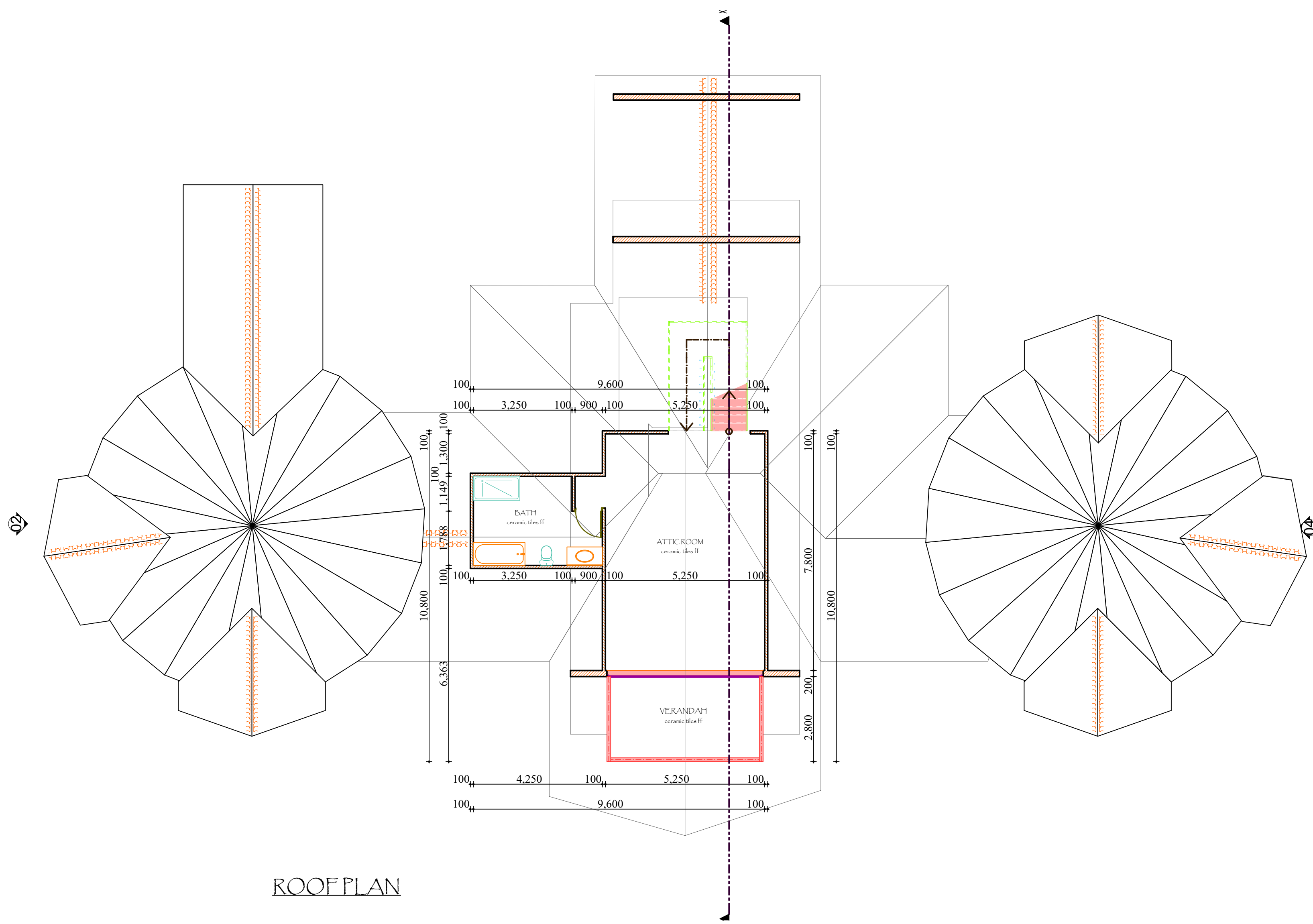
APPENDIX



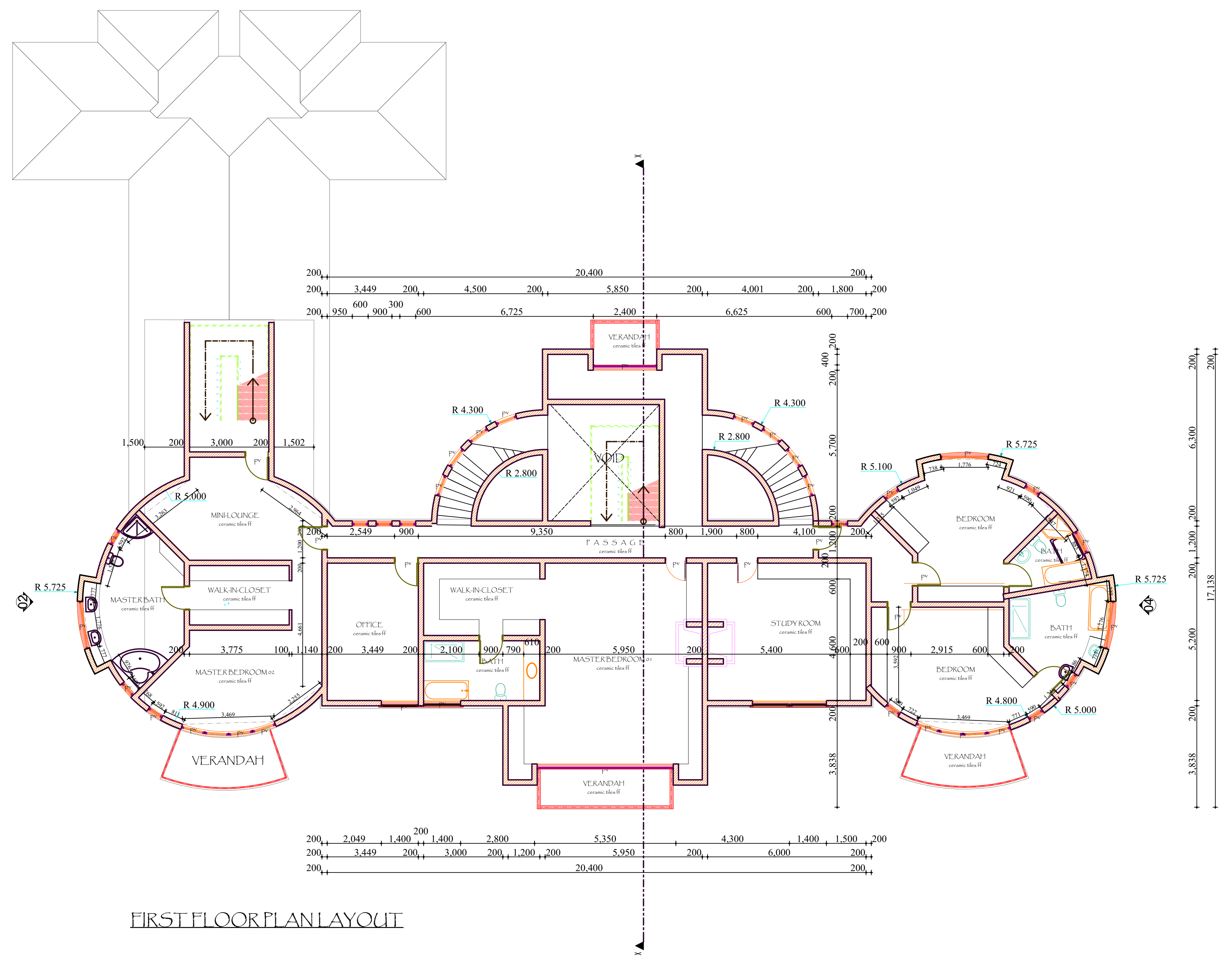
LOWER GROUND FLOOR PLAN LAYOUT



GROUND FLOOR PLAN LAYOUT



ROOF PLAN



FIRST FLOOR PLAN LAYOUT

Notes

1. This drawing is the copyright of AFRITECTS ARCHITECTS and may not be reproduced without licence.
2. All dimensions are in mm and should be checked on site. Written dimensions rule over scaled dimensions. Any discrepancies to be reported to the architect before any work commences.
3. All construction work to comply with the latest K.B.S standard code of practice, Local Authority by-laws and fire regulations.
4. P.V. denotes permanent ventilation and must be provided above all doors and windows where shown.
5. All walls should be reinforced with hoop iron at every alternate course.
6. Water meter to be located 300mm above ground level.
7. D.P.C. denotes one layer of bituminous felt to be provided under all walls and should be 150mm above GL.
8. All structural work to Structural Engineer's Details
9. Heavy duty polythene sheeting and anti-termite treatment to be provided under ground floor slab.
10. All surface beds to be cast on well compacted filling.
11. All pipes and services to be minimum 450mm below reduced GL.
12. All inspection chambers within building area and parking areas to have heavy duty double seal airight covers. Drains under building, driveway, parking to be PVC pipes encased in 150mm concrete surround.

Project Title

PROPOSED GOVERNOR'S RESIDENCE,
ELGEYO MARAKWET COUNTY.

Client

COUNTY SECRETARY
COUNTY GOVERNMENT OF ELGEYO
MARAKWET
P.O. BOX 220-50700
TEL (+254) (0) 55 42277
ITEN,
KENYA
Website: www.elgeyomarakwet.go.ke

Sign: Date:

Drawing Title

PLANS

Project No.

AA/024/15

Scale

1:100

Date

April 2015

Drawing No.

01

Revision No.

Drawn

Kim

Checked

TKC

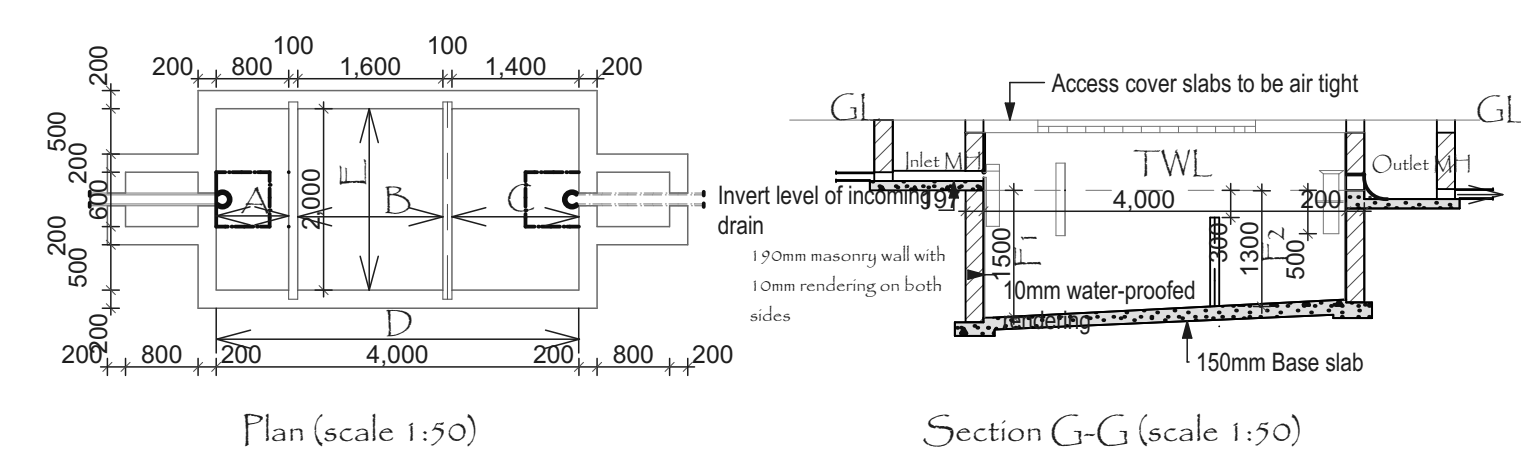
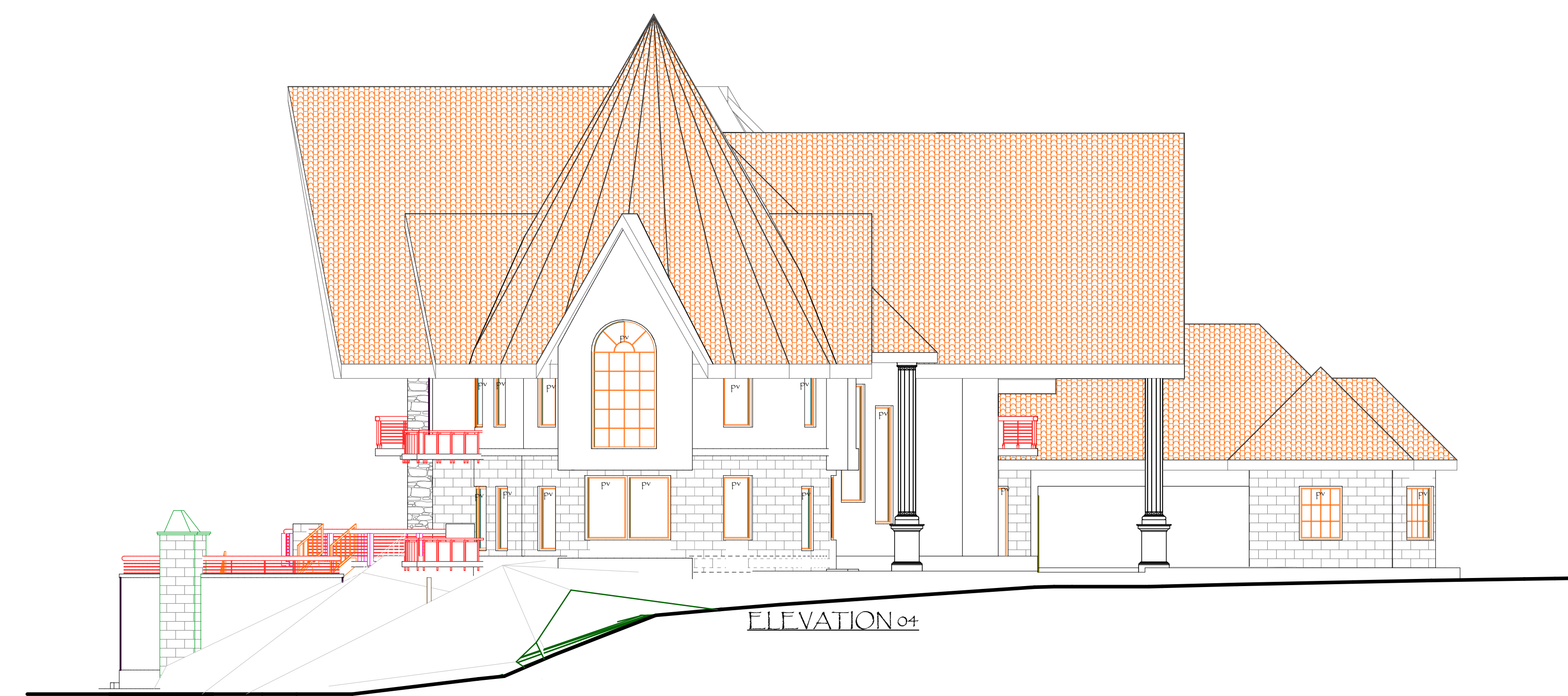
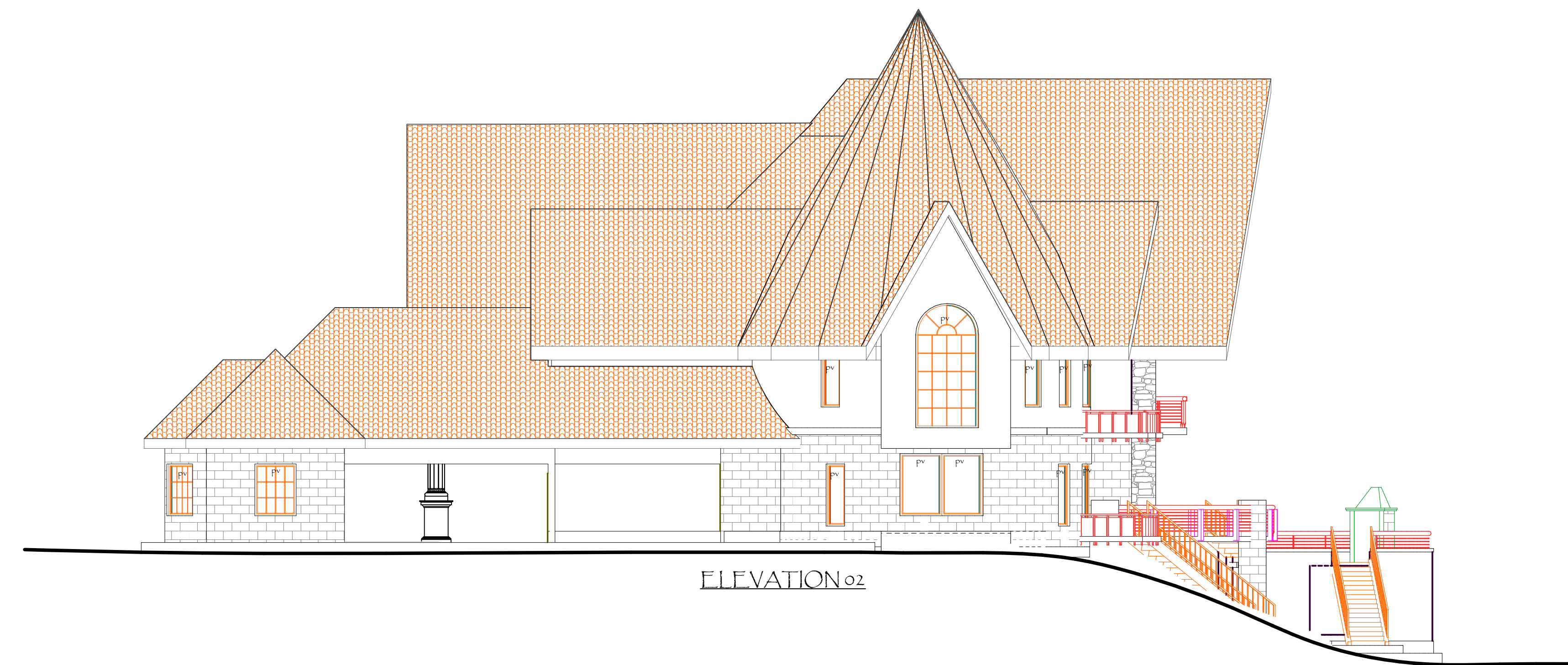
FRITECTS
ARCHITECTS
architects & project managers

Architect: Thomas K. Chelimo,
Reg. No. A1267.

