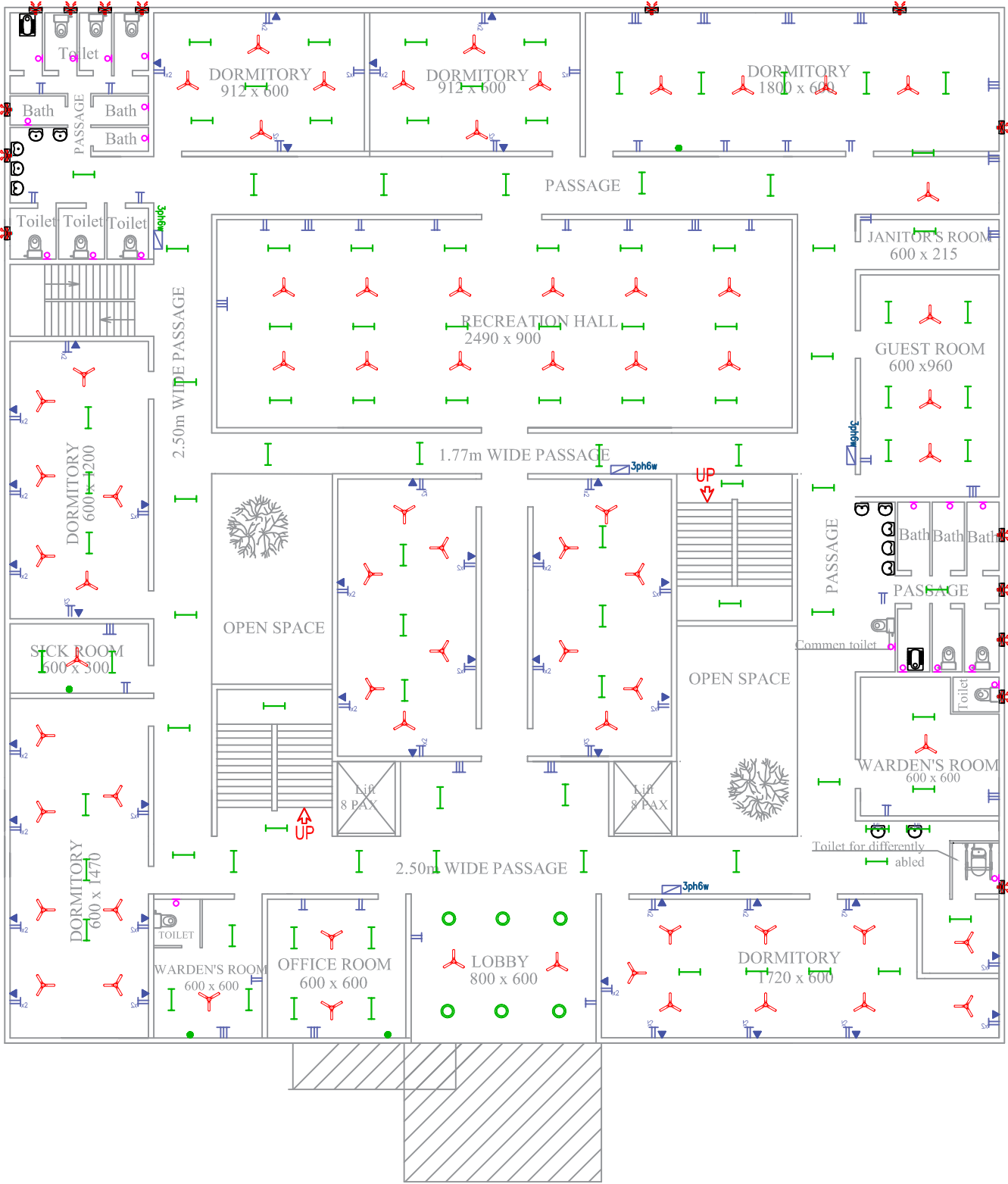


ELECTRICAL



LEGEND:

SL.NO	SYMBOL	DESCRIPTION	MOUNTING
1		6A Switch	Surface
2		6A Switch(UPS)	Surface
3		20W LED Batten	Surface
4		36W LED Batten	Surface
5		36W CRL	Recessed
6		36W Square 2x2	Recessed
7		Exhaust fan	Recessed
8		10W Bulkhead	Surface
9		Ceiling Fan	Ceiling
10		Tube light 20W	
11		6A Combined socket	
12		16A Socket	
13		Distribution board	
14		Batten	
15		Ceiling light	
16		2nos. 6A socket	
17		Street light	
18		AC socket	
19		Mirror light	
20		6A socket	
21		Data point	
22		Telephone point	
23		Light point	
24		Angle batten	

NOTES :

- ALL MEASUREMENTS ARE IN cm unless specified otherwise.
- This drawing should not be scaled.
- The measurements are to be checked on site before construction.



APPROVED BY -

CHECKED BY -

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME : UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED GENTS HOSTEL BLOCK
- SECOND FLOOR ELECTRICAL LAYOUT

DATE : 10/03/2025

SCALE : NTS

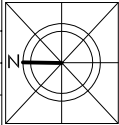
SHEET SIZE : A3

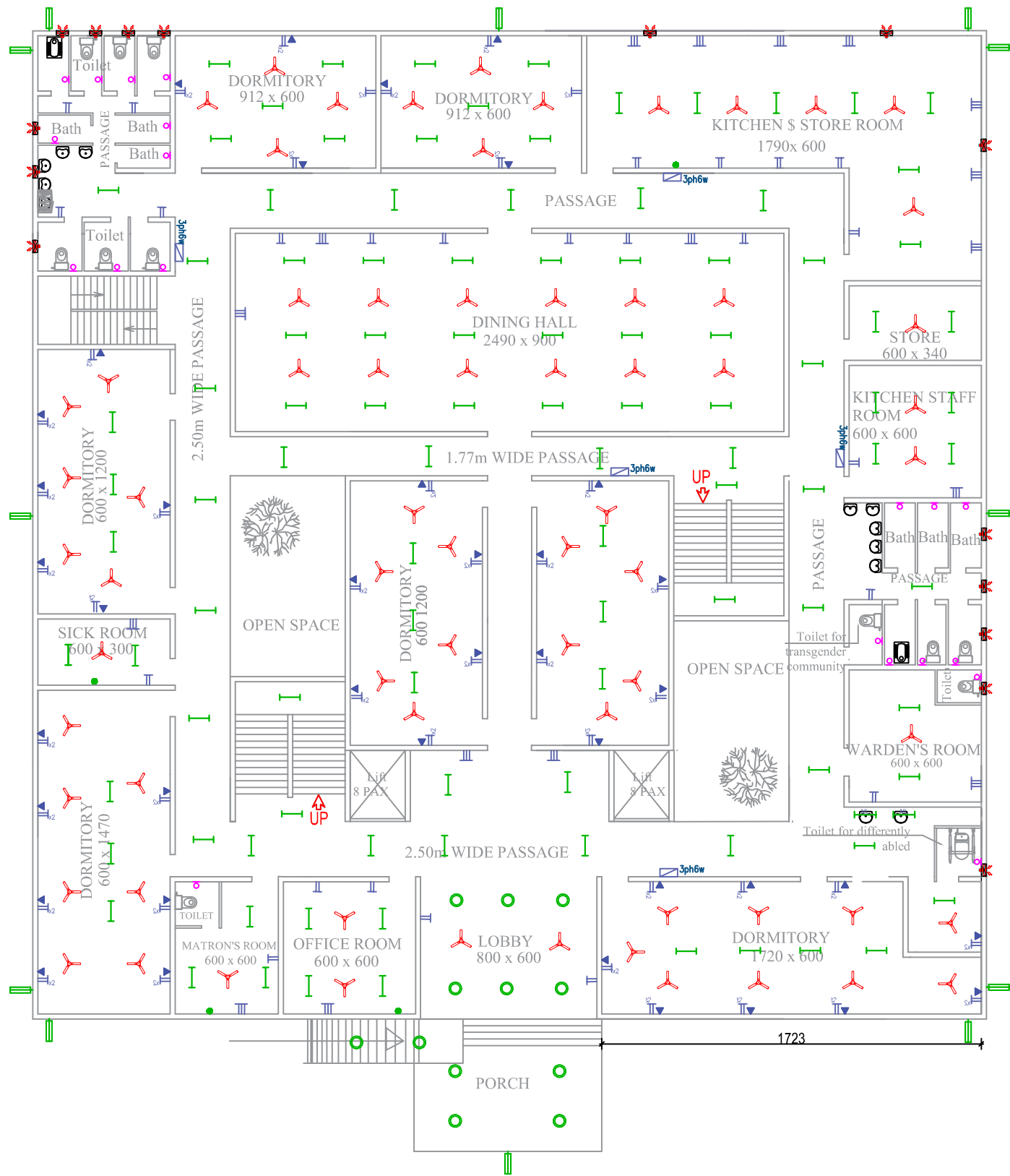
SHEET NO :

DRAWN BY :

DRAWING NO :

DRAWING STATUS :





LEGEND:

SL.NO	SYMBOL	DESCRIPTION	MOUNTING
1		6A Switch	Surface
2		6A Switch(UPS)	Surface
3		20W LED Batten	Surface
4		36W LED Batten	Surface
5		36W CRL	Recessed
6		36W Square 2x2	Recessed
7		Exhaust fan	Recessed
8		10W Bulkhead	Surface
9		Ceiling Fan	Ceiling
10		Tube light 20W	
11		6A Combined socket	
12		16A Socket	
13		Distribution board	
14		Batten	
15		Ceiling light	
16		2nos. 6A socket	
17		Street light	
18		AC socket	
19		Mirror light	
20		6A socket	
21		Data point	
22		Telephone point	
23		Light point	
24		Angle batten	

NOTES :
• ALL MEASUREMENTS ARE IN cm unless specified otherwise.
• This drawing should not be scaled.
• The measurements are to be checked on site before construction.



APPROVED BY -

CHECKED BY -

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME : UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED GENTS HOSTEL BLOCK
- GROUND FLOOR ELECTRICAL LAYOUT

