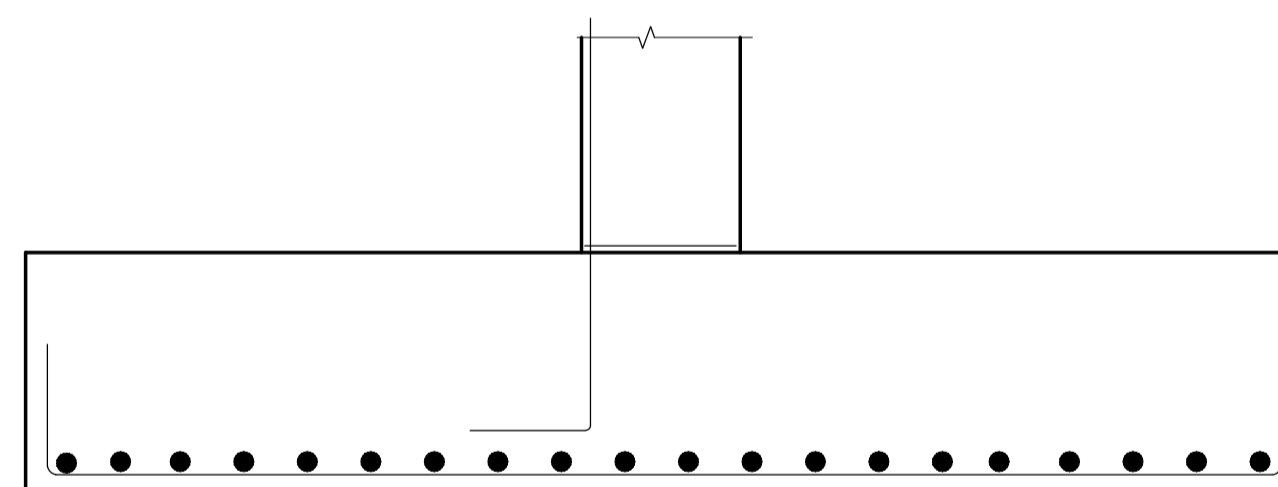
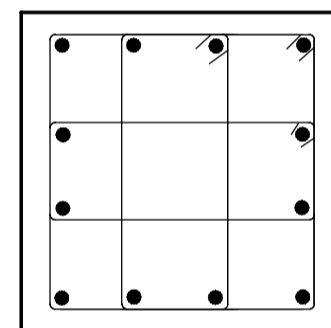
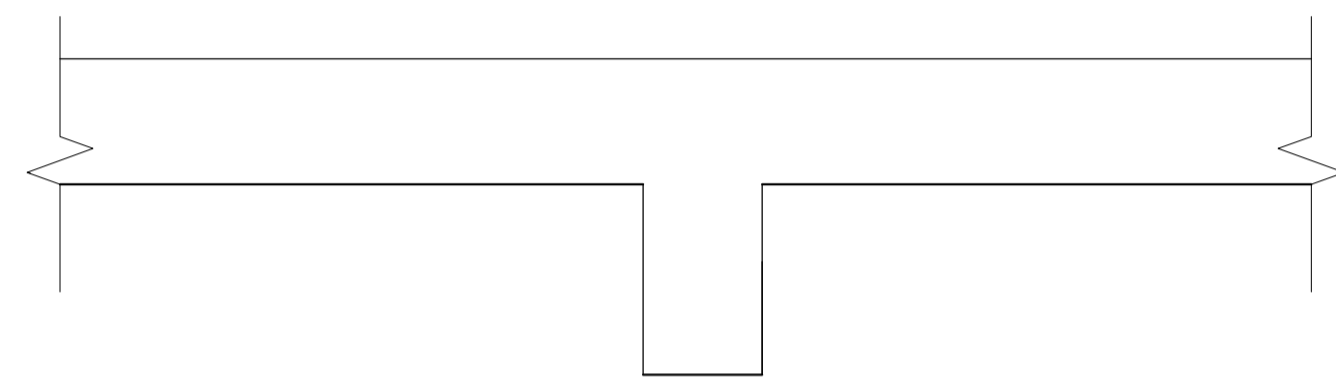
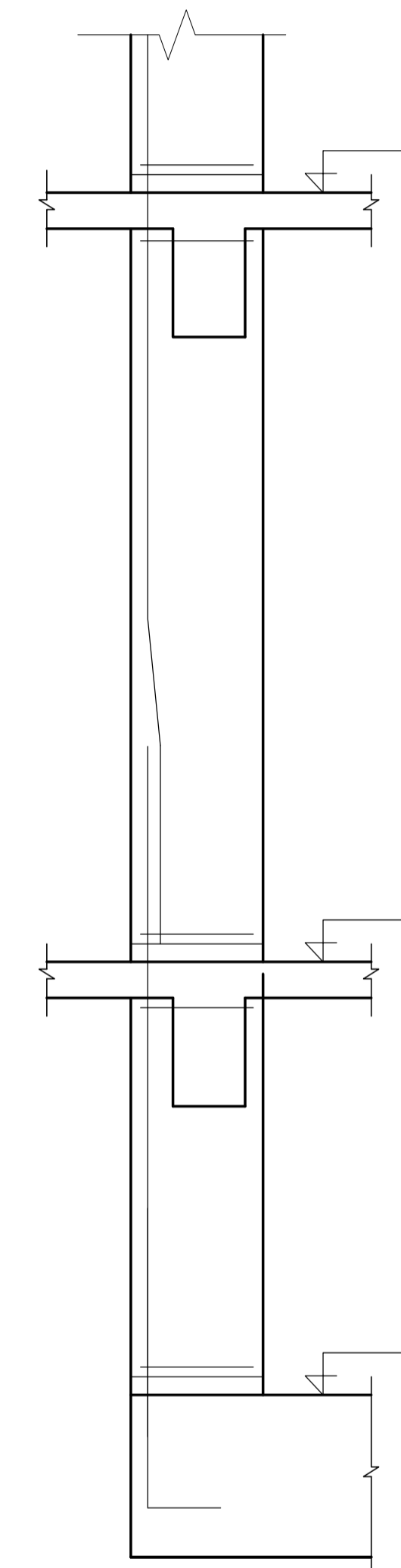


# PROPOSED HOUSING SCHEME ON PLOT LR NO. KAJIADO/KITENGELA/6242 IN KITENGELA, KAJIADO COUNTY

## TYPE 1A STRUCTURAL DRAWINGS



SHAPE CODE	METHOD OF MEASUREMENT OF BENDING DIMENSIONS	TOTAL LENGTH OF BAR ALONG CENTER LINE	DIMENSIONS TO BE GIVEN IN SCHEDULE
20		A	STRAIGHT
32		A + h	
33		A + 2h	
34		A + n	
35		A + 2n	
37		A+B-0.5R-d	

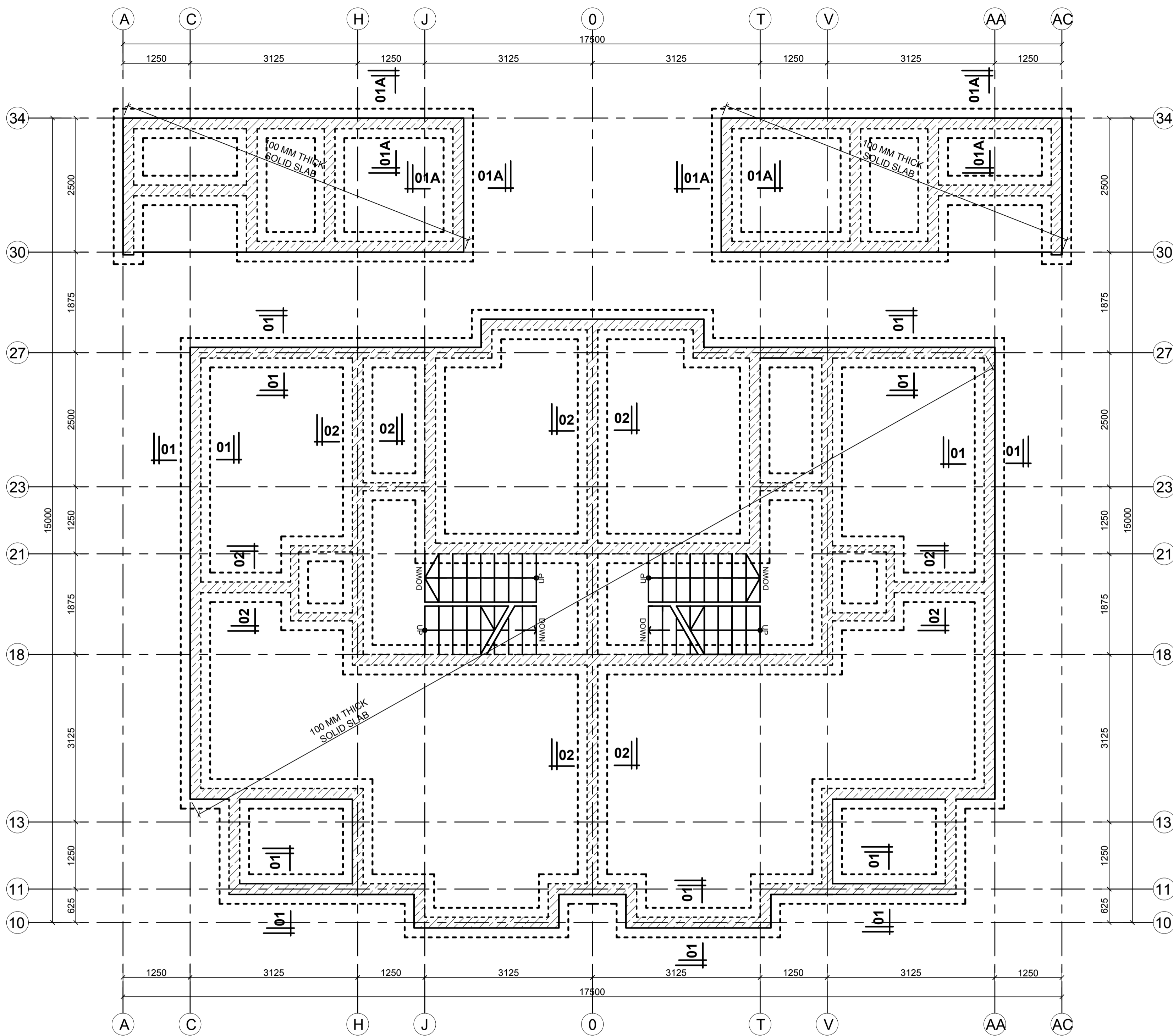


NOVEMBER 2022

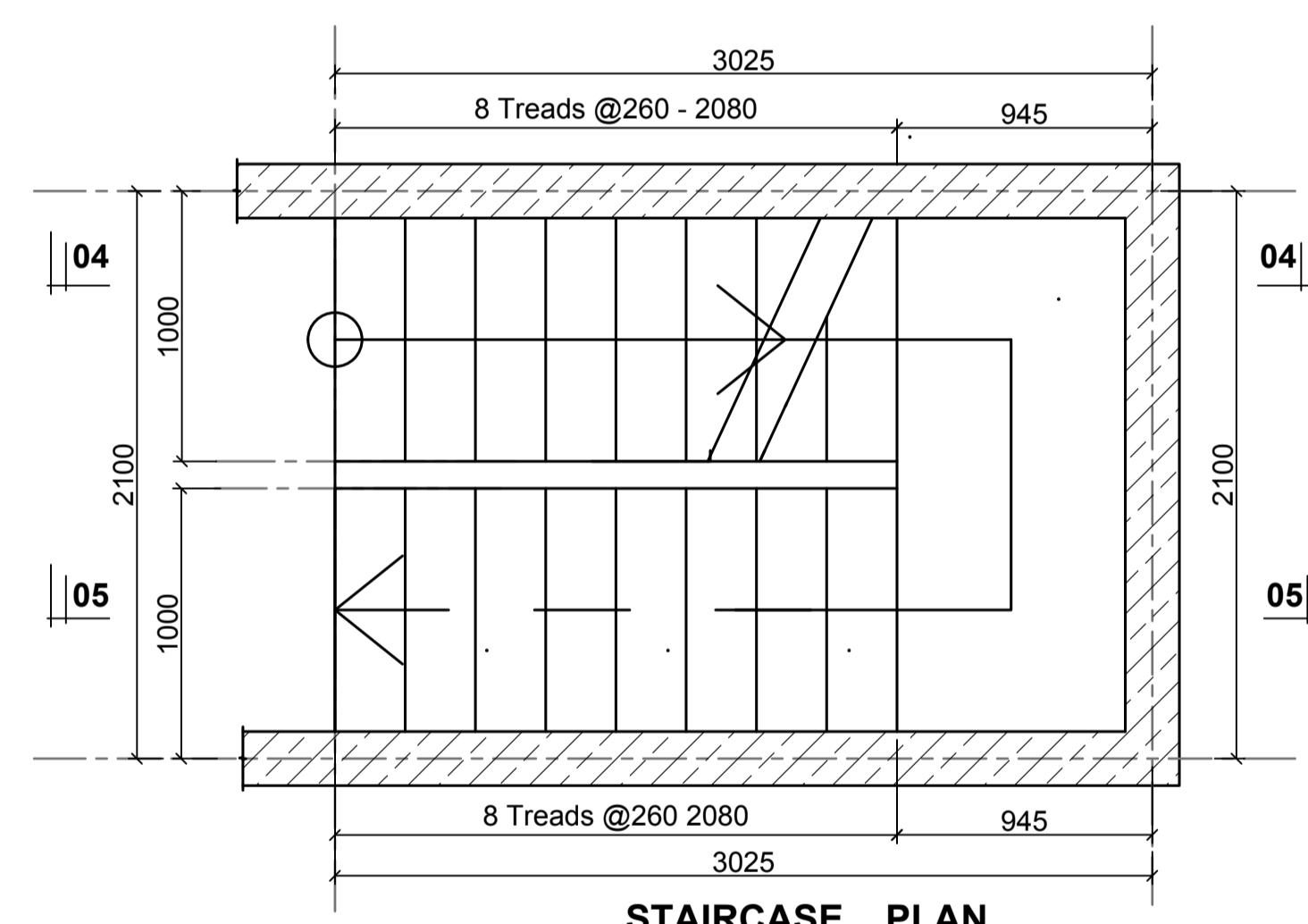
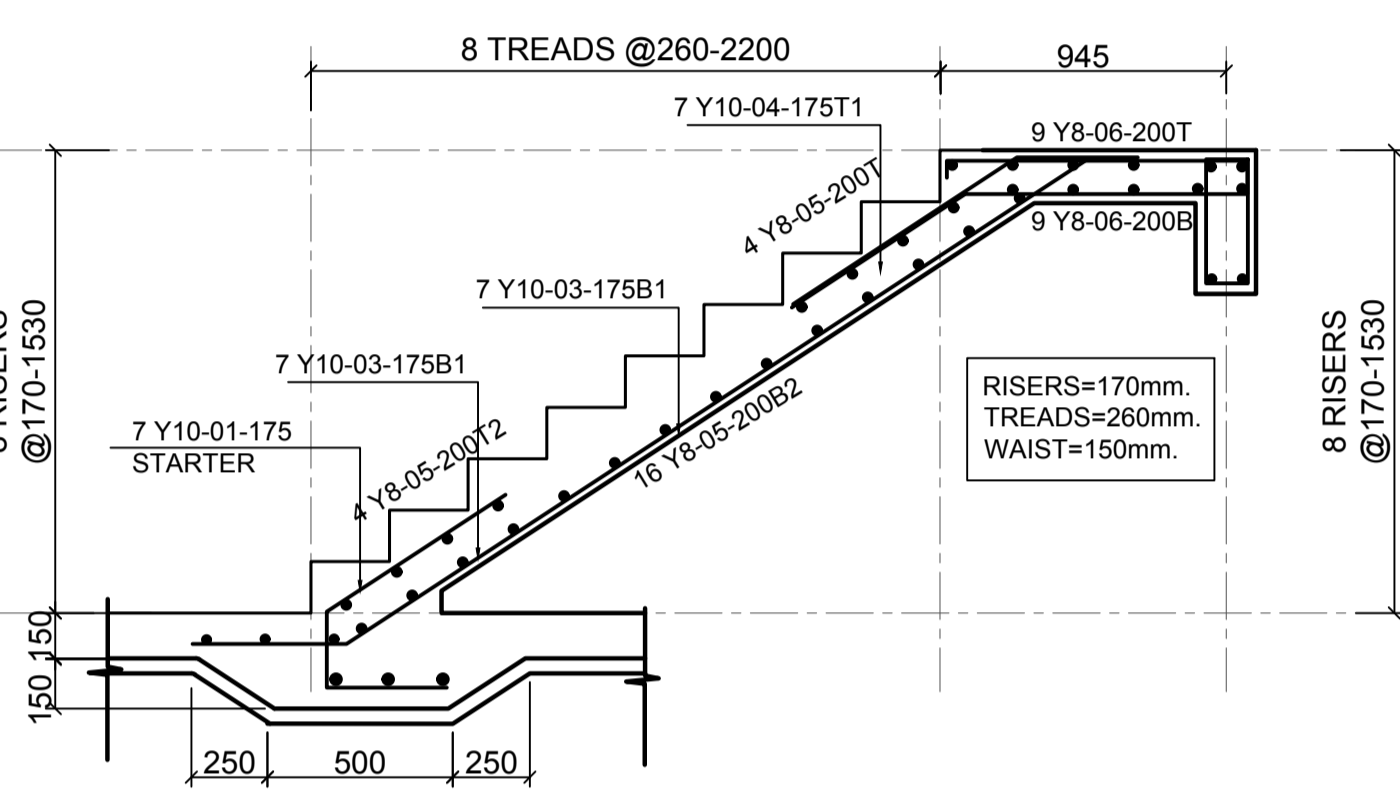
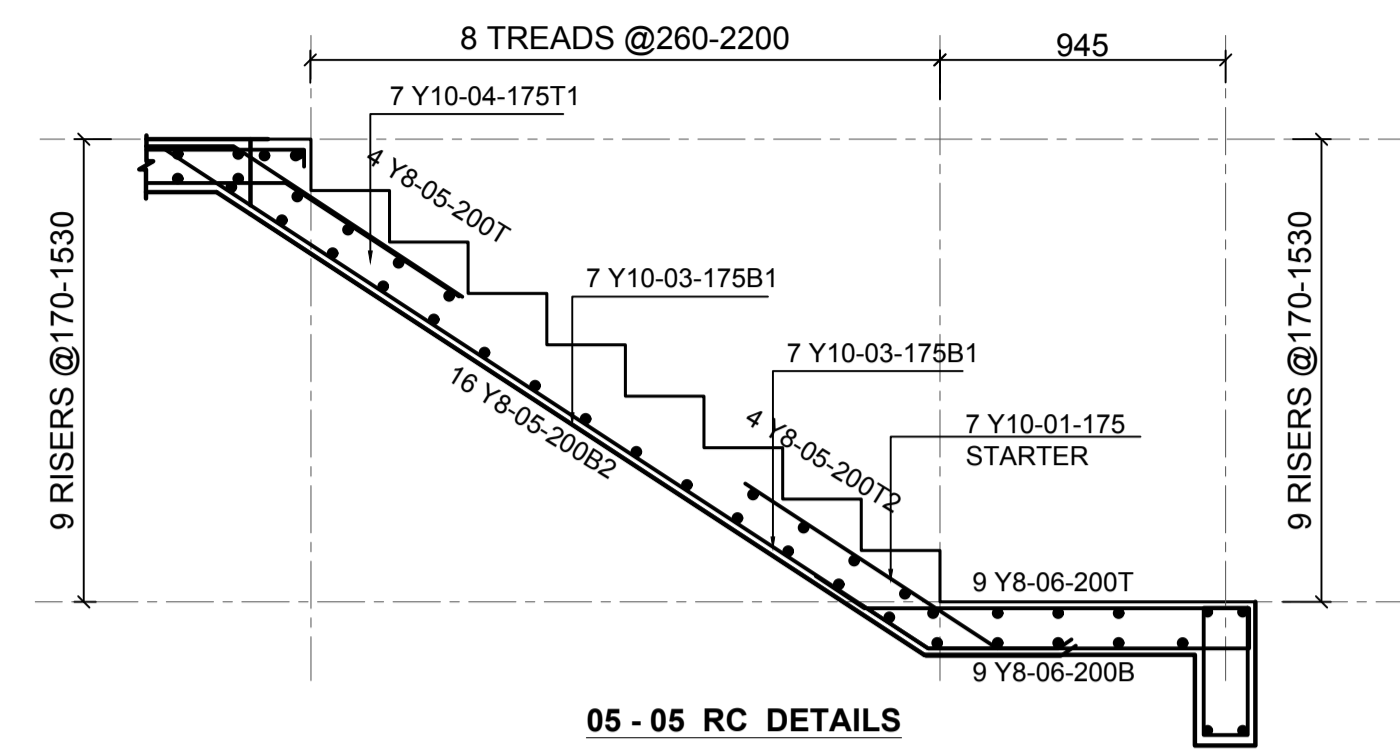
CIVIL AND STRUCTURAL ENGINEERS  
EPOCH CONSULTING  
ENGINEERS  
P.O.BOX 75193-00200,  
NAIROBI.

PROJECT ARCHITECTS  
HABITECH CONSULTANTS  
ARCHITECTS&PLANNERS  
P.O.BOX 66495,  
NAIROBI.

CLIENT:  
KENYATTA NATIONAL HOSPITAL  
STAFF RETIREMENT BENEFITS  
SCHEME(2011)  
P.O BOX 20723-00202  
NAIROBI



**FOUNDATION AND GROUND FLOOR LAYOUT  
GENERAL ARRANGEMENT-100 mm THK SLAB  
SCALE:1:50**



**STAIRCASE PLAN  
2 Nos**

- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER
  7. Y = RIBBED BARS TO BS 4461.
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.  
**EPOCH CONSULTING ENGINEERS**  
Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

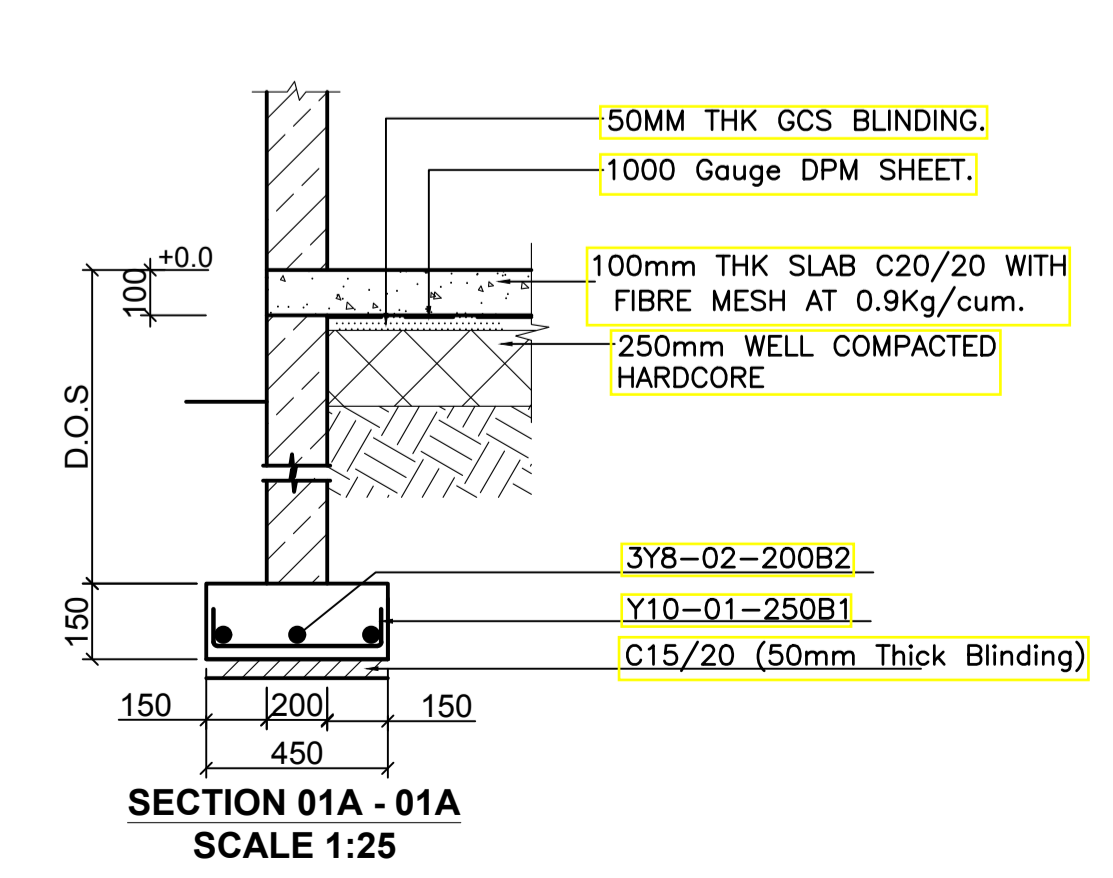
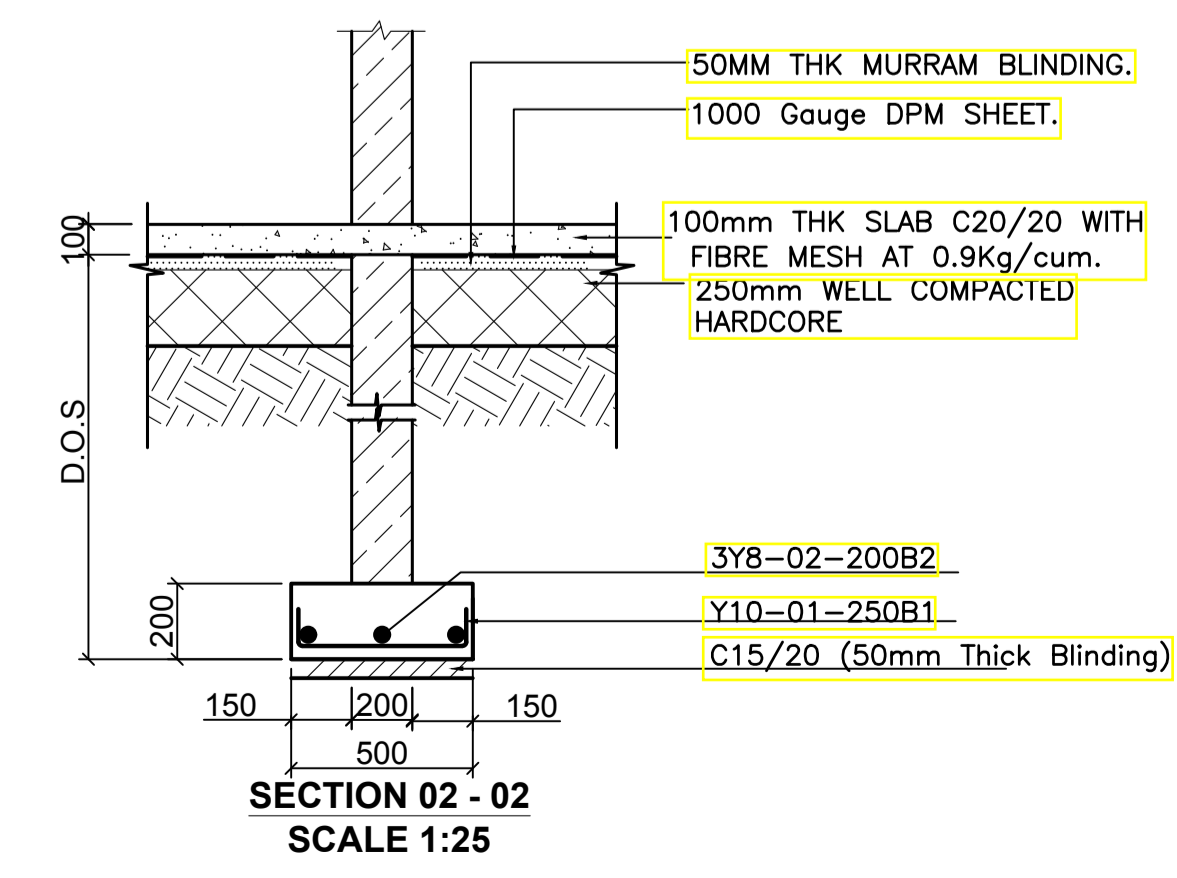
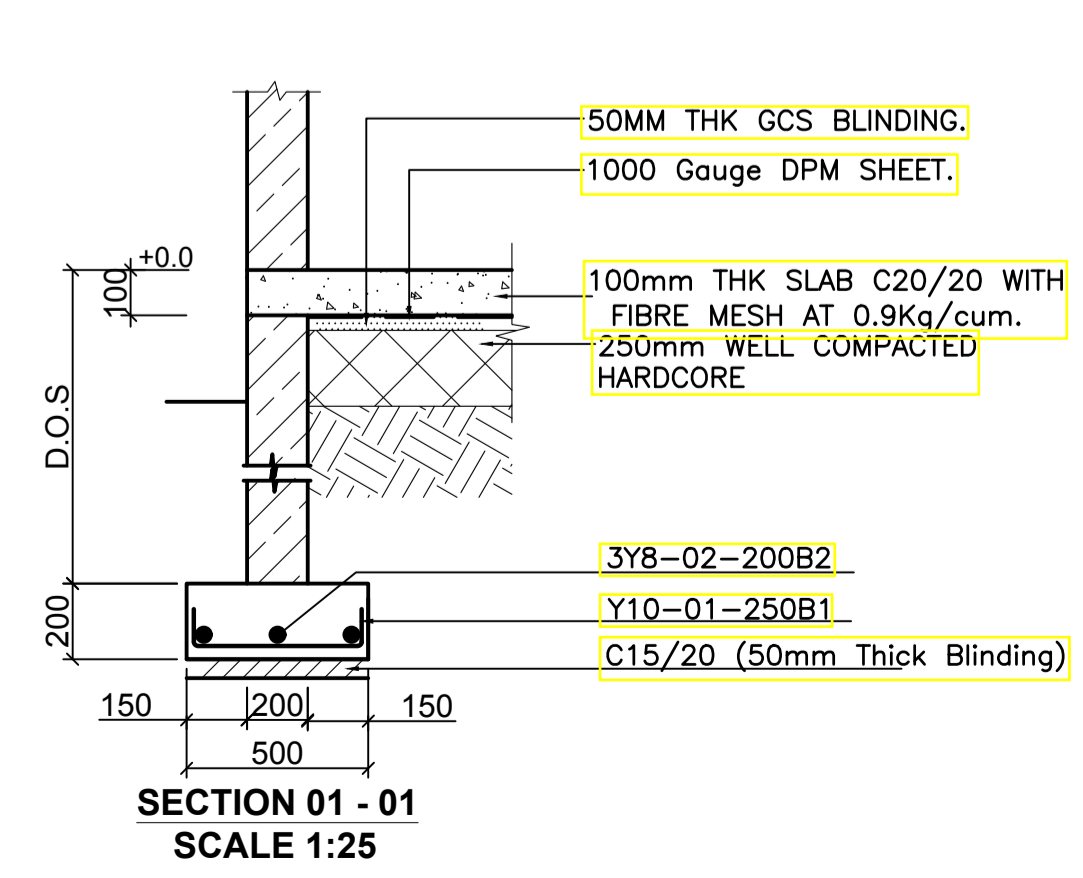
**CLIENT:**  
Kenya National Hospital Staff Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

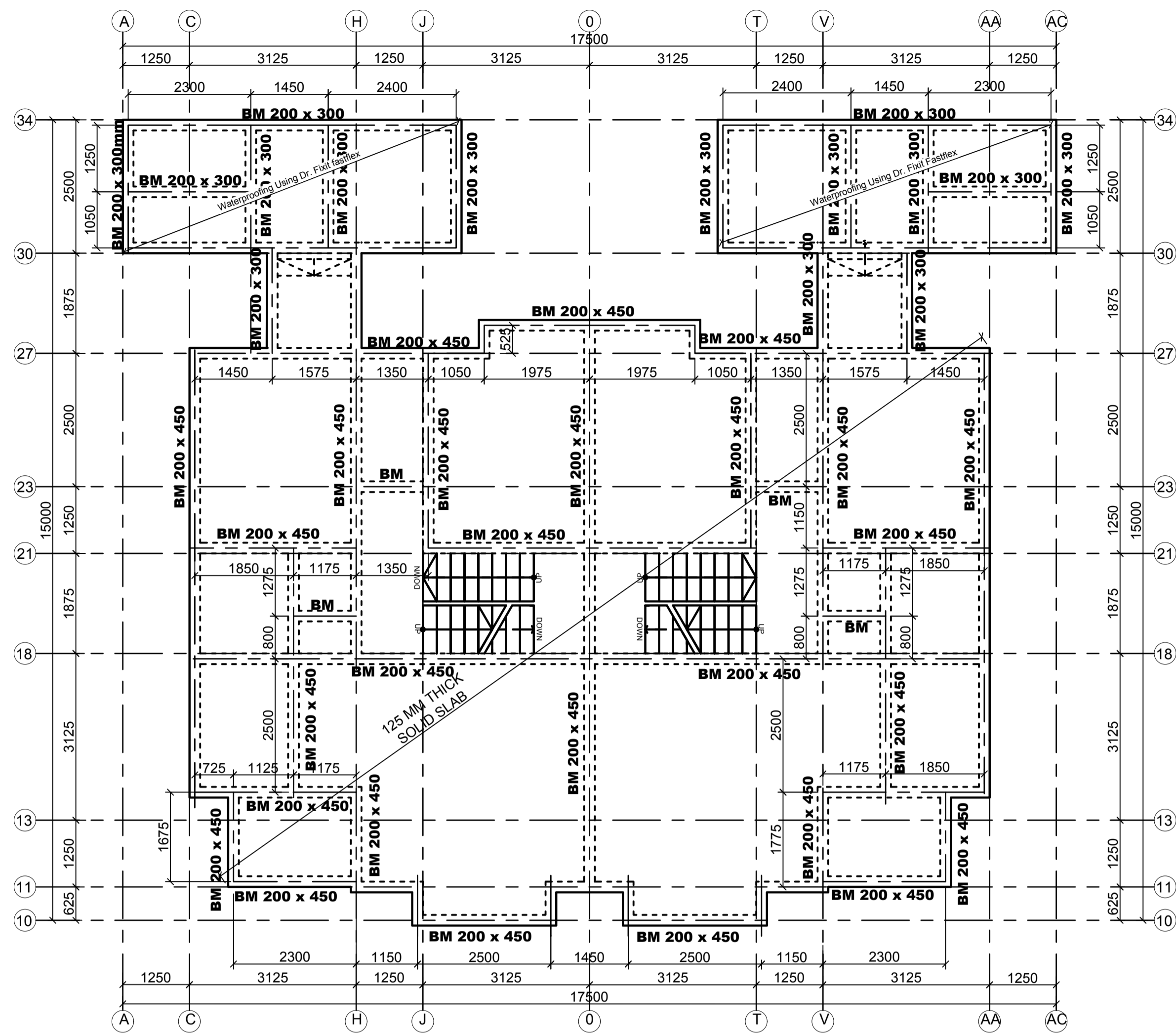
**ZONE:**  
Kajiado County

**PROJECT:**  
Proposed Housing Scheme on Plot LR NO. Kajiado/Kitengela/6242 in Kitengela

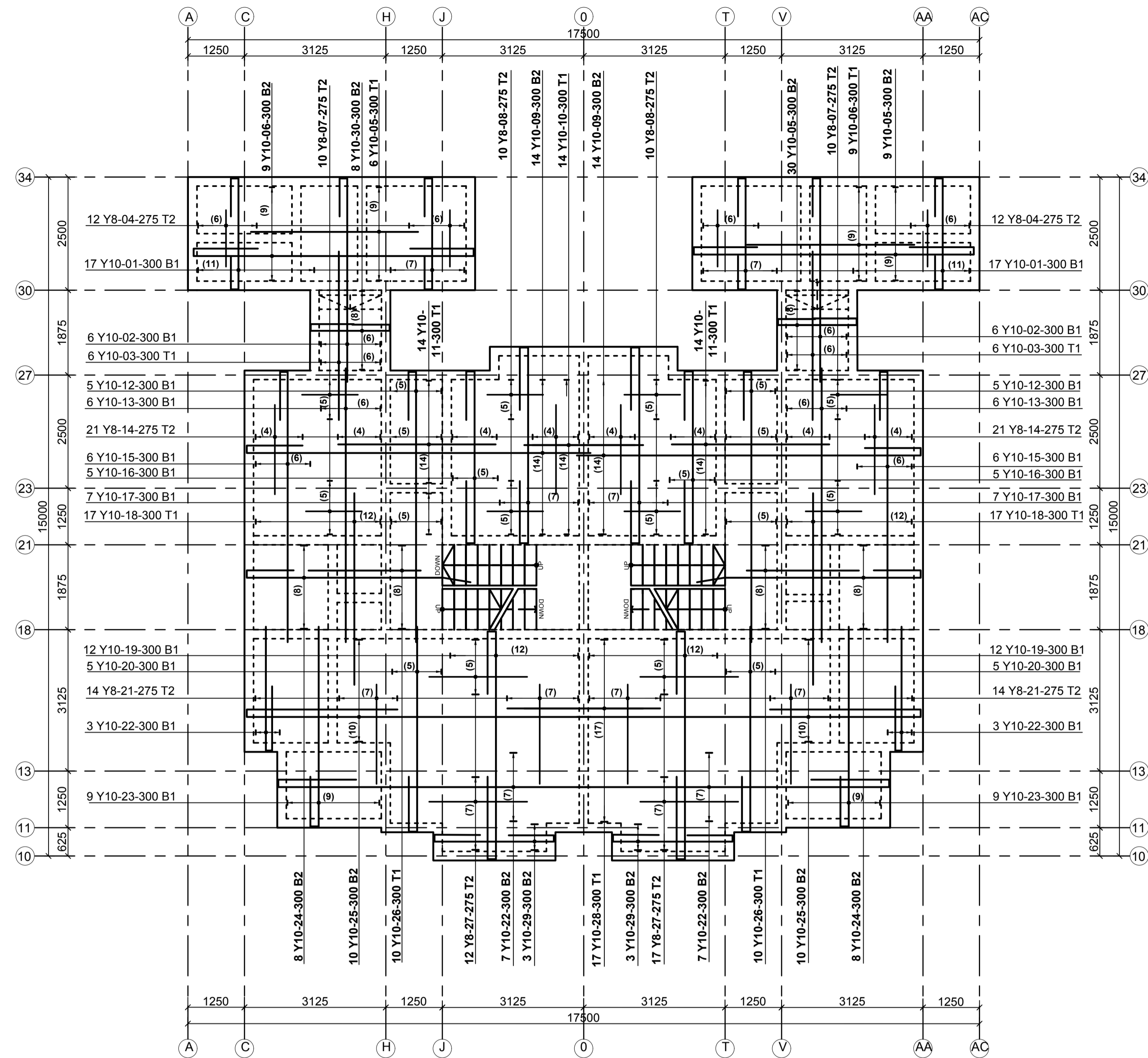
**DRAWING TITLE:**  
FOUNDATION/GROUND FLOOR,STRIP FOOTING AND STAIR REBAR DETAILS (TYPE 01A)

DESIGNED BY: I.M.I.M	DRAWN BY: F.A.
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-1A-01	REV No. DRG STATUS

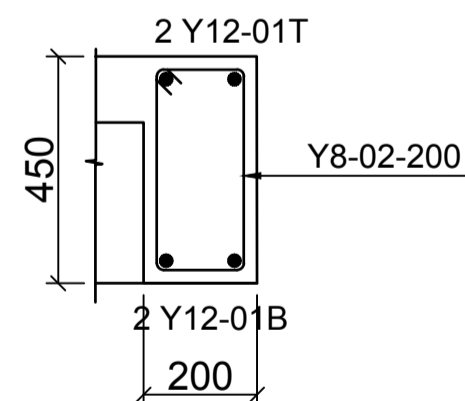




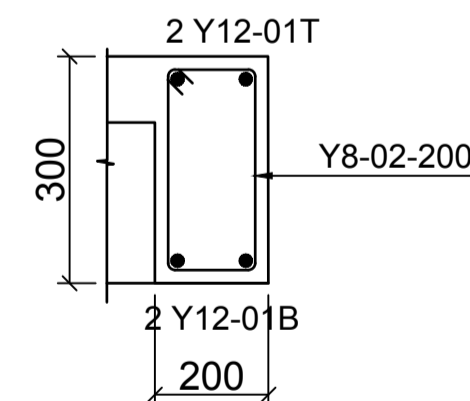
FIRST FLOOR SLAB LAYOUT  
125mm THICK SLAB  
SCALE 1:50



FIRST FLOOR SLAB REBAR  
DETAILS - 125mm THK SLAB  
SCALE 1:75



TYPICAL BM,  
(200 X 450)  
SCALE 1:25



TYPICAL BM,  
(200 X 300)  
SCALE 1:25

- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  - T1 = TOP 1ST. LAYER, T2 = TOP 2ND LAYER
  7. Y = RIBBED BARS TO BS 4461,
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**

HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.



F			
E			
D			
C			
B			
A			

REV	Description	Checked/Date	Issued to/Date
-----	-------------	--------------	----------------

CLIENT:

Kenyatta National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O. Box 20723-00202,NAIROBI

ZONE:

Kajiado County

PROJECT:

Proposed Housing Scheme on Plot LR  
NO. Kajiado/Kitengela/6242 in  
Kitengela

DRAWING TITLE:

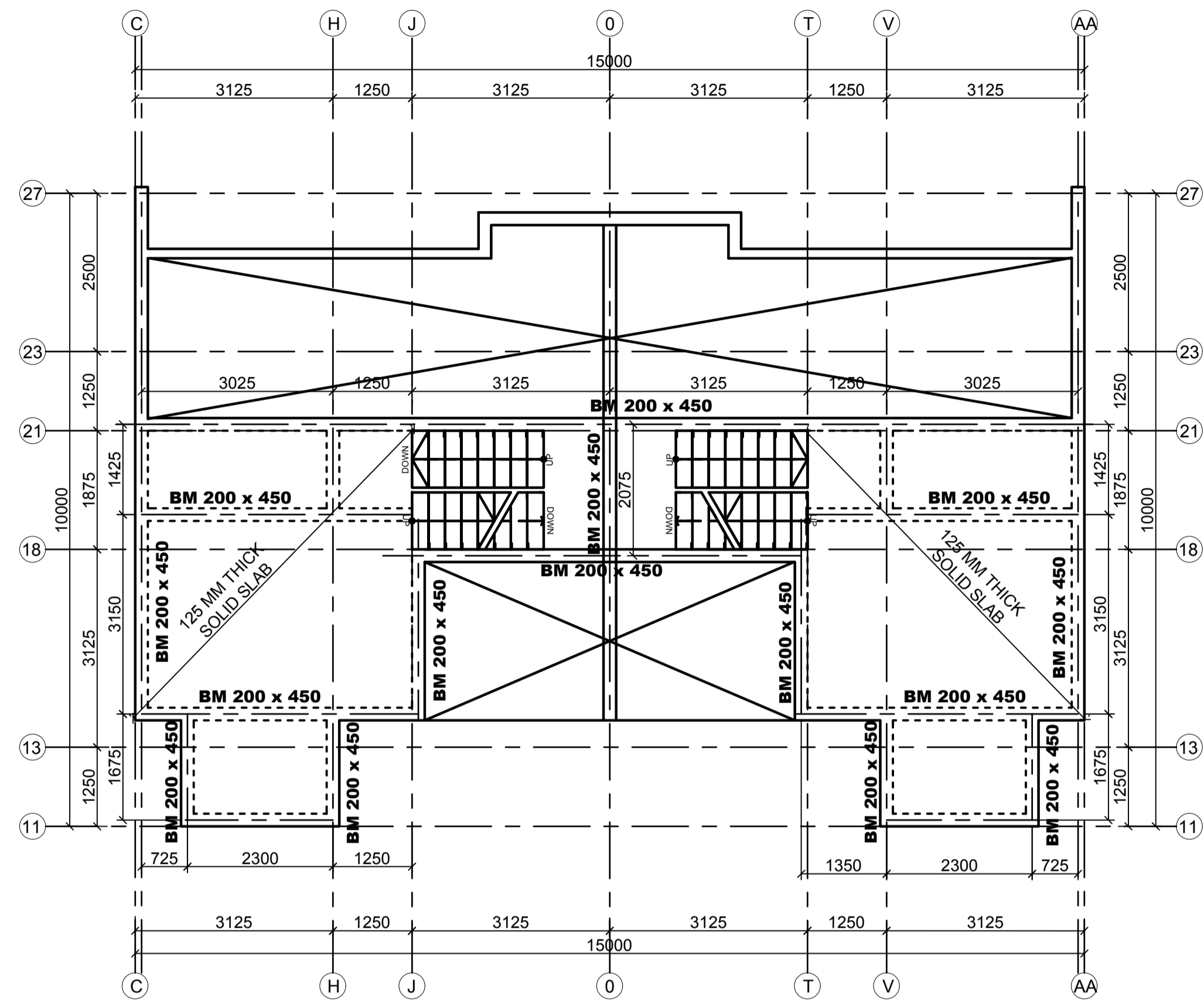
FIRST FLOOR LAYOUT AND REBAR DETAILS  
(TYPE 01A)

DESIGNED BY: M.I.M DRAWN BY: F.A

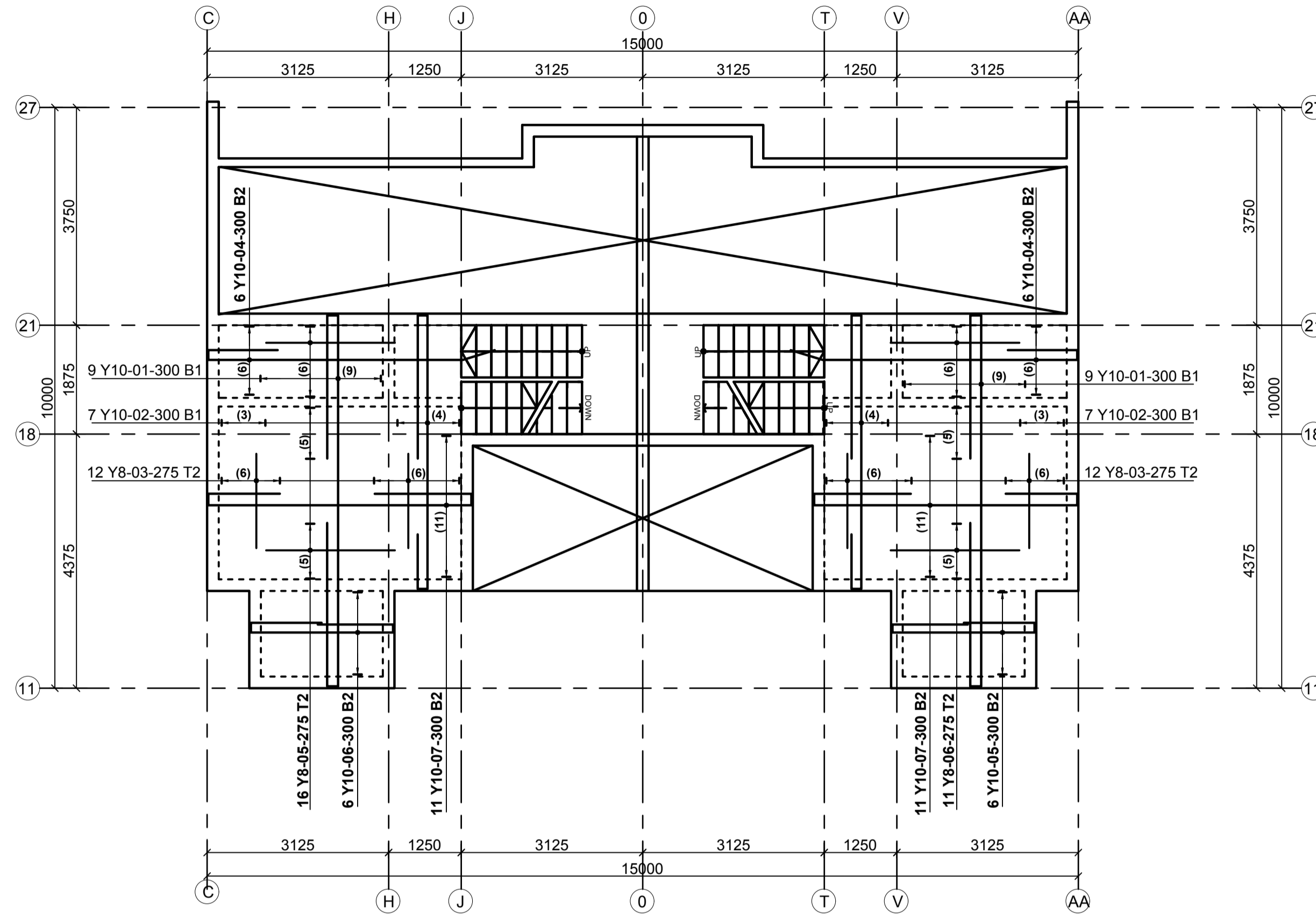
CHECKED BY: ENG. JNK JOB No.

SCALES: AS SHOWN DATE: NOVEMBER 2022

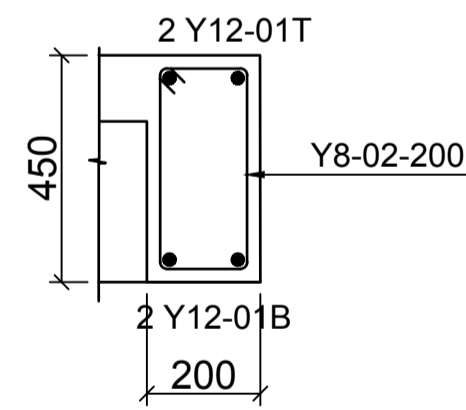
DRG No: STR-1A-02 REV No. DRG STATUS



**ATTIC FLOOR SLAB LAYOUT**  
125mm THICK SLAB  
SCALE 1:50



**ATTIC FLOOR SLAB REBAR**  
DETAILS - 125 MM THK SLAB  
SCALE 1:75



**TYPICAL BM**  
(200 X 450)  
SCALE 1:25

- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER
  7. Y = RIBBED BARS TO BS 4461,
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**

HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.



F			
E			
D			
C			
B			
A			

REV	Description	Checked/Date	Issued to/Date

**CLIENT:**

Kenyatta National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

**ZONE:**

Kajiado County

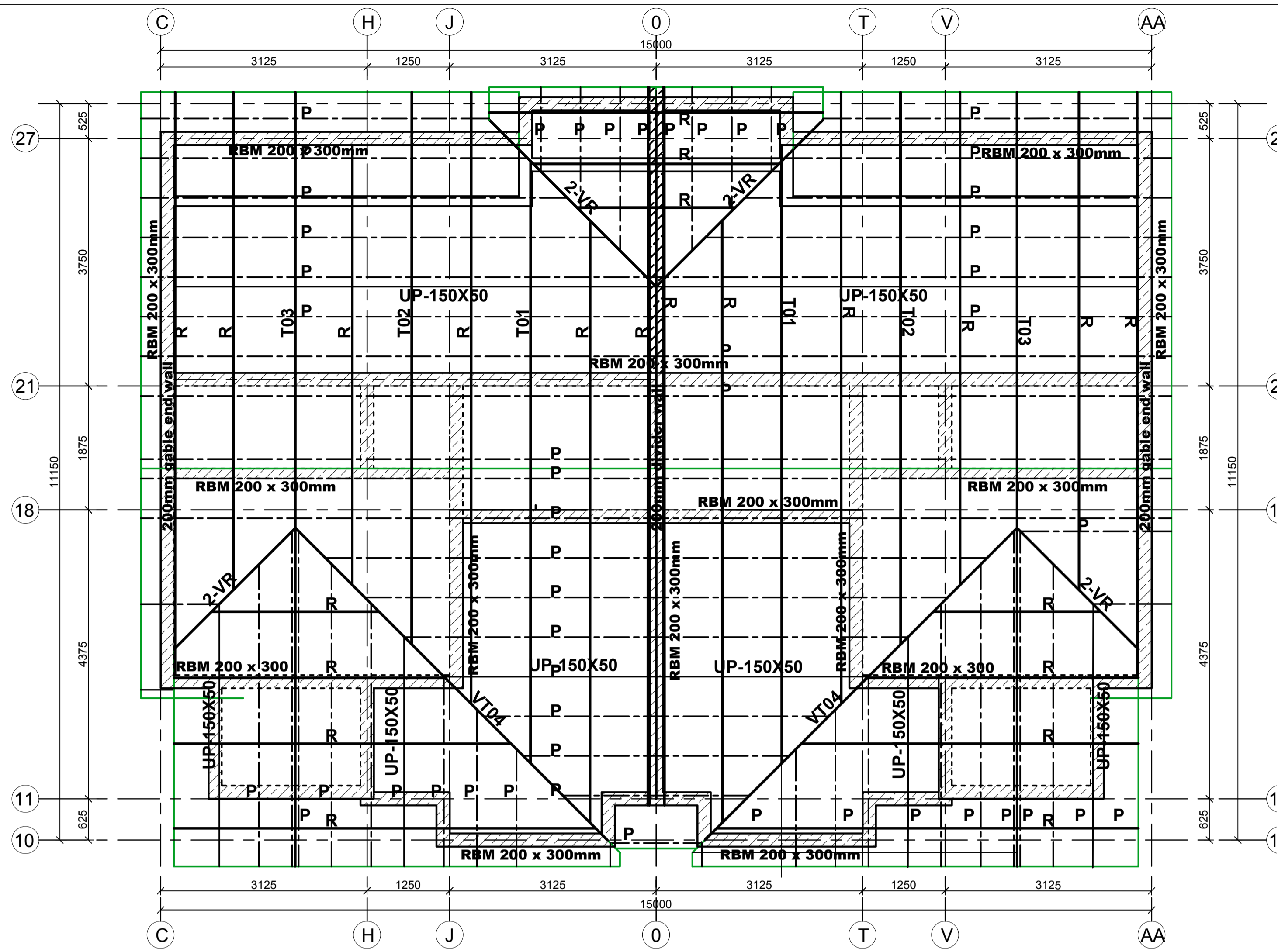
**PROJECT:**

Proposed Housing Scheme on Plot LR  
NO. Kajiado/Kitengela/6242 in  
Kitengela

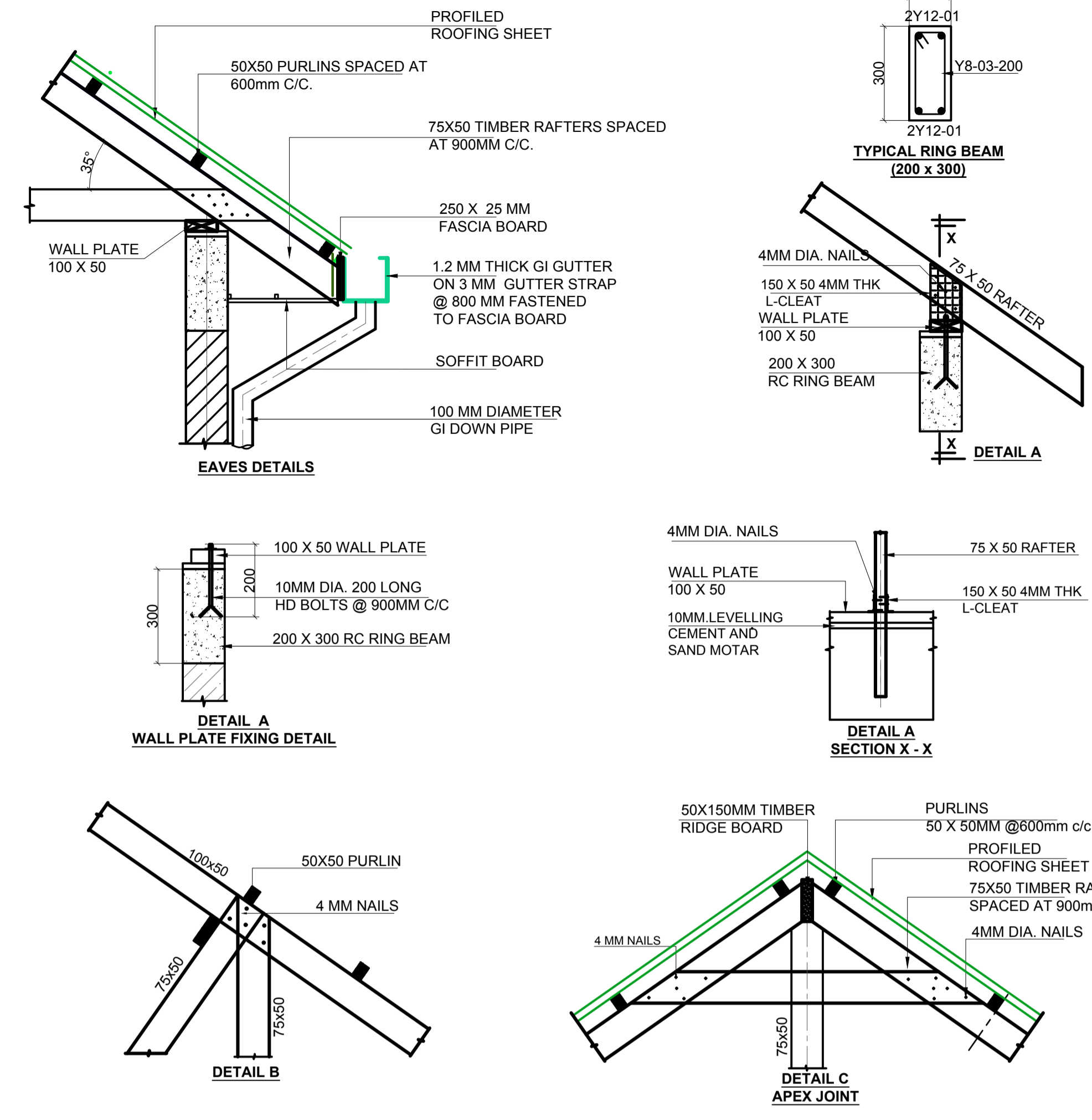
**DRAWING TITLE:**

ATTIC FLOOR LAYOUT AND REBAR DETAILS  
(TYPE 01A)

DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-1A-03	REV No. DRG STATUS



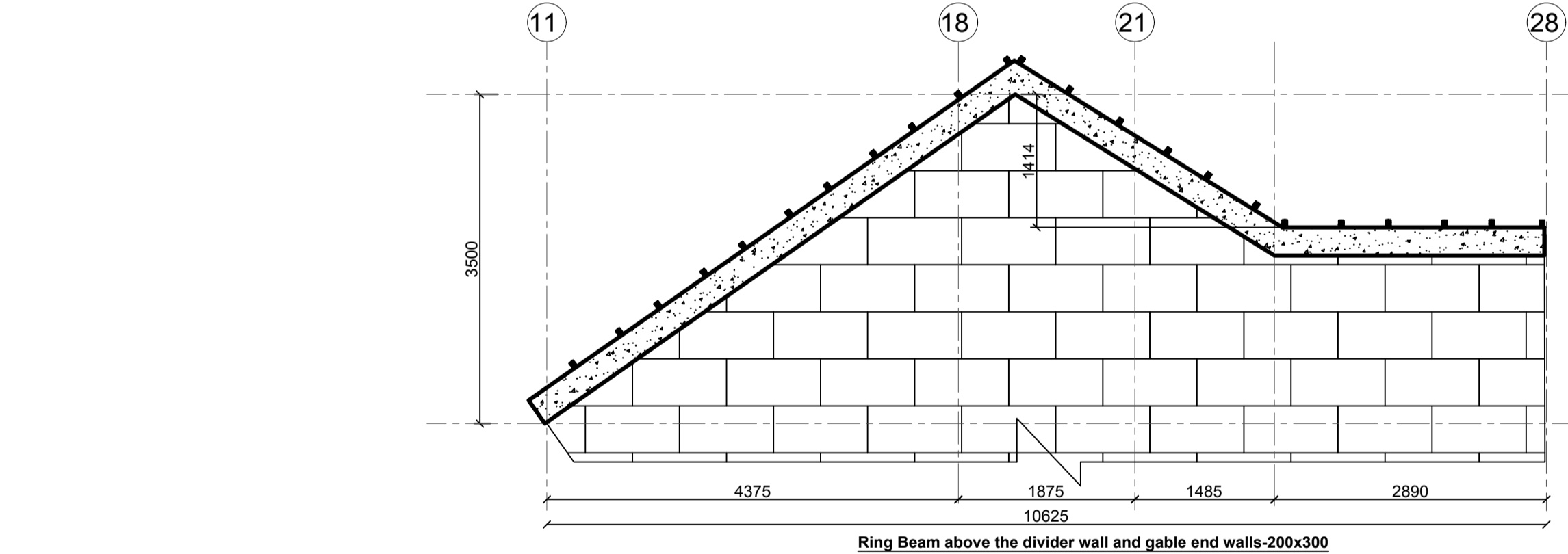
**GENERAL ROOF LAYOUT**  
 VALLEY RAFTERS 2/100 X 50  
 RAFTERS 75 X 50 @ 900 C/C  
 PURLINS 50X50@600C/C  
 UNDERPURLINS 150 X 50  
 SCALE 1:50



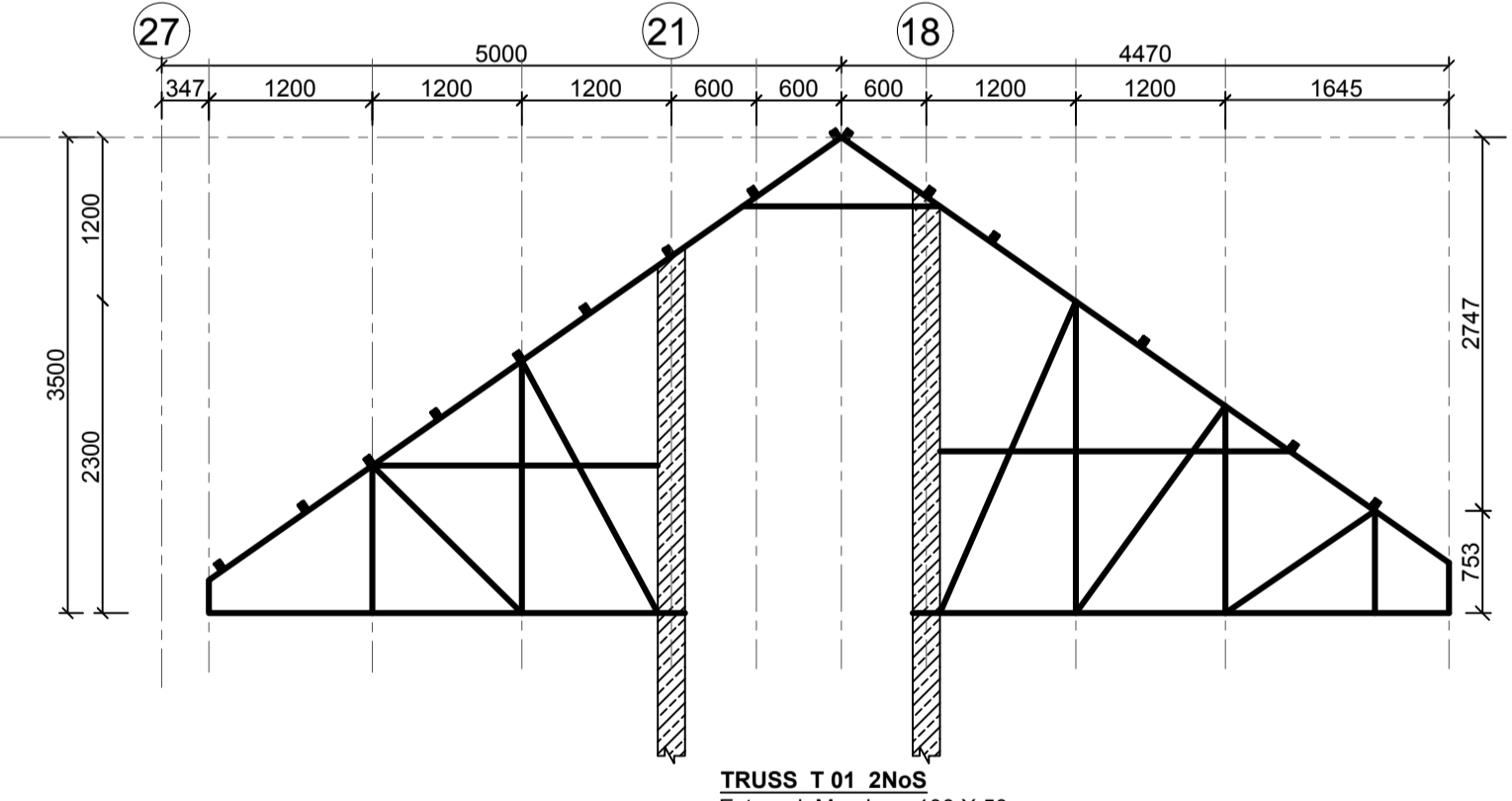
- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  7. T1 = TOP 1ST. LAYER, T2 = TOP 2ND. LAYER
  8. Y = RIBBED BARS TO BS 4461,
  9. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS. (CLASS 25/20)
- TIMBER NOTES**
1. ALL STRUCTURAL TIMBER TO BE SAWN GRADED CYPRESS (GRADE GS) TO KS 02-771-1989
  2. ALL STRUCTURAL TIMBER TO BE SEASONED TO ANEQUILIBRIUM MOISTURE CONTENT OF BETWEEN 9% AND 15%
  3. SAMPLE TRUSS TO BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE FABRICATION OF OTHER TRUSSES
  4. ALL STRUCTURAL TIMBER TO BE PRESERVATIVE TREATED TO KS02-84-1985
  5. ALL TILE BATTENS TO BE 50 X 25 MM UNLESS OTHERWISE STATED AT 300 MM MAXIMUM.
  6. TIMBER NAILS TO BE ROUND WIRE NAILS 2.65 MM DIAMETER NAILS UNLESS OTHERWISE STATED

**PROJECT ARCHITECTS**  
 HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5, 0724347807  
 NAIROBI

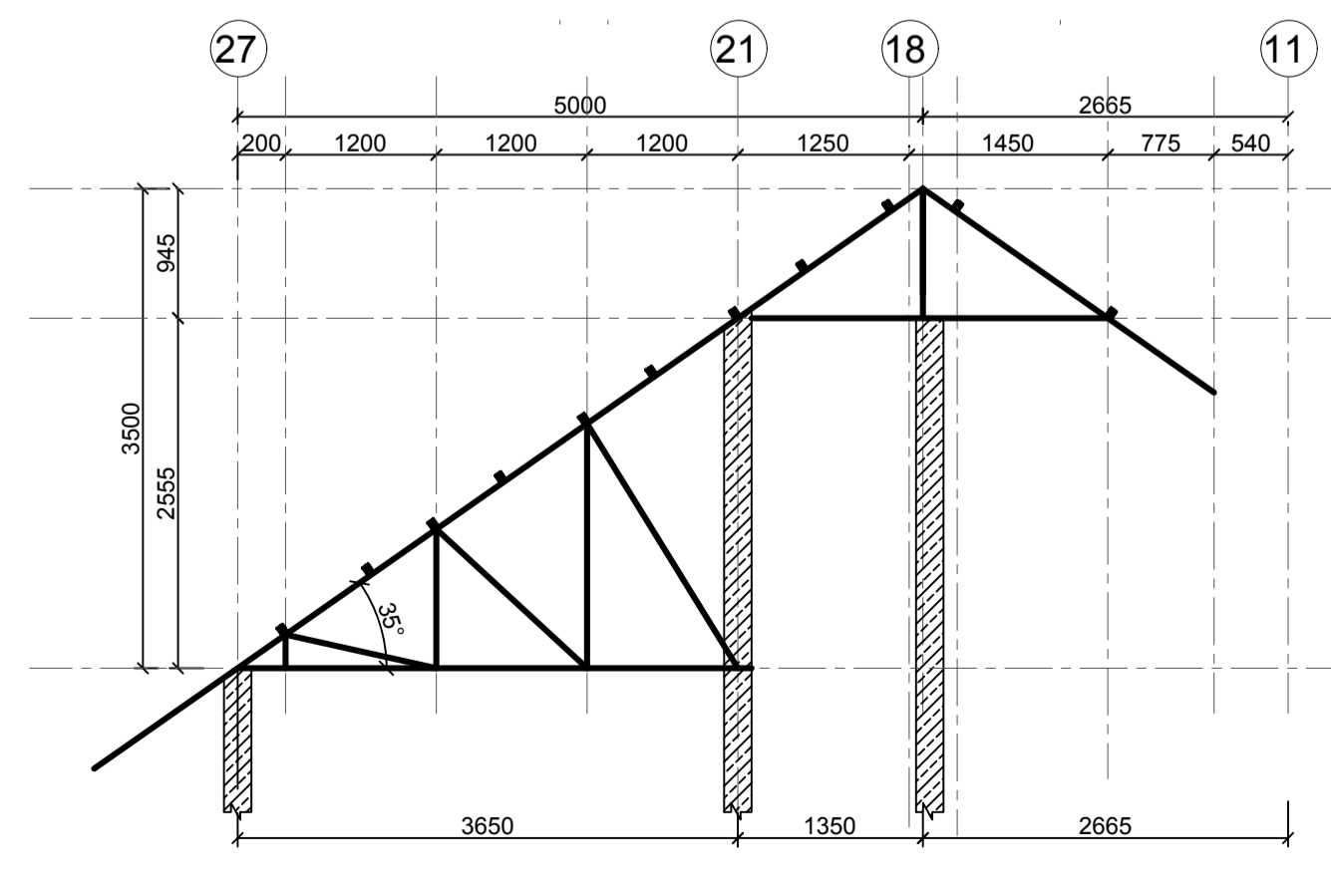
P.O. BOX 75193-00200, NAIROBI.  
  
 EPCH CONSULTING ENGINEERS  
 Civil & Structural Engineers



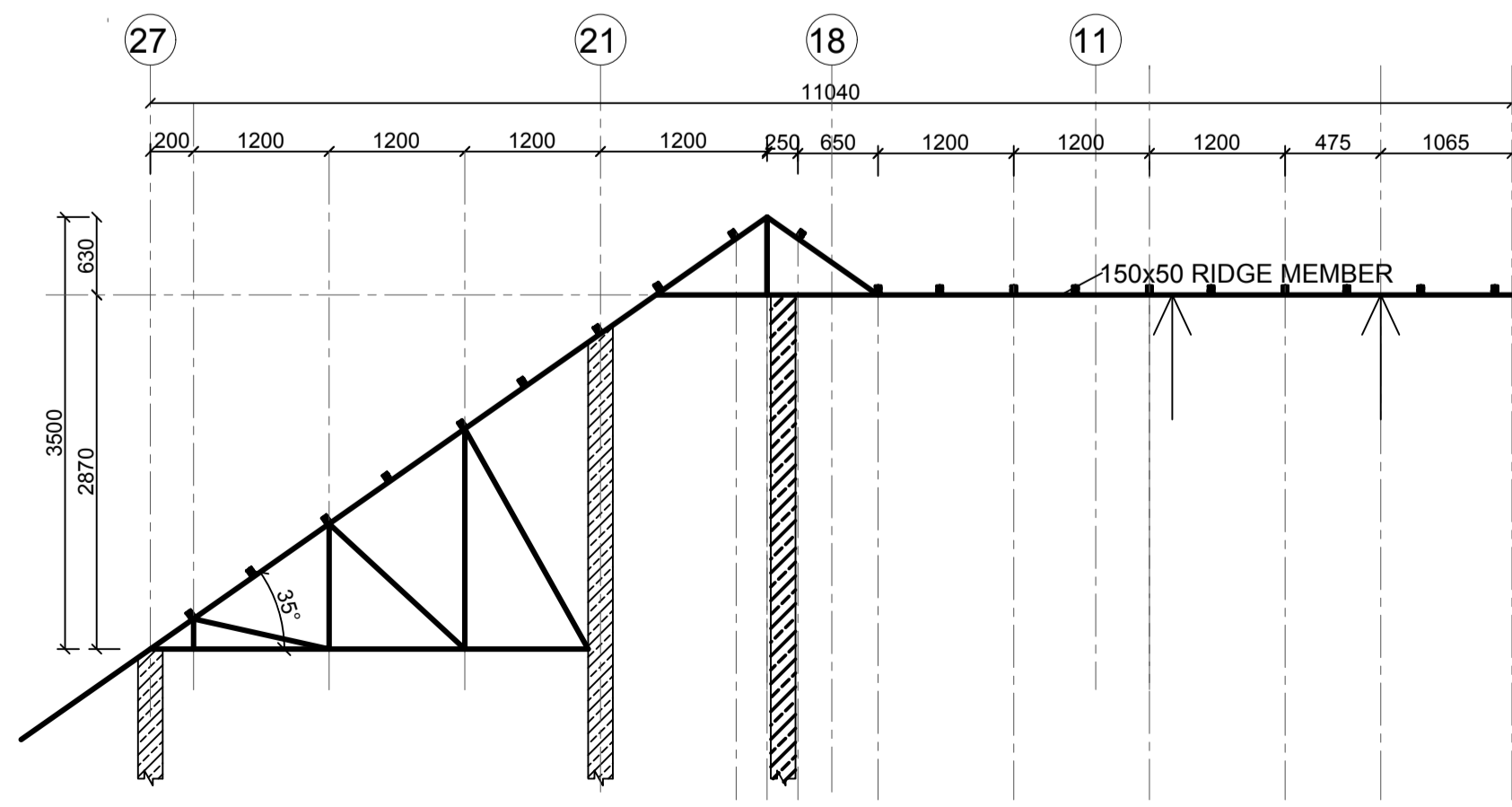
Ring Beam above the divider wall and gable end walls-200x300



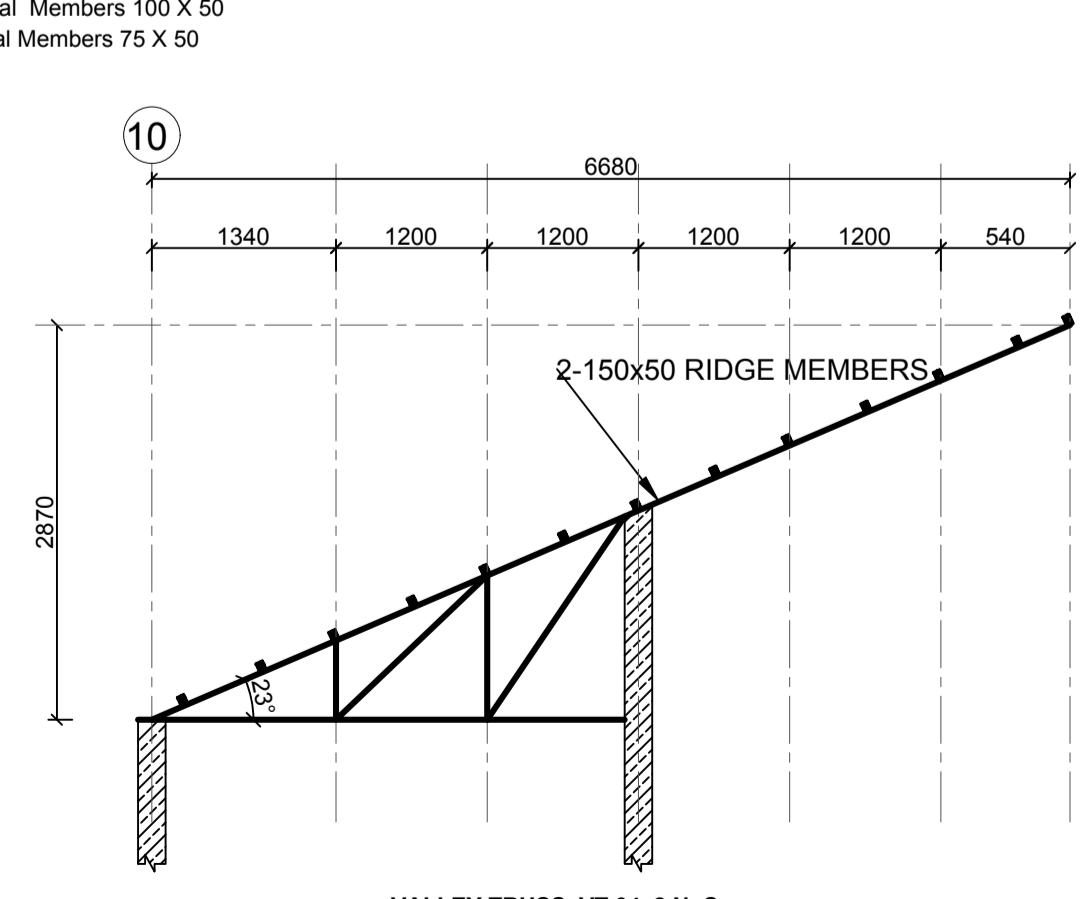
TRUSS T 01 2 NoS  
 External Members 100 X 50  
 Internal Members 75 X 50



TRUSS T 02 2 NoS  
 External Members 100 X 50  
 Internal Members 75 X 50



TRUSS T 03 2 NoS  
 External Members 100 X 50  
 Internal Members 75 X 50



VALLEY TRUSS VT 04 2 NoS  
 External Members 100 X 50  
 Internal Members 75 X 50

F			
E			
D			
C			
B			
A			
REV	Description	Checked/Date	Issued to/Date

**CLIENT:**  
 Kenyatta National Hospital Staff Retirement Benefit Scheme (2011)  
 P.O Box 20723-00202, NAIROBI

**ZONE:**  
 Kajiado County

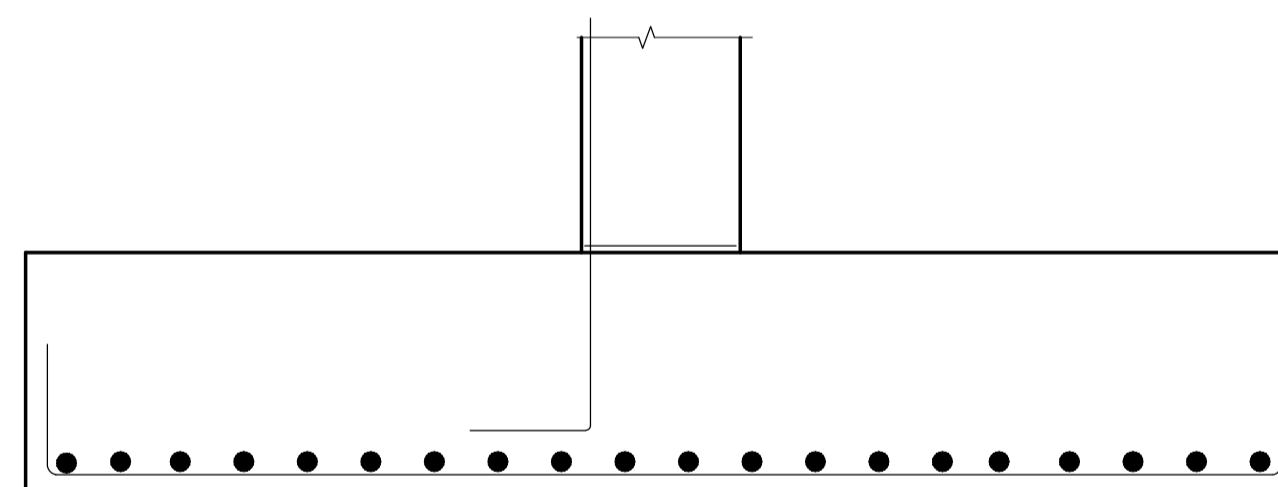
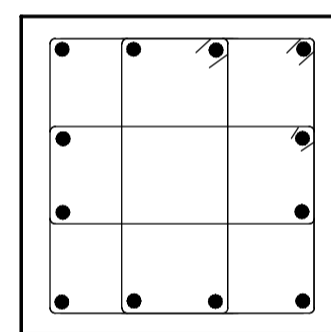
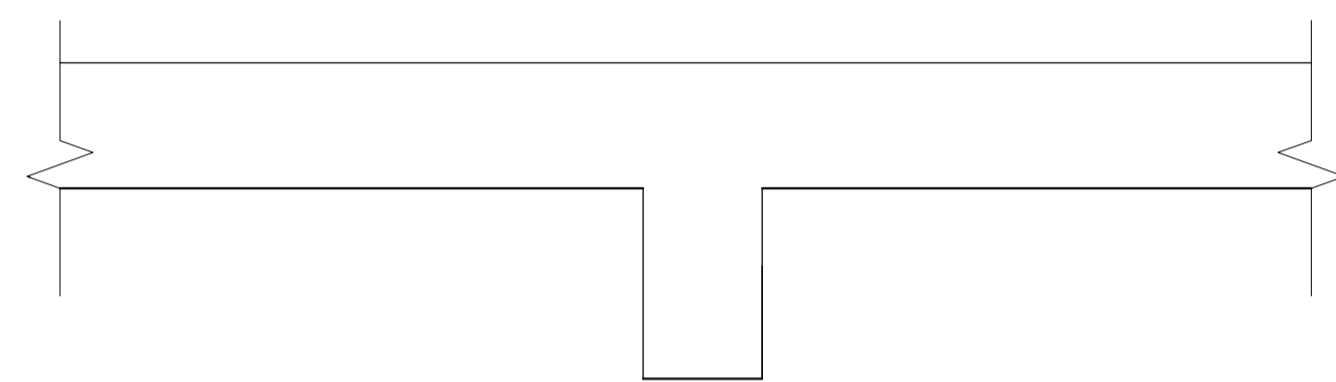
**PROJECT:**  
 Proposed Housing Scheme on Plot LR NO. Kajiado/Kitengela/6242 in Kitengela

**DRAWING TITLE:**  
 GENERAL ROOF DETAILS (TYPE 01A)

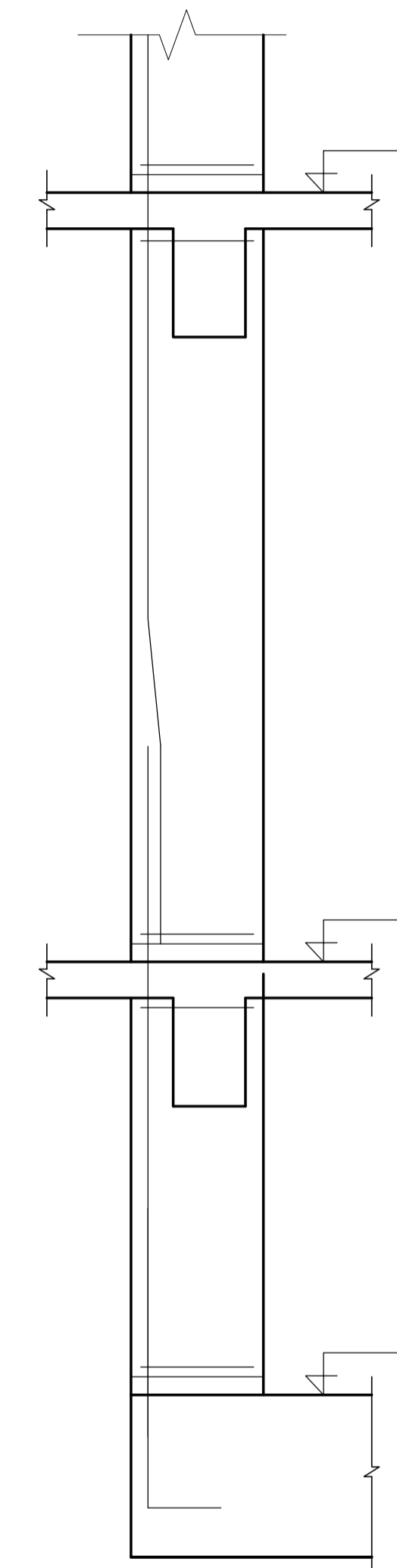
DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-1A-04	REV No. DRG STATUS

# PROPOSED HOUSING SCHEME ON PLOT LR NO. KAJIADO/KITENGELA/6242 IN KITENGELA, KAJIADO COUNTY

## TYPE 2B STRUCTURAL DRAWINGS



SHAPE CODE	METHOD OF MEASUREMENT OF BENDING DIMENSIONS	TOTAL LENGTH OF BAR ALONG CENTER LINE	DIMENSIONS TO BE GIVEN IN SCHEDULE
20		A	STRAIGHT
32		A + h	
33		A + 2h	
34		A + n	
35		A + 2n	
37		A+B-0.5R-d	

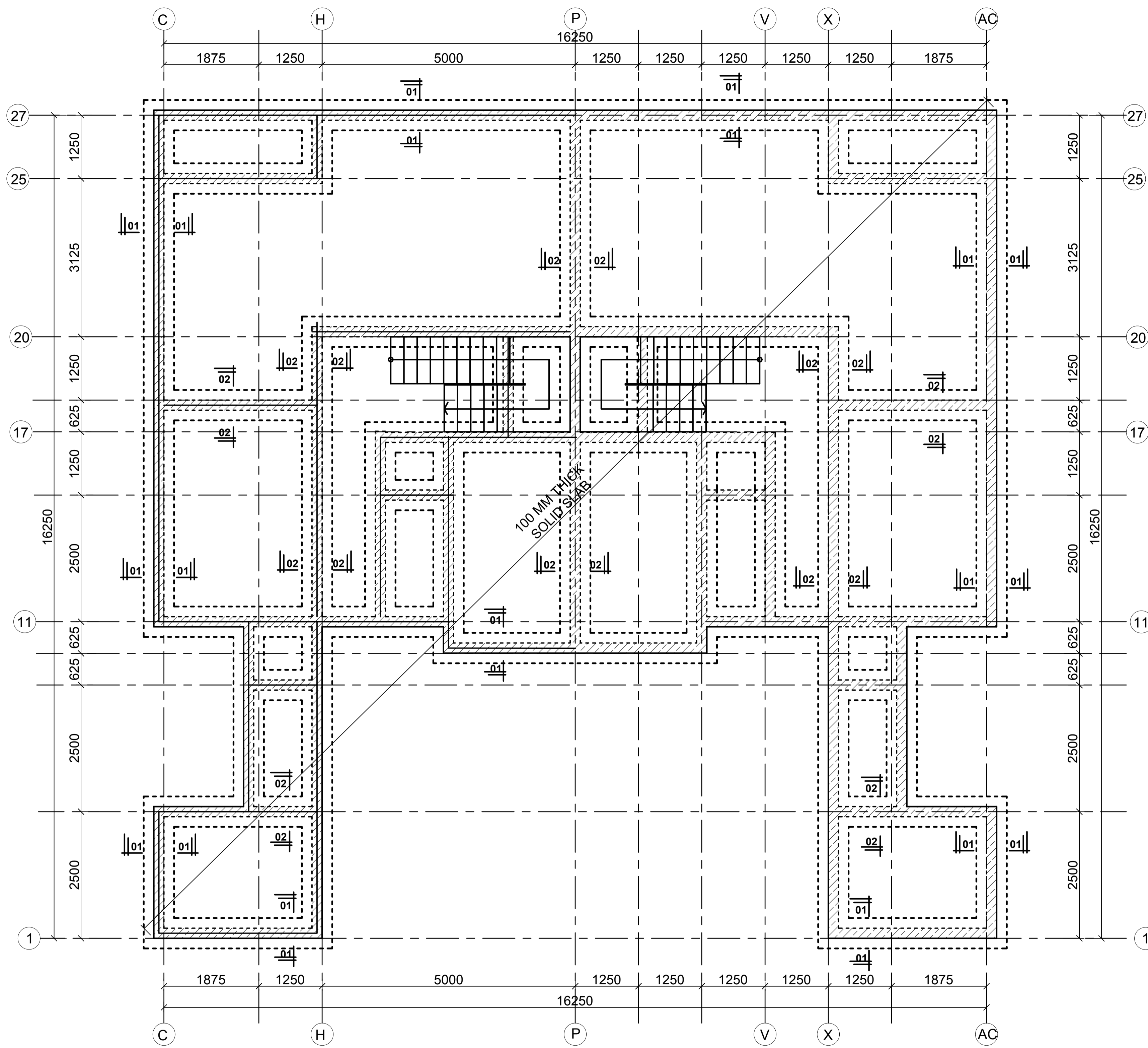


NOVEMBER 2022

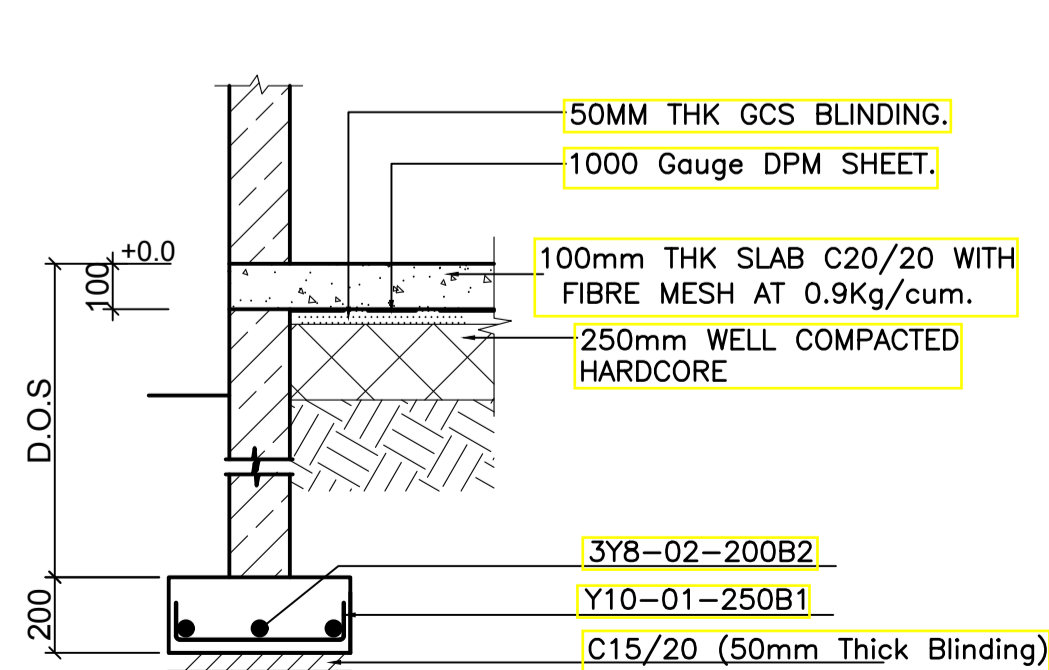
CIVIL AND STRUCTURAL ENGINEERS  
EPOCH CONSULTING  
ENGINEERS  
P.O.BOX 75193-00200,  
NAIROBI.