Date :

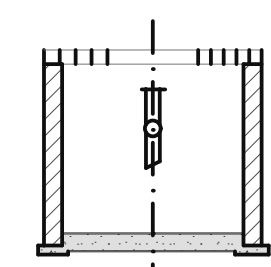
Sign:

P.O Box 8096-00100
Tel: 2729996
0722850514
Fax: 0773006689
Nairobi.



- Cover slab to be reinforced with 100mm of bars @ 100 mm c/c concrete min. 1:2:1A - Base slab to be concrete class C min 1:5:6 - Outlet and inlet pipes to be 100mm o cast iron - Scum buffer to be 100mm thick reinforced with Zns. 10mm bars at both ends conc 20/20 - Dividing wall to be 100mm thick conc. class 20/20 reinforced with weld mesh	A 800
---	--

A	B	C	D	E	F ₁	F ₂
800	1400	1200	3600	1400	1500	1400

[illegible]

Roof Construction
Roof pitch = 37 deg
deck sits on
38x38mm battens on
75mm dia pole rafter
100x50 wallplate.
250x25 fascia board
T & G timber ceiling

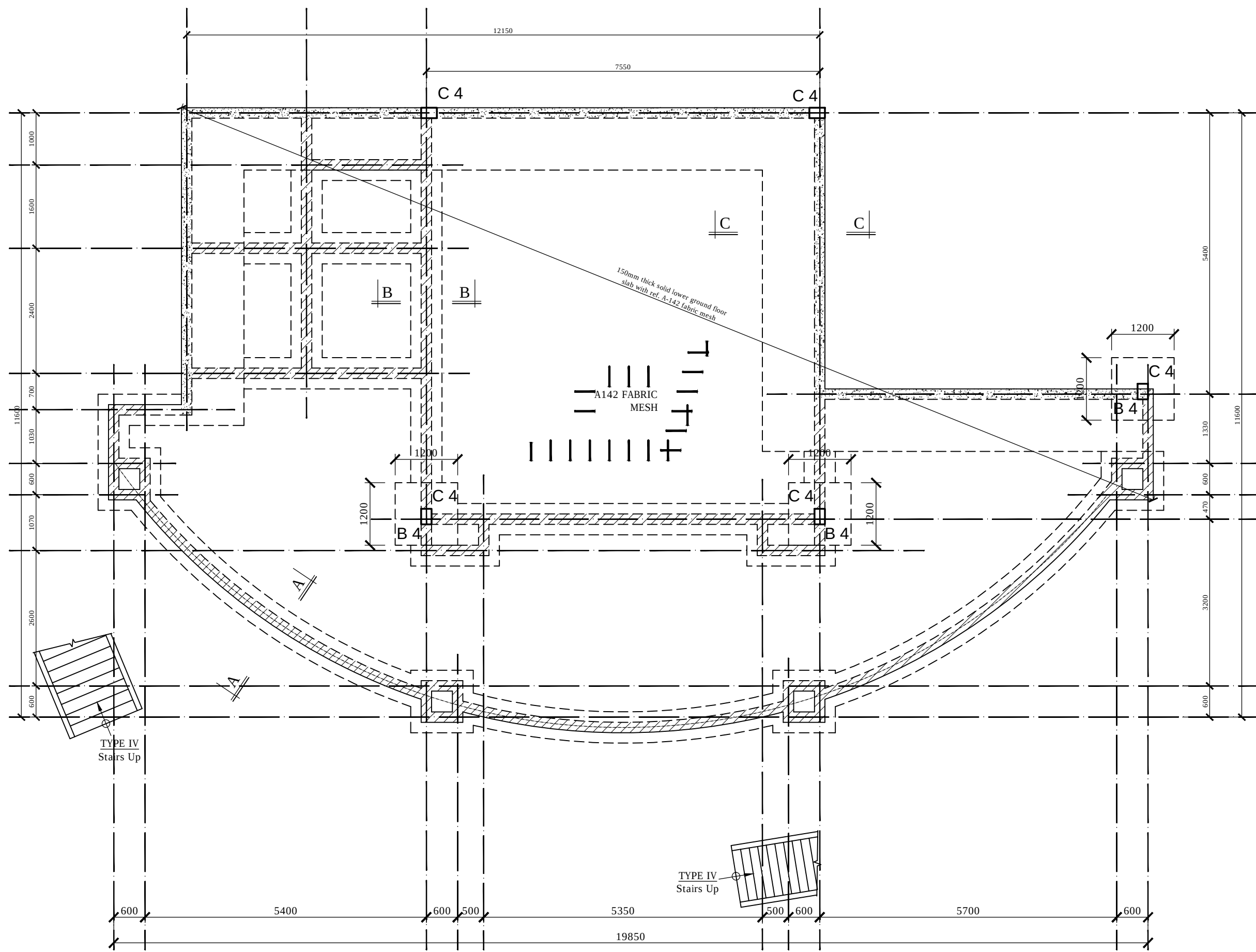
RC stair case to 2nd
bread min. 250mm wide
rise max. 150mm high
balustrade and hand
to details

Floor Construction
Approved ceramic tiles on
25mm thick screed on
150mm thick concrete floor slab in
500g polythene sheet on
50mm thick murray blinding on
200mm thick hardcore filling

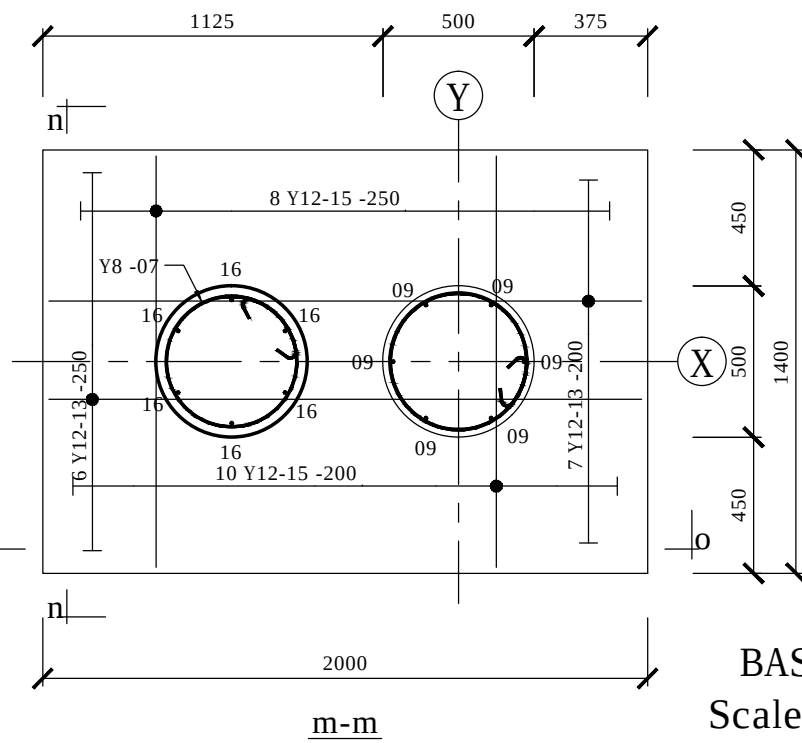
Foundation
220 stone
600x200 F

SECTION X-X

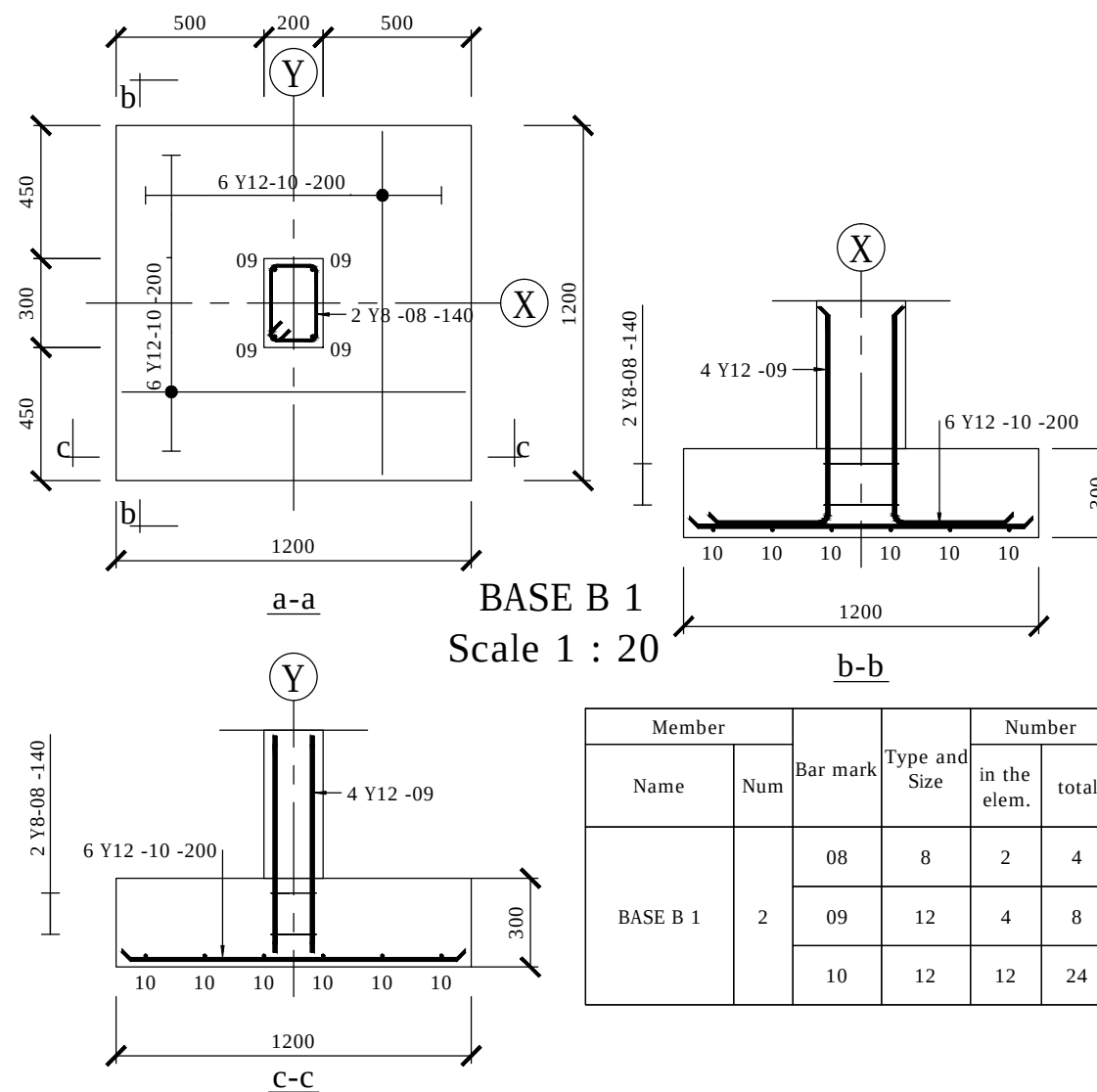




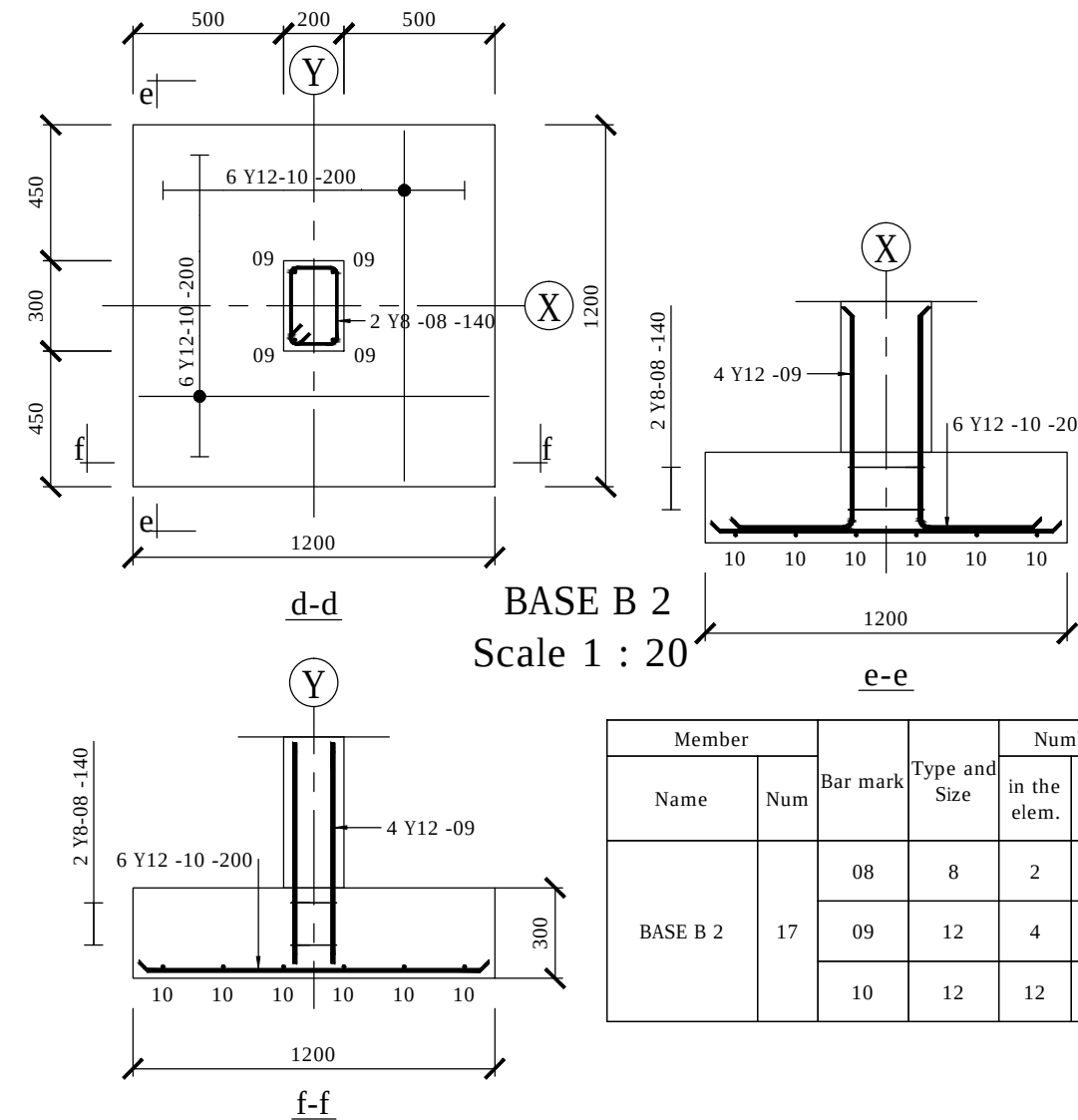
FOUNDATION/LOWER GROUND FLOOR LAYOUT
Scale 1:50