DATE : 10/03/2025

SCALE : NTS

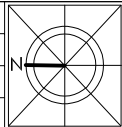
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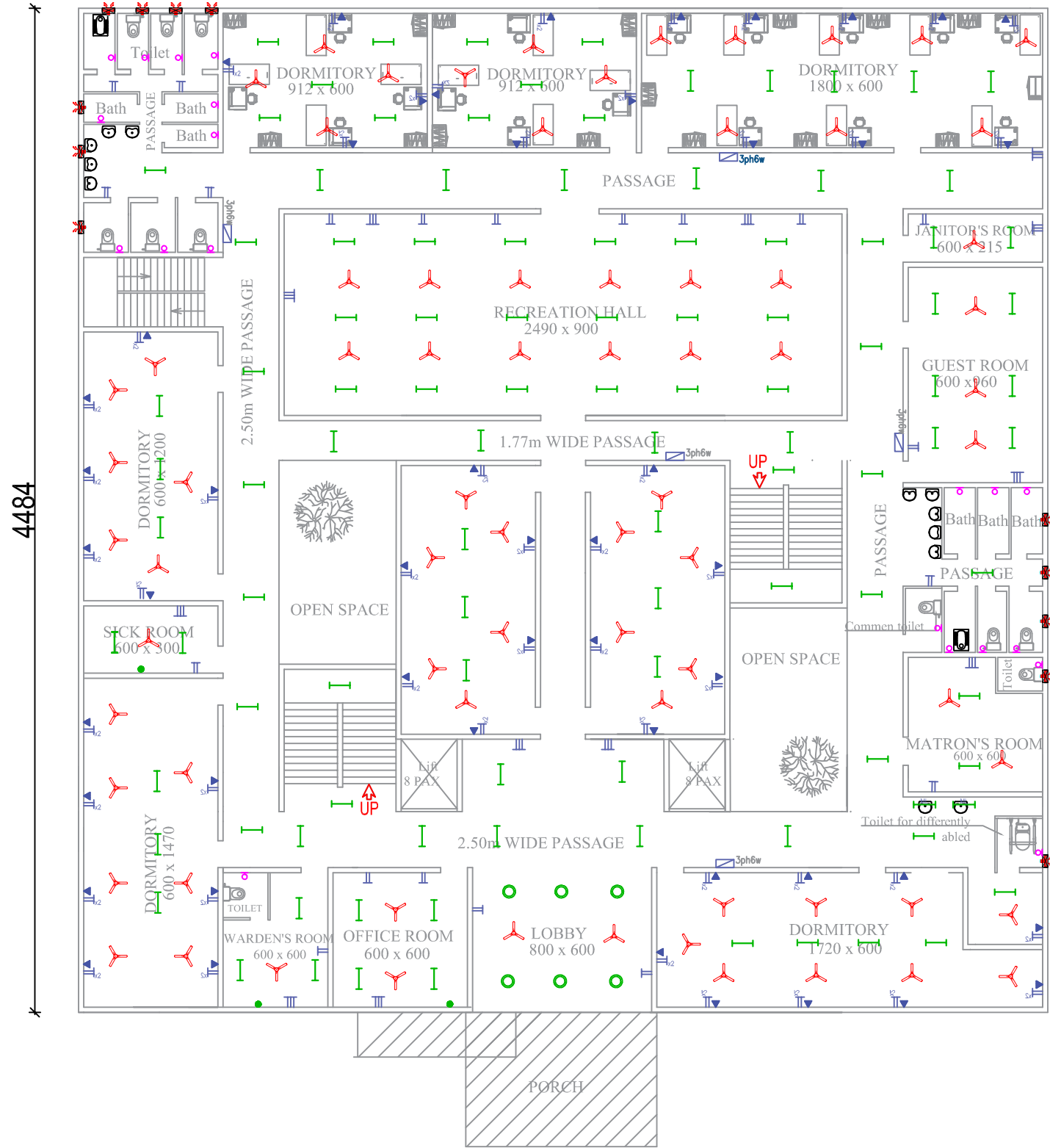
SHEET NO :

DRAWN BY :

DRAWING NO :

DRAWING STATUS :





LEGEND:

SL.NO	SYMBOL	DESCRIPTION	MOUNTING
1		6A Switch	Surface
2		6A Switch(UPS)	Surface
3		20W LED Batten	Surface
4		36W LED Batten	Surface
5		36W CRL	Recessed
6		36W Square 2x2	Recessed
7		Exhaust fan	Recessed
8		10W Bulkhead	Surface
9		Ceiling Fan	Ceiling
10		Tube light 20W	
11		6A Combined socket	
12		16A Socket	
13		Distribution board	
14		Batten	
15		Ceiling light	
16		2nos. 6A socket	
17		Street light	
18		AC socket	
19		Mirror light	
20		6A socket	
21		Data point	
22		Telephone point	
23		Light point	
24		Angle batten	

NOTES :
• ALL MEASUREMENTS ARE IN cm unless specified otherwise.
• This drawing should not be scaled.
• The measurements are to be checked on site before construction.



APPROVED BY -

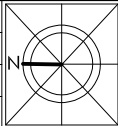
CHECKED BY -

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME : UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED GENTS HOSTEL BLOCK
- FIRST FLOOR ELECTRICAL LAYOUT

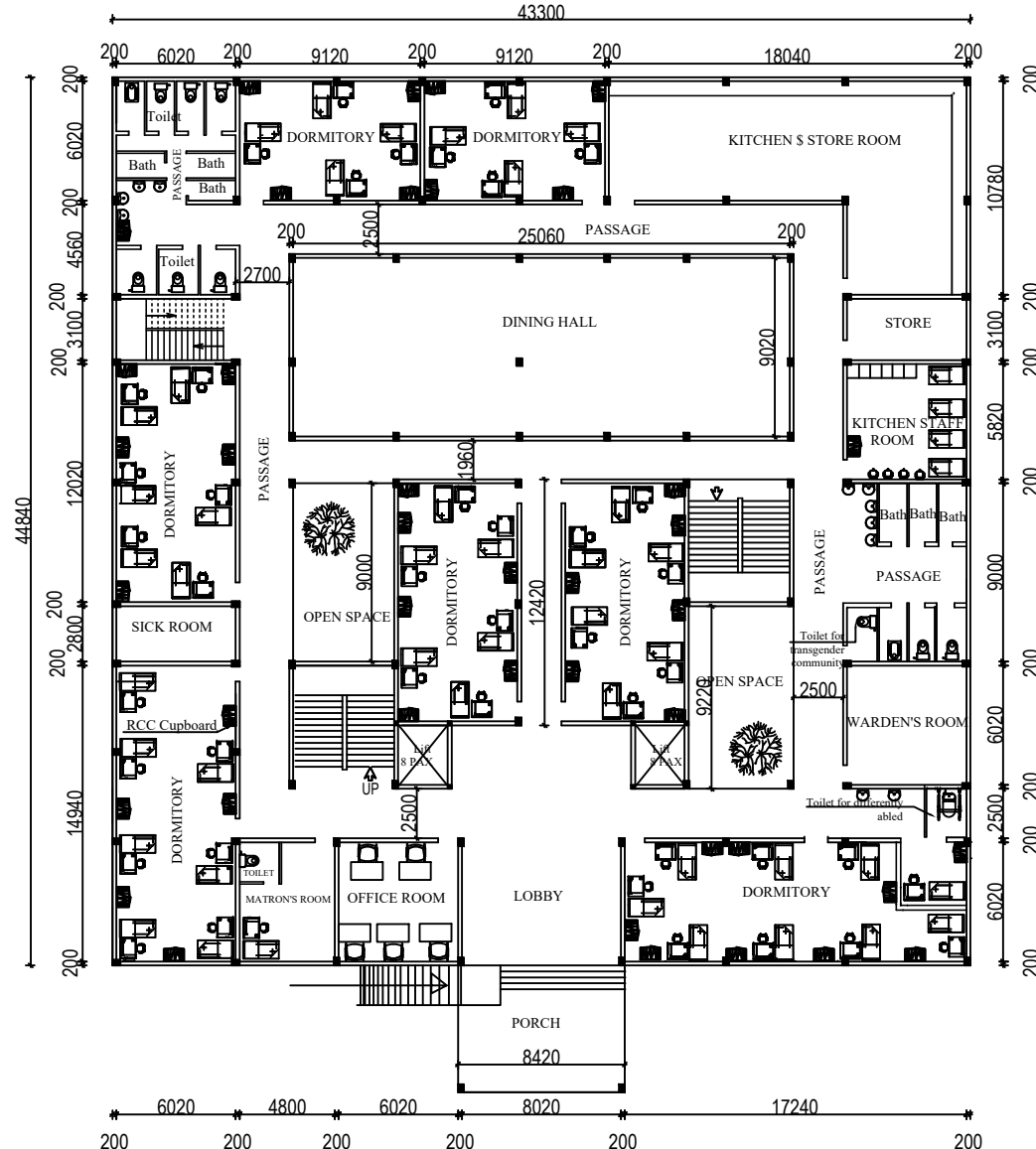
DATE : 10/03/2025
SCALE : NTS
SHEET SIZE : A3
SHEET NO :
DRAWN BY :
DRAWING NO :
DRAWING STATUS :



STRUCTURAL

1. STRUCTURAL DRAWINGS OF THE PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS

1.1 ARCHITECTURAL PLAN OF GROUND FLOOR



PROJECT

PROPOSED G+2 GENTS HOSTEL.
STRUCTURAL DRAWING

DELINEATION

ARCHITECTURAL LAYOUT
OF GROUND FLOOR

CLIENT

M/S WAPCOS LTD

LOCATION

KARIYAVATTOM CAMPUS
UNIVERSITY OF KERALA,
THIRUVANANTHAPURAM

AREA : (sq.m)

Ground Floor : 1684.21 Sqm
First Floor : 1684.21 Sqm
Second Floor : 1684.21 Sqm
Total : 5052.63 Sqm

PROJECT NUMBER

4

GENERAL NOTE

1. Do not Scale Dimensions govern in drawings
2. All Dimensions are in Millimeter unless noted otherwise.
3. All dimensions shall be verified at site before proceeding the work.
4. All Levels are in Meters unless noted otherwise.

SIGNATURE

CLIENT CONSULTANT

STRUCTURAL CONSULTANT

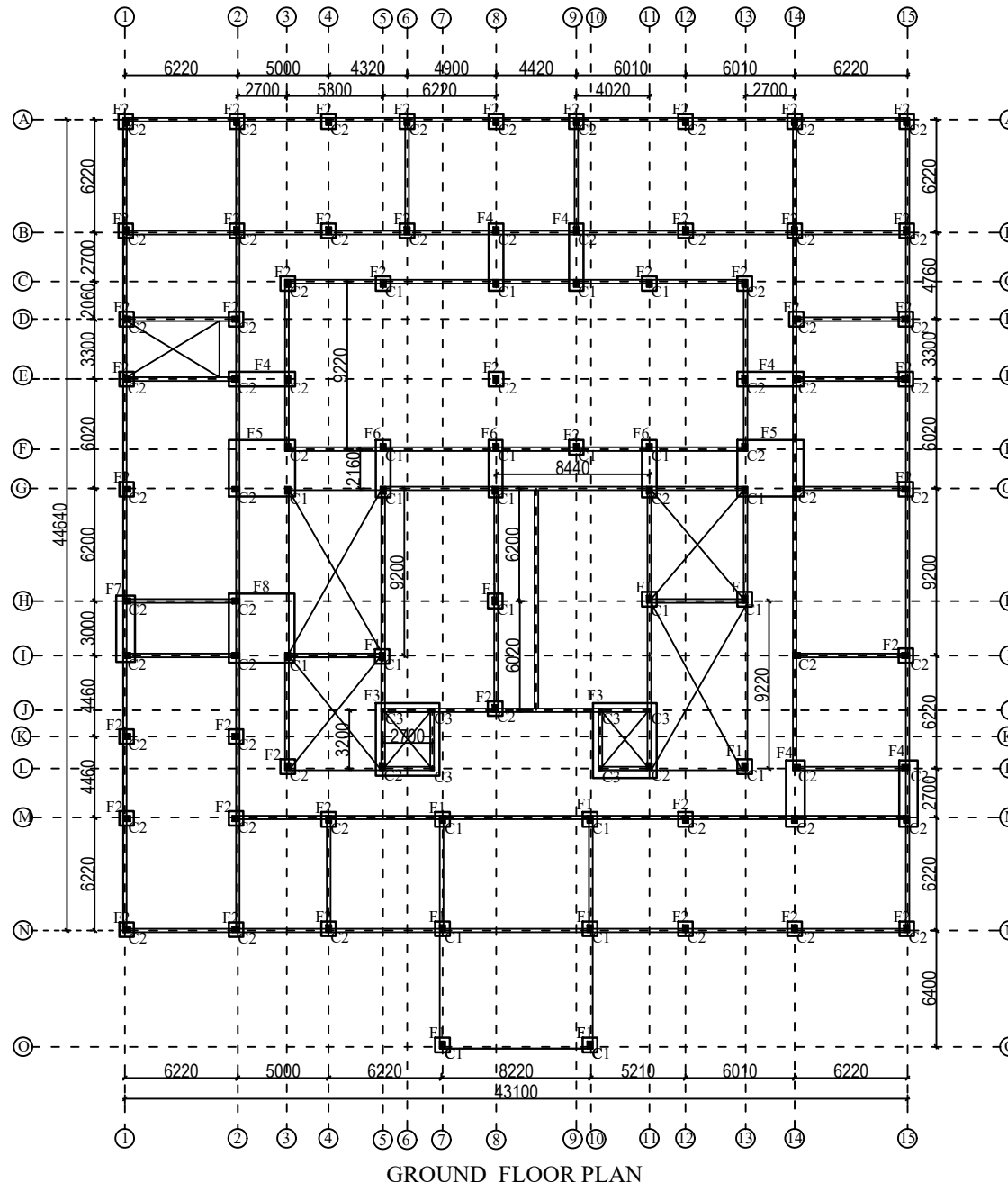
Y-Shakh
Project Management &
Consultancy Services

Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

Ref.No:	DATE :	DESIGNED:	DRAWN:	PLATE NO: 01
YSCASE,194/2025	28- 02- 2025	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCALE-1:100,All Dimensions are in Millimeter

2. STRUCTURAL LAYOUT PLAN OF SUB-STRUCTURE

2.1 FOUNDATION DETAILS



PROJECT

PROPOSED G+2 GENTS HOSTEL .
STRUCTURAL DRAWING

DELINEATION

STRUCTURAL LAYOUT PLAN
OF SUB-STRUCTURE
FOUNDATION

CLIENT

M/S WAPCOS LTD

LOCATION

KARIYAVATTOM CAMPUS
UNIVERSITY OF KERALA,
THIRUVANANTHAPURAM

AREA : (sq.m)

Ground Floor : 1684.21 Sqm
First Floor : 1684.21 Sqm
Second Floor : 1684.21 Sqm
Total : 5052.63 Sqm

PROJECT NUMBER

4

GENERAL NOTE

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2. All Dimensions are in Millimeter unless noted otherwise.
3. All dimensions shall be verified at site before proceeding the work.
4. All Levels are in Meters unless noted otherwise.