PROJECT ARCHITECTS  
HABITECH CONSULTANTS  
ARCHITECTS&PLANNERS  
P.O.BOX 66495,  
NAIROBI.

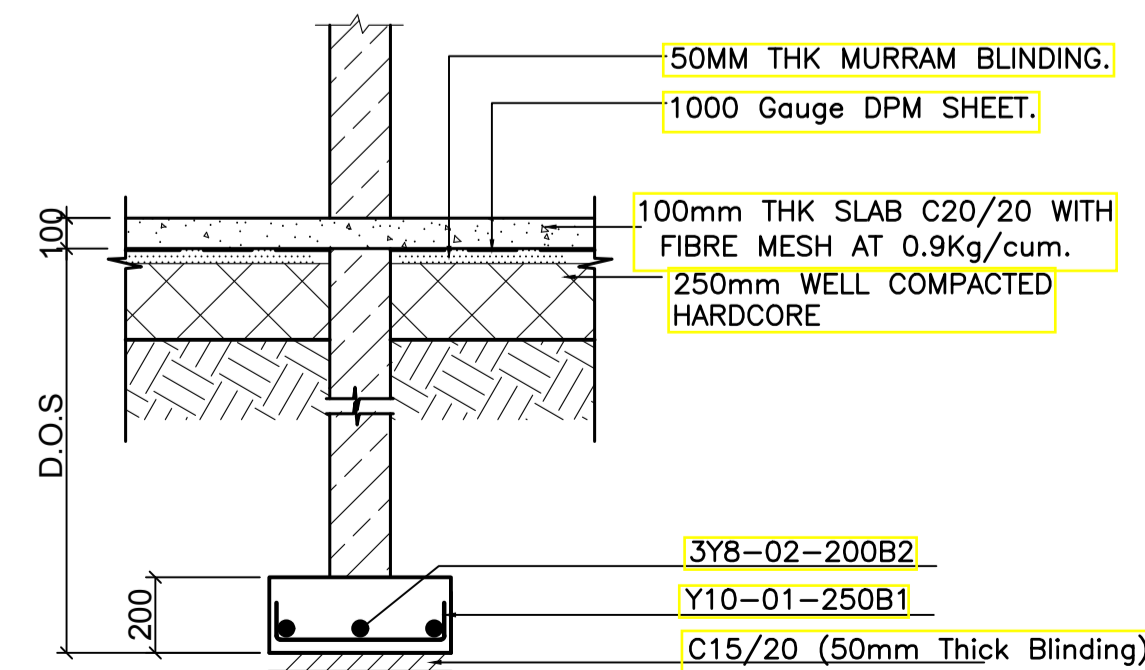
CLIENT:  
KENYATTA NATIONAL HOSPITAL  
STAFF RETIREMENT BENEFITS  
SCHEME(2011)  
P.O BOX 20723-00202  
NAIROBI



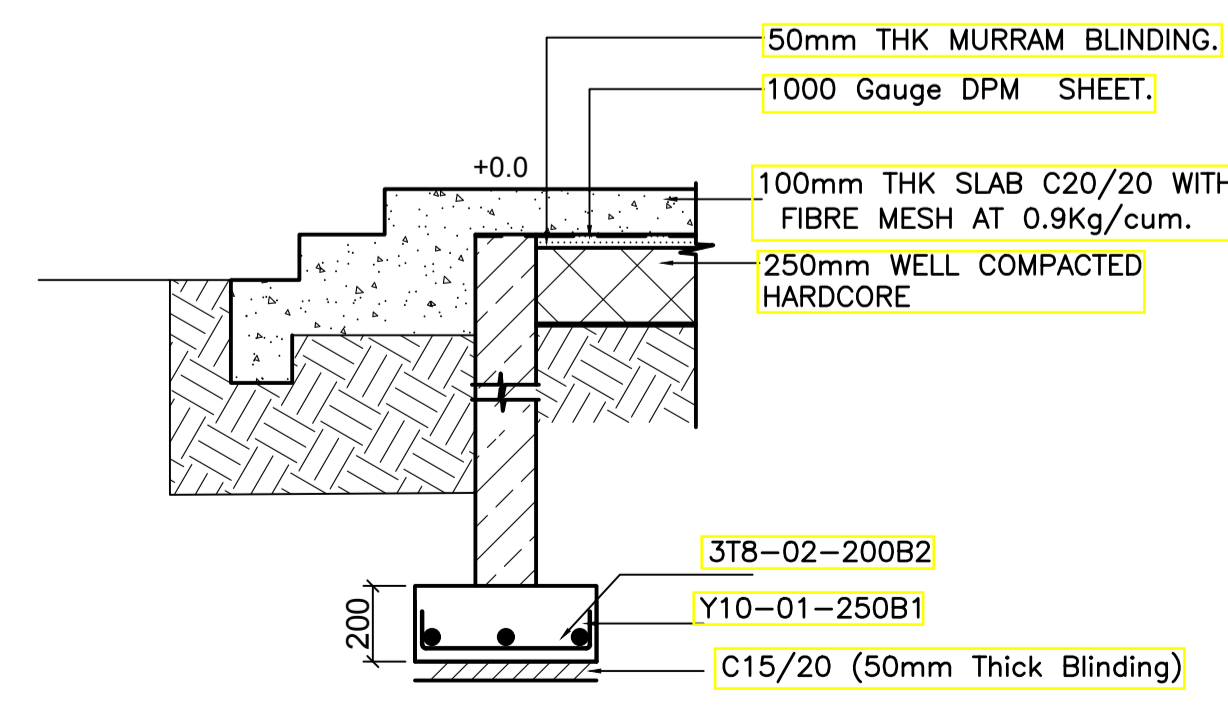
**FOUNDATION AND GROUND FLOOR LAYOUT  
GENERAL ARRANGEMENT-100 mm THK SLAB  
SCALE=1:50**



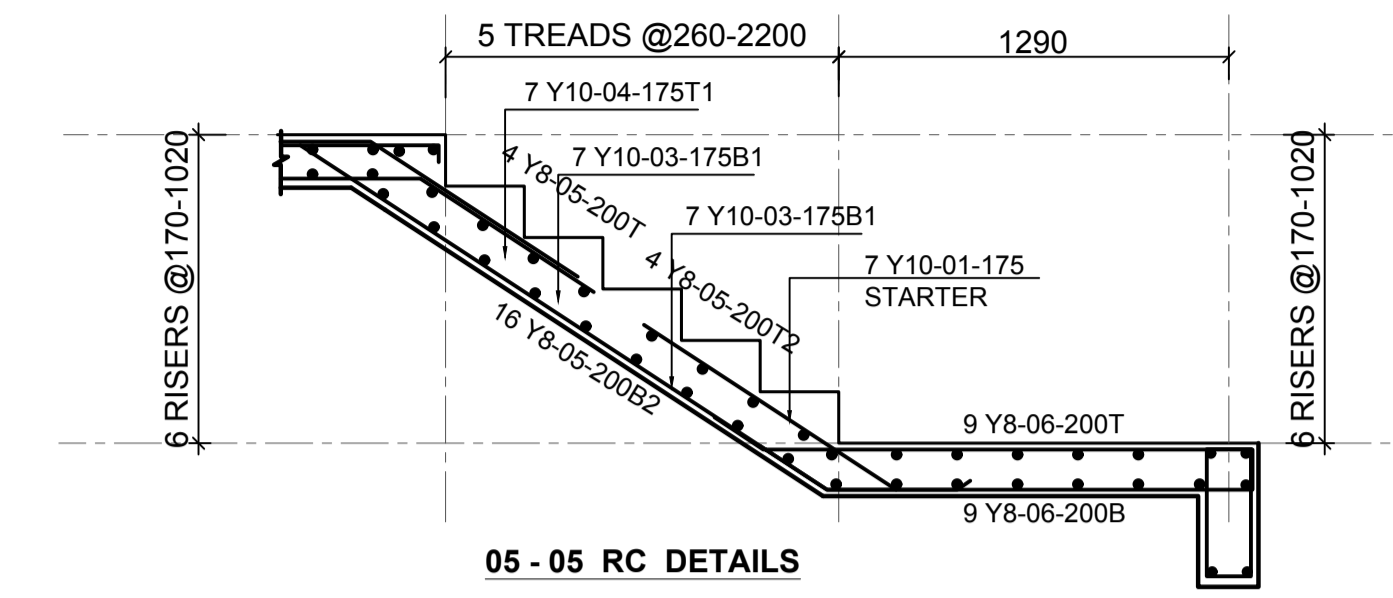
**SECTION 01 - 01  
SCALE 1:25**



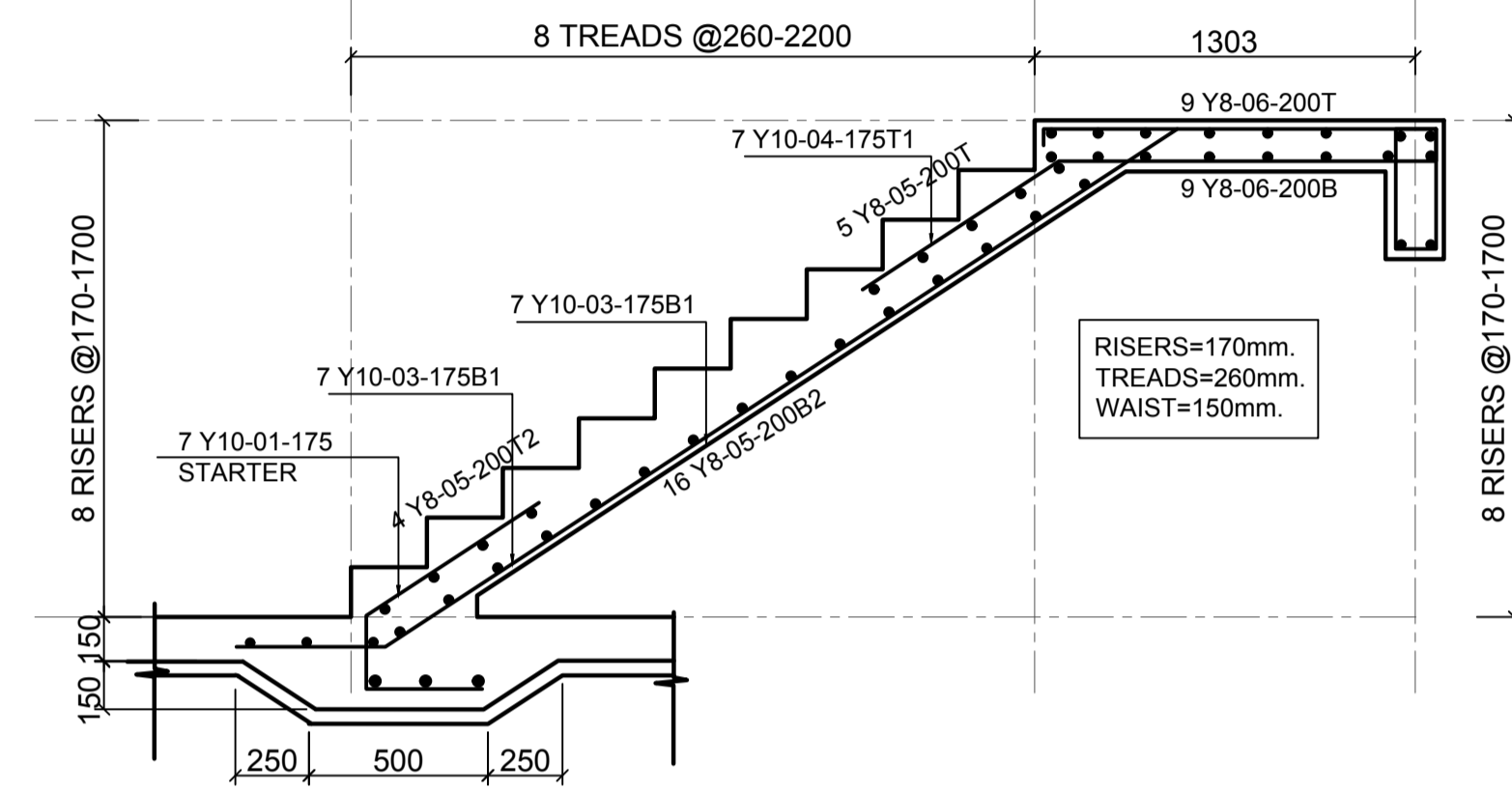
**SECTION 02 - 02  
SCALE 1:25**



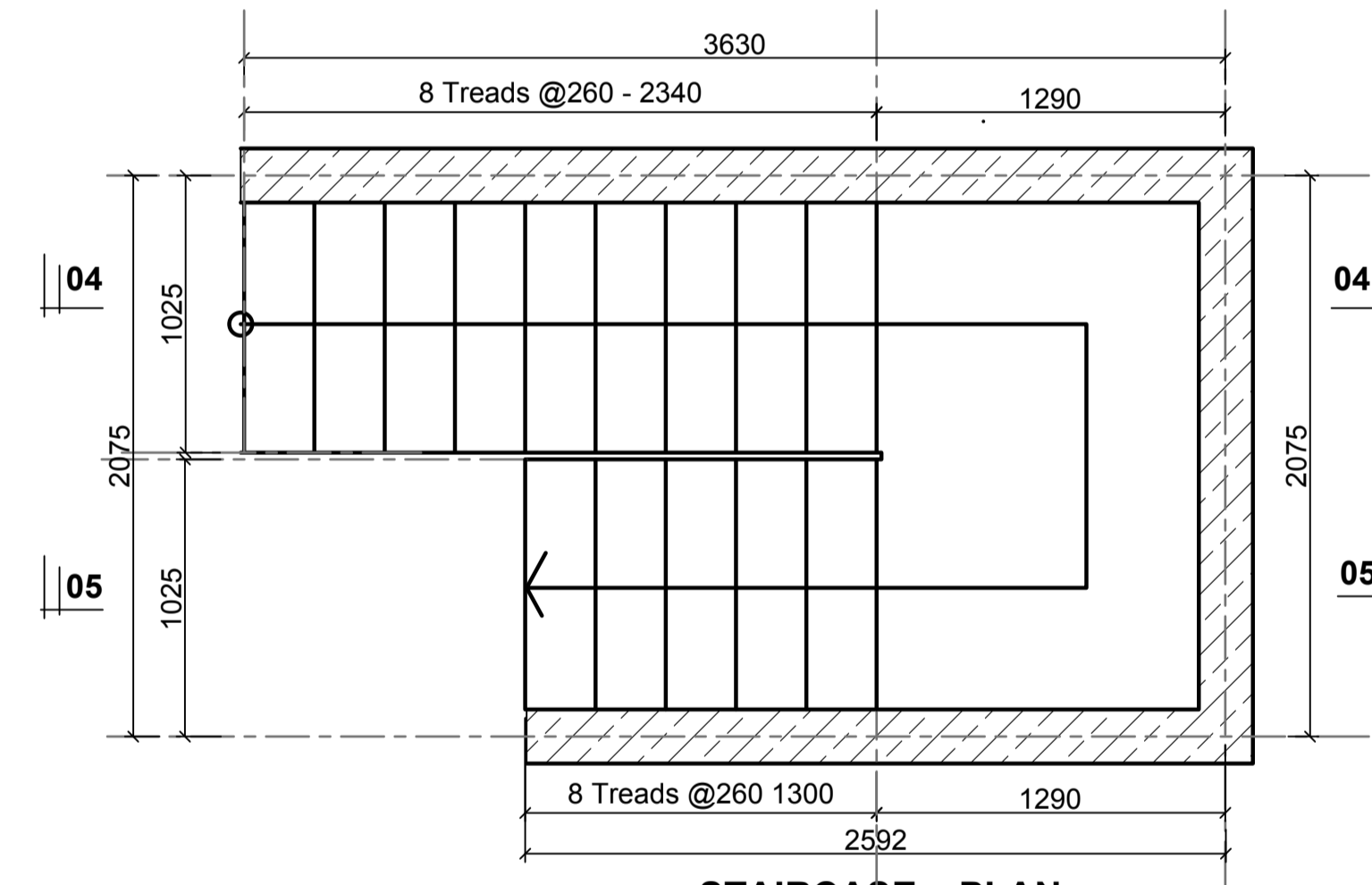
**SECTION 03 - 03  
SCALE 1:25**



**05 - 05 RC DETAILS**



**04 - 04 RC DETAILS**



**STAIRCASE PLAN  
2 Nos**

- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER,  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND. LAYER
  - Y = RIBBED BARS TO BS 4461.
  - CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**

HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.



REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

CLIENT:

Kenyatta National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

ZONE:

Kajiado County

PROJECT:

Proposed Housing Scheme on Plot LR  
NO. Kajiado/Kitengela/6242 in  
Kitengela

DRAWING TITLE:

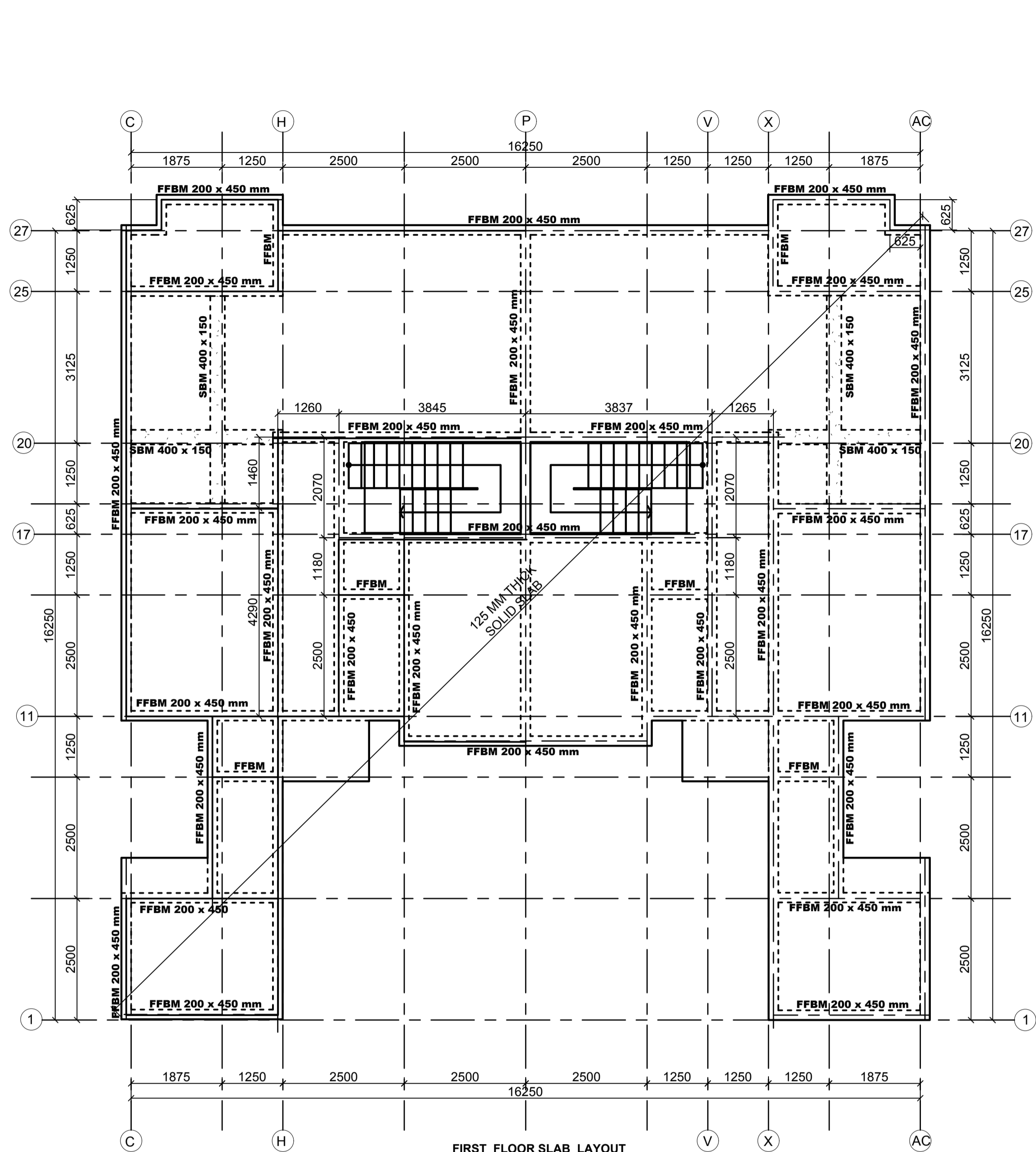
FOUNDATION/GROUND FLOOR STRIP FOOTING  
AND STAIR REBAR DETAILS  
(TYPE 02B)

DESIGNED BY: I.M.I.M DRAWN BY: F.A

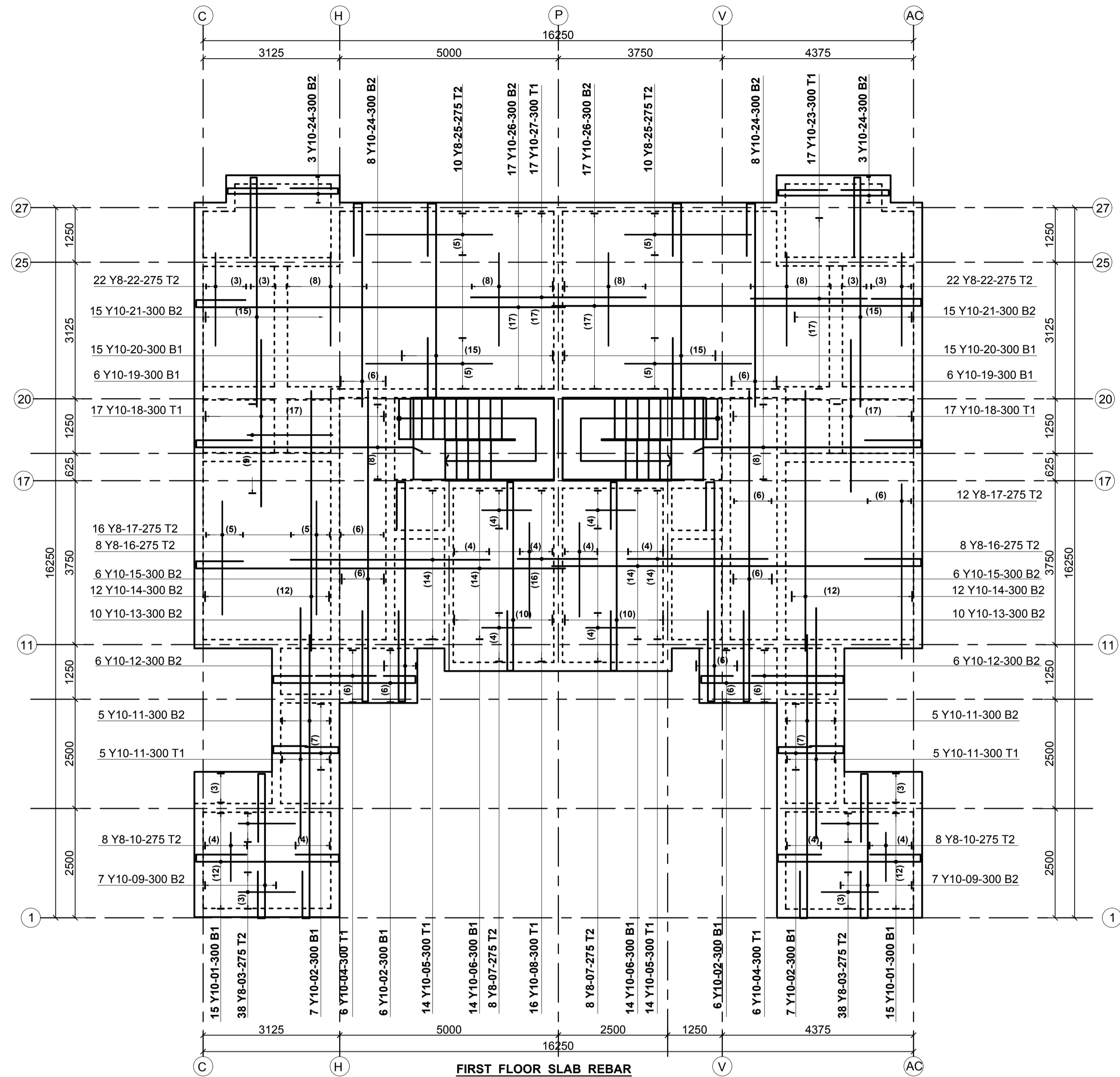
CHECKED BY: ENG. JNK JOB No.

SCALES: AS SHOWN DATE: NOVEMBER 2022

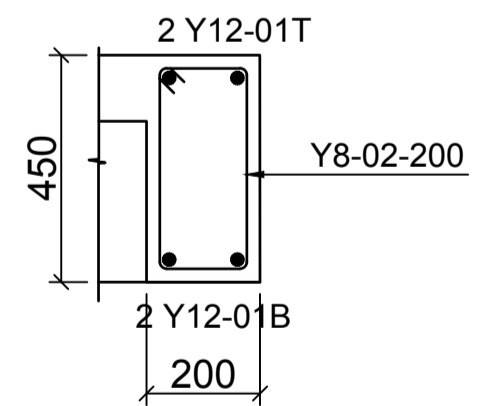
DRG No: STR-2B-01 REV No. DRG STATUS



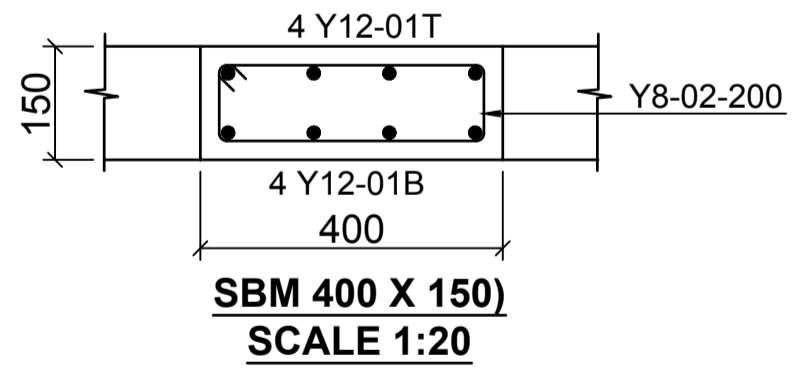
FIRST FLOOR SLAB LAYOUT  
125mm THICK SLAB  
SCALE 1:75



FIRST FLOOR SLAB REBAR  
DETAILS - 125 MM THK SLAB  
SCALE 1:75



TYPICAL FFBM,  
(200 X 450)  
SCALE 1:20



SBM 400 X 150  
SCALE 1:20

- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461.
  - CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.

**EPCC CONSULTING ENGINEERS**  
Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
D			
C			
B			
A			

CLIENT:

Kenyatta National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O. Box 20723-00202,NAIROBI

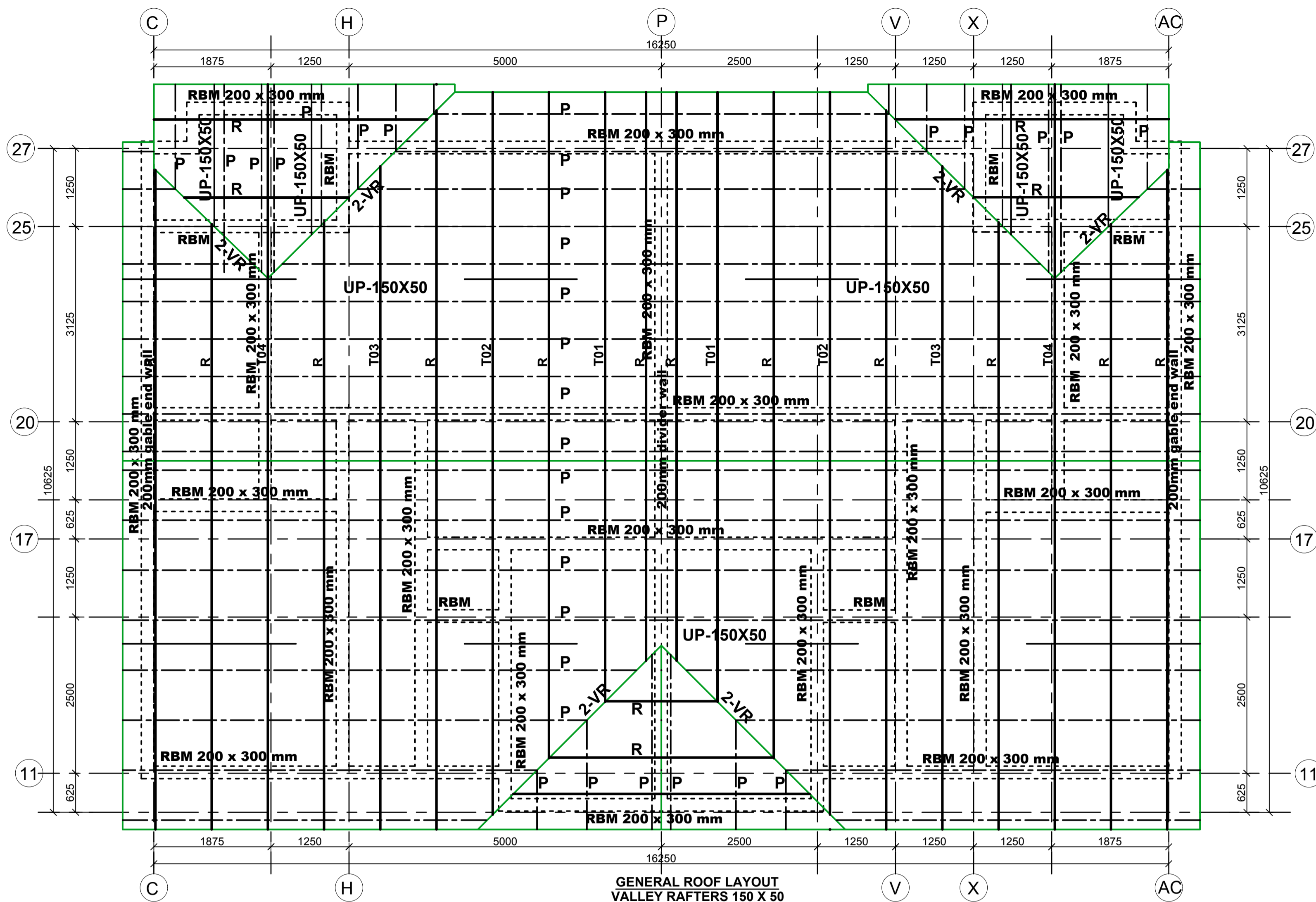
ZONE:  
Kajiado County

PROJECT:  
Proposed Housing Scheme on Plot LR  
NO. Kajiado/Kitengela/6242 in  
Kitengela

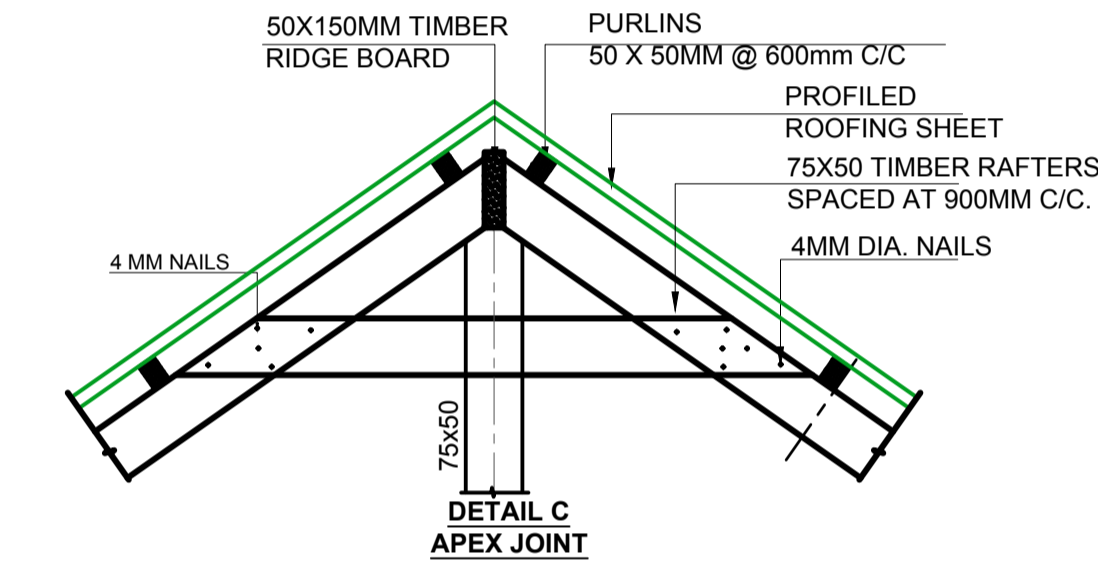
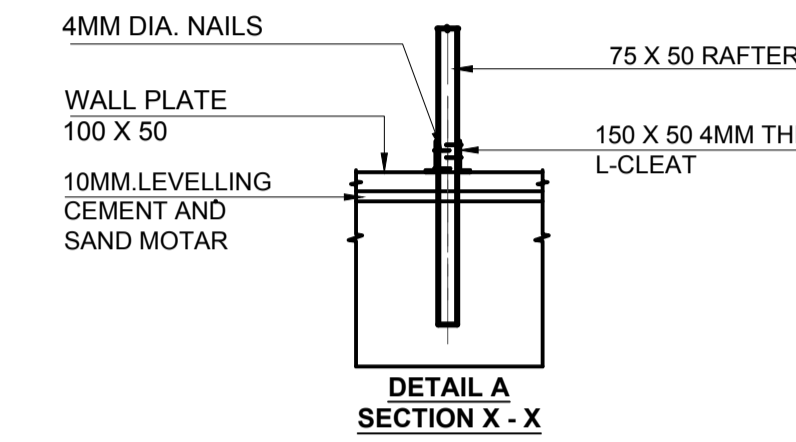
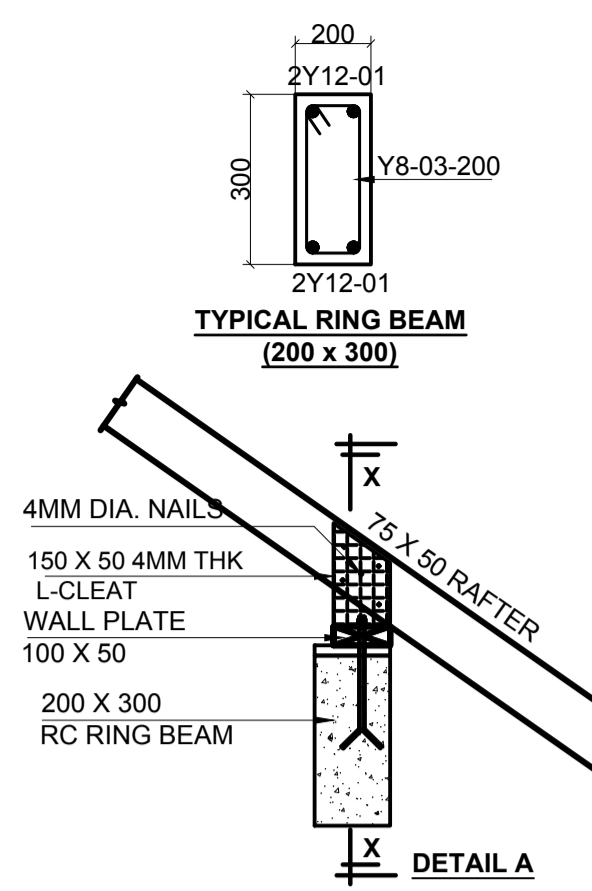
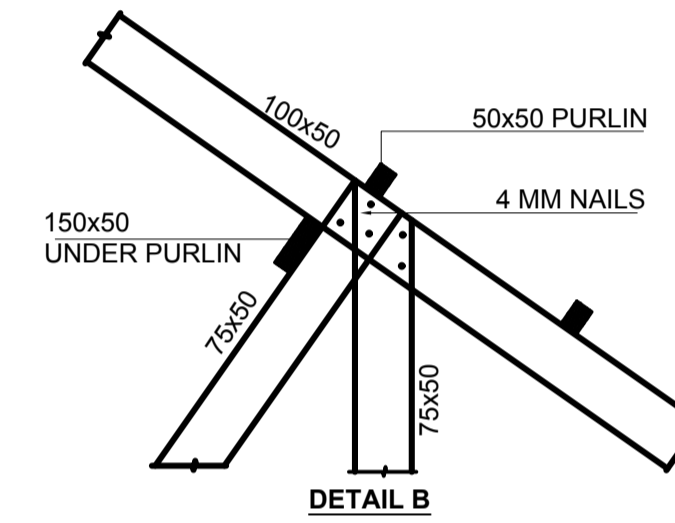
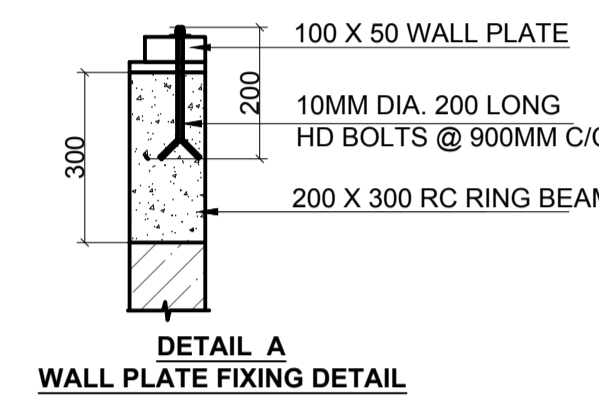
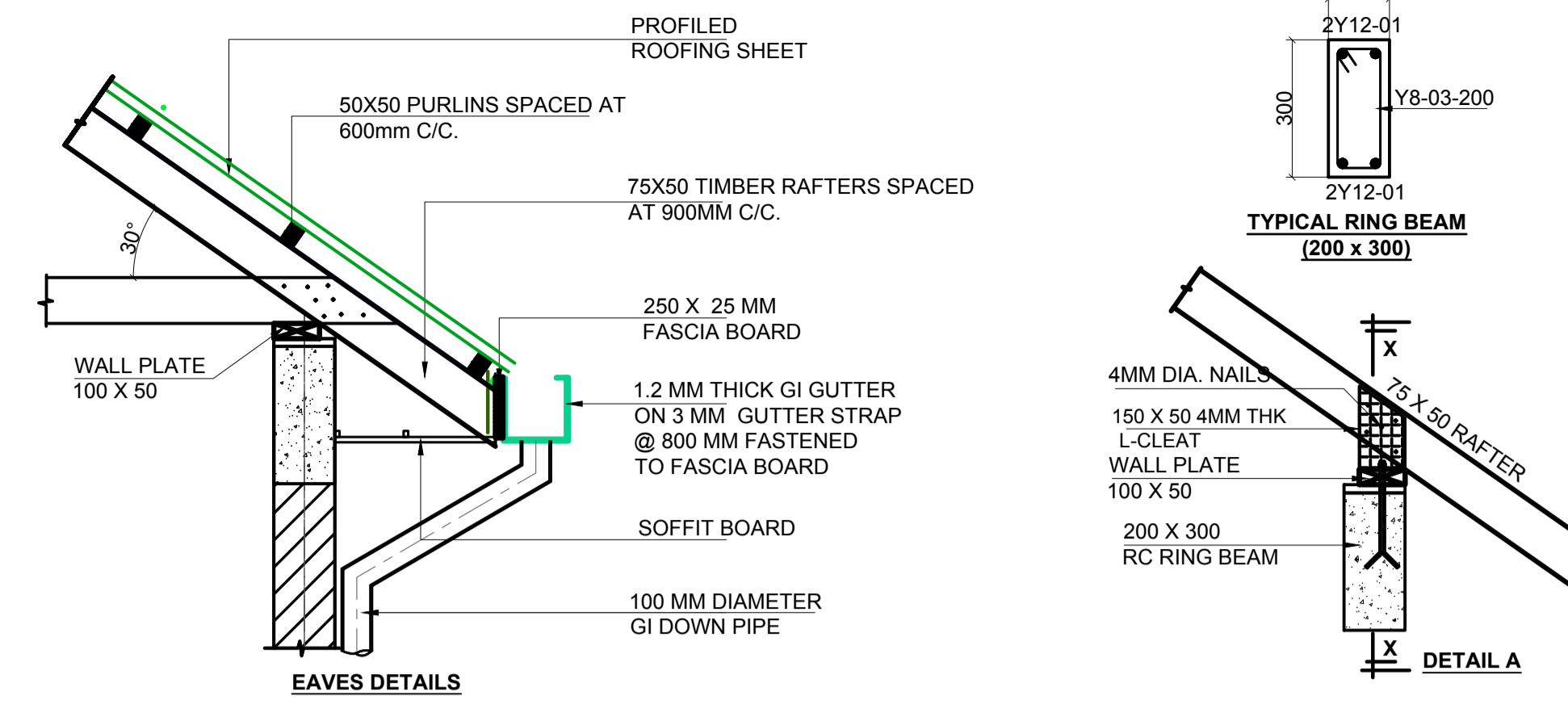
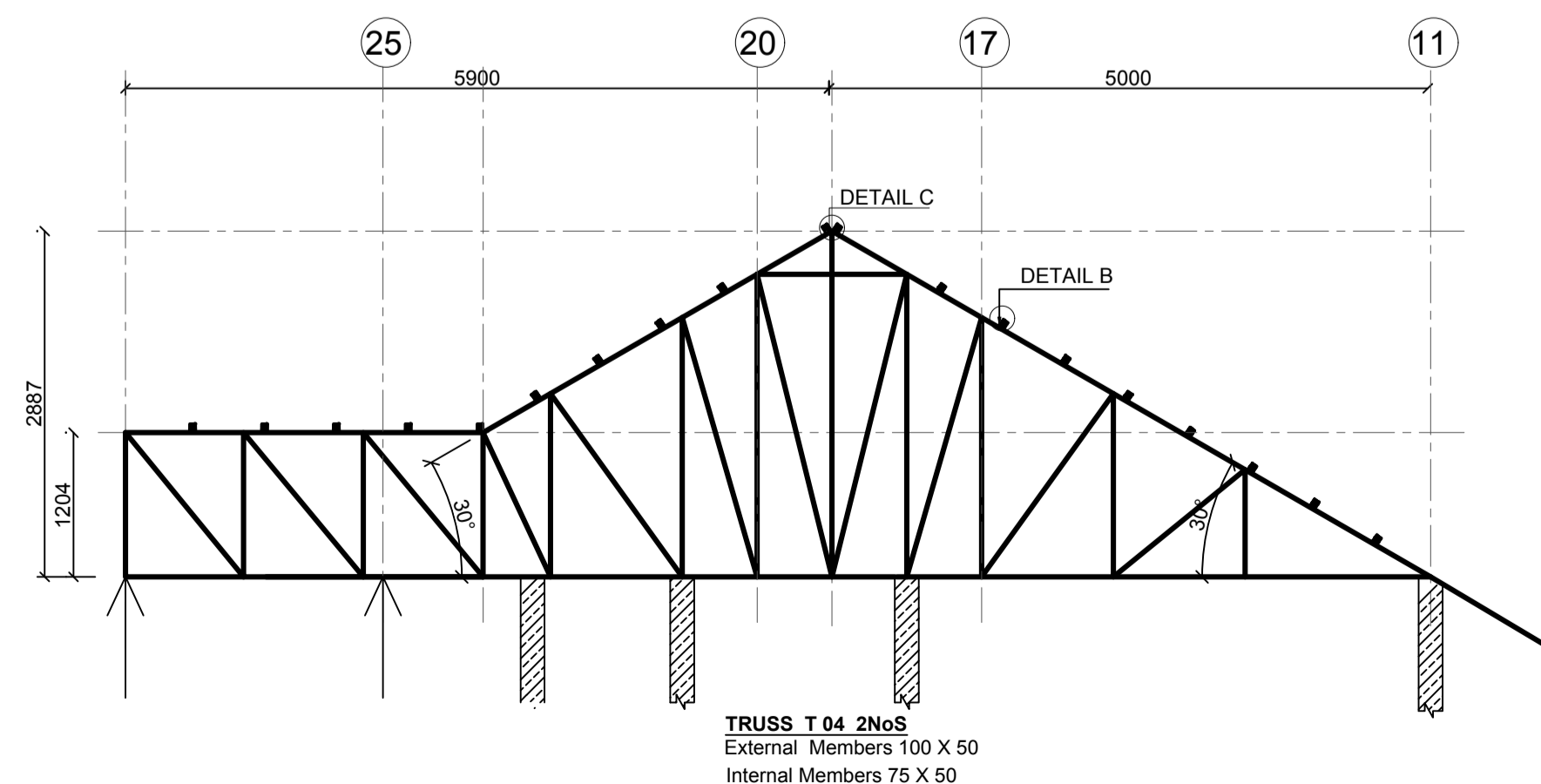
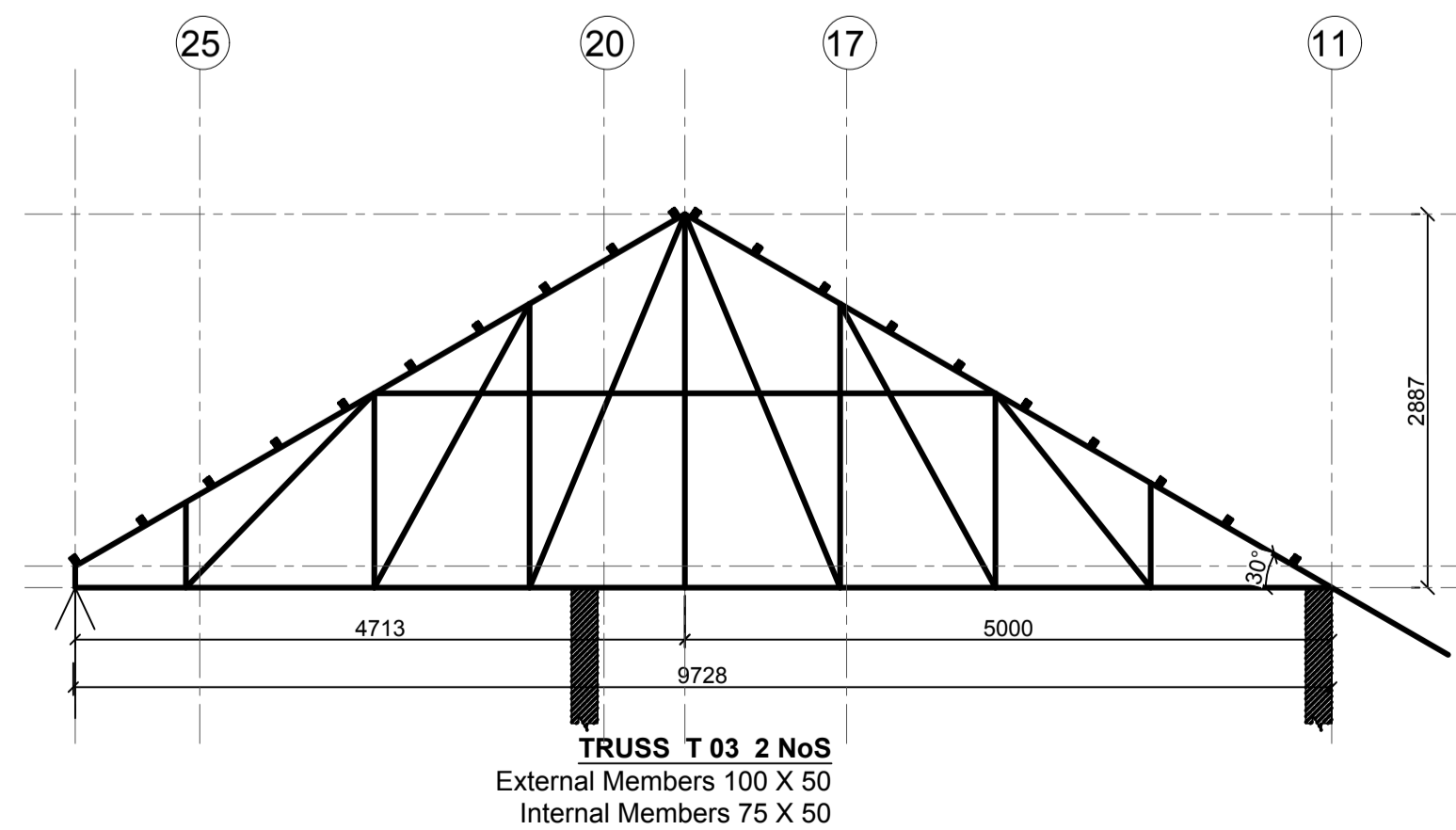
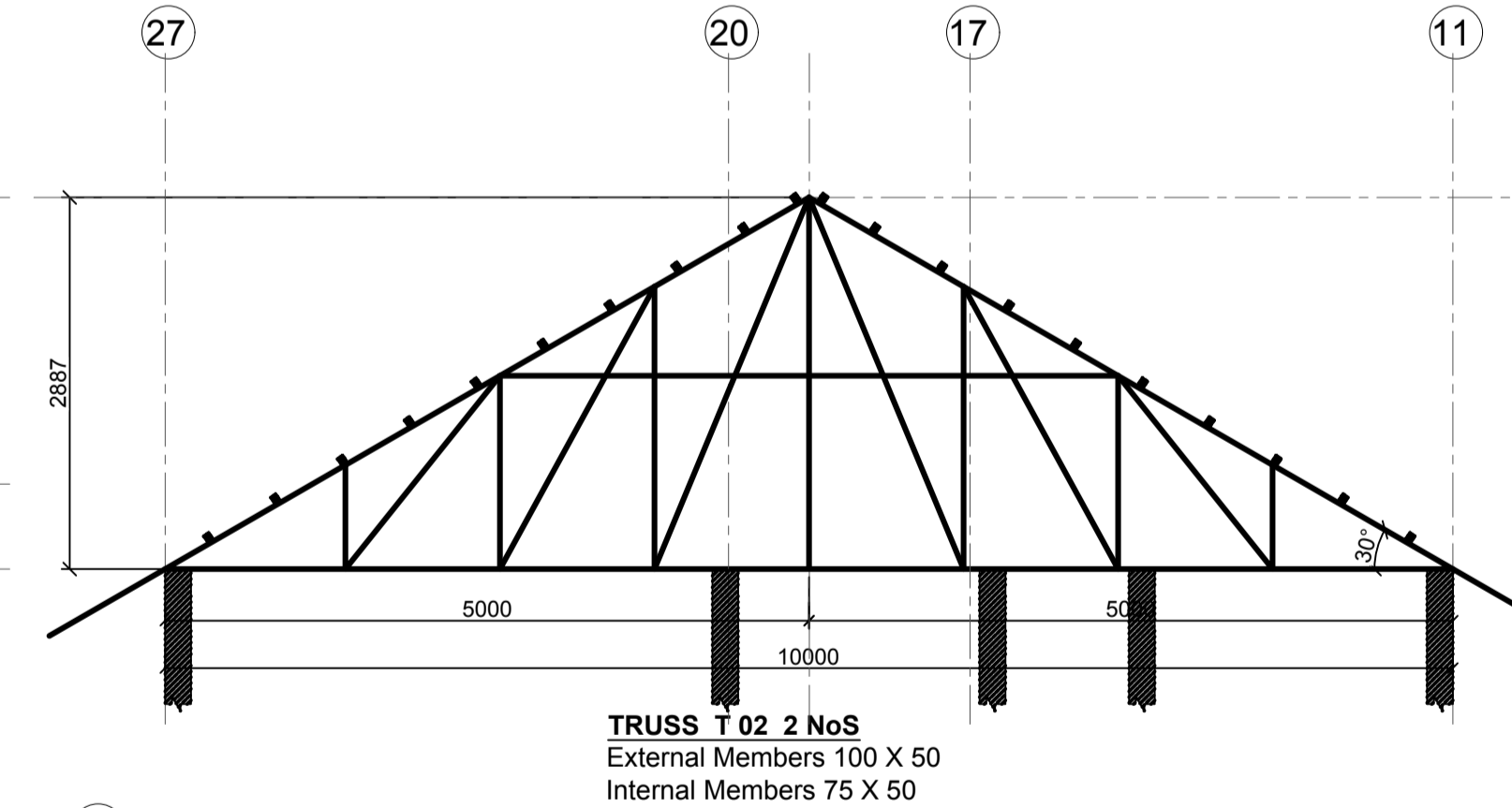
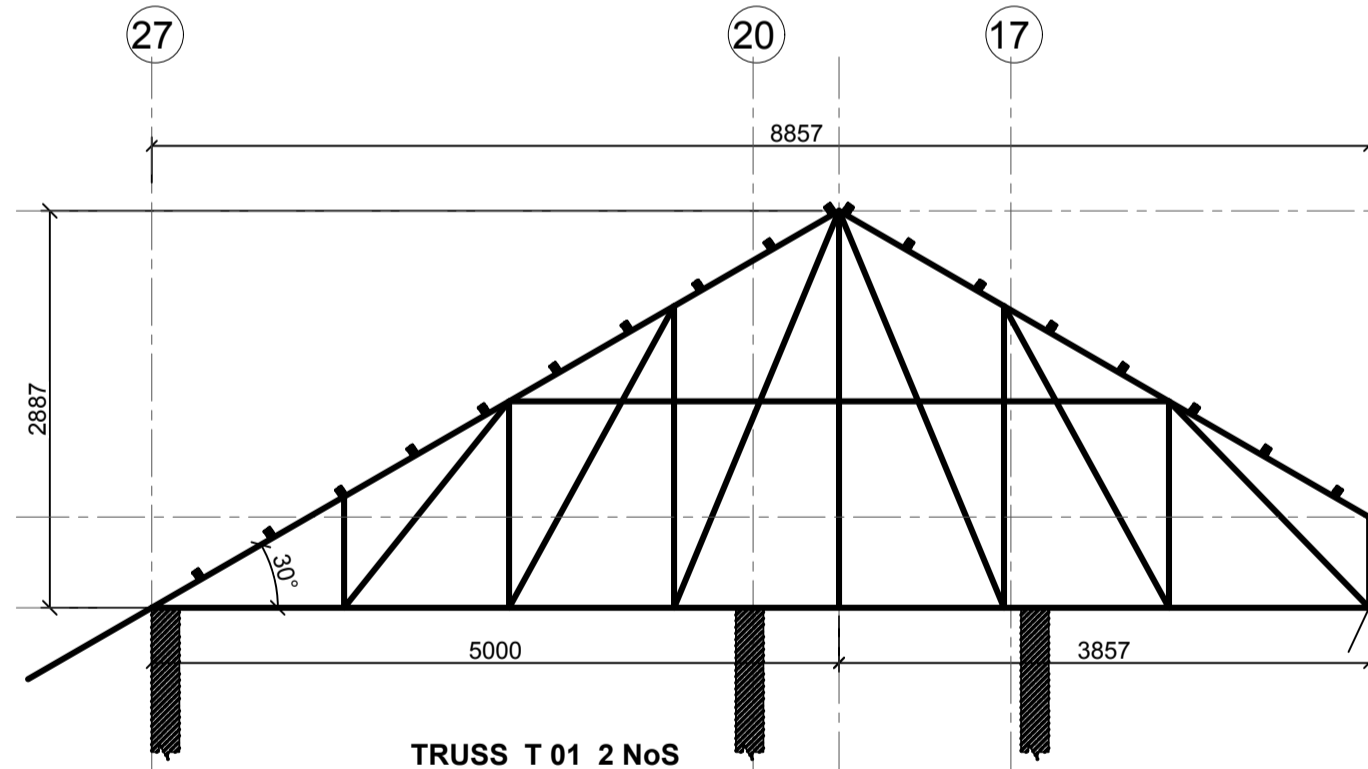
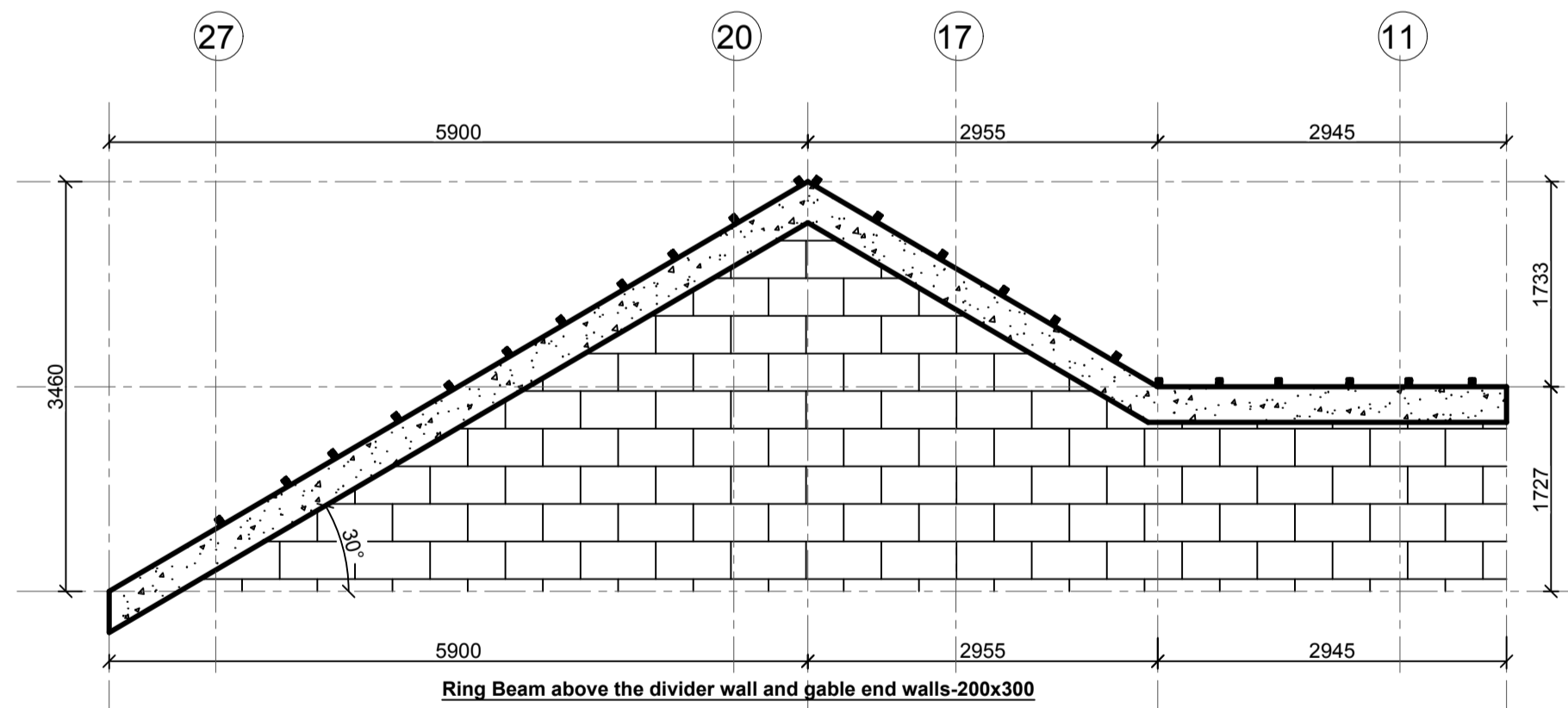
DRAWING TITLE:  
FIRST FLOOR SLAB LAYOUT AND  
REBAR DETAILS  
(TYPE 02B)

DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-2B-02	REV No. DRG STATUS





**GENERAL ROOF LAYOUT**  
 VALLEY RAFTERS 150 X 50  
 NORMAL RAFTERS 75 X 50 @ 900 C/C  
 PURLINS 50X50@600C/C  
 UNDERPURLINS 150 X 50  
 SCALE 1:50



- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM**
- COLUMN - 30MM
  - BEAMS - 25MM
  - SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  7. T1 = TOP 1ST. LAYER, T2 = TOP 2ND LAYER
  8. Y = RIBBED BARS TO BS 4461,
  9. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS. (CLASS 25/20)

- TIMBER NOTES**
1. ALL STRUCTURAL TIMBER TO BE SAWN GRADED CYPRESS (GRADE GS) TO KS 02-771-1989
  2. ALL STRUCTURAL TIMBER TO BE SEASONED TO ANEQUILIBRIUM MOISTURE CONTENT OF BETWEEN 9% AND 15%
  3. SAMPLE TRUSS TO BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE FABRICATION OF OTHER TRUSSES
  4. ALL STRUCTURAL TIMBER TO BE PRESERVATIVE TREATED TO KS02-84-1985
  5. ALL TILE BATTENS TO BE 50 X 25 MM UNLESS OTHERWISE STATED AT 300 MM MAXIMUM.
  6. TIMBER NAILS TO BE ROUND WIRE NAILS 2.65 MM DIAMETER NAILS UNLESS OTHERWISE STATED

**PROJECT ARCHITECTS**

HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5, 0724347807  
 NAIROBI

P.O. BOX 75193-00200,  
 NAIROBI.



F			
E			
D			
C			
B			
A			

REV	Description	Checked/Date	Issued to/Date
-----	-------------	--------------	----------------

**CLIENT:**

Kenyatta National Hospital Staff  
 Retirement Benefit Scheme (2011)  
 P.O. Box 20723-00202, NAIROBI

**ZONE:**  
 Kajiado County

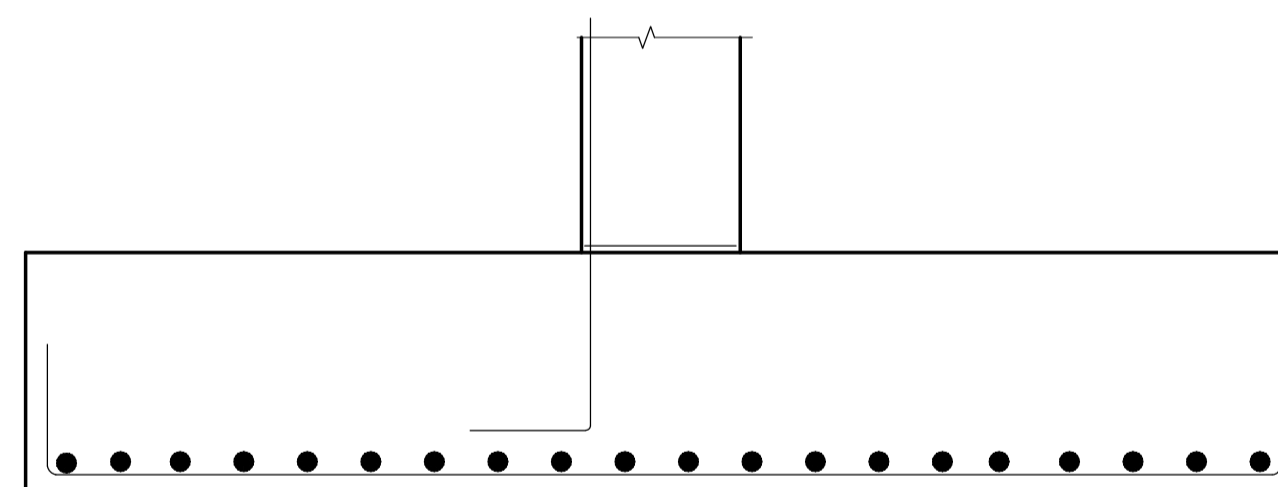
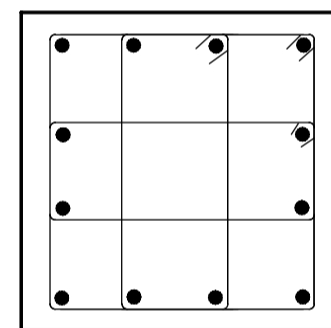
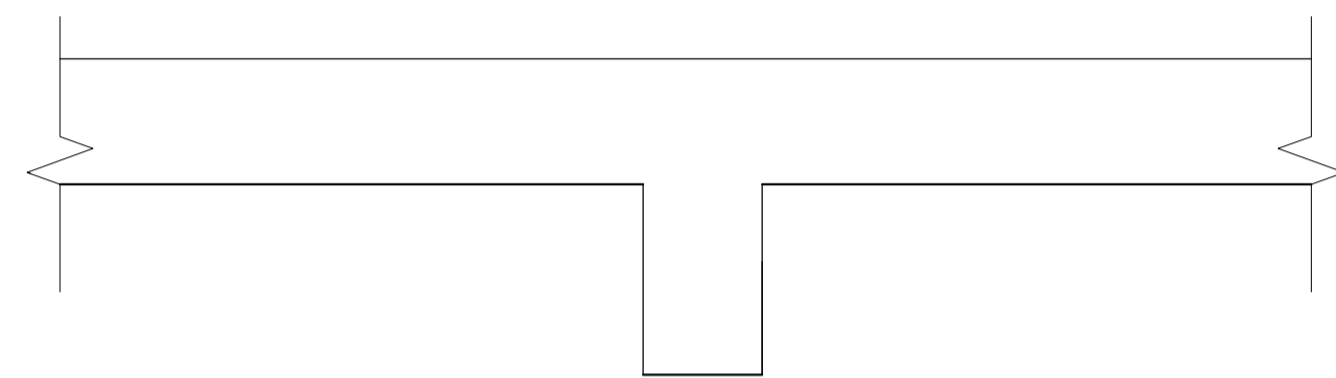
**PROJECT:**  
 Proposed Housing Scheme on Plot LR  
 NO. Kajiado/Kitengela/6242 in  
 Kitengela

**DRAWING TITLE:**  
 GENERAL ROOF DETAILS  
 (TYPE 02B)

DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-2B-03	REV No. DRG STATUS

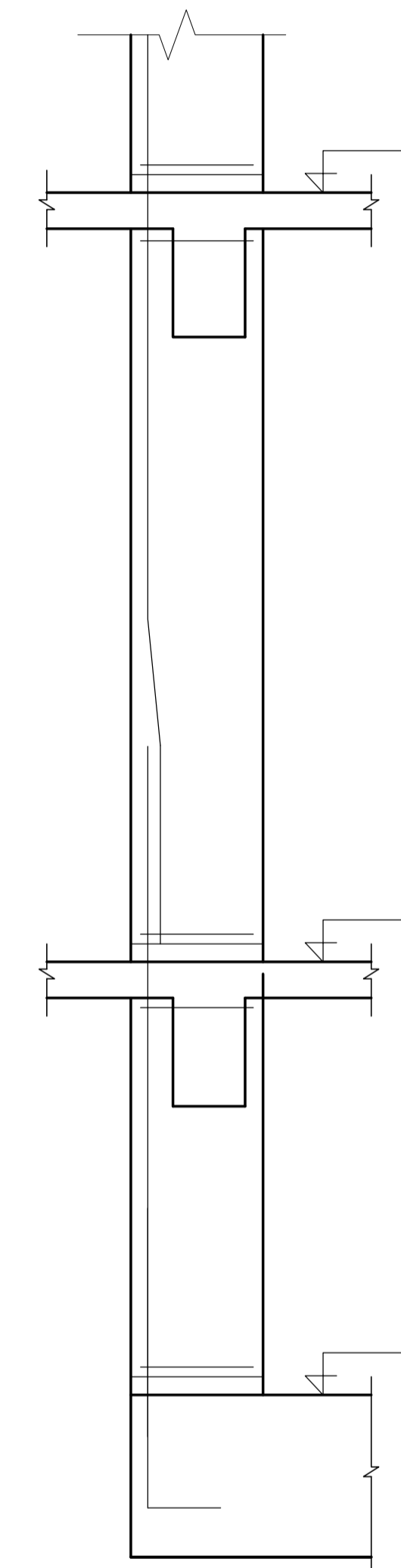
# PROPOSED HOUSING SCHEME ON PLOT LR NO. KAJIADO/KITENGELA/6242 IN KITENGELA, KAJIADO COUNTY

## TYPE 3A STRUCTURAL DRAWINGS



SHAPE CODE	METHOD OF MEASUREMENT OF BENDING DIMENSIONS	TOTAL LENGTH OF BAR ALONG CENTER LINE	DIMENSIONS TO BE GIVEN IN SCHEDULE
20		A	STRAIGHT
32		A + h	
33		A + 2h	
34		A + n	
35		A + 2n	
37		A+B-0.5R-d	

If R is non standard use shape code 51

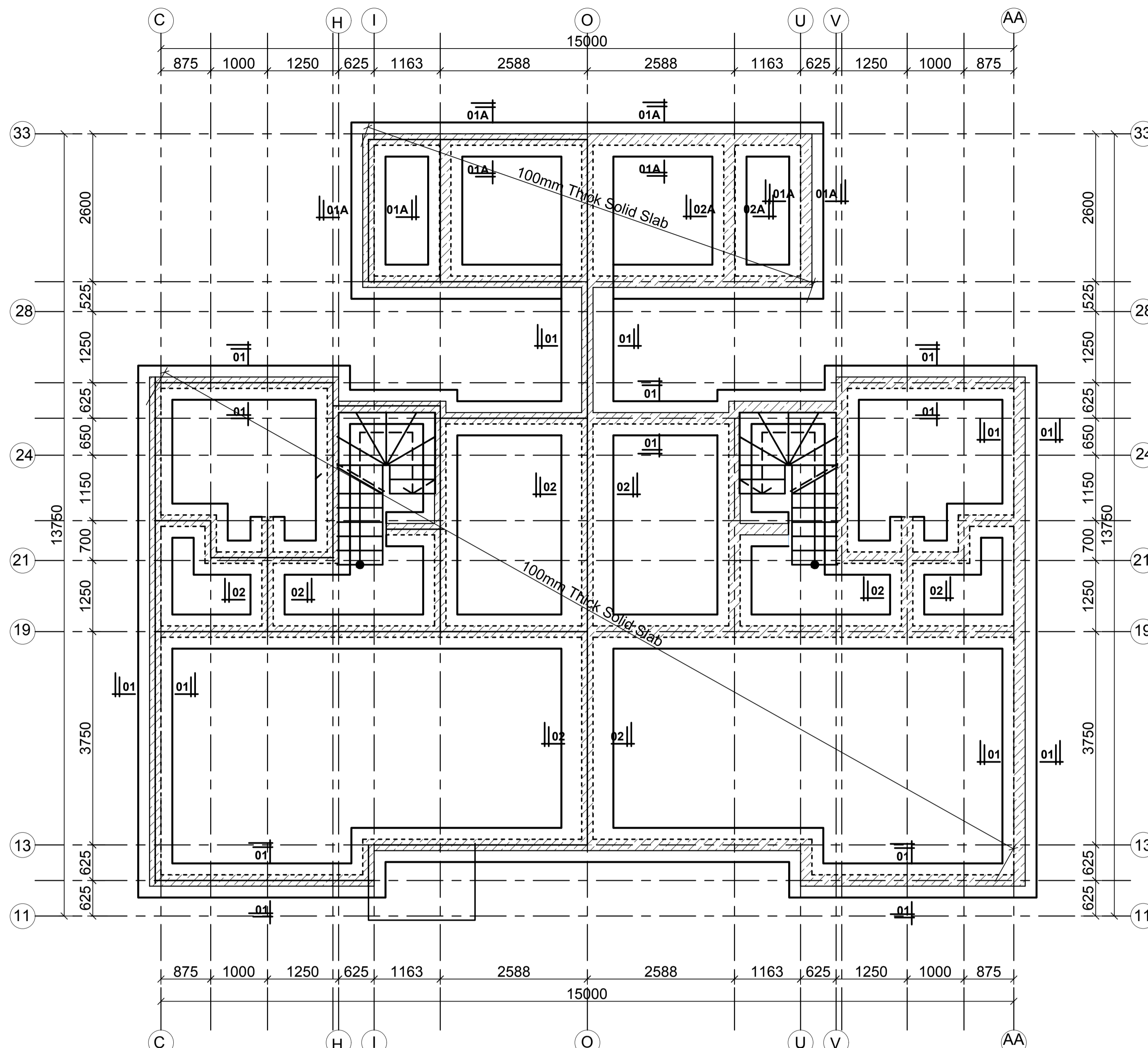


NOVEMBER 2022

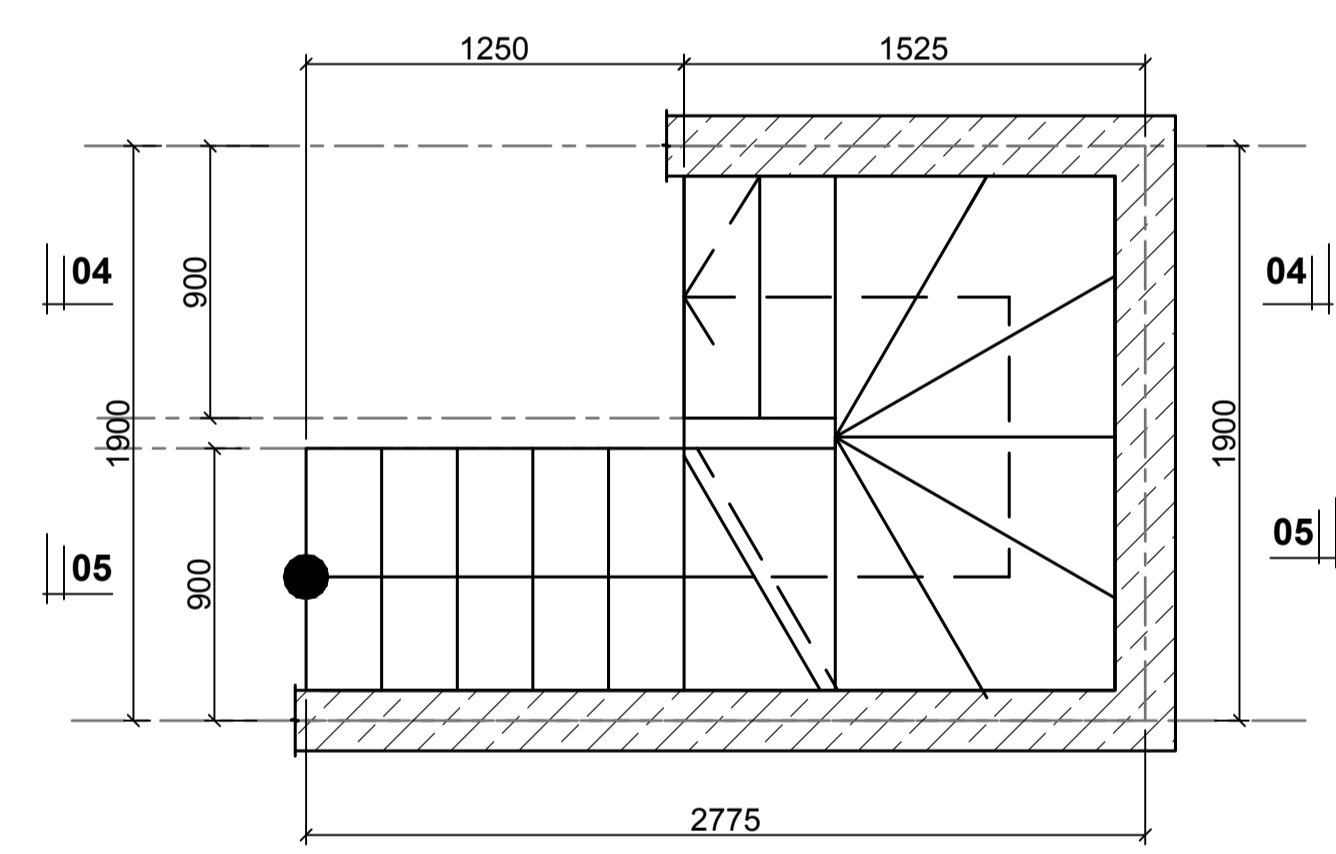
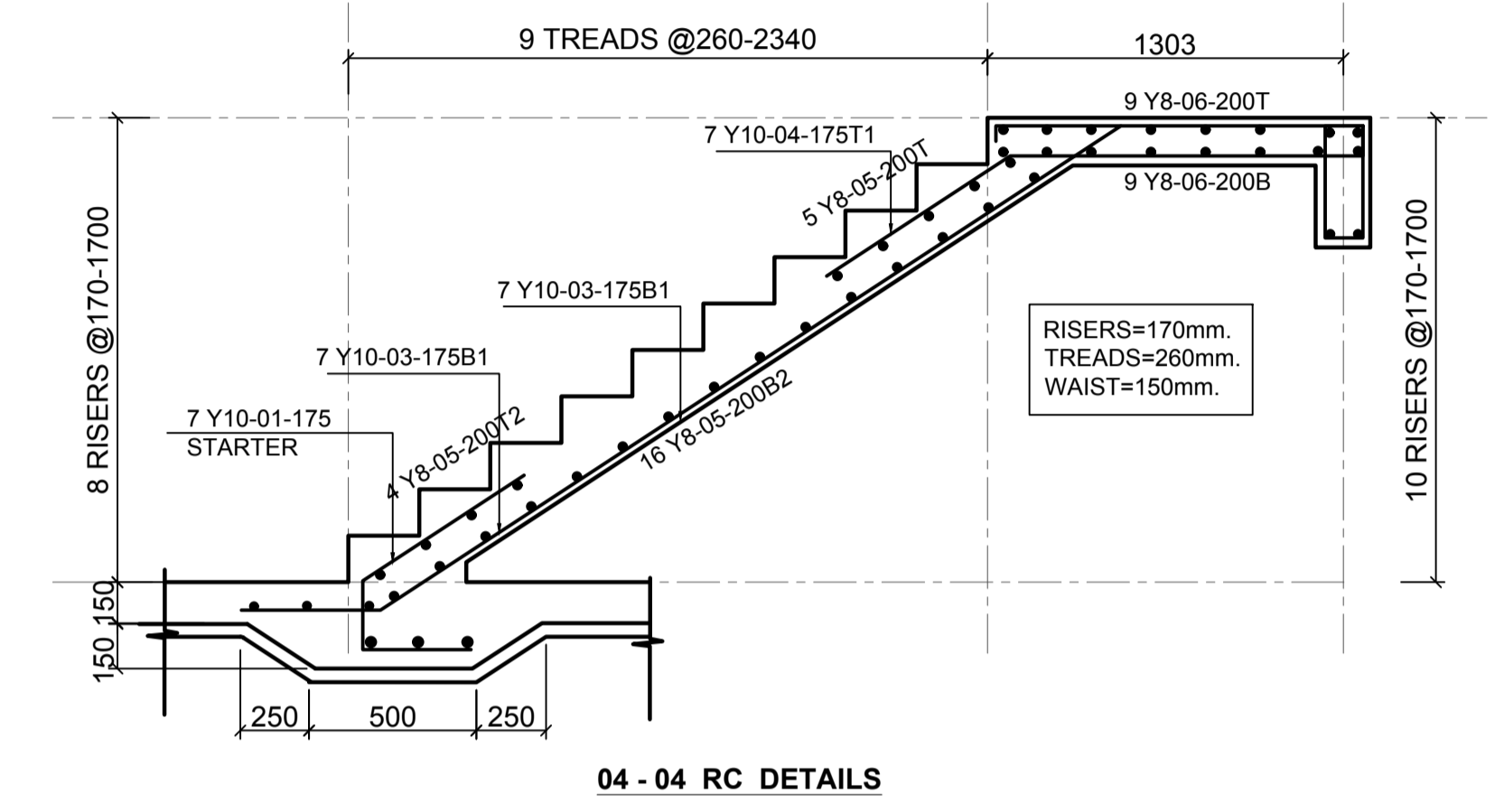
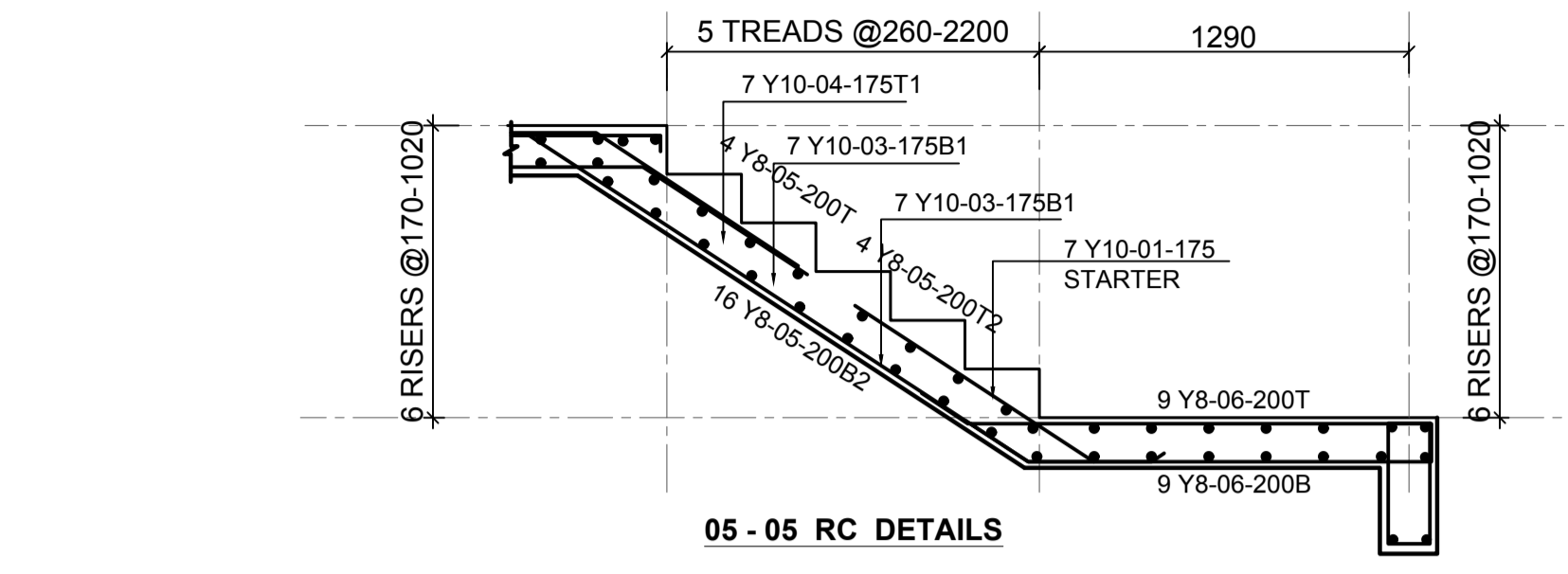
CIVIL AND STRUCTURAL ENGINEERS  
EPOCH CONSULTING  
ENGINEERS  
P.O.BOX 75193-00200,  
NAIROBI.