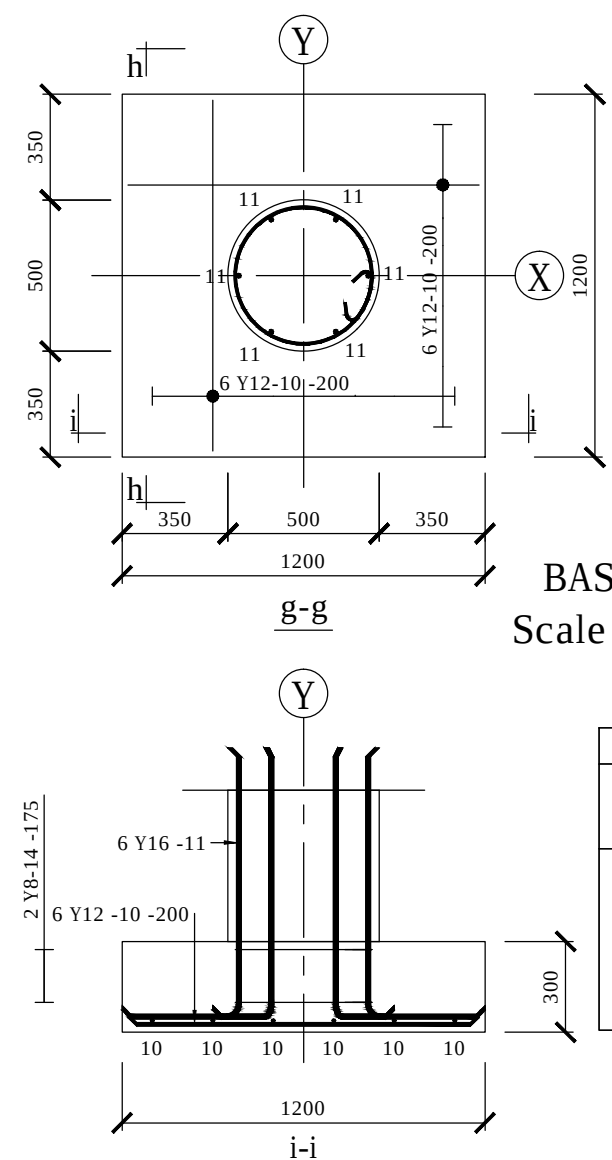
BASE B 1
Scale 1 : 20



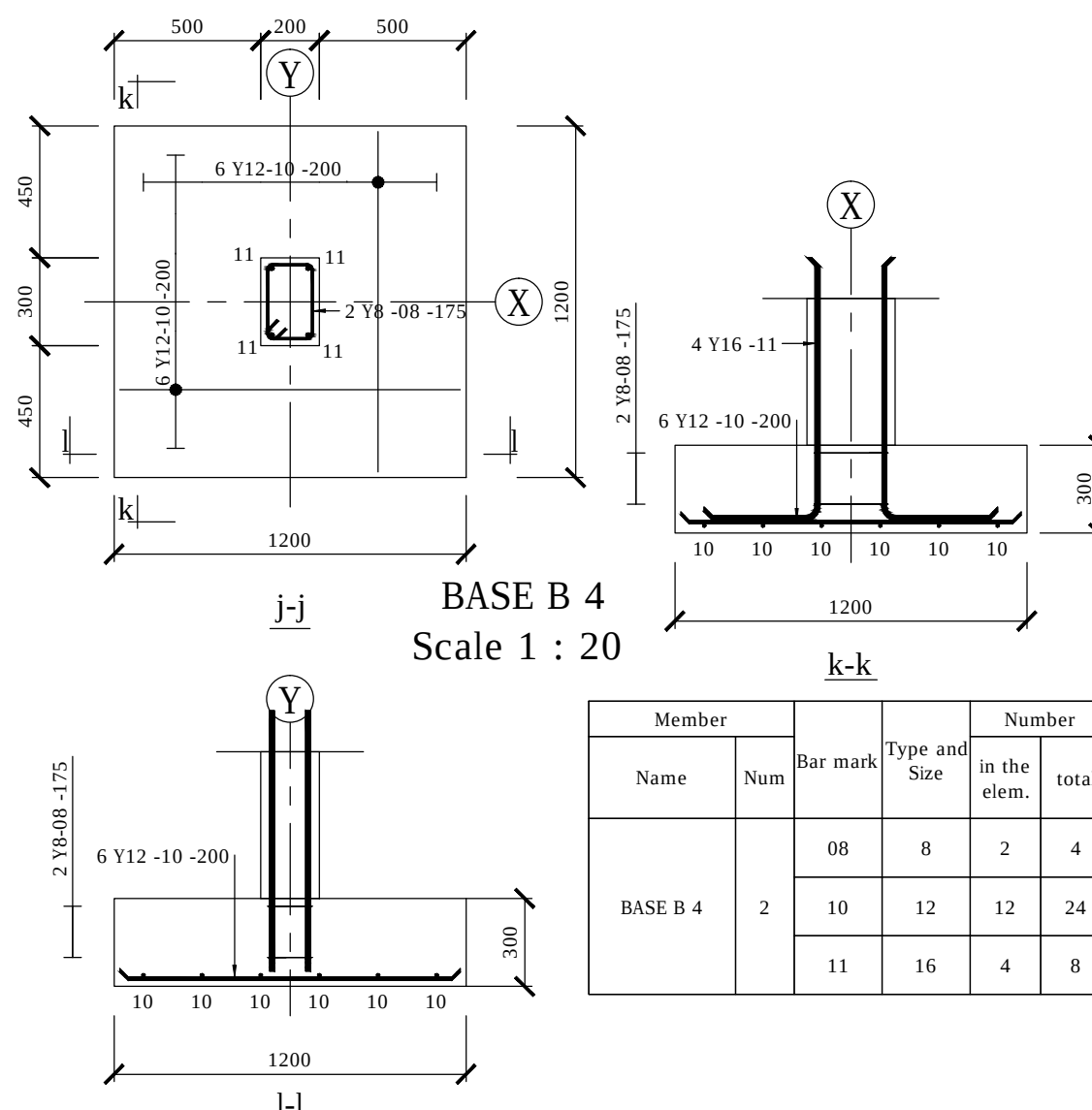
BASE B 2
Scale 1 : 20



BASE B 3
Scale 1 : 20



BASE B 4
Scale 1 : 20



BASE B 5
Scale 1 : 20

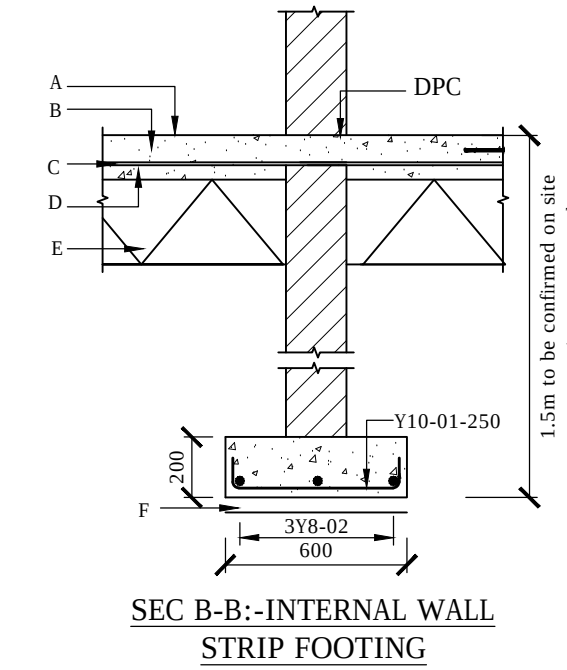
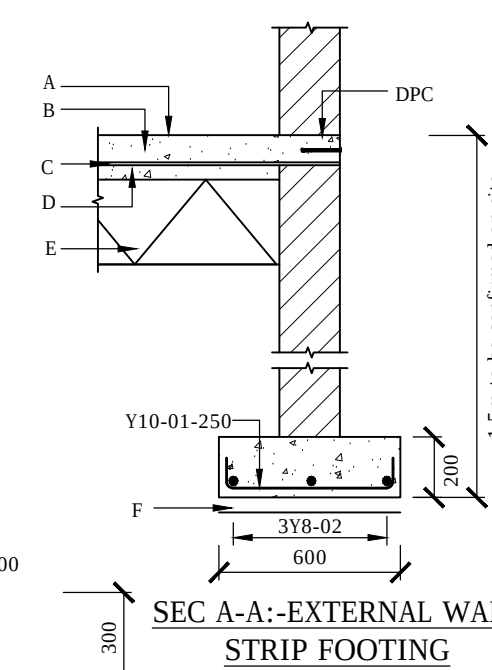
Member	Name	Num	Bar mark	Type and Size	Number in the elem.	total	Length (mm)	Shape code	A (mm)	B (mm)	C (mm)	D (mm)	E/R (mm)	Rev.
BASE B 5	2	09	12	6	12	1125	11	735	405					
		13	12	13	26	1950	00	1960						
		14	8	2	4	1725		460	180					
		15	12	18	36	1350	00	1360						

Member	Name	Num	Bar mark	Type and Size	Number in the elem.	total	Length (mm)	Shape code	A (mm)	B (mm)	C (mm)	D (mm)	E/R (mm)	Rev.
BASE B 3	2	10	12	12	24	1150	00	1160						
		11	16	6	12	1400	11	895	540					
		14	8	2	4	1725		460	180					

BAR BENDING SCHEDULE					
MEMBER	MARK	SIZE	TOTAL No.	LENGTH	BENDING
STRIP FOOTING (600 x 200)	01	Y10	---	700mm	
	02	Y8	----	12000mm (CUT AND BEND TO SUIT MIN. LAP = 500mm)	

LEGEND									
A	150mm Ground Floor slab								
B	Fabric Mesh Ref A-142								
C	500 Gauge Polyethene Sheet DPM								
D	50mm Murram Blinding or approved similar								
E	300mm thick (minimum) approved material hardcore fill laid and compacted in layers not exceeding 150mm								
F	50mm Class 15 (1:3:6) Concrete Blinding								

Member	Name	Num	Bar mark	Type and Size	Number in the elem.	total	Length (mm)	Shape code	A (mm)	B (mm)	C (mm)	D (mm)	E/R (mm)	Rev.
BASE B 1	2	08	8	2	4	925	31	160	260	160	260			
		09	12	4	8	1125	11	735	405					
		10	12	12	24	1150	00	1160						



NOTES

- Read this drawing in conjunction with relevant G.A., Services and Architectural drawings. Any discrepancy to be reported to the Engineer.
- All dimensions are in millimetres unless specified otherwise.
- All levels are indicated in m unless specified otherwise.
- All structural concrete to be Class 25 (1:1.5:3) unless stated otherwise.
- Minimum cover to all reinforcement to be:
 - Stairs, Slabs & Walls = 20mm
 - Beams (main bars) = 30mm
 - Columns (main bars) = 40mm
 - Foundations = 50mm
- Maximum tolerance on concrete cover is +/- 5mm.
- All high tensile (Y) and mild steel (R) bars to be in accordance with BS 4449 and fabric mesh to be made from cold worked steel bars in accordance with BS 4483.
- Minimum laps to all bars to be 550 unless stated otherwise.
- Nominal aggregate size to be 20mm.
- Assumed Ground Bearing Pressure=250mpa.

REV	REVISIONS	SIGN	DATE	APPROVED
P3	BY CHECKED			
P2	BY CHECKED			
P1	BY CHECKED			
P0	BY CHECKED	JWW WWG	9/5/15	

Client

ELGEYO MARKWET COUNTY
P.O BOX 220-30700
ITEN

Project

PROPOSED RESIDENTIAL
DEVELOPMENT ON PLOT L.R NO.

