

SULIT



**KEMENTERIAN PENDIDIKAN TINGGI
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI**

**BAHAGIAN PEPERIKSAAN DAN PENILAIAN
JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI
KEMENTERIAN PENDIDIKAN TINGGI**

JABATAN KEJURUTERAAN AWAM

PEPERIKSAAN AKHIR

SESI II : 2024/2025

DCQ 20344 : QUANTIFICATION OF BUILDING WORKS 2

TARIKH : 19 MEI 2025

MASA : 8.30 PAGI – 10.30 PAGI (2 JAM)

Kertas ini mengandungi **ENAM (6)** halaman bercetak

Subjektif (4 soalan)

Dokumen sokongan yang disertakan : Kertas Dimensi,
Kertas Senarai Kuantiti “Billing Paper” & Jadual Pengukuran Besi “Bar
Bending Schedule”

JANGAN BUKA KERTAS SOALAN INI SEHINGGA DIARAHKAN

(CLO yang tertera hanya sebagai rujukan)

SULIT

Notes:**Nota-nota:**

1. Measurement work must be based on the principles stated in the Malaysia Standard of Measurement of Building Works 2nd Edition (SMM2).

Kerja-kerja pengukuran mestilah berasaskan prinsip-prinsip yang dinyatakan di dalam Standard Method of Measurement of Buildings Works 2nd Edition (SMM2).

2. Assumptions should be made if specifications or details are not provided or unclear. All assumptions must be clearly stated in the answer script.

Andaian hendaklah dibuat jika spesifikasi atau perincian tidak disediakan atau kurang jelas. Semua andaian mestilah dinyatakan dengan jelas di dalam skrip jawapan.

3. Marks will be given for the knowledge of the subject, clear and systematic setting of dimensions, adequacy and accuracy of description and dimensions.

Markah akan diberi untuk pengetahuan tentang subjek, tata atur yang sistematik, kecukupan dan ketepatan dimensi dan keterangan.

SECTION A: 100 MARKS**BAHAGIAN A: 100 MARKAH****INSTRUCTION:**

This section consists of **FOUR (4)** subjective questions. Answer **ALL** questions.

ARAHAN:

Bahagian ini mengandungi EMPAT (4) soalan subjektif. Jawab SEMUA soalan.

QUESTION 1**SOALAN 1**

- CLO1 (a) By referring to SMM2, explain the measuring guidelines for formwork on floor beam using SMM2.

Merujuk kepada SMM2, terangkan peraturan pengukuran bagi kerja acuan untuk rasuk lantai.

[7 marks]

[7 markah]

- CLO1 (b) Based on Drawing No. **DCQ20344/FRAME**, calculate the quantity measurement for concrete work in column (**C16 only**).

Berdasarkan Lukisan No. DCQ20344/FRAME, hitungkan pengukuran kuantiti untuk kerja konkrit dalam tiang (C16 sahaja).

[8 marks]

[8 markah]

- CLO1 (c) Conclude the measured quantities 1(b) as the bill of quantities.

Rumuskan kuantiti terukur bagi 1(b) sebagai senarai kuantiti.

[10 marks]

[10 markah]

QUESTION 2**SOALAN 2**

- CLO1 (a) By referring to SMM2, explain the measuring guidelines for formwork on slab soffit using SMM2.
Merujuk kepada SMM2, terangkan peraturan pengukuran bagi kerja acuan untuk lantai tampang bawah.
[7 marks]
[7 markah]
- CLO1 (b) Based on Drawing No. **DCQ20344/UPPERFLOOR**, calculate the quantity measurement for concrete work in gridlines **A1-C/5-6**.
*Berdasarkan Lukisan No. **DCQ20344/UPPERFLOOR**, hitungkan pengukuran kuantiti untuk kerja konkrit pada garis grid **A1-C/5-6**.*
[8 marks]
[8 markah]
- CLO1 (c) Conclude the measured quantities 2(b) as the bill of quantities.
Rumuskan kuantiti terukur bagi 2(b) sebagai senarai kuantiti.
[10 marks]
[10 markah]