PROJECT ARCHITECTS  
HABITECH CONSULTANTS  
ARCHITECTS&PLANNERS  
P.O.BOX 66495,  
NAIROBI.

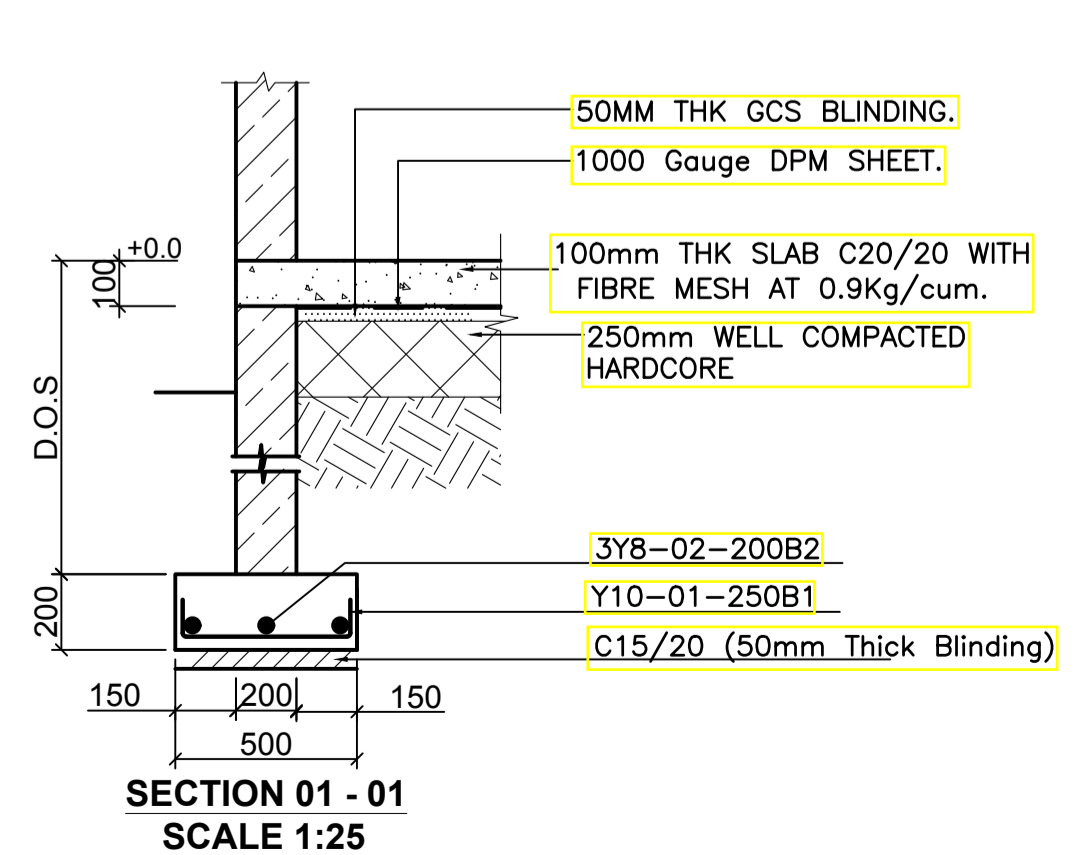
CLIENT:  
KENYATTA NATIONAL HOSPITAL  
STAFF RETIREMENT BENEFITS  
SCHEME(2011)  
P.O BOX 20723-00202  
NAIROBI



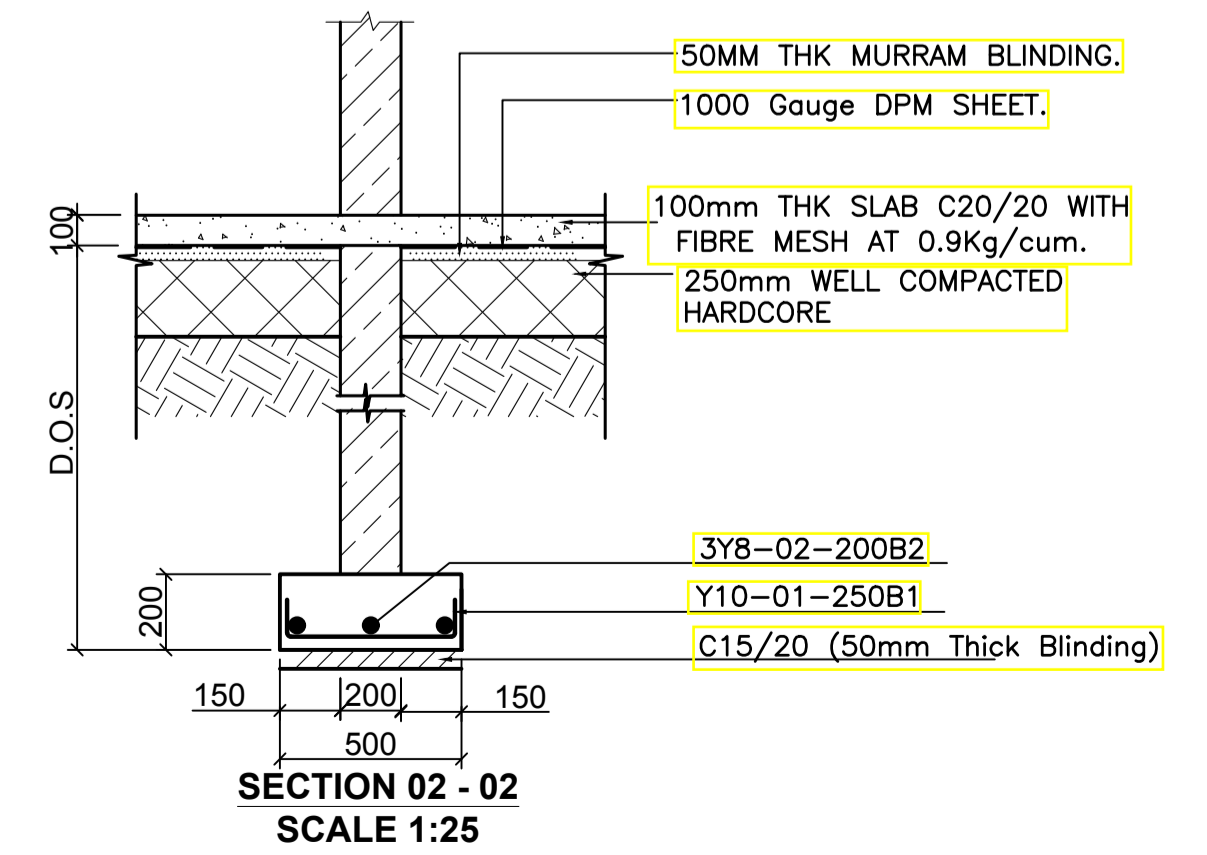
**FOUNDATION AND GROUND FLOOR LAYOUT**  
**GENERAL ARRANGEMENT-100 mm THK SLAB**  
**SCALE=1:50**



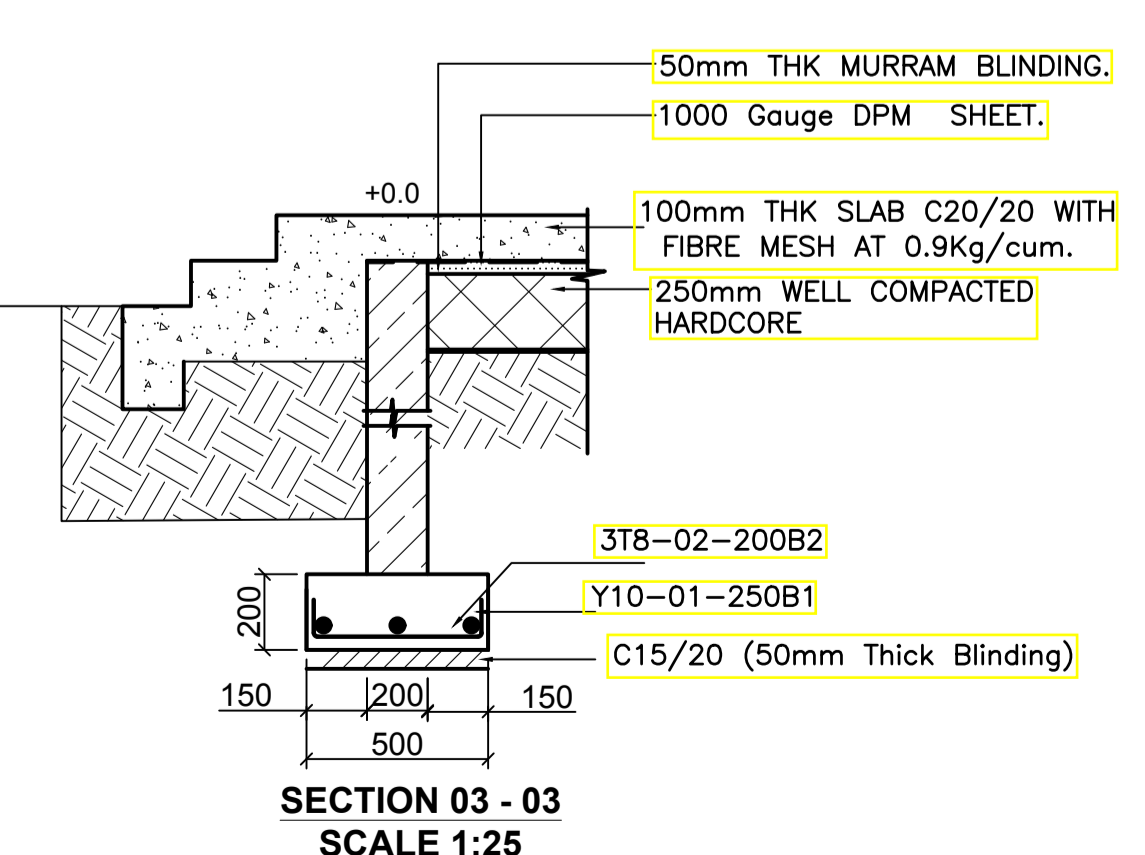
**STAIRCASE PLAN**  
**2 Nos**



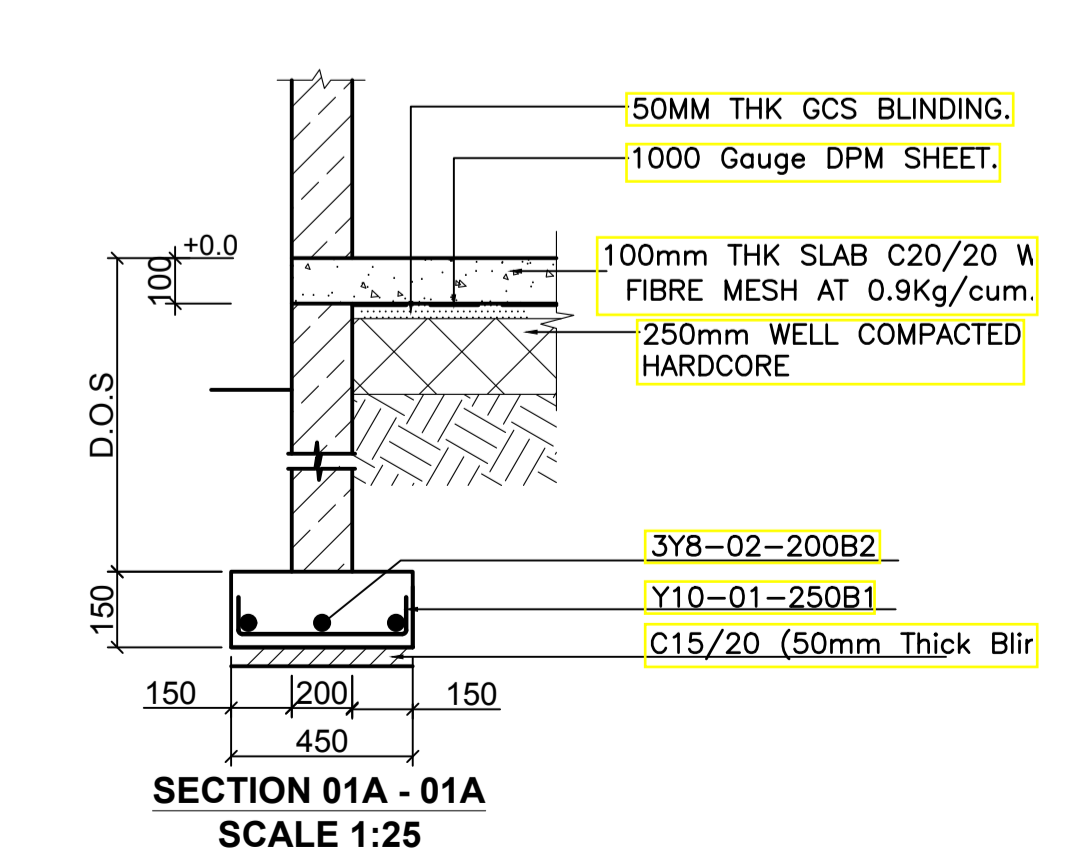
**SECTION 01 - 01**  
**SCALE 1:25**



**SECTION 02 - 02**  
**SCALE 1:25**



**SECTION 03 - 03**  
**SCALE 1:25**



**SECTION 01A - 01A**  
**SCALE 1:25**

- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER, T1 = TOP 1ST. LAYER, T2 = TOP 2ND LAYER.
  7. Y = RIBBED BARS TO BS 4461.
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**  
 HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5,0724347807  
 NAIROBI

P.O.BOX 75193-00200,  
 NAIROBI.  
**EPOCH CONSULTING ENGINEERS**  
 Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

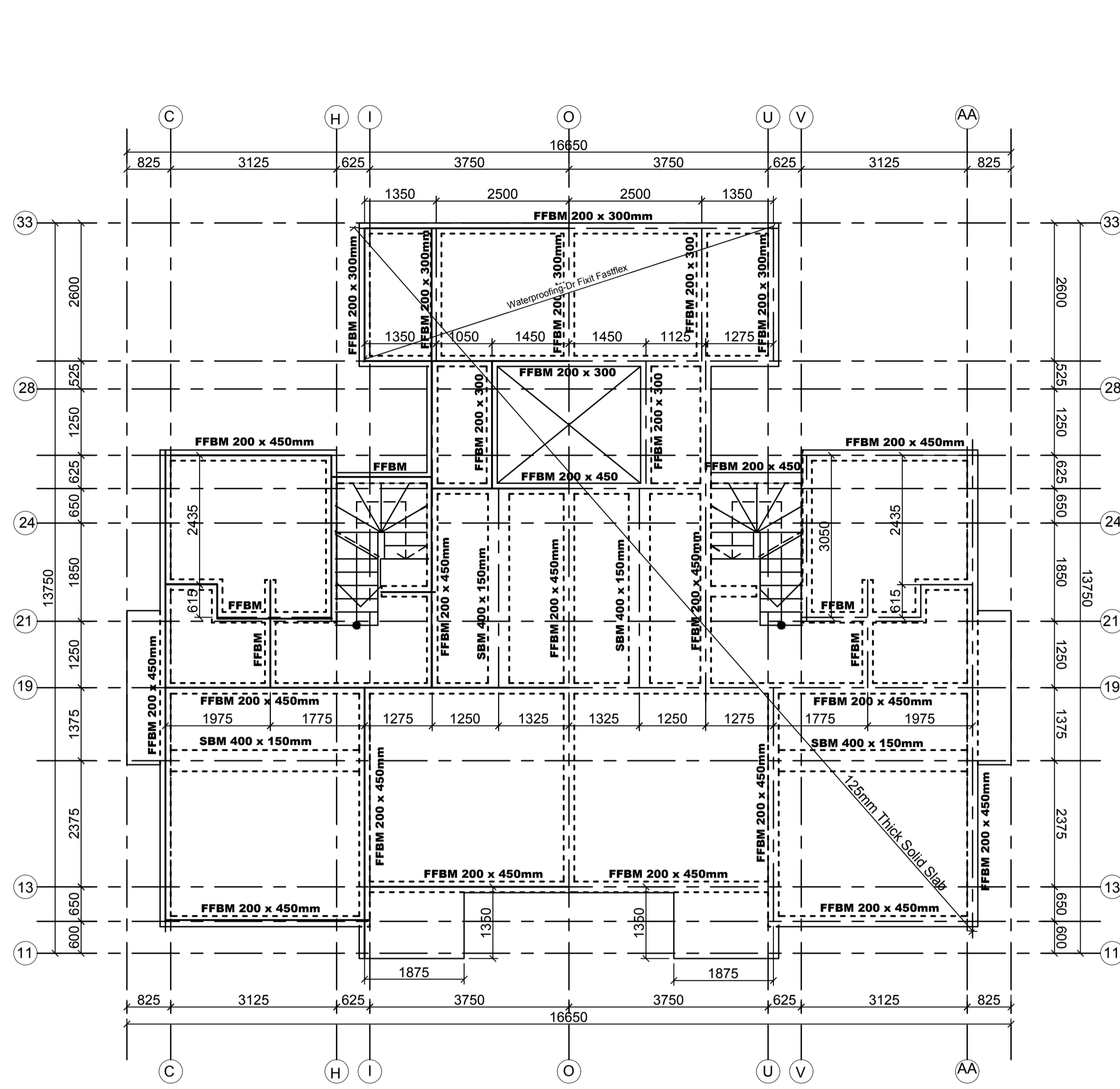
**CLIENT:**  
 Kenyatta National Hospital Staff  
 Retirement Benefit Scheme (2011)  
 P.O Box 20723-00202,NAIROBI

**ZONE:**  
 Kajiado County

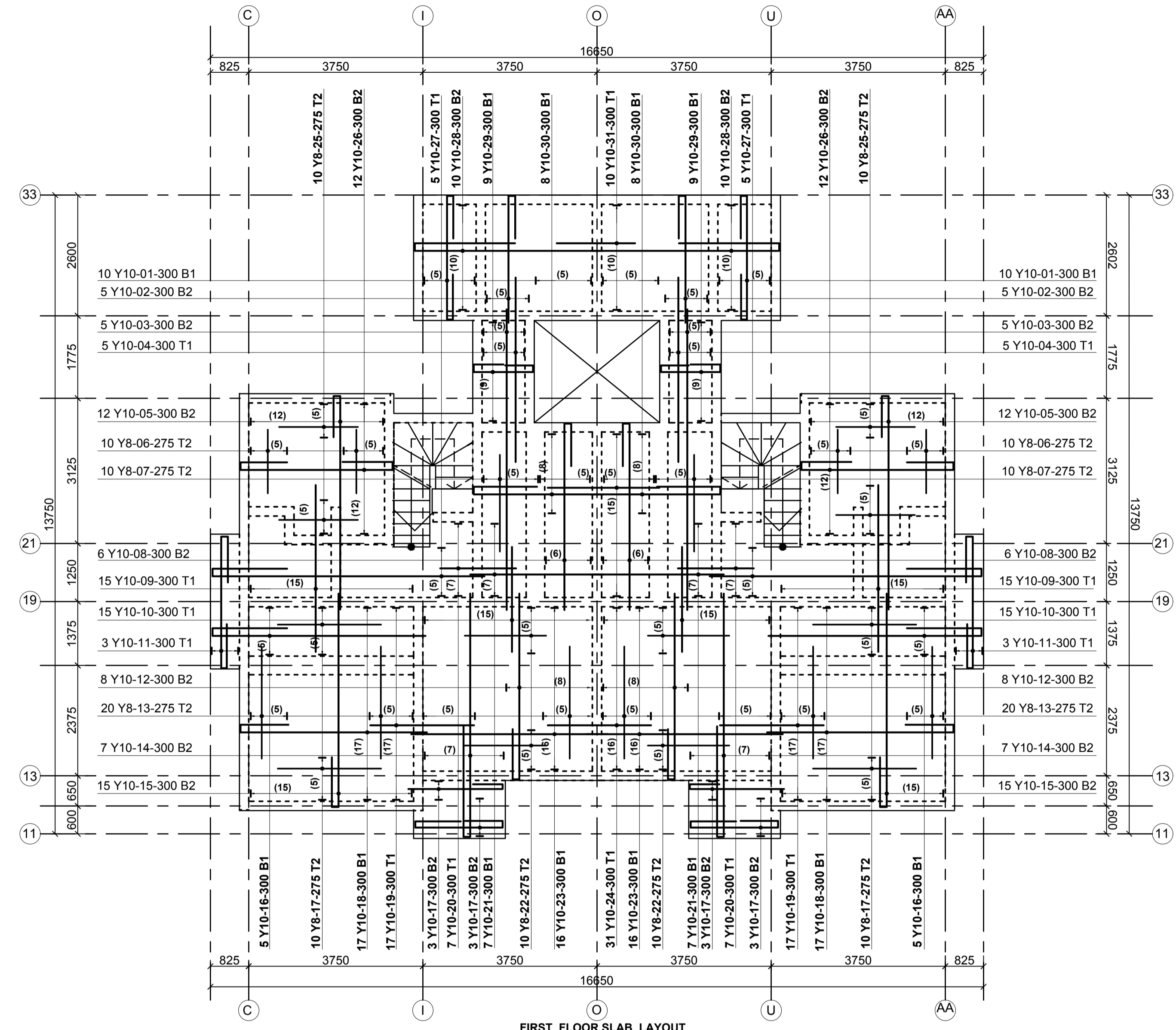
**PROJECT:**  
 Proposed Housing Scheme on Plot LR  
 NO. Kajiado/Kitengela/6242 in  
 Kitengela

**DRAWING TITLE:**  
 FOUNDATION/GROUND FLOOR STRIP FOOTING  
 AND STAIR REBAR DETAILS  
 (TYPE 03A)

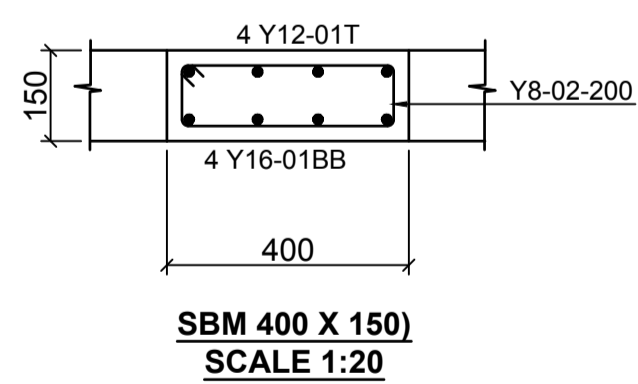
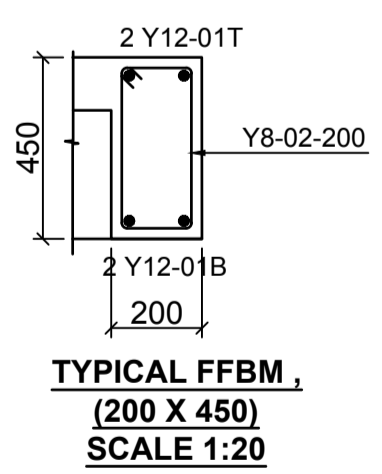
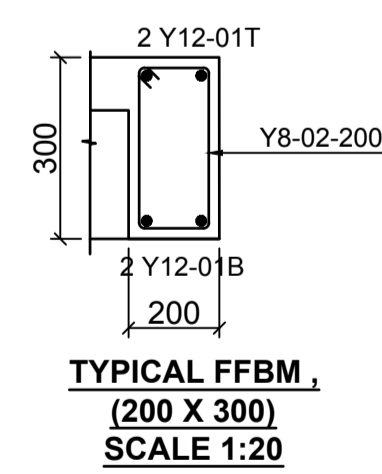
DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-3A-01	REV No. DRG STATUS



FIRST FLOOR SLAB LAYOUT  
125mm THICK SLAB  
SCALE 1:75



FIRST FLOOR SLAB LAYOUT  
125mm THICK SLAB  
SCALE 1:75



- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER  
Y = RIBBED BARS TO BS 4461,
  - CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.  
**EPDM CONSULTING ENGINEERS**  
Civil & Structural Engineers

F			
E			
D			
C			
B			
A			

REV	Description	Checked/Date	Issued to/Date

CLIENT:

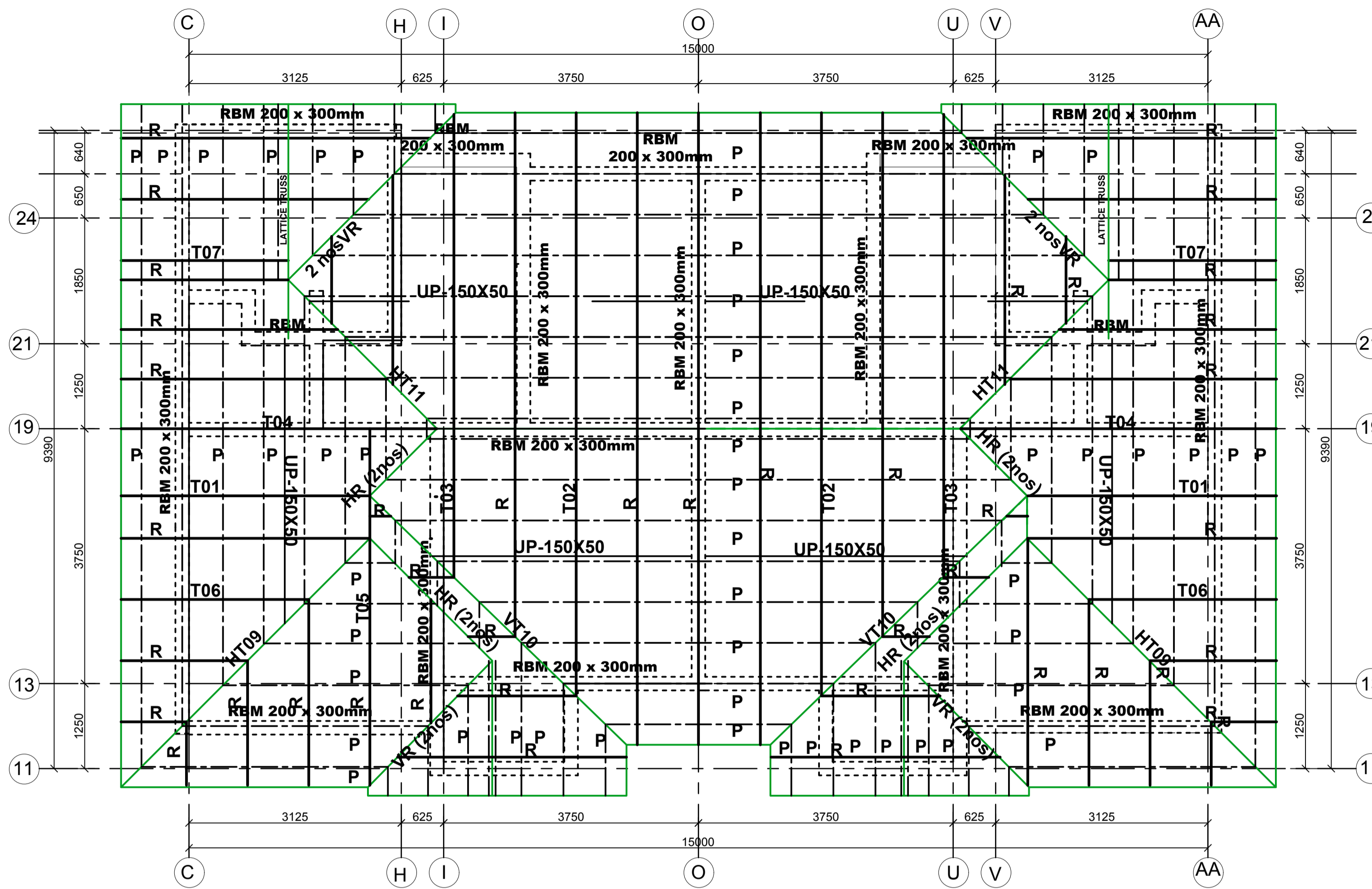
Kenyatta National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

ZONE:  
Kajiado County

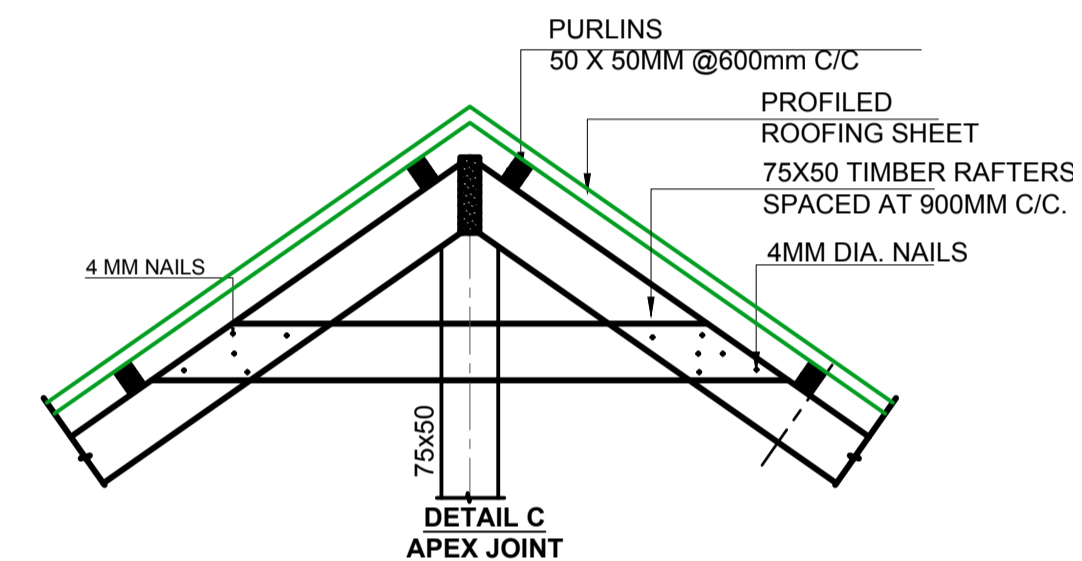
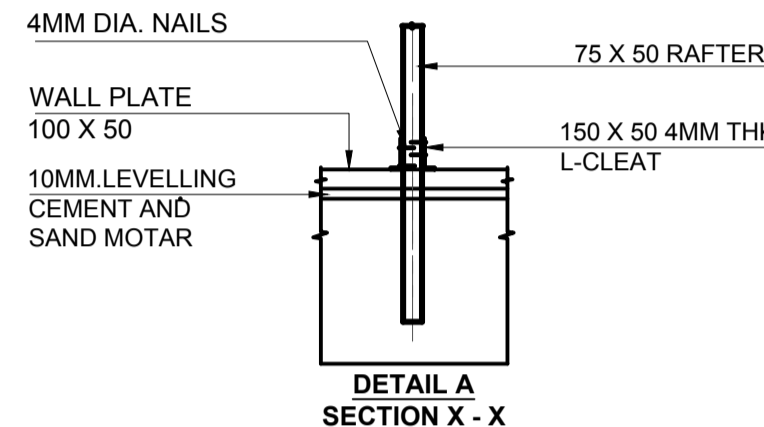
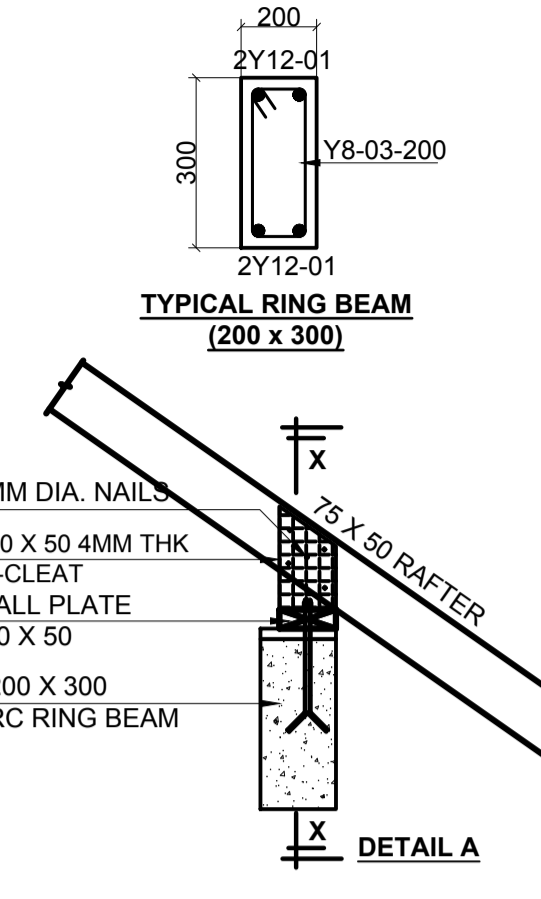
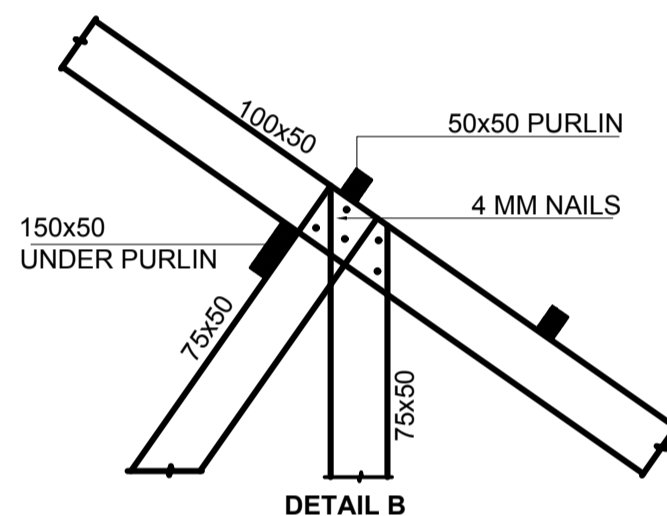
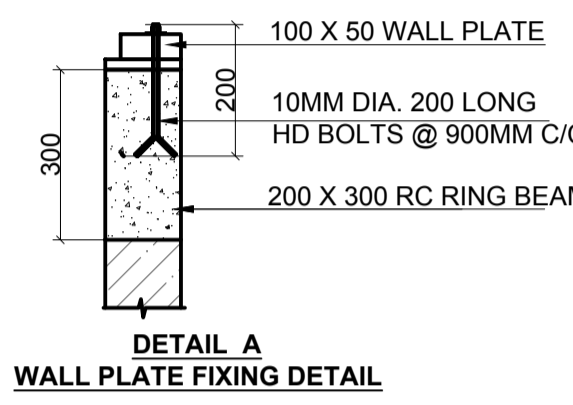
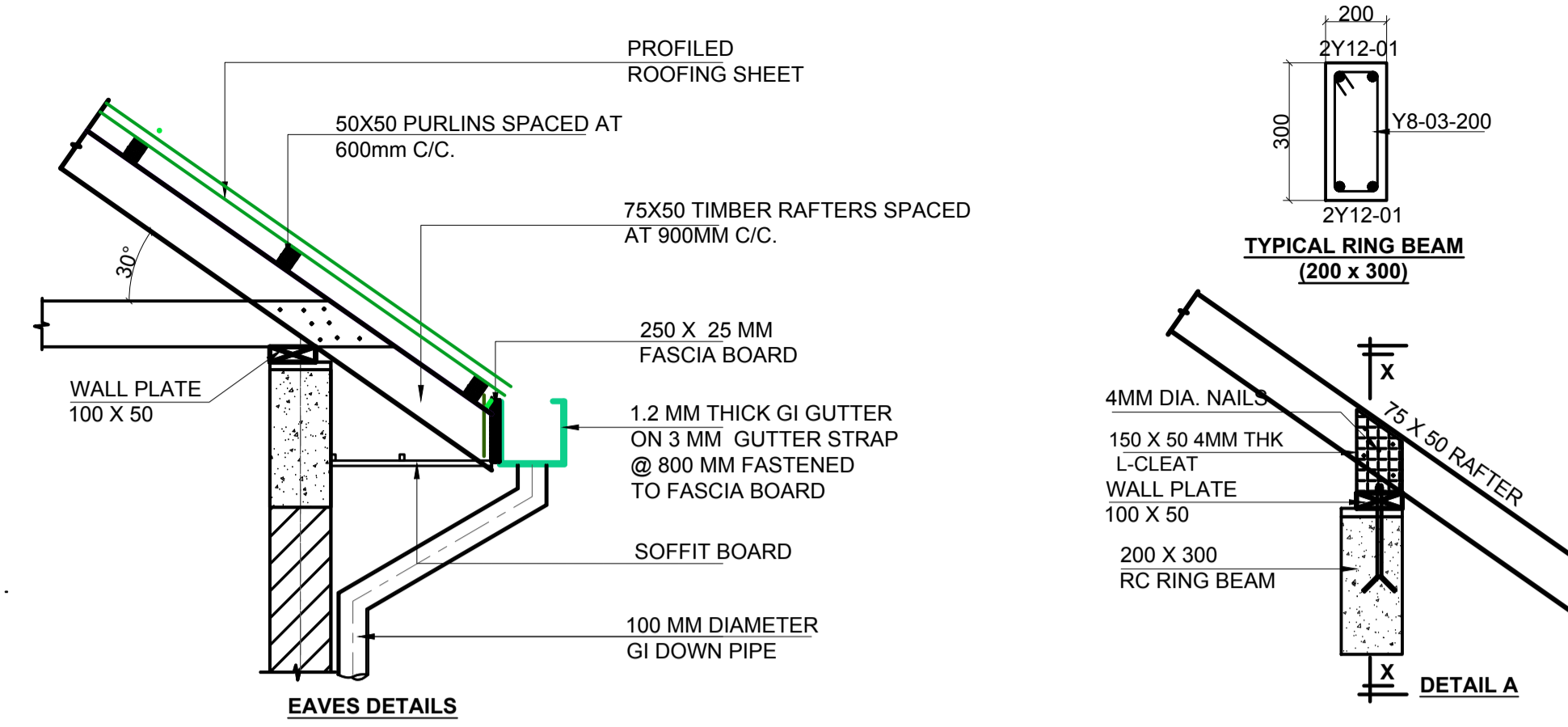
PROJECT:  
Proposed Housing Scheme on Plot LR  
NO. Kajiado/Kitengela/6242 in  
Kitengela

DRAWING TITLE:  
FIRST FLOOR SLAB LAYOUT AND  
REBAR DETAILS  
(TYPE 03A)

DESIGNED BY: I.M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-3A-02	REV No. DRG STATUS



**GENERAL ROOF LAYOUT**  
 VALLEY RAFTERS 2/100 X 50  
 RAFTERS 75 X 50 @ 900 C/C  
 PURLINS 50X50@600C/C  
 UNDERPURLINS 150 X 50  
 SCALE 1:50



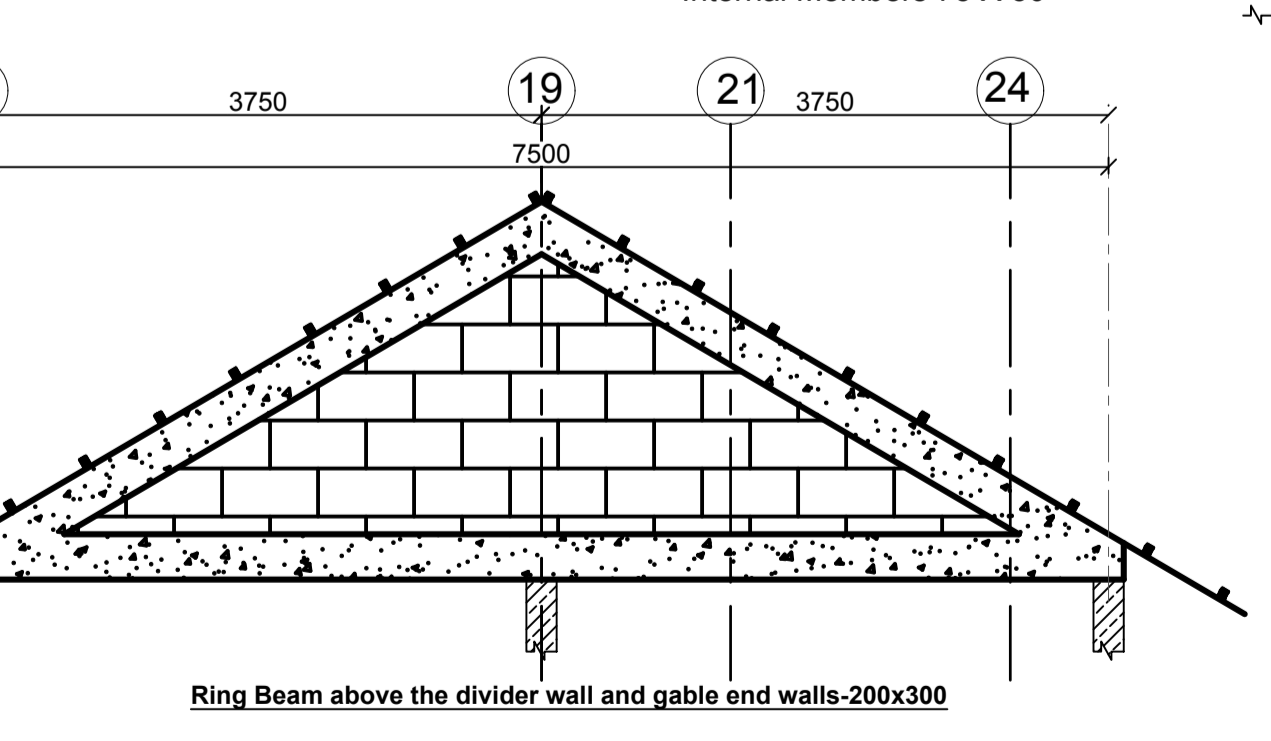
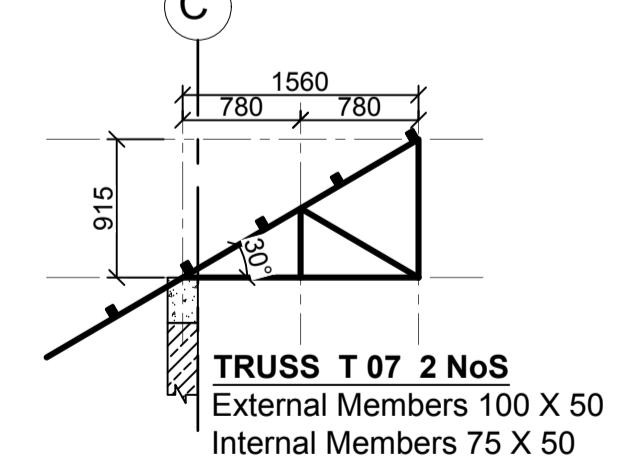
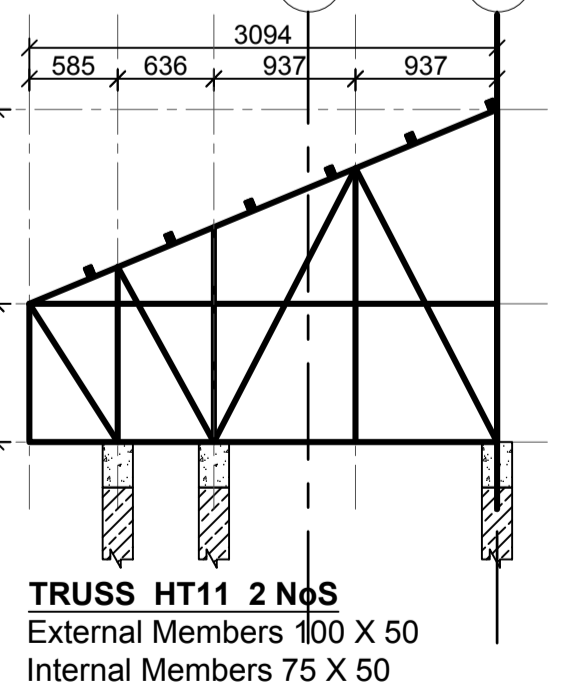
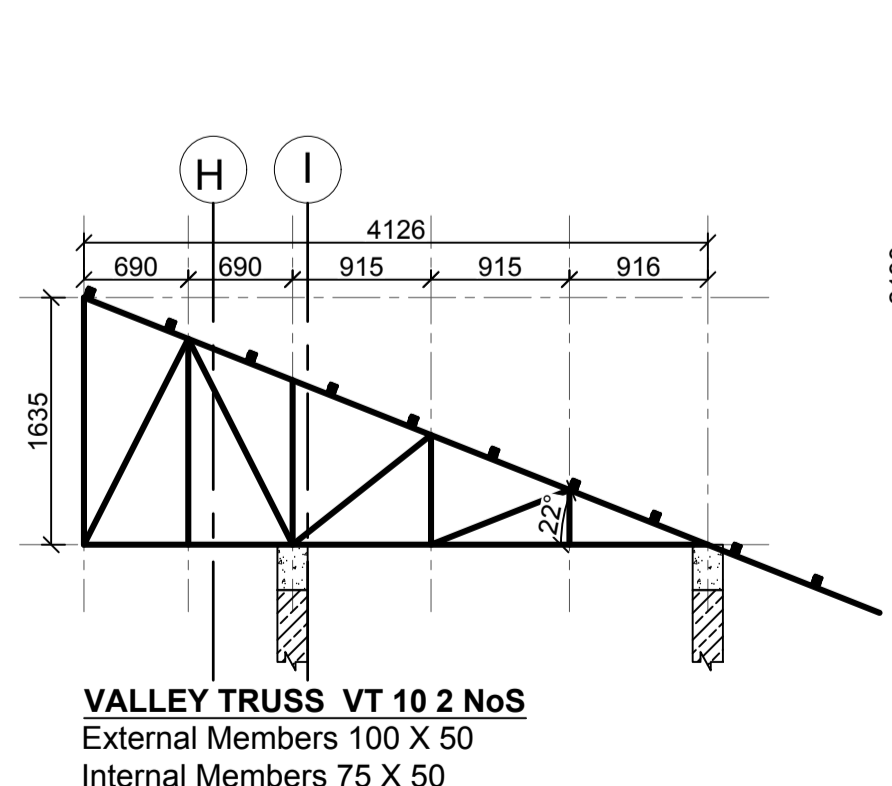
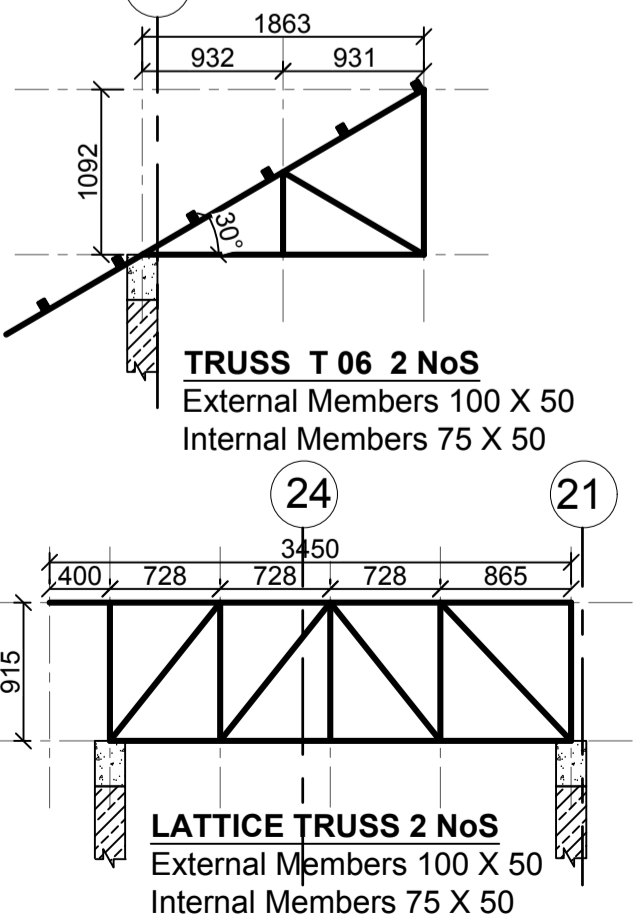
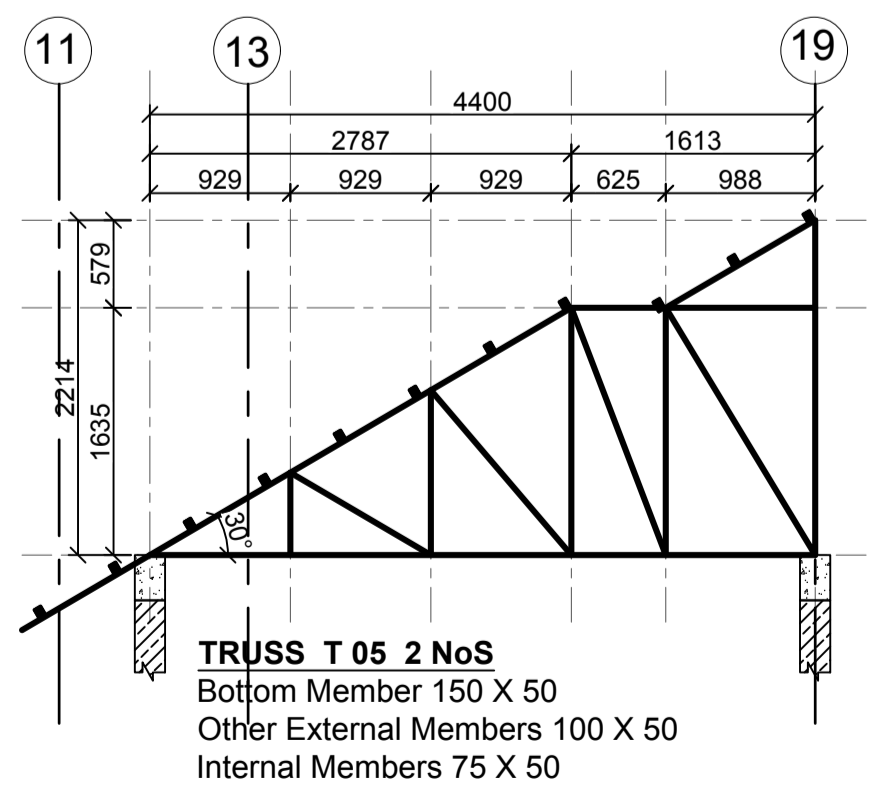
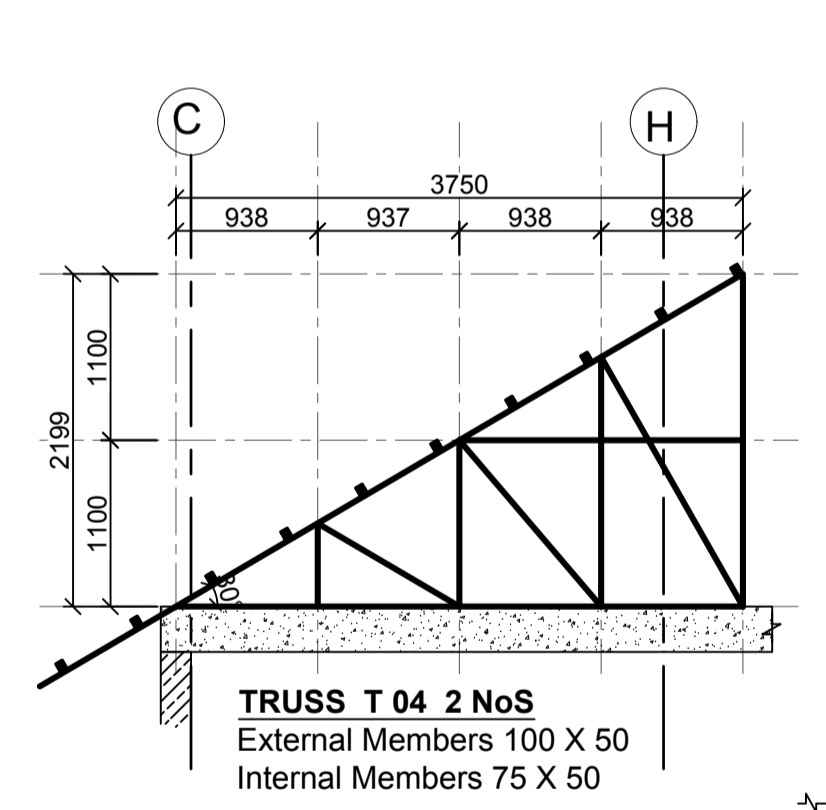
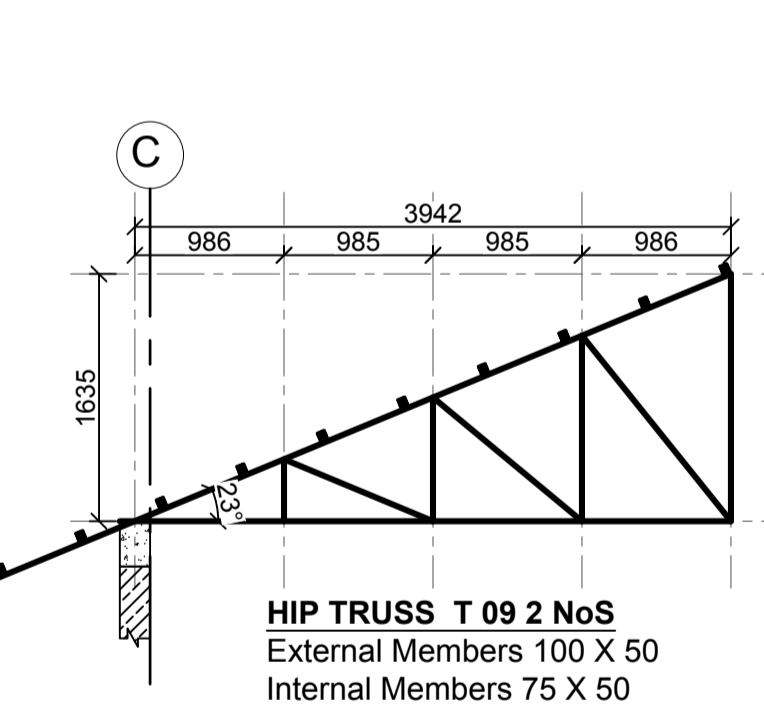
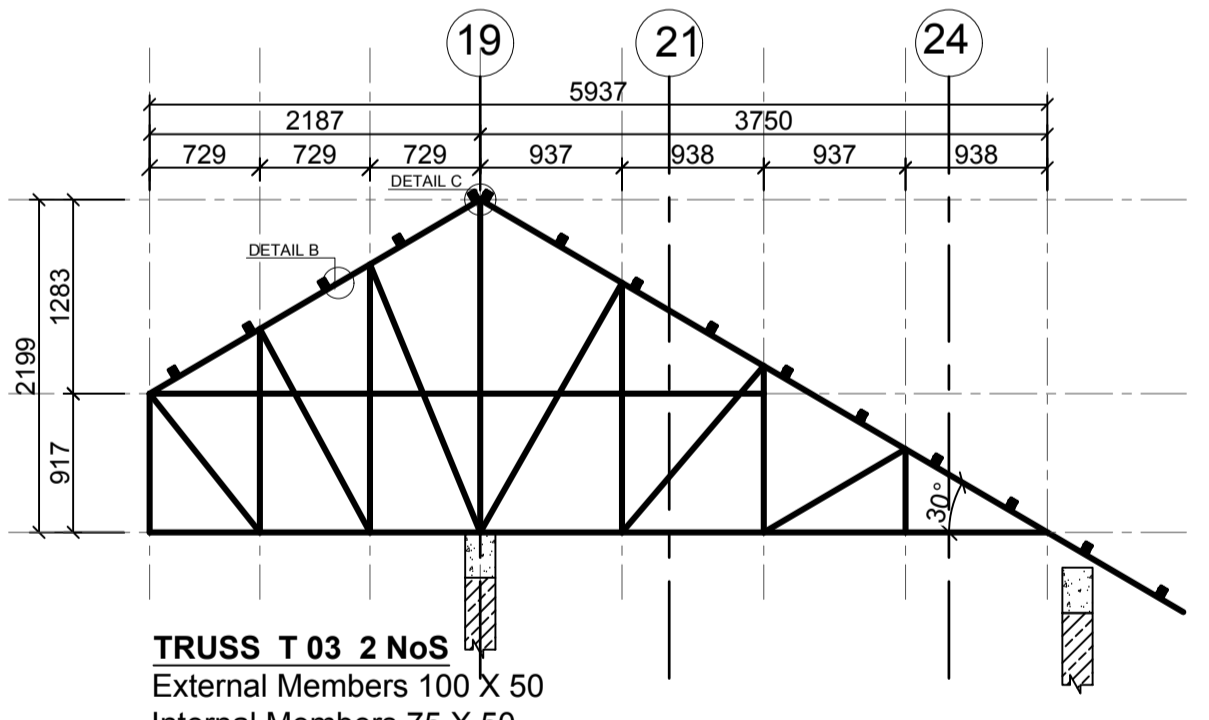
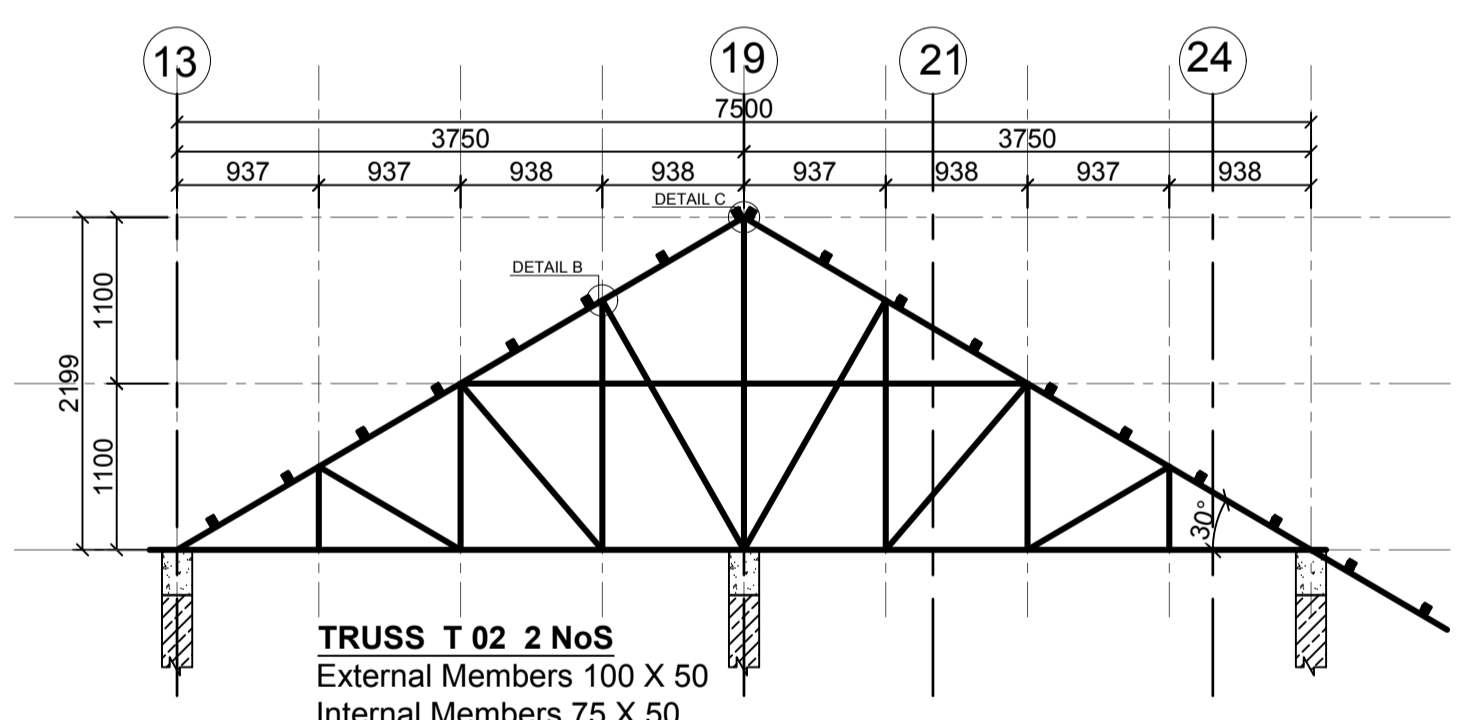
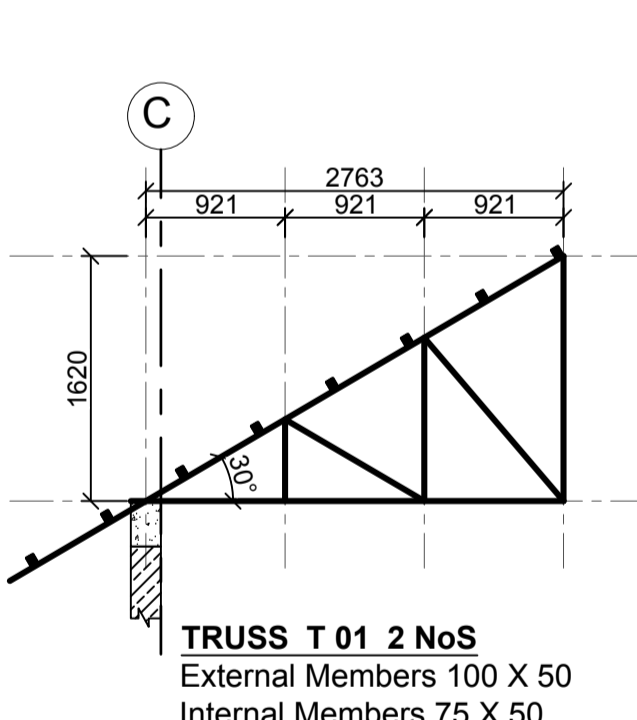
- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM**
- COLUMN - 30MM
  - BEAMS - 25MM
  - SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  - T1 = TOP 1ST. LAYER, T2 = TOP 2ND. LAYER
  7. Y = RIBBED BARS TO BS 4461,
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS. (CLASS 25/20)

- TIMBER NOTES**
1. ALL STRUCTURAL TIMBER TO BE SAWN GRADED CYPRESS (GRADE GS) TO KS 02-771-1989
  2. ALL STRUCTURAL TIMBER TO BE SEASONED TO ANEQUILIBRIUM MOISTURE CONTENT OF BETWEEN 9% AND 15%
  3. SAMPLE TRUSS TO BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE FABRICATION OF OTHER TRUSSES
  4. ALL STRUCTURAL TIMBER TO BE PRESERVATIVE TREATED TO KS02-84-1985
  5. ALL TILE BATTENS TO BE 50 X 25 MM UNLESS OTHERWISE STATED AT 300 MM MAXIMUM.
  6. TIMBER NAILS TO BE ROUND WIRE NAILS 2.65 MM DIAMETER NAILS UNLESS OTHERWISE STATED

**PROJECT ARCHITECTS**  
 HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5, 0724347807  
 NAIROBI

**EPON CONSULTING ENGINEERS**  
 Civil & Structural Engineers  
 P.O. BOX 75193-00200,  
 NAIROBI.



REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

**CLIENT:**  
 Kenyatta National Hospital Staff Retirement Benefit Scheme (2011)  
 P.O Box 20723-00202, NAIROBI

**ZONE:**  
 Kajiado County

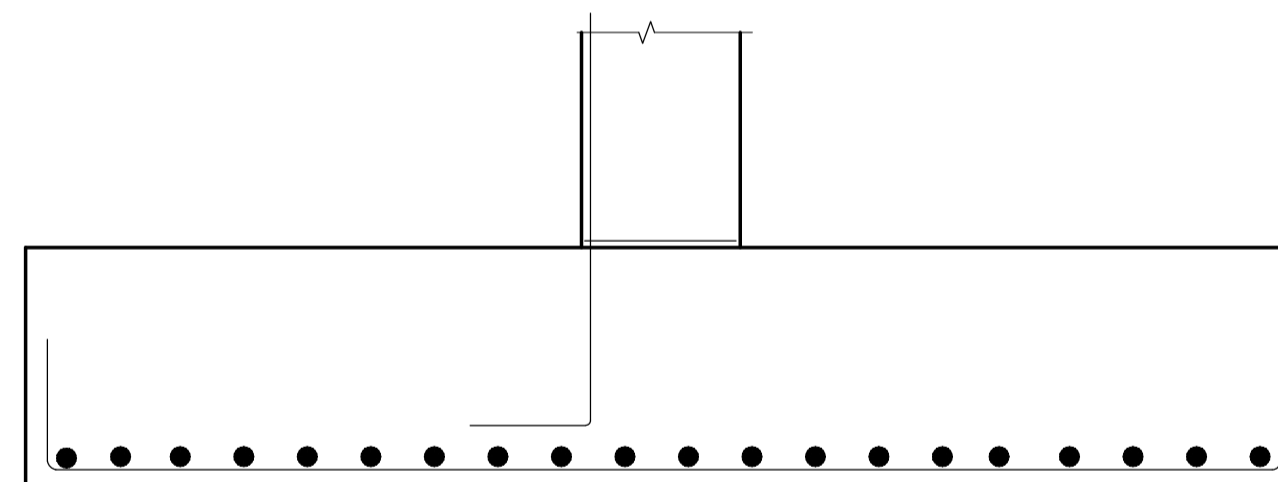
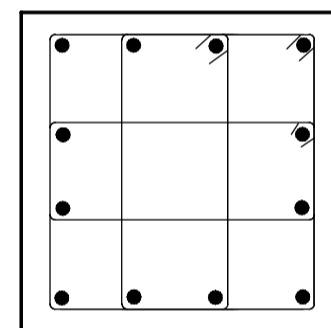
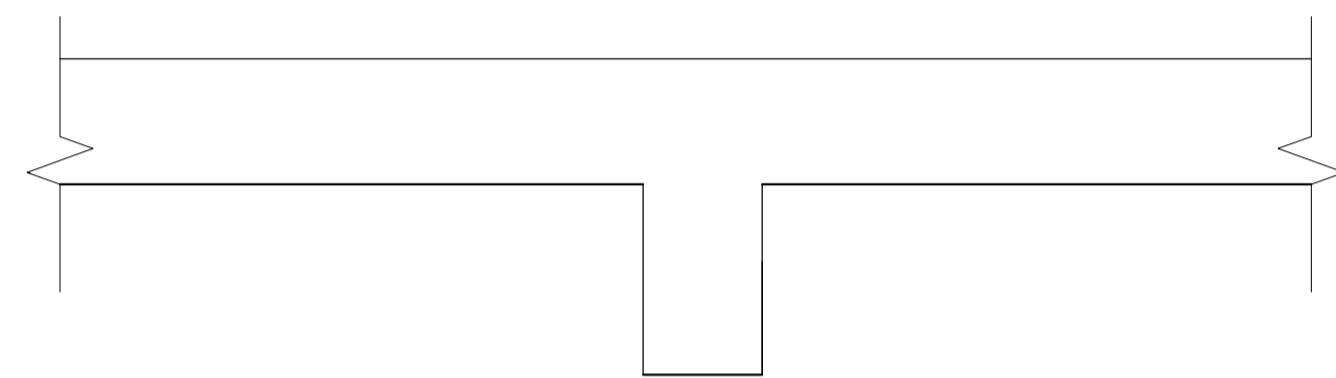
**PROJECT:**  
 Proposed Housing Scheme on Plot LR NO. Kajiado/Kitengela/6242 in Kitengela

**DRAWING TITLE:**  
 GENERAL ROOF DETAILS (TYPE 03A)

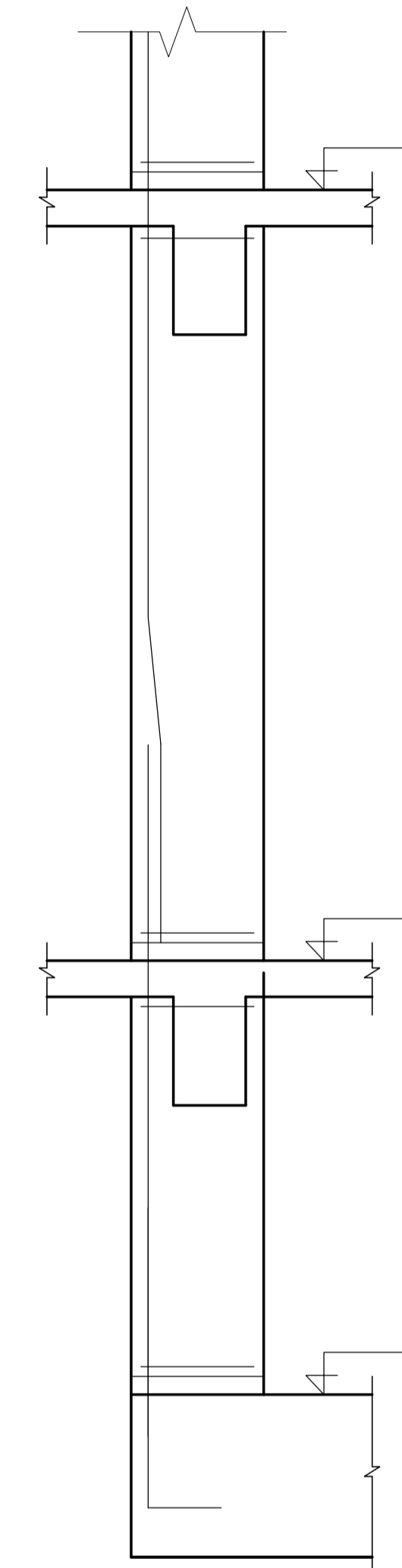
DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-3A-03	REV No. DRG STATUS

# PROPOSED HOUSING SCHEME ON PLOT LR NO. KAJIADO/KITENGELA/6242 IN KITENGELA, KAJIADO COUNTY

## TYPE 3B STRUCTURAL DRAWINGS



SHAPE CODE	METHOD OF MEASUREMENT OF BENDING DIMENSIONS	TOTAL LENGTH OF BAR ALONG CENTER LINE	DIMENSIONS TO BE GIVEN IN SCHEDULE
20		A	STRAIGHT
32		A + h	
33		A + 2h	
34		A + n	
35		A + 2n	
37		A+B-0.5R-d	

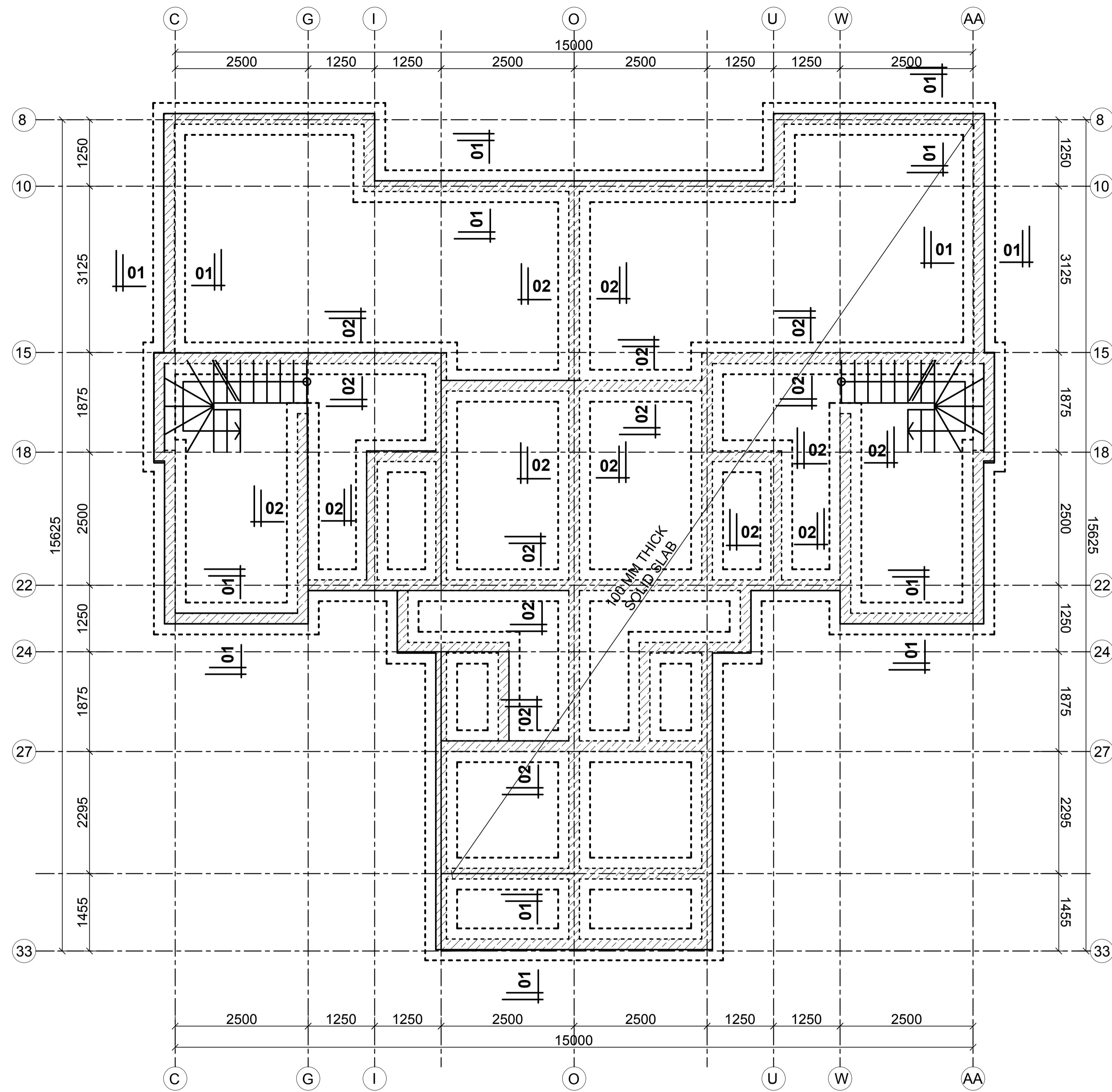


NOVEMBER 2022

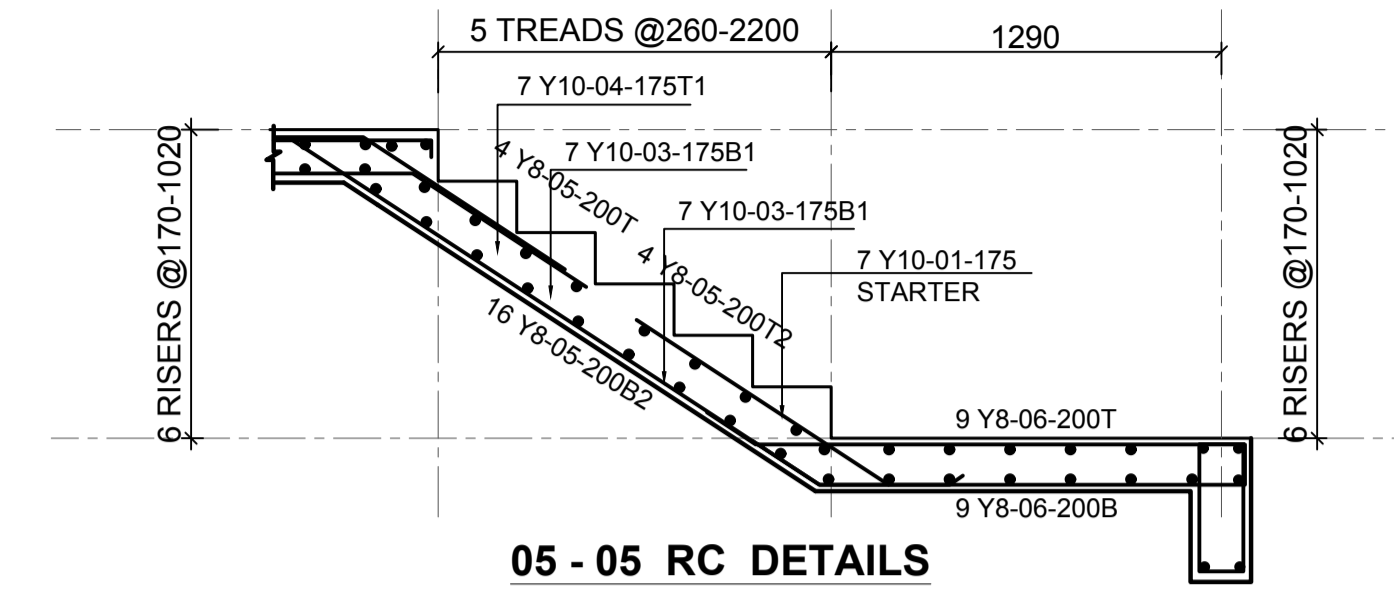
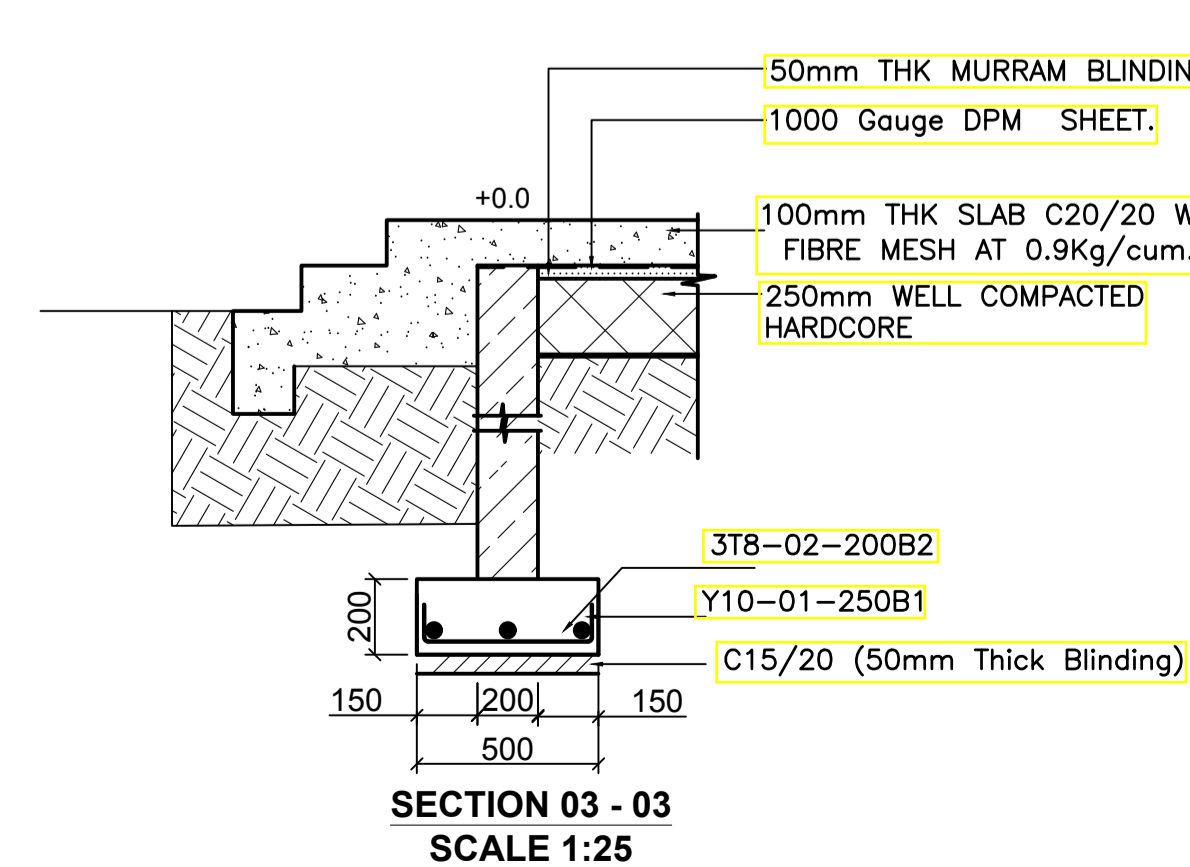
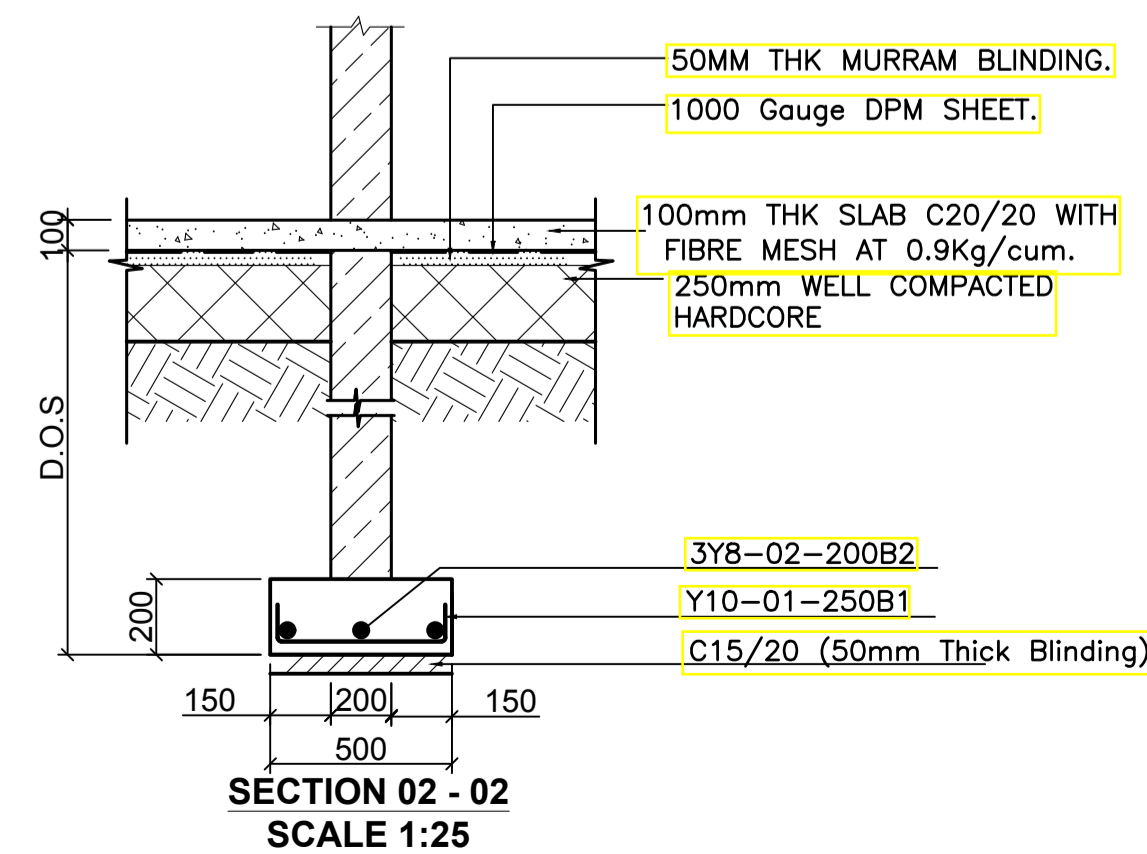
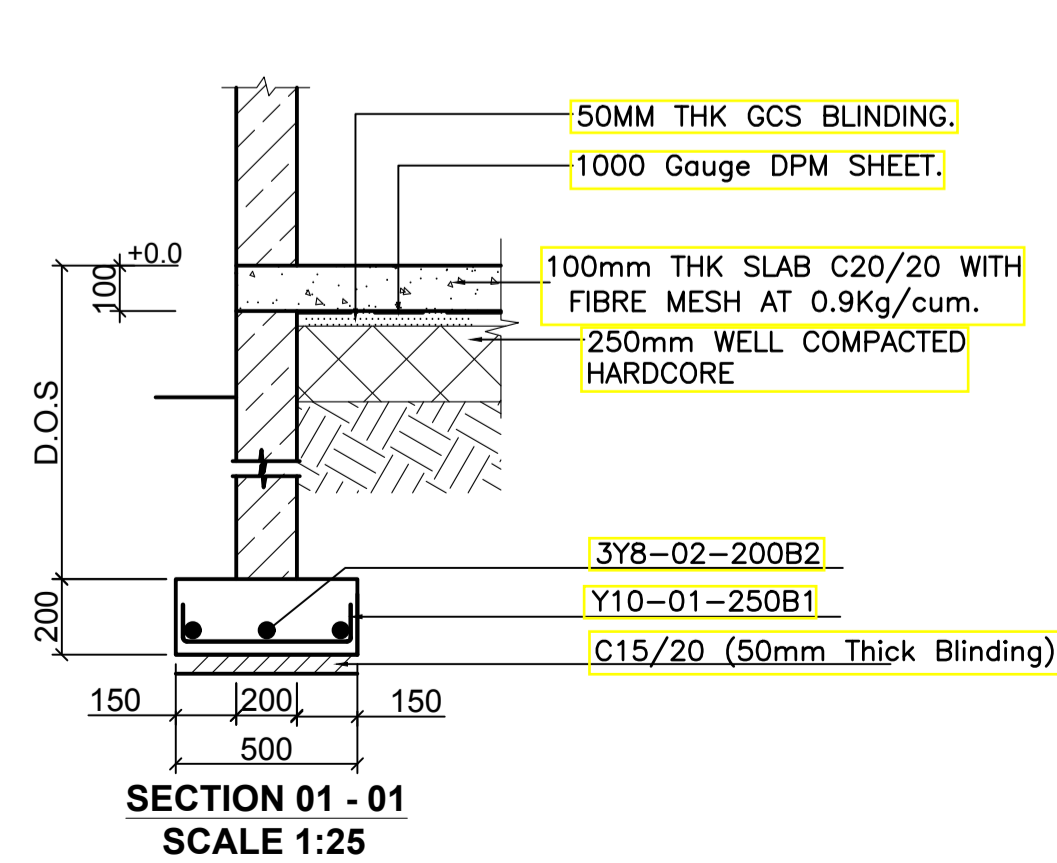
CIVIL AND STRUCTURAL ENGINEERS  
EPOCH CONSULTING  
ENGINEERS  
P.O.BOX 75193-00200,  
NAIROBI.

PROJECT ARCHITECTS  
HABITECH CONSULTANTS  
ARCHITECTS&PLANNERS  
P.O.BOX 66495,  
NAIROBI.