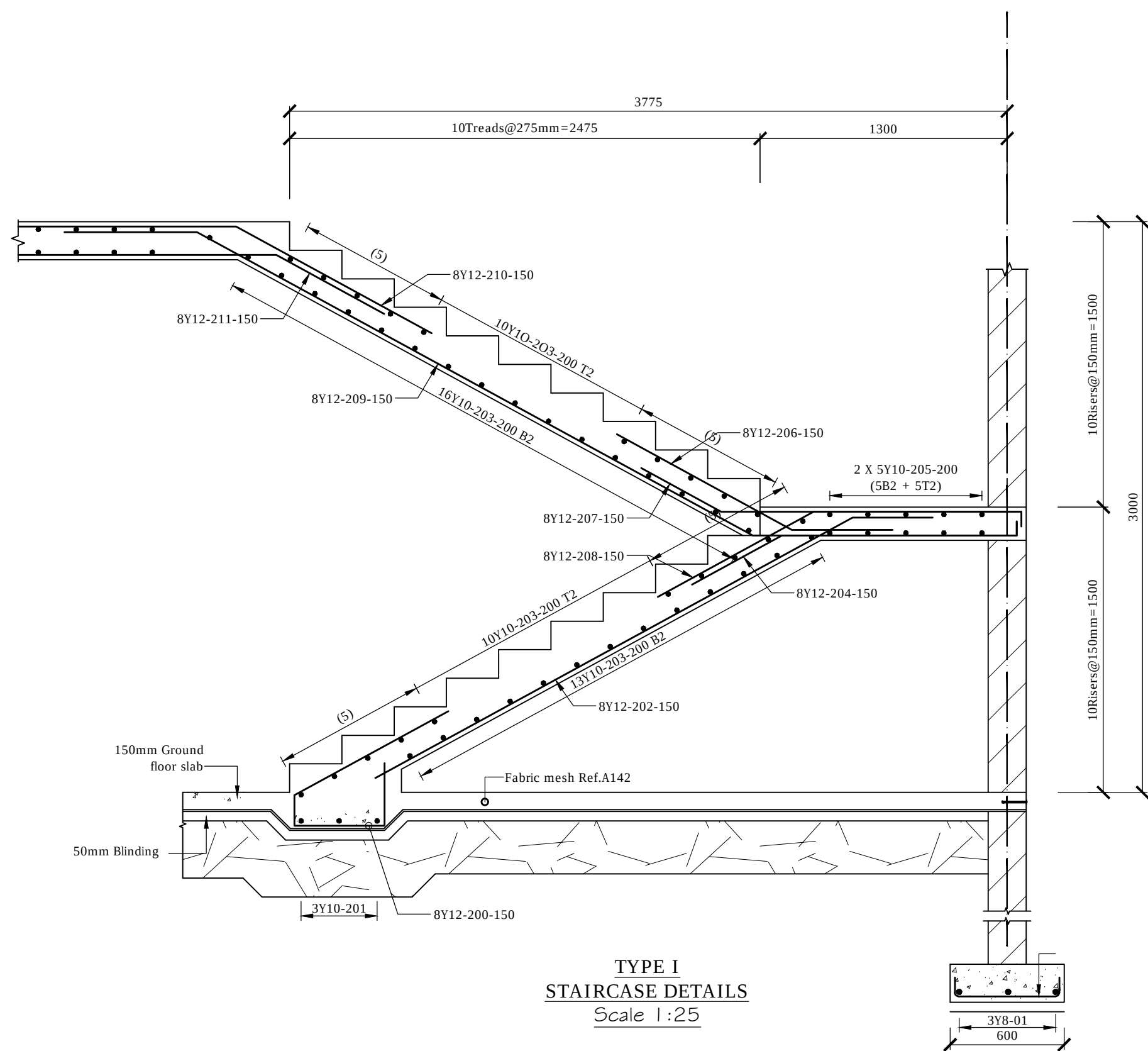
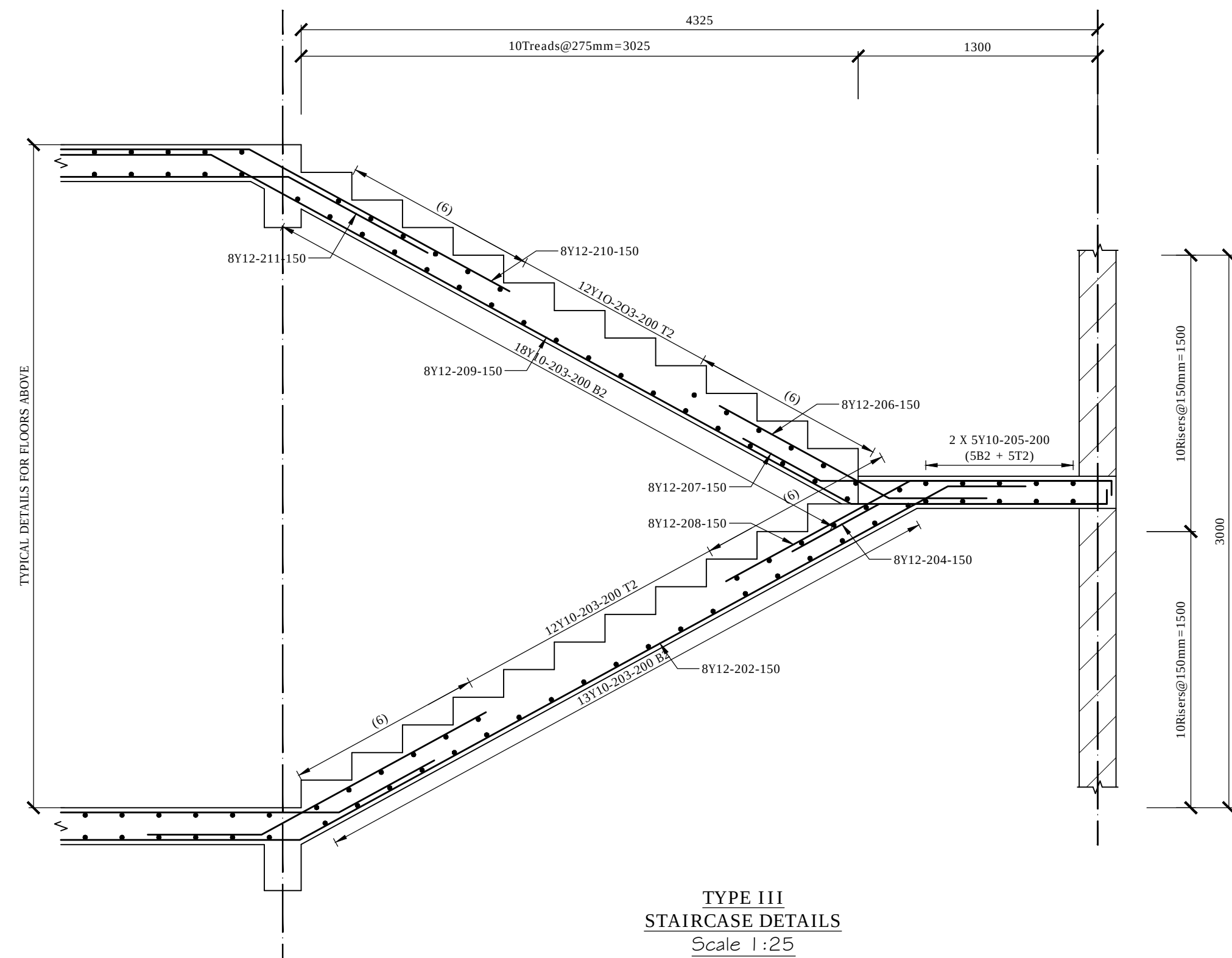
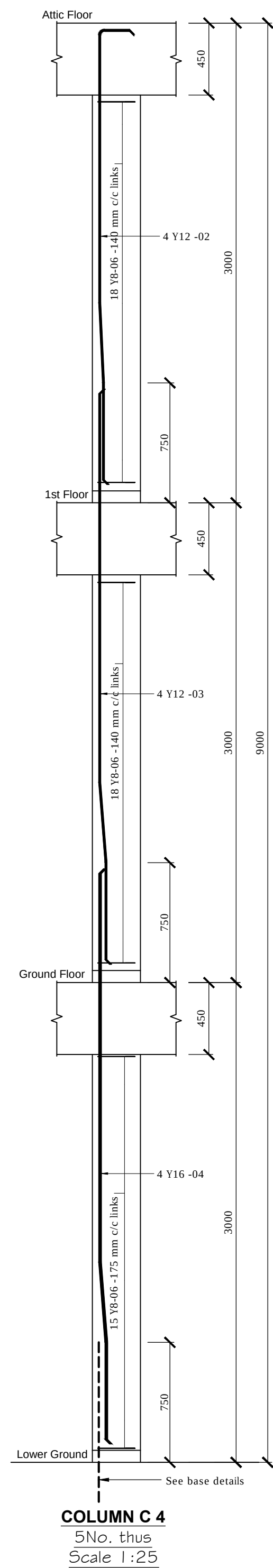
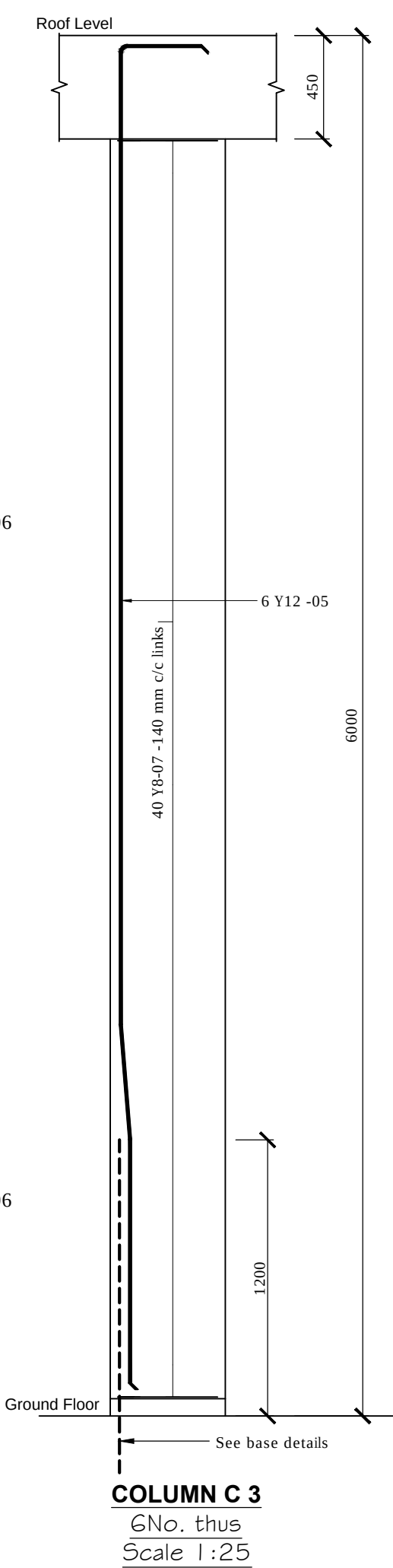
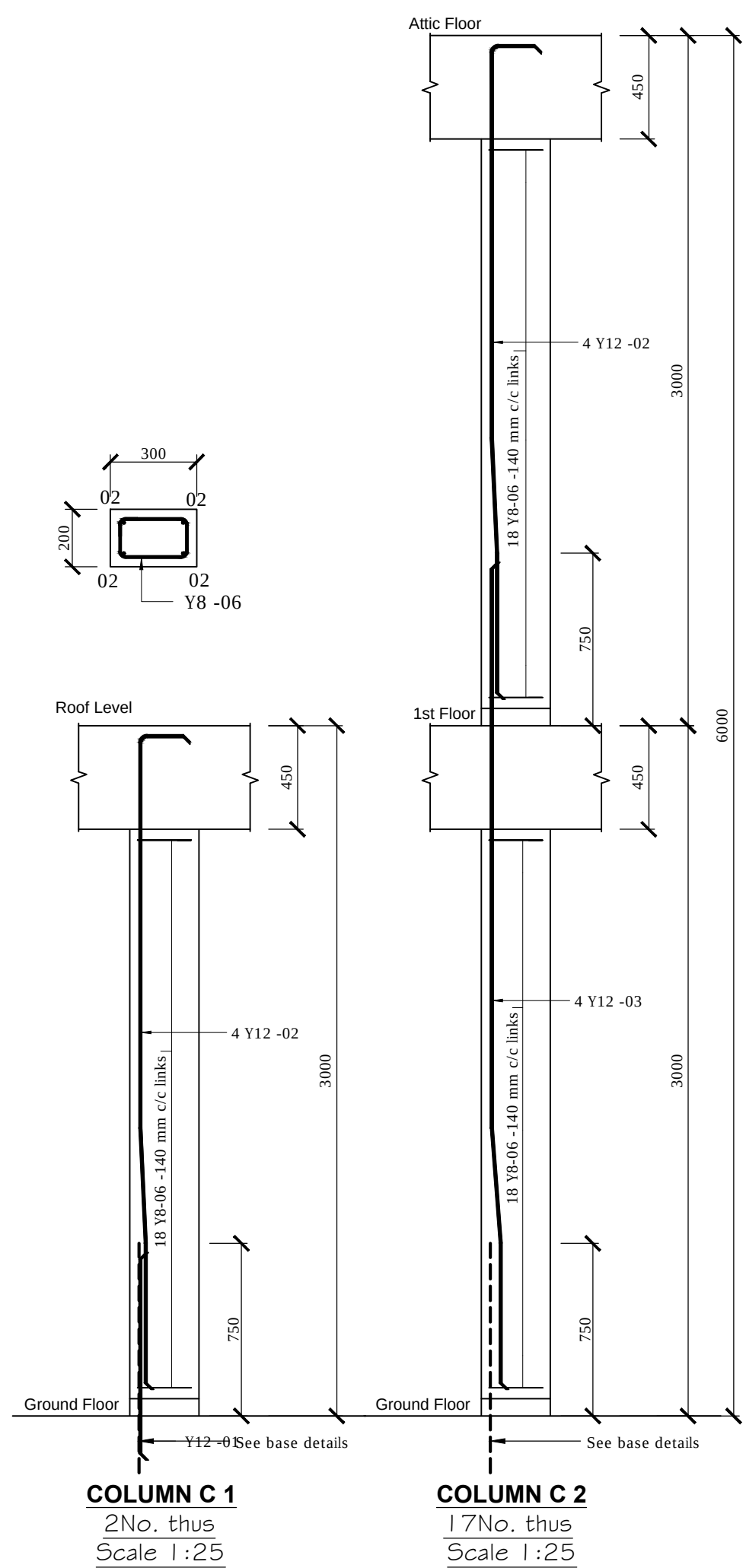
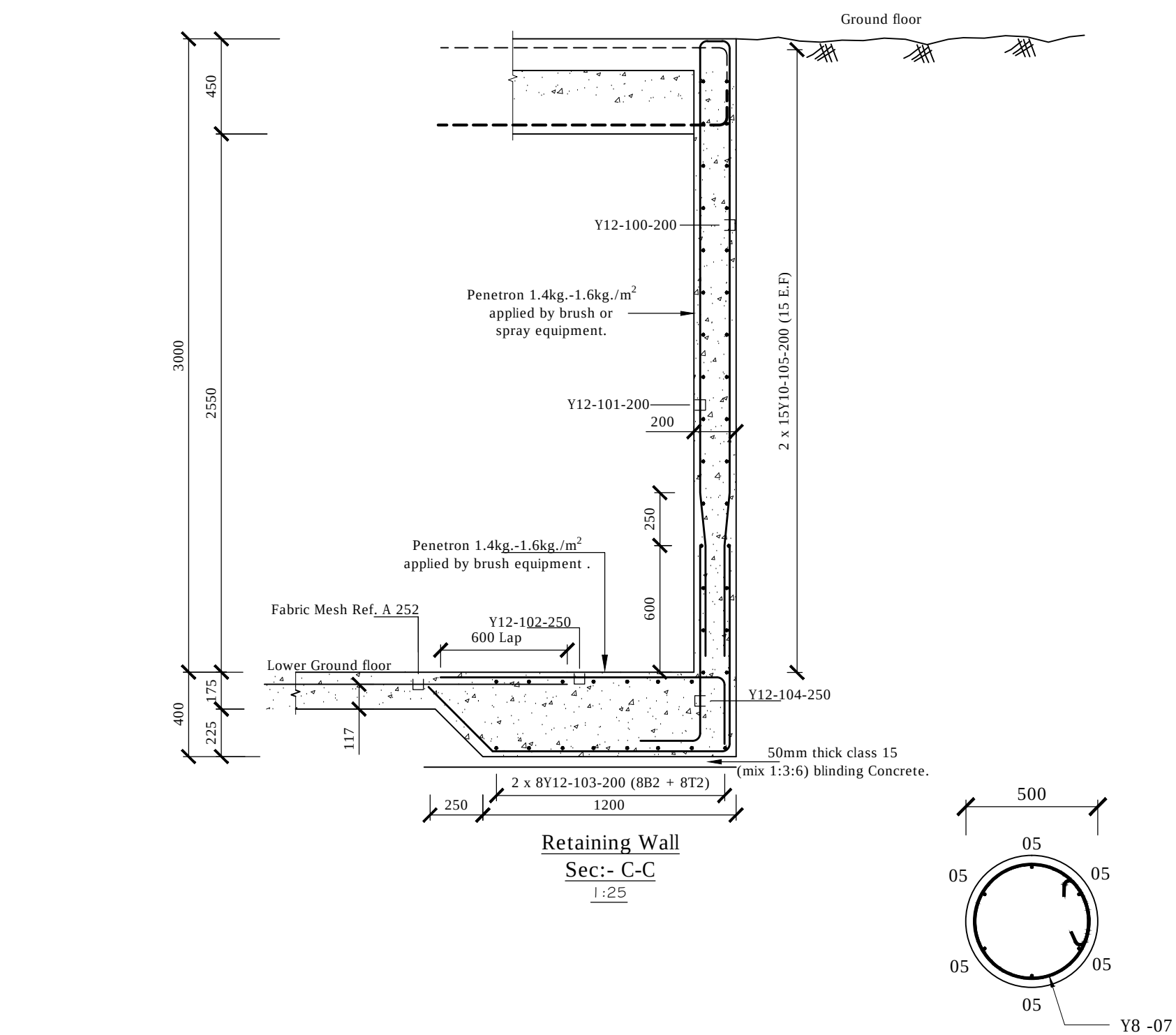
Drawing Title

FOUNDATION LAYOUT,
BASE ELEVATIONS & R.C
DETAILS

EDCONS
(K) LIMITED

ENGINEERING DESIGN & CONSULTANCY
P.O. Box 19721-00100 Nairobi.
Tel: +254 20-2066927
E-mail: mail@ed-cons.com

Designed by	JWW	Drawn by	JWW
Checked by	WWG	Approved by	
Scales	AS SHOWN	Date	MAY 2015
Job No.	EDC_15-06	ACAD File	D:/structures
P STATUS	DRAWING No. EDC_15-06-STR-01	P0 REV	



NOTES

- Read this drawing in conjunction with relevant G.A., Services and Architectural drawings. Any discrepancy to be reported to the Engineer.
- All dimensions are in millimetres unless specified otherwise.
- All levels are indicated in m unless specified otherwise.
- All structural concrete to be Class 25 (1:1.5:3) unless stated otherwise.
- Minimum cover to all reinforcement to be:
 - Stairs, Slabs & Walls = 20mm
 - Beams (main bars) = 30mm
 - Columns (main bars) = 40mm
 - Foundations = 50mm
- Maximum tolerance on concrete cover is +/- 5mm.
- All high tensile (Y) and mild steel (R) bars to be in accordance with BS 4449 and fabric mesh to be made from cold worked steel bars in accordance with BS 4483.
- Minimum laps to all bars to be 550 unless stated otherwise.
- Nominal aggregate size to be 20mm.