SIGNATURE

CLIENT

CONSULTANT

STRUCTURAL CONSULTANT

Y-Shakh
Project Management &
Consultancy Services

Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

Ref.No:

YSCASE,194/2025

DATE :

28- 02- 2025

DESIGNED:

Dr M.M KHAN. Ph.D

DRAWN:

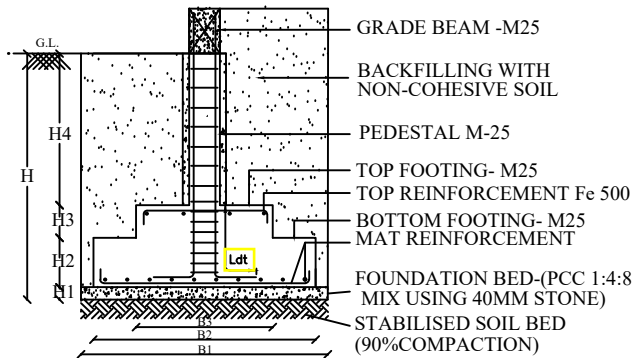
JASMINE.TOMY

PLATE NO: 02

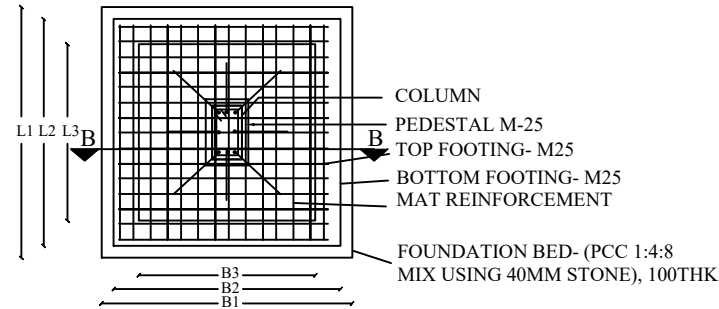
SCALE-1:100,All Dimensions are in Millimeter

3. STRUCTURAL DETAILS OF FOUNDATION

ISOLATED STEPPED FOOTING -TYPICAL DESIGN



MAT REINFORCEMENT DETAILS



SECTIONAL PLAN

SPECIAL NOTES

1. THE MINIMUM DEPTH OF FOUNDATION :2.0M BGL
2. S.B.C OF THE SOIL ASSUMED : 120 kN/M²
3. GRADE OF CONCRETE : M25
4. GRADE OF STEEL : Fe500
5. CLEAR COVER : 50mm

FOUNDATION DETAILS OF PROPOSED PROJECT

SL. NO	GROUP	FOUNDATION TRENCH			PCC BED			BOTTOM FOOTING			TOP FOOTING			REINFORCEMENT DETAILS			
		L1	B1	H	L1	B1	H1	L2	B2	H2	L3	B3	H3	MAT RODS	TOP RODS	DEV LENGTH Ld	LAP LENGTH Ls
1.	F1	3000	3000	2000	3000	3000	100	2700	2700	300	2500	2500	350	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10
2.	F2	2500	2500	2000	2500	2500	100	2200	2200	250	1800	1800	350	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10
3.	F3	5400	4900	2000	5400	4900	100	5200	4700	300	5000	4500	300	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10
4.	F4	5700	3000	2000	5700	3000	100	5500	2800	300	5100	2600	350	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10
5.	F5	4900	5500	2000	4900	5500	100	4700	5300	300	4200	5000	350	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10
6.	F6	5200	3000	2000	5200	3000	100	5000	2800	300	4700	2500	350	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10
7.	F7	5500	2500	2000	5500	2500	100	5300	2200	300	5000	1800	350	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10
8.	F8	5750	5450	2000	5750	5450	100	5600	5300	300	5200	5000	300	Y12 @ 150 C/C BOTH WAYS	Y10 @ 250 C/C BOTH WAYS	600 mm for Y12 & 500 mm for Y10	600 mm for Y12 & 500 mm for Y10

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER

CLIENT

AREA : (sq.m)

DESIGNED:

DRAWN:

DELINEATION

4

M/S WAPCOS LTD

Ground Floor : 1684.21 Sqm
First Floor : 1684.21 Sqm
Second Floor : 1684.21 Sqm
Total : 5052.63 Sqm

Dr M.M KHAN. Ph.D

JASMINE.TOMY

STRUCTURAL
DETAILS OF
FOUNDATION

Y-Shakh
Project Management &
Consultancy Services
Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

Ref.No: YSCASE,194/2025

DATE : 03- 03- 2025

DRAWING ARE NOT IN SCALE

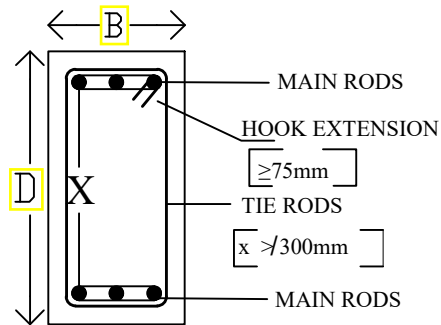
ALL DIMENSIONS ARE IN MM

PLATE NO: 03

4. STRUCTURAL DETAILS OF COLUMN

4.2 INDEX

4.1 C.S DETAILS OF COLUMNS



NOTE	
GRADE OF CONCRETE :	M25
GRADE OF STEEL :	Fe500
CLEAR COVER :	40 mm

- Y = Diameter of reinforcement rods HYSD
 Ld = Development Length of rods 50d
 Ls = Splices/Lap length at joints of reinforcement rods 50 d for tension & 40 d for compression zone
 L0 = Confining region for ductility for seismic resistance
 H = Height of Column Between support faces
 H/4 = Region where joints of rods are to be avoided
 H/2 = Region where joints allowable but shall be restricted to maximum of 50 % of joints at a particular section
 S = Spacing of stirrups in region free from L0 & Ls
 S0 = Spacing of stirrups at L0 region
 Ss = Spacing of stirrups at Ls region
 X = Space between 2 adjacent main rods in column where shall not exceed 300 mm

4.3 STRUCTURAL DETAILS OF COLUMNS OF THE PROPOSED PROJECT

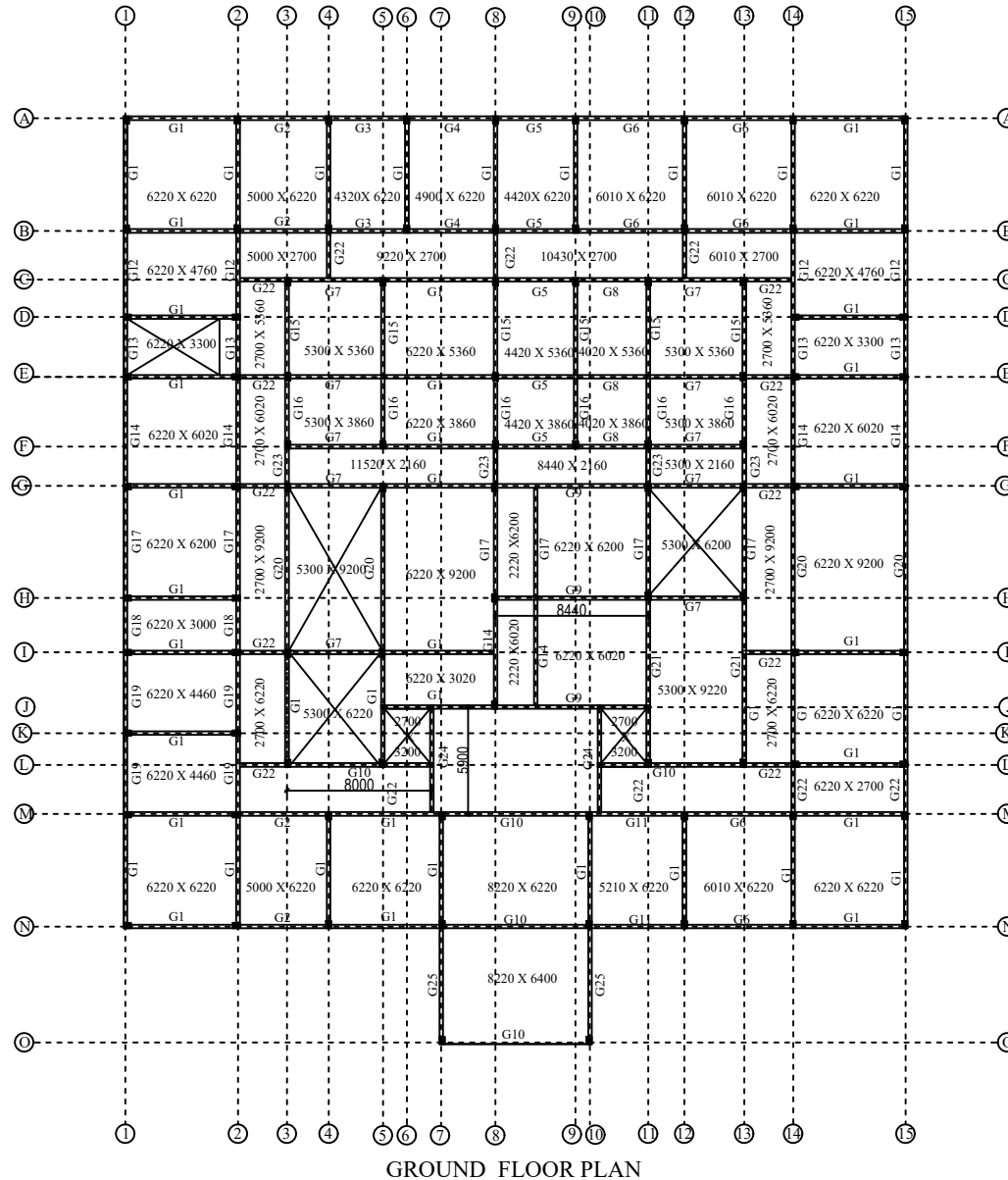
GROUP	C.S DIMENSION B X D	REINFORCEMENT		CRITICAL ZONES			SPACING OF TIES AT CRITICAL ZONE		CROSS SECTION DETAILS	TIE ARRANGEMENT
		MAIN	TIES	Dev: Length Ld (mm)	Lap length Ls (mm)	Confined Length L0 (mm)	Ss(mm)	SO(mm)		
C1	300 x 600	4 Y 20 + 8 Y 16	Y 8 @ 150 C/C	1000 mm for Y 20 & 800 mm for Y 16	800 mm for Y 20 & 640 mm for Y 16	600 mm	Y8@ 100mm/ c/c	Y8@ 75mm/ c/c		4 Legged
C2	300 x 500	4 Y 20 + 4 Y 16	Y 8 @ 150 C/C	1000 mm for Y 20 & 800 mm for Y 16	800 mm for Y 20 & 640 mm for Y 16	500 mm	Y8@ 100mm/ c/c	Y8@ 75mm/ c/c		4 Legged
C3	300 x 300	4 Y 16 + 4 Y 12	Y 8 @ 150 C/C	800 mm for Y16 & 600 mm for Y12	640 mm for Y16 & 500 mm for Y12	450 mm	Y8@ 100mm/ c/c	Y8@ 75mm/ c/c		4 Legged