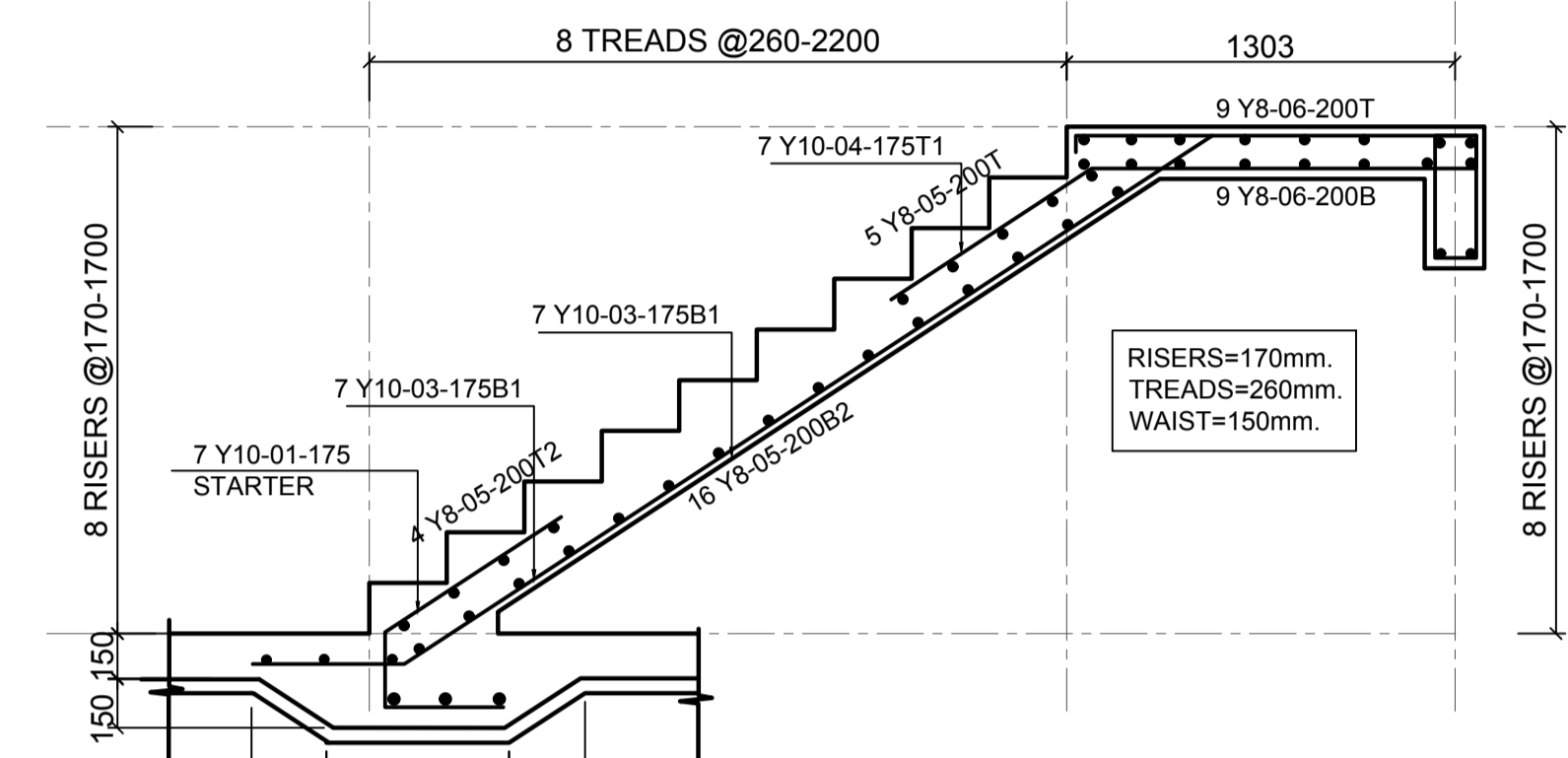
CLIENT:  
KENYATTA NATIONAL HOSPITAL  
STAFF RETIREMENT BENEFITS  
SCHEME(2011)  
P.O BOX 20723-00202  
NAIROBI



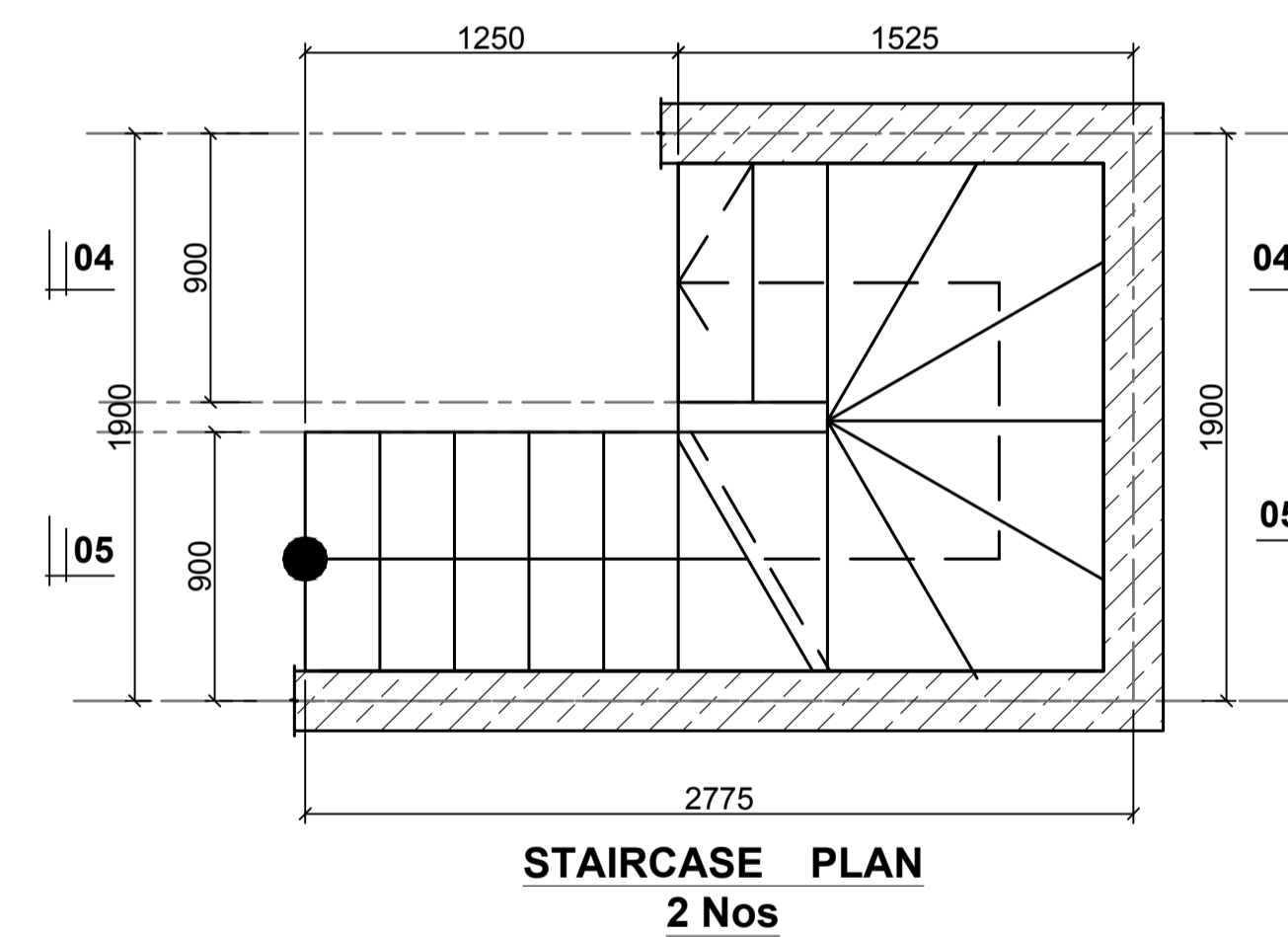
FOUNDATION AND GROUND FLOOR LAYOUT  
GENERAL ARRANGEMENT. 100 mm THK SLAB  
SCALE=1:50



05 - 05 RC DETAILS



04 - 04 RC DETAILS



STAIRCASE PLAN  
2 Nos

- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461.
  - CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**

HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5, 0724347807  
NAIROBI

P.O. BOX 75193-00200,  
NAIROBI.



REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

CLIENT:

Kenya National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O Box 20723-00202, NAIROBI

**ZONE:**

Kajiado County

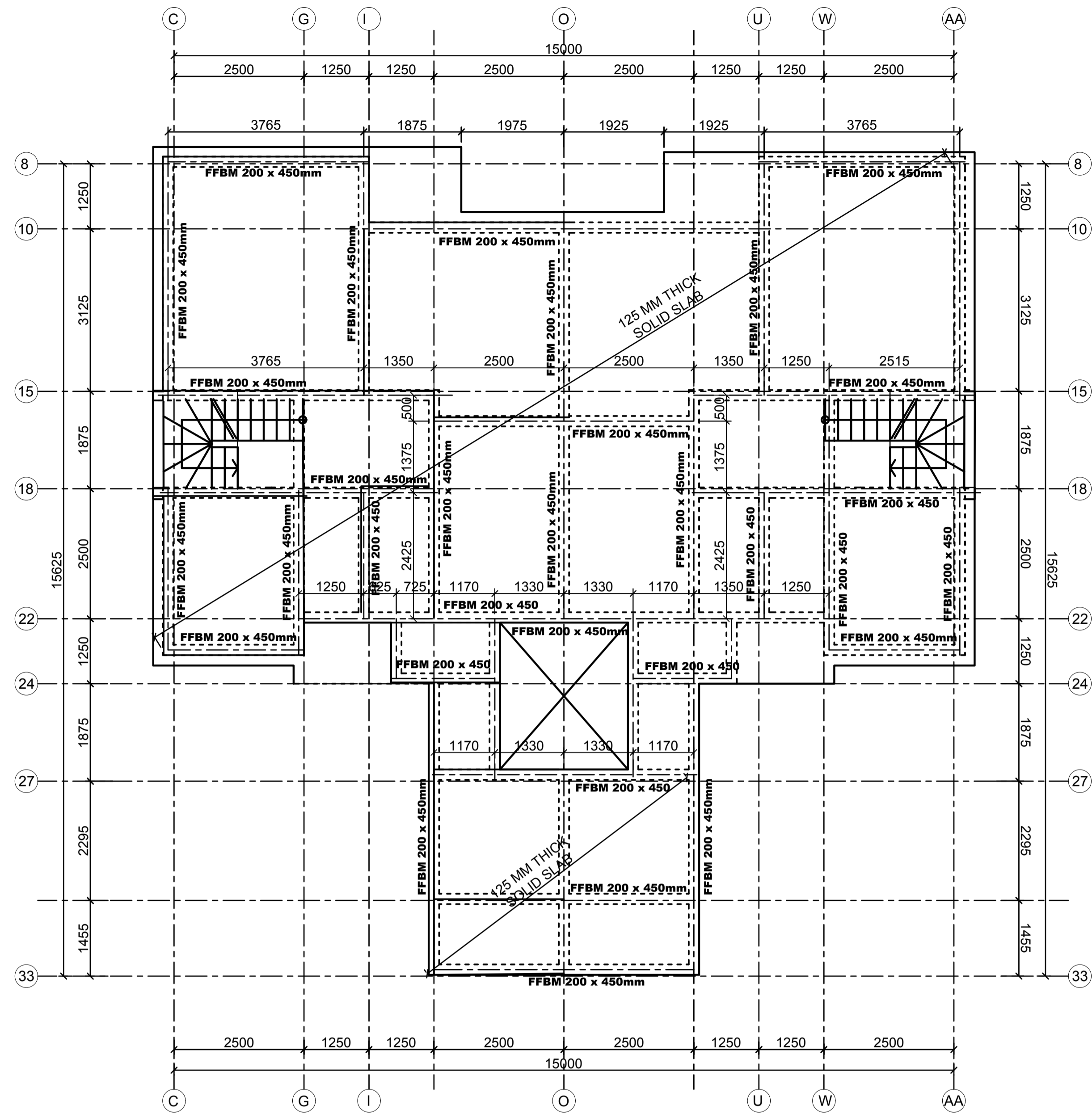
**PROJECT:**

Proposed Housing Scheme on Plot LR  
NO. Kajiado/Kitengela/6242 in  
Kitengela

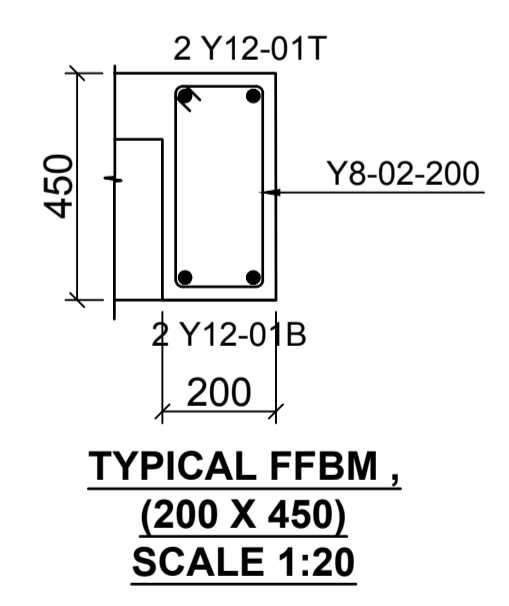
**DRAWING TITLE:**

FOUNDATION/GROUND FLOOR STRIP FOOTING  
AND STAIR REBAR DETAILS  
(TYPE 03B)

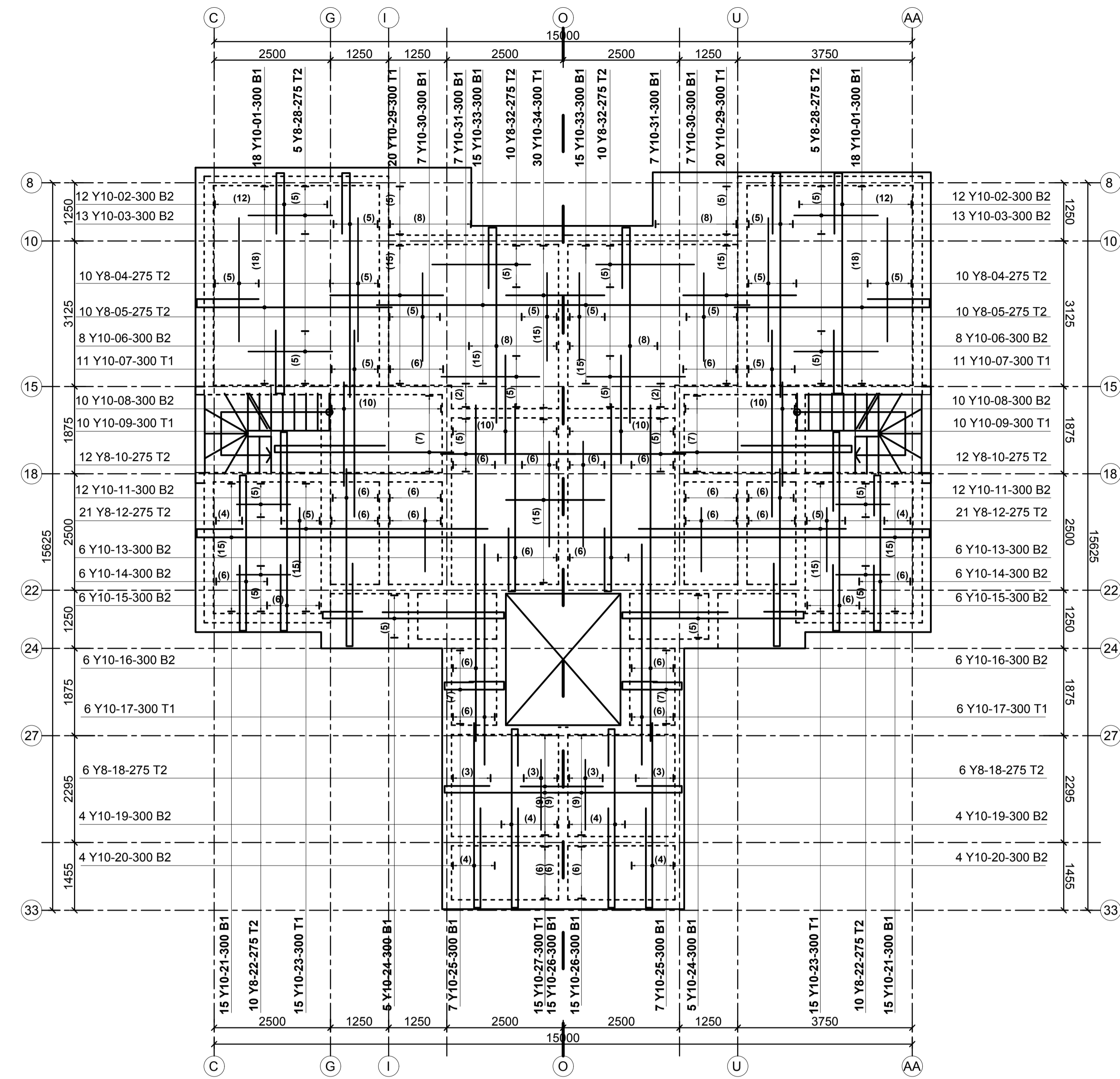
DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-3B-01	REV No. DRG STATUS



FIRST FLOOR SLAB LAYOUT  
125mm THICK SLAB  
SCALE 1:50



TYPICAL FFBM,  
(200 X 450)  
SCALE 1:20



FIRST FLOOR SLAB LAYOUT  
125mm THICK SLAB  
SCALE 1:50

- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER  
Y = RIBBED BARS TO BS 4461.
  - CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.  
**EPOCH CONSULTING ENGINEERS**  
Civil & Structural Engineers

F			
E			
D			
C			
B			
A			
REV	Description	Checked/Date	Issued to/Date

**CLIENT:**  
Kenya National Hospital Staff Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

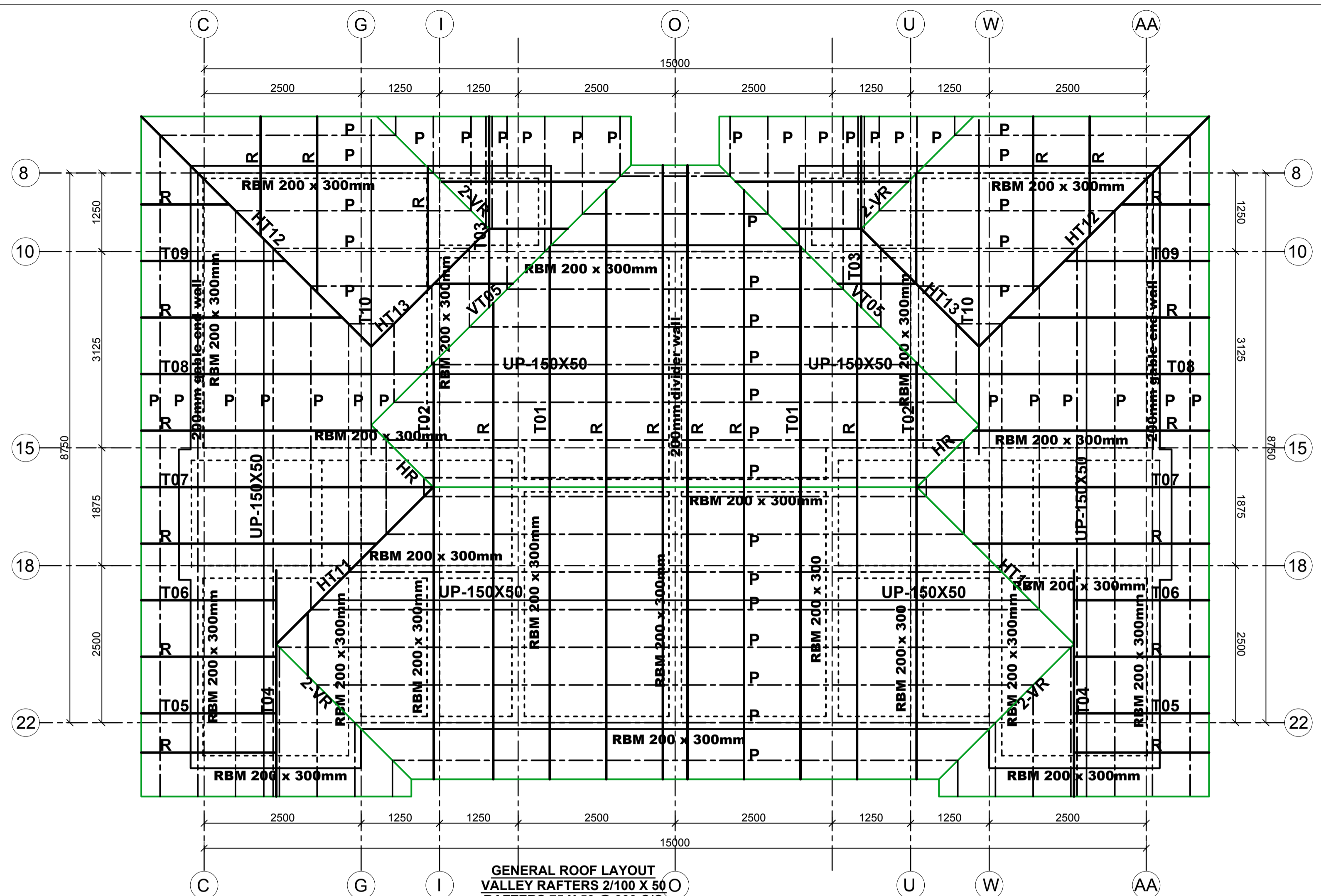
**ZONE:**  
Kajiado County

**PROJECT:**  
Proposed Housing Scheme on Plot LR NO. Kajiado/Kitengela/6242 in Kitengela

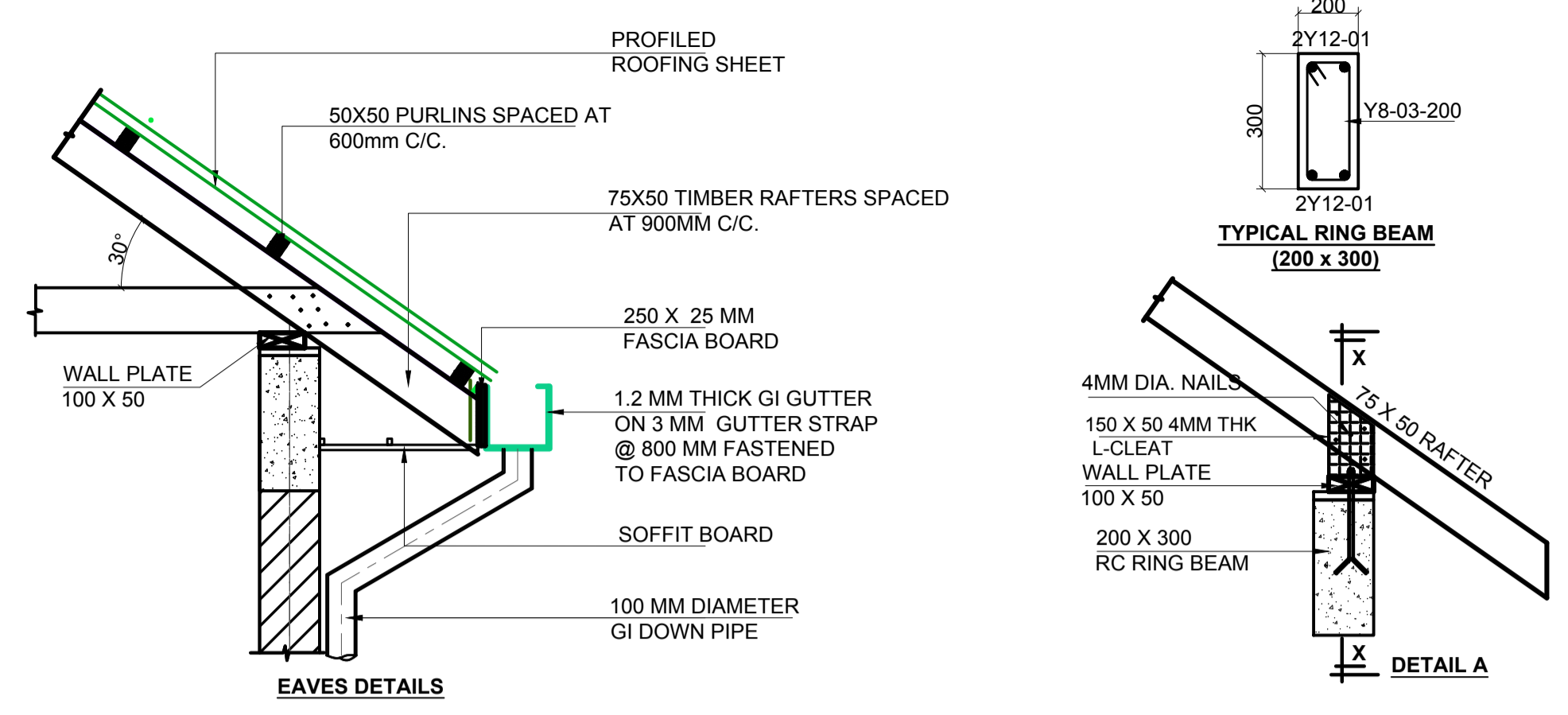
**DRAWING TITLE:**  
FIRST FLOOR SLAB LAYOUT AND REBAR DETAILS (TYPE 03B)

DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-3B-02	REV No. DRG STATUS

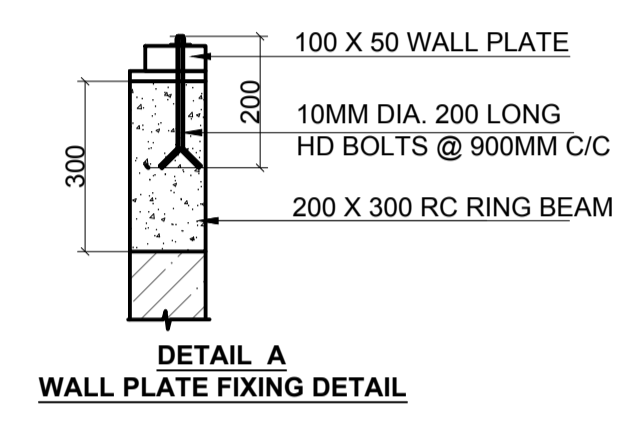




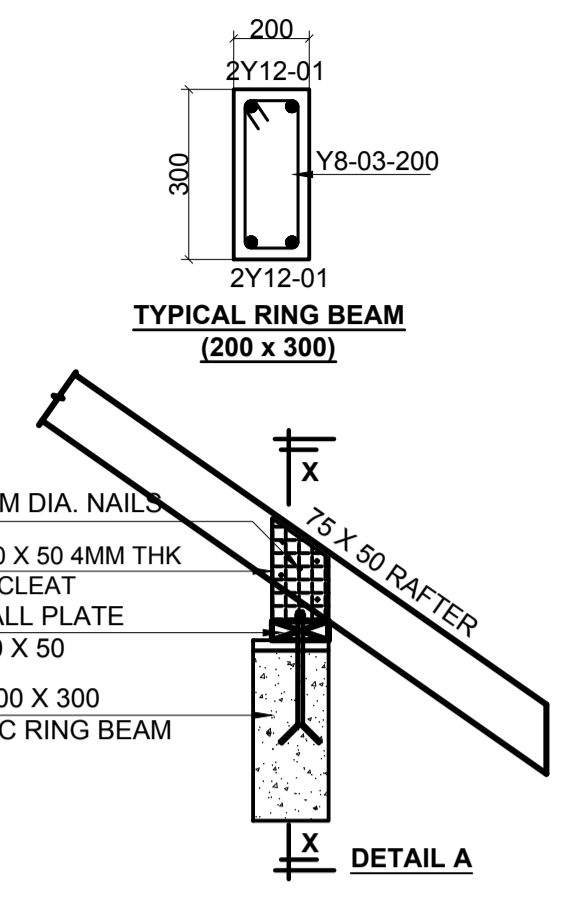
**GENERAL ROOF LAYOUT**  
 VALLEY RAFTERS 2/100 X 50  
 RAFTERS 75 X 50 @ 900 C/C  
 PURLINS 50X50@600C/C  
 UNDERPURLINS 150 X 50  
 SCALE 1:50



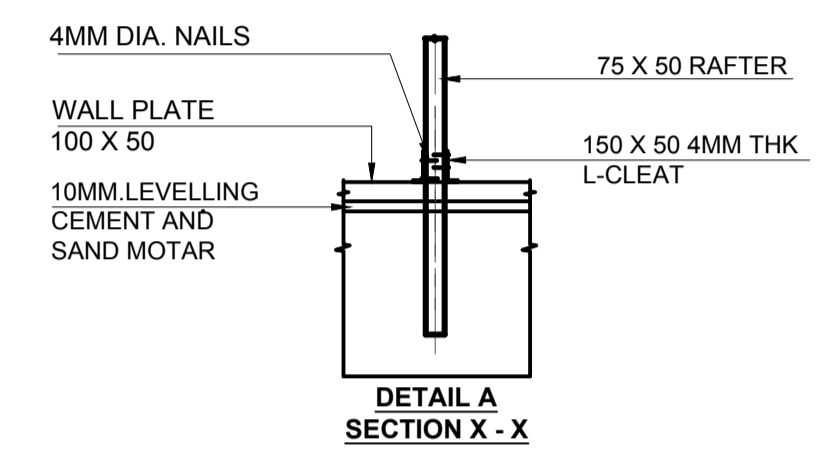
**EAVES DETAILS**



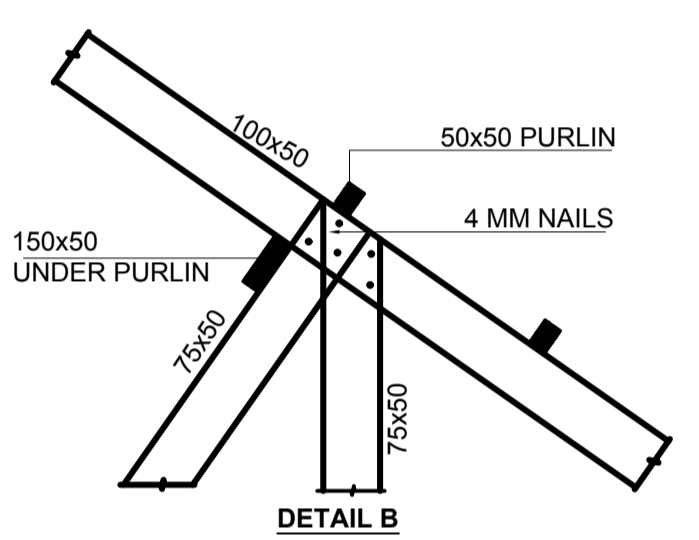
**DETAIL A WALL PLATE FIXING DETAIL**



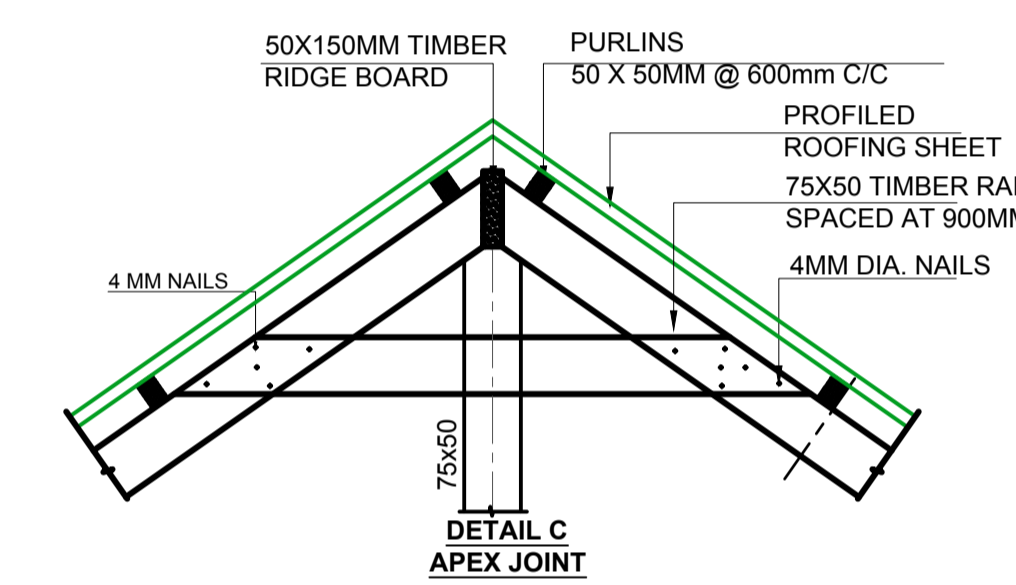
**TYPICAL RING BEAM (200 x 300)**



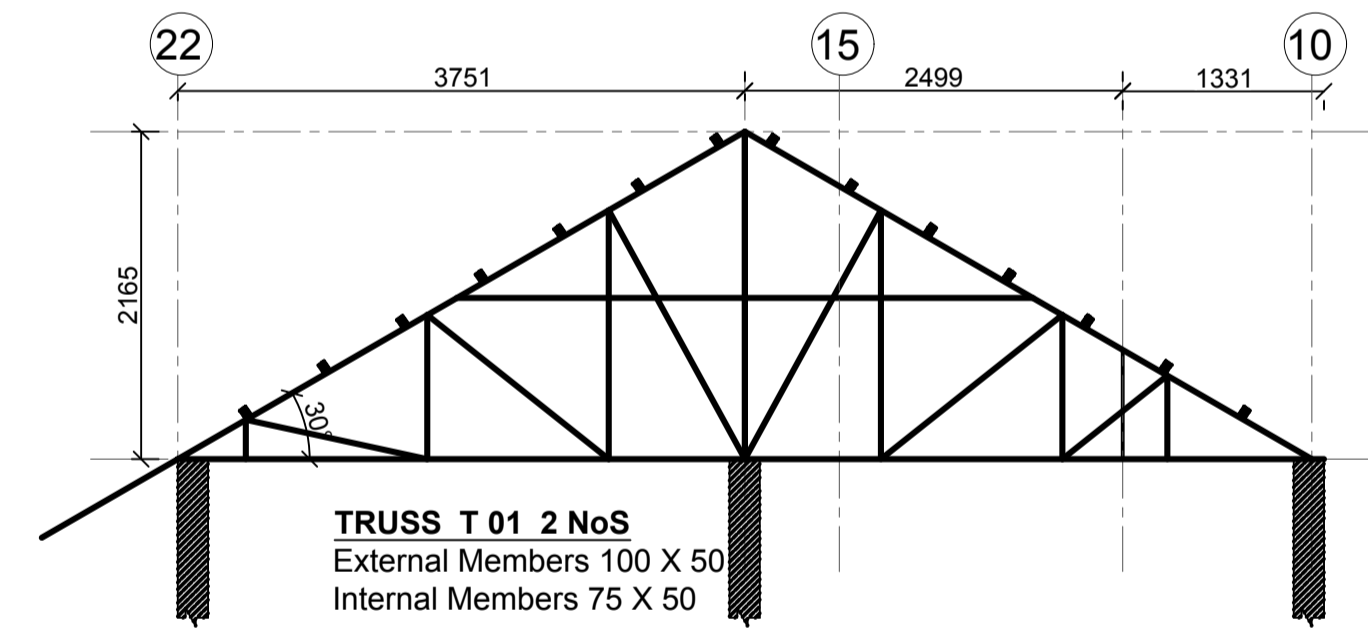
**DETAIL A SECTION X - X**



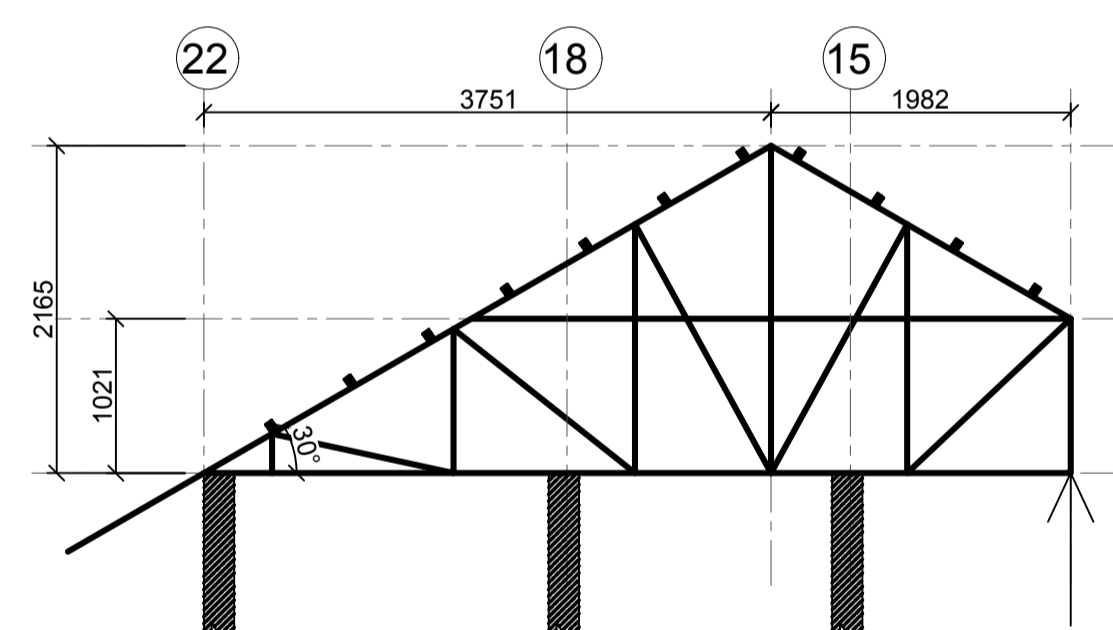
**DETAIL B**



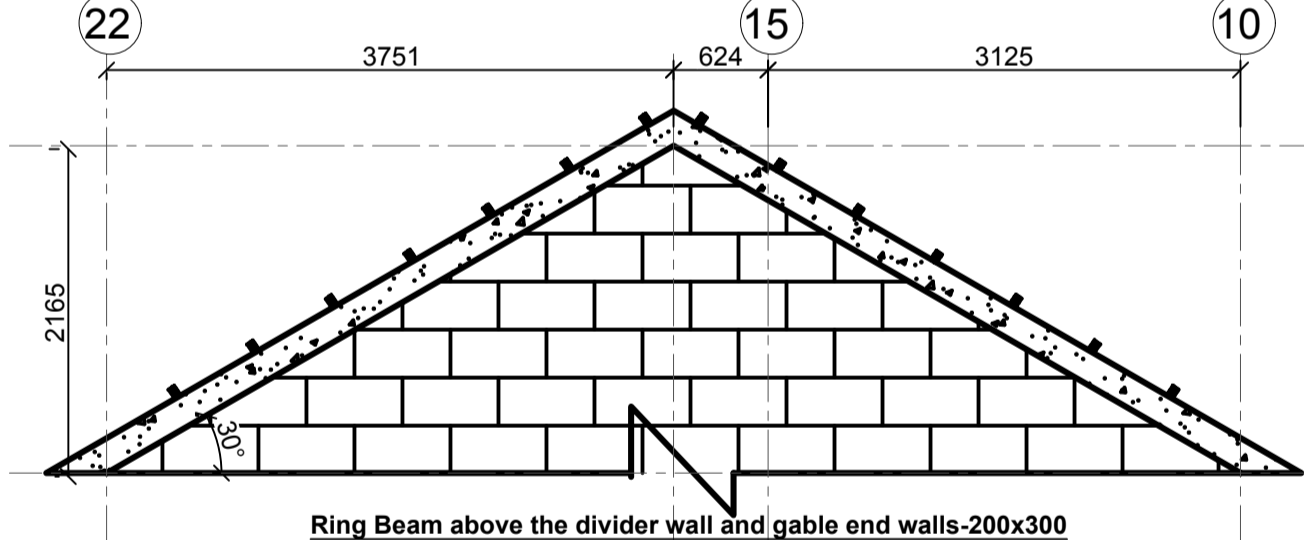
**DETAIL C APEX JOINT**



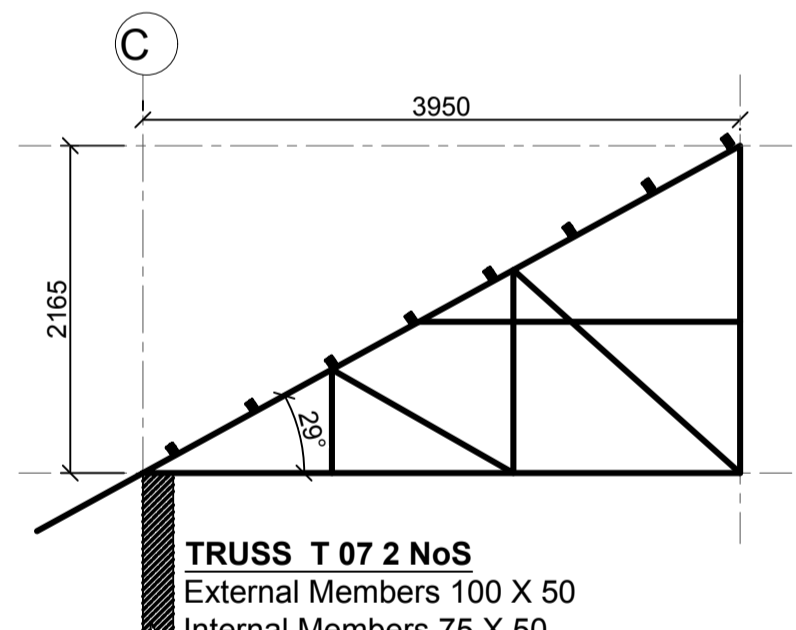
**TRUSS T 01 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



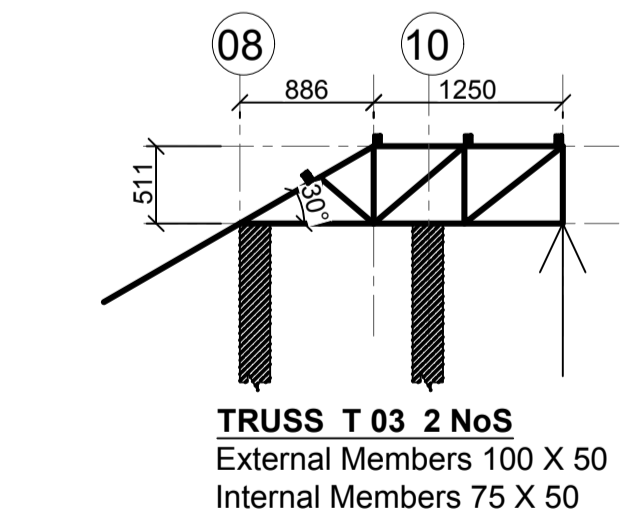
**TRUSS T 02 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



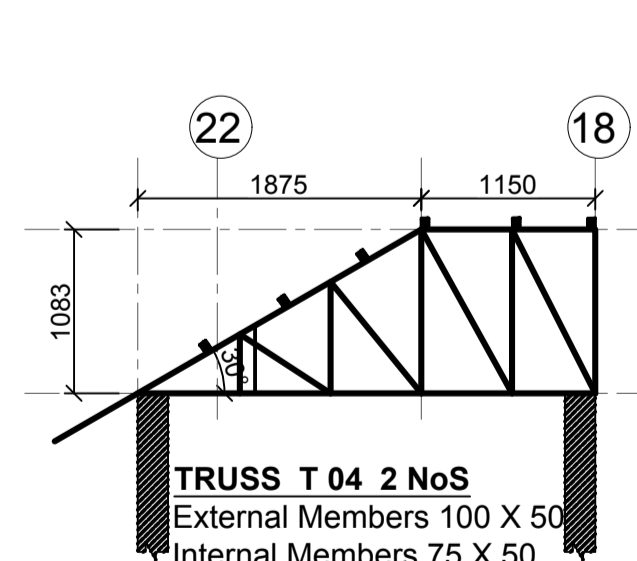
**Ring Beam above the divider wall and gable end walls-200x300**



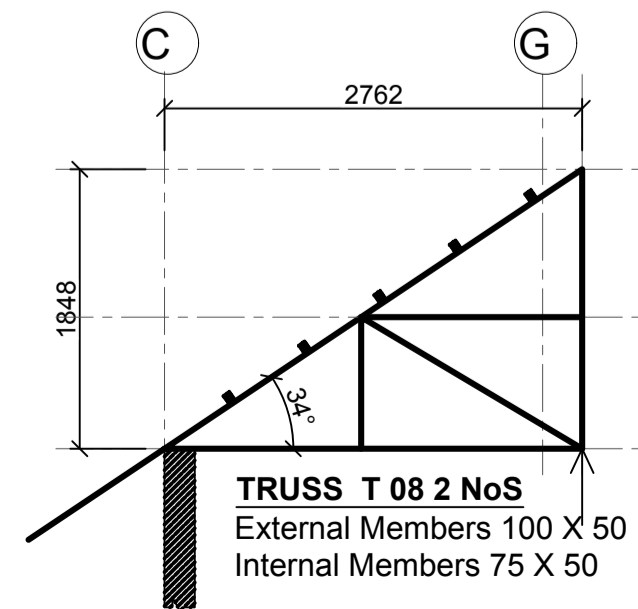
**TRUSS T 07 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



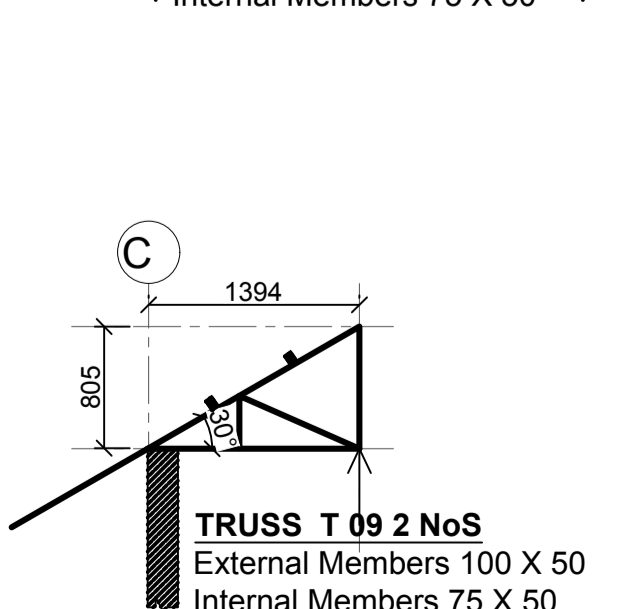
**TRUSS T 03 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



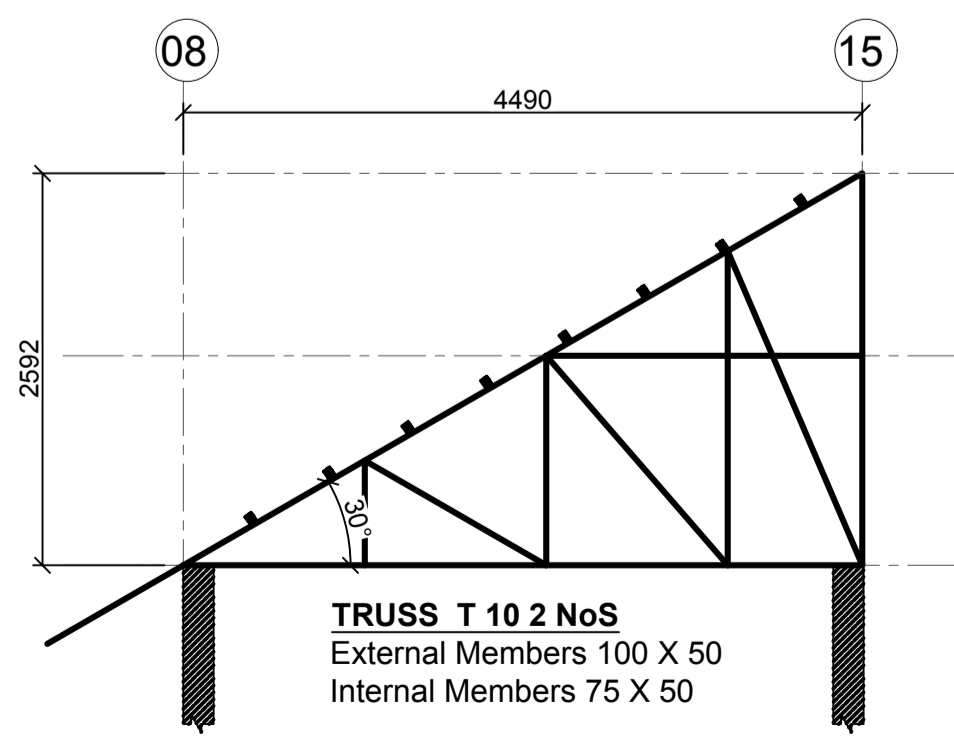
**TRUSS T 04 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



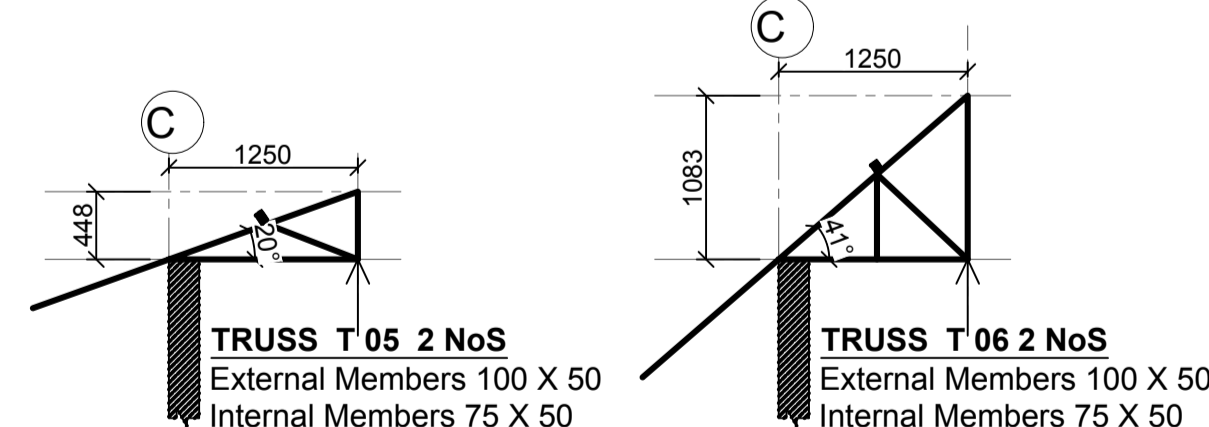
**TRUSS T 08 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



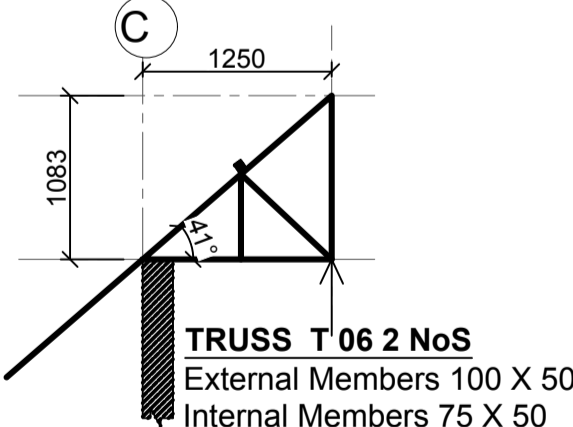
**TRUSS T 09 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



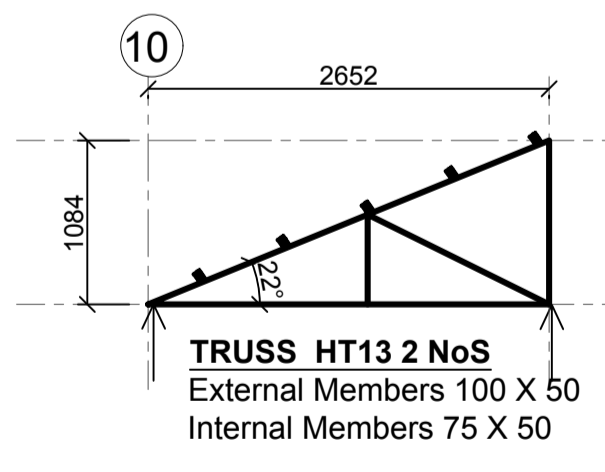
**TRUSS T 10 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



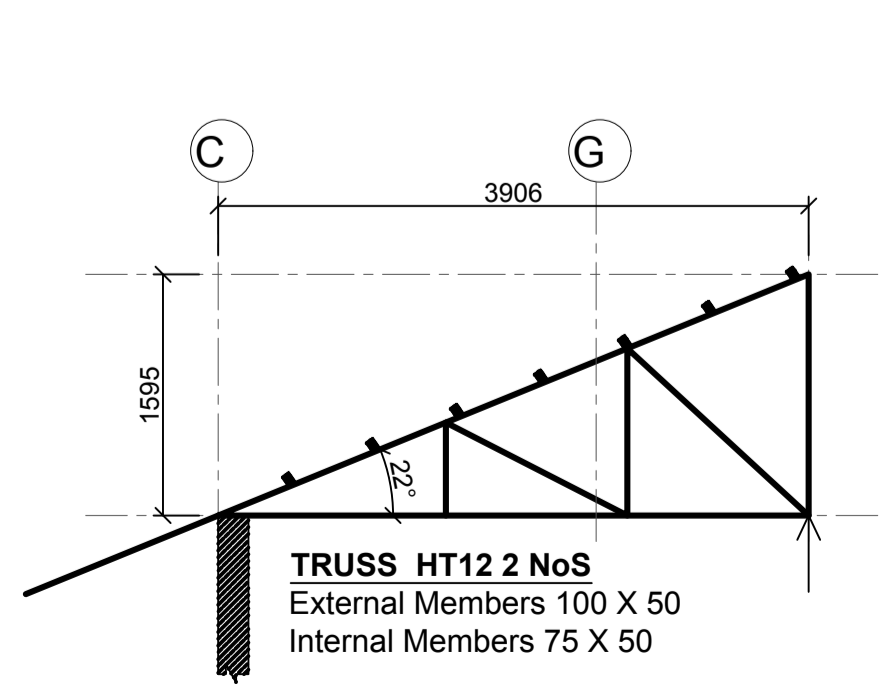
**TRUSS T 05 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



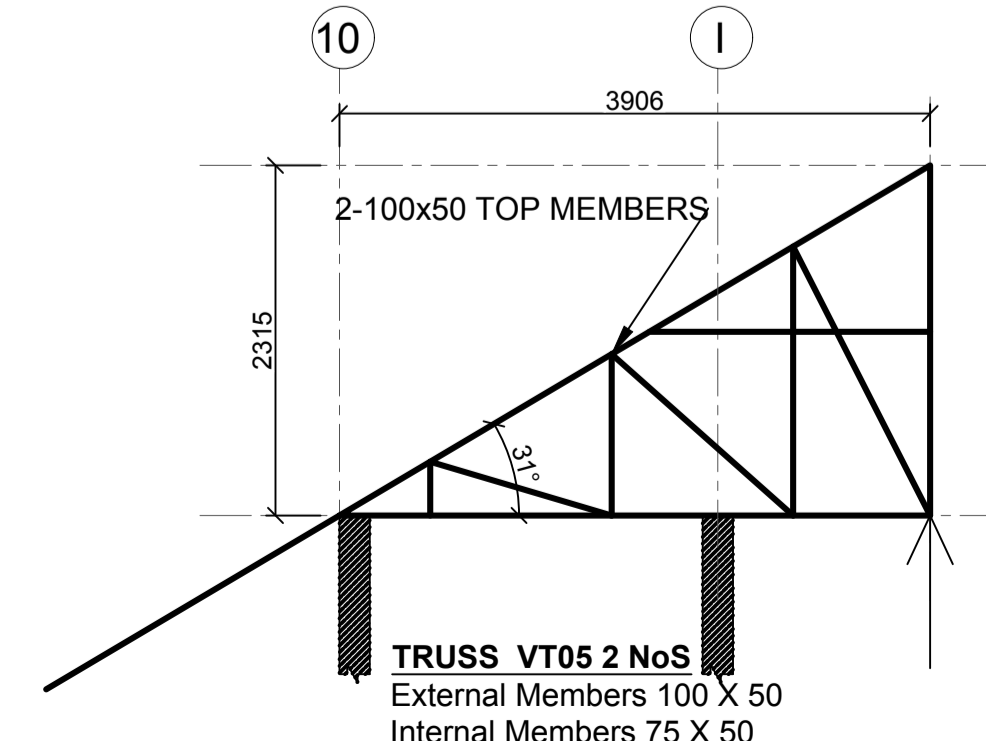
**TRUSS T 06 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



**TRUSS HT13 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



**TRUSS HT12 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50



**TRUSS VT05 2 NoS**  
 External Members 100 X 50  
 Internal Members 75 X 50

- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM**  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  7. T1 = TOP 1ST. LAYER, T2 = TOP 2ND. LAYER
  8. Y = RIBBED BARS TO BS 4461,
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS. (CLASS 25/20)

- TIMBER NOTES**
1. ALL STRUCTURAL TIMBER TO BE SAWN GRADED CYPRESS (GRADE GS) TO KS 02-771-1989
  2. ALL STRUCTURAL TIMBER TO BE SEASONED TO ANEQUILIBRIUM MOISTURE CONTENT OF BETWEEN 9% AND 15%
  3. SAMPLE TRUSS TO BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE FABRICATION OF OTHER TRUSSES
  4. ALL STRUCTURAL TIMBER TO BE PRESERVATIVE TREATED TO KS02-84-1985
  5. ALL TILE BATTENS TO BE 50 X 25 MM UNLESS OTHERWISE STATED AT 300 MM MAXIMUM.
  6. TIMBER NAILS TO BE ROUND WIRE NAILS 2.65 MM DIAMETER NAILS UNLESS OTHERWISE STATED

**PROJECT ARCHITECTS**  
 HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5, 0724347807  
 NAIROBI

**EPON CONSULTING ENGINEERS**  
 Civil & Structural Engineers  
 P.O. BOX 75193-00200,  
 NAIROBI.

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

**CLIENT:**  
 Kenyatta National Hospital Staff Retirement Benefit Scheme (2011)  
 P.O. Box 20723-00202, NAIROBI

**ZONE:**  
 Kajiado County

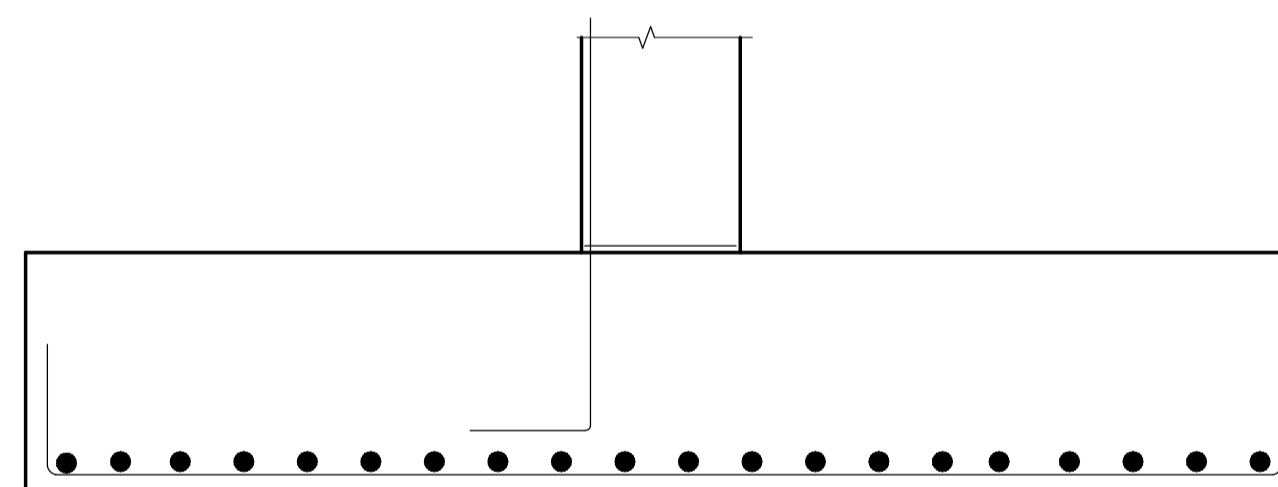
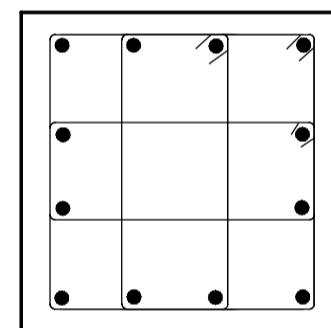
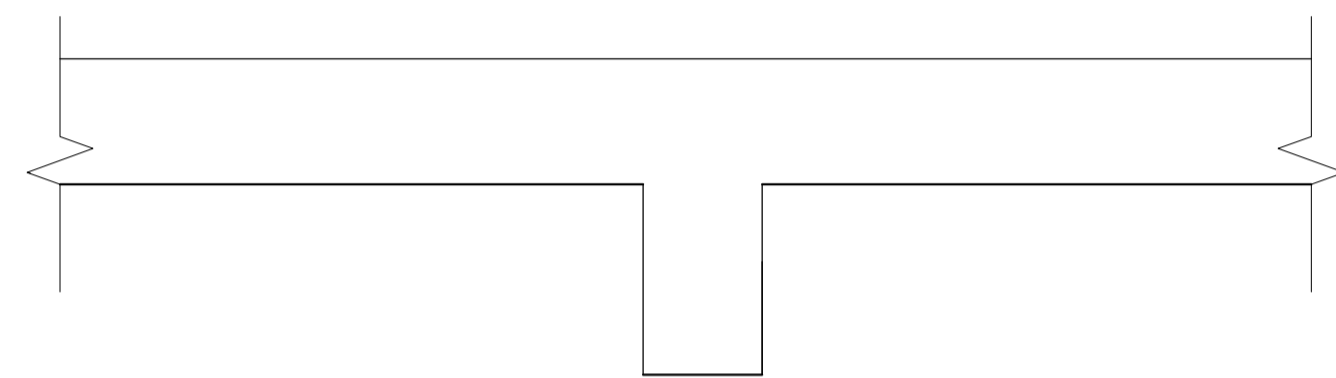
**PROJECT:**  
 Proposed Housing Scheme on Plot LR NO. Kajiado/Kitengela/6242 in Kitengela

**DRAWING TITLE:**  
 GENERAL ROOF DETAILS (TYPE 03B)

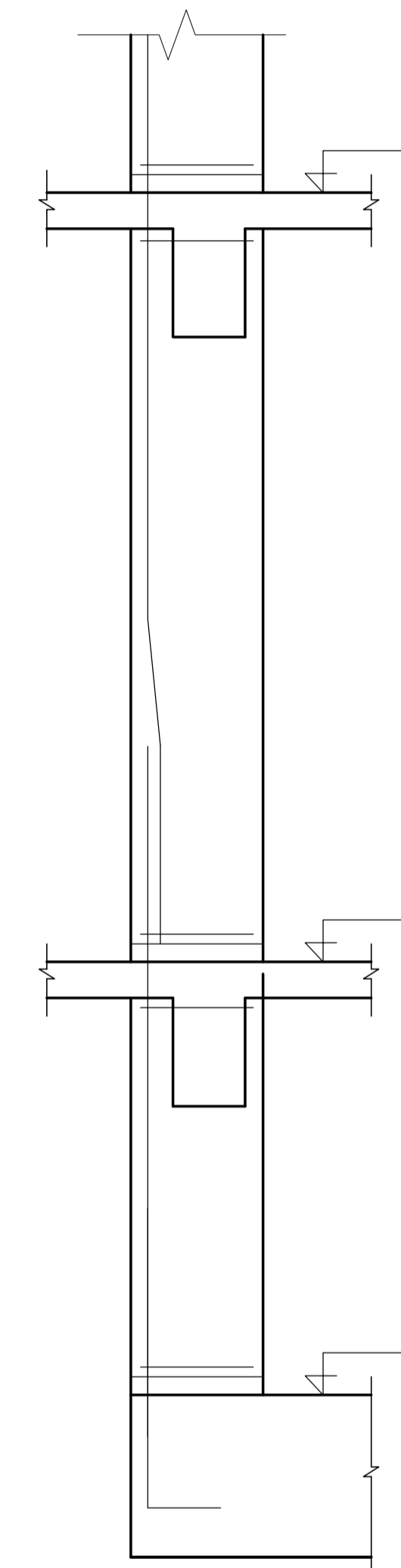
DESIGNED BY: I.M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-3B-03	REV No. DRG STATUS

# PROPOSED HOUSING SCHEME ON PLOT LR NO. KAJIADO/KITENGELA/6242 IN KITENGELA, KAJIADO COUNTY

## 2 BEDROOM APARTMENTS STRUCTURAL DRAWINGS



SHAPE CODE	METHOD OF MEASUREMENT OF BENDING DIMENSIONS	TOTAL LENGTH OF BAR ALONG CENTER LINE	DIMENSIONS TO BE GIVEN IN SCHEDULE
20		A	STRAIGHT
32		A + h	
33		A + 2h	
34		A + n	
35		A + 2n	
37	 <small>If R is non standard use shape code 51</small>	A+B-0.5R-d	

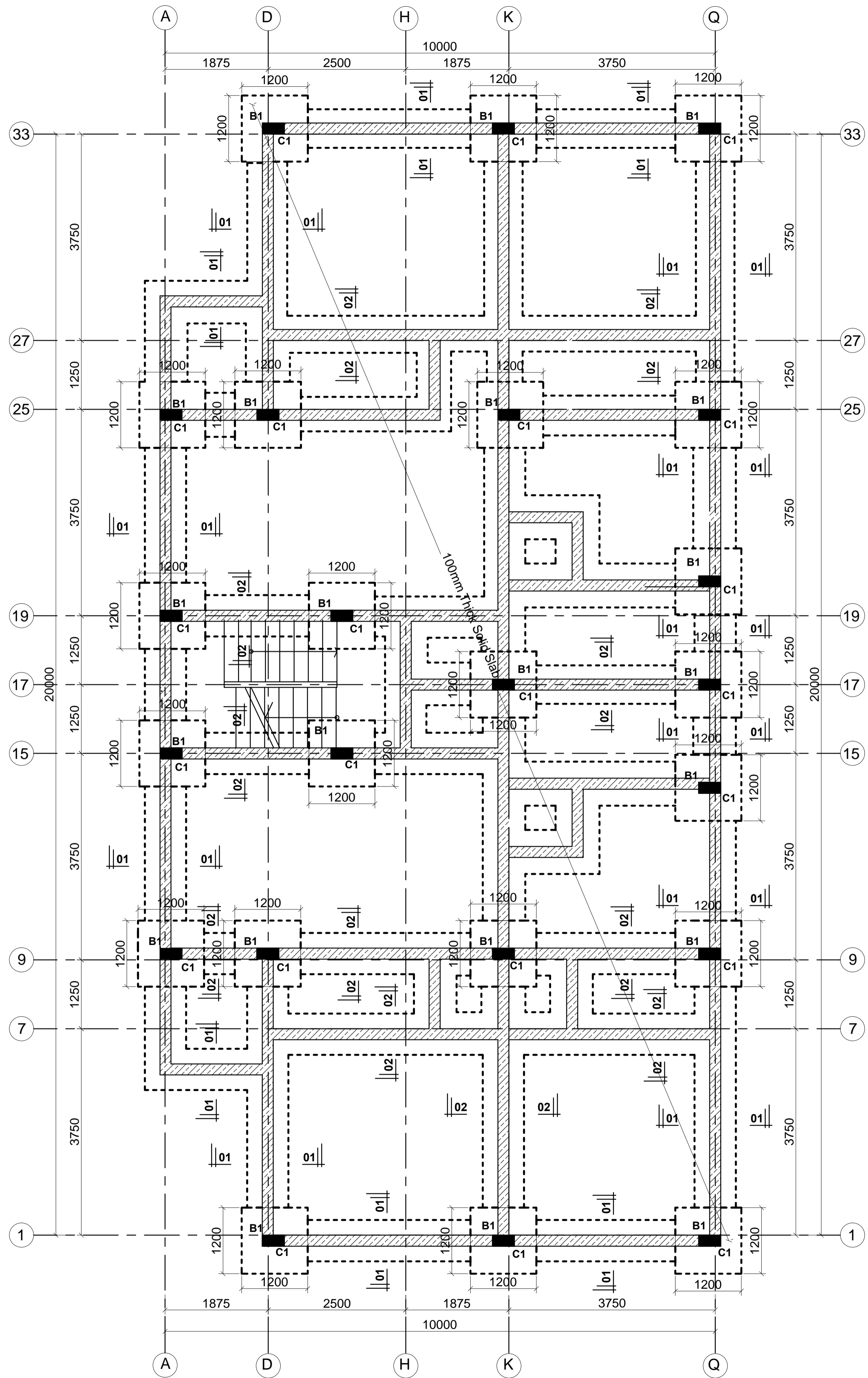


NOVEMBER 2022

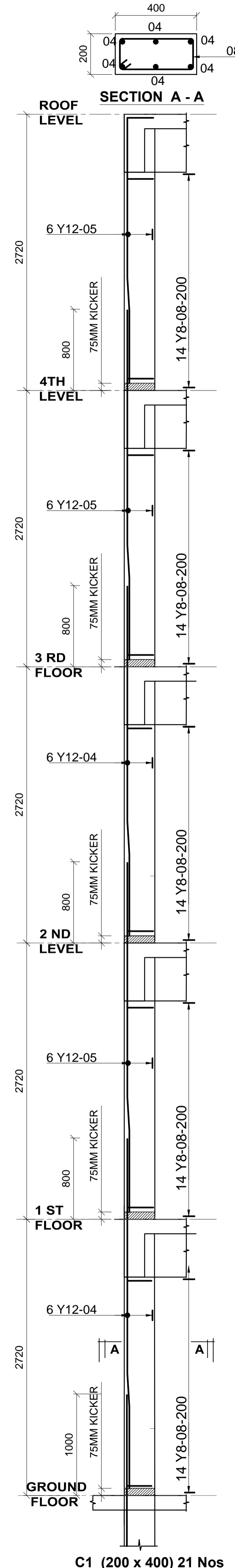
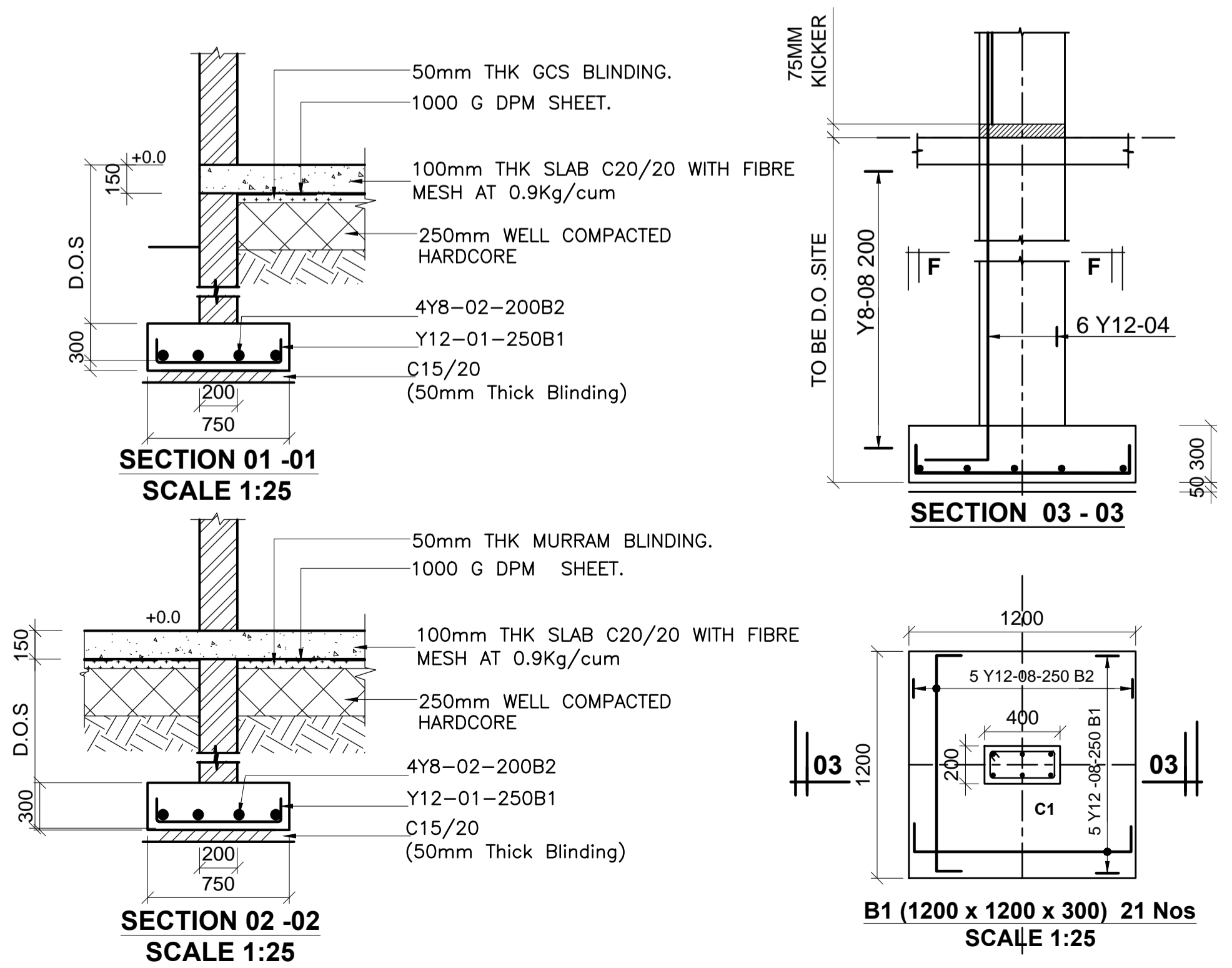
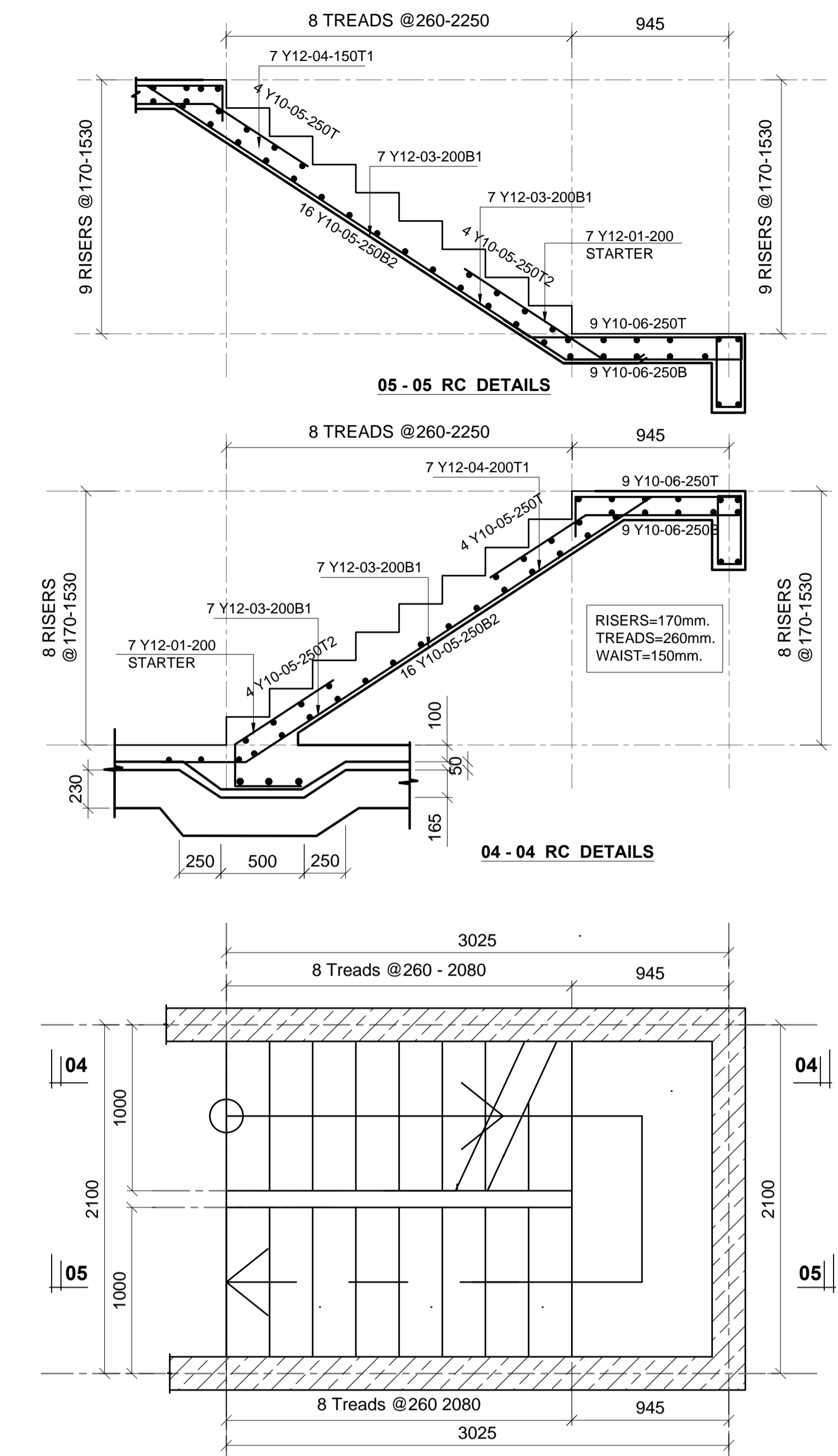
CIVIL AND STRUCTURAL ENGINEERS  
EPOCH CONSULTING ENGINEERS  
P.O.BOX 75193-00200,  
NAIROBI.

PROJECT ARCHITECTS  
HABITECH CONSULTANTS ARCHITECTS&PLANNERS  
P.O.BOX 66495,  
NAIROBI.