REV	REVISIONS	SIGN	DATE	APPROVED
P3	BY CHECKED			
P2	BY CHECKED			
P1	BY CHECKED			
P0	BY CHECKED	JWW WWG	9/5/15	

Client

ELGEYO MARKWET COUNTY
P.O BOX 220-30700
ITEN

Project

PROPOSED RESIDENTIAL
DEVELOPMENT ON PLOT L.R NO.

Drawing Title

COLUMN ELEVATIONS,
STAIRCASE & R.C DETAILS

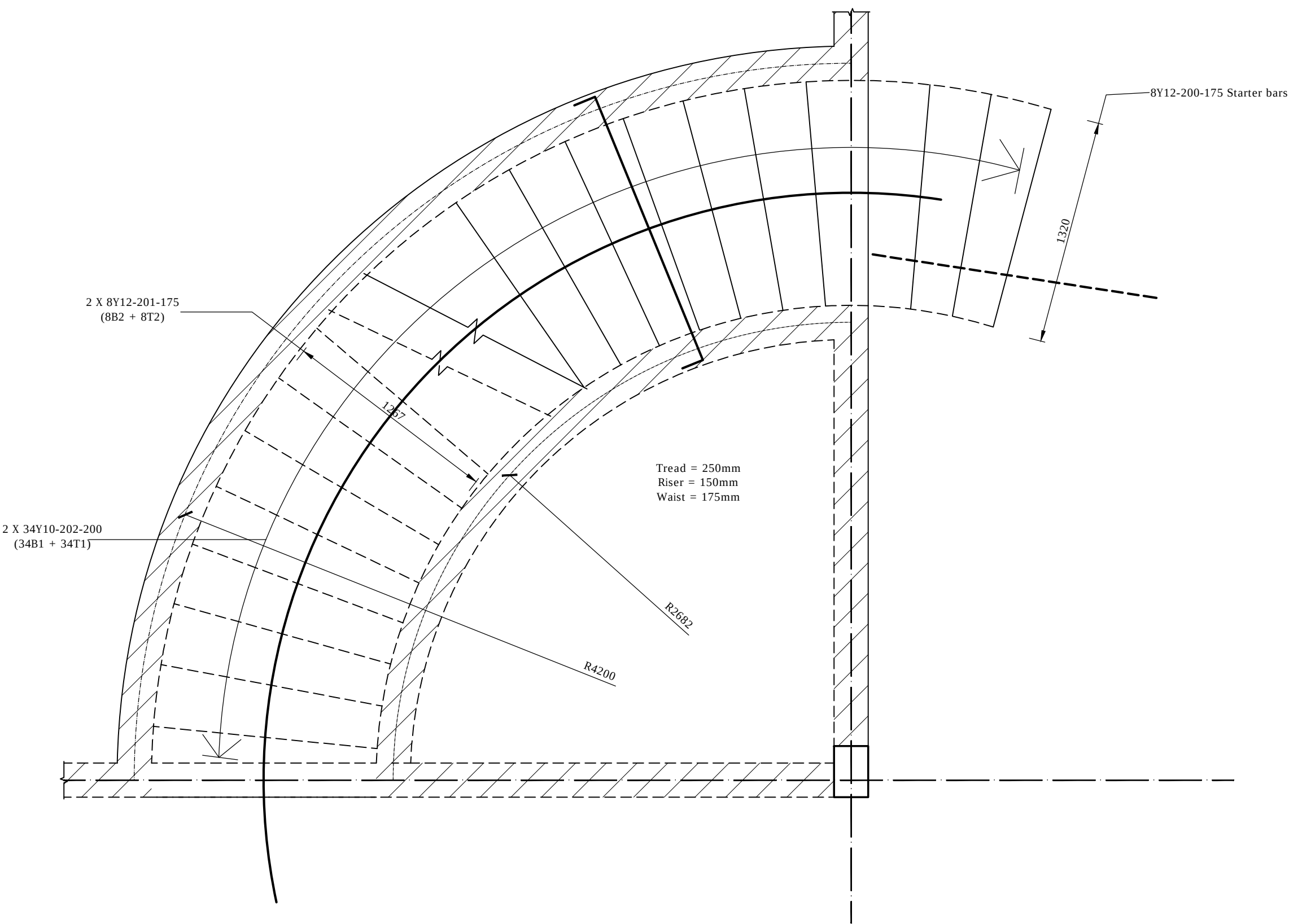


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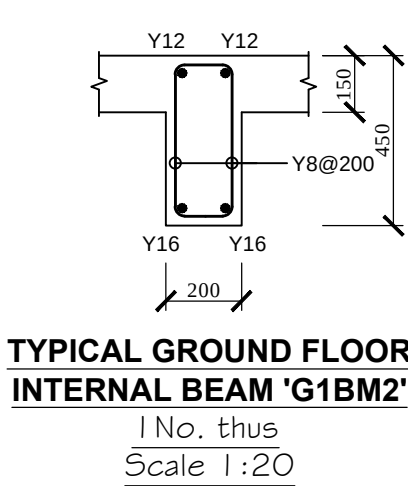
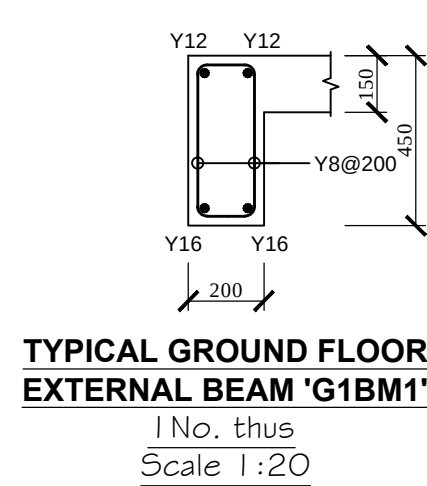
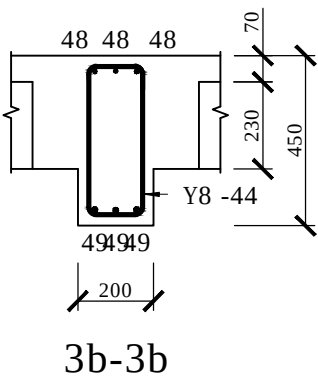
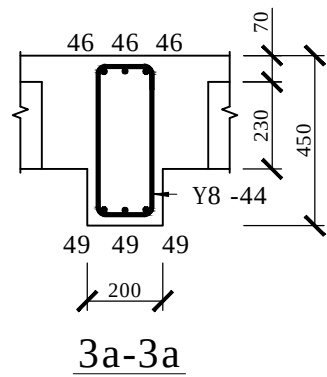
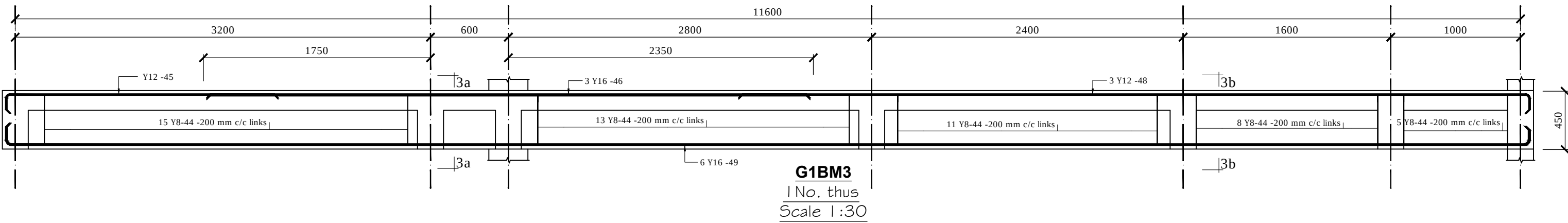
Designed by	JWW	Drawn by	JWW
Checked by	WWG	Approved by	
Scales	AS SHOWN	Date	MAY 2015
Job No.	EDC_15-06	ACAD File	D:/structures
P STATUS	DRAWING No. EDC_15-06-STR-02	P0 REV	



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Checked by	wwg	Approved by	
Scales	AS SHOWN	Date	MAY 2015
Job No.	EDC_15-06	ACAD File	D:/structures
P STATUS	DRAWING No. EDC_15-06-STR-03		P0 REV



TYPE II
STAIRCASE DETAILS
Scale 1:25



NOTES

- Read this drawing in conjunction with relevant G.A., Services and Architectural drawings. Any discrepancy to be reported to the Engineer.
- All dimensions are in millimetres unless specified otherwise.
- All levels are indicated in m unless specified otherwise.
- All structural concrete to be Class 25 (1:1.5:3) unless stated otherwise.
- Minimum cover to all reinforcement to be:
 - Stairs, Slabs & Walls = 20mm
 - Beams (main bars) = 30mm
 - Columns (main bars) = 40mm
 - Foundations = 50mm
- Maximum tolerance on concrete cover is +/- 5mm.
- All high tensile (Y) and mild steel (R) bars to be in accordance with BS 4449 and fabric mesh to be made from cold worked steel bars in accordance with BS 4483.
- Minimum laps to all bars to be 55Ø unless stated otherwise.
- Nominal aggregate size to be 20mm.

REV	REVISIONS	SIGN	DATE	APPROVED
P3	BY CHECKED			
P2	BY CHECKED			
P1	BY CHECKED			
P0	BY CHECKED	JWW WWG	9/5/15	

Client
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P.O BOX 220-30700
ITEN

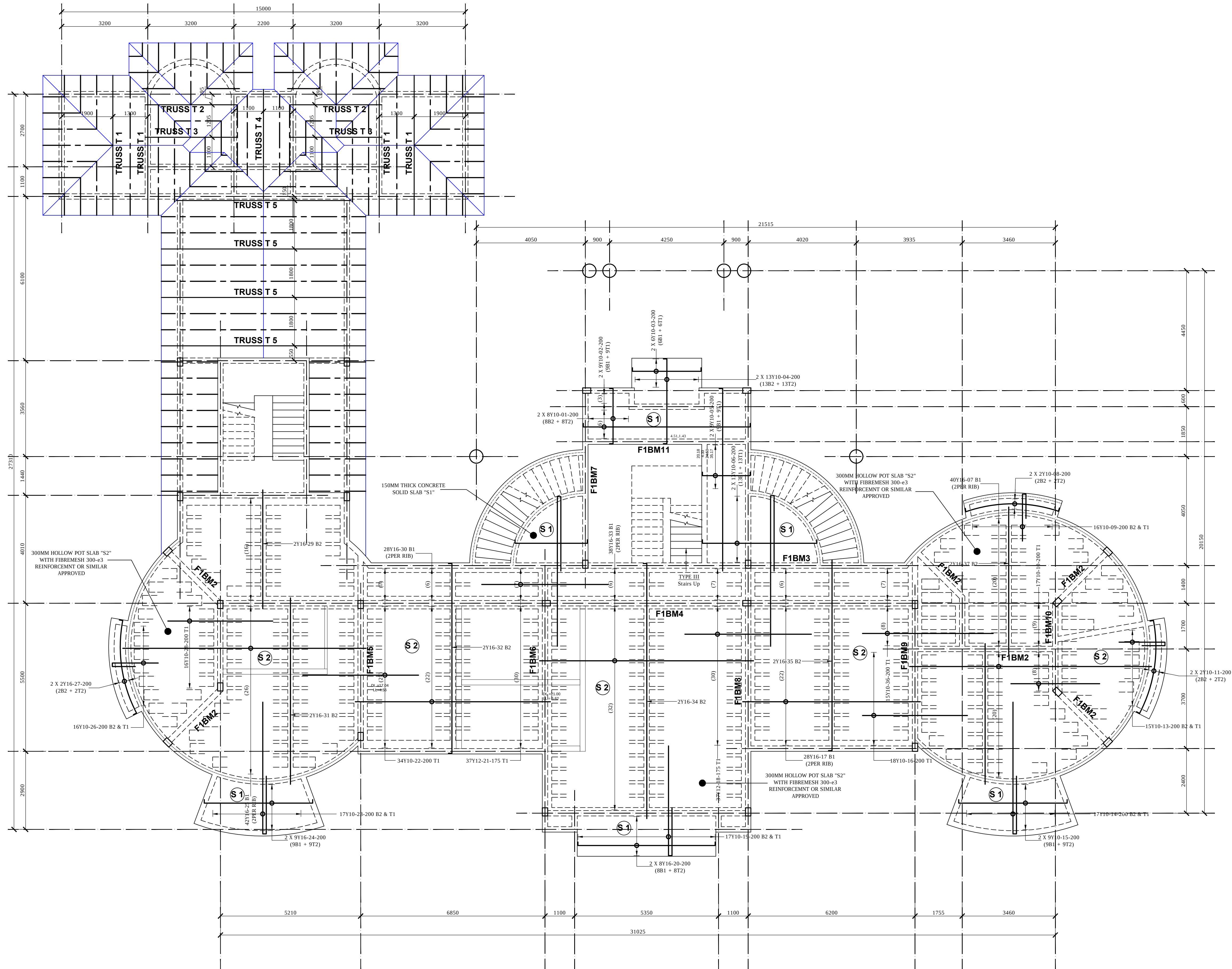
Project
PROPOSED RESIDENTIAL
DEVELOPMENT ON PLOT L.R NO.

Drawing Title
GROUND FLOOR BEAM
ELEVATIONS, STAIRCASE
& R.C DETAILS



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Checked by	WWG	Approved by	
Scales	AS SHOWN	Date	MAY 2015
Job No.	EDC_15-06	ACAD File	D:/structures
P STATUS	DRAWING No. EDC_15-06-STR-04	P0 REV	



FIRST FLOOR LAYOUT & R.C DETAILS
Scale 1:75

NOTES

1. Read this drawing in conjunction with relevant G.A., Services and Architectural drawings. Any discrepancy to be reported to the Engineer.
2. All dimensions are in millimetres unless specified otherwise.
3. All levels are indicated in m unless specified otherwise.
4. All structural concrete to be Class 25 (1:1.5:3) unless stated otherwise.
5. Minimum cover to all reinforcement to be:
 - Stairs, Slabs & Walls = 20mm
 - Beams (main bars) = 30mm
 - Columns (main bars) = 40mm
 - Foundations = 50mm
6. Maximum tolerance on concrete cover is +/- 5mm.
7. All high tensile (Y) and mild steel (R) bars to be in accordance with BS 4449 and fabric mesh to be made from cold worked steel bars in accordance with BS 4483.
8. Minimum laps to all bars to be 550 unless stated otherwise.
9. Nominal aggregate size to be 20mm.

REV	REVISIONS	SIGN	DATE	APPROVED
P3	BY CHECKED			
P2	BY CHECKED			
P1	BY CHECKED			
P0	BY CHECKED	JWW WWG	9/5/15	

Client

ELGEYO MARKWET COUNTY
P.O BOX 220-30700
ITEN

Project

PROPOSED RESIDENTIAL
DEVELOPMENT ON PLOT L.R NO.