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION	 Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpmcs@gmail.com Ph: +91 9447126629 Office: 0474-2792700
4	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	STRUCTURAL DETAILS OF COLUMNS	
		Total : 5052.63 Sqm				
Ref.No: YSCASE,194/2025	DATE : 03- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 04	

5. STRUCTURAL LAYOUT PLAN OF GRADE BEAMS



5-1 DETAILS OF GRADE BEAM

GROUP	EFF.SPAN (IN MM)
G1	6220
G2	5000
G3	4320
G4	4900
G5	4420
G6	6010
G7	5300
G8	4020
G9	8440
G10	8000
G11	5210
G12	4760
G13	3300
G14	6020
G15	5360
G16	3860
G17	6200
G18	3000
G19	4460
G20	9200
G21	9220
G22	2700
G23	2160
G24	5900
G25	6400

PROJECT

PROPOSED G+2 GENTS HOSTEL .
STRUCTURAL DRAWING

DELINEATION

STRUCTURAL LAYOUT
PLAN OF GRADE BEAMS

CLIENT

M/S WAPCOS LTD

LOCATION

KARIYAVATTOM CAMPUS
UNIVERSITY OF KERALA,
THIRUVANANTHAPURAM

AREA : (sq.m)

Ground Floor : 1684.21 Sqm
First Floor : 1684.21 Sqm
Second Floor : 1684.21 Sqm
Total : 5052.63 Sqm

PROJECT NUMBER

4

GENERAL NOTE

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- 4.All Levels are in Meters unless noted otherwise.

SIGNATURE

CLIENT CONSULTANT

STRUCTURAL CONSULTANT

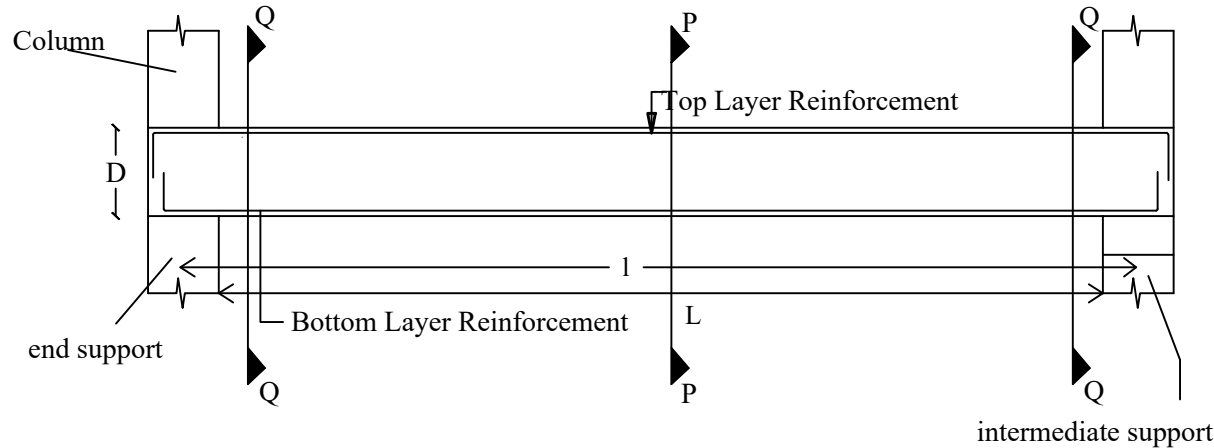

Y-Shakh
Project Management &
Consultancy Services

Y- Shakh, Nalanda Nagar-97
Thirumullavaram P.O. Kollam - 12
e-mail: yshakhpmcs@gmail.com
Ph: +91 9447126629
Office: 0474-2792700

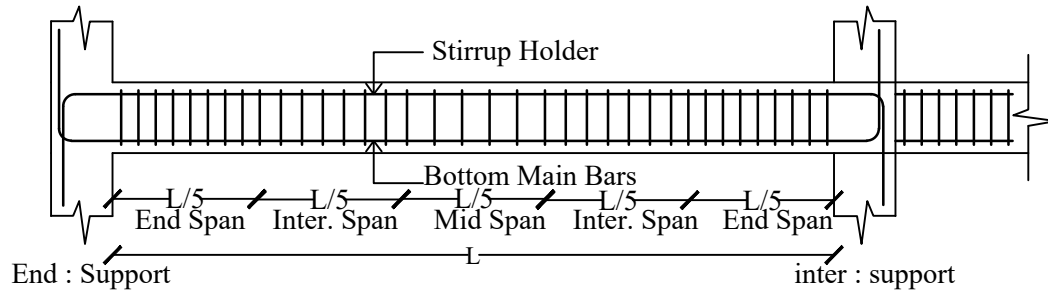
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YSCASE,194/2025	03- 03- 2025	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCALE-1:100,All Dimensions are in Millimeter

6. STRUCTURAL DETAILS OF GRADE BEAMS - TYPICAL DESIGN CONCEPT

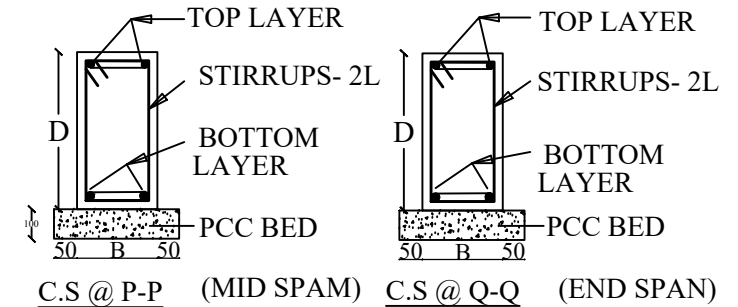
6.1 ARRANGEMENT OF MAIN BARS IN RAFT SLAB BEAMS



6.2 ARRANGEMENT OF STIRRUPS IN RAFT SLAB BEAMS



6.3 CROSS-SECTIONAL DETAILS



6.4 INDEX

L = CLEAR SPAN
 l = EFFECTIVE SPAN
 D = DEPTH OF BEAM
 B = BREADTH OF BEAM
 GRADE OF CONCRETE : M25
 GRADE OF STEEL : Fe500
 CLEAR COVER : 25mm

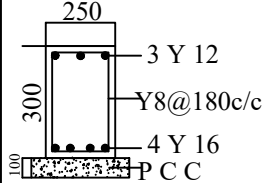
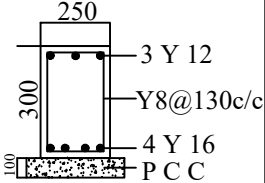
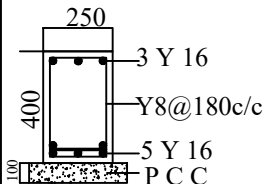
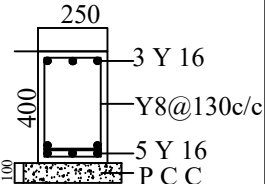
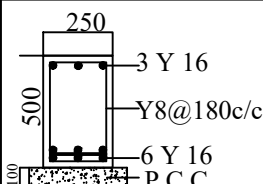
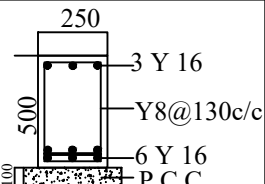
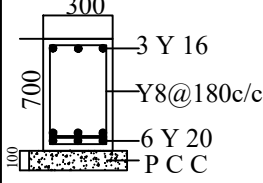
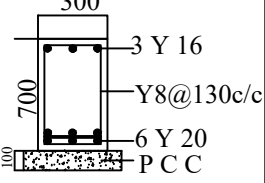
PROJECT :PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
4	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	STRUCTURAL DETAILS OF GRADE BEAMS
Ref.No: YSCASE,194/2025	DATE : 03- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 06

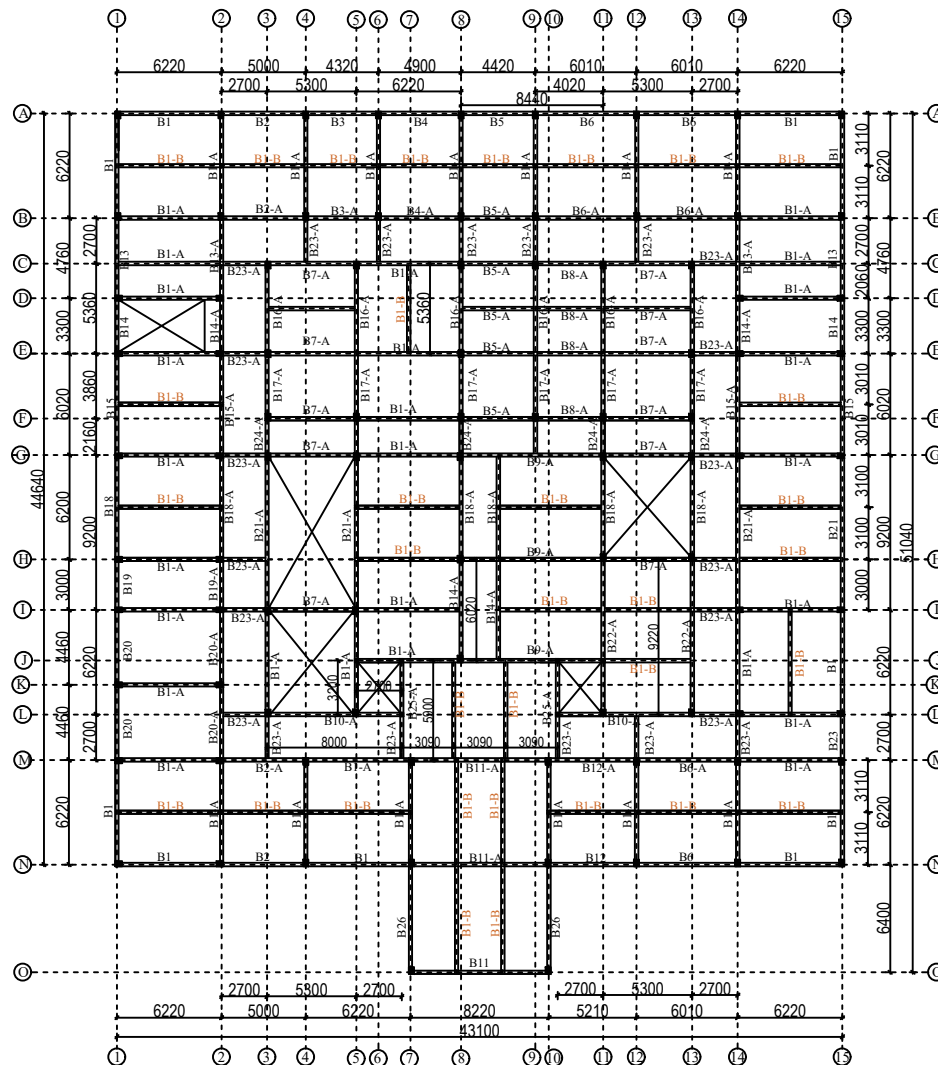
Y-Shakh
Project Management & Consultancy Services
 Y- Shakh, Nalanda Nagar-97
 Thirumullavaram P.O. Kollam - 12
 e-mail: yshakhpmcs@gmail.com
 Ph: +91 9447126629
 Office: 0474-2792700

7 -SCHEDULE OF GRADE BEAMS OF THE PROPOSED PROJECT (C.S SIZE & REINFORCEMENT DETAILS)