CLIENT:  
KENYATTA NATIONAL HOSPITAL  
STAFF RETIREMENT BENEFITS  
SCHEME(2011)  
P.O BOX 20723-00202  
NAIROBI



**FOUNDATION AND GROUND FLOOR LAYOUT  
GENERAL ARRANGEMENT-100 mm THK SLAB  
SCALE=1:50**



- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  - T1 = TOP 1ST. LAYER, T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461,
- CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)
  - GROUND FLOOR SLAB CONCRETE STRENGTH TO BE AT LEAST 20N/MM<sup>2</sup> AT 28 DAYS.(CLASS 20/20)

PROJECT ARCHITECTS  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.  
EPOCH CONSULTING ENGINEERS  
Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

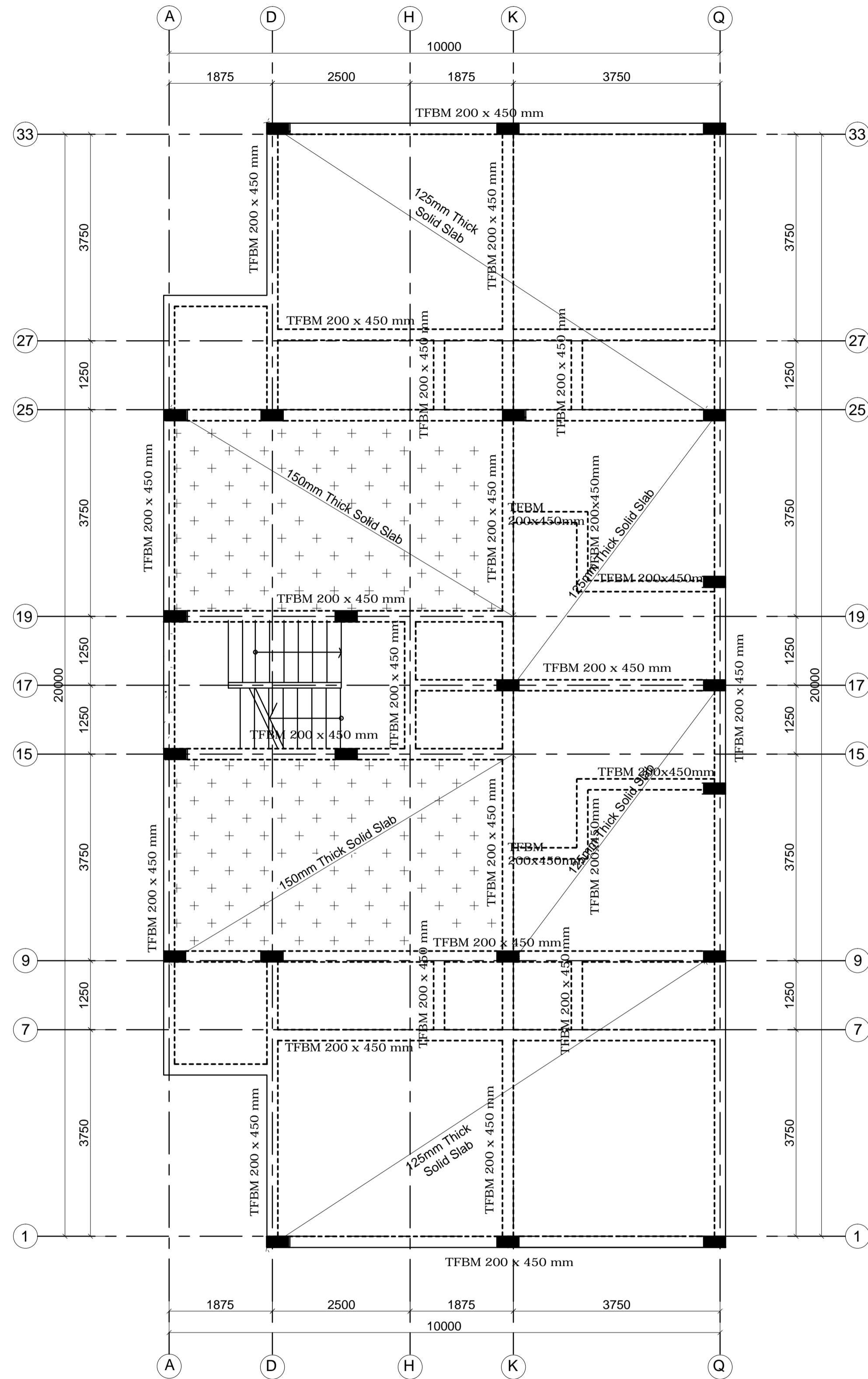
CLIENT:  
KENYATTA NATIONAL HOSPITAL STAFF  
RETIREMENT BENEFITS SCHEME (2011)  
P.O. BOX 20723-00202  
NAIROBI

ZONE:  
KAJIADO COUNTY

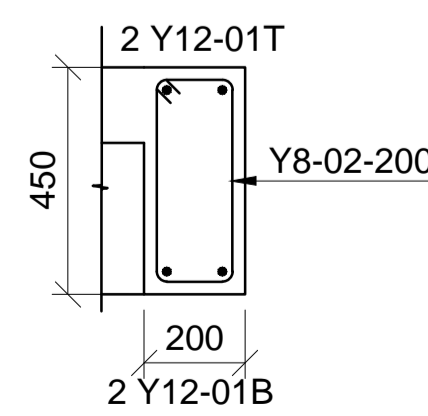
PROJECT:  
PROPOSED HOUSING SCHEME ON PLOT  
LR NO. KAJIADO/KITENGELA/6242 IN  
KITENGELA, KAJIADO COUNTY

DRAWING TITLE:  
2 BEDROOM APARTMENTS FOUNDATION  
AND COLUMN DETAILS

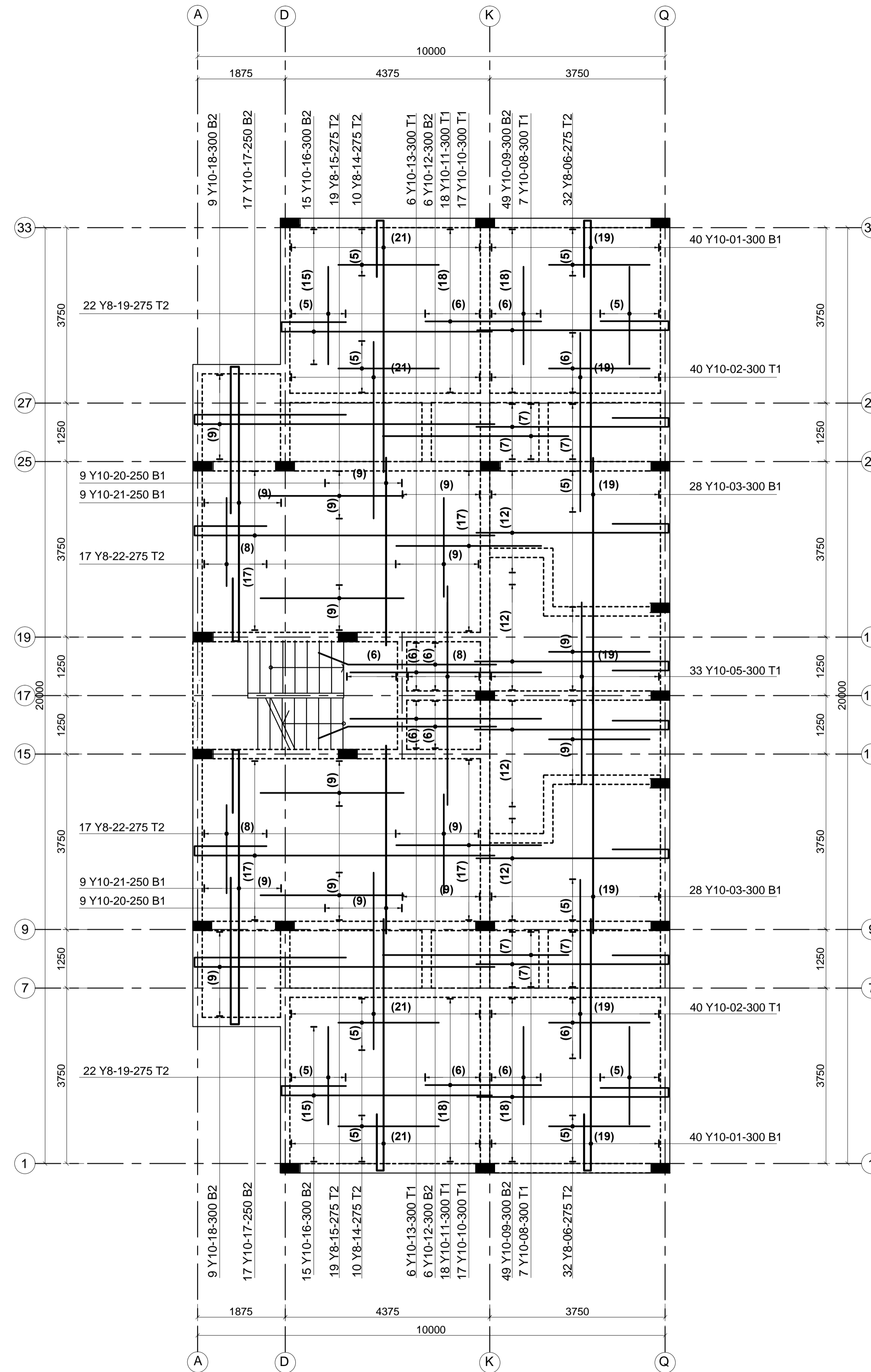
DESIGNED BY: M.J.M	DRAWN BY: FA
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-2BR-01	REV No. DRG STATUS



**TYPICAL FIRST TO FOURTH FLOOR BEAMS LAYOUT**  
 125mm & 150mm THICK SLAB AS INDICATED  
 SCALE 1:60



**TFBM(200 X 450)**  
 SCALE 1:20



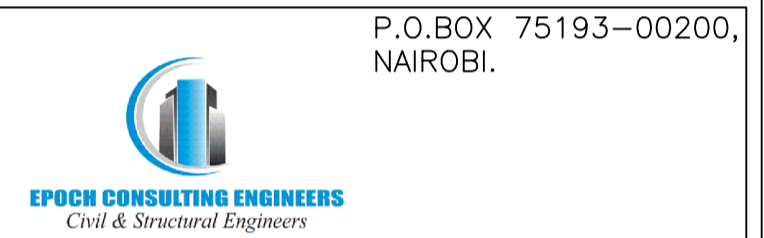
**TYPICAL FIRST TO FOURTH FLOOR RC DETAILS**  
 125mm & 150mm THICK SLAB AS INDICATED  
 SCALE 1:60

- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER,  
 B2 = BOTTOM 2ND. LAYER  
 T1 = TOP 1ST. LAYER,  
 T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461,
  - CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)
  - GROUND FLOOR SLAB CONCRETE STRENGTH TO BE AT LEAST 20N/MM<sup>2</sup> AT 28 DAYS.(CLASS 20/20)

**PROJECT ARCHITECTS**

HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5, 0724347807  
 NAIROBI



REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

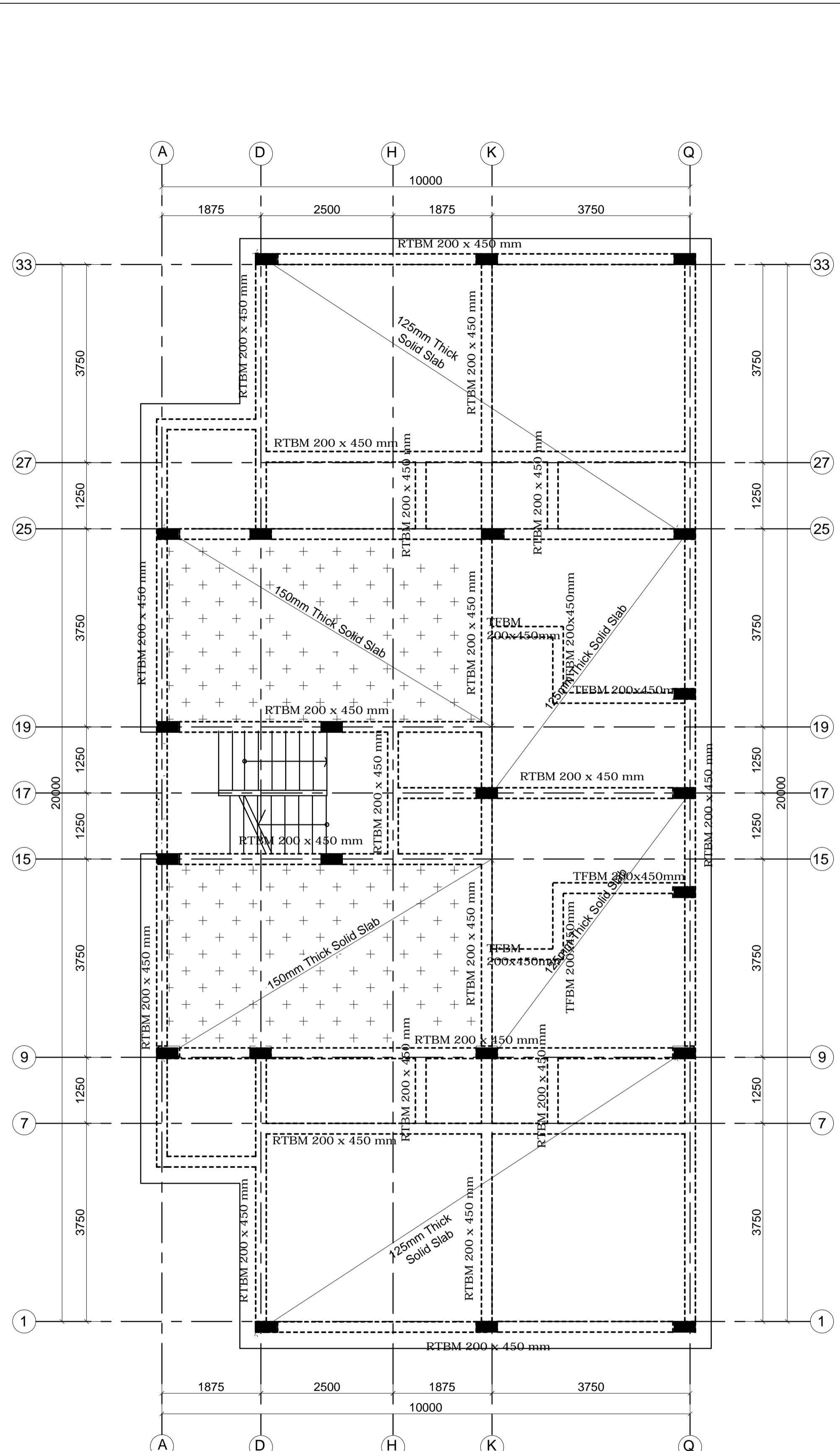
CLIENT:  
 KENYATTA NATIONAL HOSPITAL STAFF  
 RETIREMENT BENEFITS SCHEME (2011)  
 P.O. BOX 20723-00202  
 NAIROBI

ZONE:  
 KAJIADO COUNTY

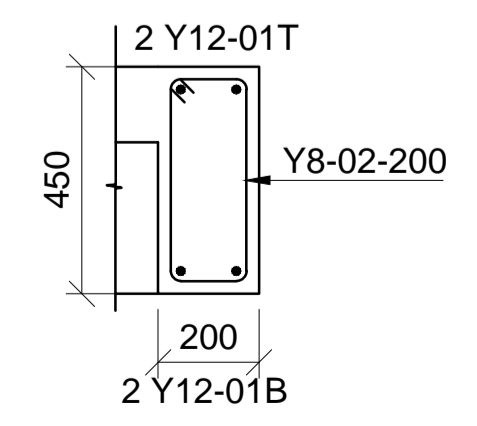
PROJECT:  
 PROPOSED HOUSING SCHEME ON PLOT  
 LR NO. KAJIADO/KITENGELA/6242 IN  
 KITENGELA, KAJIADO COUNTY

DRAWING TITLE:  
 2 BEDROOM APARTMENTS FIRST TO FOURTH FLOOR  
 BEAMS LAYOUT AND SLAB DETAILS

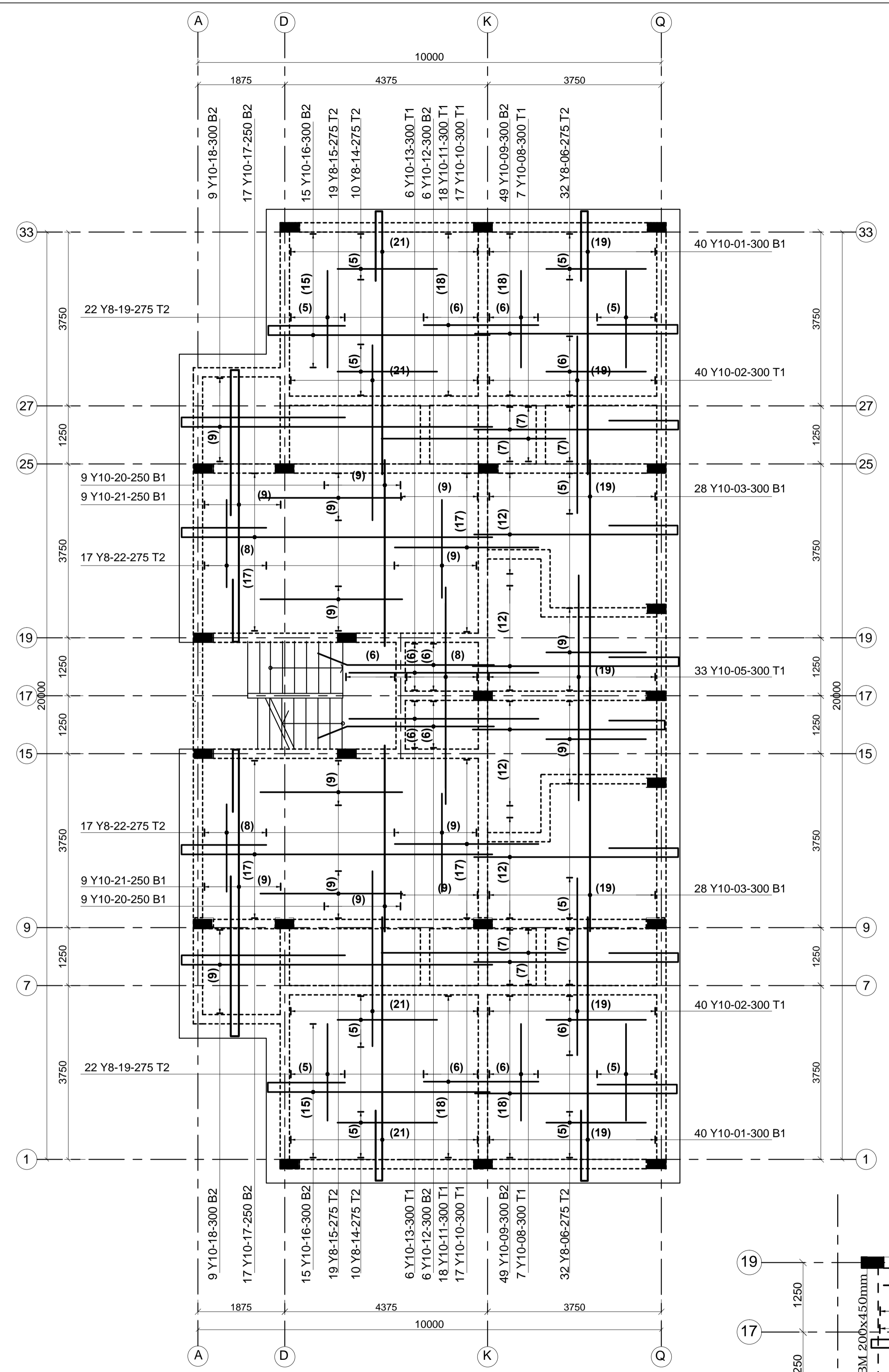
DESIGNED BY: M.J.M	DRAWN BY: FA
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-2BR-02	REV No. DRG STATUS



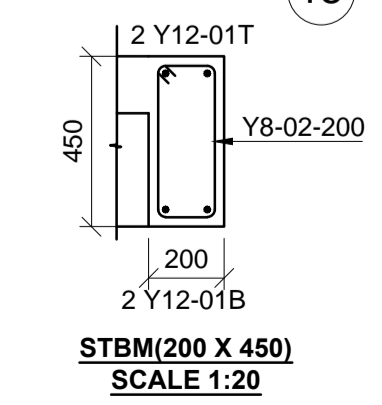
**ROOF FLOOR BEAMS LAYOUT**  
 125mm & 150mm THICK SLAB AS INDICATED  
 WATERPROOFING USING DR FIXIT FASTFLEX  
 SCALE 1:60



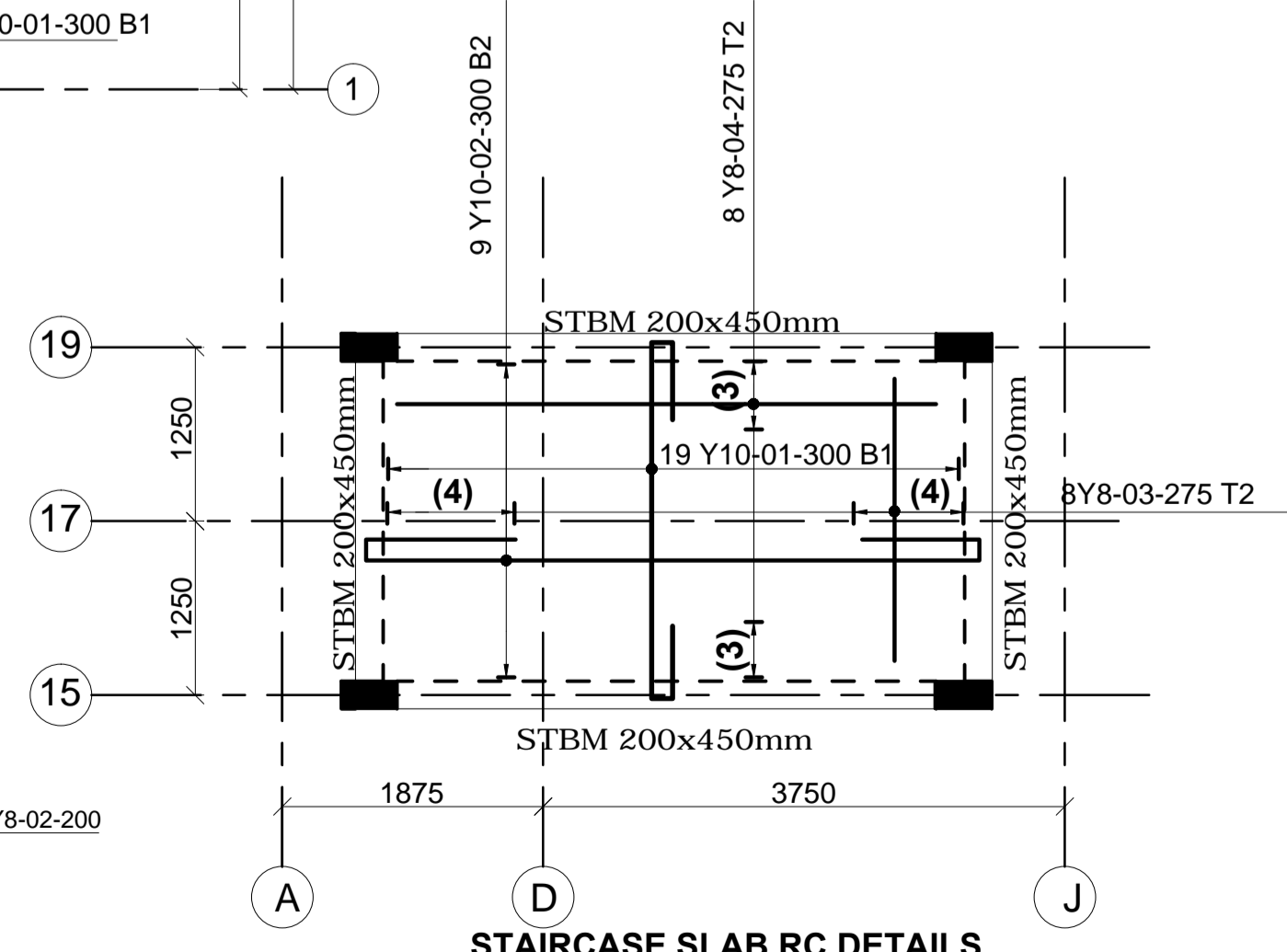
**RTBM(200 X 450)**  
 SCALE 1:20



**ROOF FLOOR RC DETAILS**  
 125mm & 150mm THICK SLAB AS INDICATED  
 SCALE 1:60



**STBM(200 X 450)**  
 SCALE 1:20



**STAIRCASE SLAB RC DETAILS**  
 125mm THICK SLAB  
 SCALE 1:60

- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER, T1 = TOP 1ST. LAYER, T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461,
- CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)
  - GROUND FLOOR SLAB CONCRETE STRENGTH TO BE AT LEAST 20N/MM<sup>2</sup> AT 28 DAYS.(CLASS 20/20)

**PROJECT ARCHITECTS**  
 HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5, 0724347807  
 NAIROBI

P.O.BOX 75193-00200,  
 NAIROBI.

**EPOCH CONSULTING ENGINEERS**  
 Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

**CLIENT:**  
 KENYATTA NATIONAL HOSPITAL STAFF  
 RETIREMENT BENEFITS SCHEME (2011)  
 P.O. BOX 20723-00202  
 NAIROBI

**ZONE:**  
 KAJIADO COUNTY

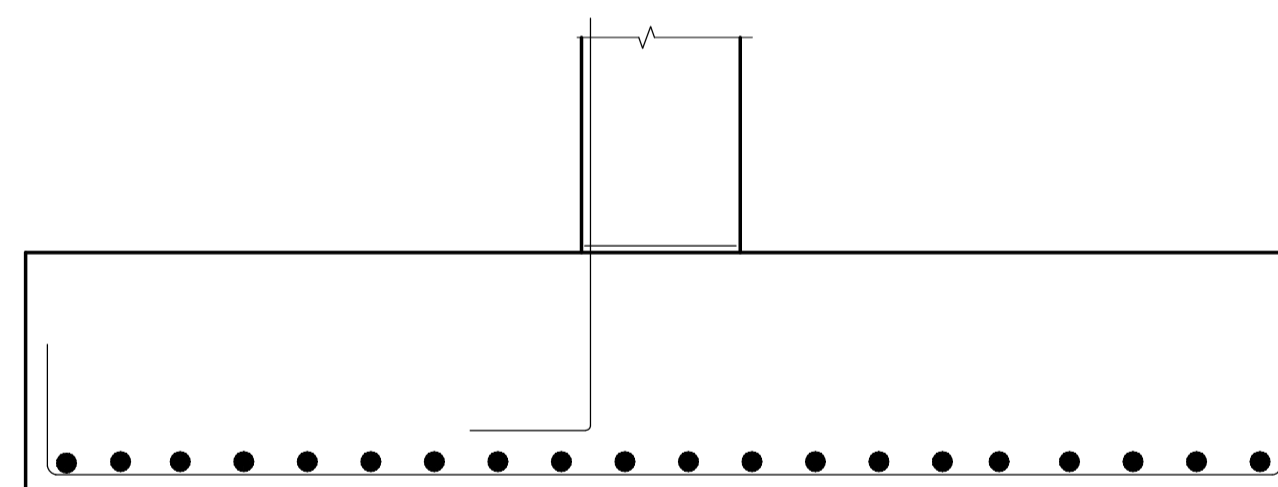
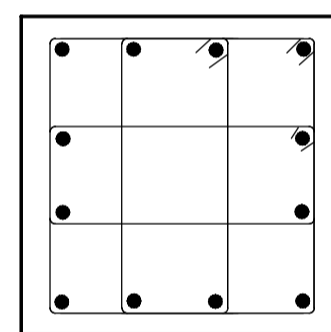
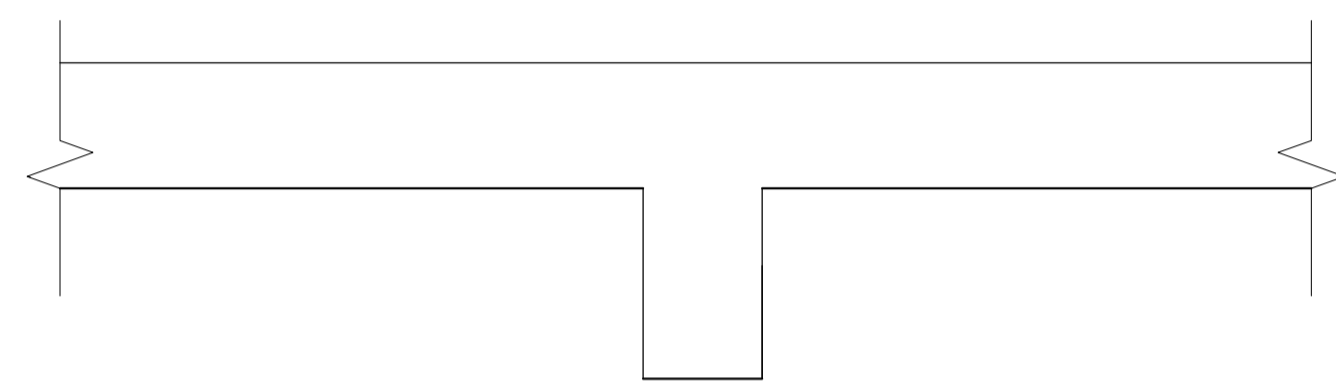
**PROJECT:**  
 PROPOSED HOUSING SCHEME ON PLOT  
 LR NO. KAJIADO/KITENGELA/6242 IN  
 KITENGELA, KAJIADO COUNTY

**DRAWING TITLE:**  
 2 BEDROOM APARTMENTS ROOF SLAB LAYOUT  
 AND DETAILS

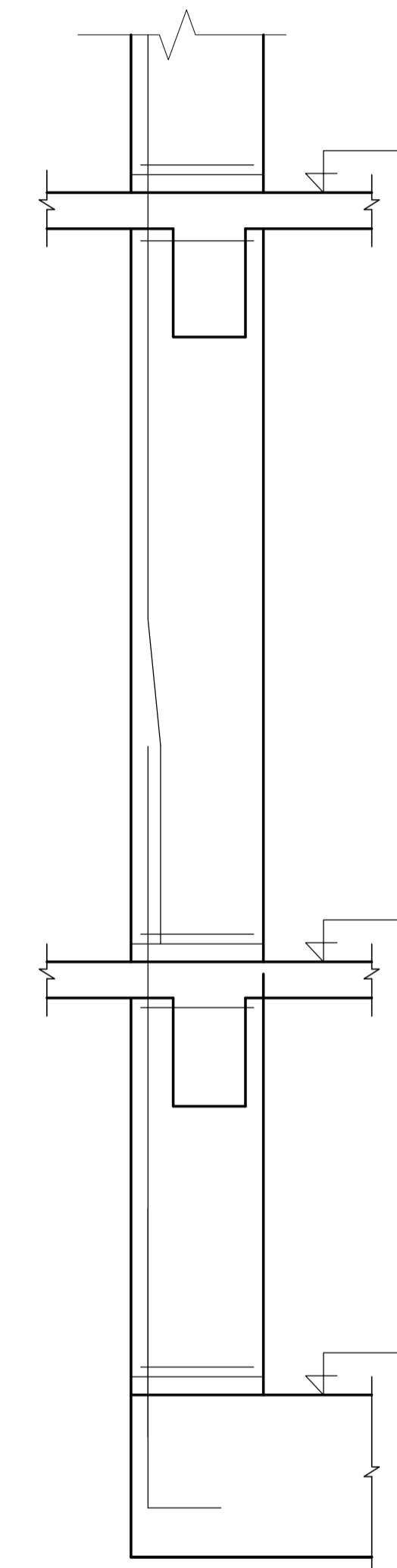
DESIGNED BY: M.J.M	DRAWN BY: FA
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-2BR-03	REV No. DRG STATUS

# PROPOSED HOUSING SCHEME ON PLOT LR NO. KAJIADO/KITENGELA/6242 IN KITENGELA, KAJIADO COUNTY

## 3 BEDROOM APARTMENTS STRUCTURAL DRAWINGS



SHAPE CODE	METHOD OF MEASUREMENT OF BENDING DIMENSIONS	TOTAL LENGTH OF BAR ALONG CENTER LINE	DIMENSIONS TO BE GIVEN IN SCHEDULE
20		A	STRAIGHT
32		A + h	
33		A + 2h	
34		A + n	
35		A + 2n	
37	 <small>If R is non standard use shape code 51</small>	A+B-0.5R-d	

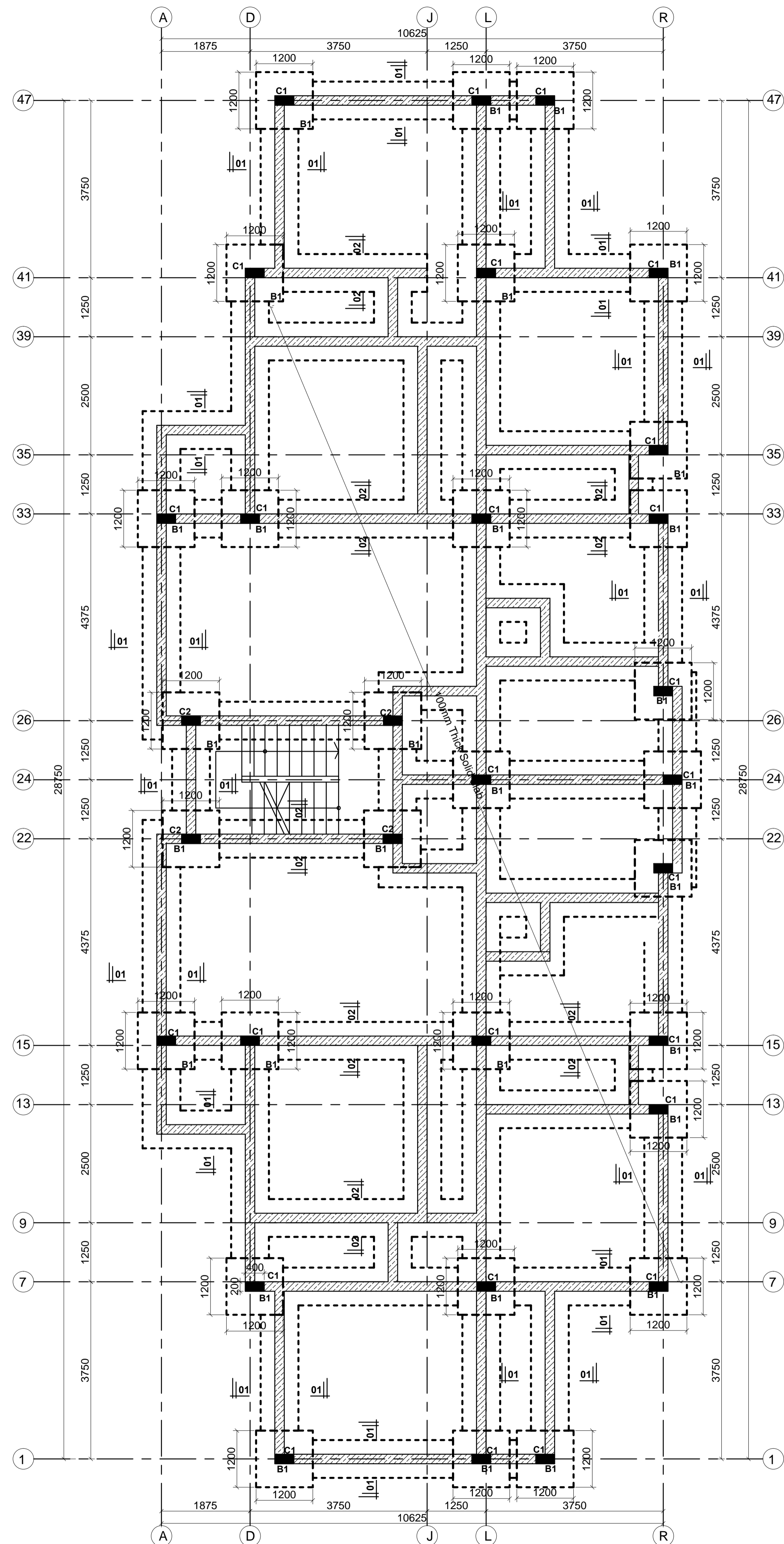


NOVEMBER 2022

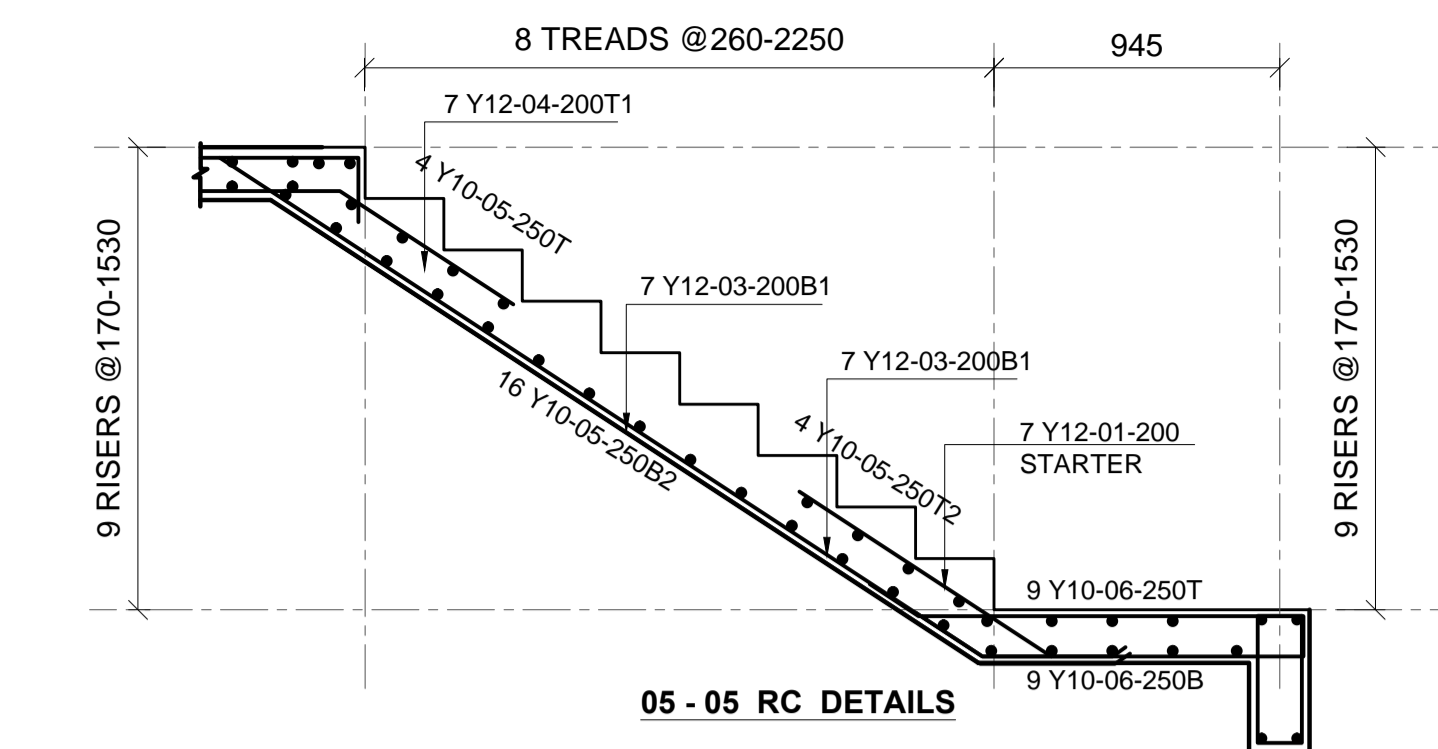
CIVIL AND STRUCTURAL ENGINEERS  
EPOCH CONSULTING  
ENGINEERS  
P.O.BOX 75193-00200,  
NAIROBI.

PROJECT ARCHITECTS  
HABITECH CONSULTANTS  
ARCHITECTS&PLANNERS  
P.O.BOX 66495,  
NAIROBI.

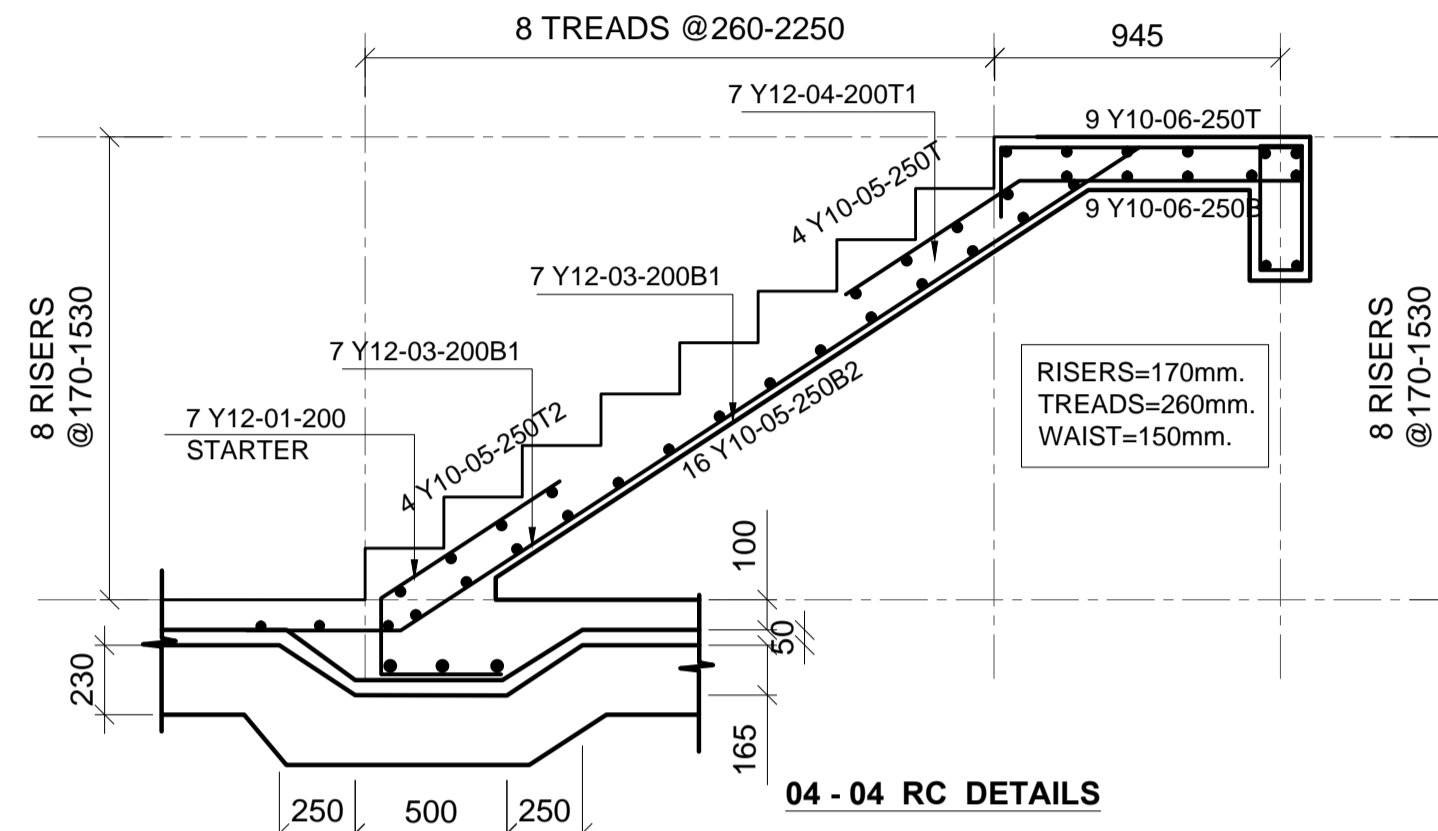
CLIENT:  
KENYATTA NATIONAL HOSPITAL  
STAFF RETIREMENT BENEFITS  
SCHEME(2011)  
P.O BOX 20723-00202  
NAIROBI



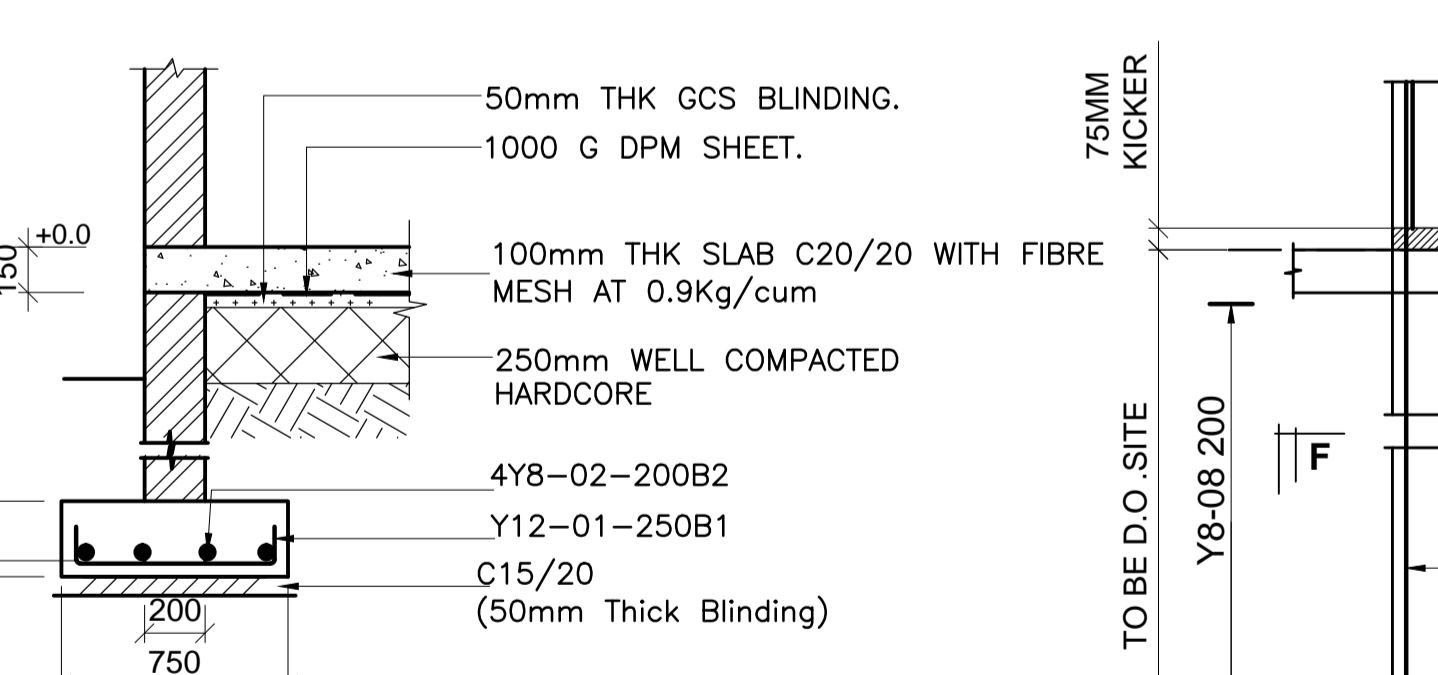
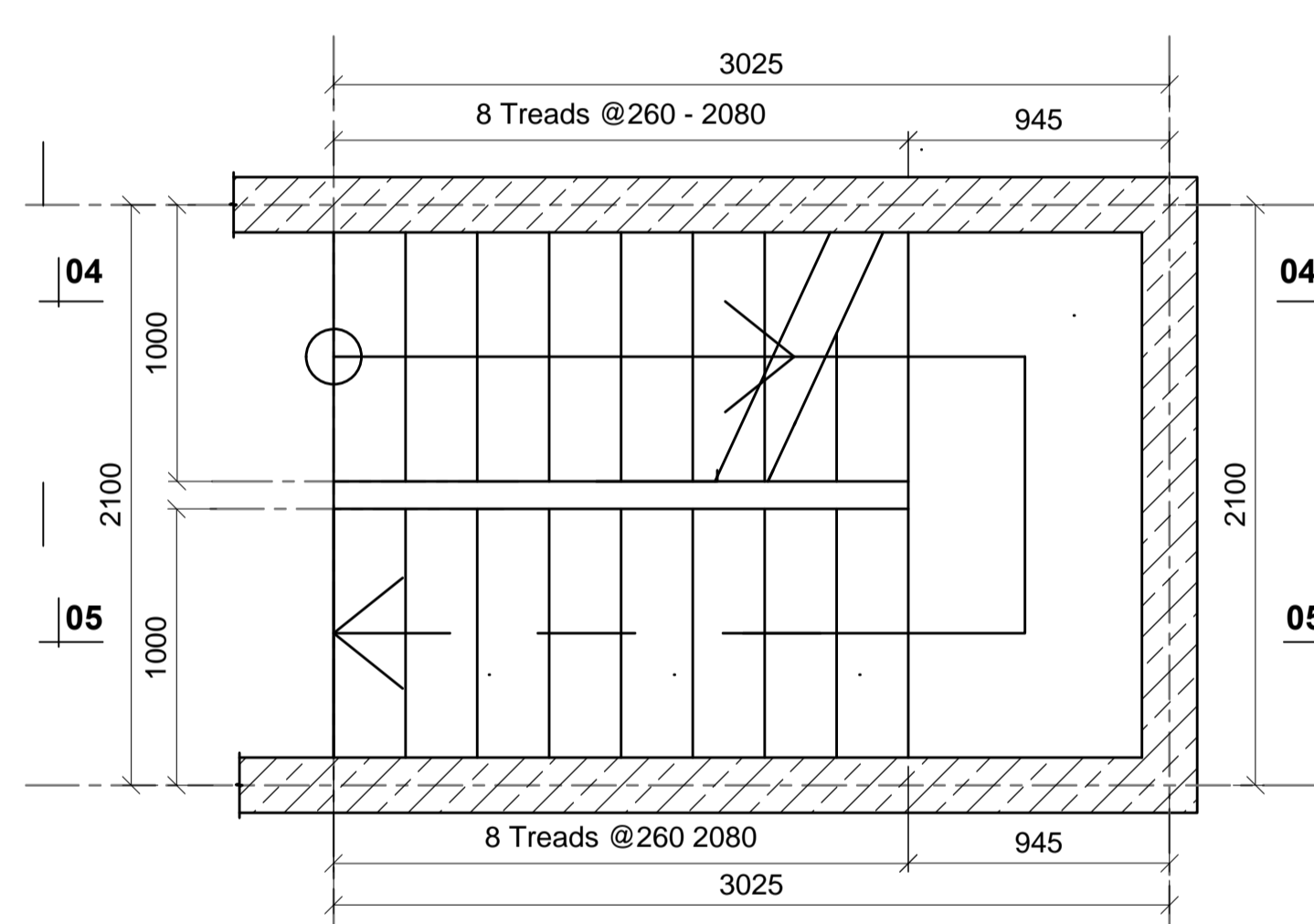
**FOUNDATION AND GROUND FLOOR LAYOUT**  
GENERAL ARRANGEMENT-100 mm THK SLAB  
SCALE=1:50



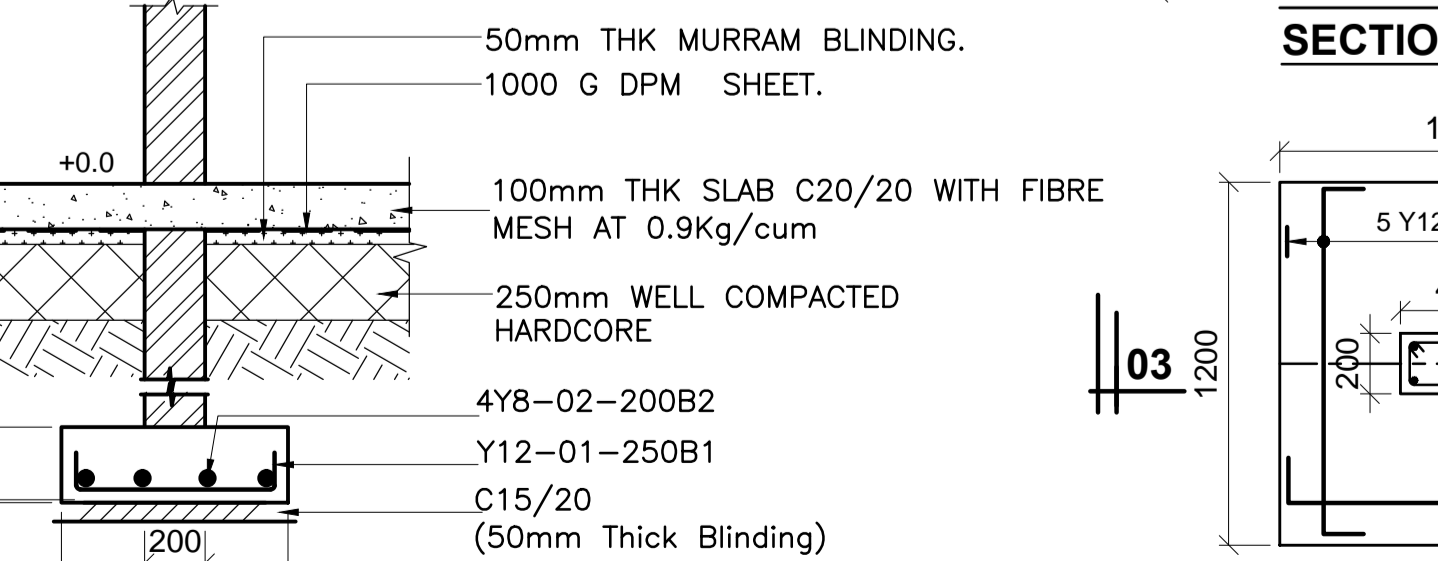
**05 - 05 RC DETAILS**



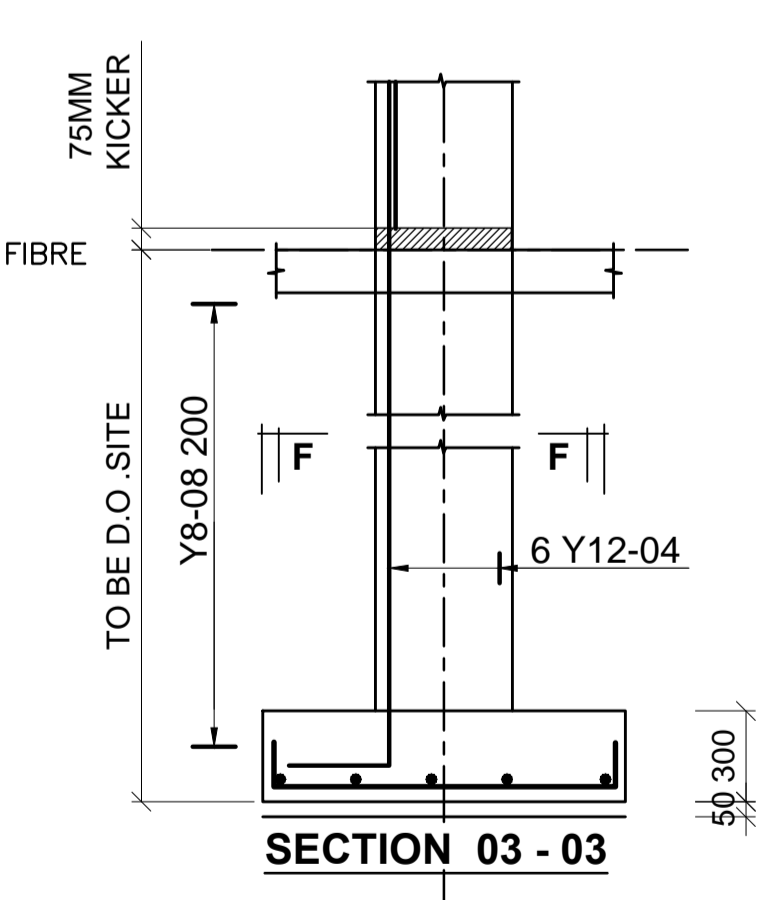
**04 - 04 RC DETAILS**



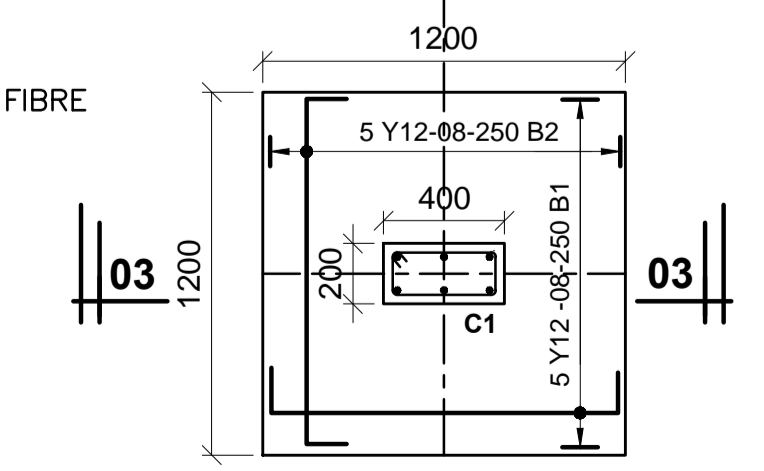
**SECTION 01-01**  
SCALE 1:25



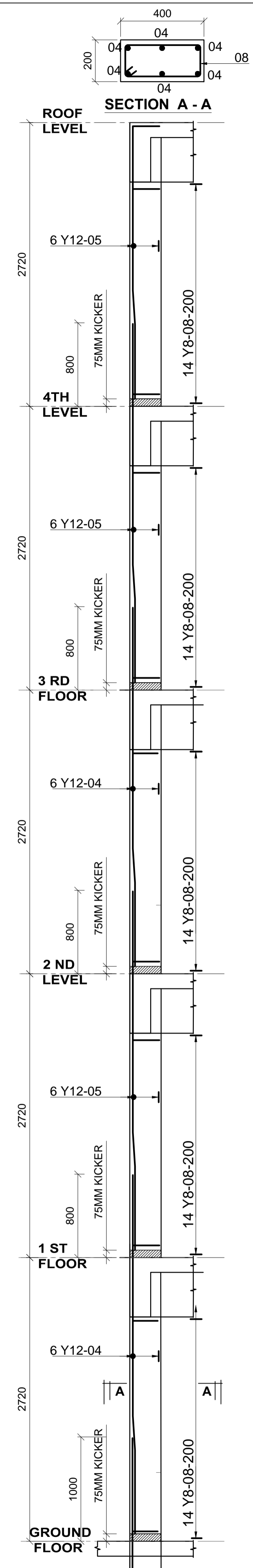
**SECTION 02-02**  
SCALE 1:25



**SECTION 03-03**



**B1 (1200 x 1200 x 300) 30 Nos**  
SCALE 1:25



**C1 (200 x 400) 30 Nos**  
SCALE 1:25

- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  - T1 = TOP 1ST. LAYER, T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461,
- CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)
  - GROUND FLOOR SLAB CONCRETE STRENGTH TO BE AT LEAST 20N/MM<sup>2</sup> AT 28 DAYS.(CLASS 20/20)

**PROJECT ARCHITECTS**  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.  
**EPOCH CONSULTING ENGINEERS**  
Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

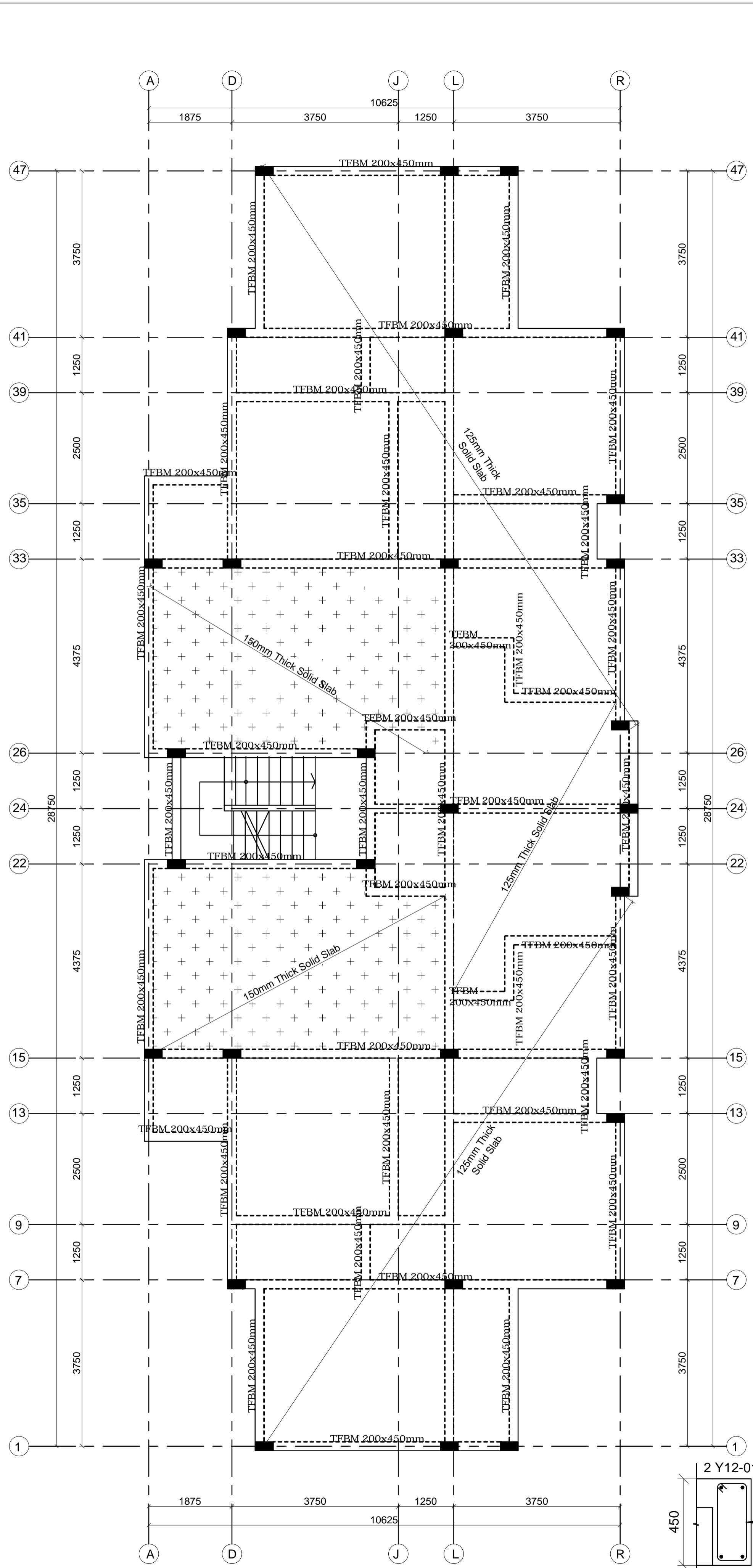
**CLIENT:**  
KENYATTA NATIONAL HOSPITAL STAFF  
RETIREMENT BENEFITS SCHEME (2011)  
P.O. BOX 20723-00202  
NAIROBI

**ZONE:**  
KAJIADO COUNTY

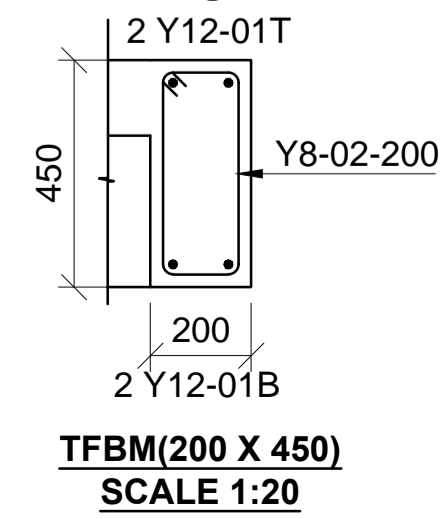
**PROJECT:**  
PROPOSED HOUSING SCHEME ON PLOT  
LR NO. KAJIADO/KITENGELA/6242 IN  
KITENGELA, KAJIADO COUNTY

**DRAWING TITLE:**  
3 BEDROOM APARTMENTS FOUNDATION  
AND COLUMN DETAILS

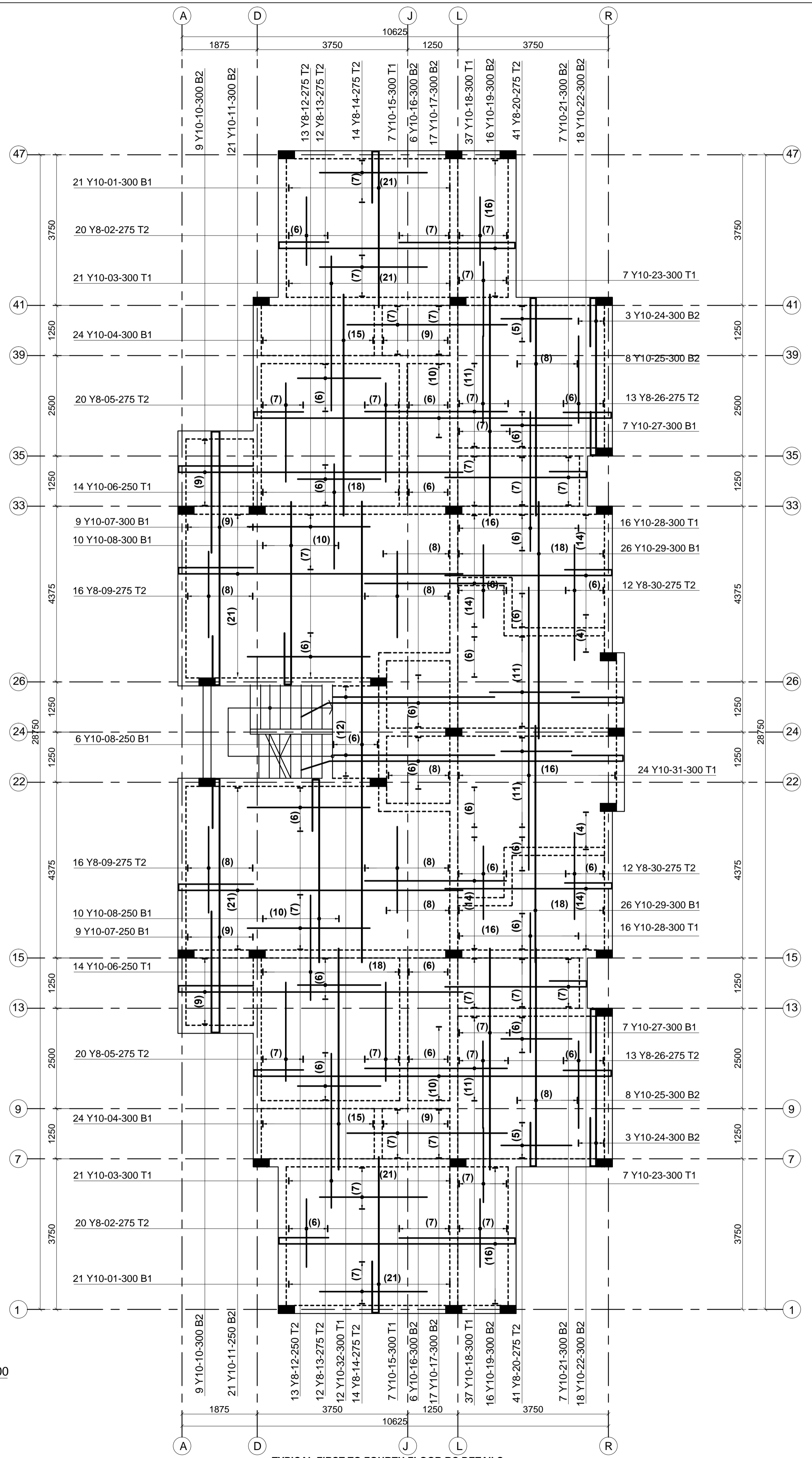
DESIGNED BY: M.J.M	DRAWN BY: FA
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-3BR-01	REV No. DRG STATUS



**TYPICAL FIRST TO FOURTH FLOOR BEAMS LAYOUT**  
125mm & 150mm THICK SLAB AS INDICATED  
SCALE 1:50



**TFBM(200 X 450)**  
SCALE 1:20



**TYPICAL FIRST TO FOURTH FLOOR RC DETAILS**  
125mm & 150mm THICK SLAB AS INDICATED  
SCALE 1:50

- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM
  - COLUMN - 30MM
  - BEAMS - 25MM
  - SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  - T1 = TOP 1ST. LAYER, T2 = TOP 2ND. LAYER
  7. Y = RIBBED BARS TO BS 4461,
8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)
  9. GROUND FLOOR SLAB CONCRETE STRENGTH TO BE AT LEAST 20N/MM<sup>2</sup> AT 28 DAYS.(CLASS 20/20)

**PROJECT ARCHITECTS**  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5, 0724347807  
NAIROBI

**EPOCH CONSULTING ENGINEERS**  
Civil & Structural Engineers  
P.O. BOX 75193-00200,  
NAIROBI.

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

**CLIENT:**  
KENYATTA NATIONAL HOSPITAL STAFF  
RETIREMENT BENEFITS SCHEME (2011)  
P.O. BOX 20723-00202  
NAIROBI

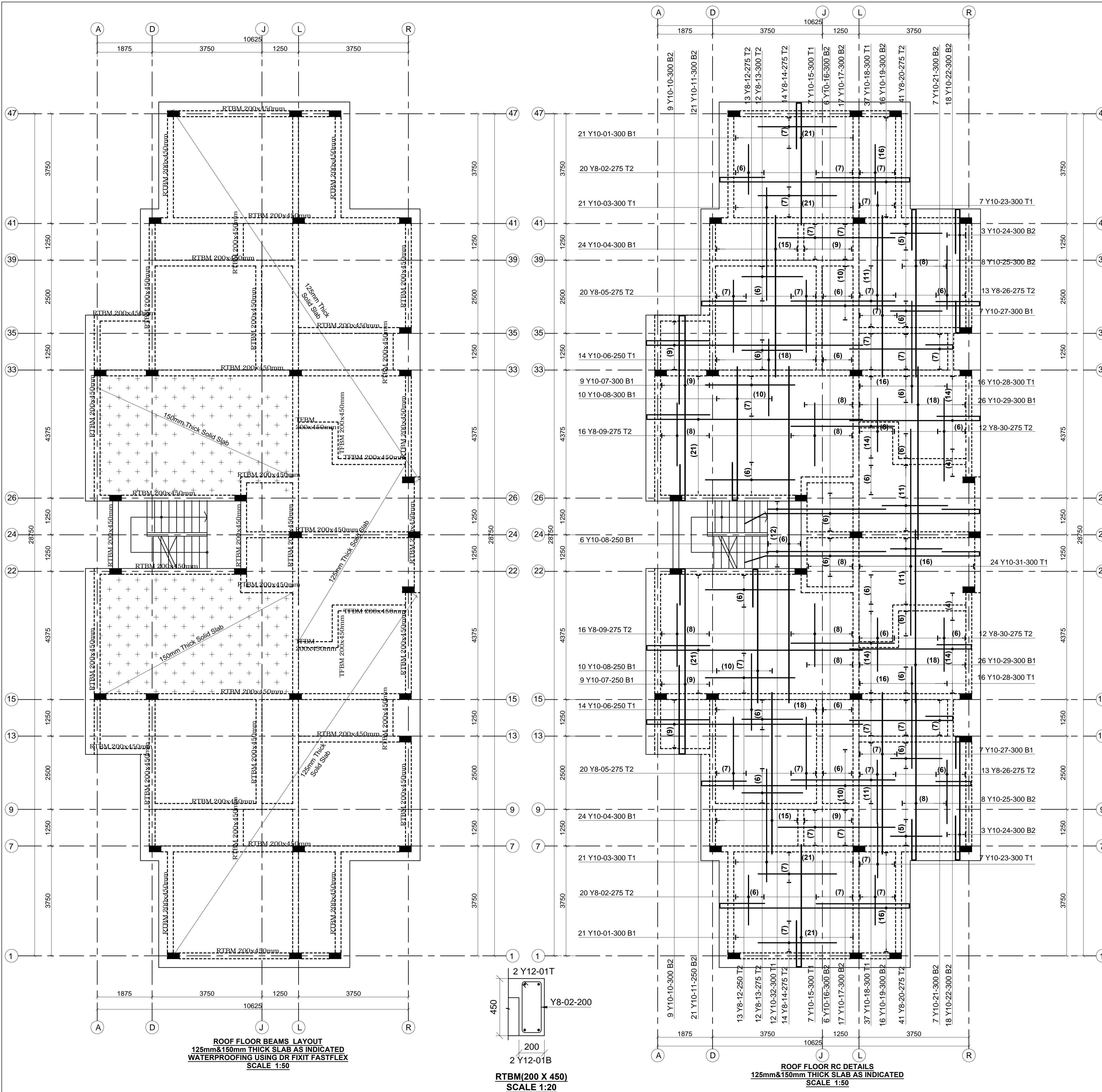
**ZONE:**  
KAJIADO COUNTY

**PROJECT:**  
PROPOSED HOUSING SCHEME ON PLOT  
LR NO. KAJIADO/KITENGELA/6242 IN  
KITENGELA, KAJIADO COUNTY

**DRAWING TITLE:**  
3 BEDROOM APARTMENTS FIRST TO  
FOURTH FLOOR SLAB LAYOUT AND  
BEAM DETAILS

DESIGNED BY: M.J.M	DRAWN BY: FA
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-3BR-02	REV No. DRG STATUS





- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM
  - COLUMN - 30MM
  - BEAMS - 25MM
  - SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  - T1 = TOP 1ST. LAYER, T2 = TOP 2ND LAYER
  7. Y = RIBBED BARS TO BS 4461,
8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)
  9. GROUND FLOOR SLAB CONCRETE STRENGTH TO BE AT LEAST 20N/MM<sup>2</sup> AT 28 DAYS.(CLASS 20/20)

**PROJECT ARCHITECTS**  
**HABITECH CONSULTANTS**  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5, 0724347807  
 NAIROBI

P.O. BOX 75193-00200,  
 NAIROBI.  
**EPOCH CONSULTING ENGINEERS**  
 Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

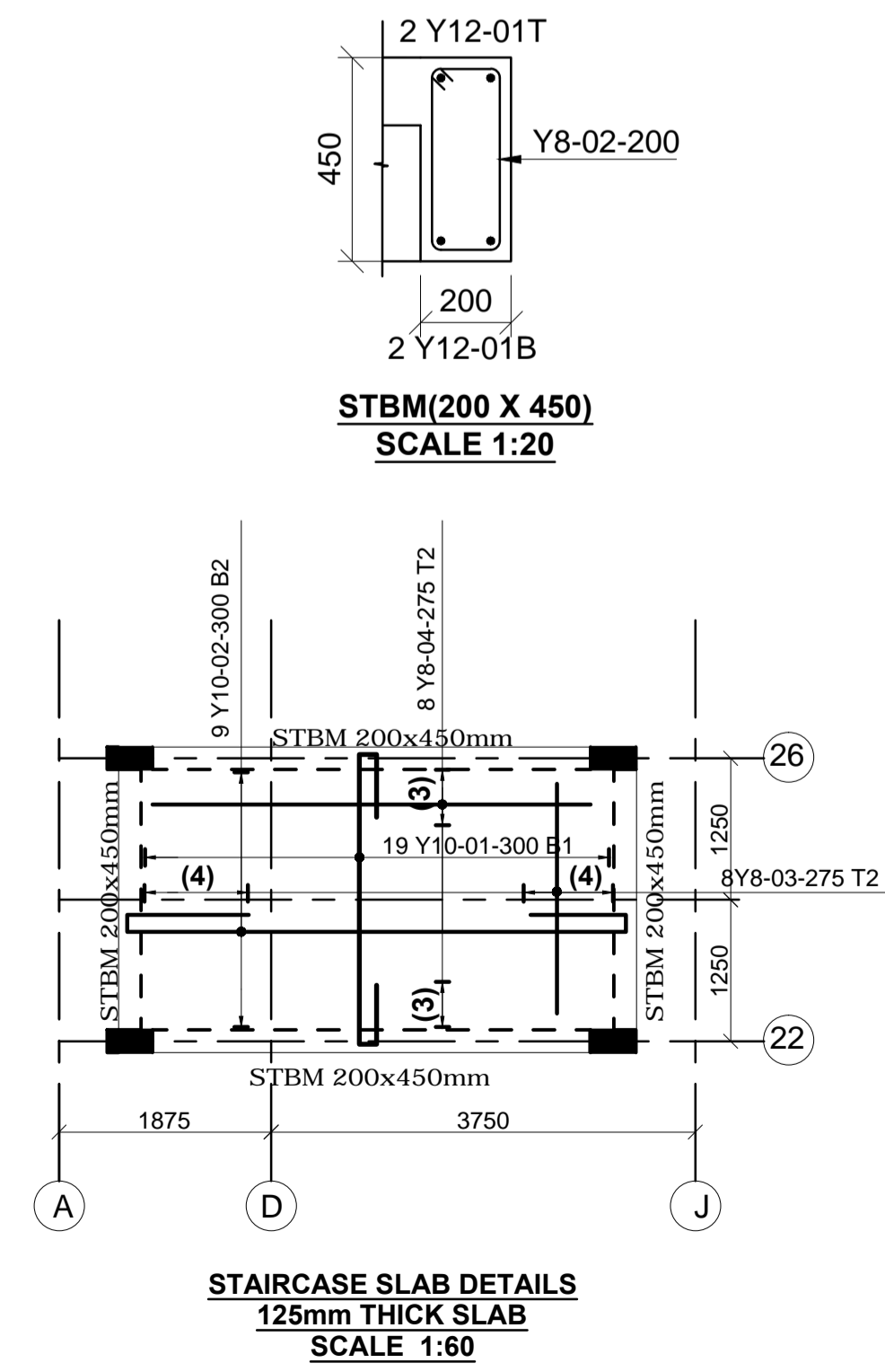
CLIENT:  
 KENYATTA NATIONAL HOSPITAL STAFF  
 RETIREMENT BENEFITS SCHEME (2011)  
 P.O. BOX 20723-00202  
 NAIROBI

ZONE:  
 KAJIADO COUNTY

PROJECT:  
 PROPOSED HOUSING SCHEME ON PLOT  
 LR NO. KAJIADO/KITENGELA/6242 IN  
 KITENGELA, KAJIADO COUNTY

DRAWING TITLE:  
 3 BEDROOM APARTMENTS ROOF SLAB  
 BEAM LAYOUT AND DETAILS

DESIGNED BY: M.J.M	DRAWN BY: FA
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-3BR-03	REV No. DRG STATUS



**ROOF FLOOR BEAMS LAYOUT**  
 125mm&150mm THICK SLAB AS INDICATED  
 WATERPROOFING USING DR FIXIT FASTFLEX  
 SCALE 1:50

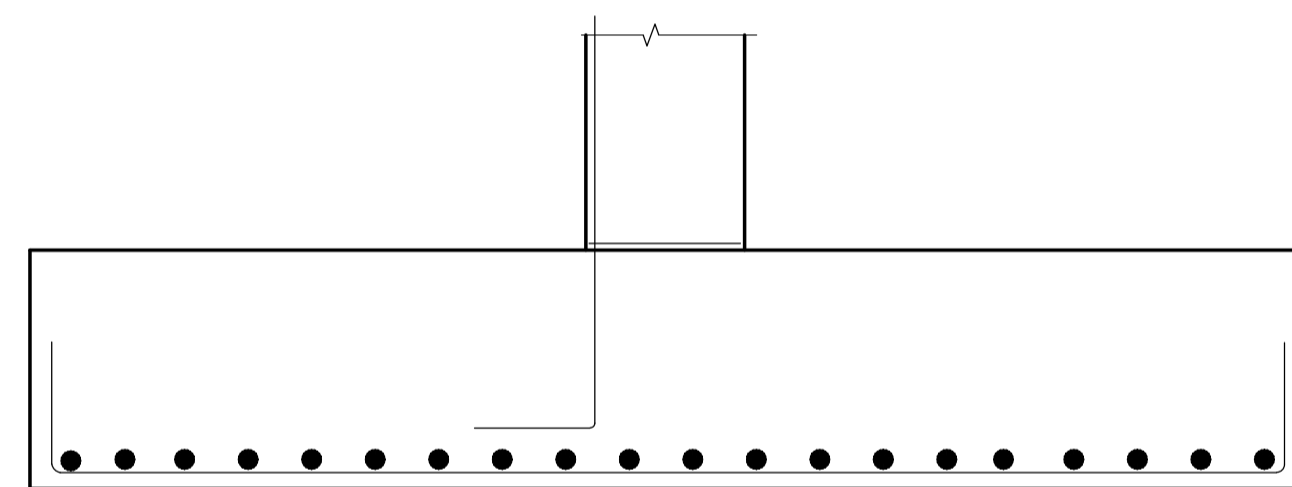
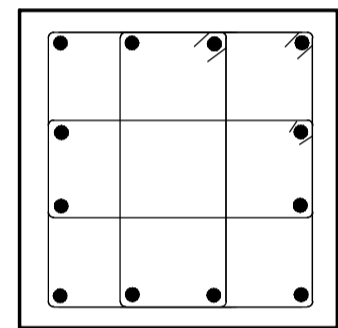
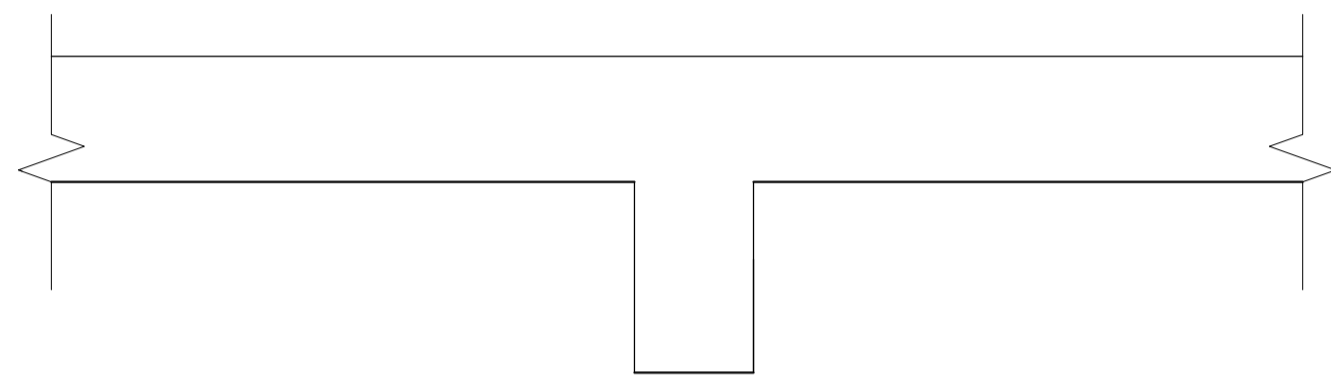
**RTBM(200 X 450)**  
 SCALE 1:20

**ROOF FLOOR RC DETAILS**  
 125mm&150mm THICK SLAB AS INDICATED  
 SCALE 1:50

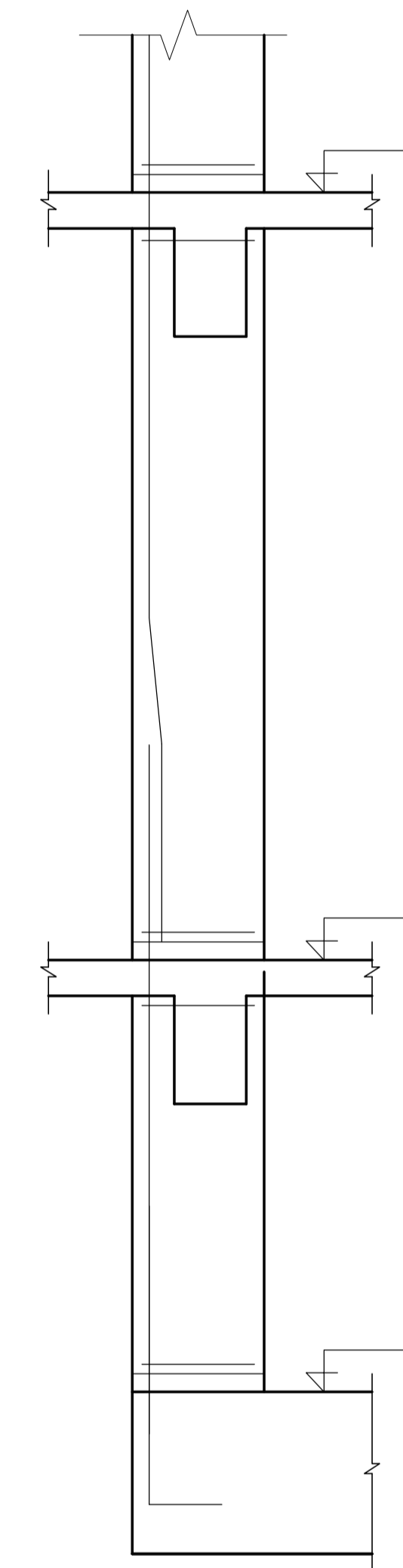
**STAIRCASE SLAB DETAILS**  
 125mm THICK SLAB  
 SCALE 1:60

PROPOSED HOUSING SCHEME ON PLOT LR NO.  
KAJIADO/KITENGELA/6242 IN KITENGELA, KAJIADO COUNTY

SUPPORT AMMENITIES STRUCTURAL DRAWINGS



- 1.CLUB HOUSE
- 2.SWIMMING POOL
- 3.WASTE WATER TREATMENT
- 4.ELEVATED WATERTANKS
- 5.UNDERGROUND WATERTANK
- 6.GATE HOUSE
- 7.BOUNDARY WALL
- 8.CIVIL WORKS

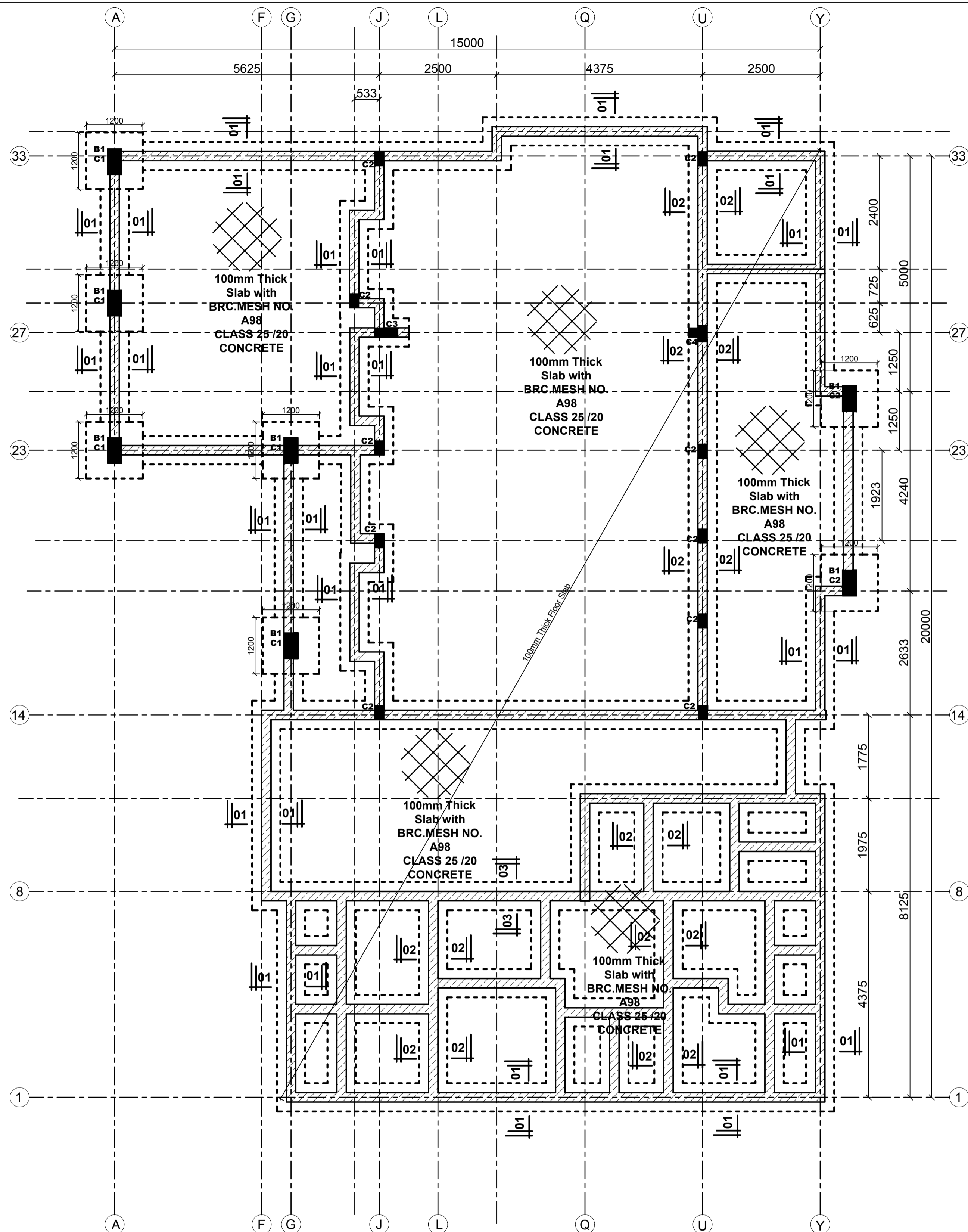


NOVEMBER 2022

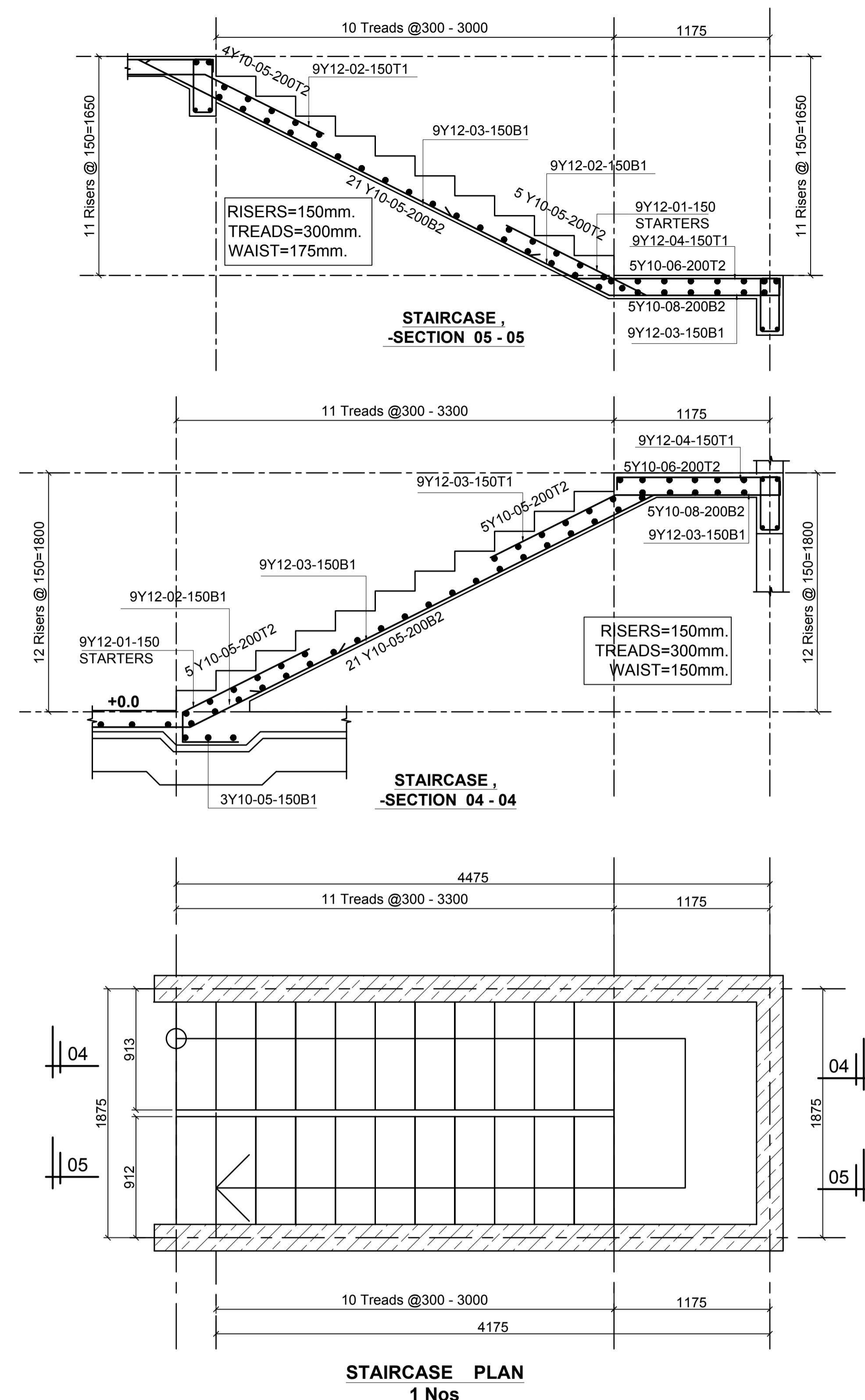
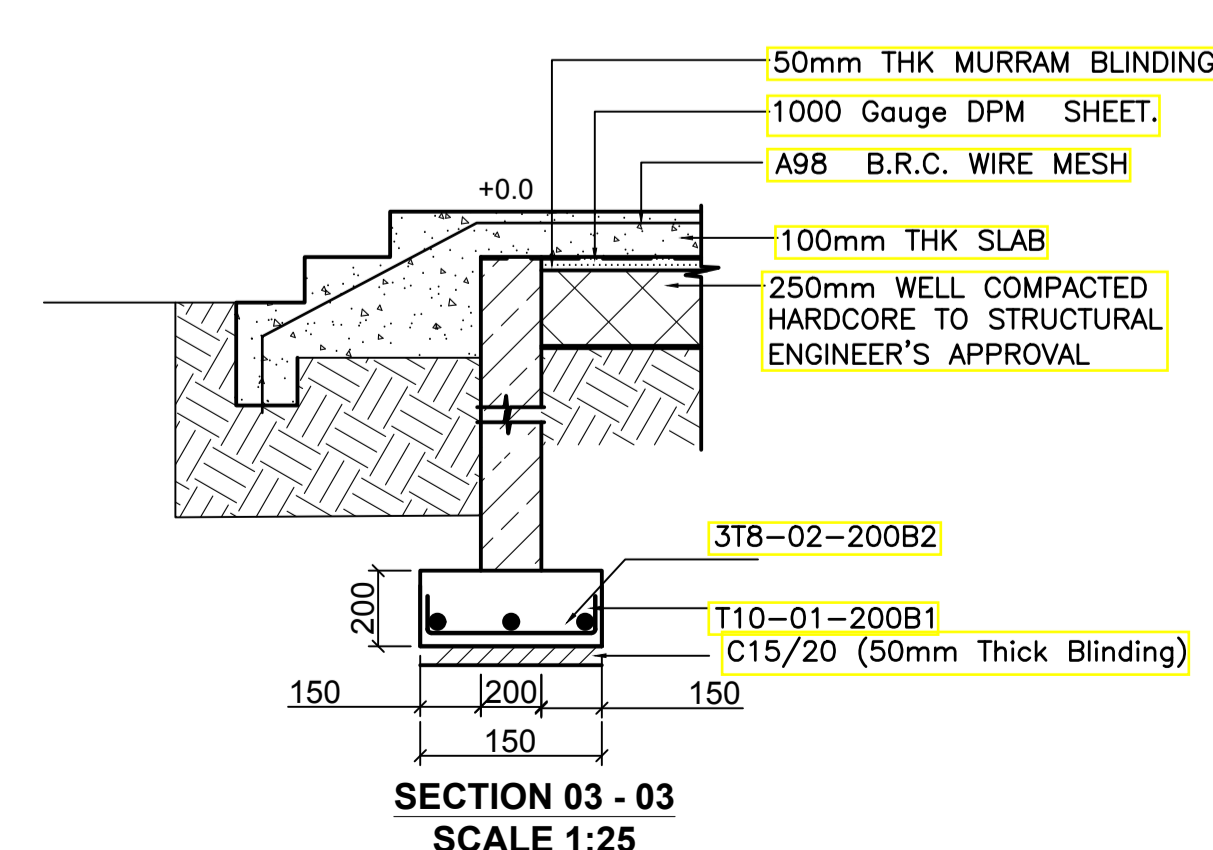
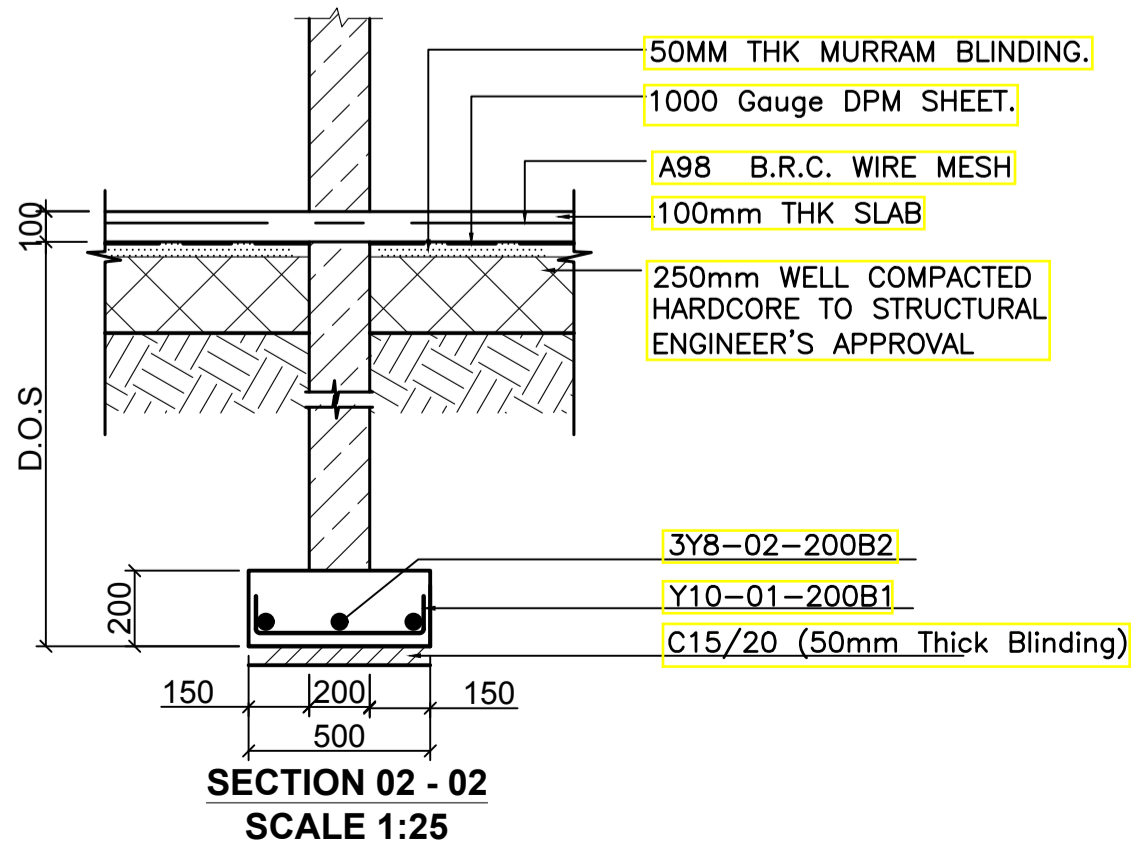
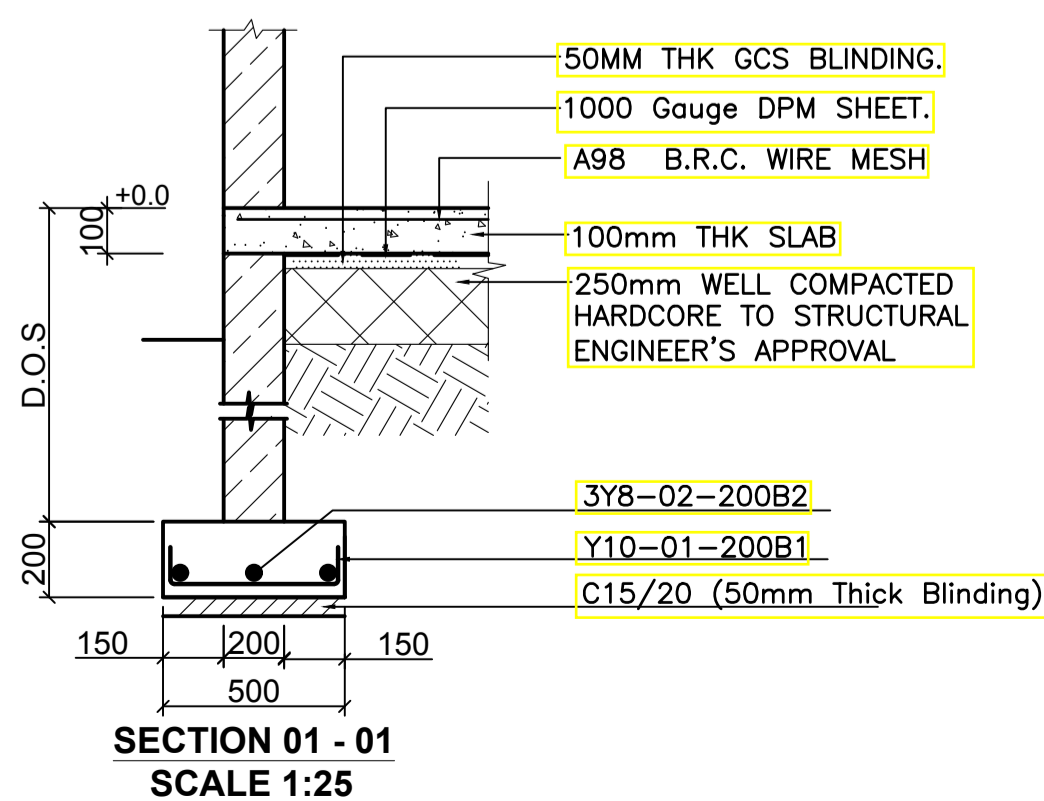
CIVIL AND STRUCTURAL ENGINEERS  
EPOCH CONSULTING  
ENGINEERS  
P.O.BOX 75193-00200,  
NAIROBI.