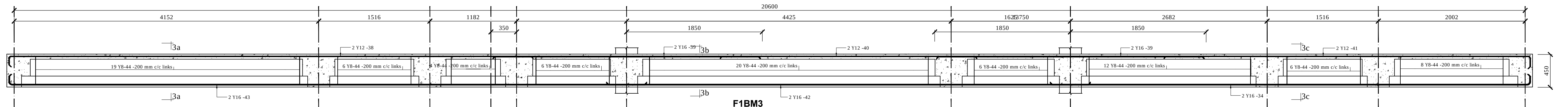
Drawing Title

**FIRST FLOOR LAYOUT
& R.C DETAILS**

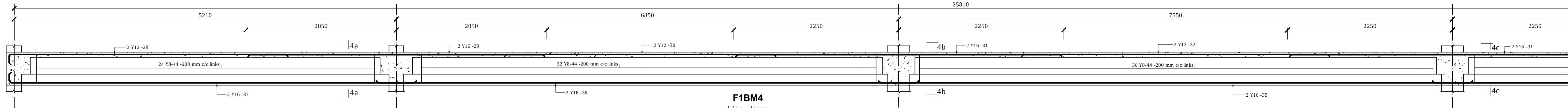


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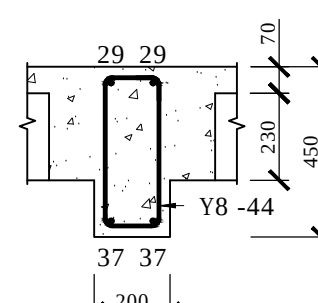
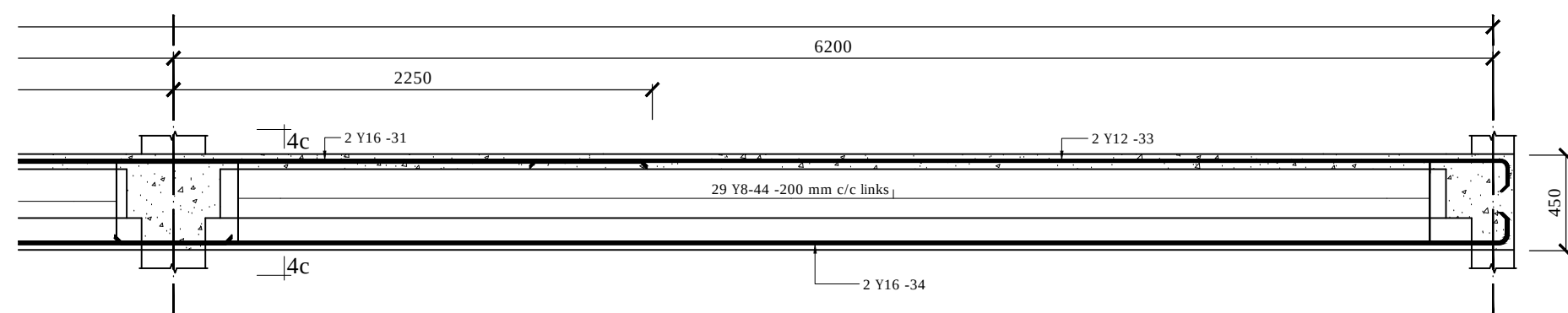
Designed by	JWW	Drawn by	JWW
Checked by	WWG	Approved by	
Scales	AS SHOWN	Date	MAY 2015
Job No.	EDC_15-06	ACAD File	D:/structures
P STATUS	DRAWING No. EDC_15-06-STR-05	P0 REV	



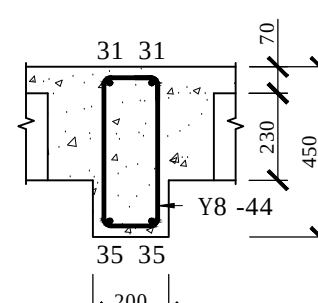
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I No. thus
Scale 1:30



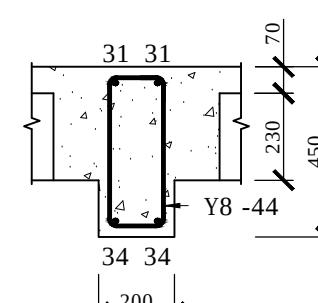
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I No. thus
Scale 1:30



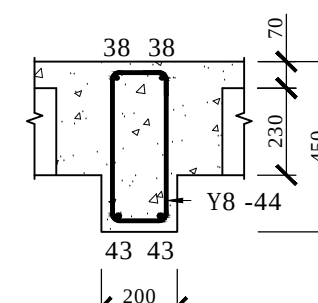
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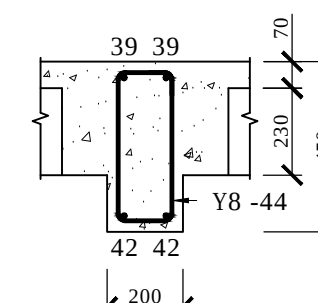
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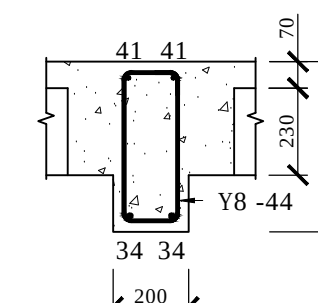
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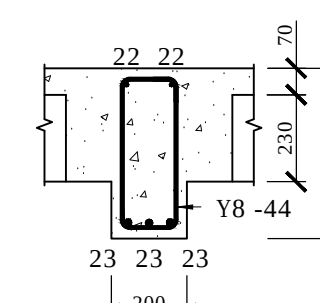
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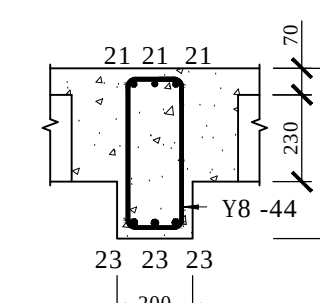
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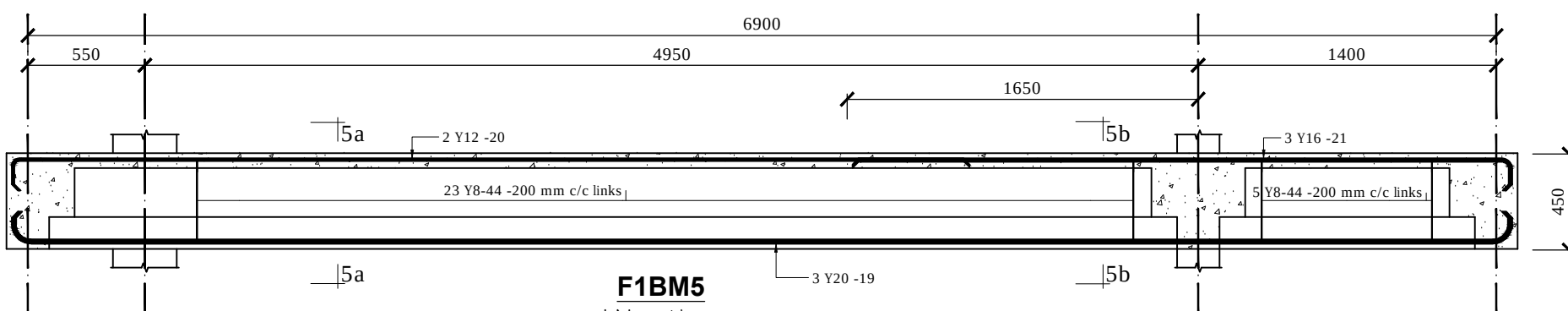
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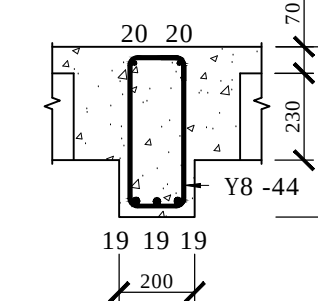
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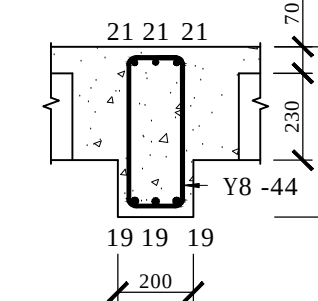
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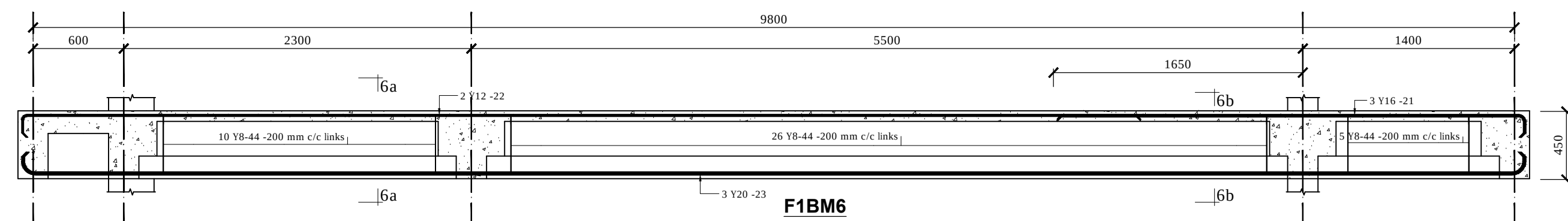
F1BM5
I No. thus
Scale 1:30



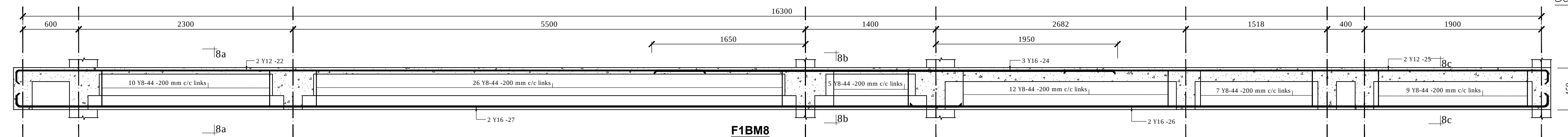
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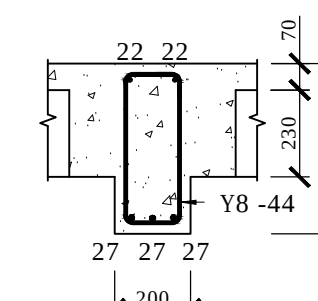
5b-5b



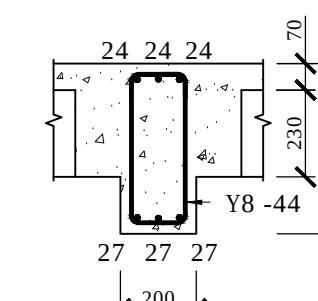
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Scale 1:30



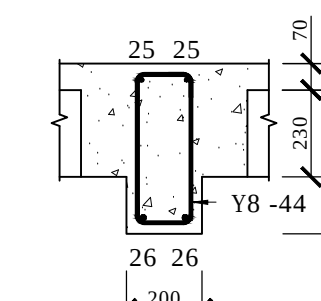
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I No. thus
Scale 1:30



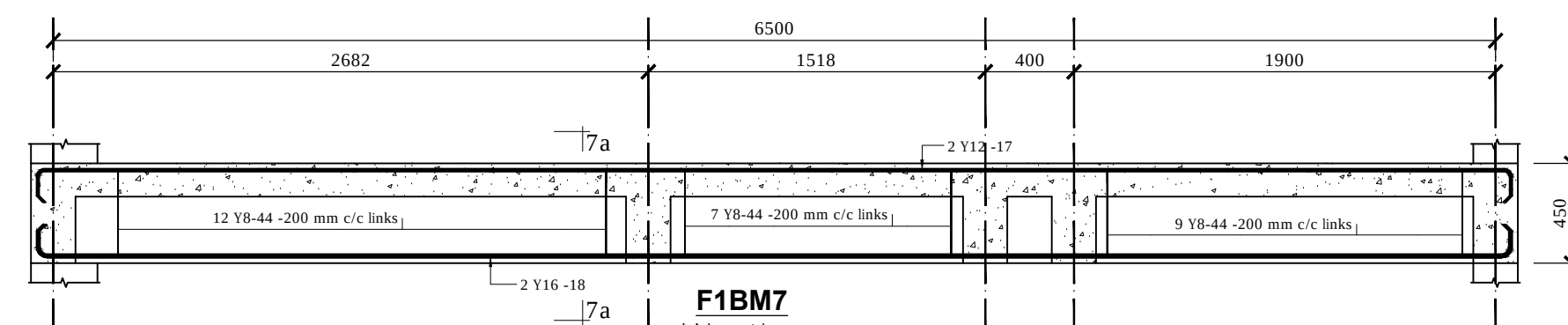
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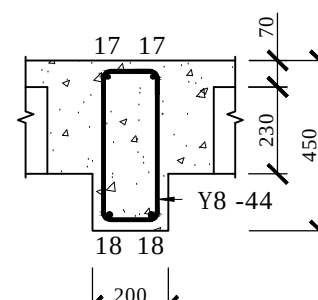
8b-8b



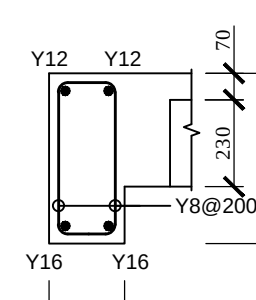
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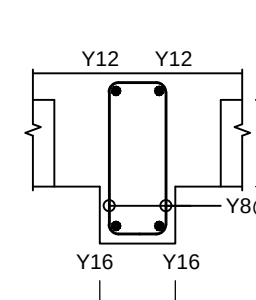
F1BM7
I No. thus
Scale 1:30



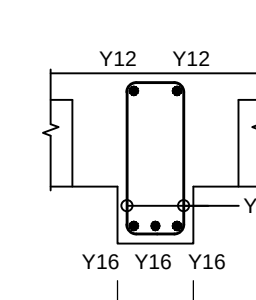
7a-7a



**TYPICAL 1ST FLOOR
EXTERNAL BEAM 'F1BM1'**
I No. thus
Scale 1:20



**TYPICAL 1ST FLOOR
INTERNAL BEAM 'F1BM2'**
I No. thus
Scale 1:20



F1BM 10
I No. thus
Scale 1:20



PROJECT
**PROPOSED RESIDENTIAL
DEVELOPMENT ON PLOT L.R NO.**

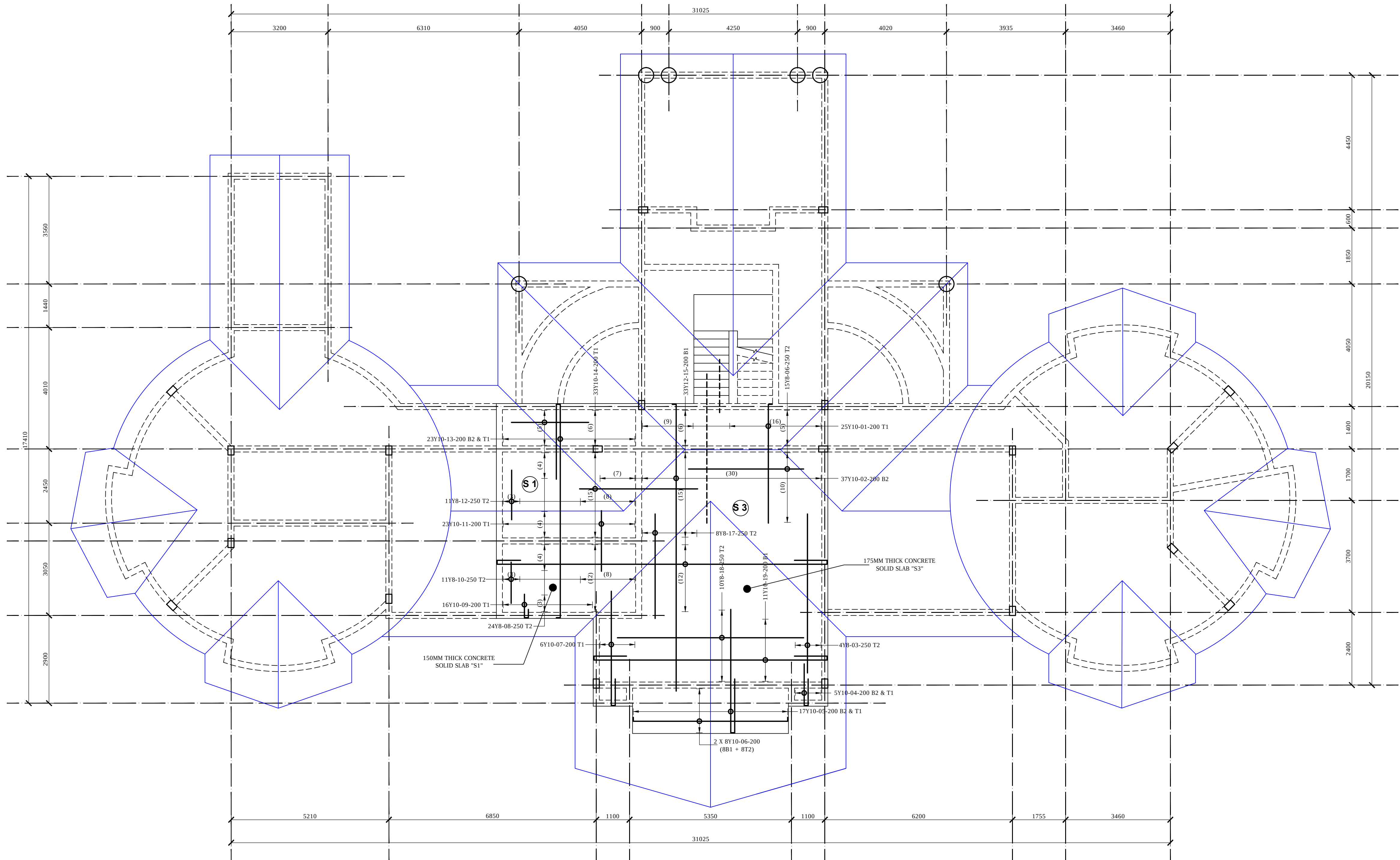
Client
**ELGEYO MARKWET COUNTY
P.O BOX 220-30700
ITEN**

Drawing Title
**FIRST FLOOR BEAM
ELEVATIONS & R.C DETAILS**

NOTES
1. Read this drawing in conjunction with relevant G.A., Services and Architectural drawings. Any discrepancy to be reported to the Engineer.
2. All dimensions are in millimetres unless specified otherwise.
3. Figured dimensions to be read, No scaling is allowed on this drawing.
4. All levels are in meters unless otherwise indicated.
5. Minimum cover to all reinforcement to be:
Stairs, Slabs & Walls = 20mm Beams = 30mm
Columns (main bars) = 40mm Foundations = 50mm

6. Structural concrete to be class 25 (1:1.5:3) unless stated o/w.
7. Maximum tolerance on concrete cover is +/- 5mm.
8. All high tensile (Y) and mild steel (R) bars to be in accordance with BS 4449 and fabric mesh to be made from cold worked steel bars in accordance with BS 4483.
9. Minimum laps to all bars to be 550 unless stated otherwise.
10. Nominal aggregate size to be 20mm.