GROUP	CLEAR SPAN L	C.S DIMENSION BXD	REINFORCEMENT DETAILS			CRITICAL ZONES			TYPICAL SECTION	
			BOTTOM MAIN BARS	TOP MAIN BARS	STIRRUP (GENERAL)	LAP Ls	DEV: Ld	CONFINED L0	MID SPAN SECTION CS @ P-P	END SPAN SECTION CS @ Q-Q
G13 G16 G18 G22 G23	2160 to 3860	250 x 300	4 Y 16	3 Y 12	Y8@130 to 180 c/c	800mm for Y 16 600mm for Y12	800mm for Y 16 600mm for Y12	600mm		
G2 G3 G4 G5 G7 G8 G11 G12 G15 G19	4020 to 5360	250 x 400	5 Y 16	3 Y 16	Y8@130 to 180 c/c	800mm for Y 16	800mm for Y 16	800mm		
G1 G6 G14 G17 G24 G25	5900 to 6400	250 x 500	6 Y 16	3 Y 16	Y8@130 to 180 c/c	800mm for Y 16	800mm for Y 16	1000mm		
G9 G10 G20 G21	8000 to 9200	300 x 700	6 Y 20	3 Y 16	Y8@130 to 180 c/c	1000mm for Y 20 800mm for Y 16	1000mm for Y 20 800mm for Y 16	1500mm		

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING							STRUCTURAL CONSULTANT
PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION	 Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpmcs@gmail.com Ph: +91 9447126629 Office: 0474-2792700	
4	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF GRADE BEAMS		
Ref.No: YSCASE,194/2025	DATE : 03- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 07		

8.STRUCTURAL LAYOUT PLAN OF SUPERSTRUCTURE- (ROOF BEAMS - GROUND FLOOR)



ROOF BEAM DETAILS

R.C.C	STEEL	COVER	STRIPPING TIME	CURING
M-25	Fe-500	20 mm	Roof beam - 14 Days	7 DAYS

SPECIAL NOTES:

1 . BEAMS HAVE BEEN DESIGNED INDIVIDUALLY BASED ON THEIR STRUCTURAL BEHAVIOUR AND DIFFERENT SECTION ARE PROVIDED FOR EACH BEAM. FOR PRACTICAL PURPOSE BIGGEST SECTION MAY BE PROVIDED FOR CONTINUOUS BEAMS .

DETAILS OF ROOF BEAM

Group	EFF: Span (In mm)
1. B1 L-Beam	6220
2. B2 L-Beam	5000
3. B3 L-Beam	4320
4. B4 L-Beam	4990
5. B5 L-Beam	4420
6. B6 L-Beam	6010
7. -	5300
8. -	4020
9. -	8440
10. -	8000
11. B11 L-Beam	8220
12. B12 L-Beam	5210
13. B13 L-Beam	4760
14. B14 L-Beam	3300
15. B15 L-Beam	6020
16. -	5360
17. -	3860
18. B18 L-Beam	6200
19. B19 L-Beam	3000
20. B20 L-Beam	4460
21. B21 L-Beam	9200
22. -	9220
23. B23 L-Beam	2700
24. -	2160
25. -	5900
26. B26 L-Beam	6400

PROJECT

PROPOSED G+2 GENTS HOSTEL .
STRUCTURAL DRAWING

DELINEATION

STRUCTURAL LAYOUT
PLAN OF ROOF BEAMS

CLIENT

M/S WAPCOS LTD

LOCATION

KARIYAVATTOM CAMPUS
UNIVERSITY OF KERALA,
THIRUVANANTHAPURAM

AREA : (sq.m)

Ground Floor : 1684.21 Sqm
First Floor : 1684.21 Sqm
Second Floor : 1684.21 Sqm
Total : 5052.63 Sqm

PROJECT NUMBER

4

GENERAL NOTE

1.Do not Scale Dimensions govern in drawings
2.All Dimensions are in Millimeter unless noted otherwise.
3.All dimensions shall be verified at site before proceeding the work.
4.All Levels are in Meters unless noted otherwise.

SIGNATURE

CLIENT CONSULTANT

STRUCTURAL CONSULTANT

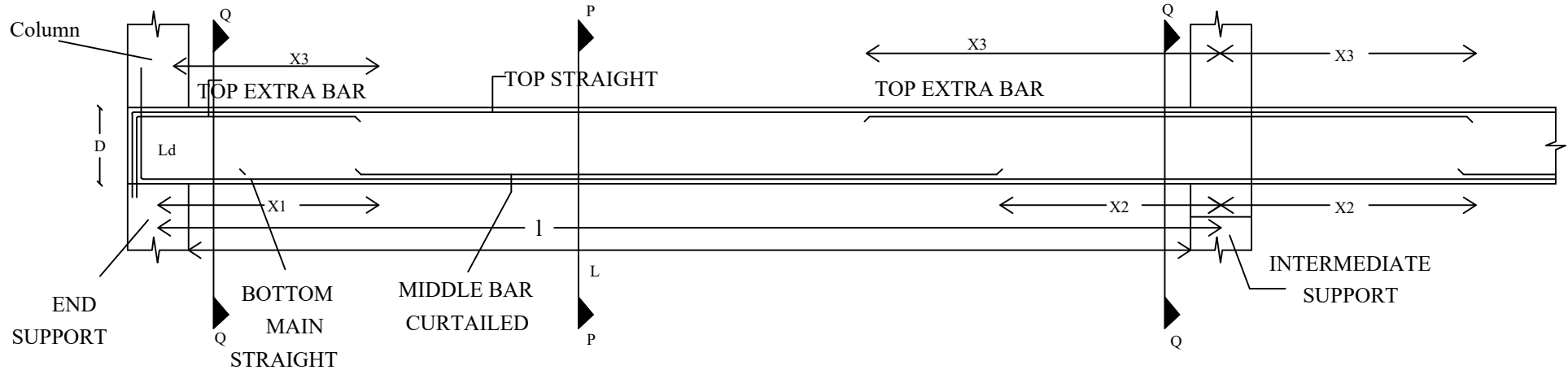
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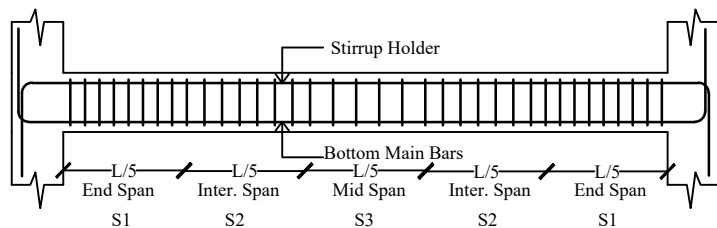
Ref.No:	DATE :	DESIGNED:	DRAWN:	PLATE NO: 08
YSCASE,194/2025	04- 03- 2025	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCALE-1:100,All Dimensions are in Millimeter

9. STRUCTURAL DETAILS OF ROOF BEAMS - TYPICAL DESIGN CONCEPT

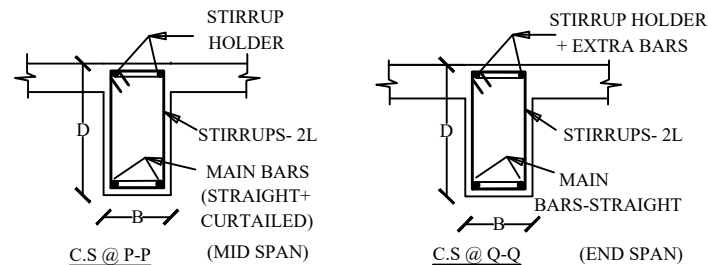
9-1 BEAMS - TYPICAL ARRANGEMENT OF REINFORCEMENTS IN BEAMS



9-2 ARRANGEMENT OF STIRRUPS IN BEAMS-TYPICAL



9-3. CROSS-SECTIONAL DETAIL



NOTE : For end beams the section shall be L- Beam as against T- Beam

9.4 INDEX

L = CLEAR SPAN OF BEAM
 1 = EFFECTIVE SPAN OF BEAM
 X1 = CURTAILED DISTANCE FROM END SUPPORT
 X2 = CURTAILED DISTANCE FROM INTERMEDIATE SUPPORT
 X3 = LENGTH OF EXTRA BARS AT SUPPORTS
 Ls = LAP LENGTH AT JOINTS
 Ld = DEVELOPMENT LENGTH
 L0 = SPECIAL CONFINED LENGTH FOR SEISMIC LOAD
 D = DEPTH OF BEAM
 B = BREADTH OF BEAMS
 GRADE OF CONCRETE : M25
 GRADE OF STEEL : Fe500
 CLEAR COVER : 25mm

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINATION
4	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	REINFORCEMENT DETAILS OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 09

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**10-A. SCHEDULE OF ROOF BEAMS OF THE PROPOSED PROJECT
(C.S & REINFORCEMENT DETAILS OF GROUND FLOOR)**

T - BEAM

GROUP	CLEAR SPAN L	C.S SIZE B X D	REINFORCEMENT DETAILS					CRITICAL ZONE			C.S @ P.P MID SPAN	C.S @ Q.Q END SPAN
			BOTTOM MIDDLE STRAIGHT	BOTTOM MIDDLE CURT:	TOP STRT: STIRRUP HOLDER	TOP EXTRA	STIRRUPS	LAPS Ls	DEVE: LENGTH Ld	CONFINED L0		
B14-A B17-A B19-A B23-A B24-A	2160 to 3860	250 x 300	2 Y 16	2 Y 16	2 Y 12	1 Y 12	Y8@ 130 to 180 C/C	800 mm for Y 16 & 600 mm for Y 12	800 mm for Y 16 & 600 mm for Y 12	600mm		
B2-A B3-A B4-A B5-A B7-A B8-A B12-A B13-A B16-A B20-A	4020 to 5360	250 x 400	3 Y 16	2 Y 16	2 Y 16	1 Y 16	Y8@ 130 TO 180 C/C	800 mm for Y 16 & 600 mm for Y 12	800 mm for Y 16 & 600 mm for Y 12	800mm		
B1-A B6-A B15-A B18-A B25-A	5900 to 6400	250 x 500	3 Y 16	3 Y 16	2 Y 16	2 Y 16	Y8@ 130 TO 180 C/C	800 mm for Y 16	800 mm for Y 16	1000mm		
B9-A B10-A B11-A B21-A B22-A	8000 to 9220	300 x 700	4 Y 20	2 Y 20	2 Y 16	2 Y 16	Y8@ 130 TO 180 C/C	800 mm for Y 16 & 1000 mm for Y 20	800 mm for Y 16 & 1000 mm for Y 20	1500mm		
B1-B	5900 & 6220	200 x 400	2 Y 16	2 Y 16	2 Y 12	1 Y 12	Y8@ 130 TO 180 C/C	800 mm for Y 16 & 600 mm for Y 12	800 mm for Y 16 & 600 mm for Y 12	800mm		

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

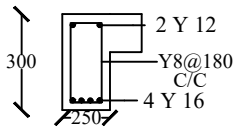
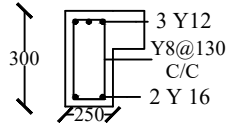
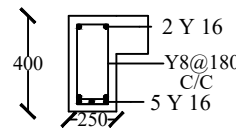
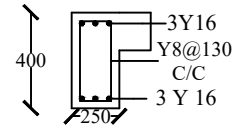
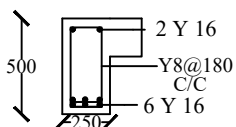
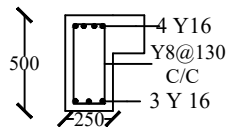
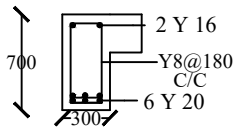
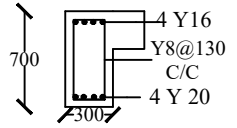
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PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
4	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 10