PROJECT ARCHITECTS  
HABITECH CONSULTANTS  
ARCHITECTS&PLANNERS  
P.O.BOX 66495,  
NAIROBI.

CLIENT:  
KENYATTA NATIONAL HOSPITAL  
STAFF RETIREMENT BENEFITS  
SCHEME(2011)  
P.O BOX 20723-00202  
NAIROBI



FOUNDATION AND GROUND FLOOR LAYOUT  
GENERAL ARRANGEMENT-100 mm THK SLAB  
SCALE=1:50



STAIRCASE PLAN  
1 Nos

- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461.
  - CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.  
**EPOCH CONSULTING ENGINEERS**  
Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

**CLIENT:**  
Kenya National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

**ZONE:**  
Kajiado County

**PROJECT:**  
Proposed Housing Scheme on Plot LR  
NO. Kajiado/Kitengela/6242 in  
Kitengela

**DRAWING TITLE:**  
FOUNDATION/GROUND FLOOR STRIP FOOTING  
AND STAIR REBAR DETAILS  
(CLUB HOUSE)

DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-CH-01	REV No. DRG STATUS

- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER, T1 = TOP 1ST. LAYER, T2 = TOP 2ND LAYER
  7. Y = RIBBED BARS TO BS 4461.
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**  
 HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5,0724347807  
 NAIROBI

P.O.BOX 75193-00200,  
 NAIROBI.

**EPOCH CONSULTING ENGINEERS**  
 Civil & Structural Engineers

F			
E			
D			
C			
B			
A			
REV	Description	Checked/Date	Issued to/Date

**CLIENT:**

Kenyatta National Hospital Staff  
 Retirement Benefit Scheme (2011)  
 P.O Box 20723-00202,NAIROBI

**ZONE:**

Kajiado County

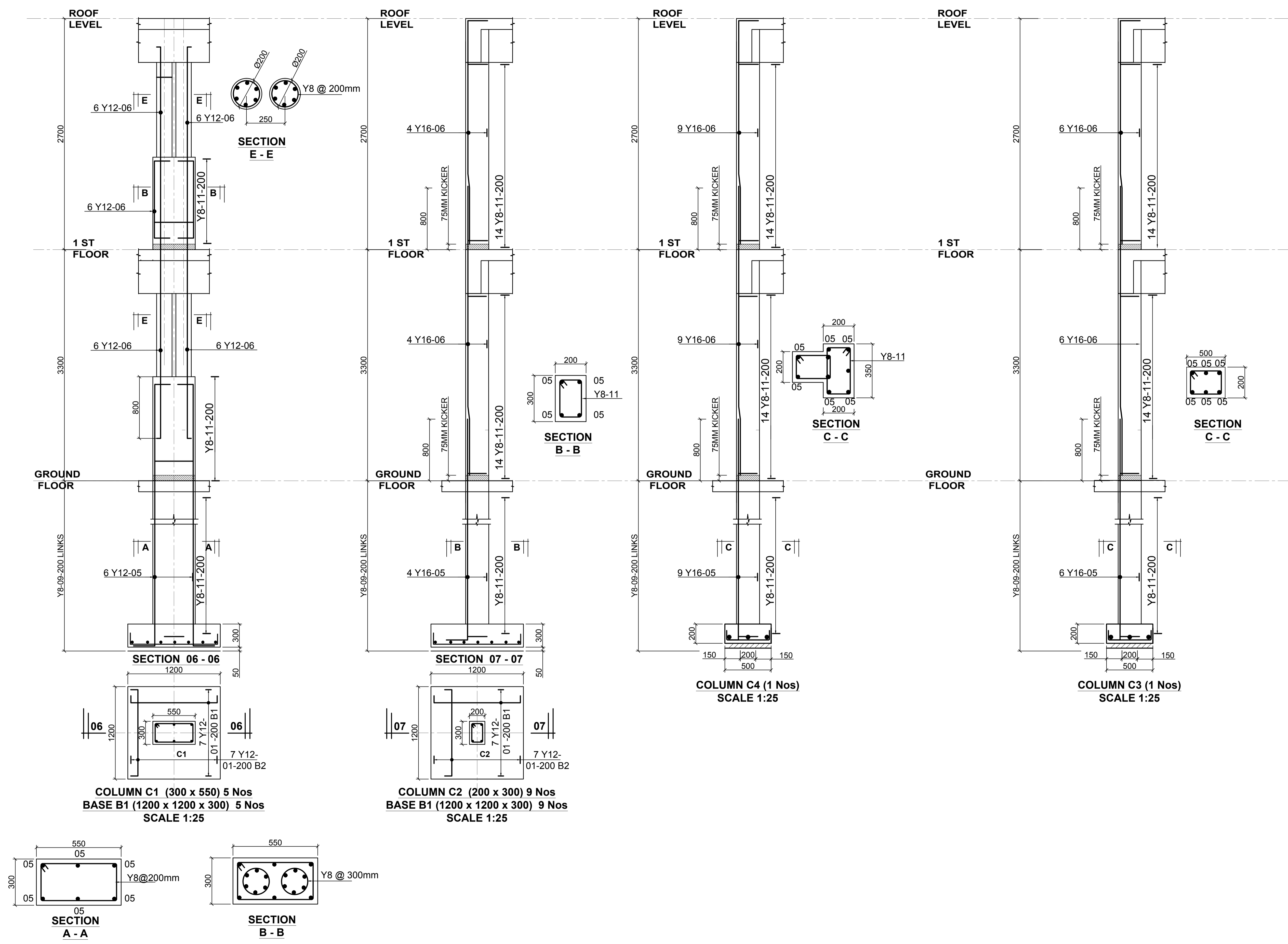
**PROJECT:**

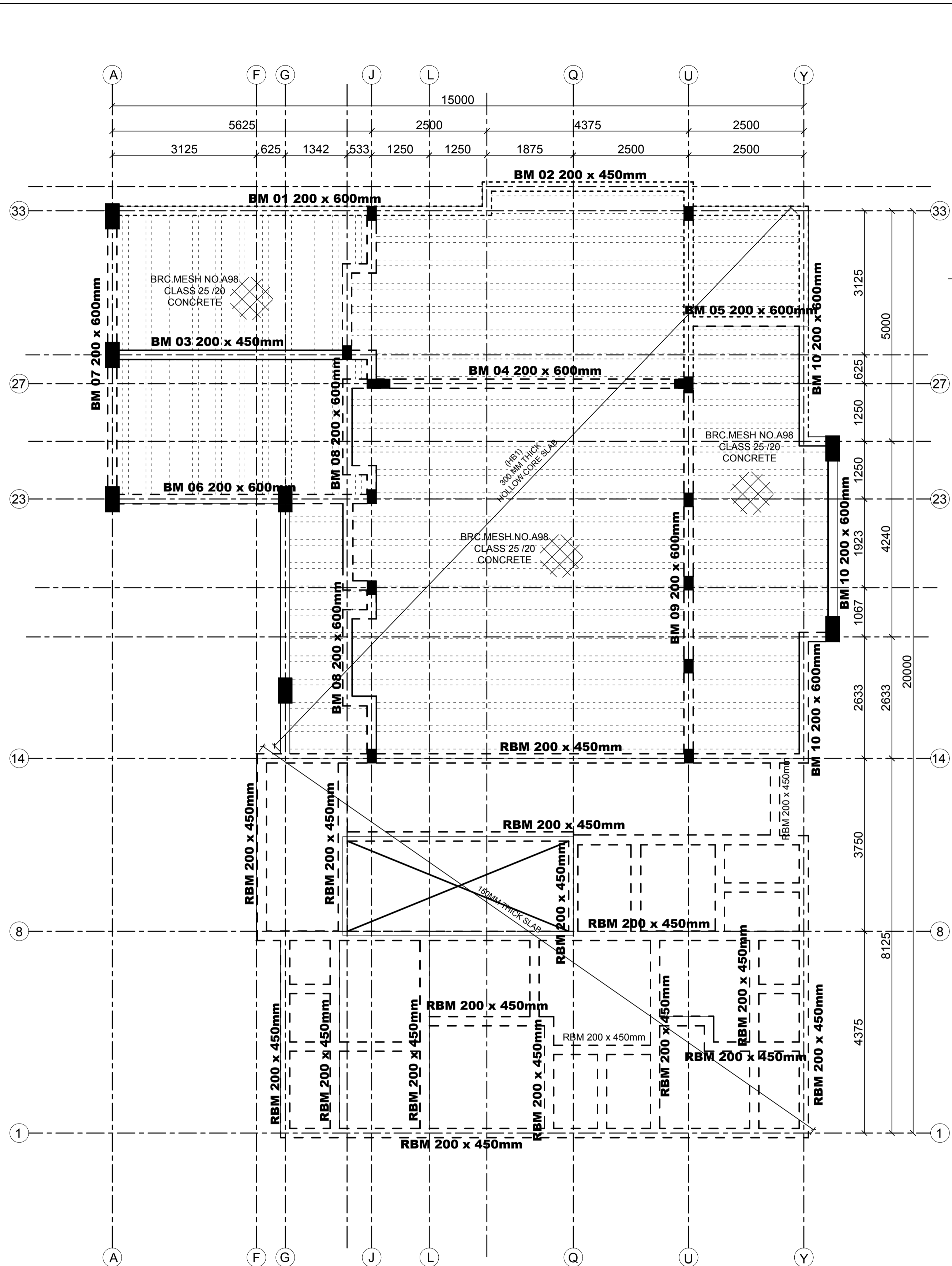
Proposed Housing Scheme on Plot LR  
 NO. Kajiado/Kitengela/6242 in  
 Kitengela

**DRAWING TITLE:**

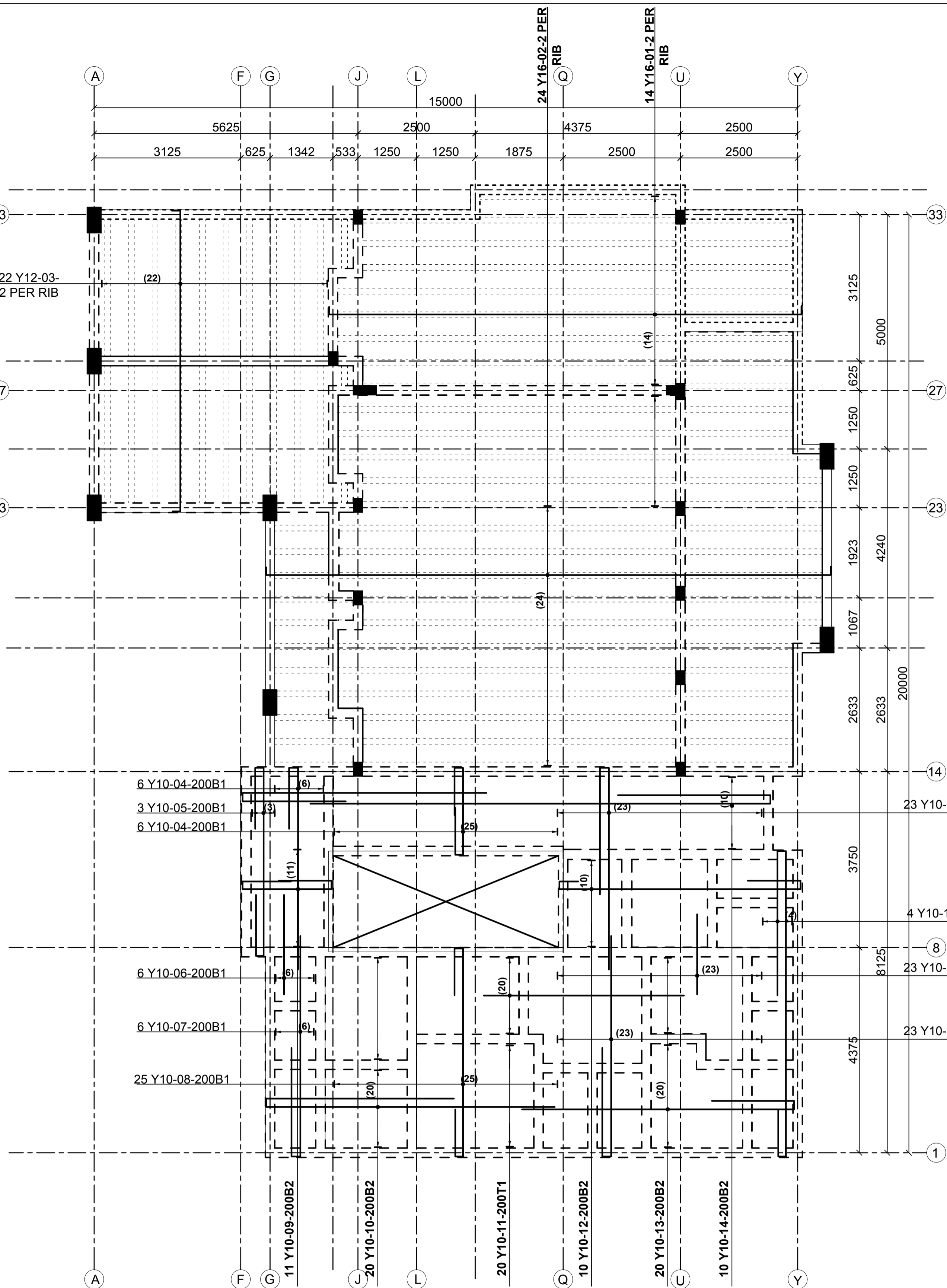
COLUMN BASES AND COLUMNS REBAR DETAILS  
 (CLUB HOUSE)

DESIGNED BY:	IM.I.M	DRAWN BY:	F.A
CHECKED BY:	ENG. JNK	JOB No.:	
SCALES:	AS SHOWN	DATE:	NOVEMBER 2022
DRG No.:	STR-CH-01.1	REV No.:	DRG STATUS

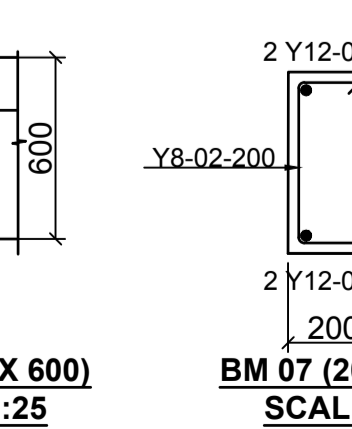
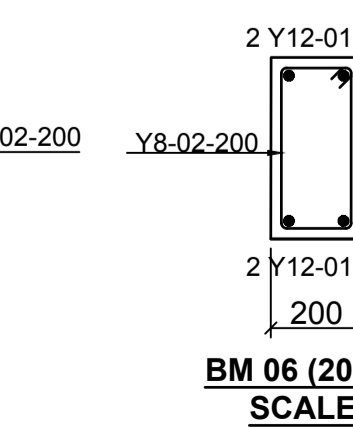
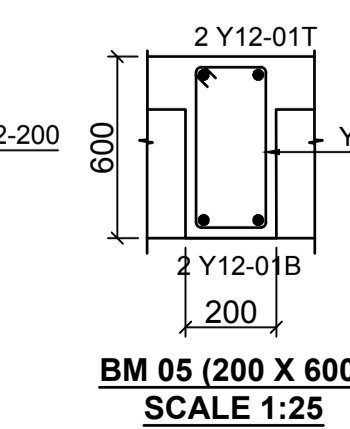
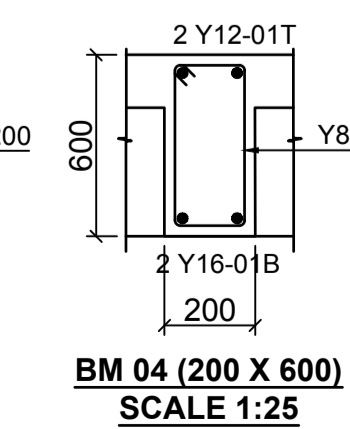
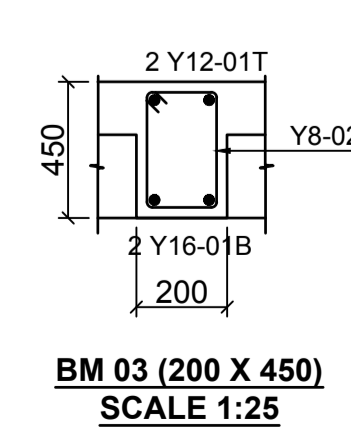
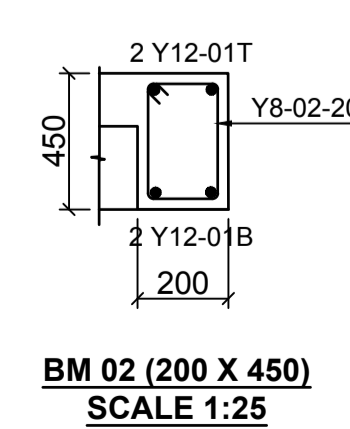
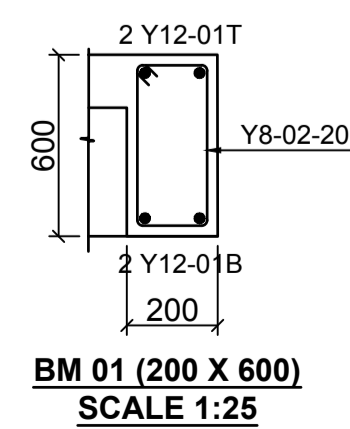
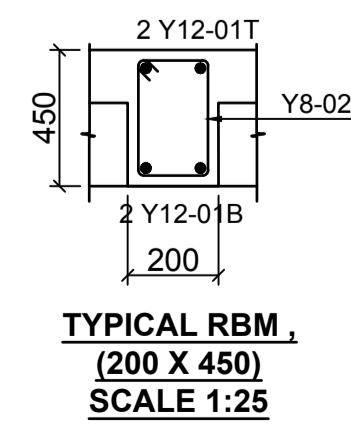
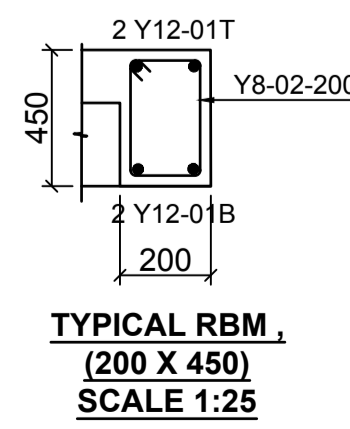
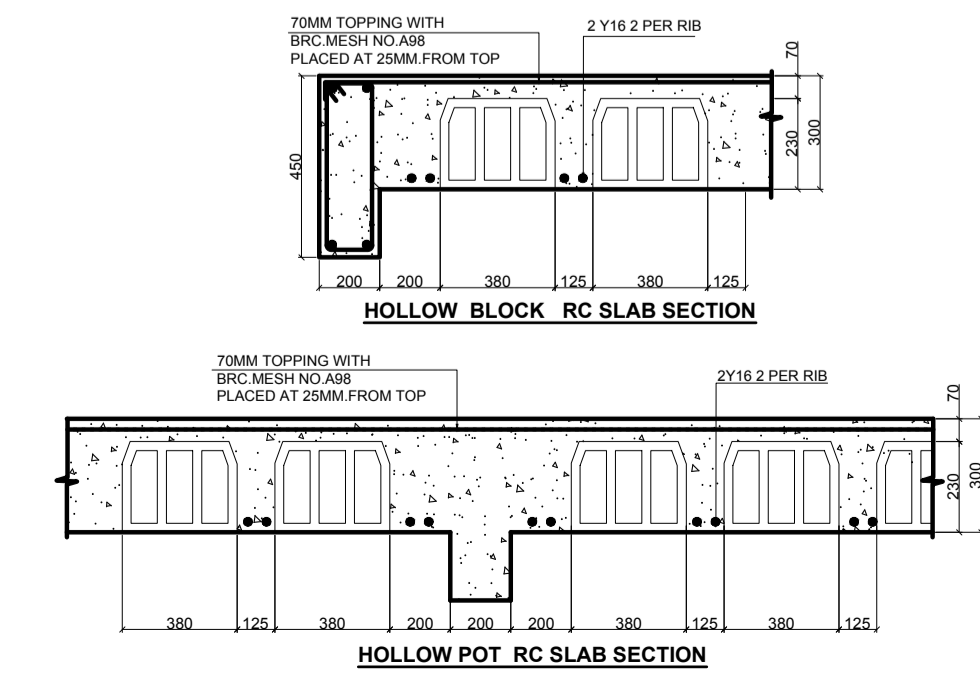




**FIRST FLOOR SLAB LAYOUT**  
**300 MM THICK HOLLOW BLOCK SLAB & 150 MM THK SOLID SLAB**  
**SCALE 1:50**



**FIRST FLOOR SLAB REBAR DETAILS**  
**300 MM THICK HOLLOW BLOCK SLAB & 150 MM THK SOLID SLAB**  
**SCALE 1:50**



- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER,  
 B2 = BOTTOM 2ND. LAYER  
 T1 = TOP 1ST. LAYER,  
 T2 = TOP 2ND LAYER
  7. Y = RIBBED BARS TO BS 4461.
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**  
 HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5,0724347807  
 NAIROBI

P.O.BOX 75193-00200,  
 NAIROBI.

**EPOCH CONSULTING ENGINEERS**  
 Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
D			
C			
B			
A			

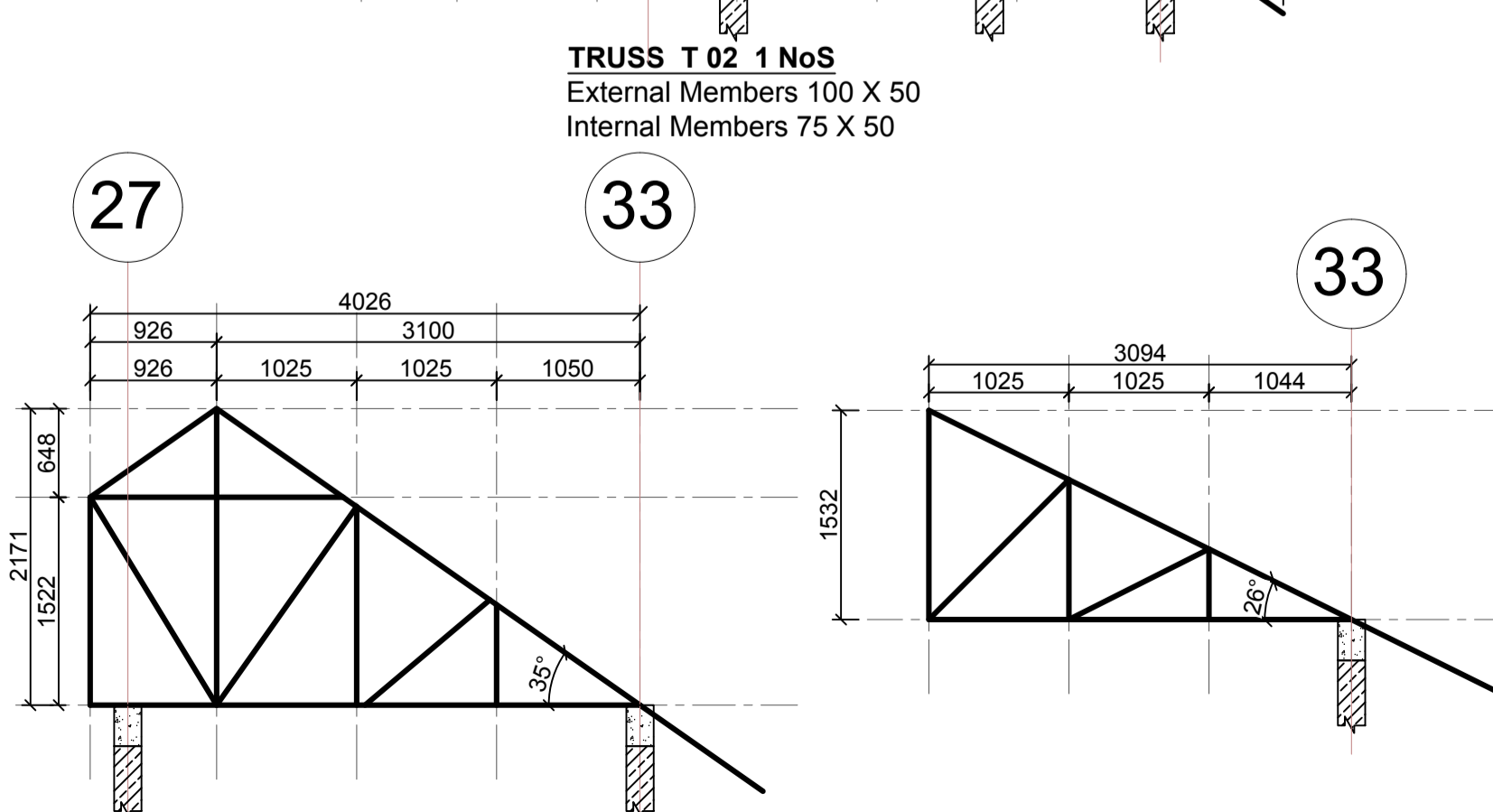
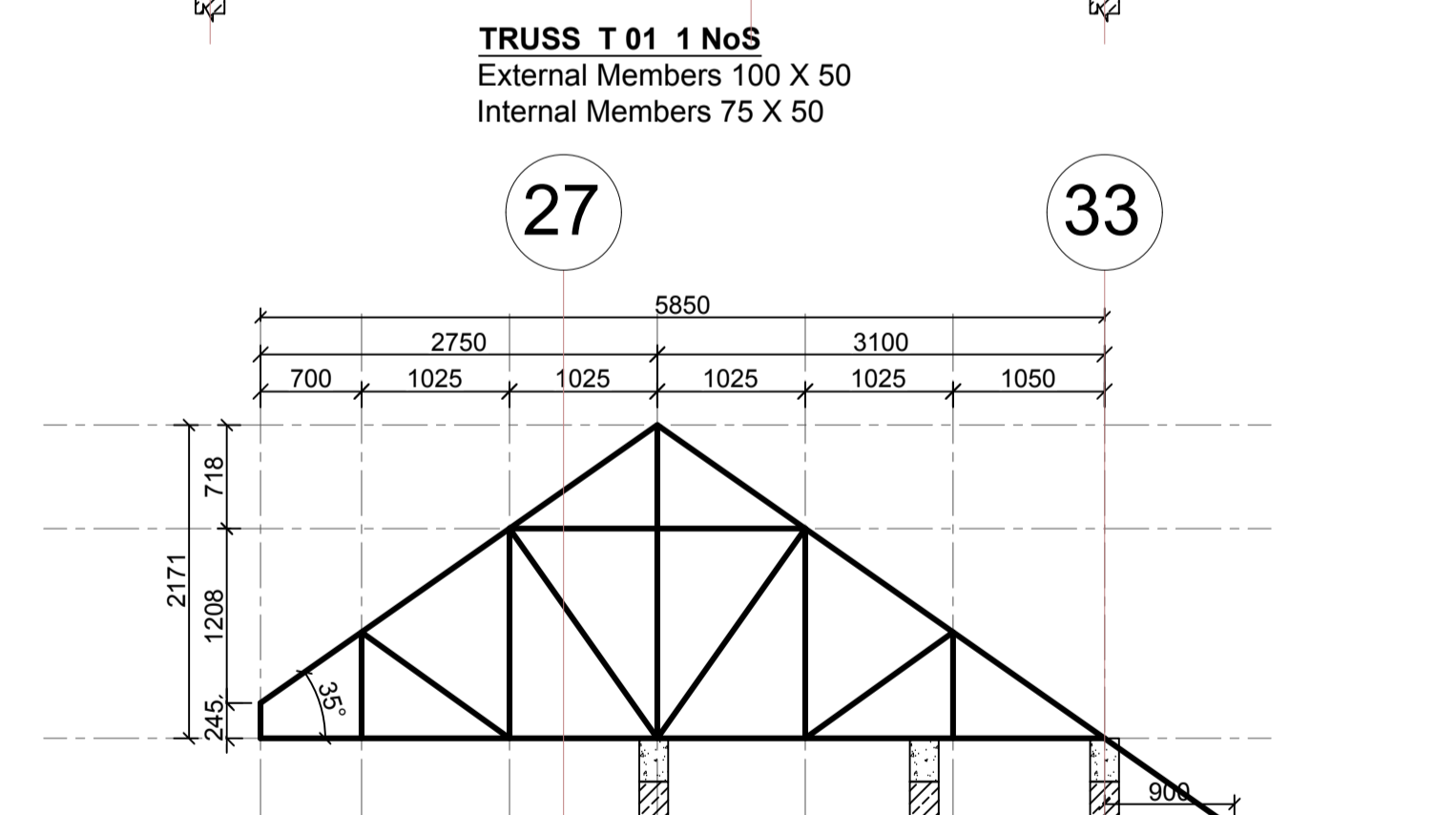
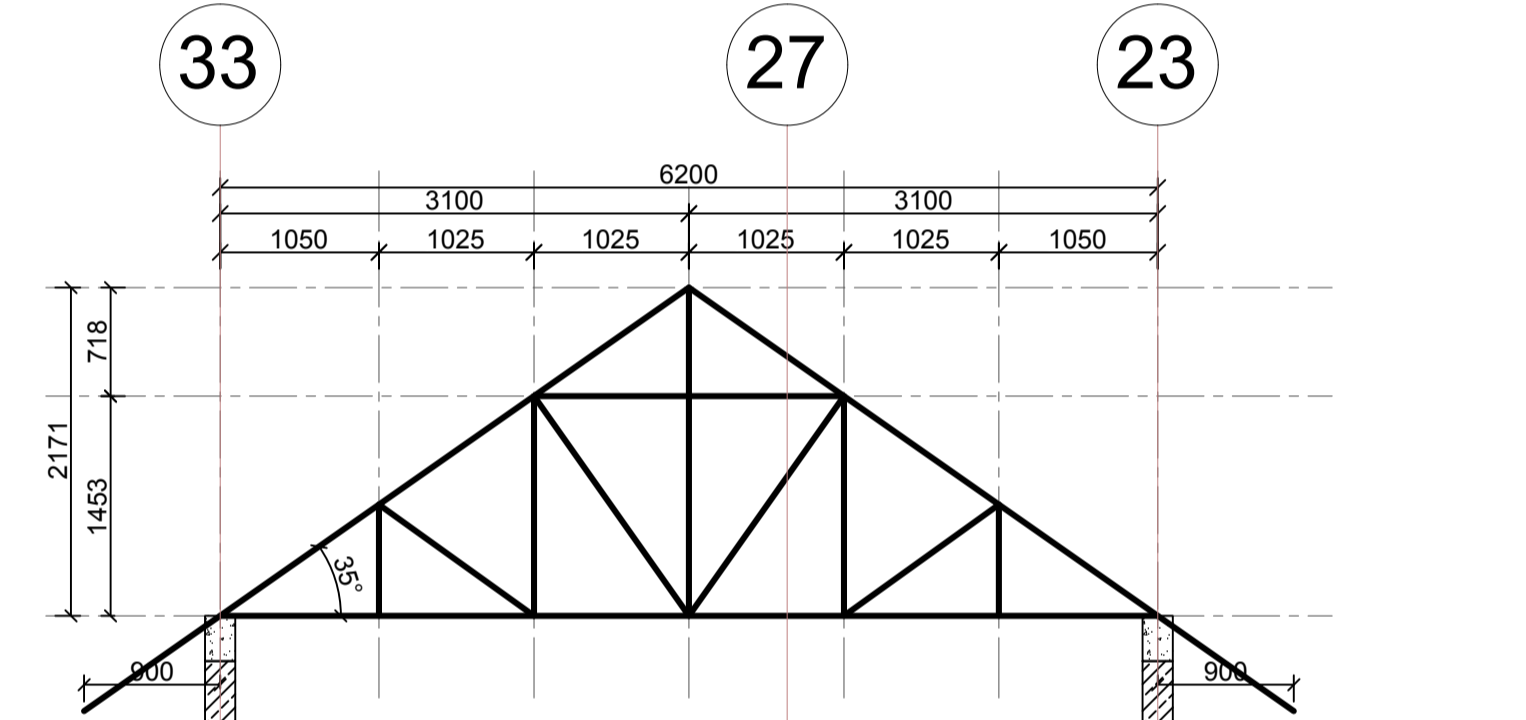
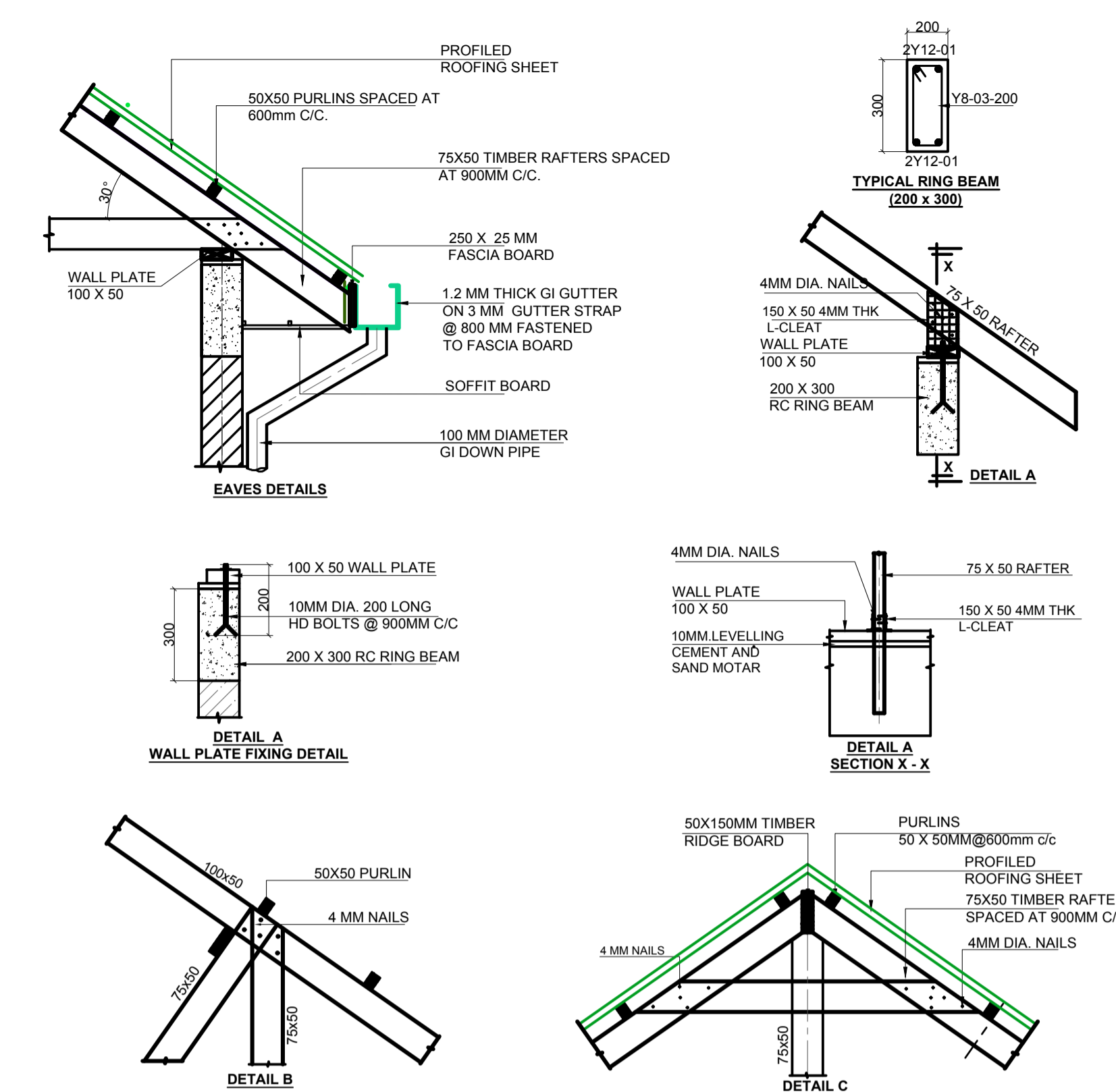
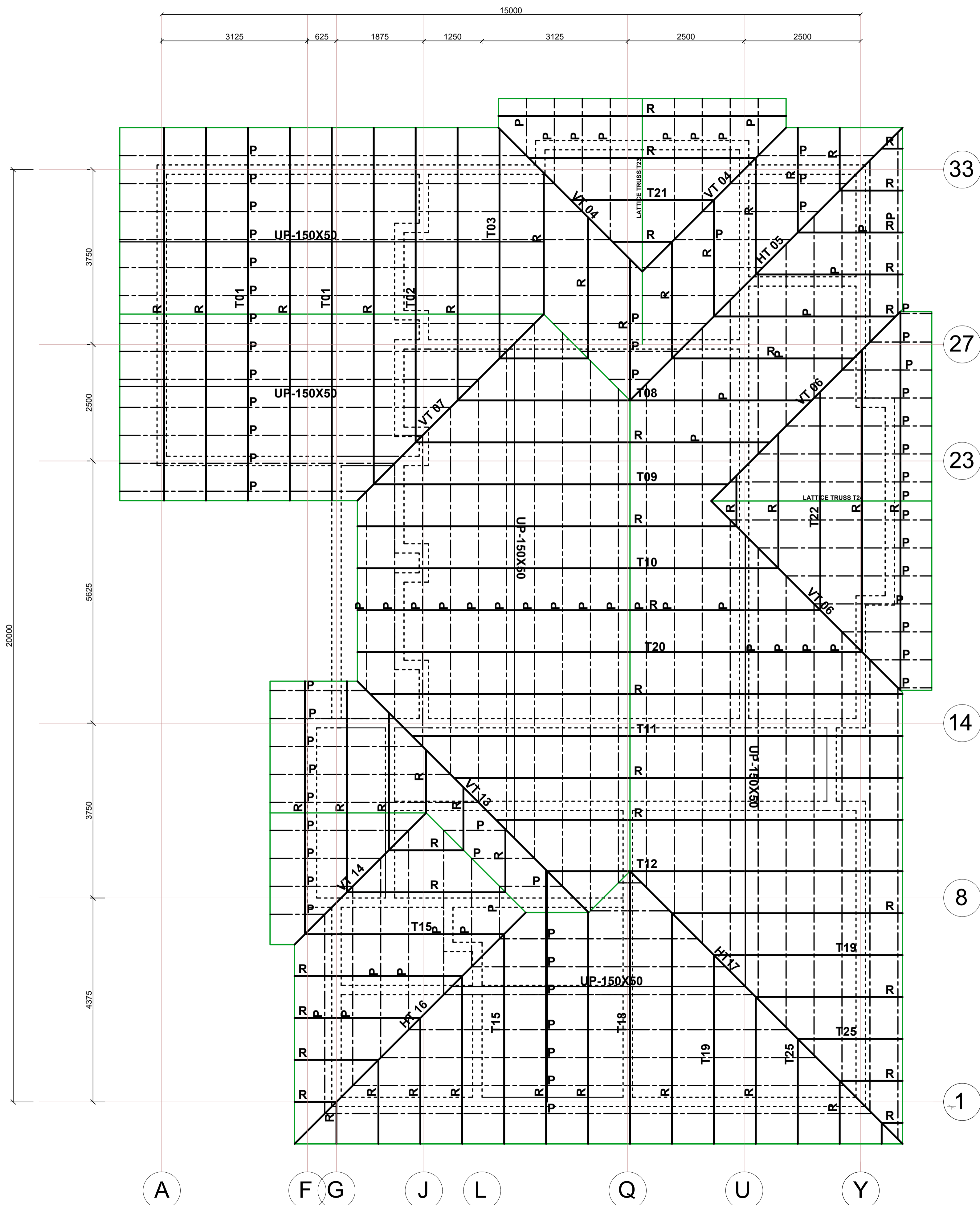
**CLIENT:**  
 Kenyatta National Hospital Staff Retirement Benefit Scheme (2011)  
 P.O Box 20723-00202,NAIROBI

**ZONE:**  
 Kajiado County

**PROJECT:**  
 Proposed Housing Scheme on Plot LR NO. Kajiado/Kitengela/6242 in Kitengela

**DRAWING TITLE:**  
 FIRST FLOOR SLAB LAYOUT AND REBAR DETAILS (CLUB HOUSE)

DESIGNED BY: I.M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-CH-02	REV No. DRG STATUS



- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:

- FOUNDATION - 50MM**  
**COLUMN - 30MM**  
**BEAMS - 25MM**  
**SLAB - 20MM**
6. B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER
  - T1 = TOP 1ST. LAYER, T2 = TOP 2ND. LAYER
  - Y = RIBBED BARS TO BS 4461,
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS. (CLASS 25/20)

- TIMBER NOTES**
1. ALL STRUCTURAL TIMBER TO BE SAWN GRADED CYPRESS (GRADE GS) TO KS 02-771-1989
  2. ALL STRUCTURAL TIMBER TO BE SEASONED TO ANEQUILIBRIUM MOISTURE CONTENT OF BETWEEN 9% AND 15%
  3. SAMPLE TRUSS TO BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE FABRICATION OF OTHER TRUSSES
  4. ALL STRUCTURAL TIMBER TO BE PRESERVATIVE TREATED TO KS02-84-1985
  5. ALL TILE BATTENS TO BE 50 X 25 MM UNLESS OTHERWISE STATED AT 300 MM MAXIMUM.
  6. TIMBER NAILS TO BE ROUND WIRE NAILS 2.65 MM DIAMETER NAILS UNLESS OTHERWISE STATED

**PROJECT ARCHITECTS**  
 HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5, 0724347807  
 NAIROBI

P.O. BOX 75193-00200, NAIROBI.  
  
**EPOCH CONSULTING ENGINEERS**  
 Civil & Structural Engineers

**QUANTITY SURVEYORS**

F			
D			
C			
B			
A			

REV	Description	Checked/Date	Issued to/Date
-----	-------------	--------------	----------------

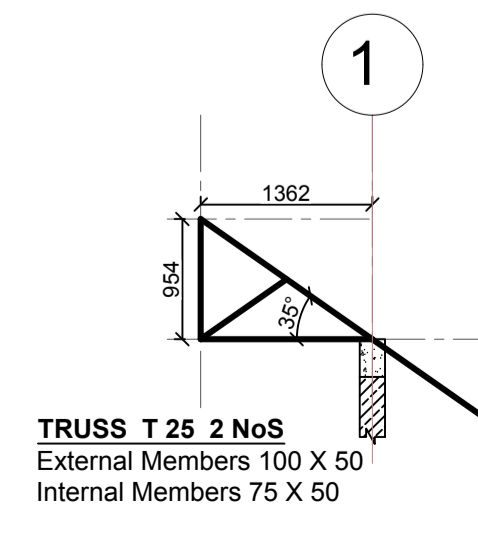
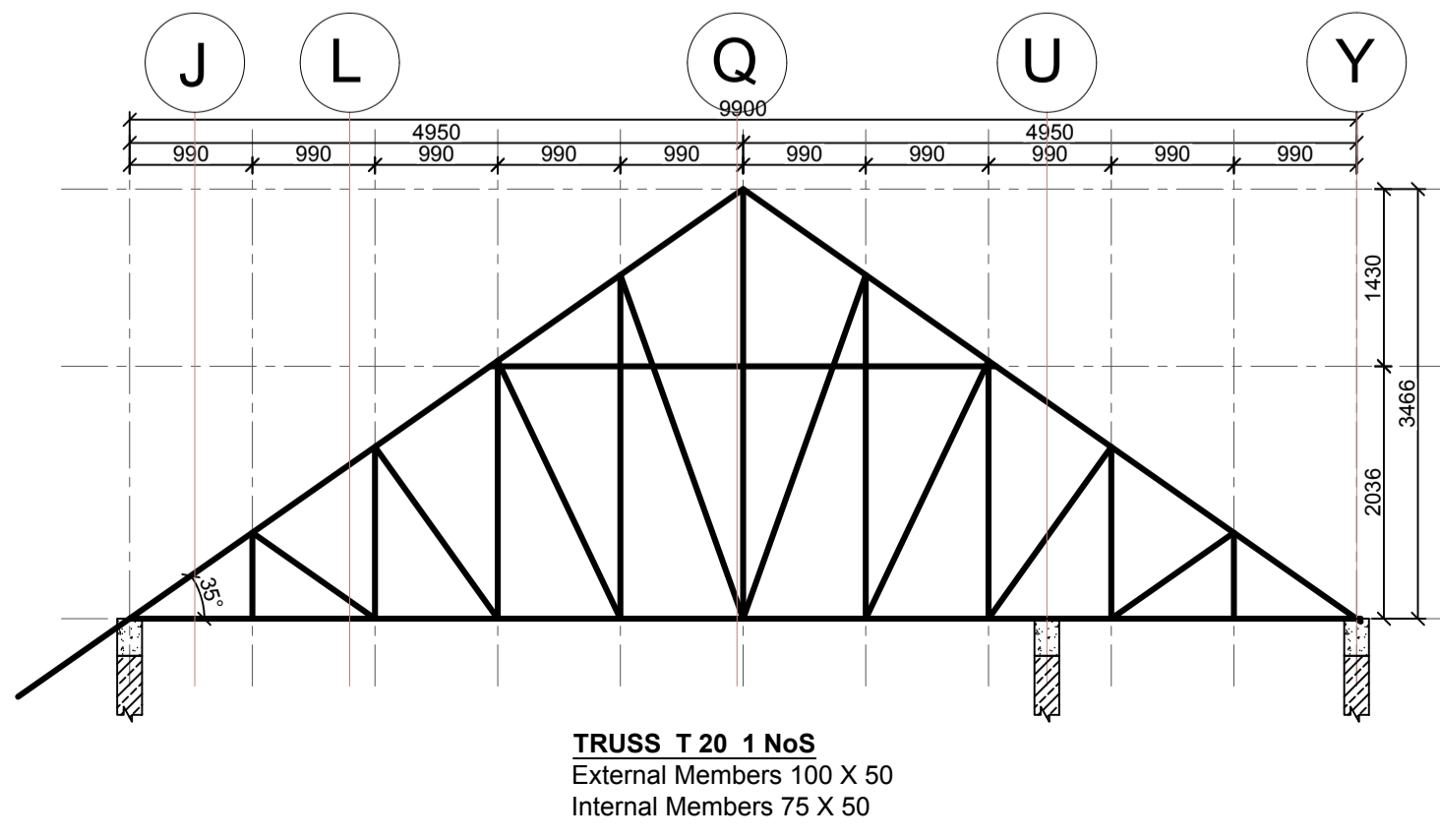
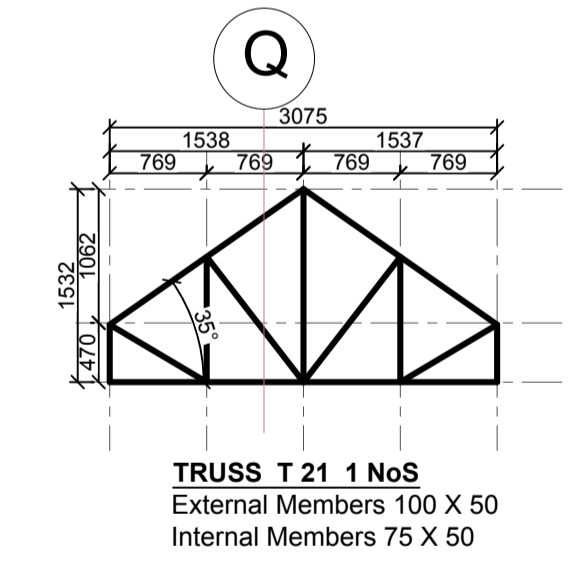
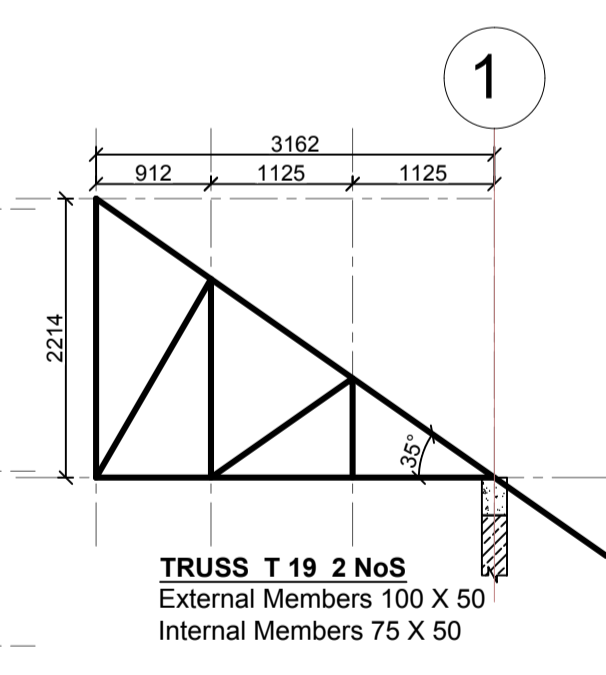
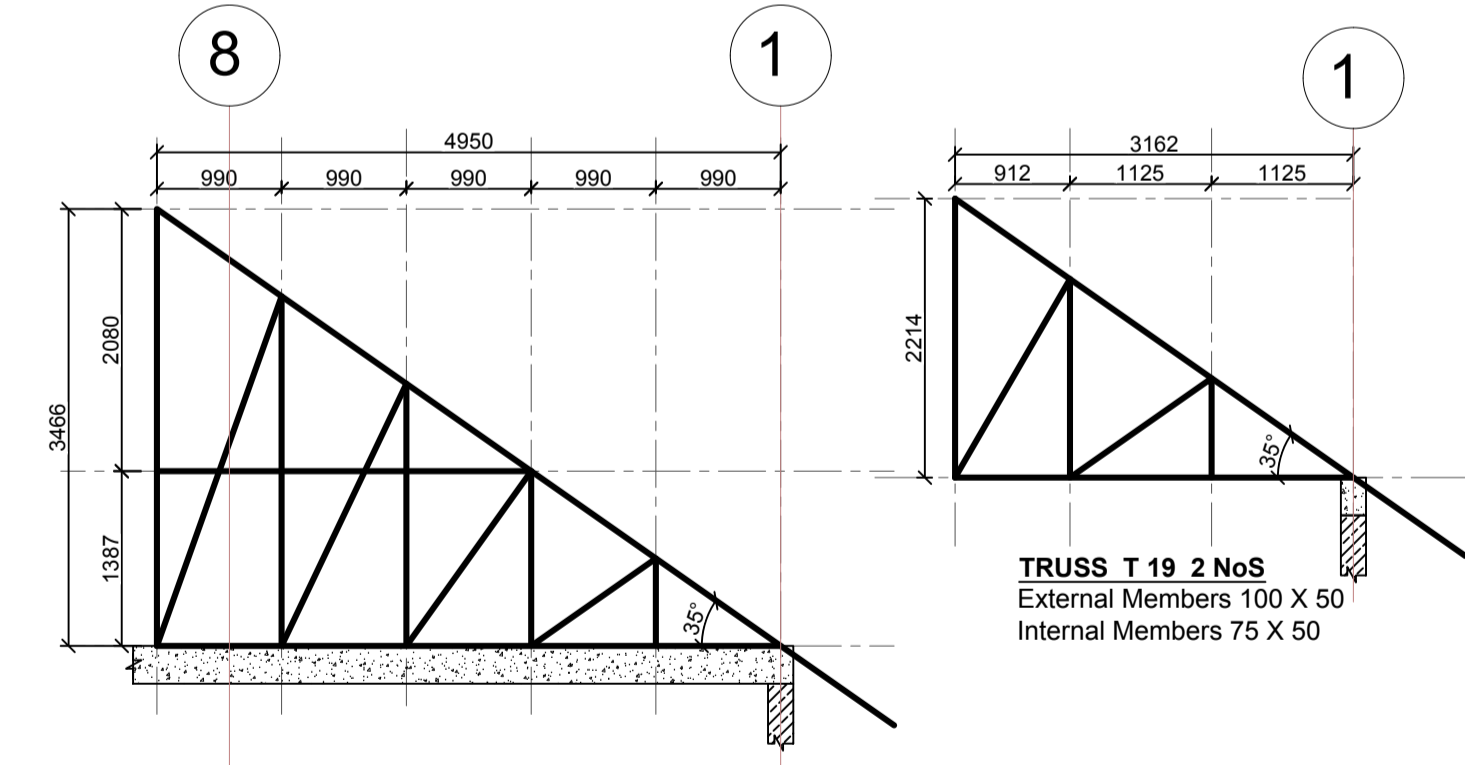
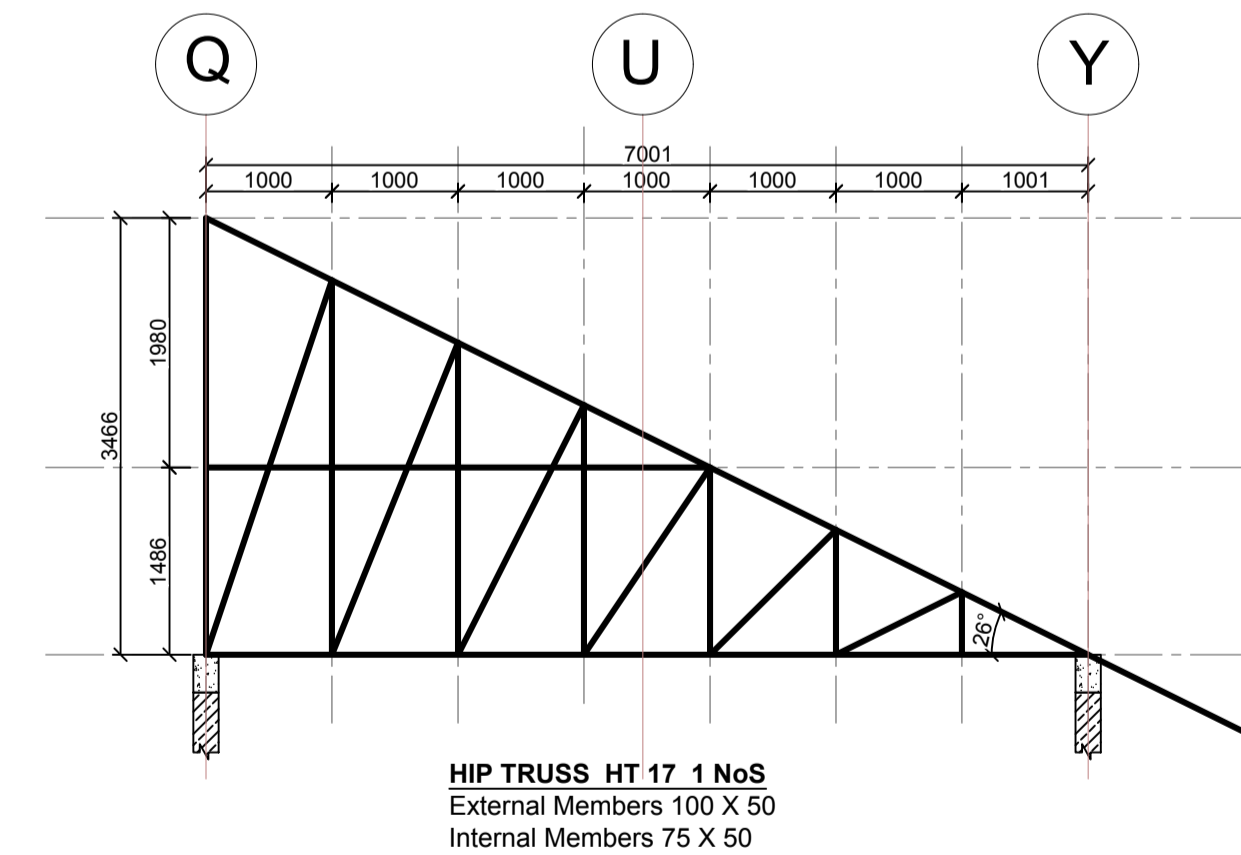
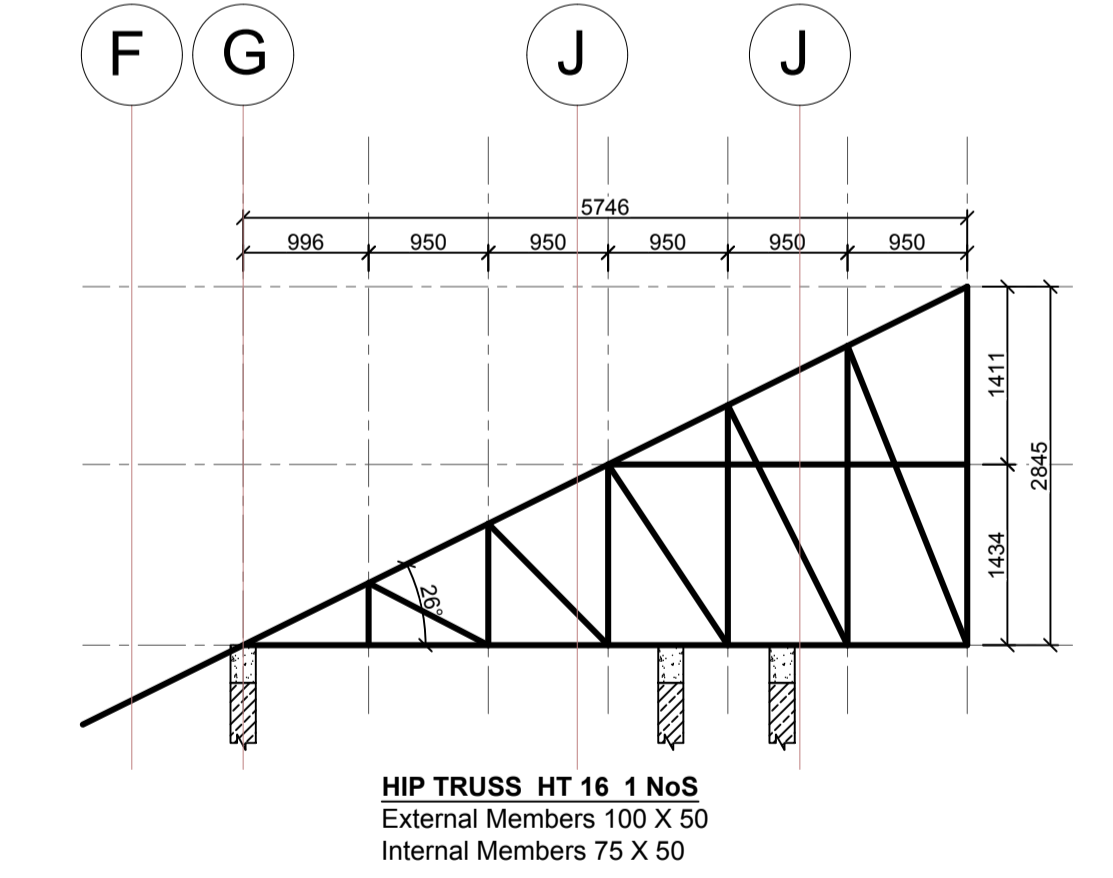
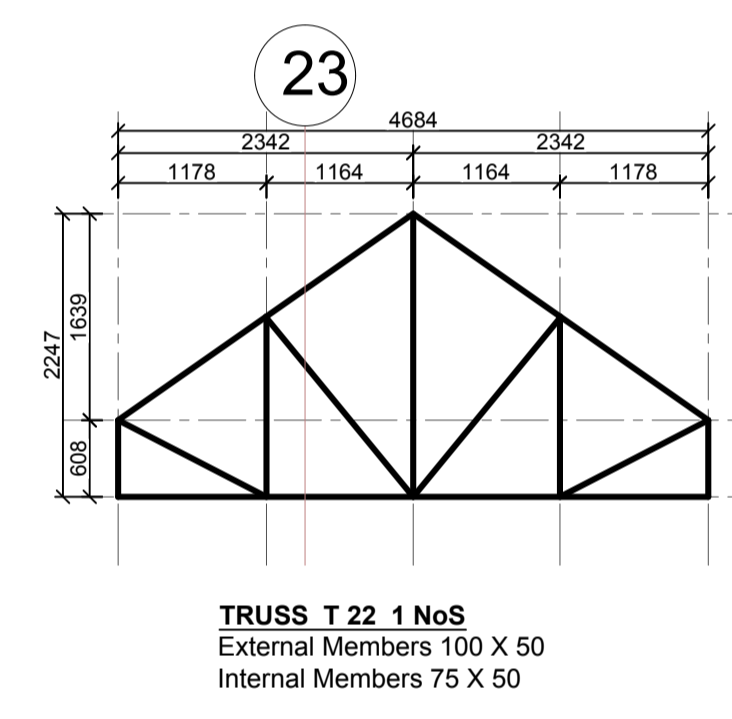
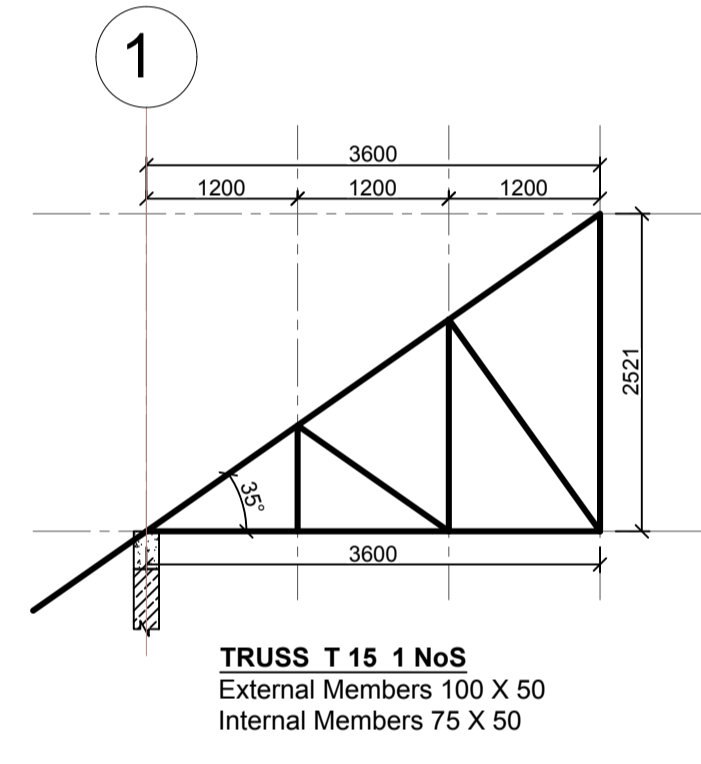
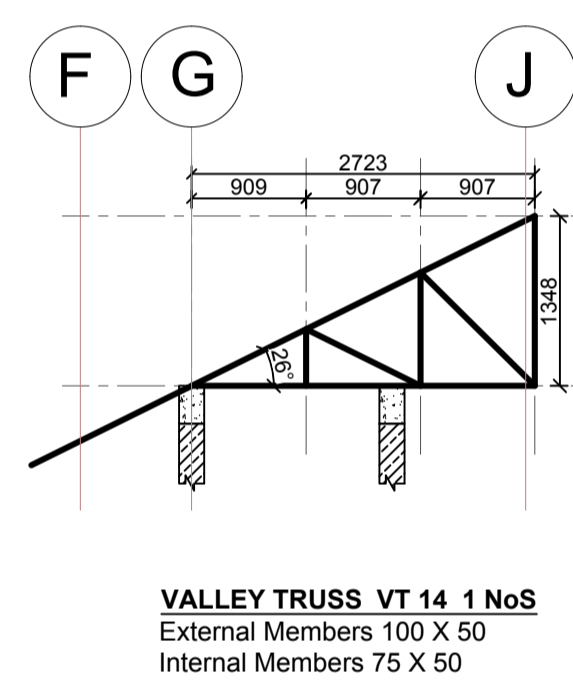
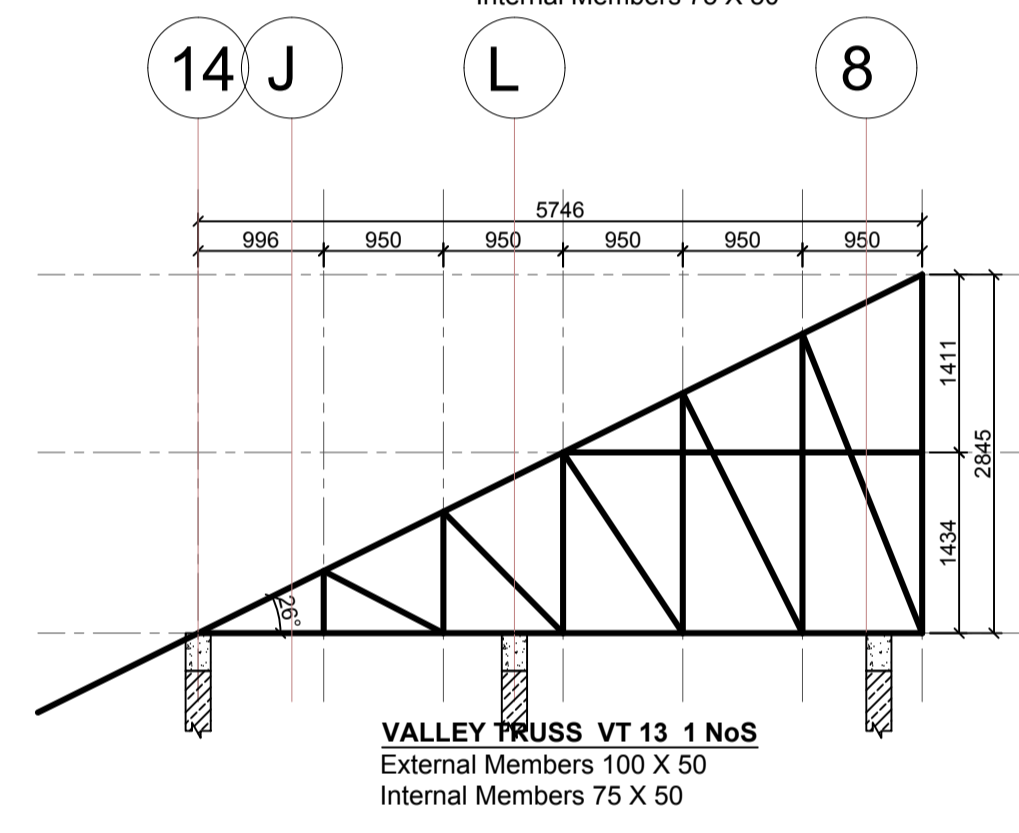
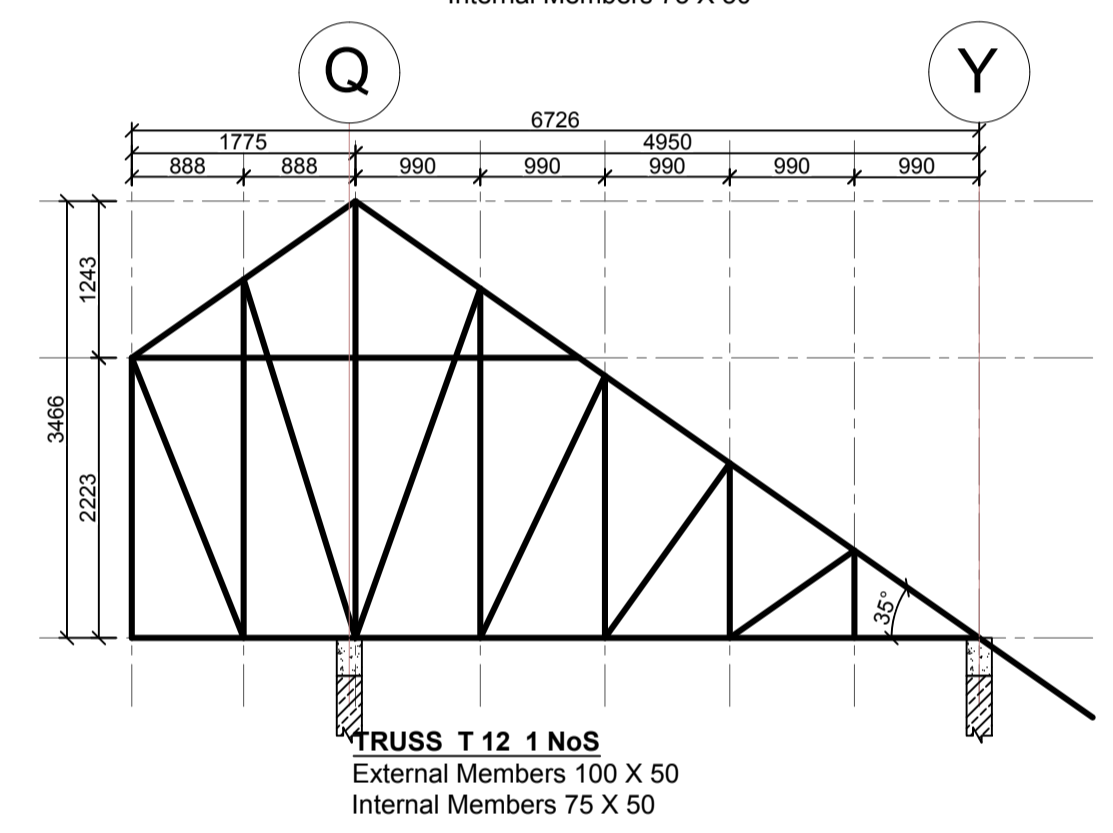
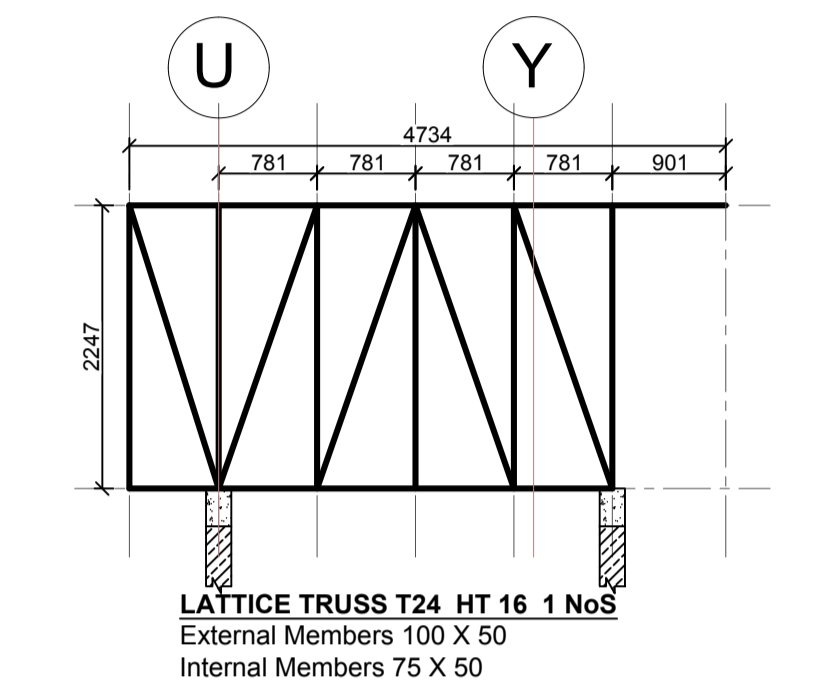
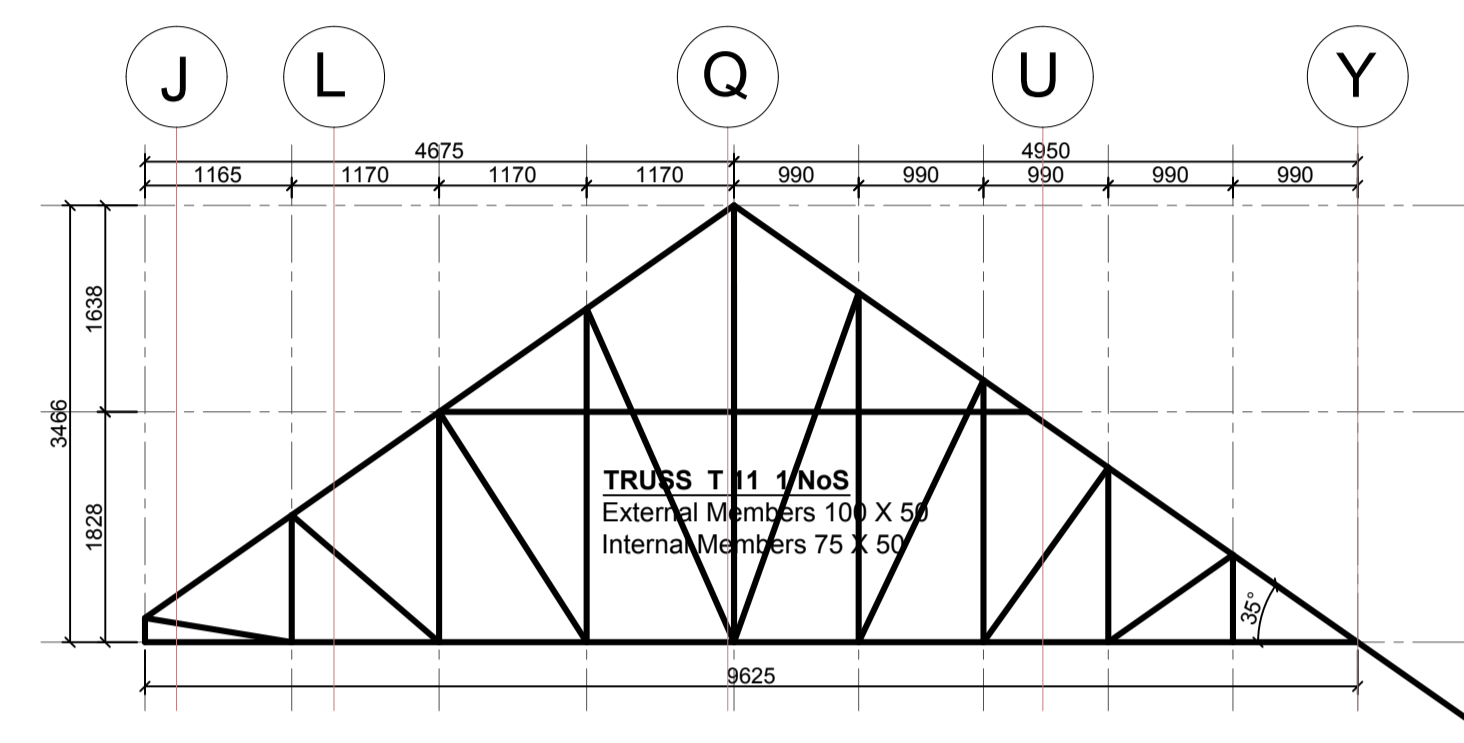
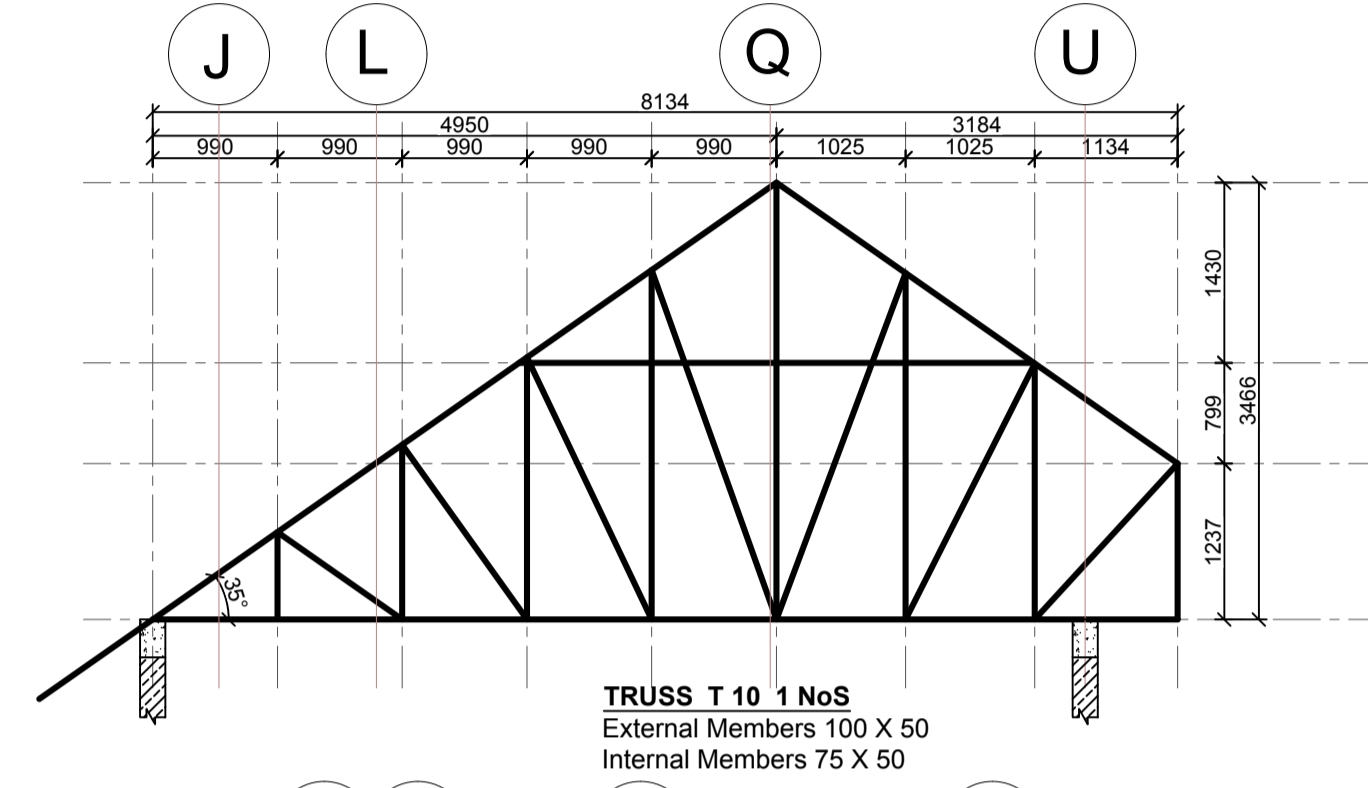
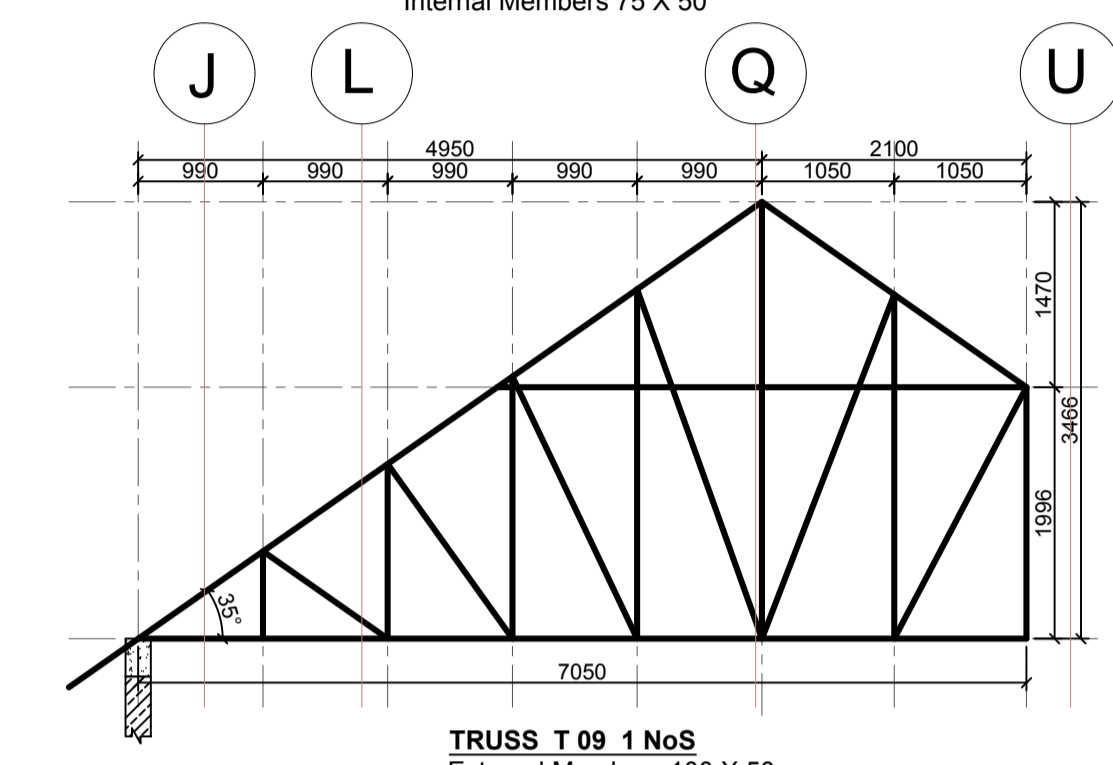
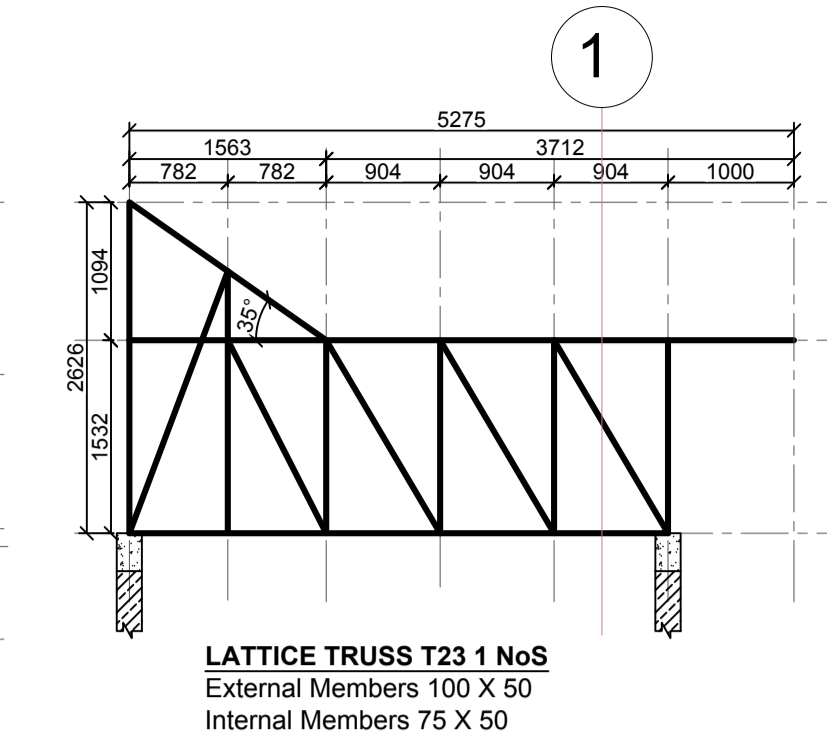
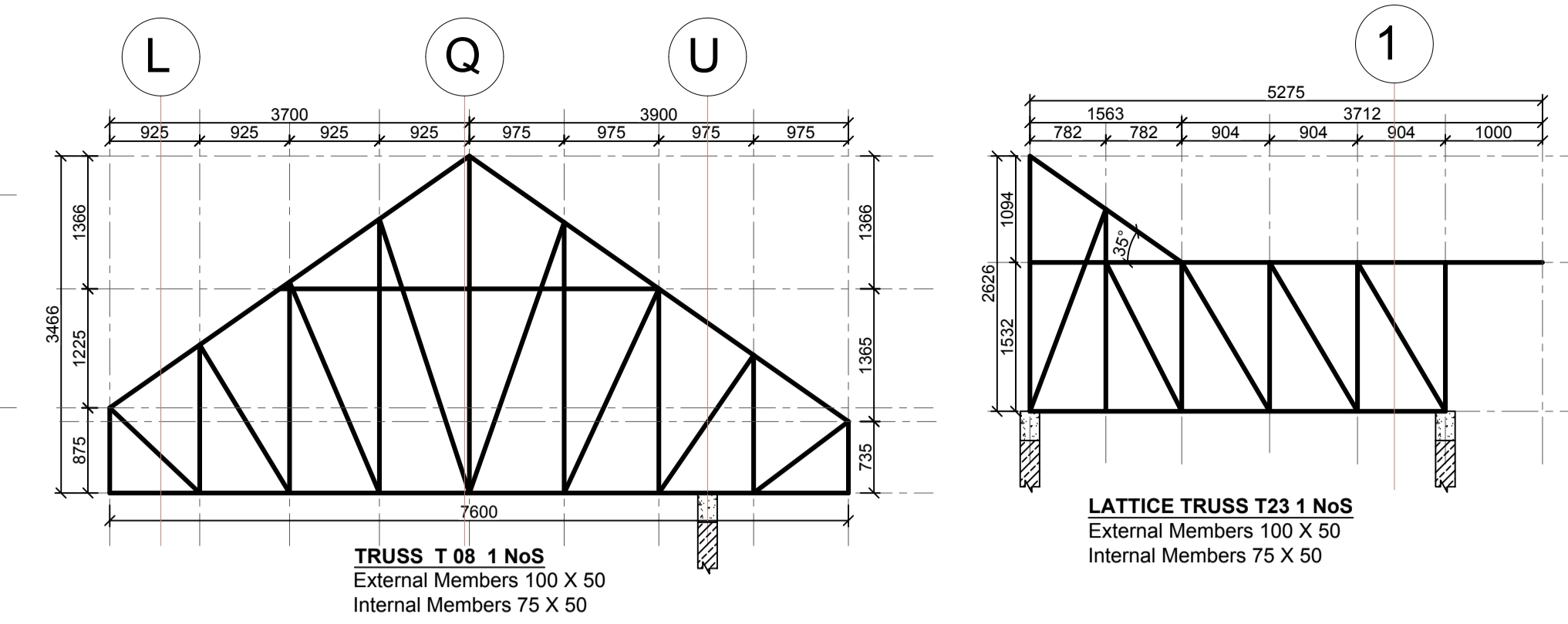
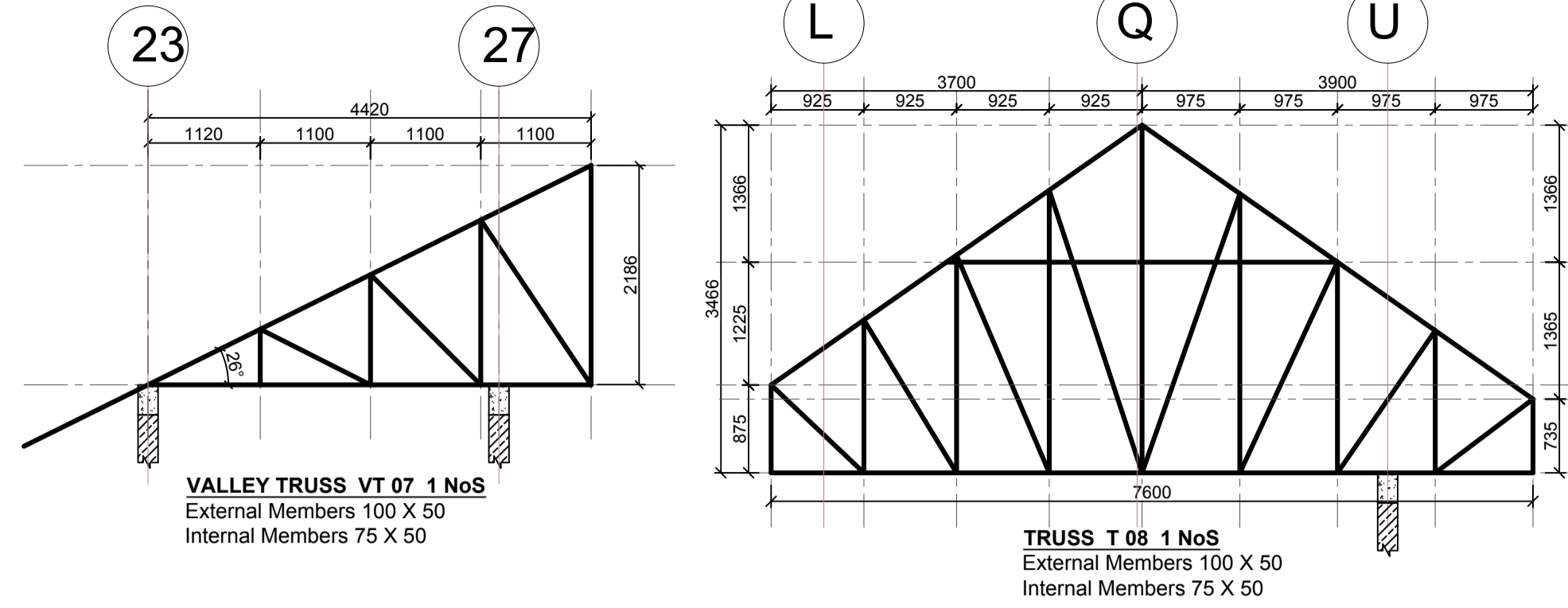
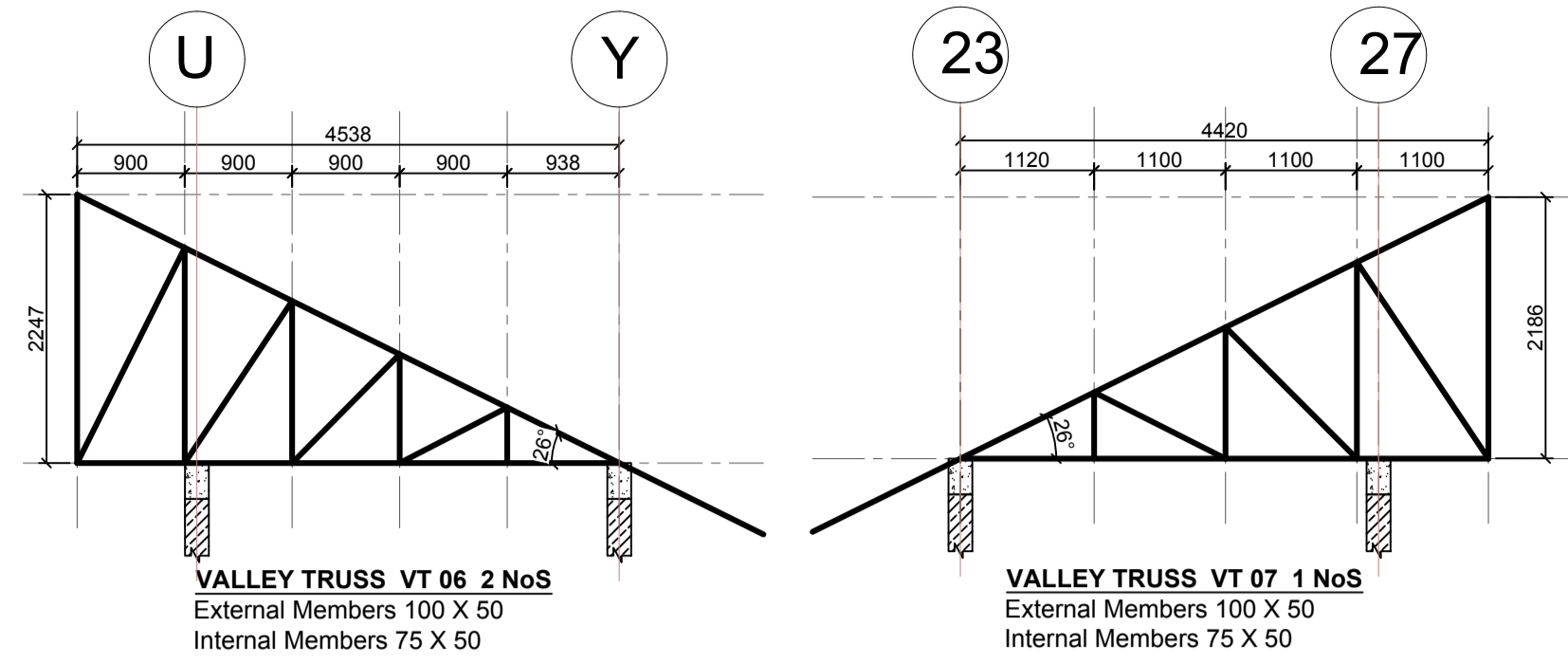
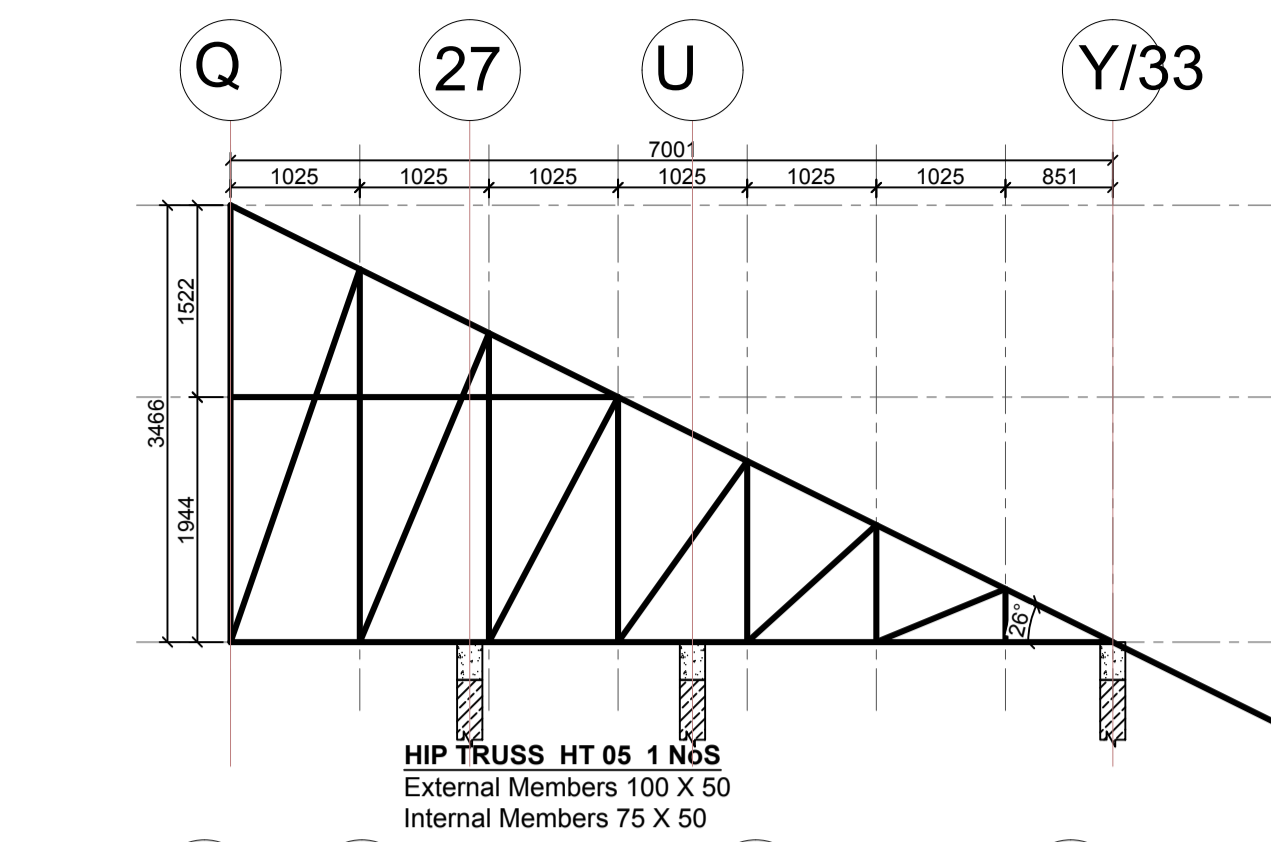
**CLIENT:**  
 Kenyatta National Hospital Staff Retirement Benefit Scheme (2011)  
 P.O Box 20723-00202, NAIROBI