REV	REVISIONS	SIGN	DATE	Designed by	JWW	Drawn by	JWW
P3	BY CHECKED			Checked by	wwg	Approved by	
P2	BY CHECKED			Scales	As shown	Date	MAY 2015
P1	BY CHECKED			Job No.	EDC_15-06	ACAD File	D:/structures
P0	BY CHECKED	JWW WWG	09/05/2015	P STATUS	DRAWING No.	EDC_15-06-STR-06	P0 REV



ATTIC FLOOR LAYOUT & R.C. DETAILS
Scale 1:75

NOTES

1. Read this drawing in conjunction with relevant G.A., Services and Architectural drawings. Any discrepancy to be reported to the Engineer.
2. All dimensions are in millimetres unless specified otherwise.
3. All levels are indicated in m unless specified otherwise.
4. All structural concrete to be Class 25 (1:1.5:3) unless stated otherwise.
5. Minimum cover to all reinforcement to be:
 - Stairs, Slabs & Walls = 20mm
 - Beams (main bars) = 30mm
 - Columns (main bars) = 40mm
 - Foundations = 50mm
6. Maximum tolerance on concrete cover is +/- 5mm.
7. All high tensile (Y) and mild steel (R) bars to be in accordance with BS 4449 and fabric mesh to be made from cold worked steel bars in accordance with BS 4483.
8. Minimum laps to all bars to be 550 unless stated otherwise.
9. Nominal aggregate size to be 20mm.

REV	REVISIONS	SIGN	DATE	APPROVED
P3	BY CHECKED			
P2	BY CHECKED			
P1	BY CHECKED			
P0	BY CHECKED	JWW WWG	9/5/15	

Client

ELGEYO MARKWET COUNTY
P.O BOX 220-30700
ITEN

Project

PROPOSED RESIDENTIAL
DEVELOPMENT ON PLOT L.R NO.

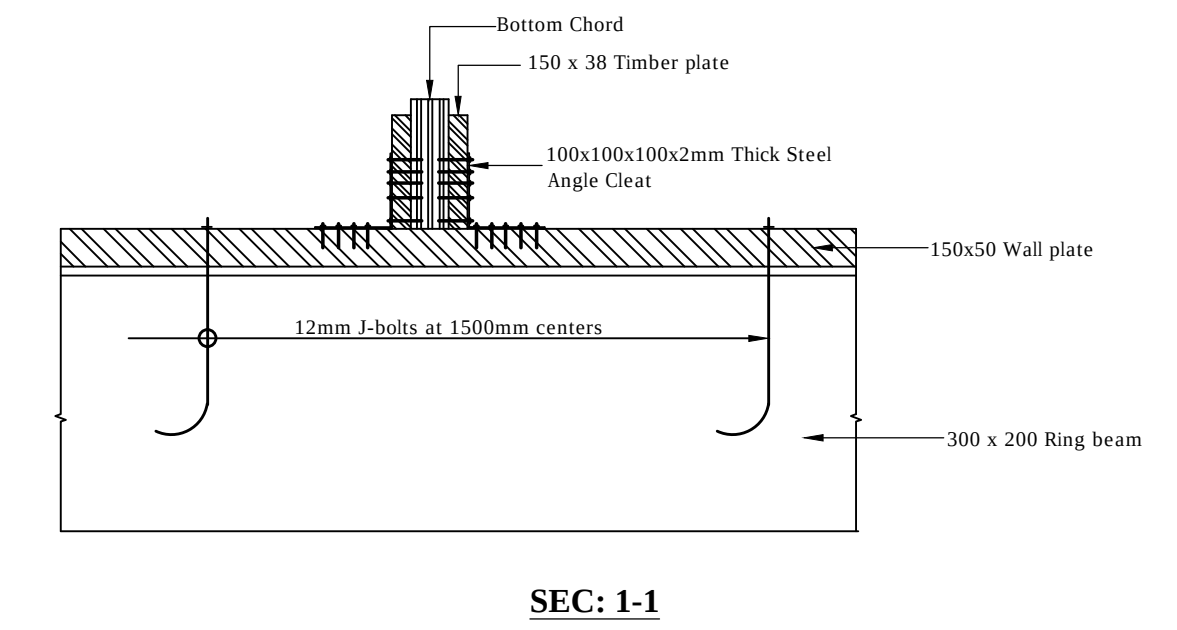
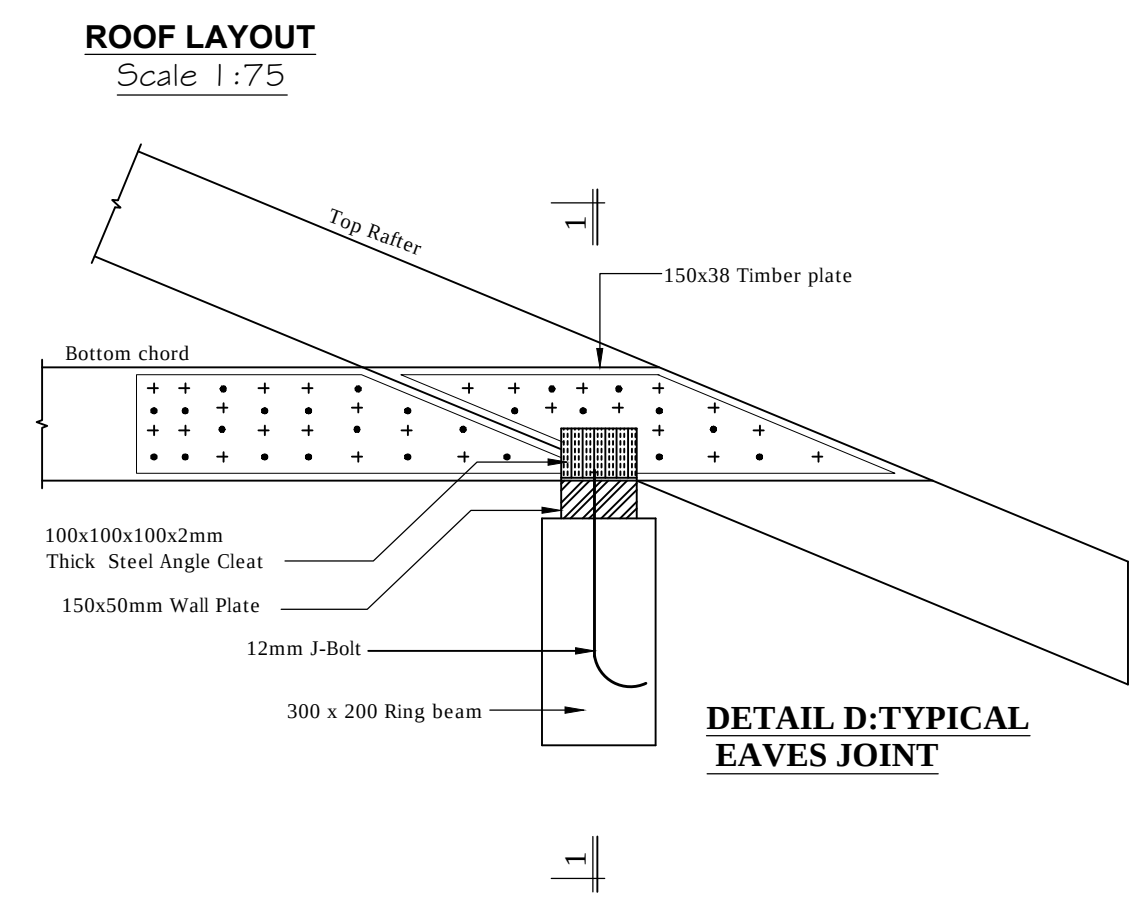
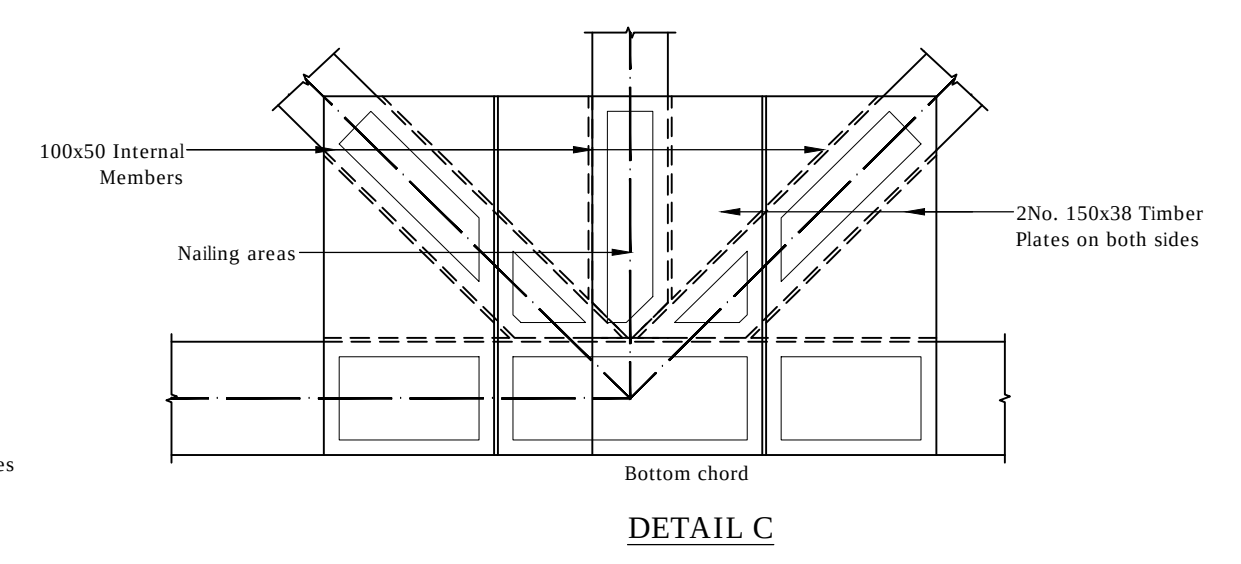
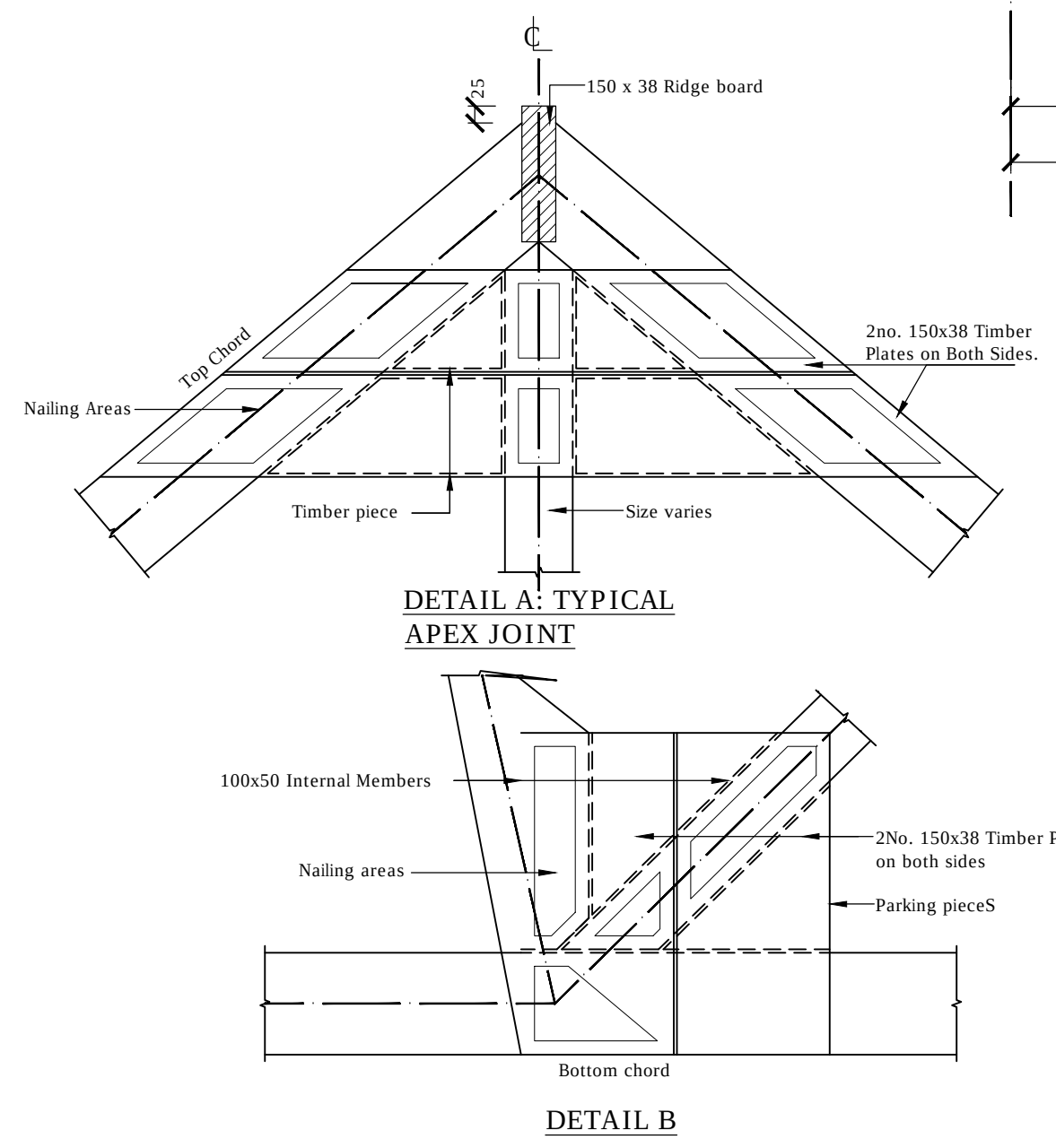
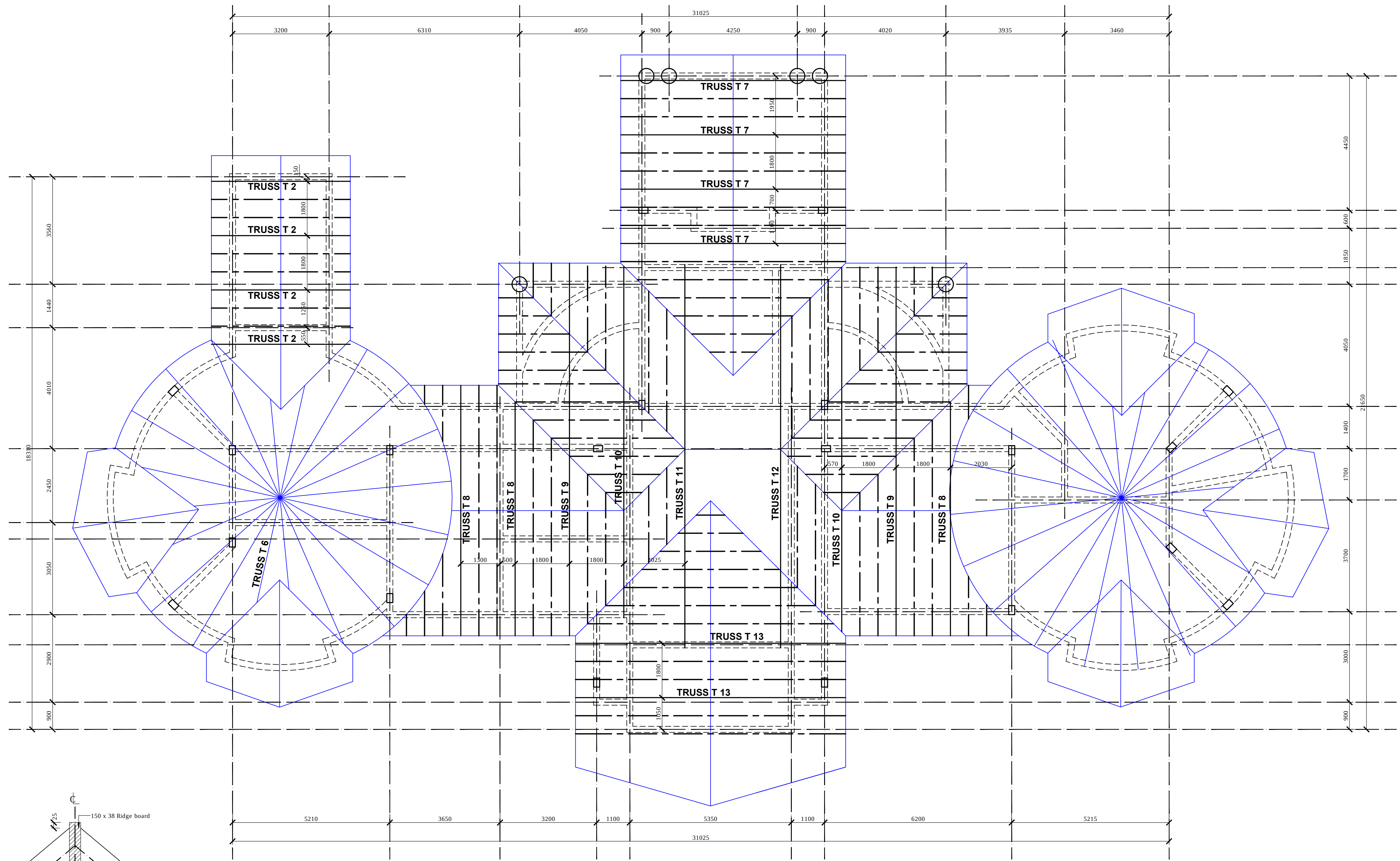
Drawing Title