QUESTION 3**SOALAN 3**

- CLO1 (a) By referring to SMM2, explain the clauses **F.10.1b** and **F.12** for staircase construction.
Merujuk kepada SMM2, terangkan klausa F.10.1b dan F.12 untuk pembinaan tangga.
- [7 marks]
[7 markah]
- CLO1 (b) Based on Drawing No. **DCQ20344/STAIRCASE**, calculate quantity measurement for concrete work in staircase.
Berdasarkan Lukisan No. DCQ20344/STAIRCASE, hitungkan pengukuran kuantiti bagi kerja konkrit dalam tangga.
- [8 marks]
[8 markah]
- CLO1 (c) Based on Drawing No. **DCQ20344/ROOF**, calculate quantity measurement for wall plate in roof construction.
Berdasarkan Lukisan No. DCQ20344/ROOF, hitungkan pengukuran kuantiti bagi plat dinding dalam pembinaan bumbung.
- [10 marks]
[10 markah]

QUESTION 4**SOALAN 4**

- CLO1 (a) By referring to SMM2, explain the clauses **G.1.1** and **G.3.3a** for brickwork.
*Merujuk kepada SMM2, terangkan klausa **G.1.1** dan **G.3.3a** untuk kerja bata.*
[7 marks]
[7 markah]
- CLO1 (b) Based on Drawing No. **DCQ20344/WALL**, calculate the quantity measurement for a 113mm thick brick wall.
*Berdasarkan Lukisan No. **DCQ20344/WALL**, hitungkan pengukuran kuantiti bagi 113mm tebal dinding.*
[8 marks]
[8 markah]
- CLO1 (c) Based on Drawing No. **DCQ20344/DOOR**, calculate the quantity measurement for the door lintel.
*Berdasarkan Lukisan No. **DCQ20344/DOOR**, hitungkan pengukuran kuantiti untuk lintol pintu.*
[10 marks]
[10 markah]

SOALAN TAMAT

PROJECT TITLE:

Bangunan Kediaman 2 tingkat di Lot 1234,
Mukim Batu.

NOTES:

YOU CAN MAKE ALL THE NECESSARY
AND REASONABLE ASSUMPTIONS
WHERE APPLICABLE.

SCALE:

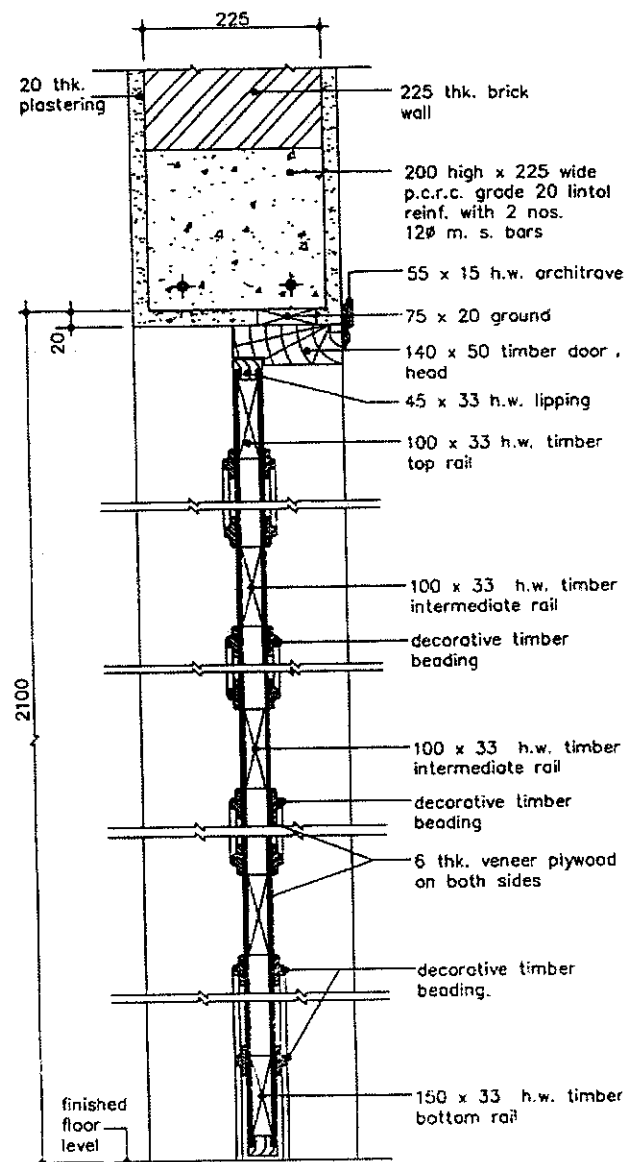
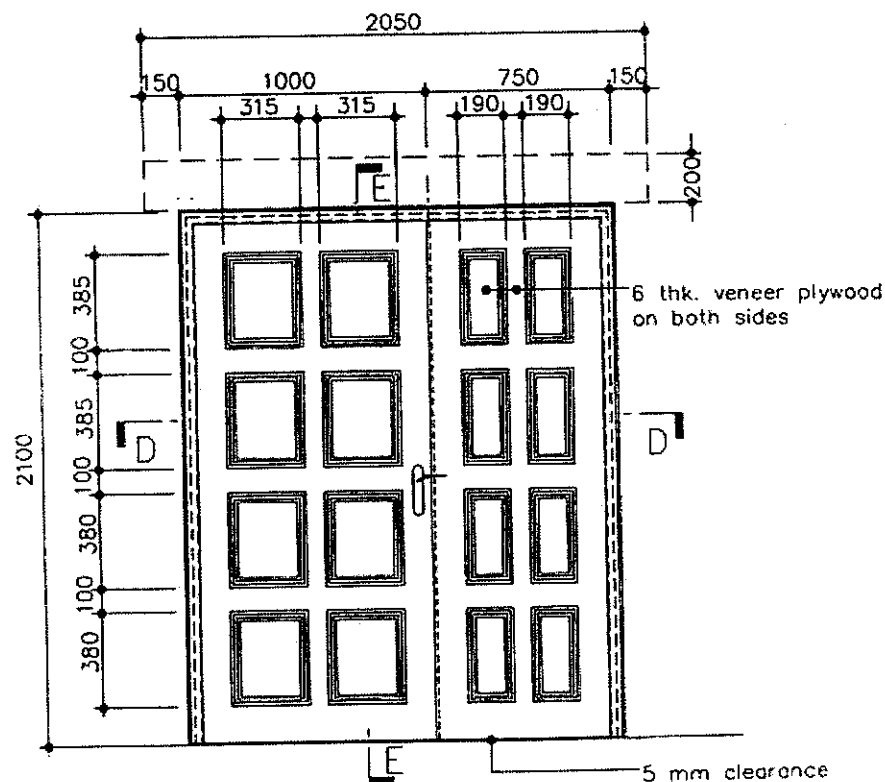
NOT TO SCALE

DRAWING TITLE:

Elevation of D1
Section E-E

DRAWING NUM:

DCQ20344/DOOR



PROJECT TITLE:

Rumah Banglo 2 Tingkat di Lot 1234,
Mukim Pasir.

NOTES:

- 1) All concrete shall be in Grade 30
- 2) Concrete cover for reinforcement is 25mm
- 3) Column Height = 3500mm

YOU CAN MAKE ALL THE NECESSARY
AND REASONABLE ASSUMPTIONS
WHERE APPLICABLE.

SCALE:

NOT TO SCALE

DRAWING TITLE:

Column Reinforcement Schedule

DRAWING NUM:

DCQ20344/FRAME

COLUMN MARK		C1(B2/4) C3(E/4) C4(B2/5) C5(E/5) C10(B4/5B) C11(E/5B) C14(E/6)	C2(B/4) C7(B4/5)	C5(C/5) C6(B2/5) C9(B2/5B) C13(B2/6)	C12(C/6)	C20(A/1A1) C25(A/3A)	C30(B/4)	C39(C/4X)	C18(C/1)	OTHERS
FLOOR										
Floor RB-RB										
	MAIN BAR	6T12	6T12	6T12	6T12					
	TIES	R8-125	R8-125	R8-125	R8-125					
	COL. SIZE	125 X 300	125 X 300	125 X 300	300 X 125					
Floor GB-RB										
	MAIN BAR	6T12	6T12		6T12	6T12	12T12		8T12	6T12
	TIES	R8-125	R8-125		R8-125	R8-125	3R8-125		2R8-125	R8-125
	COL. SIZE	125 X 300	300 X 125		125 X 300	300 X 300	750 X 125		425 X 125	300 X 125
Slump										
	MAIN BAR	6T12	6T12		6T12	6T12	12T12	6T12	8T12	6T12
	TIES	R8-125	R8-125		R8-125	R8-125	3R8-125	R8-125	2R8-125	R8-125
	COL. SIZE	125 X 300	300 X 125		125 X 300	300 X 300	750 X 125	125 X 300	425 X 125	300 X 125

COLUMN REINFORCEMENT SCHEDULE

PROJECT TITLE:

Rumah Banglo 2 Tingkat di Lot 1234,
Mukim Pasir.

NOTES:

YOU CAN MAKE ALL THE NECESSARY
AND REASONABLE ASSUMPTIONS
WHERE APPLICABLE.

SCALE:

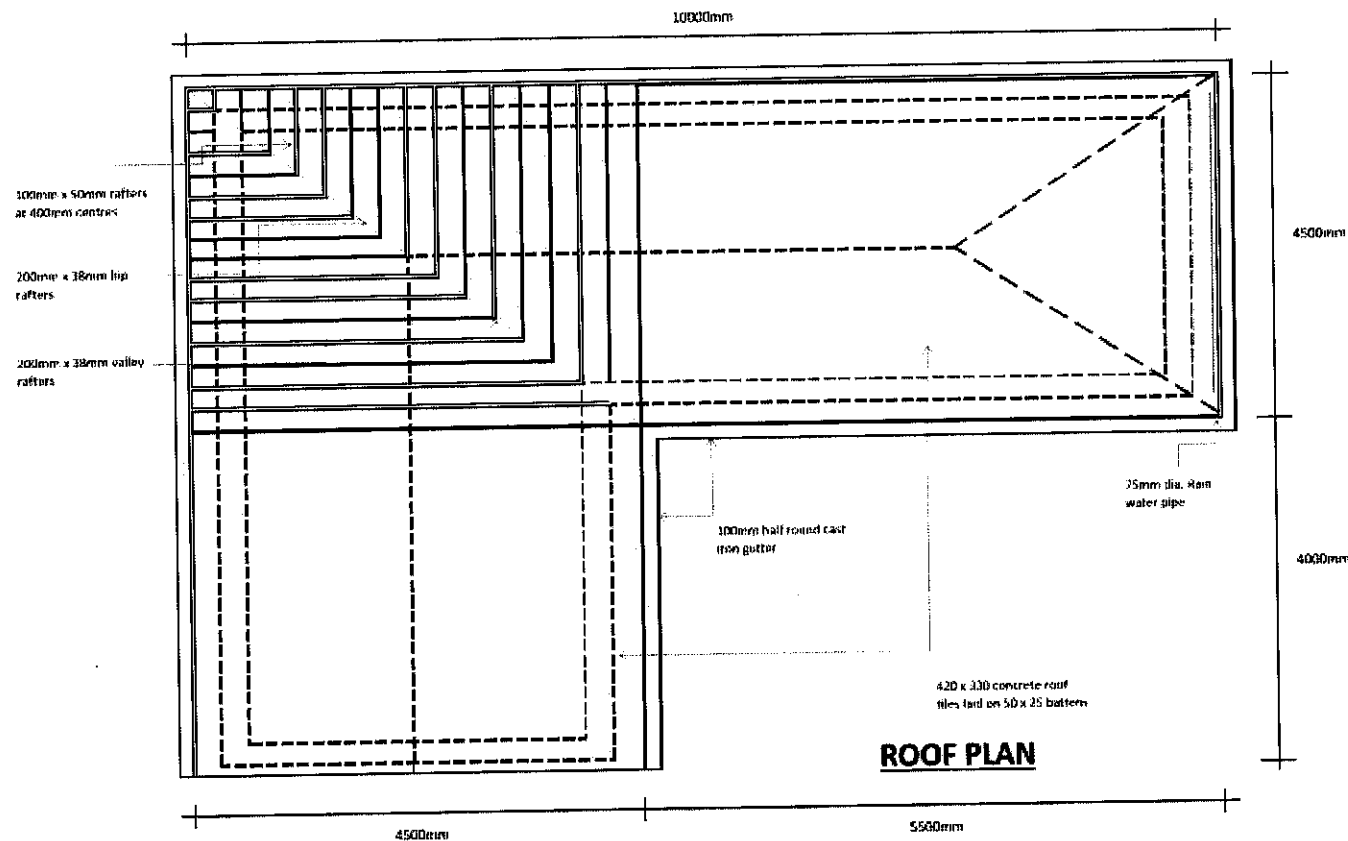
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DRAWING TITLE:

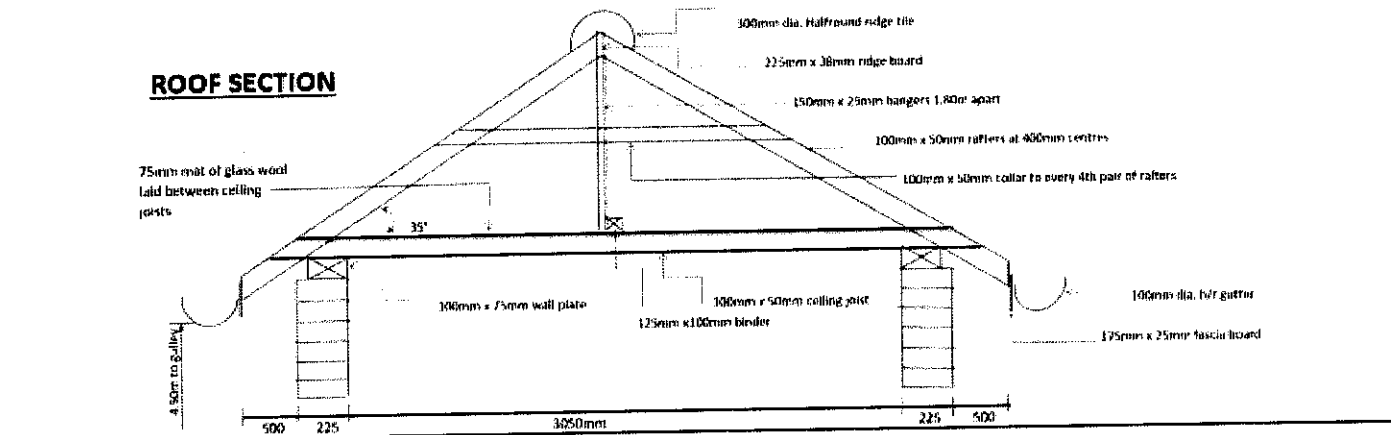
Roof Plan
Roof Section

DRAWING NUM:

DCQ20344/ROOF



ROOF SECTION



PROJECT TITLE:

Rumah Banglo 2 Tingkat di Lot 1234,
Mukim Pasir.

NOTES:

- 1) All concrete shall be in Grade 30.
- 2) Tread = 180mm
- 3) Riser = 150mm

YOU CAN MAKE ALL THE NECESSARY
AND REASONABLE ASSUMPTIONS
WHERE APPLICABLE.