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10-B. SCHEDULE OF ROOF BEAMS OF THE PROPOSED PROJECT
(C.S & REINFORCEMENT DETAILS OF GROUND FLOOR)

L - BEAM

GROUP	CLEAR SPAN L	C.S SIZE B X D	REINFORCEMENT DETAILS					CRITICAL ZONE			C.S @ P.P MID SPAN	C.S @ Q.Q END SPAN
			BOTTOM MIDDLE STRAIGHT	BOTTOM MIDDLE CURT:	TOP STRT: STIRRUP HOLDER	TOP EXTRA	STIRRUPS	LAPS Ls	DEVE: LENGTH Ld	CONFINED L0		
B14 B19 B23	2160 to 3860	250 x 300	2 Y 16	2 Y 16	2 Y 12	1 Y 12	Y8@ 130 to 180 C/C	800 mm for Y 16 & 600 mm for Y 12	800 mm for Y 16 & 600 mm for Y 12	600mm		
B2 B3 B4 B5 B12 B13 B20	4020 to 5360	250 x 400	3 Y 16	2 Y 16	2 Y 16	1 Y 16	Y8@ 130 TO 180 C/C	800 mm for Y 16 & 600 mm for Y 12	800 mm for Y 16 & 600 mm for Y 12	800mm		
B1 B6 B15 B18 B26	5900 to 6400	250 x 500	3 Y 16	3 Y 16	2 Y 16	2 Y 16	Y8@ 130 TO 180 C/C	800 mm for Y 16	800 mm for Y 16	1000mm		
B11 B21	8000 to 9220	300 x 700	4 Y 20	2 Y 20	2 Y 16	2 Y 16	Y8@ 130 TO 180 C/C	800 mm for Y 16 & 1000 mm for Y 20	800 mm for Y 16 & 1000 mm for Y 20	1500mm		

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
4	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 11


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11-A. STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

GROUP	C.S SIZE BXD	SPAN		CURTAILMENT DETAILS OF MAIN BARS			STIRRUPS SPACING			STIRRUPS AT CRITICAL ZONE	
		CLEAR	EFFECTIVE	FROM END SUPPORT X1	FROM INT: SUPPORT X2	EXTRA BARS X3	END SPAN S1	INT: SPAN S2	MID SPAN S3	LAP ZONE Ss	CONFINING ZONE S0
B1,B1A	250 X 500	6020	6220	620	940	1500	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B2, B2A	250 X 400	4800	5000	500	750	1200	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B3, B3A	250 X 400	4120	4320	430	650	1030	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B4, B4A	250 X 400	4790	4990	500	750	1200	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B5, B5A	250 X 400	4220	4420	450	670	1060	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 12



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11-B. STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

GROUP	C.S SIZE BXD	SPAN		CURTAILMENT DETAILS OF MAIN BARS			STIRRUPS SPACING			STIRRUPS AT CRITICAL ZONE	
		CLEAR	EFFECTIVE	FROM END SUPPORT X1	FROM INT: SUPPORT X2	EXTRA BARS X3	END SPAN S1	INT: SPAN S2	MID SPAN S3	LAP ZONE Ss	CONFINING ZONE S0
B6,B6A	250 X 500	5810	6010	600	900	1450	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B7A	250 X 400	5100	5300	530	800	1280	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B8A	250 X 400	3820	4020	400	600	1000	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B9A	300 X 700	8240	8440	850	1270	2060	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B10-A	300 X 700	7800	8000	800	1200	1950	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE,TOMY	SCHEDULE OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 13


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11-B. STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

GROUP	C.S SIZE BXD	SPAN		CURTAILMENT DETAILS OF MAIN BARS			STIRRUPS SPACING			STIRRUPS AT CRITICAL ZONE	
		CLEAR	EFFECTIVE	FROM END SUPPORT X1	FROM INT: SUPPORT X2	EXTRA BARS X3	END SPAN S1	INT: SPAN S2	MID SPAN S3	LAP ZONE Ss	CONFINING ZONE S0
B11,B11A	300 X 700	8020	8220	830	1240	2000	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B12,B12A	250 X 400	5010	5210	520	780	1260	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B13,B13A	250 X 400	4560	4760	480	720	1140	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B14,B14A	250 X 300	3100	3300	330	500	780	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B15,B15-A	250 X 500	5820	6020	600	900	1460	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 14


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11-B. STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

GROUP	C.S SIZE BXD	SPAN		CURTAILMENT DETAILS OF MAIN BARS			STIRRUPS SPACING			STIRRUPS AT CRITICAL ZONE	
		CLEAR	EFFECTIVE	FROM END SUPPORT X1	FROM INT: SUPPORT X2	EXTRA BARS X3	END SPAN S1	INT: SPAN S2	MID SPAN S3	LAP ZONE Ss	CONFINING ZONE S0
B16A	250 X 400	5160	5360	540	800	1290	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B17A	250 X 300	3660	3860	390	580	920	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B18,B18A	250 X 500	6000	6200	620	930	1500	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B19,B19A	250 X 300	2800	3000	300	450	700	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B20,B20-A	250 X 400	4260	4460	450	670	1070	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

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11-B. STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

GROUP	C.S SIZE BXD	SPAN		CURTAILMENT DETAILS OF MAIN BARS			STIRRUPS SPACING			STIRRUPS AT CRITICAL ZONE	
		CLEAR	EFFECTIVE	FROM END SUPPORT X1	FROM INT: SUPPORT X2	EXTRA BARS X3	END SPAN S1	INT: SPAN S2	MID SPAN S3	LAP ZONE Ss	CONFINING ZONE S0
B21,B21A	300 X 700	9000	9200	920	1380	2250	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B22A	300 X 700	9020	9220	920	1380	2260	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B23,B23A	250 X 300	—	2700	—	—	—	—	—	—	—	—
B24A	250 X 300	—	2160	—	—	—	—	—	—	—	—
B25-A	250 X 500	5700	5900	590	890	1430	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C
B26	250 X 500	6200	6400	640	960	1550	Y8@ 130 mm C/C	Y8@ 160 mm C/C	Y8@ 180 mm C/C	Y8@ 100 mm C/C	Y8@ 80 mm C/C

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

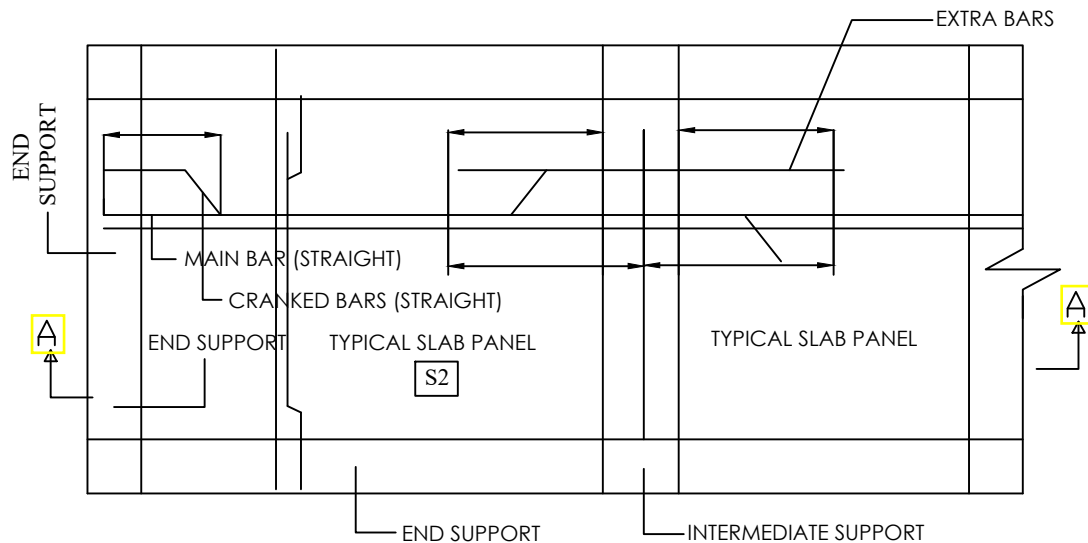
STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF BEAMS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 16

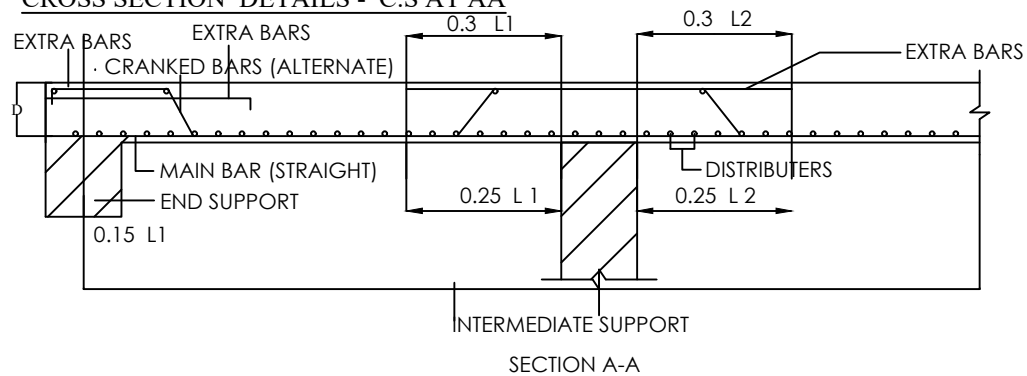

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Office: 0474-2792700

12 . STRUCTURAL DETAILS OF ROOF SLABS

12.1 STRUCTURAL DETAILS OF TWO WAY SLAB-TYPICAL



12.2 CROSS SECTION DETAILS - C.S AT AA



12.3 DESIGN DETAILS OF ROOF SLAB OF PROPOSED PROJECT

- | | |
|------------------------------|--|
| 1. THICKNESS OF SLAB | - 130 MM |
| 2. DESIGN MIX CONCRETE | - M25 |
| 3. GRADE OF REINFORCEMENT | - Fe - 500 D |
| 4. CLEAR COVER | - 25 mm |
| 8. CRANKED BARS | - EVERY ALTERNATE BARS |
| 9. CRANKED DISTANCE | - 0.05L FROM CENTER OF END SUPPORTS
&
0.25L FROM INTERMEDIATE SUPPORTS |
| 10. LENGTH OF EXTRA BARS TOP | - 0.3L FROM EACH SUPPORT |