**ZONE:**  
 Kajiado County

**PROJECT:**  
 Proposed Housing Scheme on Plot LR NO. Kajiado/Kitengela/6242 in Kitengela

**DRAWING TITLE:**  
 GENERAL ROOF DETAILS (CLUB HOUSE)

DESIGNED BY: I.M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-CH-03	REV No. DRG STATUS



**LEGEND**  
1. ALL DIMENSIONS ARE IN MILLIMETRES.  
2. BLINDING LAYER TO BE 50MM CLASS 15/20.  
3. GROUND FLOOR TO BE AS PER THE DRAWINGS.  
4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>  
5. MIN. COVER TO REINFORCEMENT:  
  
FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM  
6. B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER  
7. Y = RIBBED BARS TO BS 4461,  
  
8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS. (CLASS 25/20)

**TIMBER NOTES**  
1. ALL STRUCTURAL TIMBER TO BE SAWN GRADED CYPRESS (GRADE GS) TO KS 02-771-1989  
2. ALL STRUCTURAL TIMBER TO BE SEASONED TO ANEQUILIBRIUM MOISTURE CONTENT OF BETWEEN 9% AND 15%  
3. SAMPLE TRUSS TO BE APPROVED BY THE STRUCTURAL ENGINEER BEFORE FABRICATION OF OTHER TRUSSES  
4. ALL STRUCTURAL TIMBER TO BE PRESERVATIVE TREATED TO KS02-84-1985  
5. ALL TILE BATTENS TO BE 50 X 25 MM UNLESS OTHERWISE STATED AT 300 MM MAXIMUM.  
6. TIMBER NAILS TO BE ROUND WIRE NAILS 2.65 MM DIAMETER NAILS UNLESS OTHERWISE STATED

**PROJECT ARCHITECTS**  
  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5, 0724347807  
NAIROBI

**QUANTITY SURVEYORS**  
  
EPOCH CONSULTING ENGINEERS  
Civil & Structural Engineers  
P.O. BOX 75193-00200,  
NAIROBI.

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

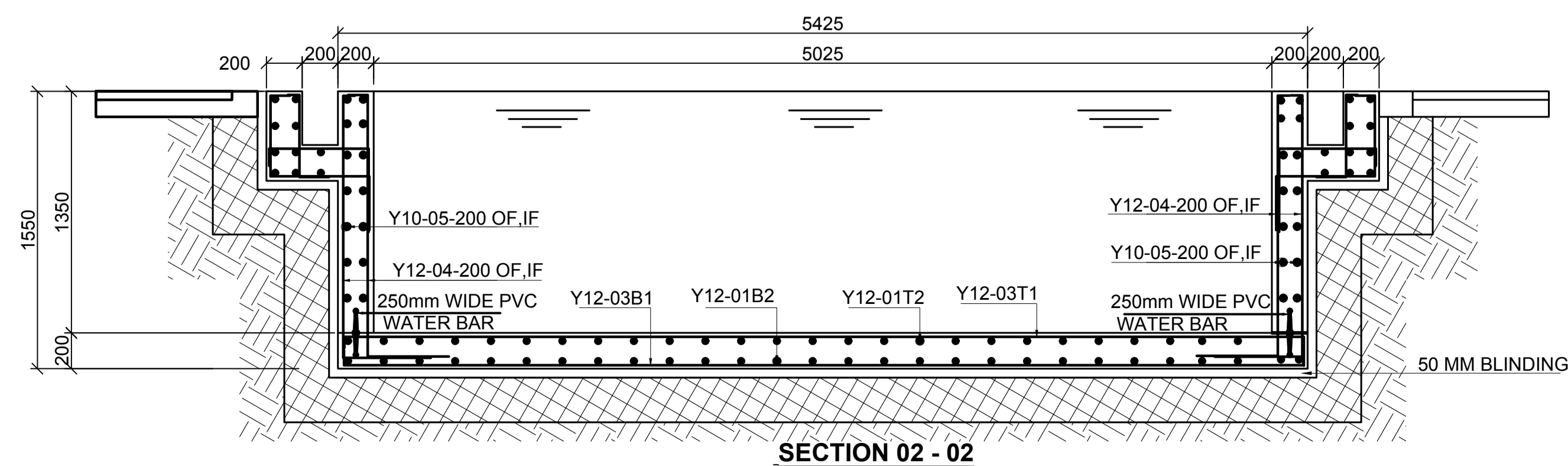
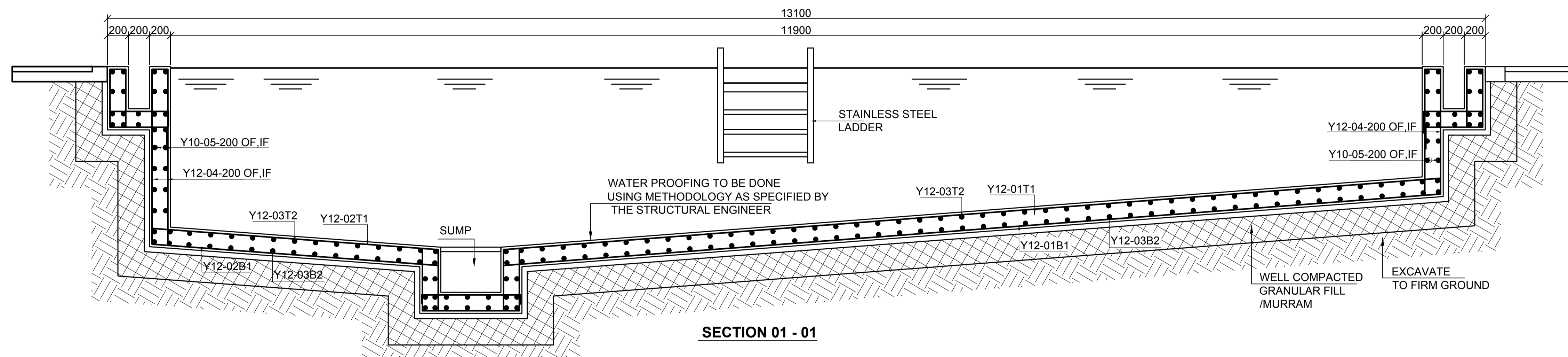
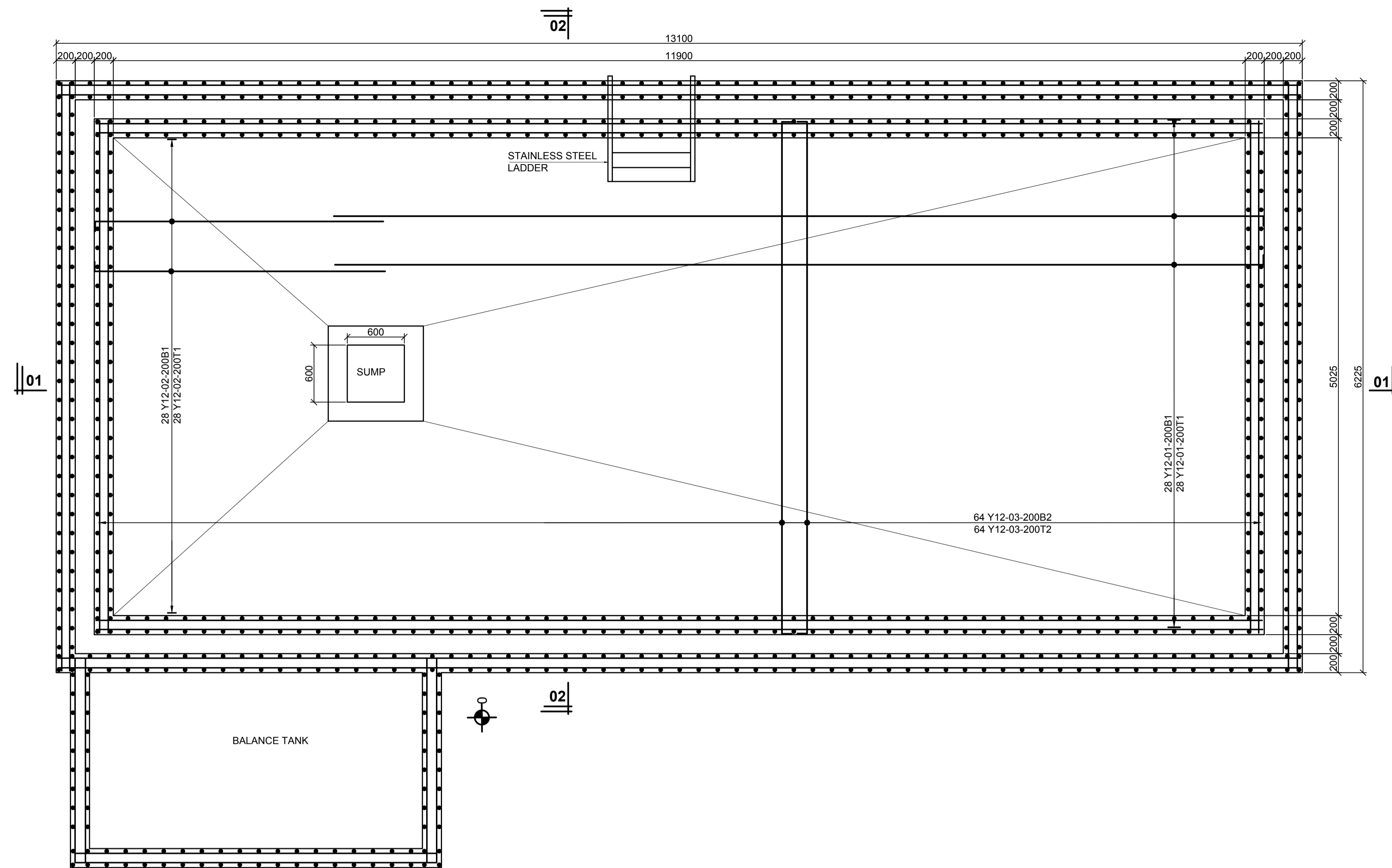
**CLIENT:**  
  
Kenya National Hospital Staff Retirement Benefit Scheme (2011)  
P.O Box 20723-00202, NAIROBI

**ZONE:**  
  
Kajiado County

**PROJECT:**  
  
Proposed Housing Scheme on Plot LR NO. Kajiado/Kitengela/6242 in Kitengela

**DRAWING TITLE:**  
  
GENERAL ROOF DETAILS (SHEET 2) (CLUB HOUSE)

DESIGNED BY: I.M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-CH-04	REV No. DRG STATUS



- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER,  
 B2 = BOTTOM 2ND. LAYER  
 T1 = TOP 1ST. LAYER,  
 T2 = TOP 2ND LAYER
  7. Y = RIBBED BARS TO BS 4461,
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**

HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5,0724347807  
 NAIROBI

P.O.BOX 75193-00200,  
 NAIROBI.

**EPOCH CONSULTING ENGINEERS**  
 Civil & Structural Engineers

F			
E			
D			
C			
B			
A			

REV	Description	Checked/Date	Issued to/Date
-----	-------------	--------------	----------------

**CLIENT:**

Kenyatta National Hospital Staff  
 Retirement Benefit Scheme (2011)  
 P.O Box 20723-00202,NAIROBI

**ZONE:**

Kajiado County

**PROJECT:**

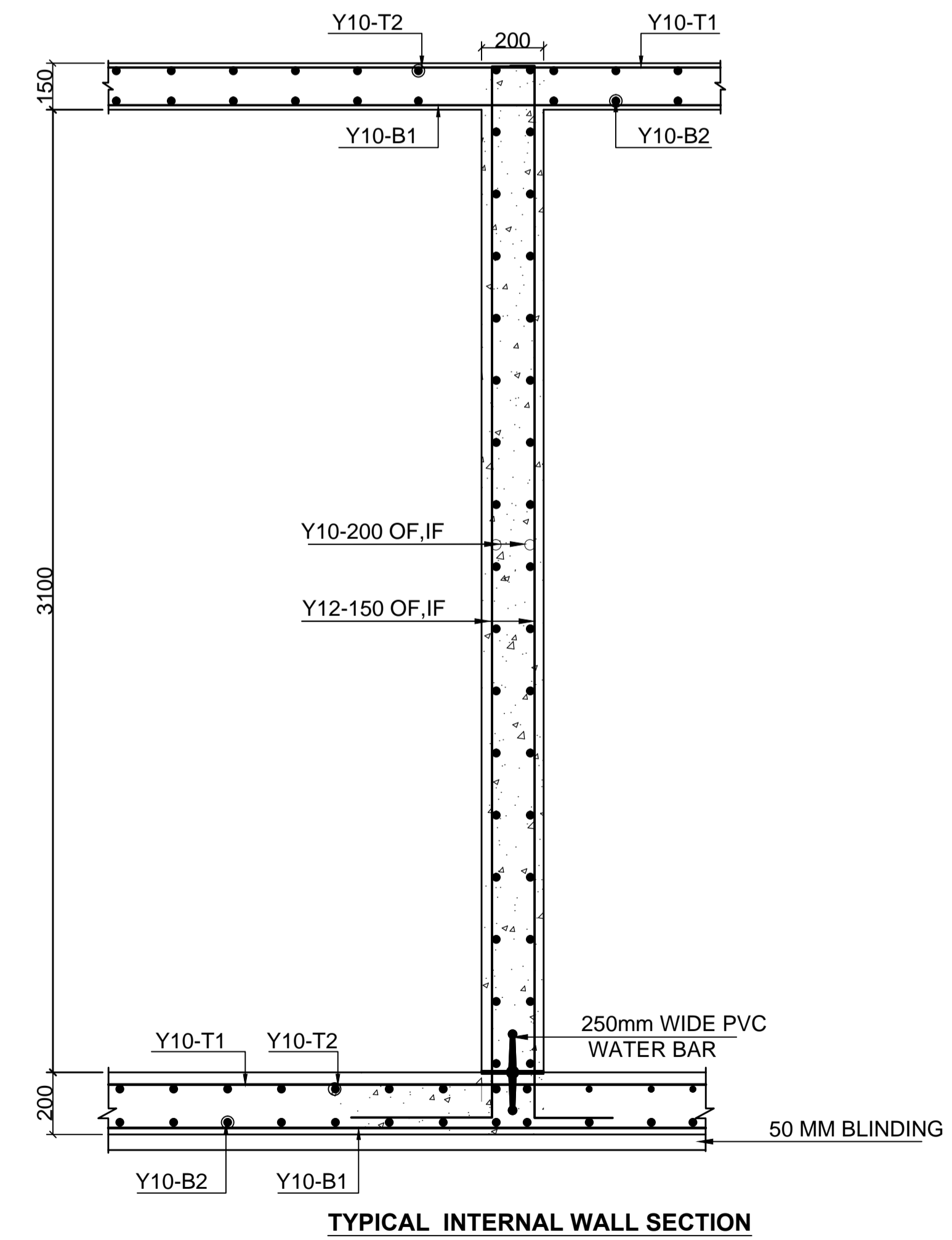
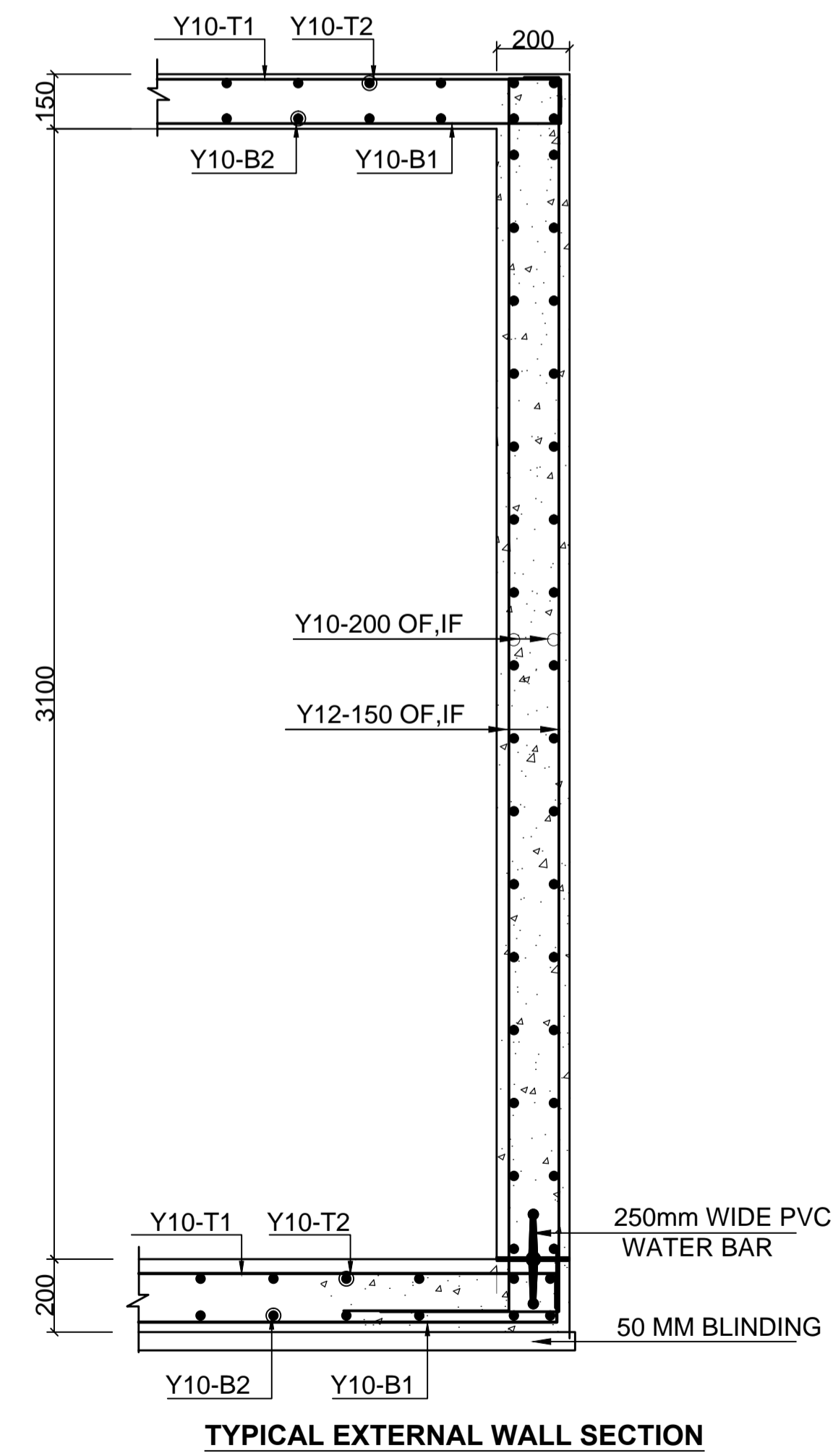
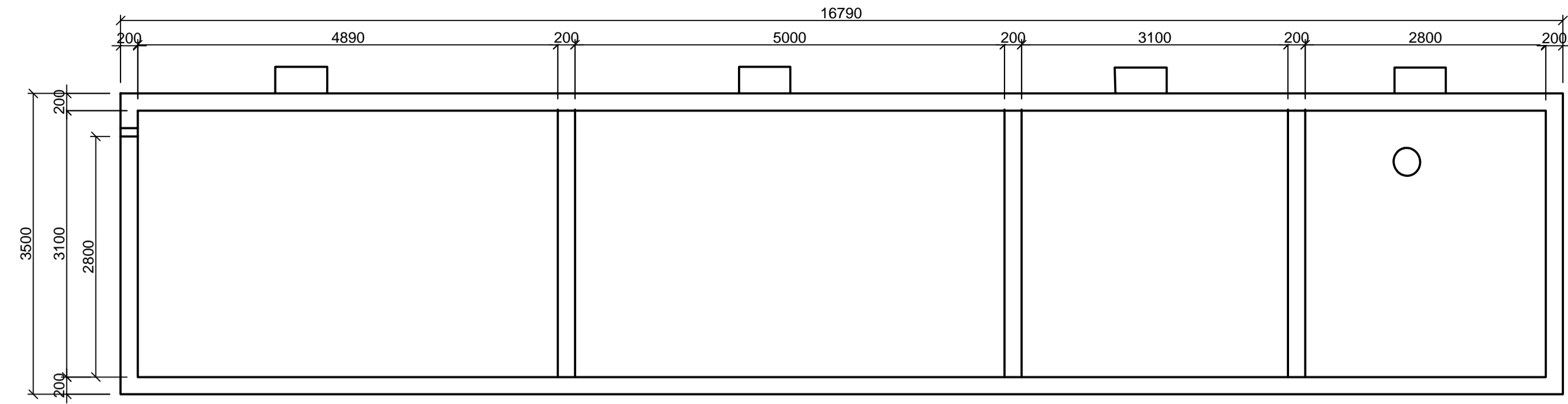
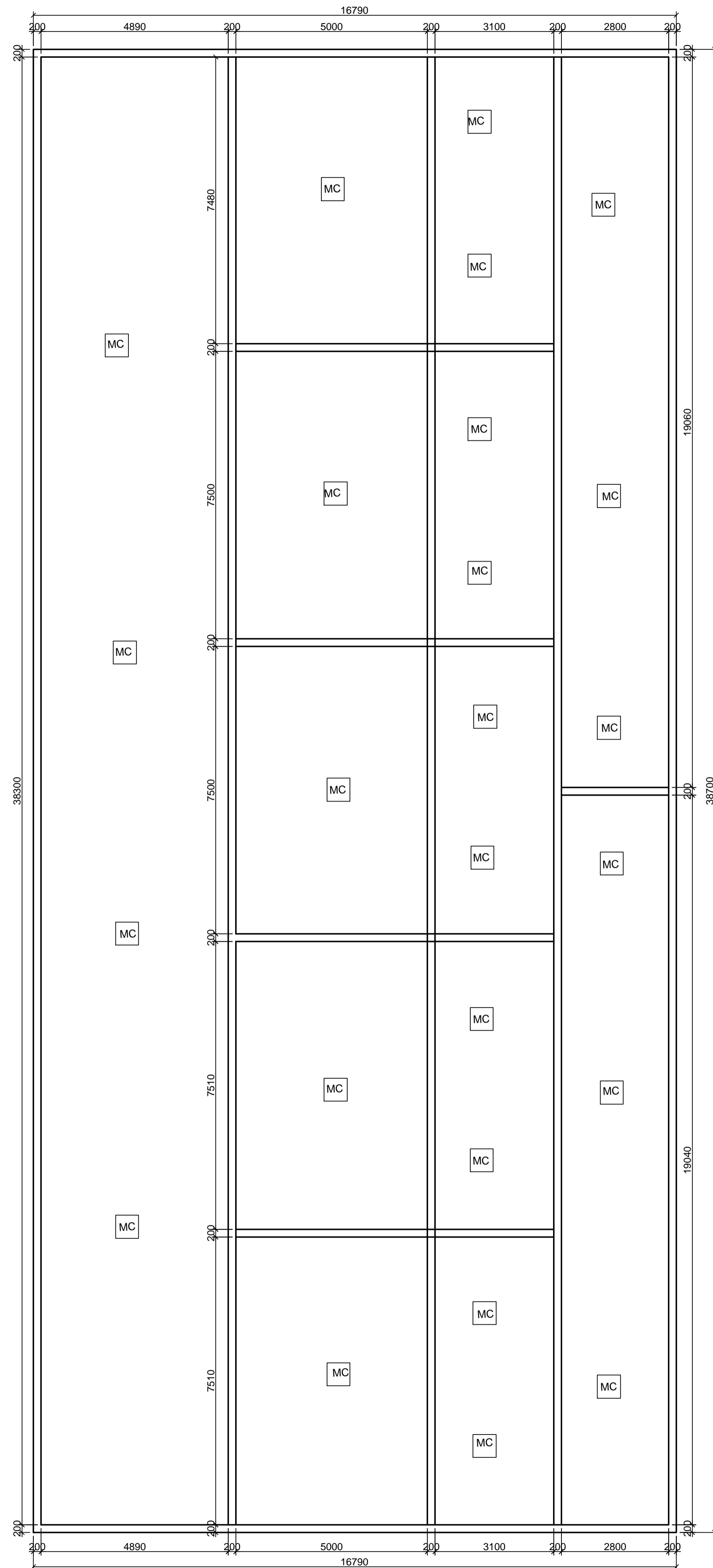
Proposed Housing Scheme on Plot LR  
 NO. Kajiado/Kitengela/6242 in  
 Kitengela

**DRAWING TITLE:**

SWIMMING POOL

DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-SP-01	REV No. DRG STATUS






- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
6. B1 = BOTTOM 1ST. LAYER,  
 B2 = BOTTOM 2ND. LAYER  
 T1 = TOP 1ST. LAYER,  
 T2 = TOP 2ND LAYER
  7. Y = RIBBED BARS TO BS 4461,
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**

HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL. 3860394/5,0724347807  
 NAIROBI

P.O.BOX 75193-00200,  
 NAIROBI.



**EPOCH CONSULTING ENGINEERS**  
 Civil & Structural Engineers

F			
E			
D			
C			
B			
A			

REV Description Checked/Date Issued to/Date

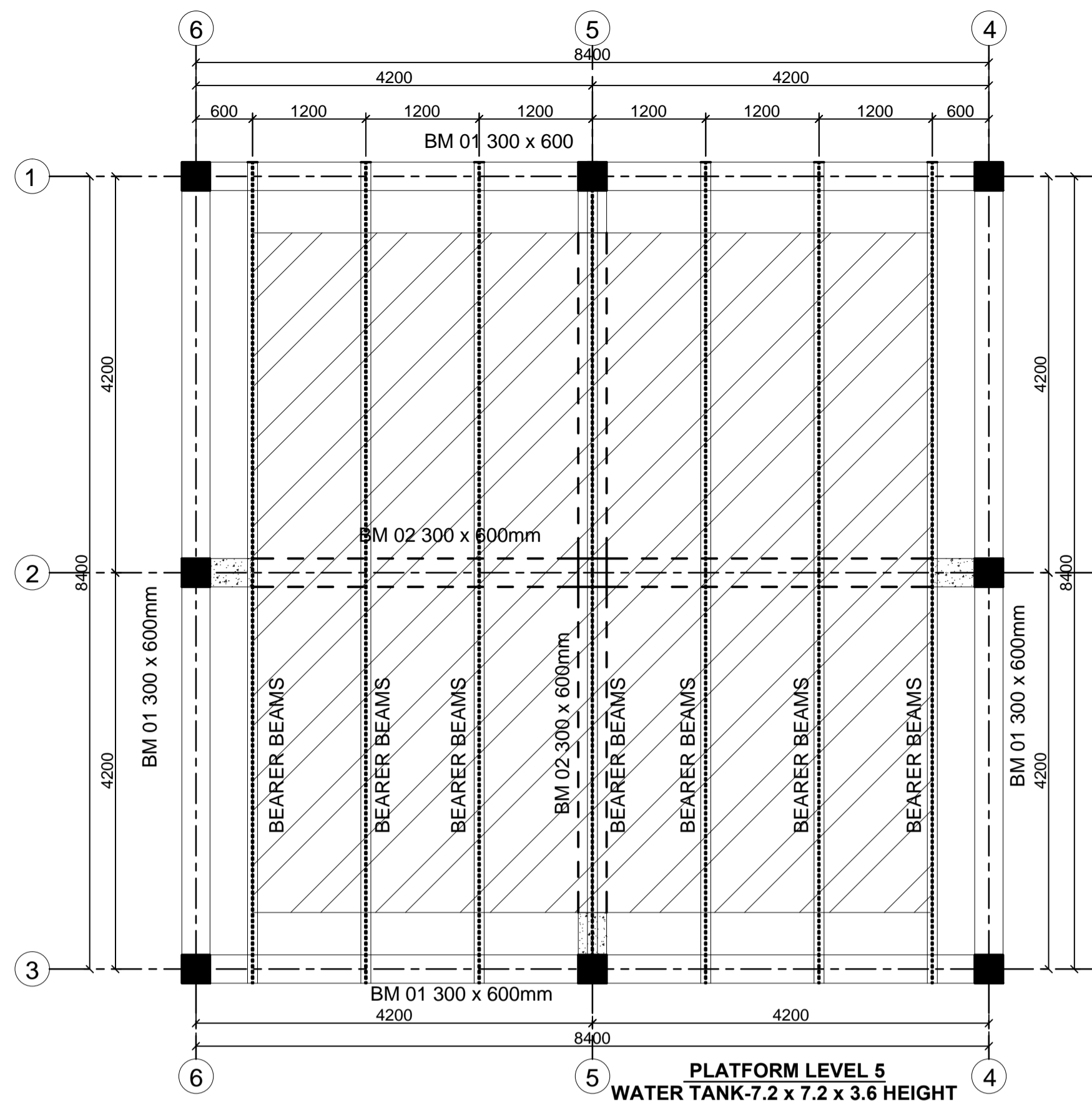
CLIENT:  
 Kenyatta National Hospital Staff  
 Retirement Benefit Scheme (2011)  
 P.O Box 20723-00202,NAIROBI

ZONE:  
 Kajiado County

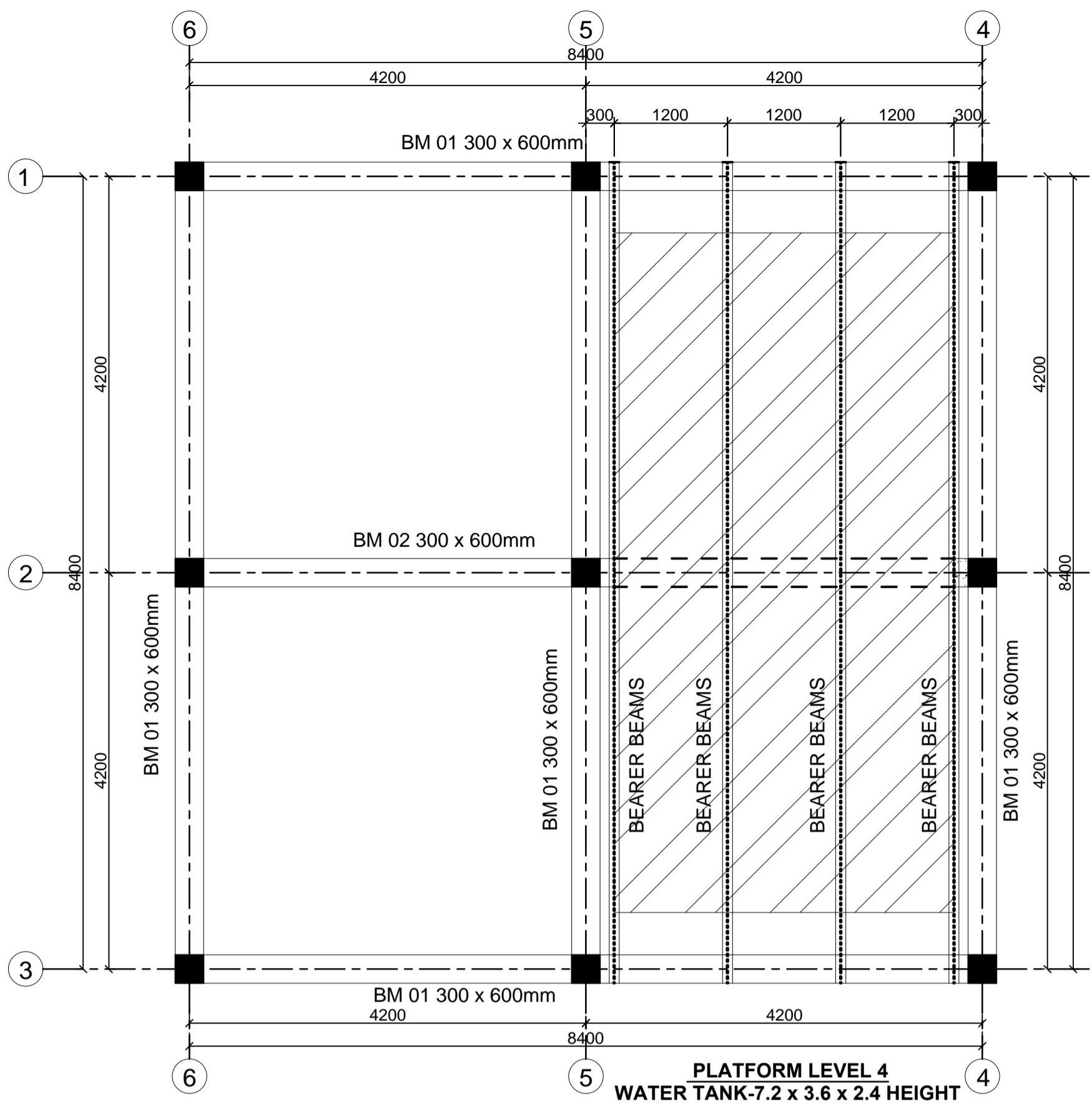
PROJECT:  
 Proposed Housing Scheme on Plot LR  
 NO. Kajiado/Kitengela/6242 in  
 Kitengela

DRAWING TITLE:  
 BIODIGESTER REBAR DETAILS

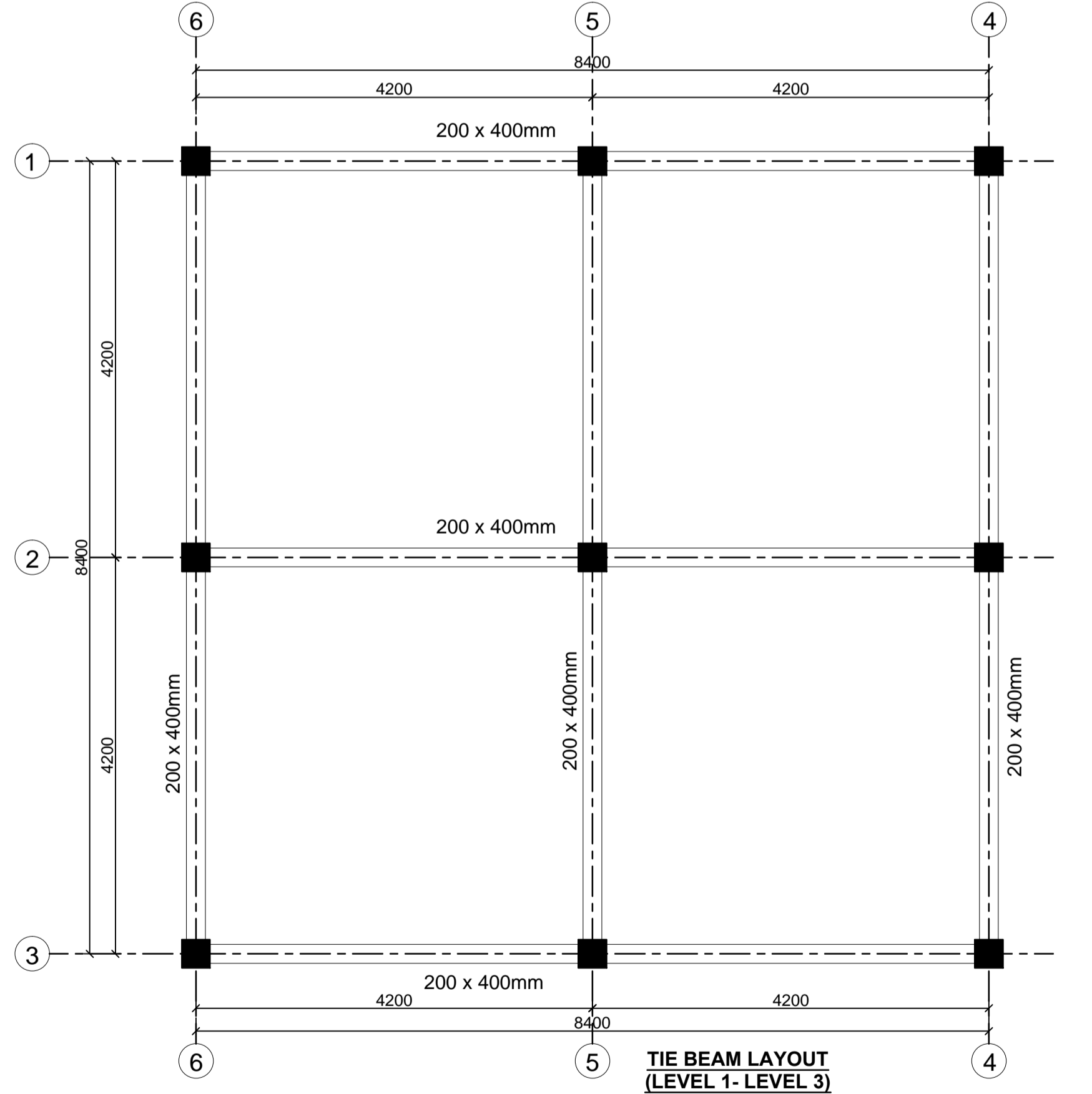
DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-BD-01	REV No. DRG STATUS



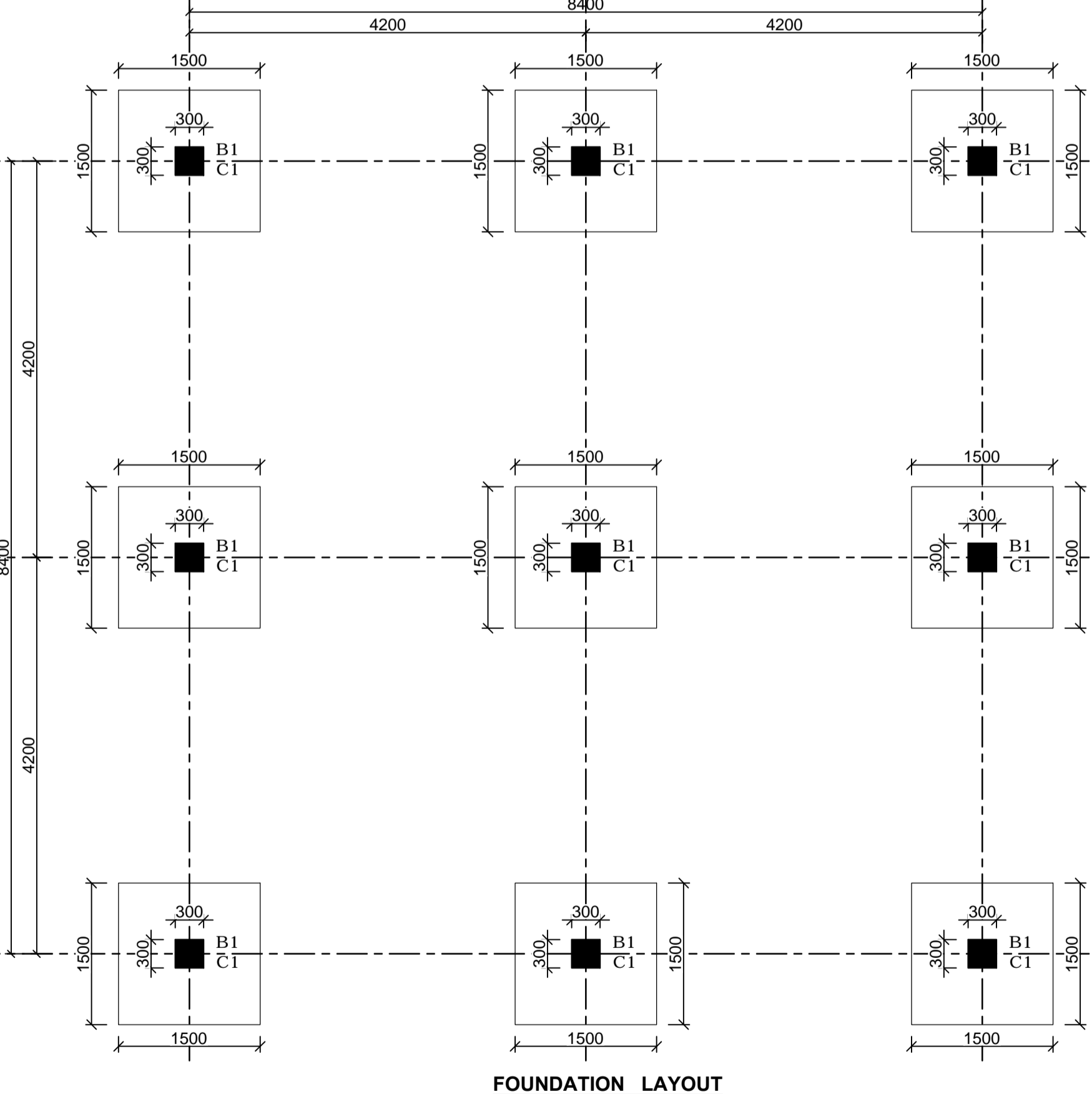
**PLATFORM LEVEL 5  
WATER TANK-7.2 x 7.2 x 3.6 HEIGHT**



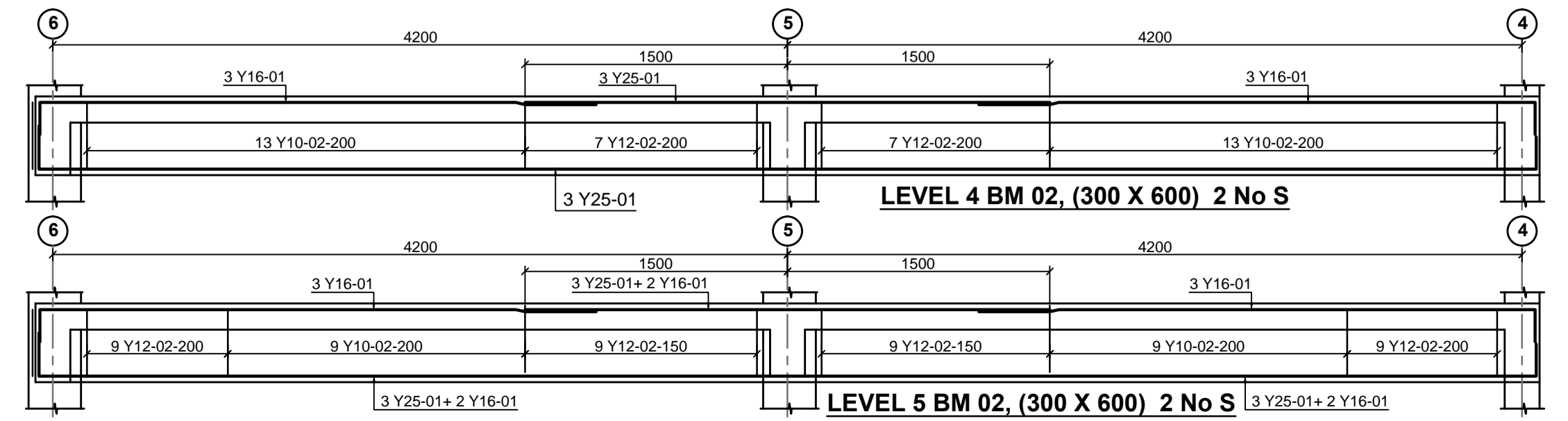
**PLATFORM LEVEL 4  
WATER TANK-7.2 x 3.6 x 2.4 HEIGHT**



**TIE BEAM LAYOUT  
(LEVEL 1- LEVEL 3)  
SCALE=1:50**

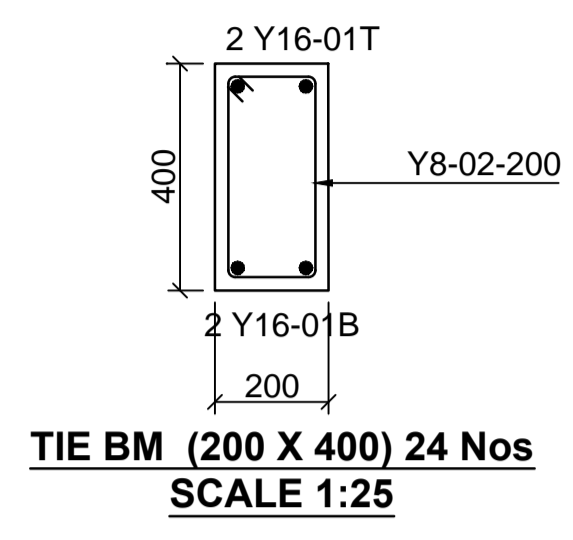


**FOUNDATION LAYOUT  
SCALE=1:50**

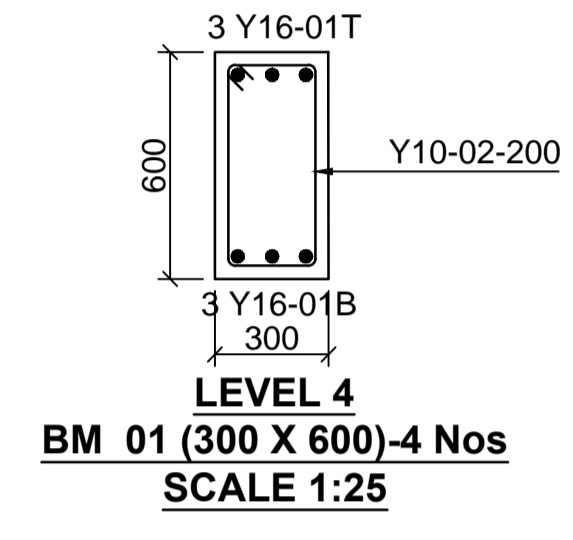


**LEVEL 4 BM 02, (300 X 600) 2 No S**

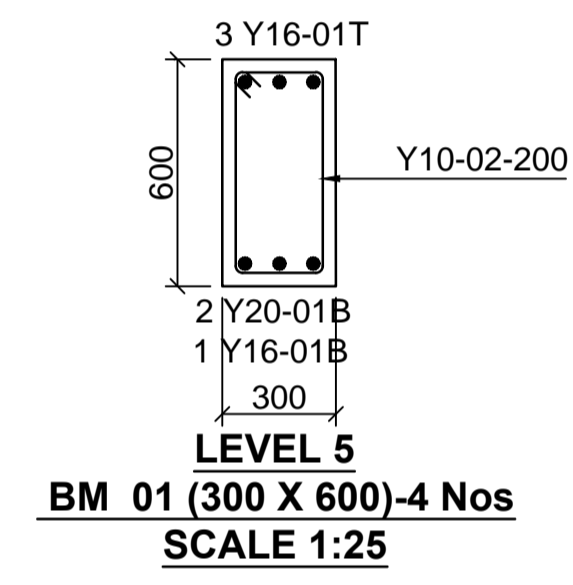
**LEVEL 5 BM 02, (300 X 600) 2 No S**



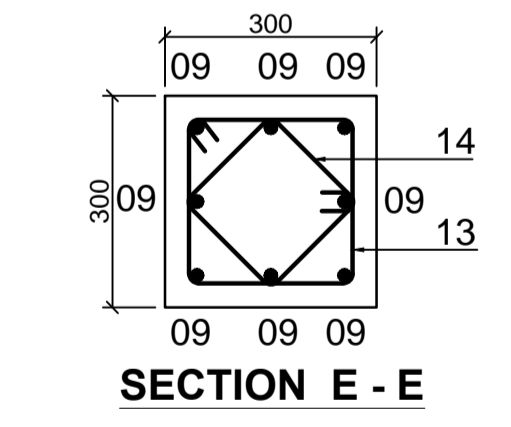
**TIE BM (200 X 400) 24 Nos  
SCALE 1:25**



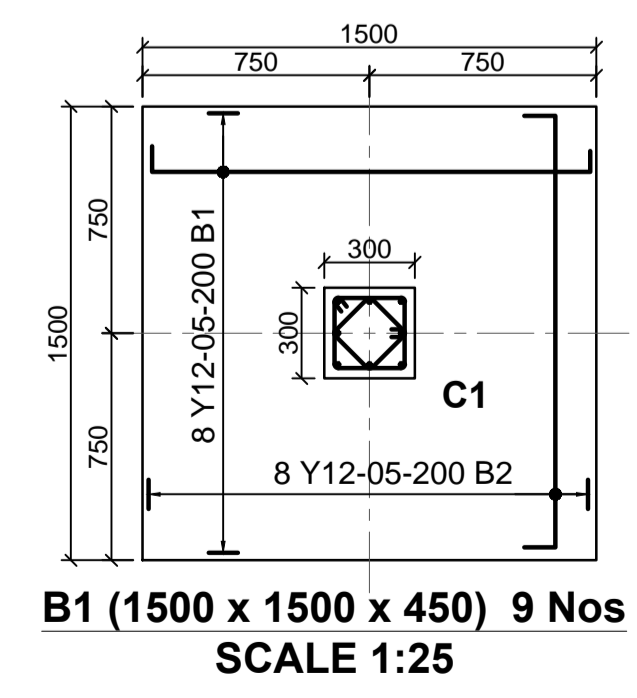
**LEVEL 4  
BM 01 (300 X 600)-4 Nos  
SCALE 1:25**



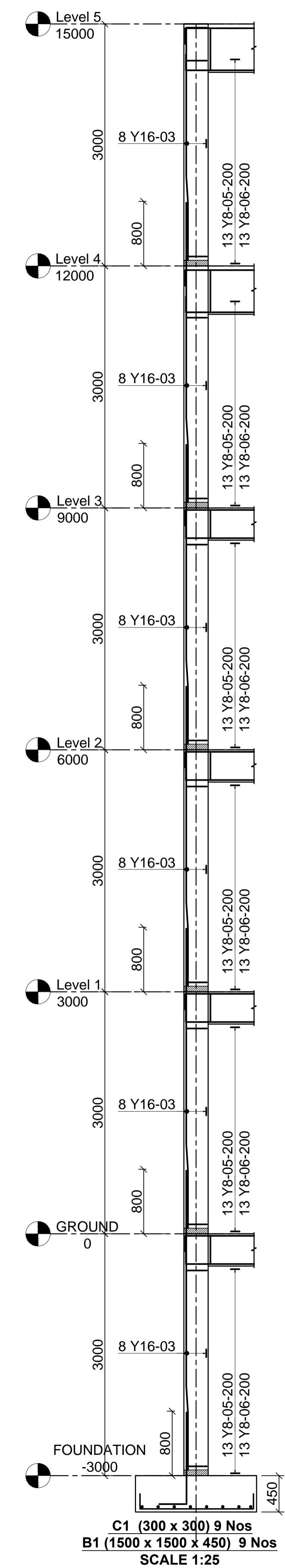
**LEVEL 5  
BM 01 (300 X 600)-4 Nos  
SCALE 1:25**



**SECTION E - E**



**B1 (1500 x 1500 x 450) 9 Nos  
SCALE 1:25**



- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461,
- CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

PROJECT ARCHITECTS  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.  
EPOCH CONSULTING ENGINEERS  
Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

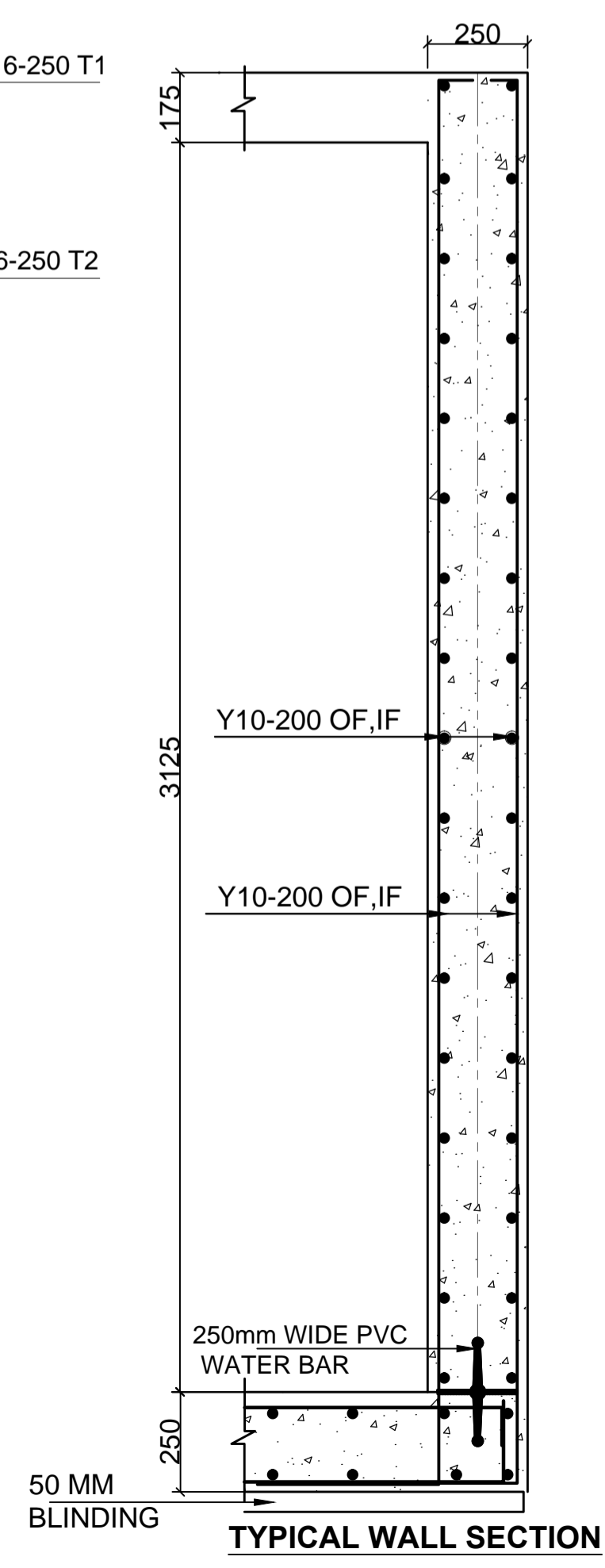
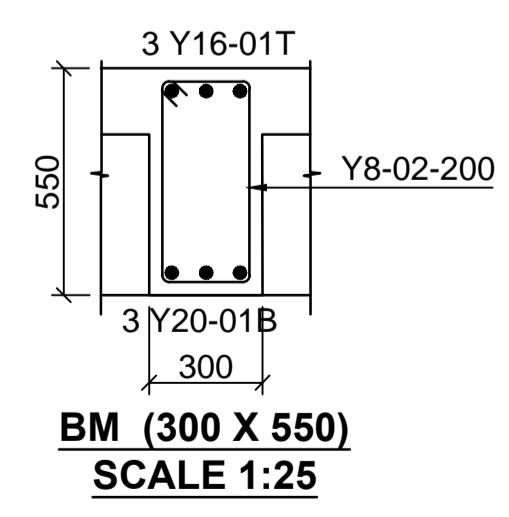
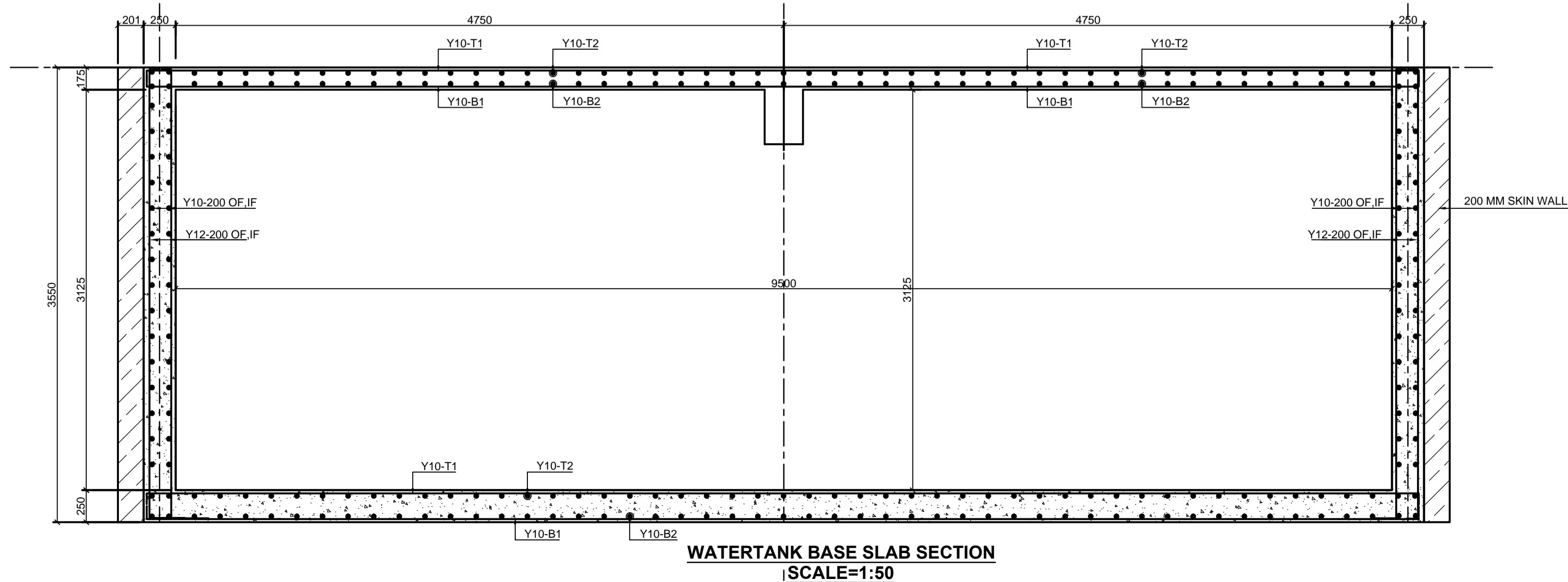
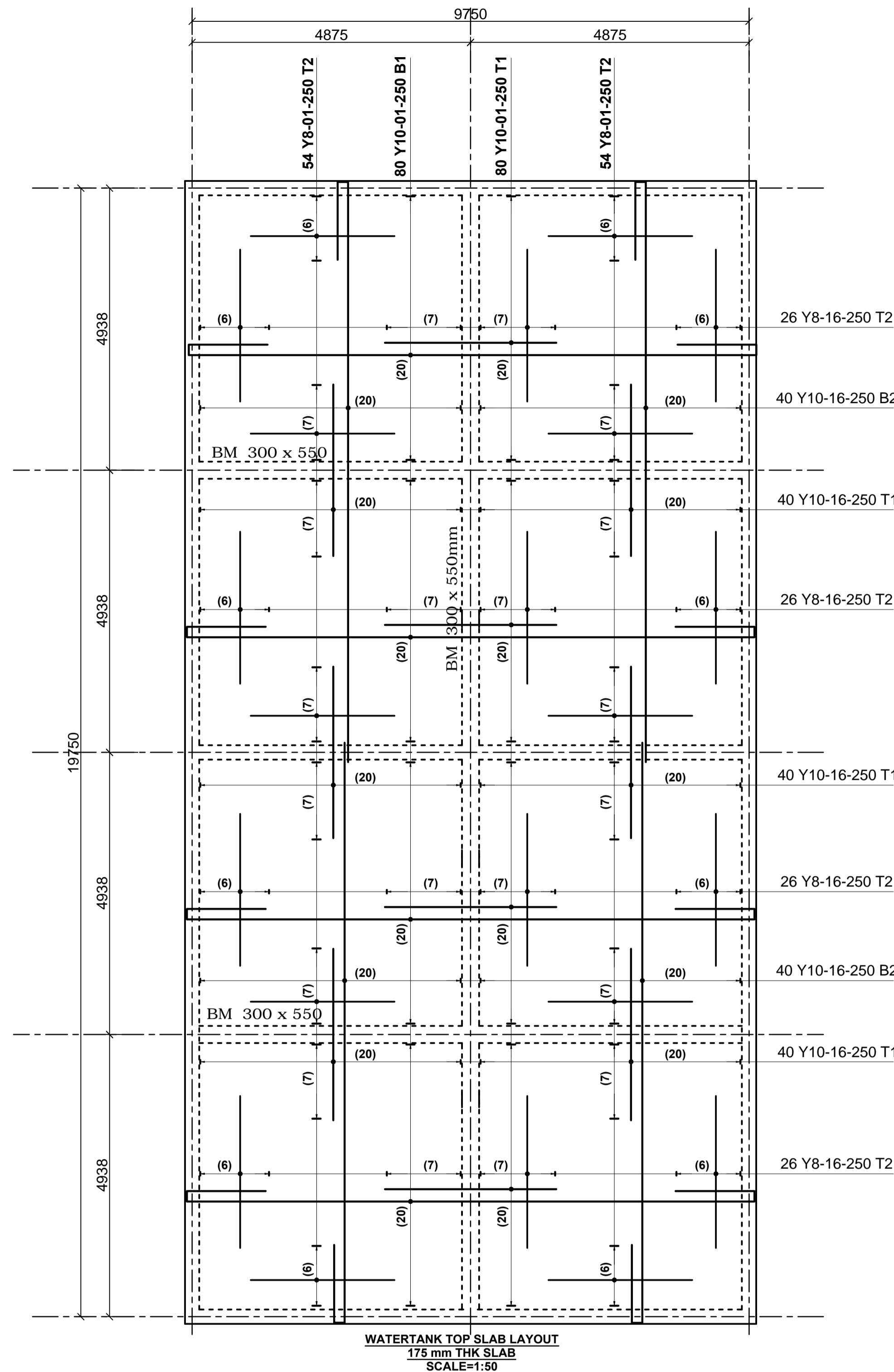
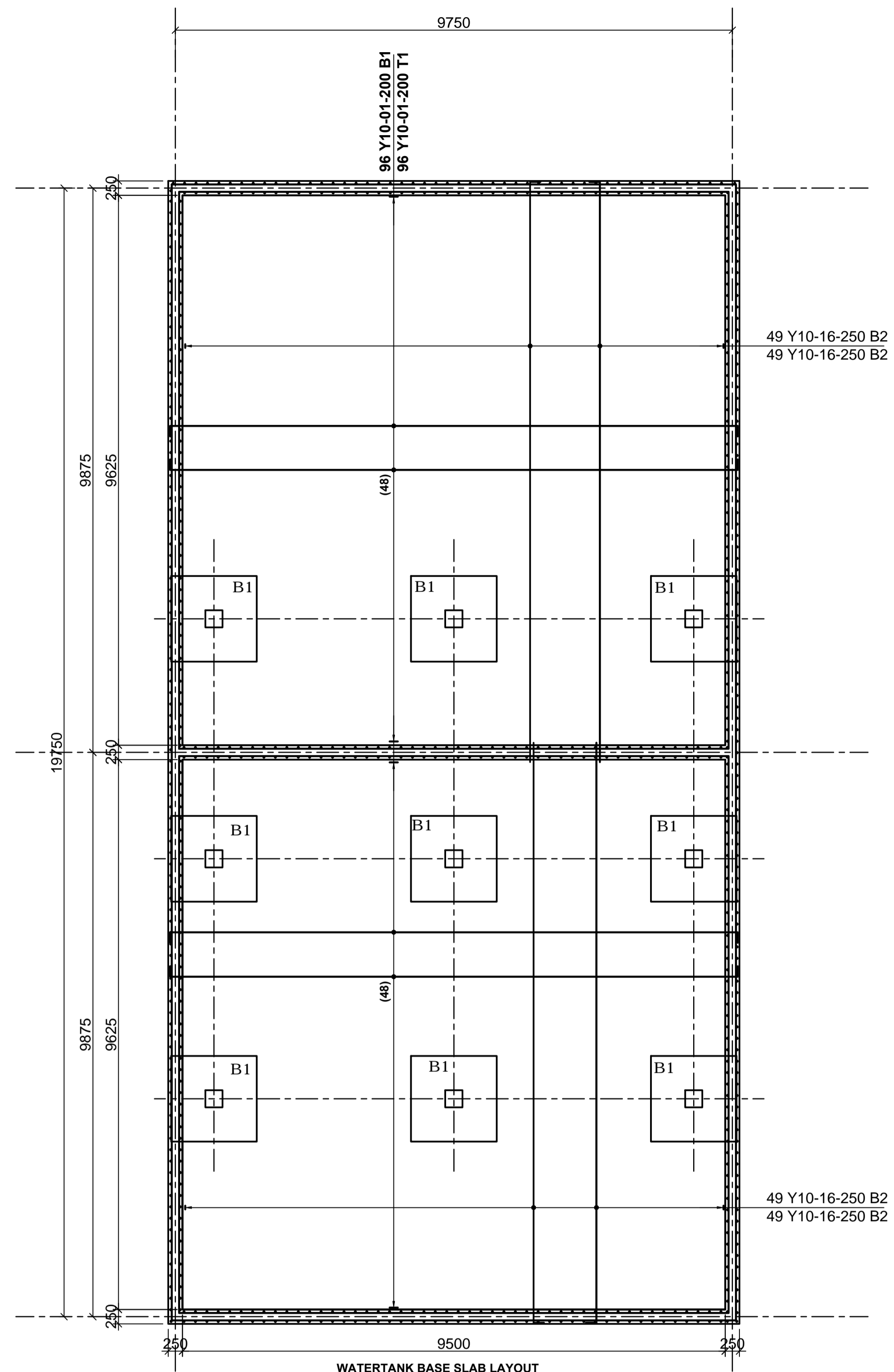
CLIENT:  
Kenya National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

ZONE:  
Kajiado County

PROJECT:  
Proposed Housing Scheme on Plot LR  
NO. Kajiado/Kitengela/6242 in  
Kitengela

DRAWING TITLE:  
FOUNDATION, ELEVATION AND LEVELS  
REBAR DETAILS  
(WATER TOWER)

DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-TWR-01	REV No. DRG STATUS



- LEGEND**
1. ALL DIMENSIONS ARE IN MILLIMETRES.
  2. BLINDING LAYER TO BE 50MM CLASS 15/20.
  3. GROUND FLOOR TO BE AS PER THE DRAWINGS.
  4. CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  5. MIN. COVER TO REINFORCEMENT:  
FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
  6. B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER
  7. Y = RIBBED BARS TO BS 4461,
  8. CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

PROJECT ARCHITECTS  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.  
**EPOCH CONSULTING ENGINEERS**  
Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

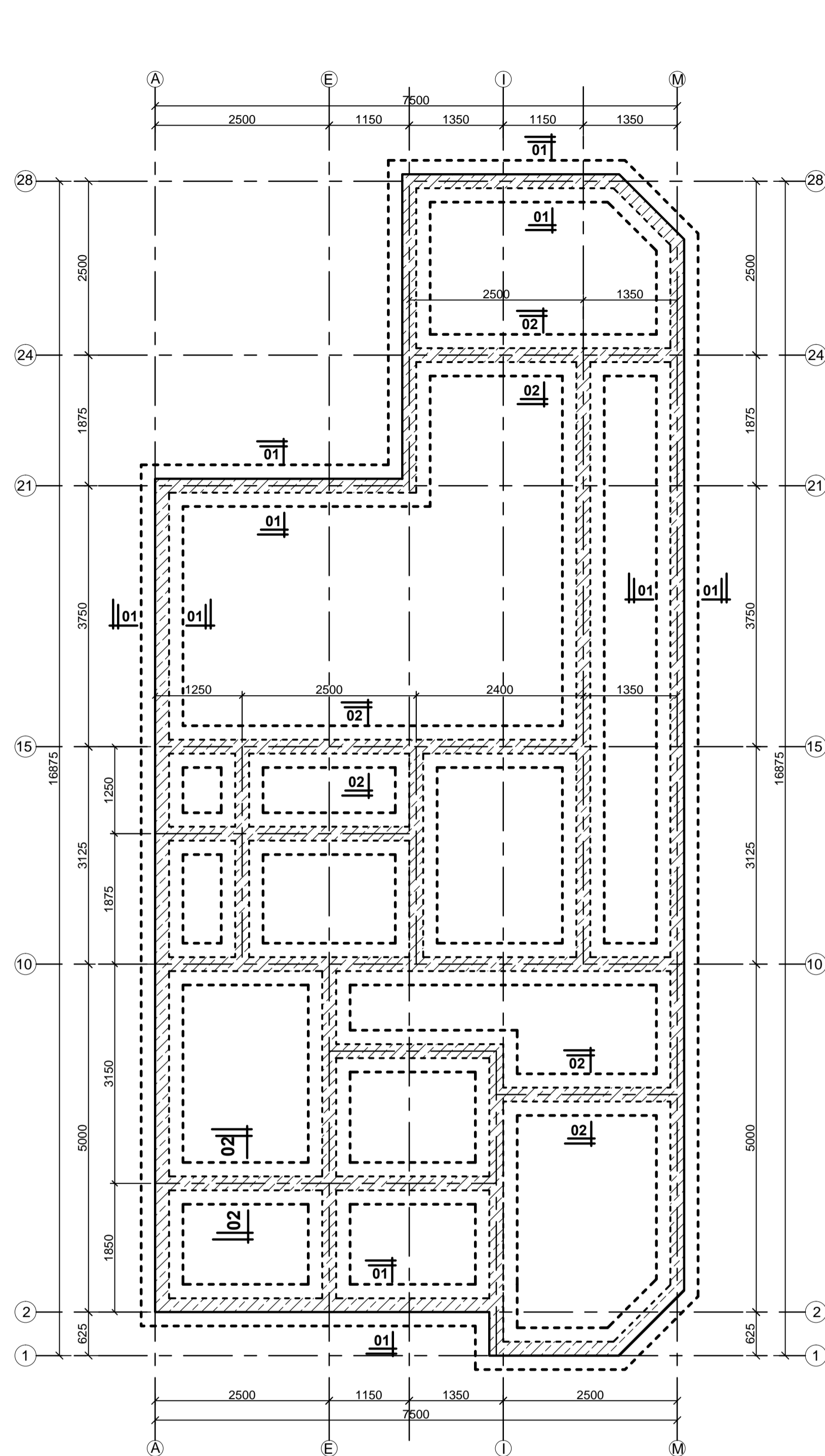
CLIENT:  
Kenyatta National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