SCALE:

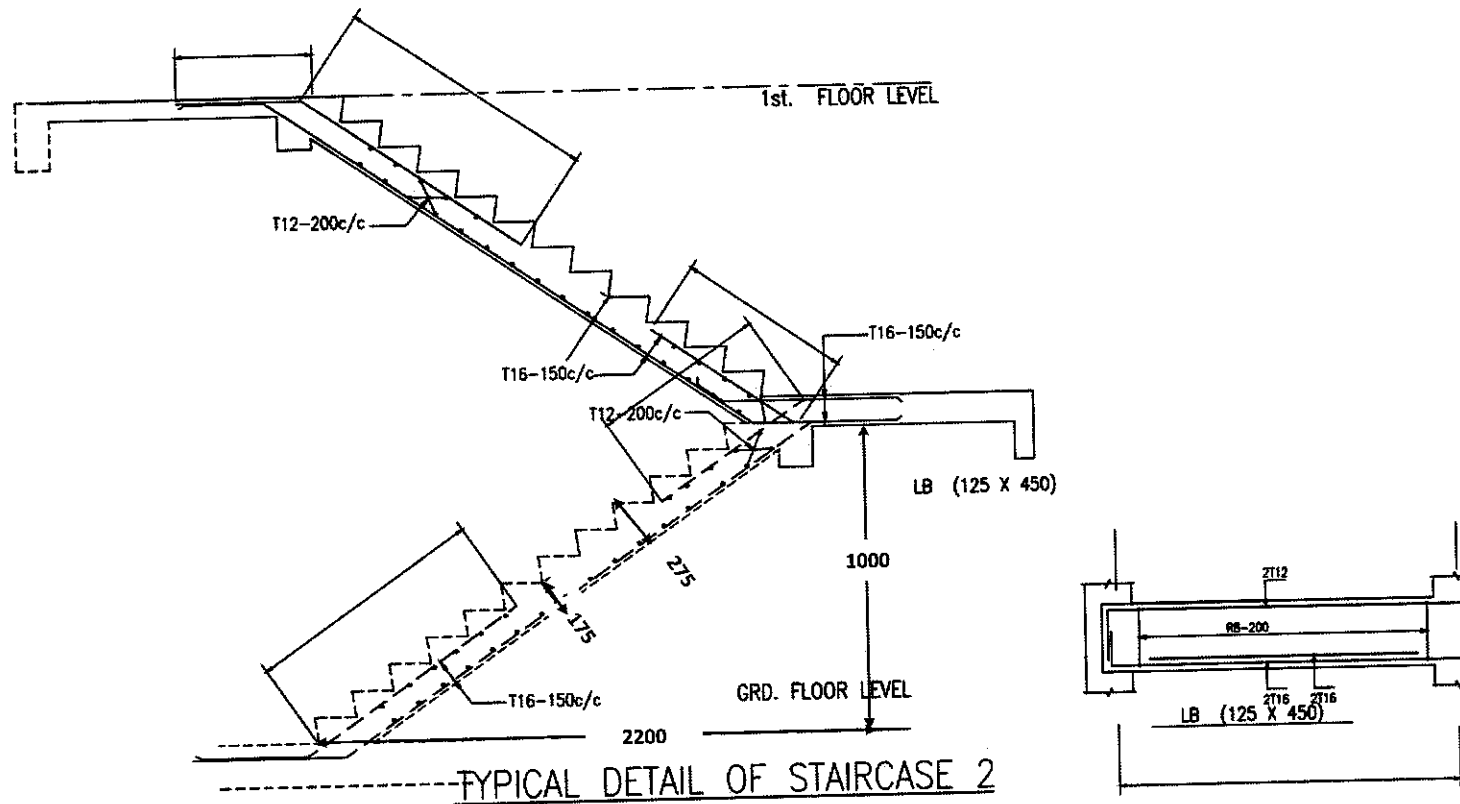
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