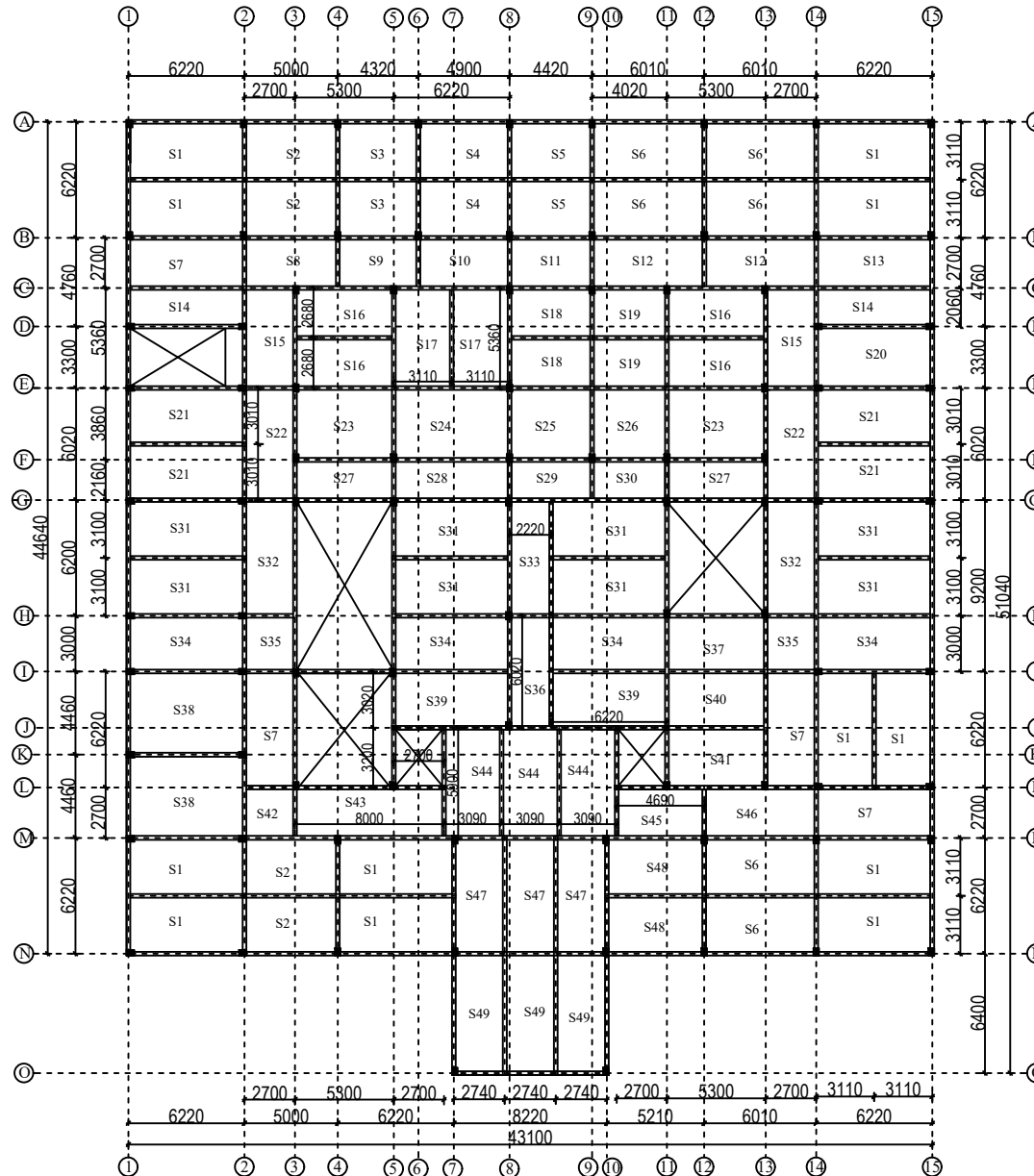
PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINATION
	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF SLABS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 15


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13.STRUCTURAL LAYOUT PLAN OF SUPERSTRUCTURE- (ROOF SLABS - GROUND FLOOR)



PROJECT

PROPOSED G+2 GENTS HOSTEL .
STRUCTURAL DRAWING

DELINEATION

STRUCTURAL LAYOUT
PLAN OF ROOF SLAB

CLIENT

M/S WAPCOS LTD

LOCATION

KARIYAVATTOM CAMPUS
UNIVERSITY OF KERALA,
THIRUVANANTHAPURAM

AREA : (sq.m)

Ground Floor : 1684.21 Sqm
First Floor : 1684.21 Sqm
Second Floor : 1684.21 Sqm
Total : 5052.63 Sqm

PROJECT NUMBER

4

GENERAL NOTE

- 1.Do not Scale Dimensions govern in drawings
- 2.All Dimensions are in Millimeter unless noted otherwise.
- 3.All dimensions shall be verified at site before proceeding the work.
- 4.All Levels are in Meters unless noted otherwise.

SIGNATURE

CLIENT CONSULTANT

STRUCTURAL CONSULTANT

Y-Shakh
Project Management &
Consultancy Services

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Office: 0474-2792700

Ref.No:

YSCASE,194/2025

DATE :

04- 03- 2025

DESIGNED:

Dr.M.M KHAN. Ph.D

DRAWN:

JASMINE.TOMY

PLATE NO: 16

SCALE-1:100,All Dimensions are in Millimeter

14-A-STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

Sl.no	Size of the slab (L x B)	Catogory	Main Bar (Shorter span)	Distribution Bar (Longer Span)	Remarks
S1	6220 x 3110	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S2	5000 x 3110	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S3	4320 x 3110	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S4	4900 x 3110	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S5	4420 x 3110	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S6	6010 x 3110	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S7	6220 x 2700	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S8	5000 x 2700	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S9	4320 x 2700	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S10	4900 x 2700	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S11	4420 x 2700	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S12	6010 x 2700	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S13	6220 x 2700	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
3	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF SLABS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 17



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14-B-STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

Sl.no	Size of the slab (L x B)	Catogory	Main Bar (Shorter span)	Distribution Bar (Longer Span)	Remarks
S14	6220 x 2060	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S15	2700 x 5360	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S16	5300 x 2680	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S17	3110 x 5360	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S18	4220 x 2680	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S19	4020 x 2680	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S20	6220 x 3300	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S21	6220 x 3010	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S22	2700 x 6020	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S23	5300 x 3860	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S24	6220 x 3860	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S25	4420 x 3860	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S26	4020 x 3860	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING						STRUCTURAL CONSULTANT
PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION	 Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpmcs@gmail.com Ph: +91 9447126629 Office: 0474-2792700
3	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF SLABS	
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 18	

14-B-STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

Sl.no	Size of the slab (L x B)	Catogory	Main Bar (Shorter span)	Distribution Bar (Longer Span)	Remarks
S 27	5300 x 2160	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S 28	6220 x 2160	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S 29	4420 x 2160	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S30	4020 x 2160	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S31	6220 x 3100	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S32	2700 x 6200	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S33	2220 x 6200	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S34	6220 x 3000	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S35	2700 x 3000	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S36	2220 x 6020	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S37	5300 x 3000	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S38	6220 x 4460	Two Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	
S39	6220 x 3020	One Way Slab	8 Y @ 130 C/C	8 Y @ 140 C/C	

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING

STRUCTURAL CONSULTANT

PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION
3	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF SLABS
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 18


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 Office: 0474-2792700

14-B-STRUCTURAL DETAILS OF ROOF BEAM - SPACE MANAGEMENT OF REINFORCEMENT

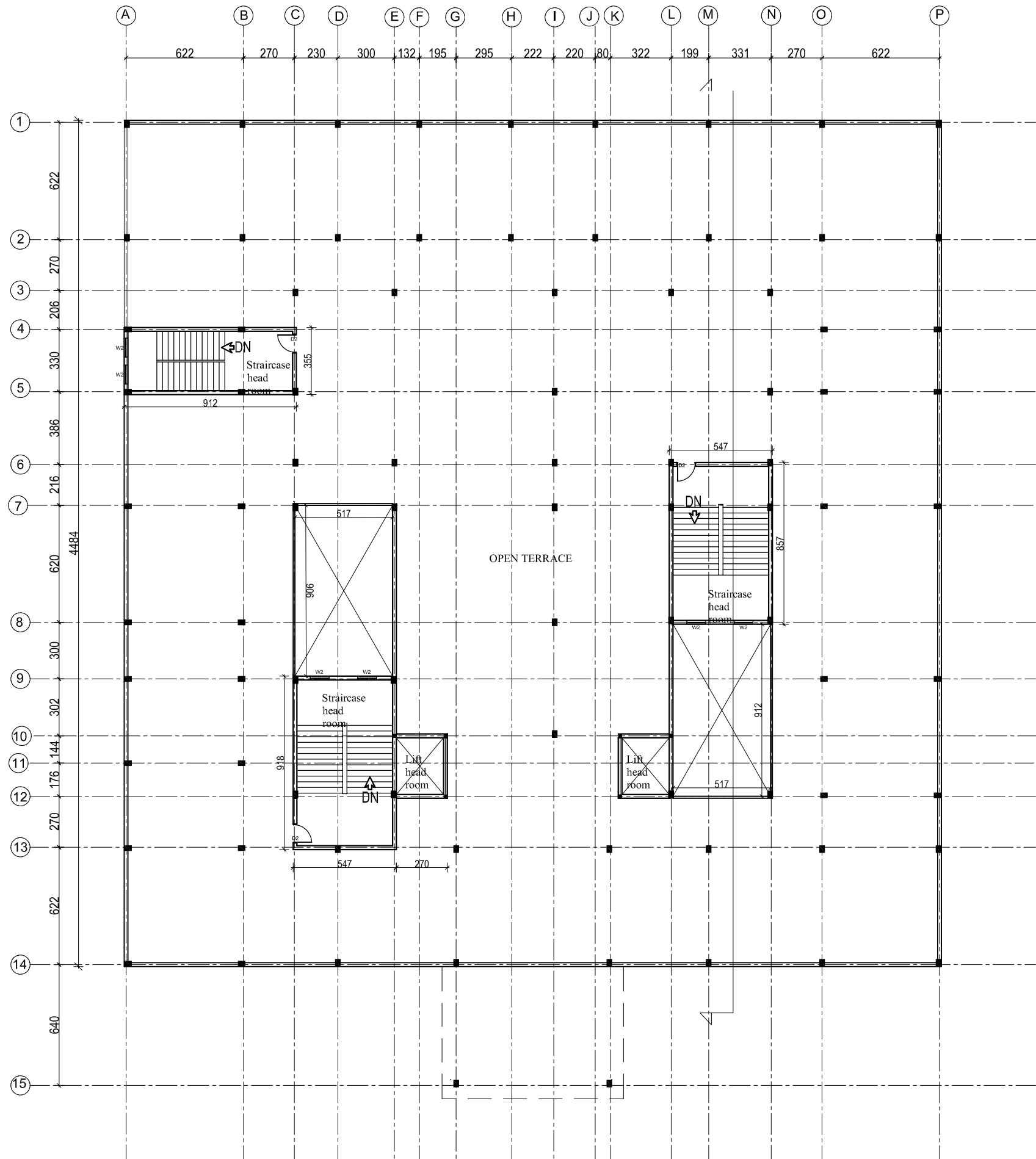
Sl.no	Size of the slab (L x B)	Catogory	Main Bar (Shorter span)	Distribution Bar (Longer Span)	Remarks
S40	5300 x 3020	Two Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	
S41	5300 x 3200	Two Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	
S42	2700 x 2700	Two Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	
S43	8000 x 2700	One Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	
S44	3090 x 5900	Two Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	
S45	4690 x 2700	Two Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	
S46	6010 x 2700	One Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	
S47	2740 x 6220	One Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	
S48	5210 x 3110	Two Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	
S49	2740 x 6400	One Way Slab	8 Y@ 130 C/C	8 Y@ 140 C/C	

SPECIAL NOTES:

1. FOR REDUCING IN THE THICKNESS OF THE SLAB SUB BEAMS OF MINIMUM SECTION HAVE BEEN PROVIDED IN BETWEEN THE LARGER BAYS.

PROJECT : PROPOSED G+2 GENTS HOSTEL AT KARIYAVATTOM CAMPUS, UNIVERSITY OF KERALA, THIRUVANANTHAPURAM. STRUCTURAL DRAWING						STRUCTURAL CONSULTANT
PROJECT NUMBER	CLIENT	AREA : (sq.m)	DESIGNED:	DRAWN:	DELINEATION	 Y-Shakh Project Management & Consultancy Services Y- Shakh, Nalanda Nagar-97 Thirumullavaram P.O. Kollam - 12 e-mail: yshakhpmcs@gmail.com Ph: +91 9447126629 Office: 0474-2792700
3	M/S WAPCOS LTD	Ground Floor : 1684.21 Sqm First Floor : 1684.21 Sqm Second Floor : 1684.21 Sqm Total : 5052.63 Sqm	Dr M.M KHAN. Ph.D	JASMINE.TOMY	SCHEDULE OF ROOF SLABS	
Ref.No: YSCASE,194/2025	DATE : 04- 03- 2025	DRAWING ARE NOT IN SCALE	ALL DIMENSIONS ARE IN MM		PLATE NO: 19	

ARCHITECTURAL



DOOR & WINDOW SCHEDULE			
SNO.	NAME	DESCRIPTION	SIZE
1.	D	Main door	2x2.4m
2.	TD	Double door	1.5x2.4m
3.	D1	Door	1.2x2.4m
4.	D2	Door/ toilet door	1x2.1m
5.	D3	Toilet door	0.8x2.1m
6.	W2	Window	1X1.5m
7.	W3	Window	1.5x1.5m
8.	V1	Ventilator	0.6x0.6m

AREA STATEMENT	
GROUND FLOOR	1922.86 SQM
FIRST FLOOR	1846.25 SQM
SECOND FLOOR	1846.25 SQM
TERRACE	148.56 SQM
TOTAL B/UP AREA	5763.74 SQM

NOTES :

- ALL MEASUREMENTS ARE IN cm unless specified otherwise.
- This drawing should not be scaled.
- The measurements are to be checked on site before construction.