ZONE:  
Kajiado County

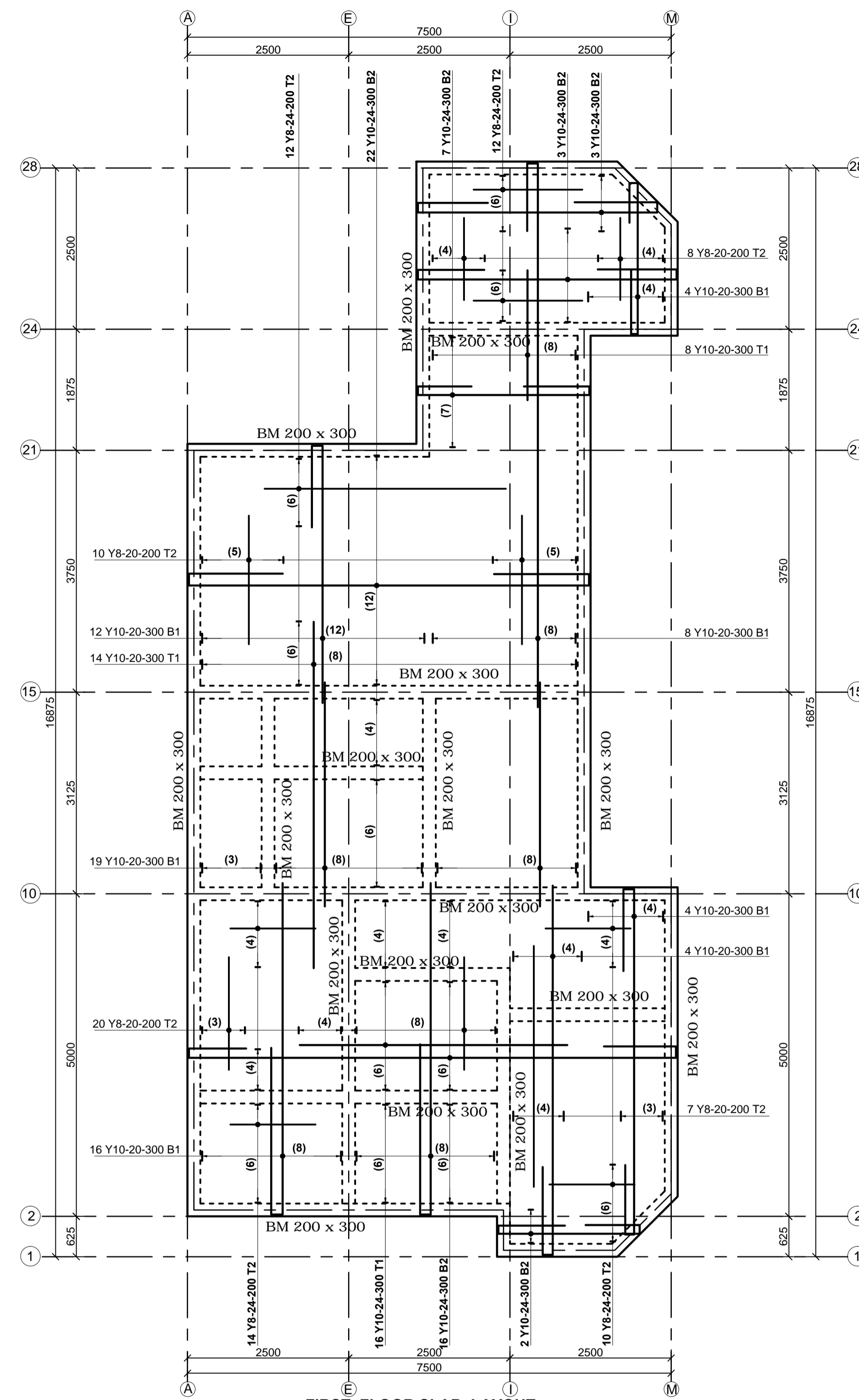
PROJECT:  
Proposed Housing Scheme on Plot LR  
NO. Kajiado/Kitengela/6242 in  
Kitengela

DRAWING TITLE:  
UNDERGROUND WATER REBAR DETAILS

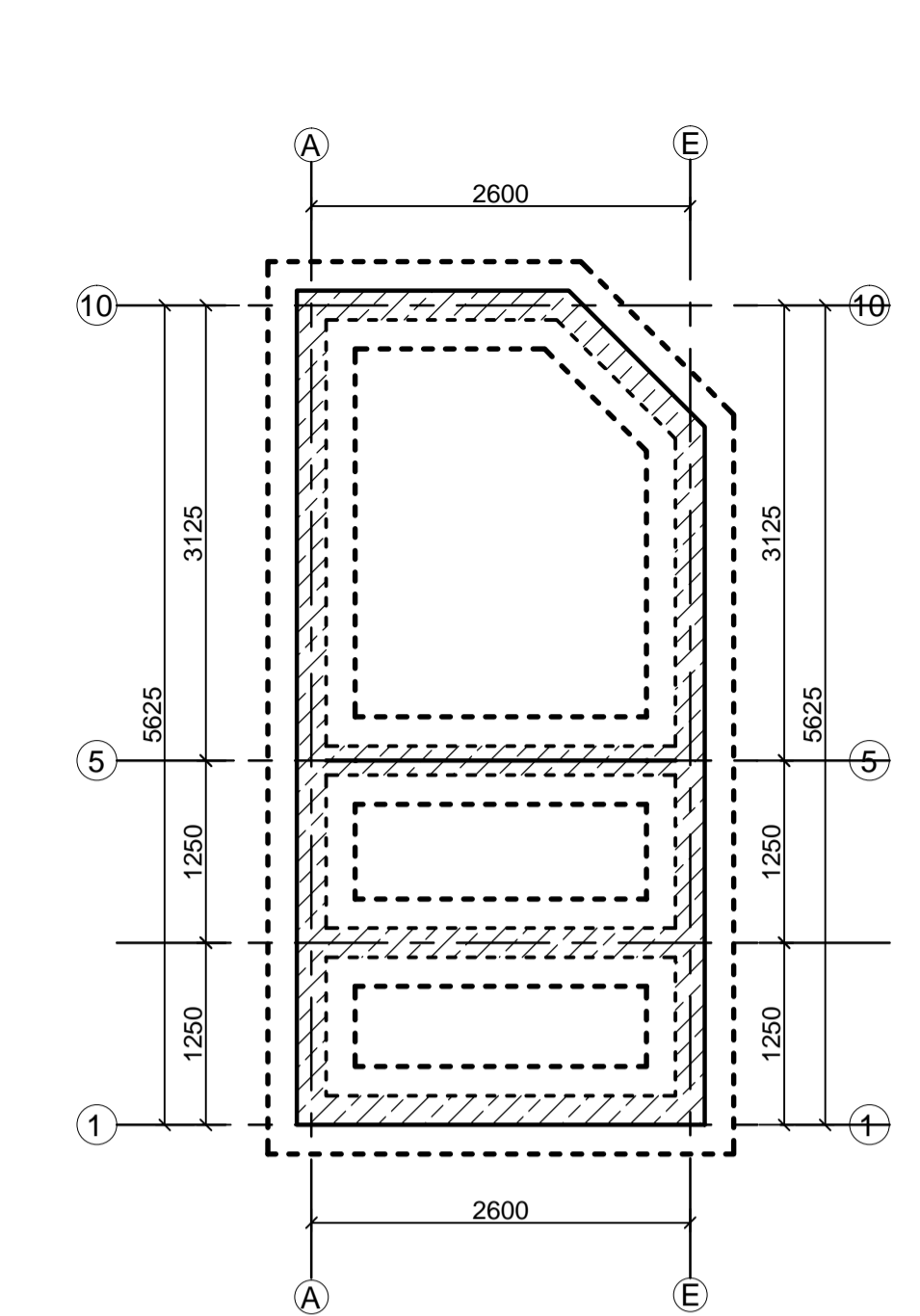
DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-WT-01	REV No. DRG STATUS



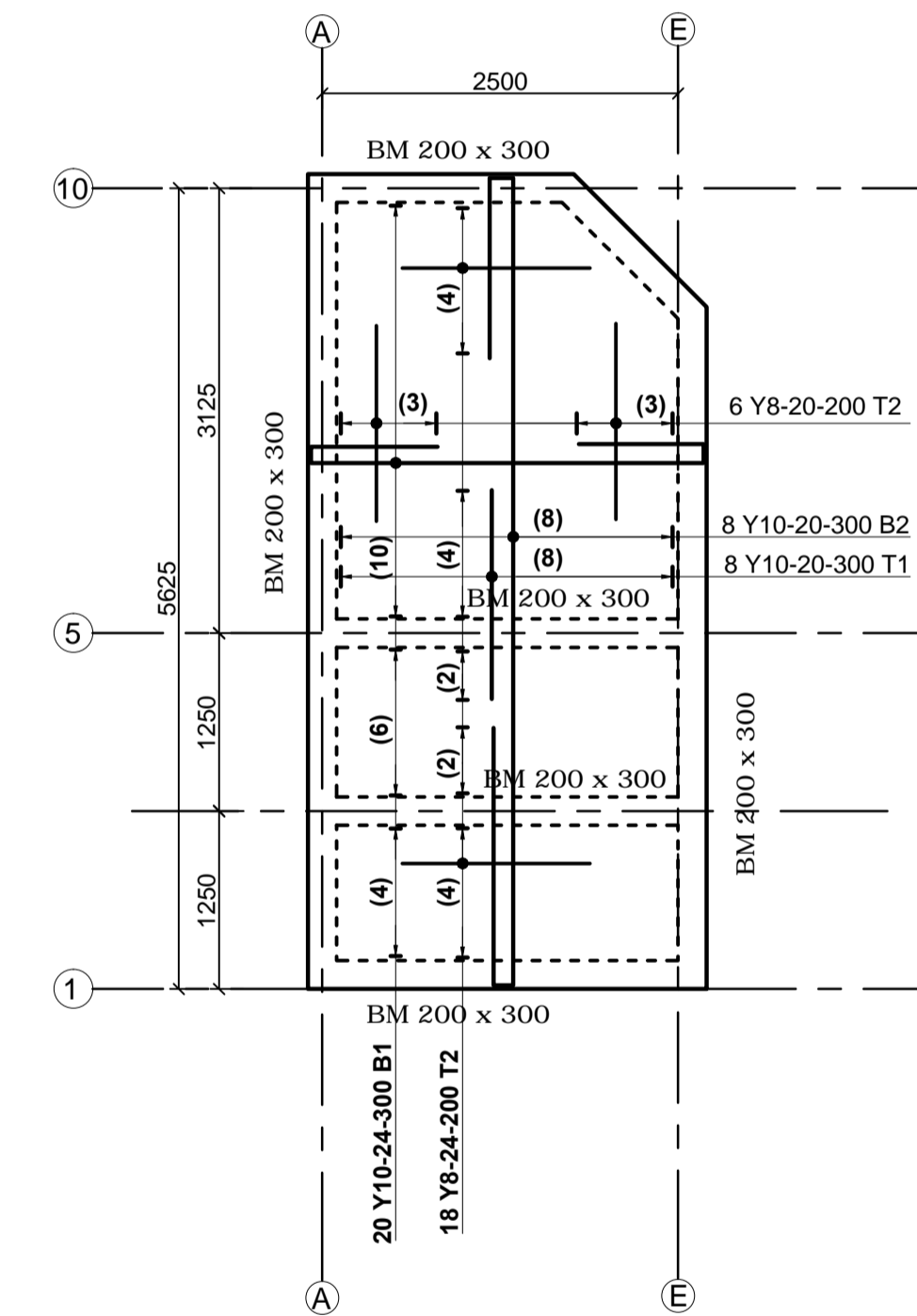
FOUNDATION AND GROUND FLOOR LAYOUT GENERAL ARRANGEMENT-100 mm THK SLAB SCALE=1:50



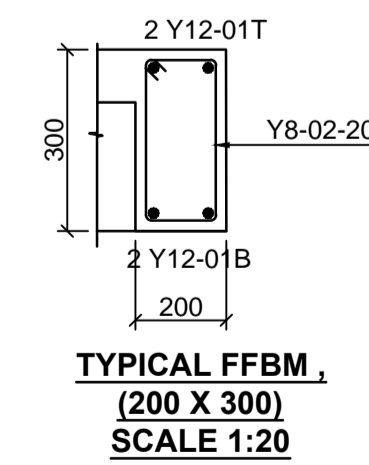
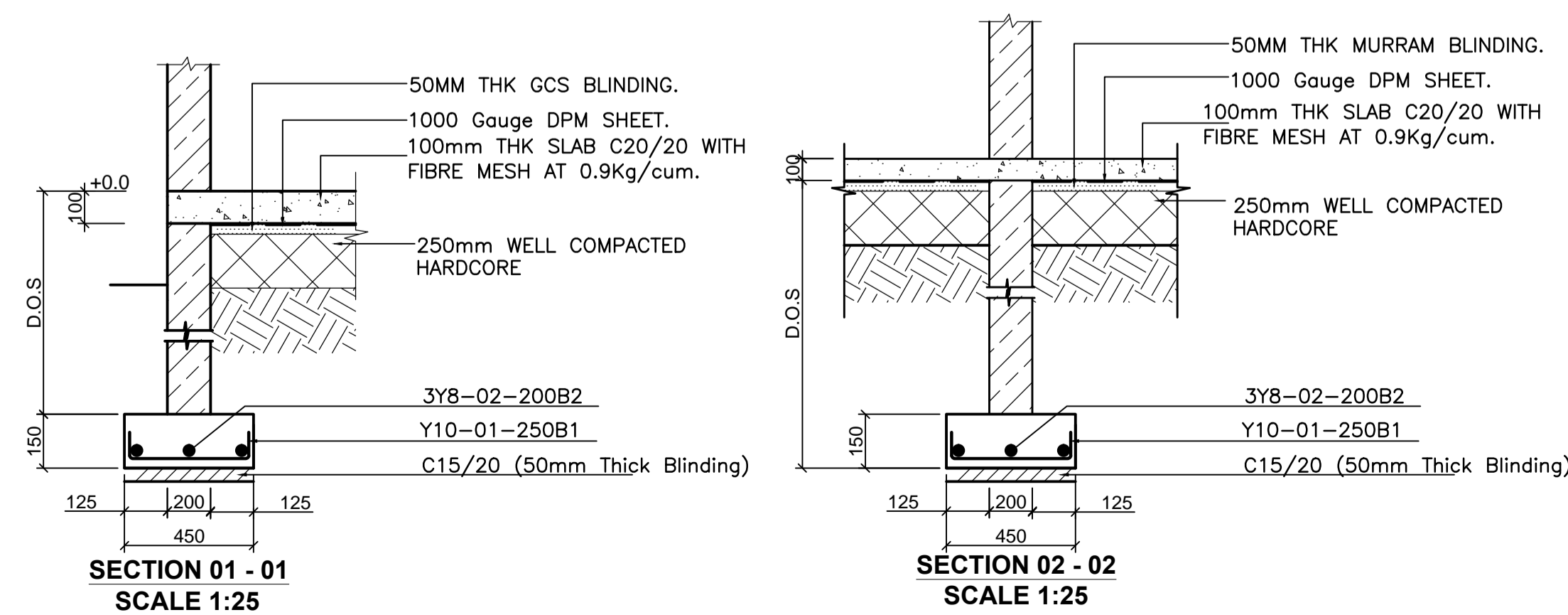
FIRST FLOOR SLAB LAYOUT 125mm THICK SLAB SCALE 1:50



FOUNDATION AND GROUND FLOOR LAYOUT GENERAL ARRANGEMENT-100 mm THK SLAB SCALE=1:50



FIRST FLOOR SLAB LAYOUT 125mm THICK SLAB SCALE 1:50



- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
COLUMN - 30MM  
BEAMS - 25MM  
SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER,  
B2 = BOTTOM 2ND. LAYER  
T1 = TOP 1ST. LAYER,  
T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461,
  - CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

PROJECT ARCHITECTS

HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5,0724347807  
NAIROBI

P.O.BOX 75193-00200,  
NAIROBI.

**EPOCH CONSULTING ENGINEERS**  
Civil & Structural Engineers

REV	Description	Checked/Date	Issued to/Date
F			
E			
D			
C			
B			
A			

CLIENT:

Kenyatta National Hospital Staff Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

ZONE:

Kajiado County

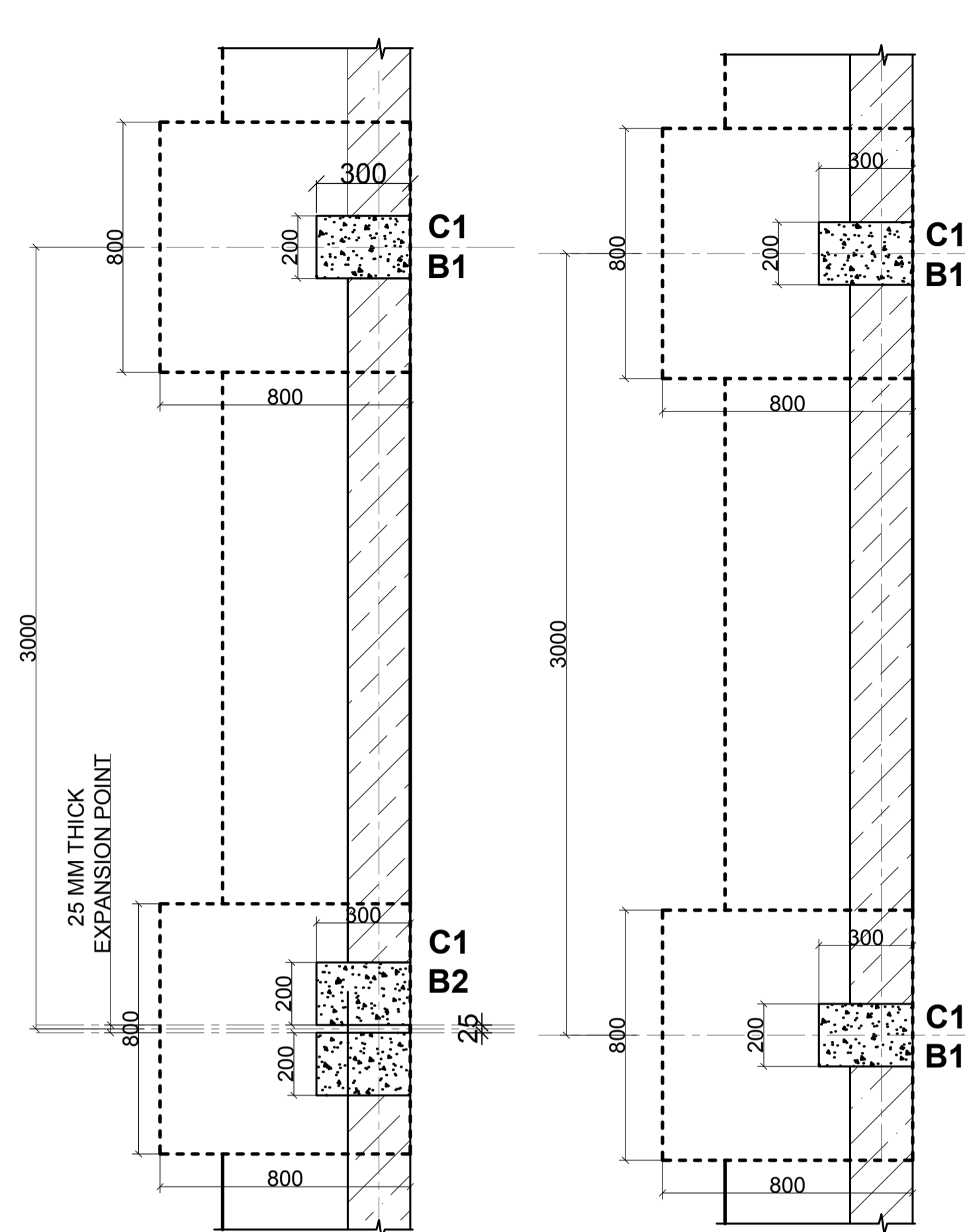
PROJECT:

Proposed Housing Scheme on Plot LR NO. Kajiado/Kitengela/6242 in Kitengela

DRAWING TITLE:

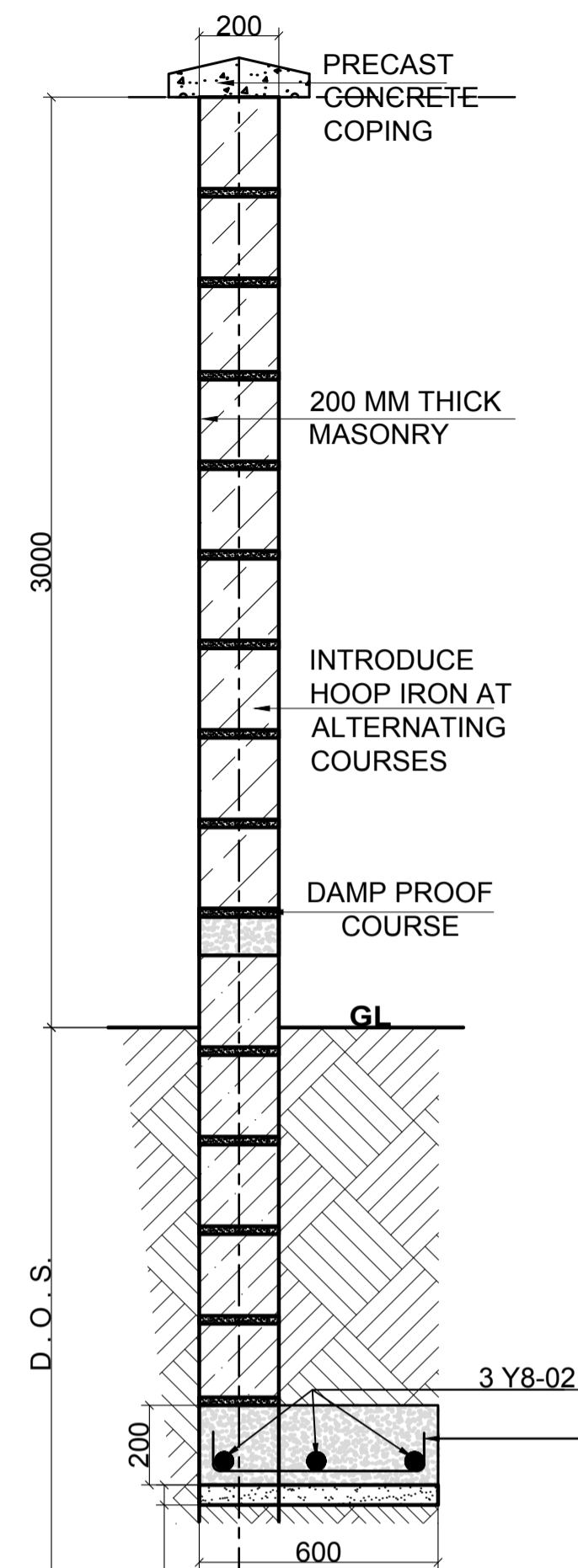
FOUNDATION AND GROUND FLOOR ROOF SLAB LAYOUT AND REBAR DETAILS (GATE HOUSE)

DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-GH-01	REV No. DRG STATUS

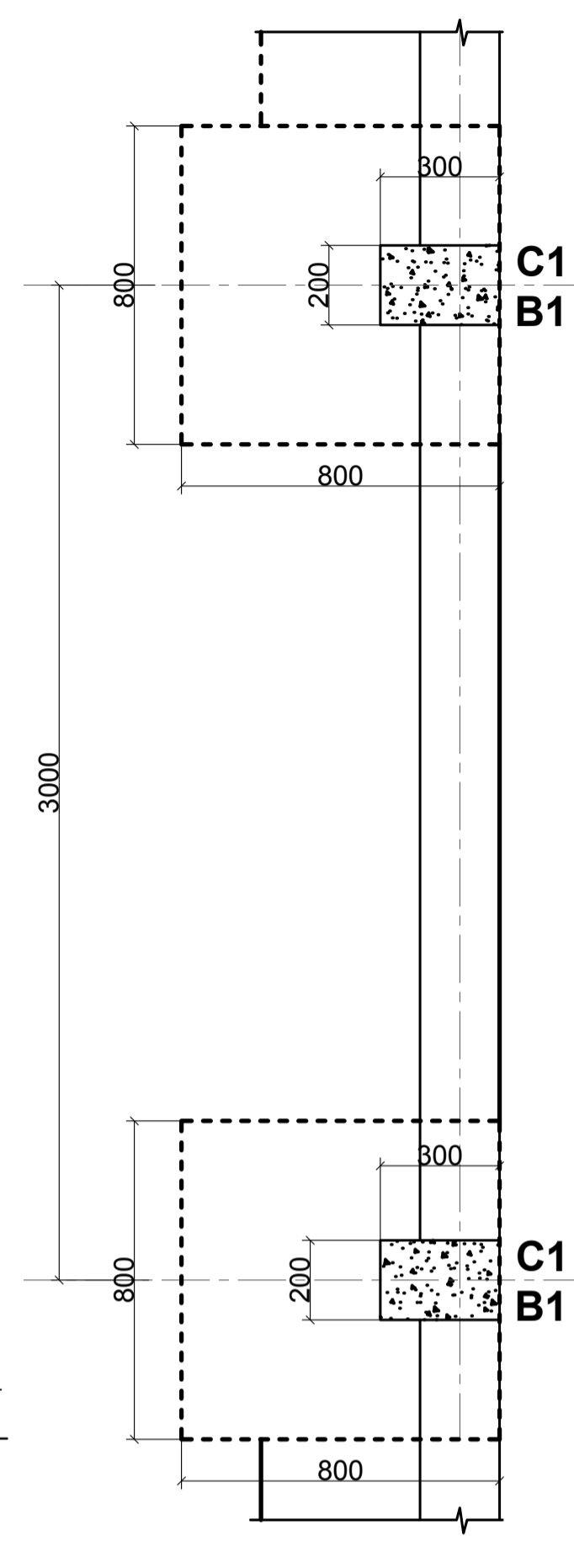


**TYPICAL BOUNDARY WALL EXPANSION JOINT FOUNDATION LAYOUT**

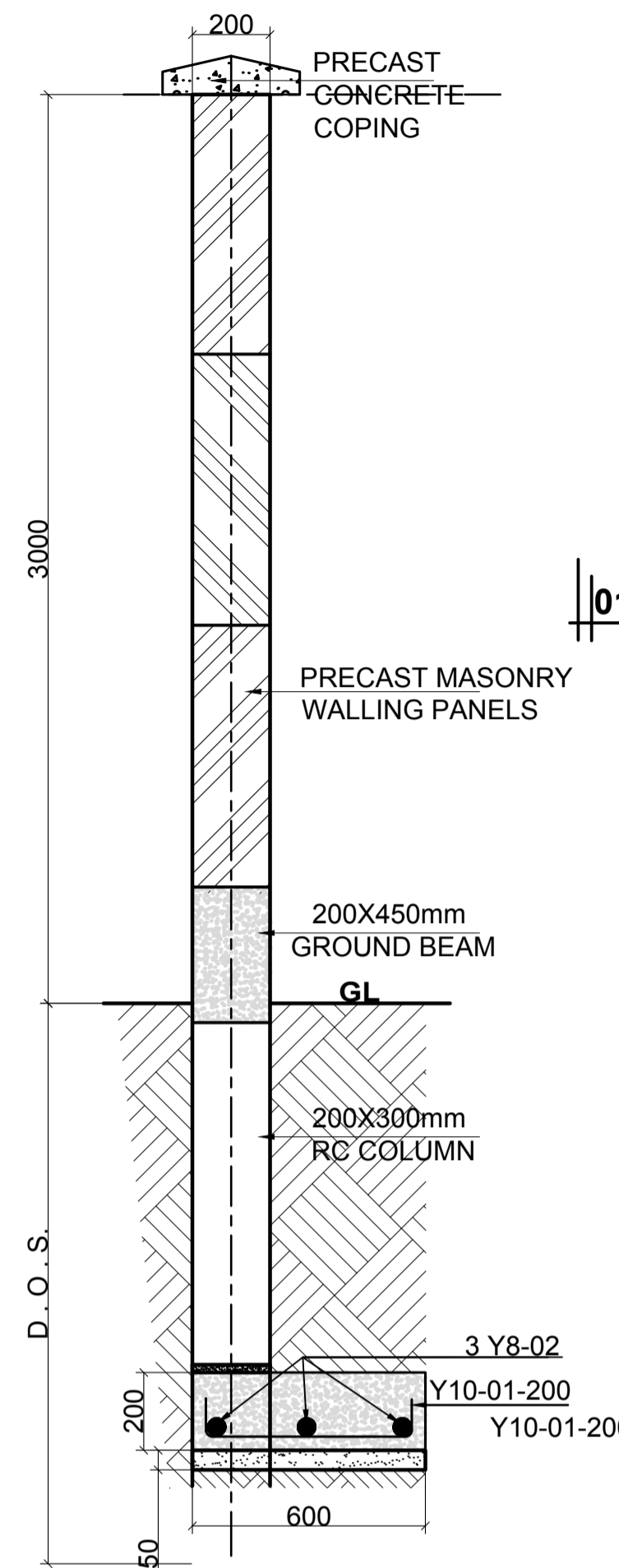
**TYPICAL BOUNDARY WALL FOUNDATION LAYOUT**



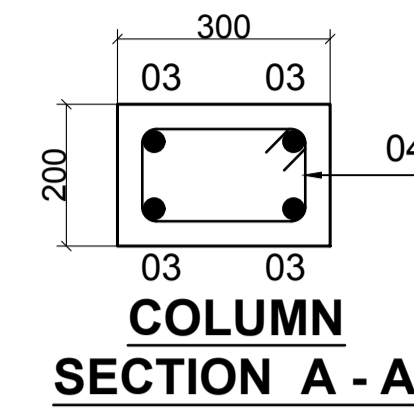
**TYPICAL BOUNDARY WALL SECTION**



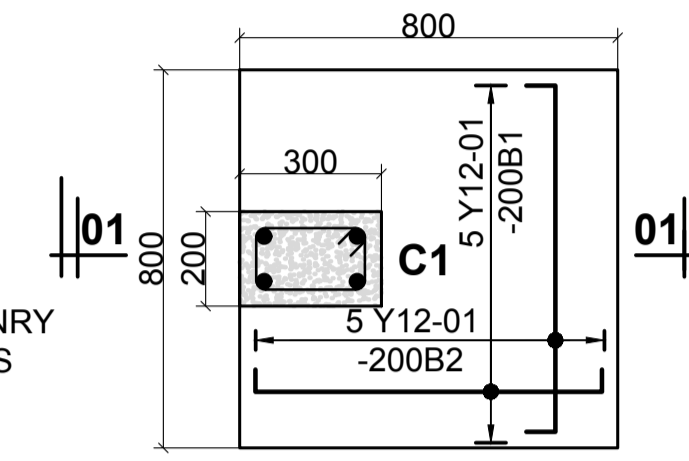
**TYPICAL PRECAST WALLING PANELS BOUNDARY WALL FOUNDATION LAYOUT**



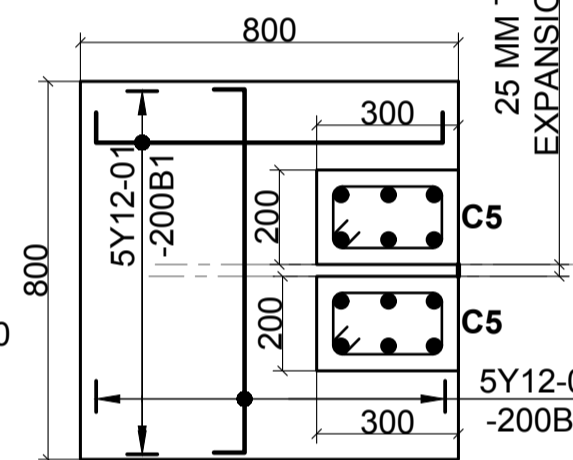
**TYPICAL BOUNDARY WALL SECTION (PRECAST CONCRETE PANEL TYPE)**



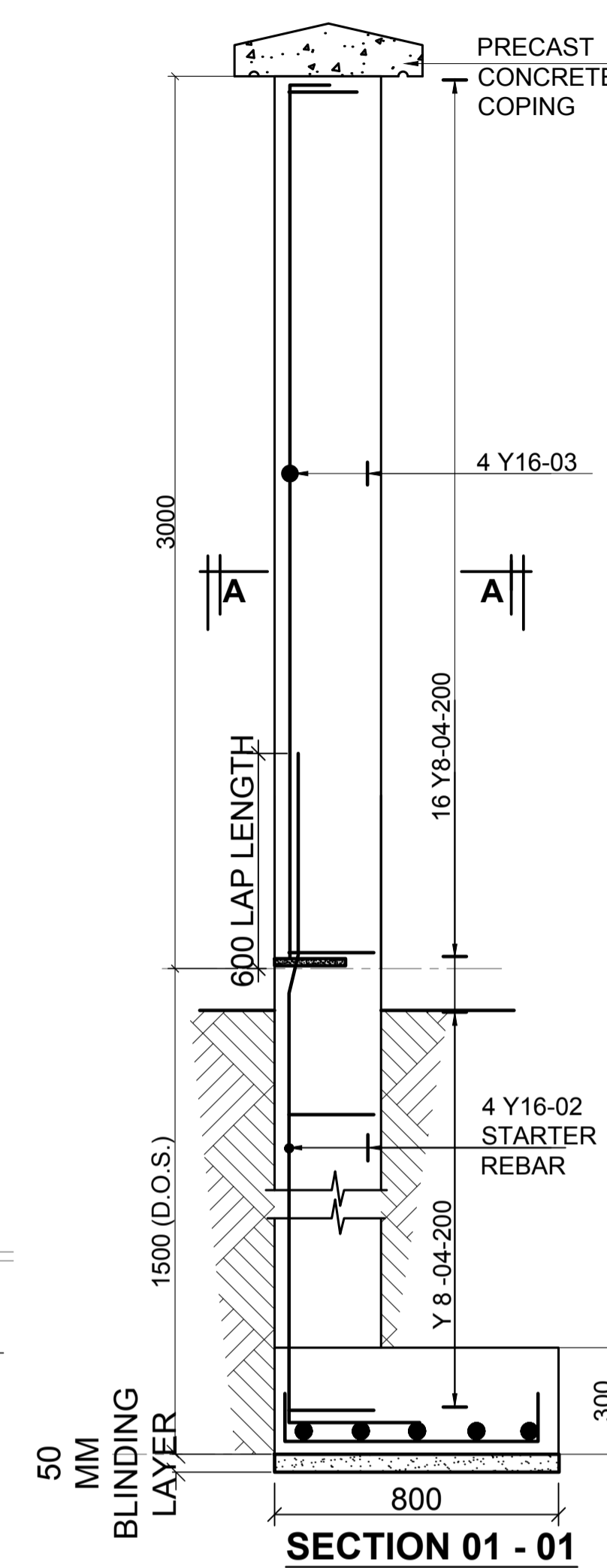
**COLUMN SECTION A - A**



**TYPICAL BOUNDARY COLUMN SECTION 01 - 01**



**C1 (200X300) B2 (800 X 800 X 300)**



**SECTION 01 - 01**

- LEGEND**
- ALL DIMENSIONS ARE IN MILLIMETRES.
  - BLINDING LAYER TO BE 50MM CLASS 15/20.
  - GROUND FLOOR TO BE AS PER THE DRAWINGS.
  - CRUSHING STRENGTH OF BUILDING STONE TO BE > 7N/MM<sup>2</sup>
  - MIN. COVER TO REINFORCEMENT:
- FOUNDATION - 50MM  
 COLUMN - 30MM  
 BEAMS - 25MM  
 SLAB - 20MM
- B1 = BOTTOM 1ST. LAYER, B2 = BOTTOM 2ND. LAYER, T1 = TOP 1ST. LAYER, T2 = TOP 2ND LAYER
  - Y = RIBBED BARS TO BS 4461,
  - CONCRETE STRENGTH TO BE AT LEAST 25N/MM<sup>2</sup> AT 28 DAYS.(CLASS 25/20)

**PROJECT ARCHITECTS**  
 HABITECH CONSULTANTS  
 ARCHITECTS AND PLANNERS  
 P.O BOX 66495  
 TEL: 3860394/5,0724347807  
 NAIROBI

P.O.BOX 75193-00200,  
 NAIROBI.

**EPOCH CONSULTING ENGINEERS**  
 Civil & Structural Engineers

F			
E			
D			
C			
B			
A			

REV	Description	Checked/Date	Issued to/Date
-----	-------------	--------------	----------------

**CLIENT:**

Kenyatta National Hospital Staff  
 Retirement Benefit Scheme (2011)  
 P.O Box 20723-00202,NAIROBI

**ZONE:**

Kajiado County

**PROJECT:**

Proposed Housing Scheme on Plot LR  
 NO. Kajiado/Kitengela/6242 in  
 Kitengela

**DRAWING TITLE:**

BOUNDARY WALL DETAILS

DESIGNED BY: M.I.M	DRAWN BY: F.A
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-BWL-01	REV No. DRG STATUS



REVISIONS		
REV.No.	DATE	DESCRIPTION

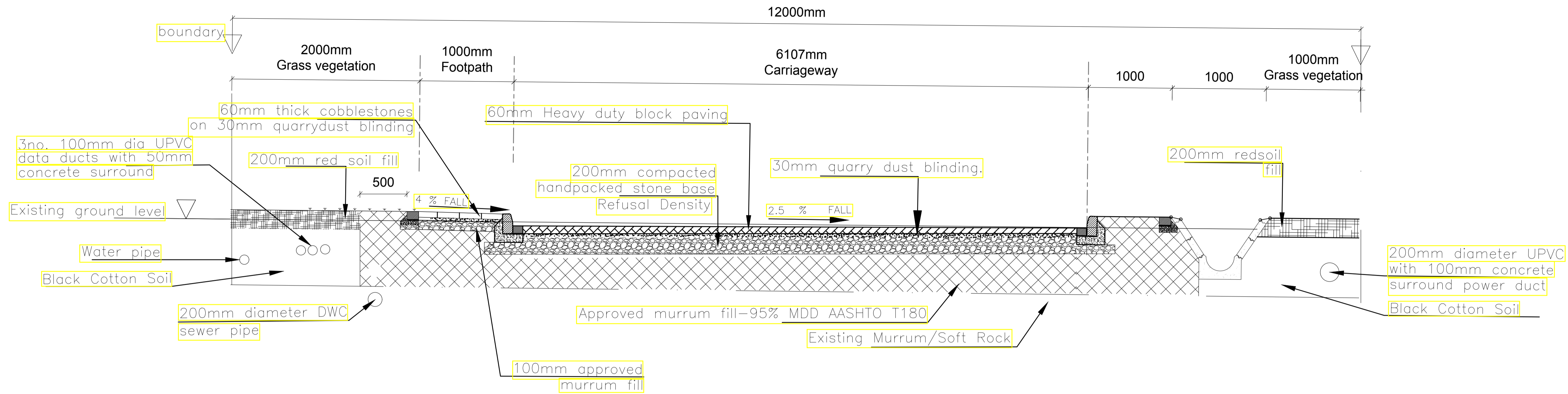
CONSULTANTS:	
<b>EPOCH CONSULTING ENGINEERS</b> P.O.BOX 75193-00200, NAIROBI.	
CHECKED BY:	JNK
DESIGNED BY:	ENN

CLIENT:	
<b>KENYATTA NATIONAL HOSPITAL STAFF            RETIREMENT BENEFIT SCHEME (2011)            P.O BOX 20723-00202, NAIROBI.</b>	

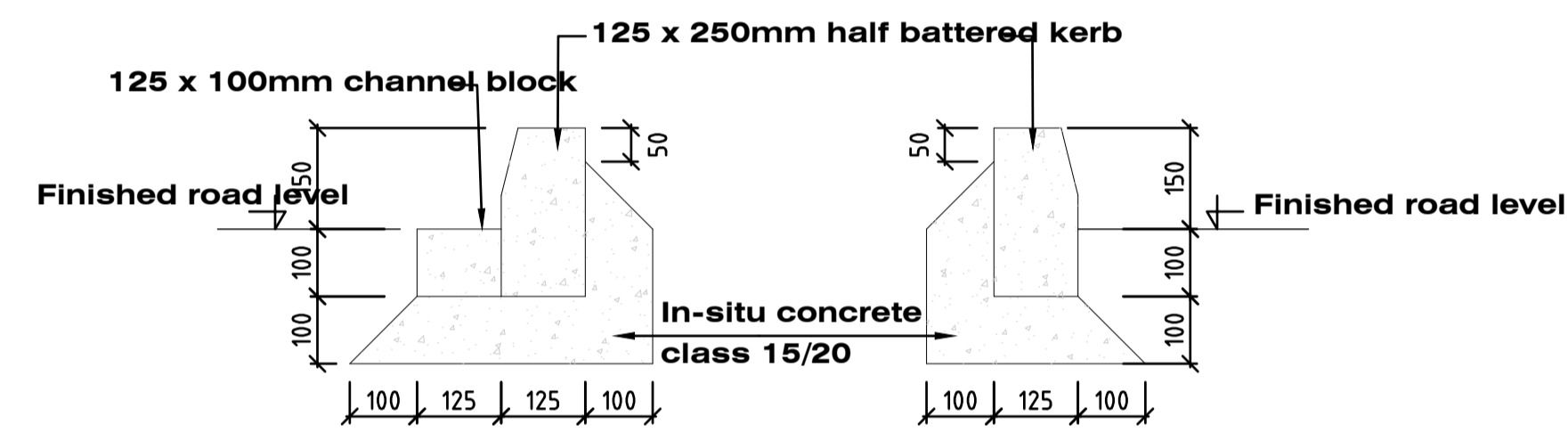
SCALES:

PROJECT:	
<b>PROPOSED HOUSING SCHEME ON PLOT LR NO.            KAJIADO/KITENGELA/6242 IN KITENGELA</b>	
SHEET CONTENTS:	<b>LAYOUT PLAN FOR            (ROADS / DRAINAGE AND SEWER)</b>

DWG. No.:	
DATE:	NOVEMBER 2022
SCALE :	PLAN 1: 7500
SHEET NO:	1 of 1

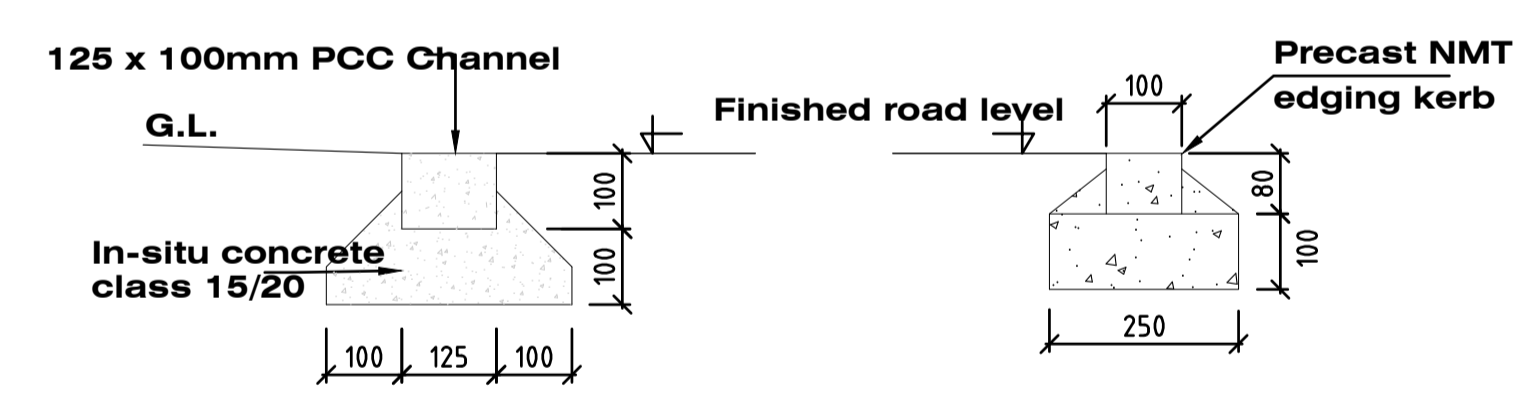


**MAIN ACCESS ROAD CROSS SECTION**

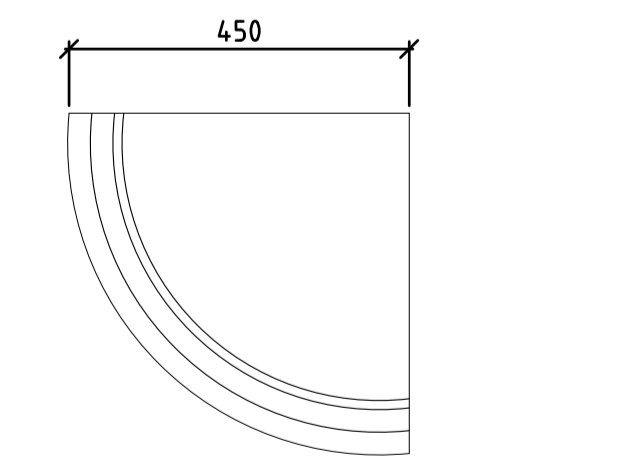


**KERB AND CHANNEL**      **KERB ONLY**

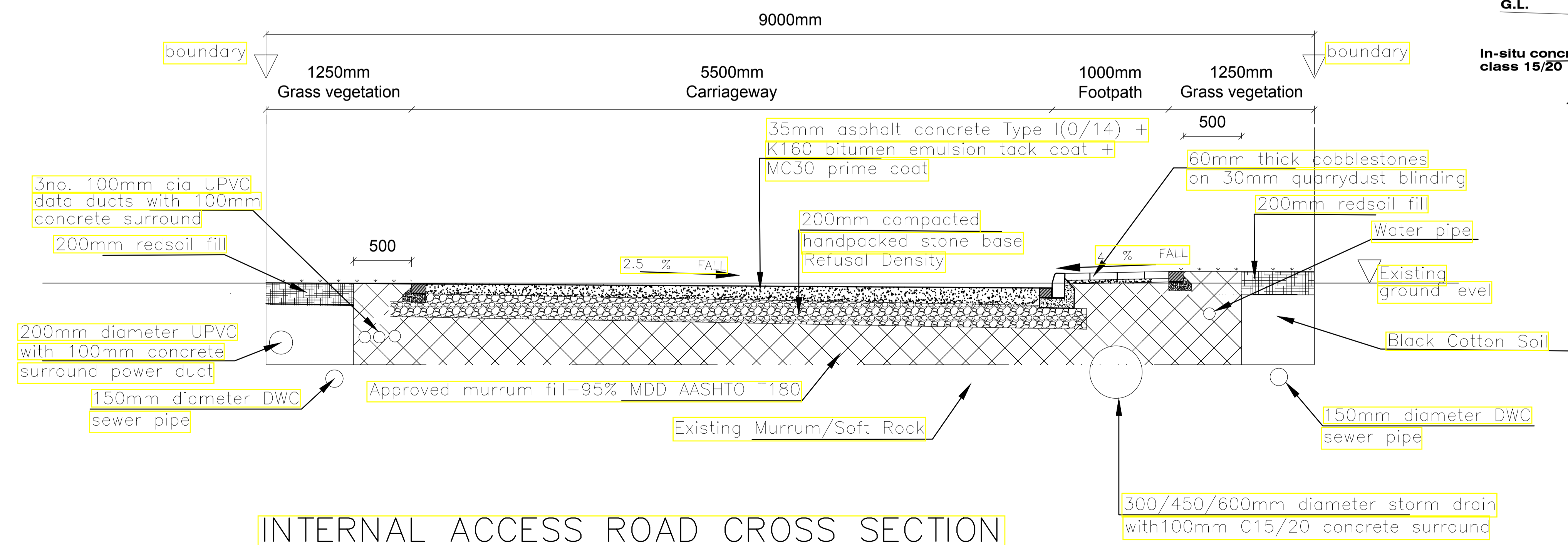
**BEDS AND HAUCHES FOR KERBS AND CHANNELS**



**P.C.C. CHANNEL DETAIL**  
SCALE 1:20



**PLAN**  
**ELEVATION QUADRANT**  
R=9.5mm  
R=19mm



**INTERNAL ACCESS ROAD CROSS SECTION**

**PROJECT ARCHITECTS:**  
HABITECH CONSULTANTS  
ARCHITECTS AND PLANNERS  
P.O BOX 66495  
TEL. 3860394/5, 0724347807  
NAIROBI

P.O. BOX 75193-00200,  
NAIROBI.  
**EPOCH CONSULTING ENGINEERS**  
Civil & Structural Engineers

F			
E			
D			
C			
B			
A			

REVI Description Checked/Date Issued to/Date

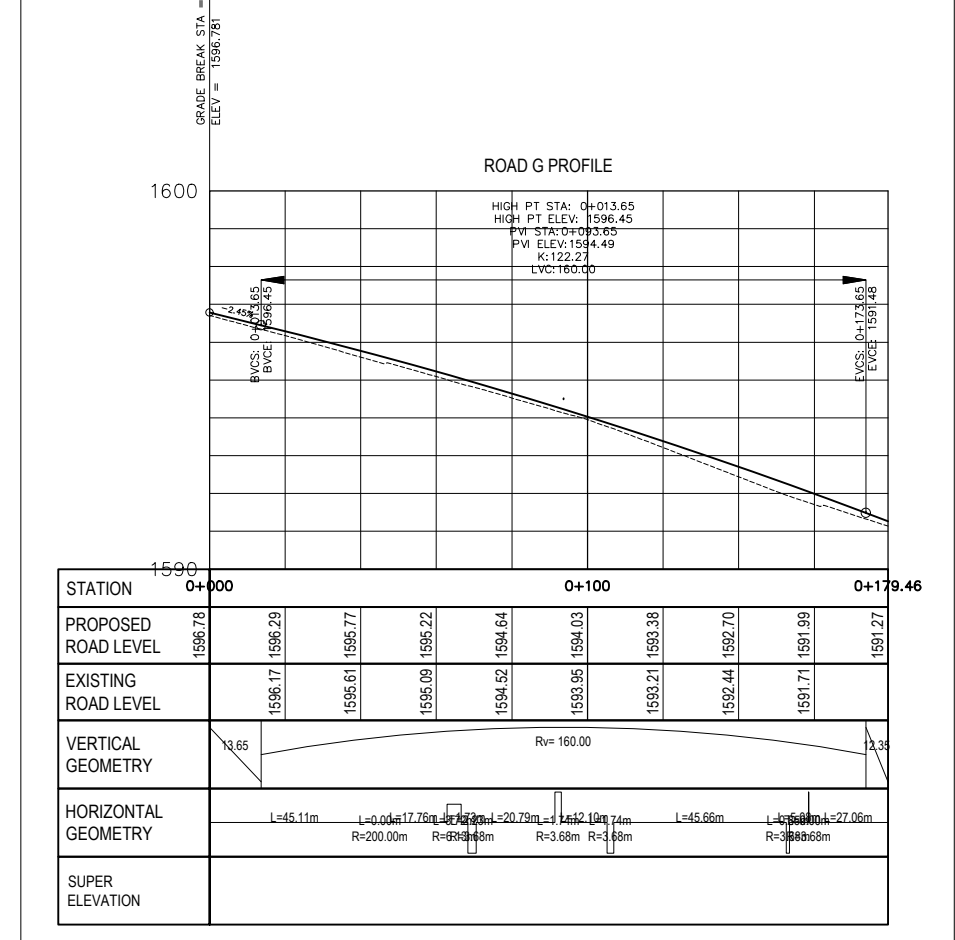
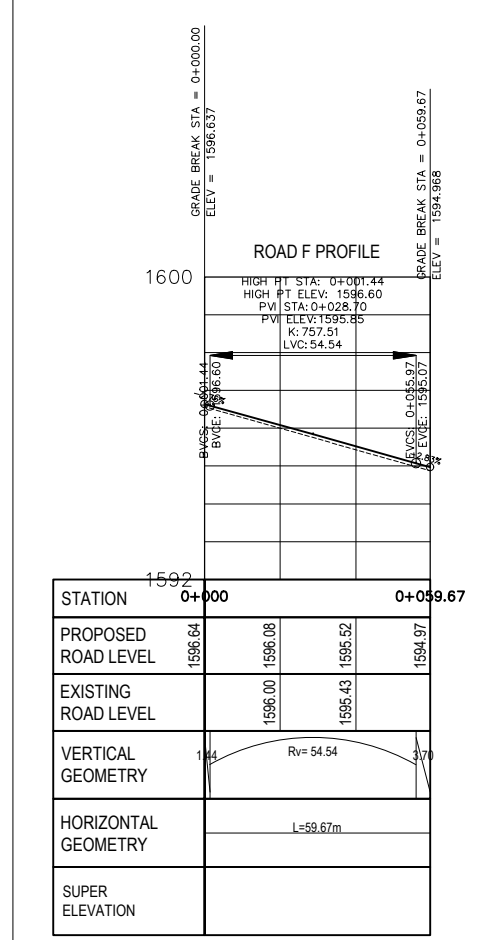
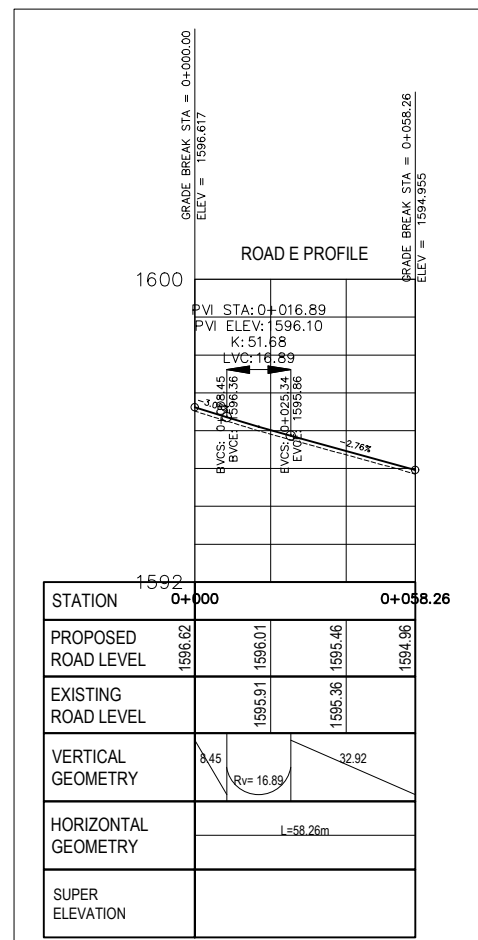
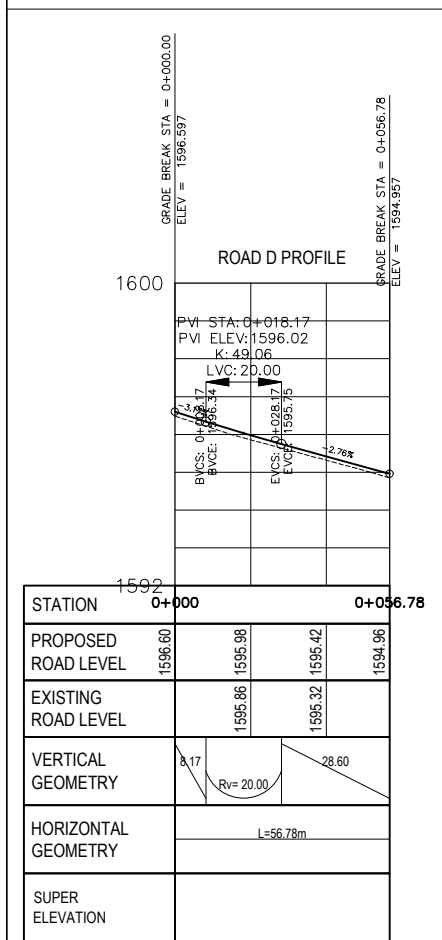
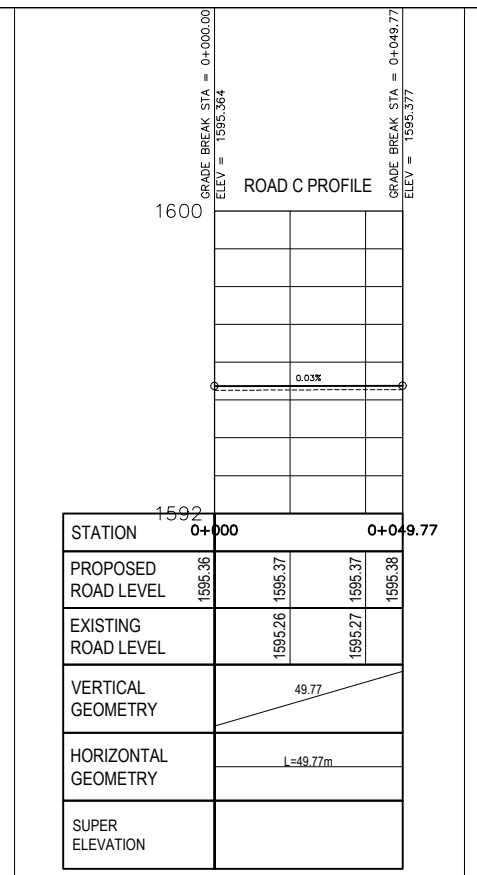
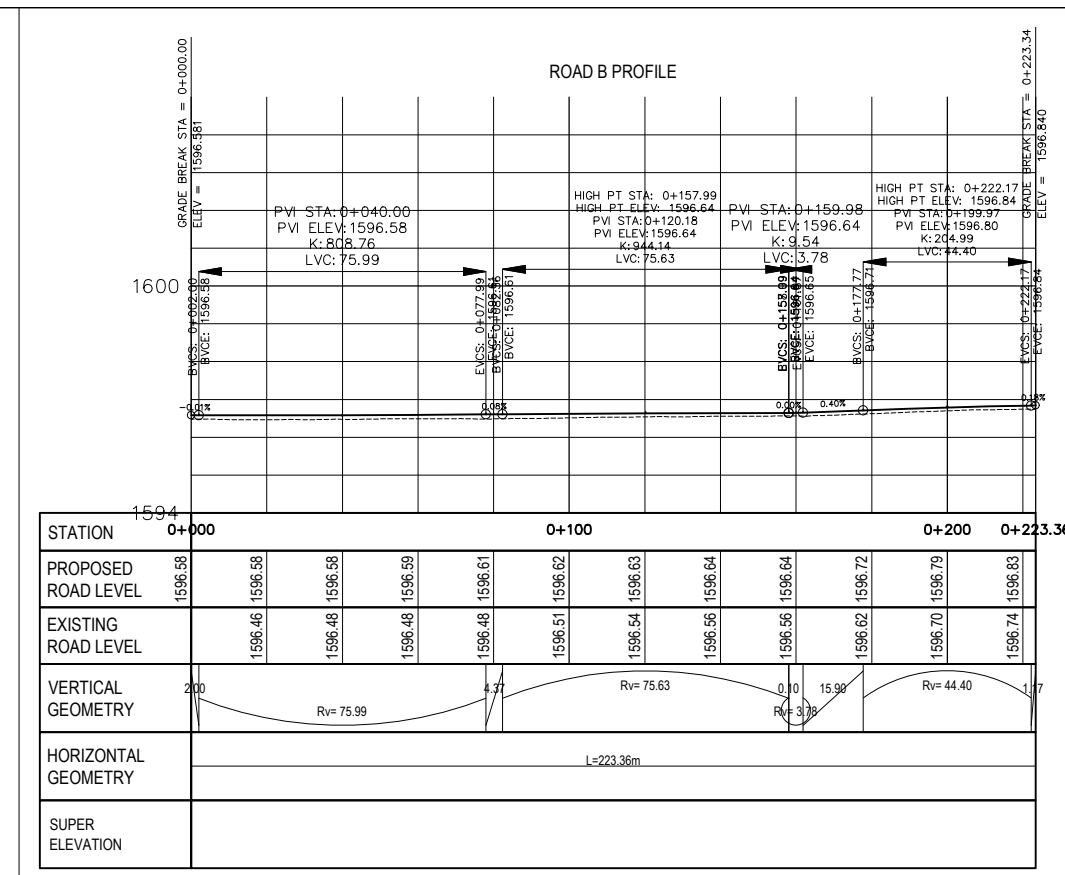
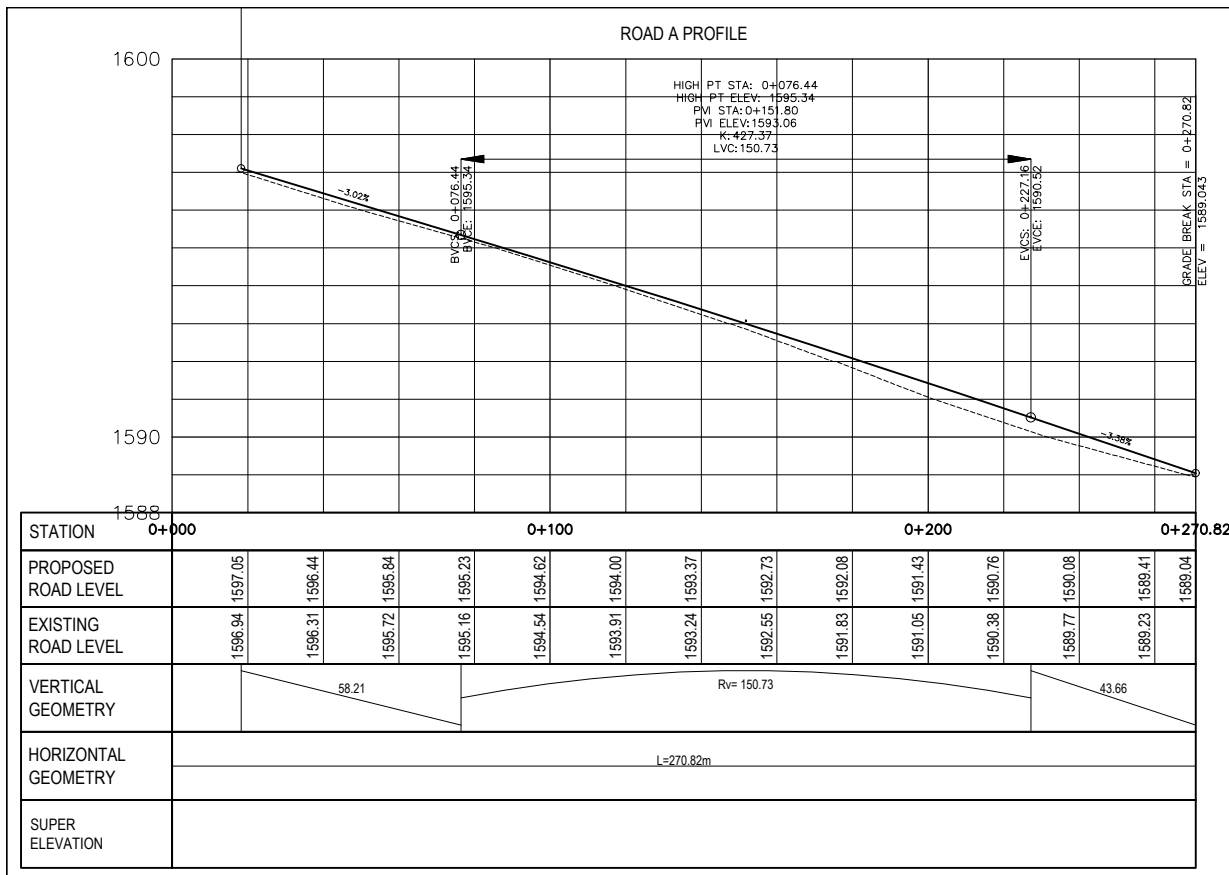
**CLIENT:**  
Kenya National Hospital Staff  
Retirement Benefit Scheme (2011)  
P.O Box 20723-00202,NAIROBI

**ZONE:**  
KAJIADO COUNTY

**PROJECT:**  
PROPOSED HOUSING SCHEME ON PLOT  
LR NO. KAJIADO/KITENGELA/6242 IN  
KITENGELA

**DRAWING TITLE:**  
TYPICAL ROAD CROSS SECTION

DESIGNED BY: M.I.M	DRAWN BY: S.O
CHECKED BY: ENG. JNK	JOB No.
SCALES: AS SHOWN	DATE: NOVEMBER 2022
DRG No: STR-RD-01	REV No. DRG STATUS



REVISIONS		
REV.No.	DATE	DESCRIPTION

**CONSULTANTS:**  
**EPOCH CONSULTING ENGINEERS**  
 P.O.BOX 75193-00200,  
 NAIROBI.

CHECKED BY: JNK  
 DESIGNED BY: ENN

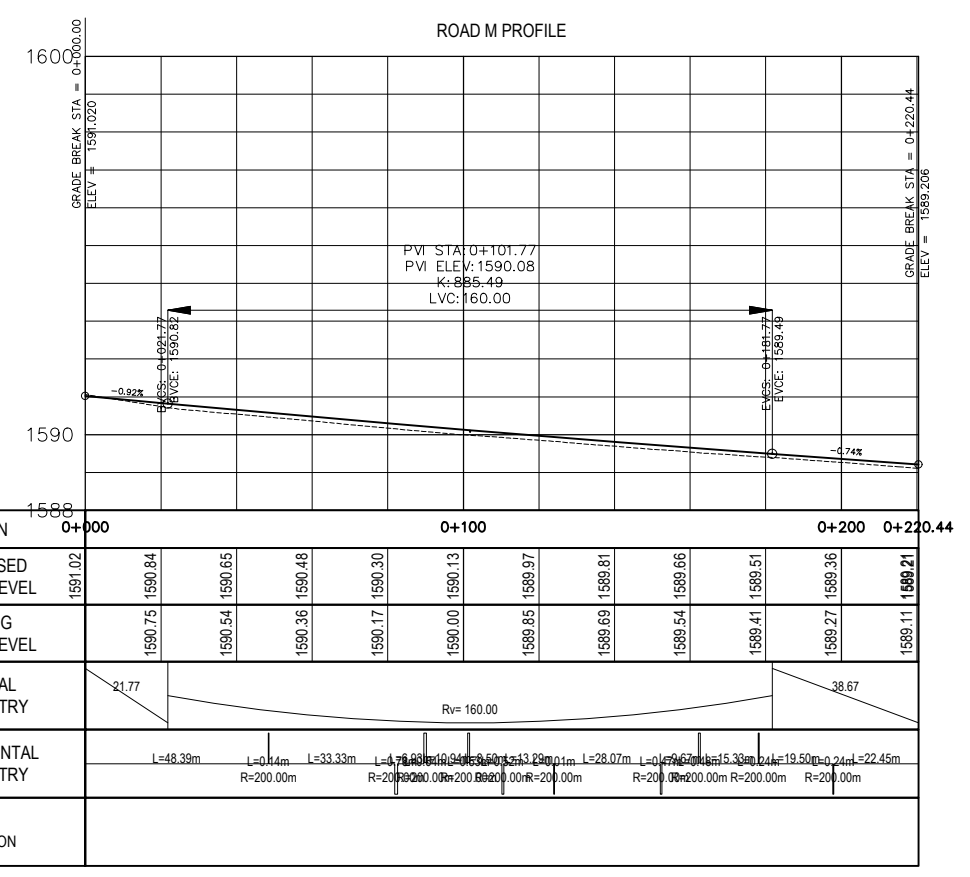
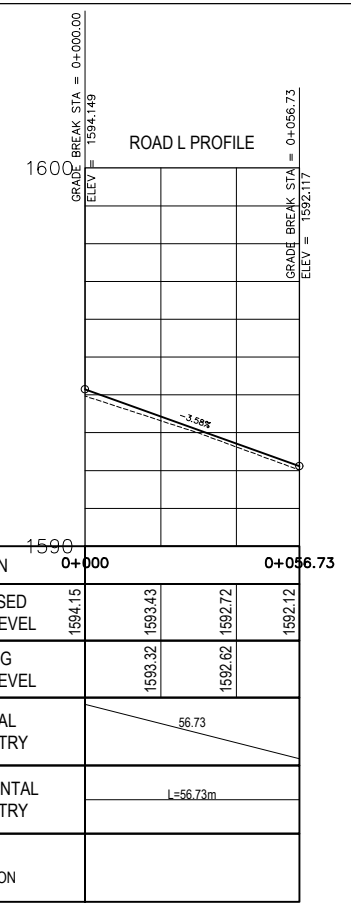
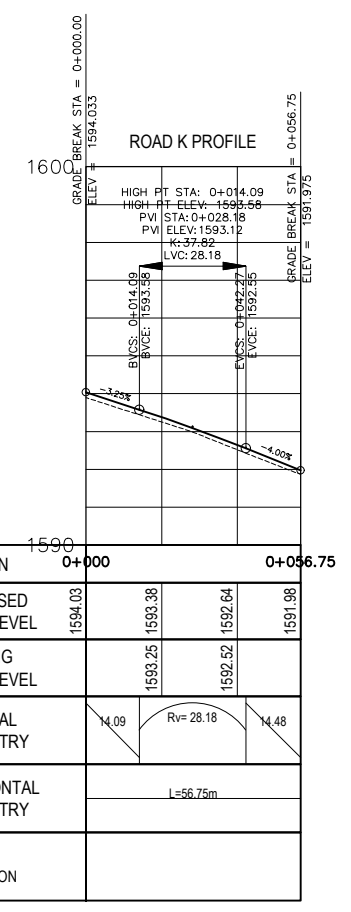
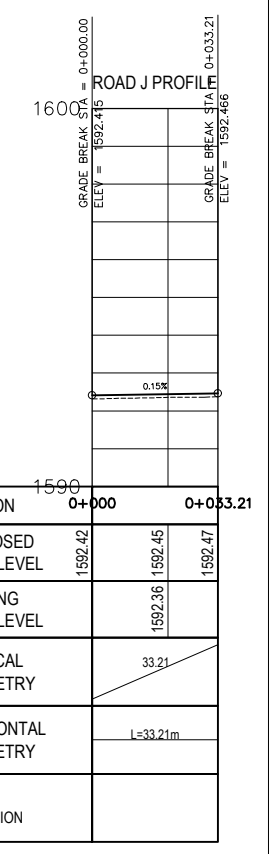
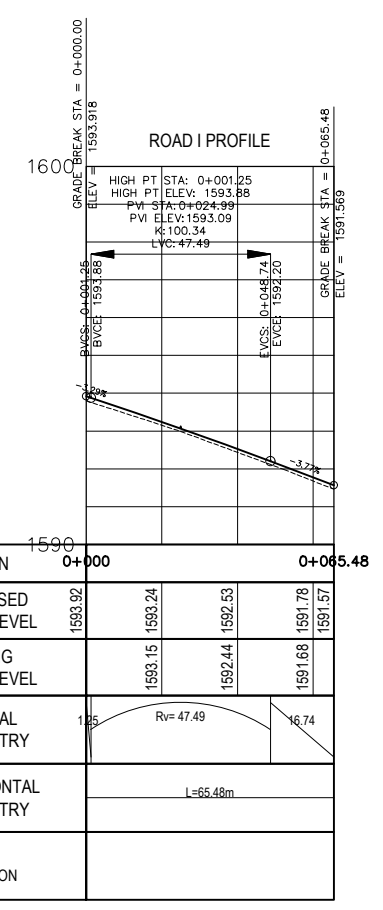
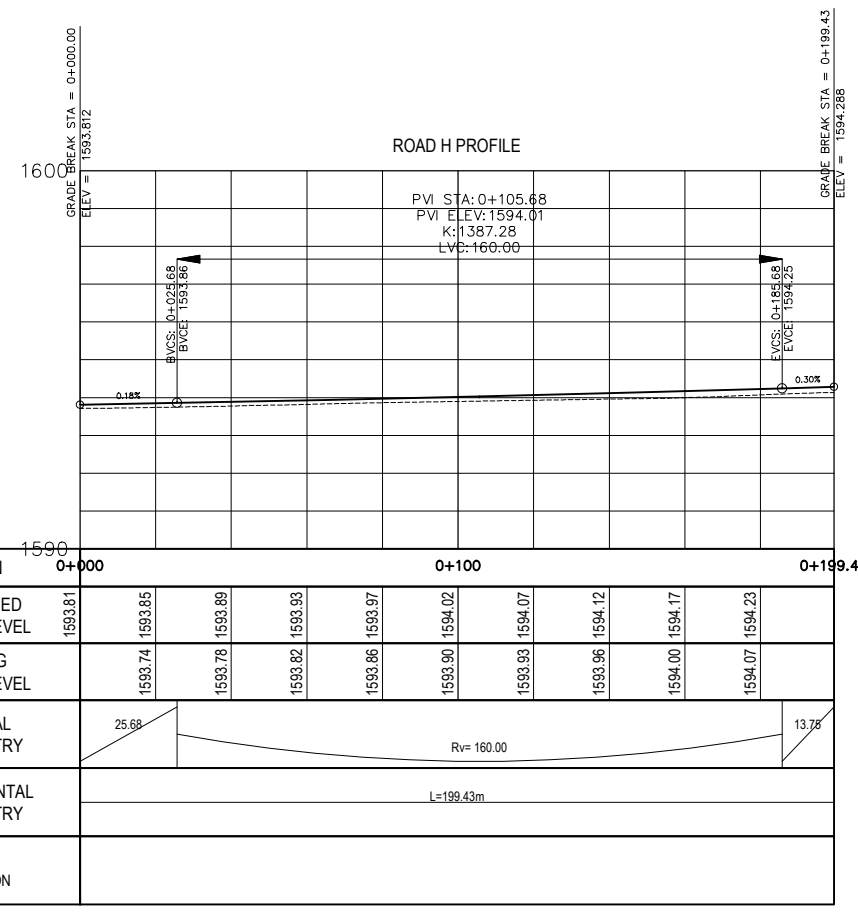
**CLIENT:**  
**KENYATTA NATIONAL HOSPITAL STAFF RETIREMENT BENEFIT SCHEME (2011)**  
 P.O BOX 20723-00200, NAIROBI.

**SCALES:**  
**PROJECT:**  
 PROPOSED HOUSING SCHEME ON PLOT LR NO. KAJIADO/KITENGELA/6242 IN KITENGELA

**SHEET CONTENTS:**  
 ROADS PROFILE ROAD A - ROAD G

DWG. No.: CIV/003  
 DATE: NOVEMBER 2022  
 SCALE: PROFILE 1:500  
 SHEET NO: 1 of 2





REVISIONS		
REV. NO.	DATE	DESCRIPTION

**CONSULTANTS:**

**EPOCH CONSULTING ENGINEERS**  
P.O.BOX 75193-00200,  
NAIROBI.

**CHECKED BY:** JNK  
**DESIGNED BY:** ENN

**CLIENT:**

**KENYATTA NATIONAL HOSPITAL STAFF  
RETIREMENT BENEFIT SCHEME (2011)  
P.O BOX 20723-002002, NAIROBI.**

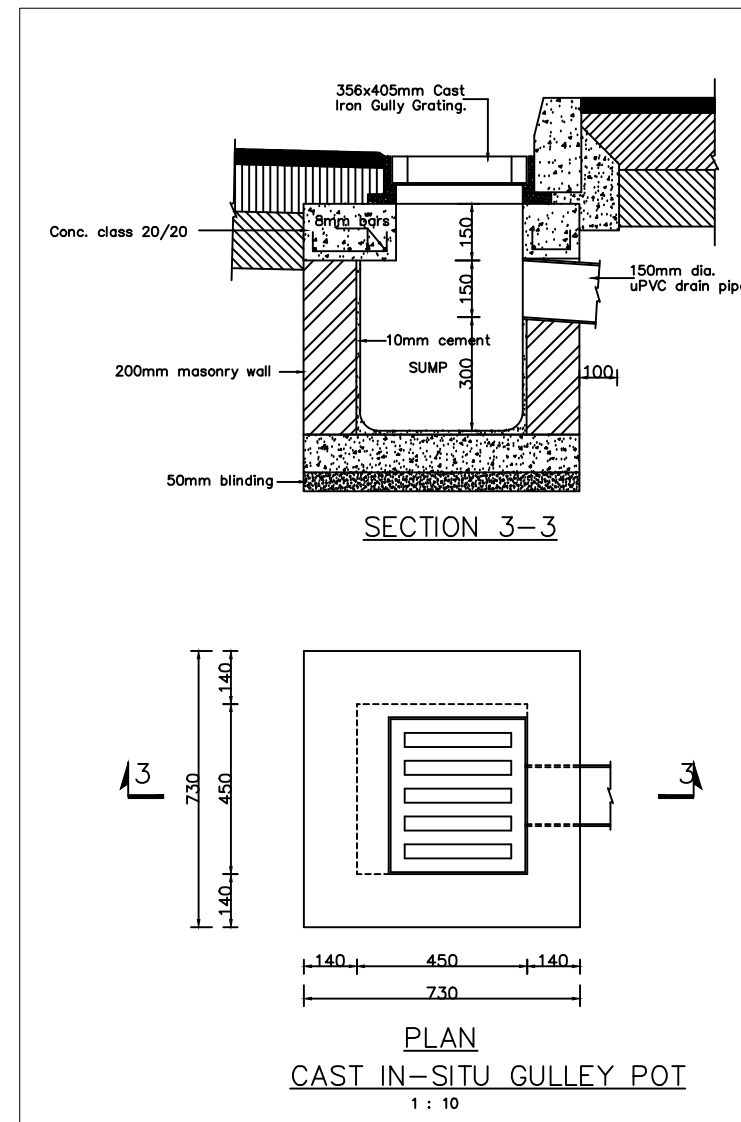
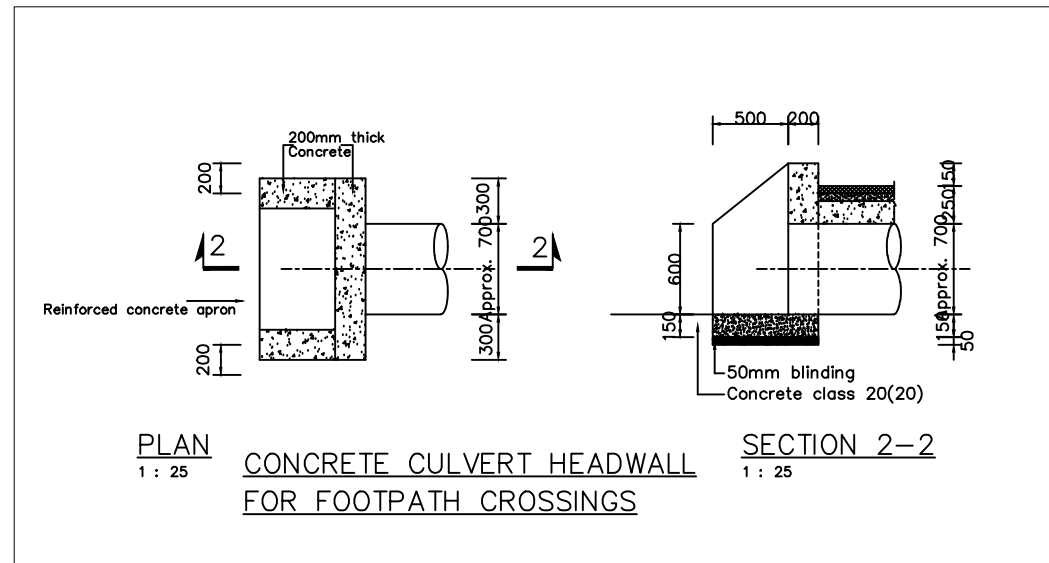
**SCALES:**

**PROJECT:**

**PROPOSED HOUSING SCHEME ON PLOT LR NO.  
KAJIADO/KITENGELA/6242 IN KITENGELA**

**SHEET CONTENTS:**

DWG. No.: CIV/004 DATE: 2022  
November 2022  
SCALE: PROFILE 1:500  
SHEET NO: 2 of 2




notes  
Figured dimensions to be used in preference to scaling of drawings. All dimensions to be checked by contractor on site before commencing work.

comments

no	date	revision	by

client  
Kenya National Hospital Staff Retirement Benefit Scheme (2011)  
P.O Box 20723-00202, NAIROBI

project  
PROPOSED HOUSING SCHEME ON PLOT LR NO. KAJIADO/KITENGELA/6242 IN KITENGELA

 P.O.BOX 75193-00200, NAIROBI.  
Civil & Structural Engineers

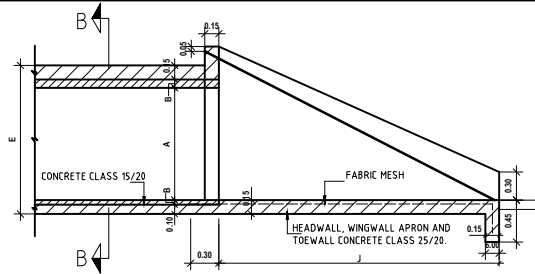
Architects      Planners

Quantity Surveyors

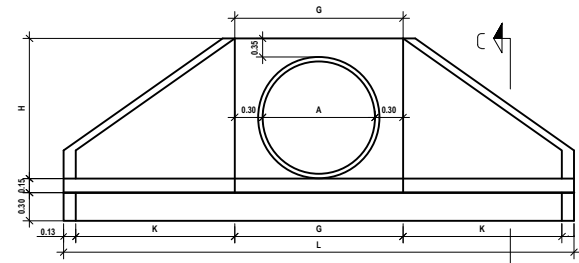
drawing title  
CAST IN SITU GULLY POTS AND PIPE CULVERT DETAILS

scale As shown	drawn ENN	date Nov. 2022
-------------------	--------------	-------------------

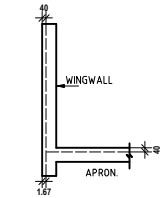
drwg.no.      CIV/005



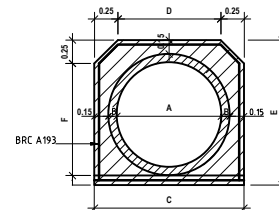
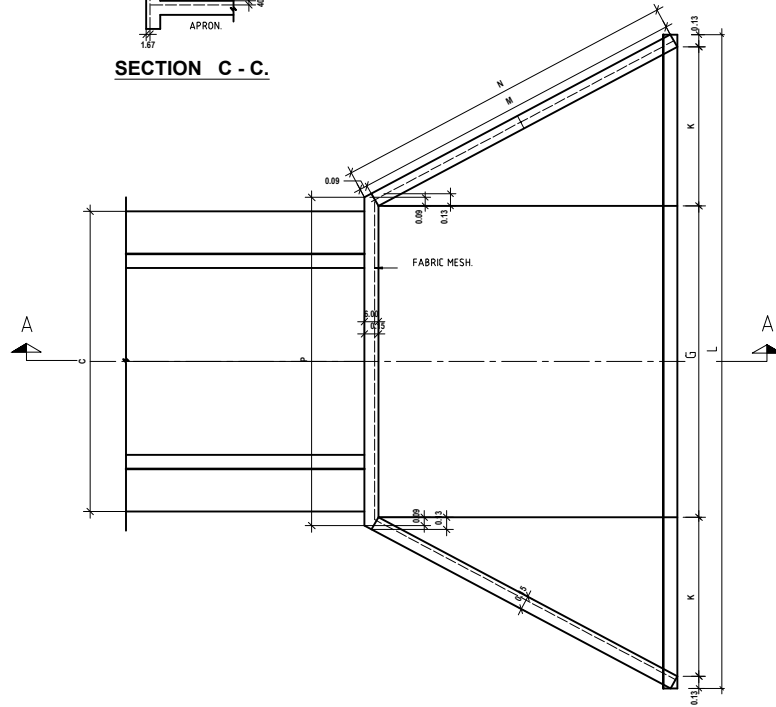
**SECTION A - A.**



**FRONT ELEVATION.**

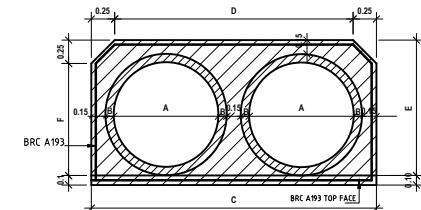


**SECTION C - C.**



**SECTION B - B.**

SEE NOTE 4



**SECTION B - B.**

SEE NOTE 4

CULVERT	A m	B m	C m	D m	E m	F m	G m	H m	J m	K m	L m	M m	N m	P m	CONCRETE CLASS 25/20 INLET AND OUTLET	CONCRETE CLASS 15/20 SURROUNDING & BEAM PER RUNNING METRE	A193 FABRIC MESH REINFORCEMENT m <sup>2</sup>
1x0.60m. DIA.	0.60	0.05	1.00	0.50	0.95	0.60	1.20	0.95	1.70	1.00	3.46	1.97	2.06	1.38	3.20	0.51	22.66
2x0.60m. DIA.	2x0.60	0.05	1.85	1.35	0.95	0.60	2.05	0.95	1.70	1.00	4.31	1.97	2.06	2.23	2.56	0.93	17.90
1x0.90m. DIA.	0.90	0.07	1.34	0.84	1.29	0.94	1.50	1.25	2.30	1.30	4.36	2.64	2.73	1.68	4.08	0.82	28.20
1x1.20m. DIA.	1.20	0.09	1.68	1.18	1.73	1.33	1.80	1.60	3.00	1.70	5.46	3.45	3.54	1.98	6.31	1.35	42.05
2x1.20m. DIA.	2x1.20	0.09	3.21	2.71	1.73	1.33	3.33	1.60	3.00	1.70	6.99	3.45	3.54	3.51	8.11	2.49	54.05
2x0.90m. DIA.	2x0.90	0.07	1.53	1.03	1.29	0.94	2.69	1.25	2.3	1.3	5.55	2.64	2.73	2.87	5.20	1.50	36.38

**NOTES.**

- A142 Fabric mesh reinforcement to B.S. 4483 to be placed as shown.
- Level and slope of the pipe shall be as instructed by the Engineer on site.
- All dimensions are in metres unless otherwise stated.
- 600mm culverts to be used only at intersections as instructed on site.
- Cover to BRC mesh to be 40mm.
- PCC pipes to be manufactured in compliance with Section 17 of Standard Specification for the Road and Bridge Construction - 1986.
- All excavations for foundation to be approved by the Engineer on site before commencement of concrete work for each foundation.

REVISIONS			CONSULTANTS:		CLIENT:		SCALES:		PROJECT:		DWG No.: CIV008			
REV/NO.	DATE	DESCRIPTION	<b>EPOCH CONSULTING ENGINEERS</b> P.O.BOX 75193-00200, NAIROBI.		<b>Kenya National Hospital Staff Retirement Benefit Scheme (2011)</b> P.O Box 20723-00202,NAIROBI				<b>PROPOSED HOUSING SCHEME ON PLOT LR NO. KAJIADO/KITENGELA/6242 IN KITENGELA</b>		DATE: November 2022			
											CHECKED BY: JNK			SCALE: 1:20.00m
											DESIGNED BY: ENN			SHEET CONTENTS:
														STANDARD PIPE CULVERT
														SHEET NO. 1 of 1