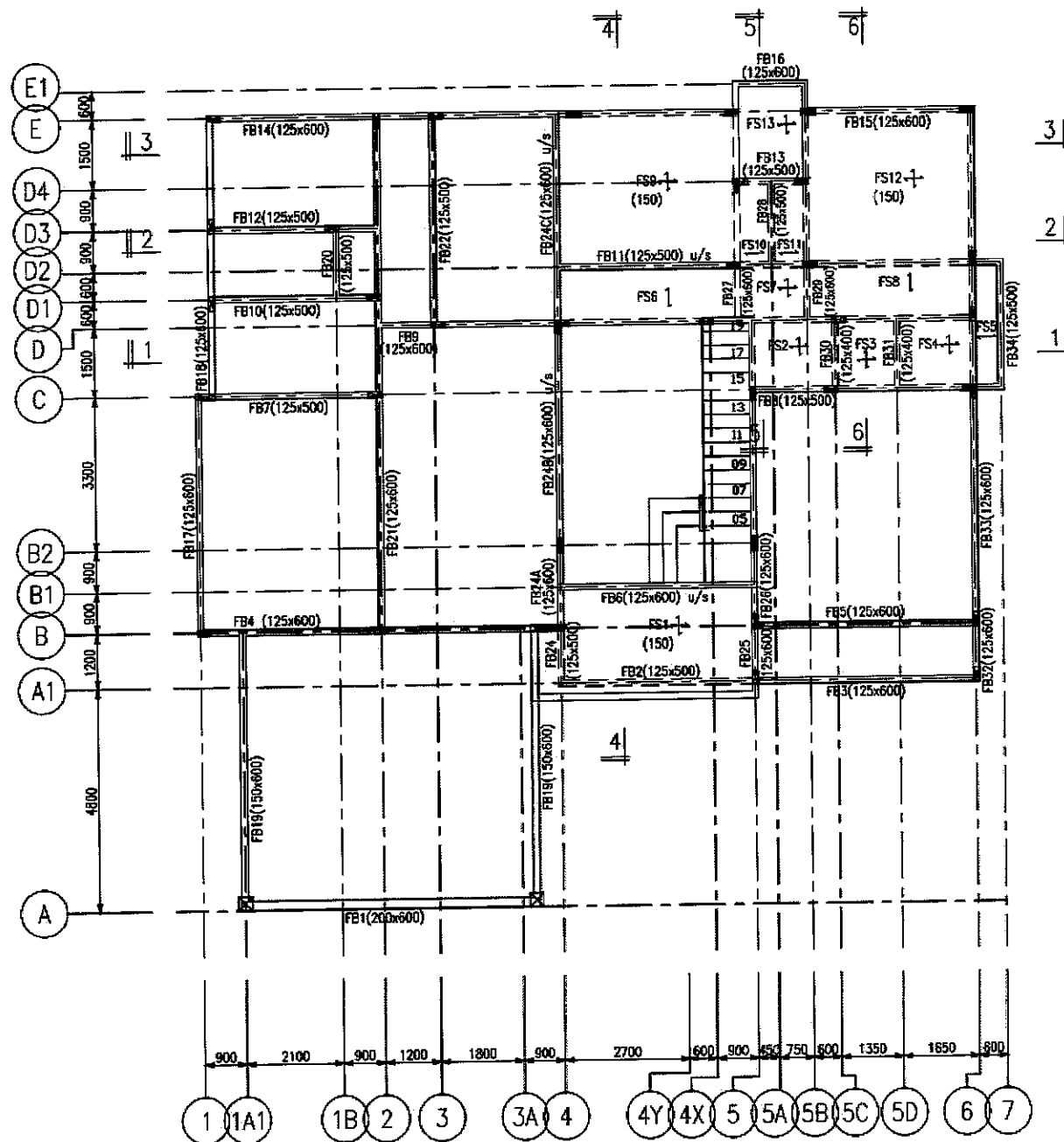
DRAWING TITLE:

Typical Detail of Staircase 2

DRAWING NUM:

DCQ20344/STAIRCASE





PROJECT TITLE:

Rumah Banglo 2 Tingkat di Lot 1234,
Mukim Pasir.

NOTES:

- 1) All concrete shall be in Grade 30.
- 2) All slab thickness is 125mm.

YOU CAN MAKE ALL THE NECESSARY
AND REASONABLE ASSUMPTIONS
WHERE APPLICABLE.

SCALE:

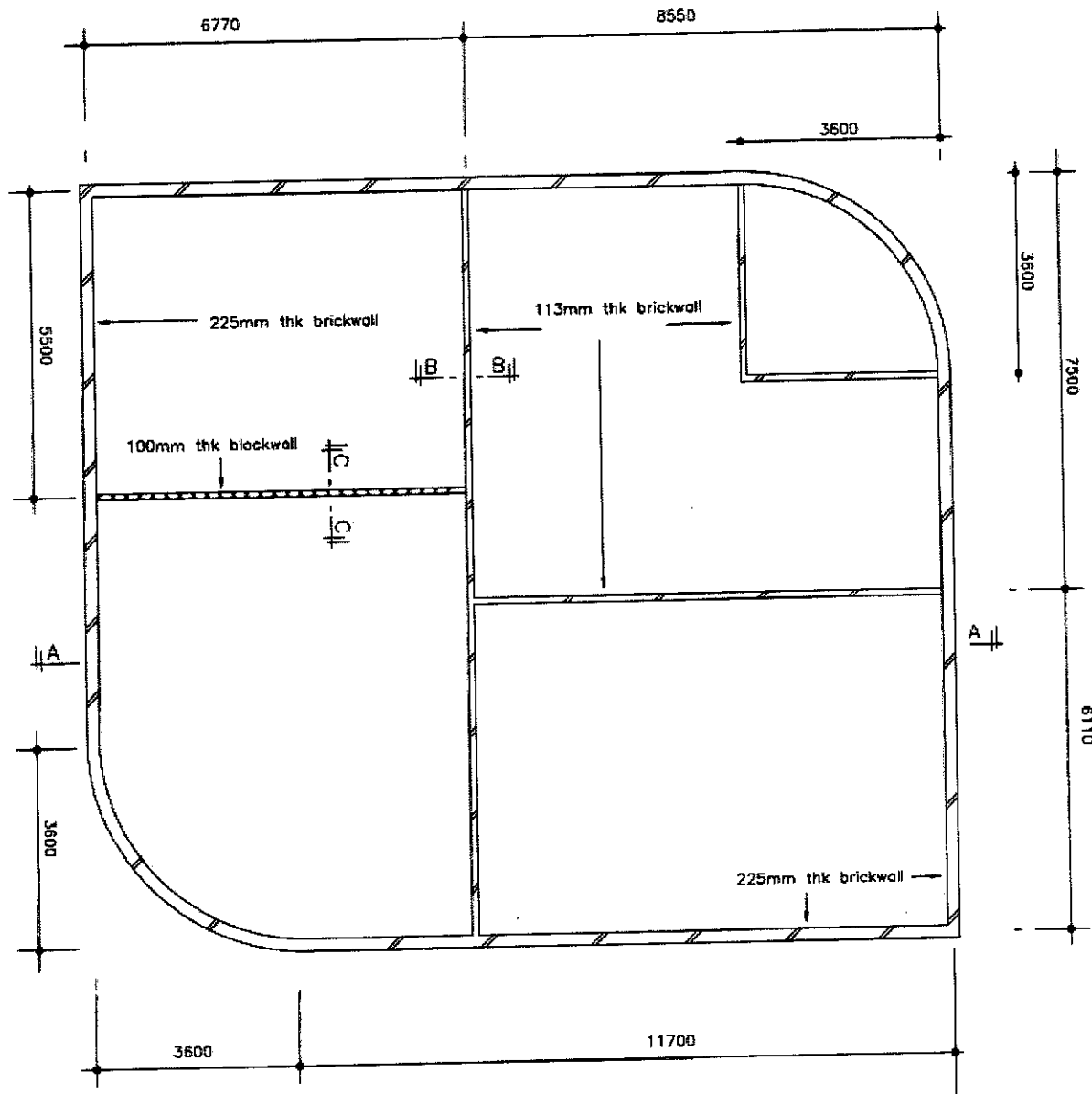
NOT TO SCALE

DRAWING TITLE:

First Floor Plan

DRAWING NUM:

DCQ20344/UPPERFLOOR



PROJECT TITLE:

Bangunan Komersial di Lot 1234, Mukim Batu.

NOTES:

- 1) All brick shall be in ordinary clay bricks.
- 2) Building height = 3560mm

YOU CAN MAKE ALL THE NECESSARY AND REASONABLE ASSUMPTIONS WHERE APPLICABLE.

SCALE:

NOT TO SCALE

DRAWING TITLE:

Floor Plan

DRAWING NUM:

DCQ20344/WALL