ATTIC FLOOR LAYOUT
& R.C DETAILS



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Designed by	JWW	Drawn by	JWW
Checked by	WWG	Approved by	
Scales	AS SHOWN	Date	MAY 2015
Job No.	EDC_15-06	ACAD File	D:/structures
P STATUS	DRAWING No. EDC_15-06-STR-06	P0 REV	



ROOF LAYOUT
Scale 1:75

NOTES

- All dimensions are in mm unless otherwise stated.
- This drawing must be read in conjunction with Architectural drawings and any other relevant drawings.
- Only figured dimensions to be taken, no scaling is allowed.
- These trusses are intended for use with decra roofing tiles on 100x50mm timber purlins on trusses at Max. 2400mm c/c with 100x50 intermediate Rafters.
- All timber to be sawn cypress of GS grade, seasoned to less than 20% moisture content.
- All timber to be preservative treated.
- All J-bolts to be 12mm diameter black bolts and 3mm steel washers to be red-oxide (anti-rust) treated.
- Sample Timber Truss must be inspected and approved by the Structural Engineer before commencing fabrication.
- Roof pitch = 30°.

REV	REVISIONS	SIGN	DATE	APPROVED
P3	BY CHECKED			
P2	BY CHECKED			
P1	BY CHECKED			
P0	BY CHECKED	JWW WWG	9/5/15	

Client

ELGEYO MARKWET COUNTY
P.O BOX 220-30700
ITEN

Project

PROPOSED RESIDENTIAL
DEVELOPMENT ON PLOT L.R NO.

Drawing Title

ROOF LAYOUT & TIMBER
CONNECTION DETAILS

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Checked by	WWG	Approved by	
Scales	AS SHOWN	Date	MAY 2015
Job No.	EDC_15-06	ACAD File	D:/structures
P STATUS	DRAWING No. EDC_15-06-STR-08	P0 REV	

NOTES

1. All dimensions are in mm unless otherwise stated.
2. This drawing must be read in conjunction with Architectural drawings and any other relevant drawings.
3. Only figured dimensions to be taken, no scaling is allowed.
4. These trusses are intended for use with decra roofing tiles on 100x50mm timber purlins on trusses at Max. 2400mm c/c with 100x50 intermediate Rafters.
5. All timber to be sawn cypress of GS grade, seasoned to less than 20% moisture content.
6. All timber to be preservative treated.
8. All J-bolts to be 12mm diameter black bolts and 3mm steel washers to be red-oxide (anti-rust) treated.
9. Sample Timber Truss must be inspected and approved by the Structural Engineer before commencing fabrication.
10. Roof pitch = 30°.

REV	REVISIONS	SIGN	DATE	APPROVED
P3	BY			
	CHECKED			
P2	BY			
	CHECKED			
P1	BY			
	CHECKED			
P0	BY	JWW	9/5/15	
	CHECKED	WWG		

Client
ELGEYO MARKWET COUNTY
P.O BOX 220-30700
ITEN

Project
PROPOSED RESIDENTIAL
DEVELOPMENT ON PLOT L.R NO.

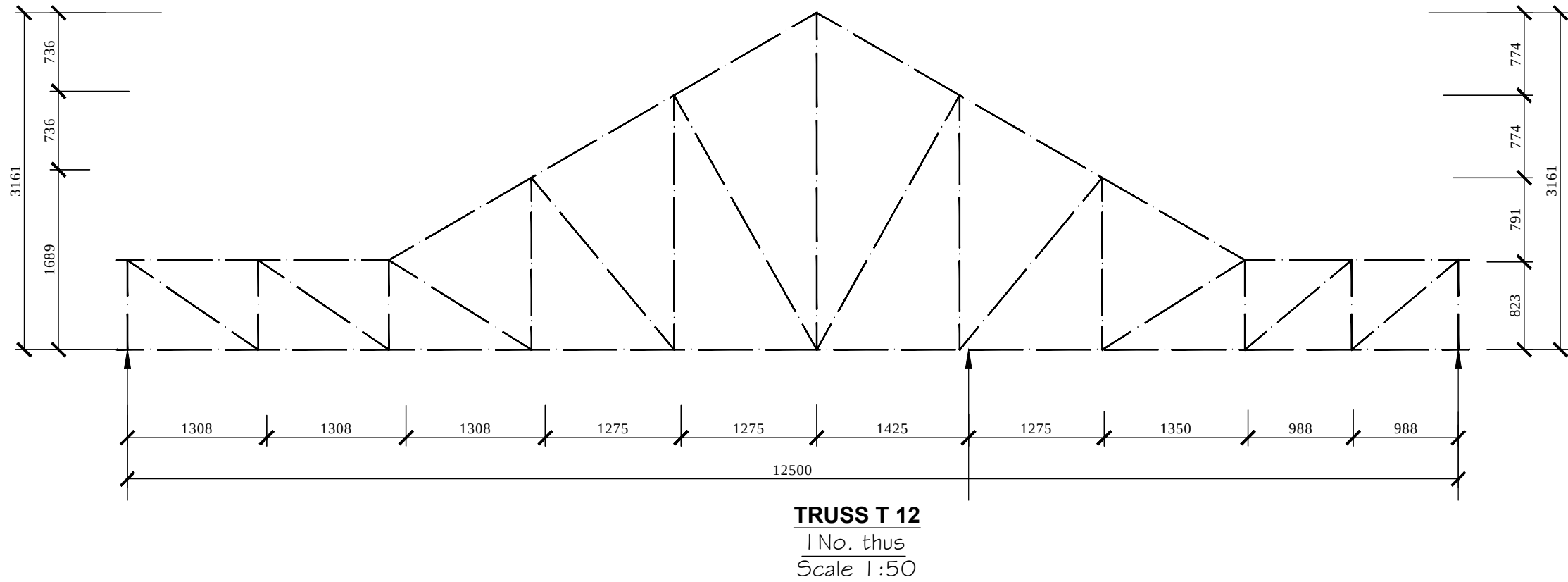
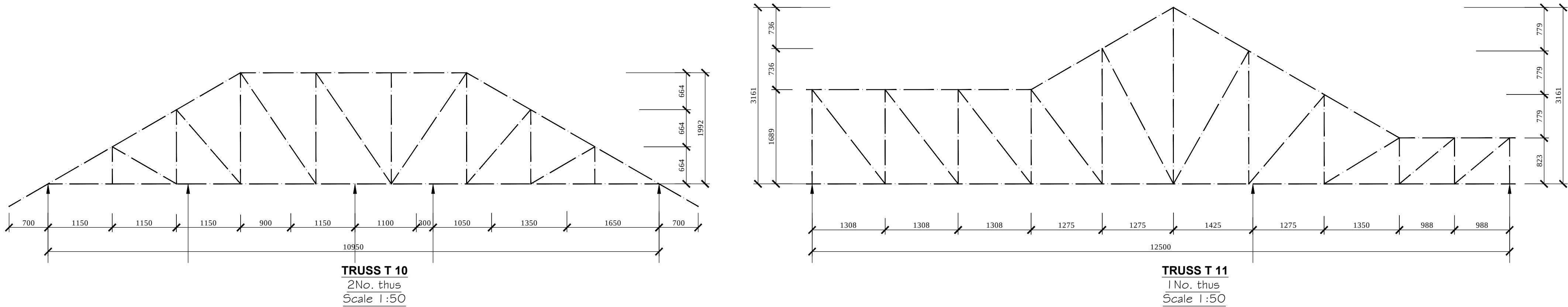
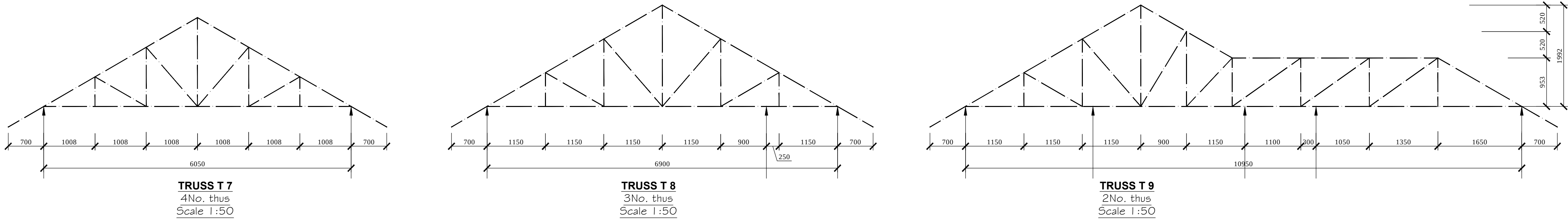
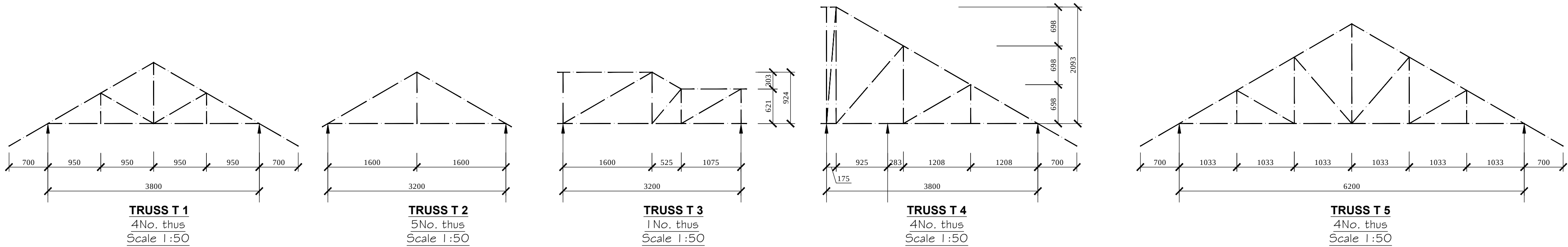
Drawing Title
TRUSS ELEVATIONS

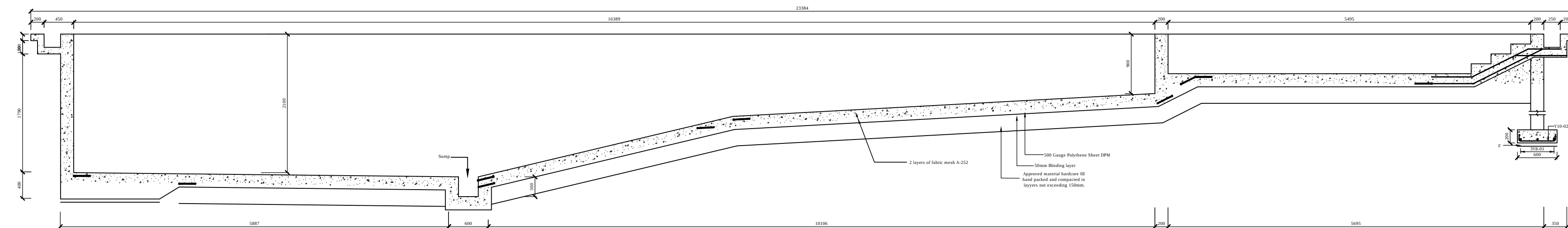
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Tel: +254 20-2066927
E-mail:-mail@ed-cons.com

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Checked by	wwg	Approved by	
Scales	AS SHOWN	Date	MAY 2015
Job No.	EDC_15-06	ACAD File	D:/structures
P STATUS	DRAWING No. EDC_15-06-STR-09	P0 REV	





Technical drawing of a reinforced concrete structure, likely a foundation or wall, showing dimensions and reinforcement details. The structure is L-shaped, with a vertical section on the left and a horizontal section extending to the right. The vertical section has a total height of 1790 mm, with a top section of 180 mm and a bottom section of 400 mm. The horizontal section has a total length of 5887 mm, with a section of 600 mm at the right end. The structure is reinforced with steel bars, including Y12-11-150, 10Y11-202-200 E, 7Y10-02-200 T2, and 8Y16-02-200 B2. The drawing also shows a cross-section of the structure at the right end, with a width of 300 mm.

Technical drawing of a stepped concrete structure. The drawing shows a cross-section of a wall or foundation with a stepped profile. The dimensions are indicated as follows: a horizontal step of 200 units, a vertical section of 900 units, and another vertical section of 600 units. The structure is shown in a perspective view, with a sloped base and a horizontal top surface. The drawing is labeled with 'a' and 'b' at the bottom, indicating different sections or materials.

SECTION C-C: SHALLOW END

Scale 1:25

Designed by	JWW	Drawn by	JWW
Checked by	WWG	Approved by	
Scales	AS SHOWN	Date	MAY 2015
Job No.	EDC_15-06	ACAD File	D:/structures
P STATUS	DRAWING No. EDC_15-06-STR-10		P0 REV