**WAPCOS LIMITED**

(A Government of India Undertaking)
Ministry of Jal Shakti
Regional Office (Kerala)
1st Floor, JP Krishna Building
Pollimukku, Pettah
Trivandrum 695024, Kerala

APPROVED BY -

CHECKED BY -

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME :

UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED GENTS HOSTEL BLOCK
TERRACE PLAN

DATE : 29/03/2025

SCALE : NTS

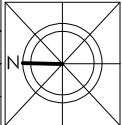
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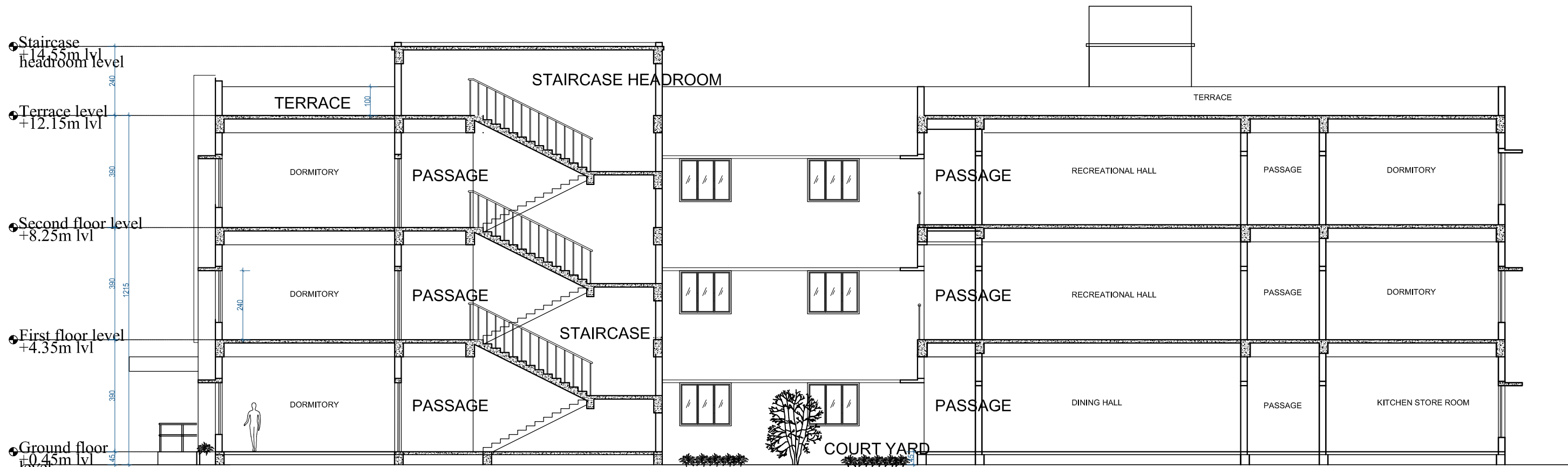
SHEET NO :

DRAWN BY :

DRAWING NO :

DRAWING STATUS : FOR TENDER





PROPOSED GENTS HOSTEL- SECTION

NOTES :

- ALL MEASUREMENTS ARE IN cm unless specified otherwise.
- This drawing should not be scaled.
- The measurements are to be checked on site before construction.



APPROVED BY -

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REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME :

UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED GENTS HOSTEL BLOCK - SECTION

DATE : 29/03/2025

SCALE : NTS

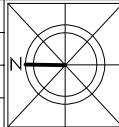
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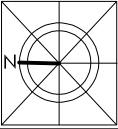
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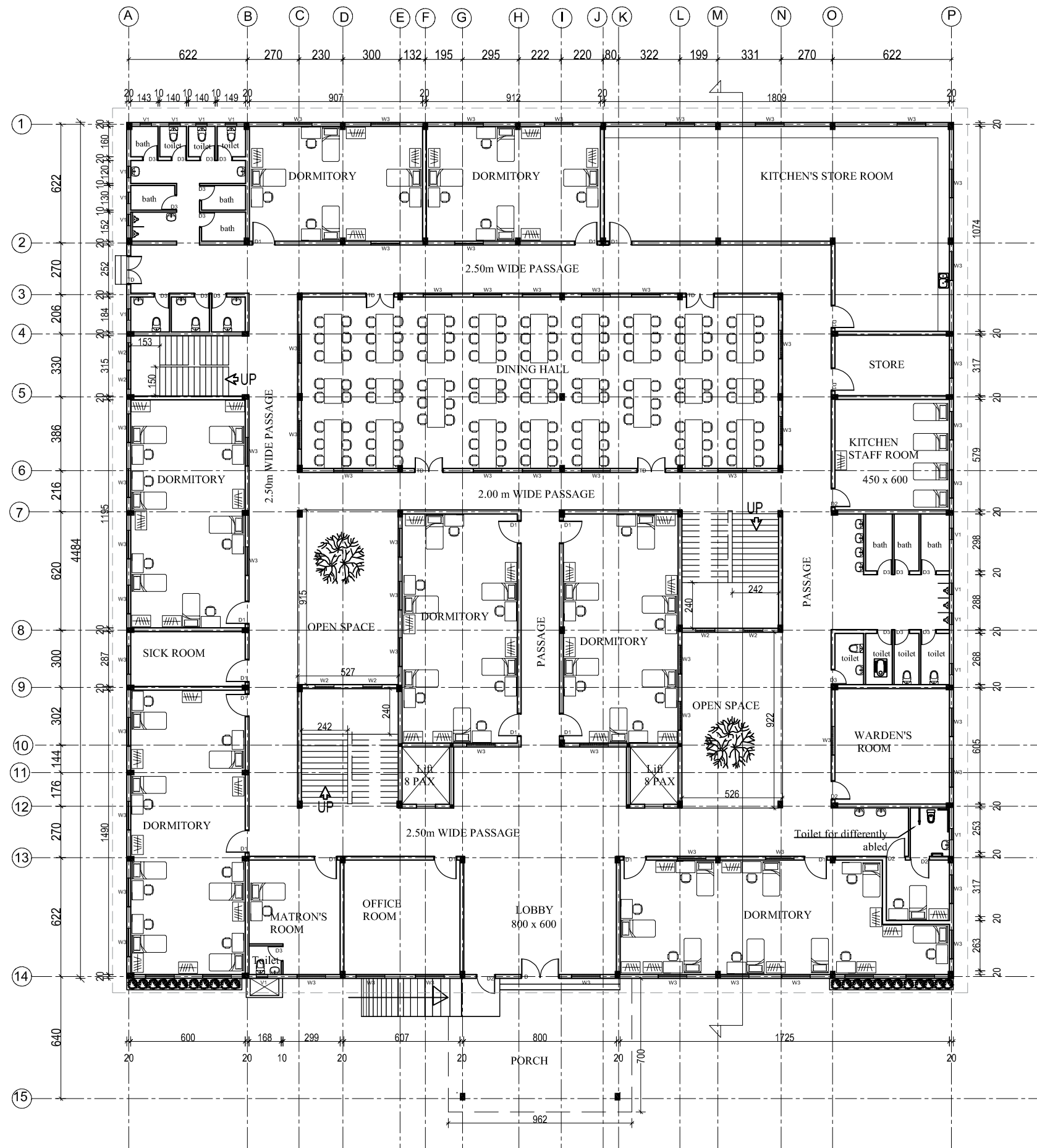
DRAWING STATUS : FOR TENDER





PROPOSED GENTS HOSTEL BLOCK - FRONT ELEVATION

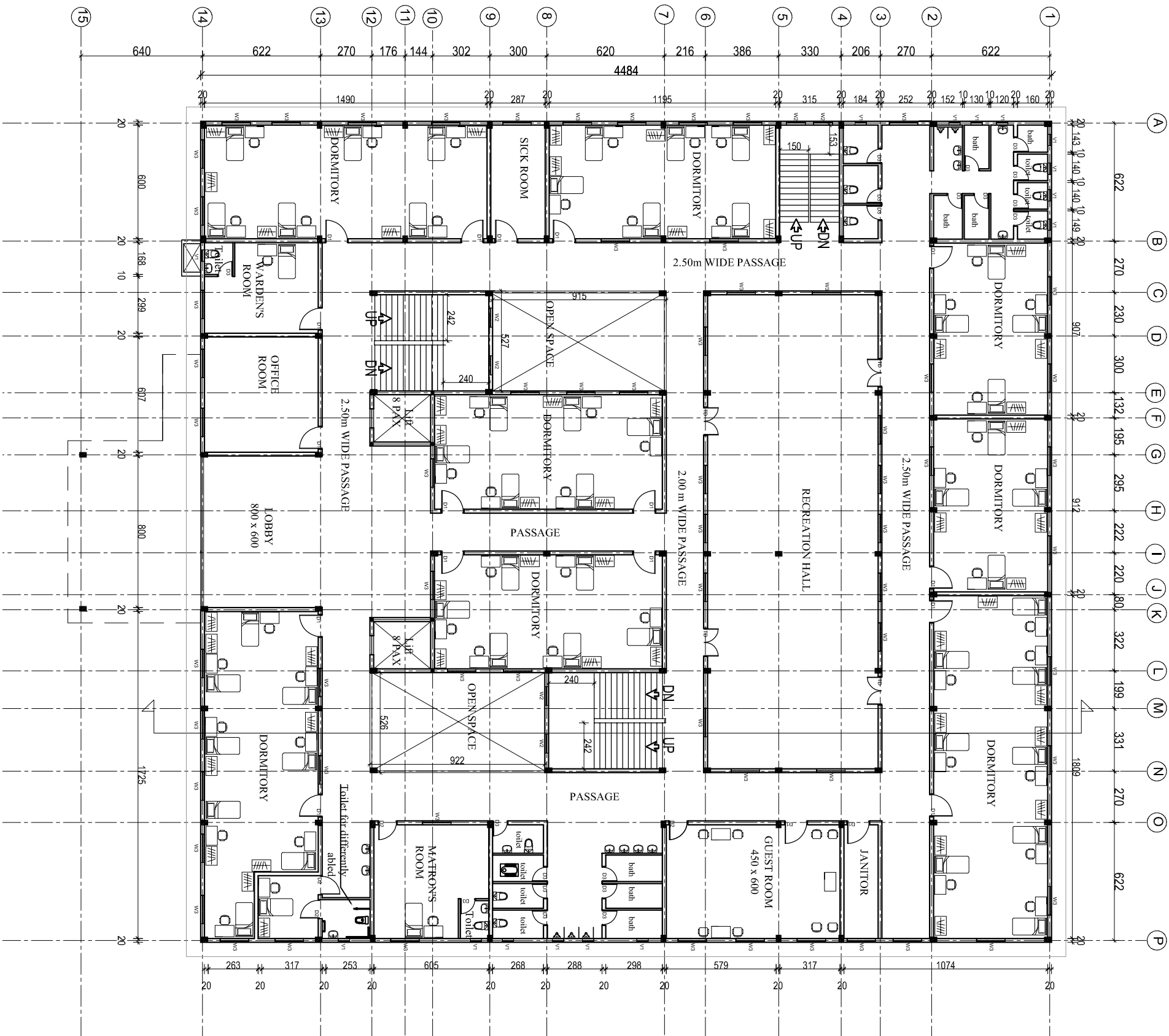
NOTES : • ALL MEASUREMENTS ARE IN cm unless specified otherwise. • This drawing should not be scaled. • The measurements are to be checked on site before construction.	 WAPCOS LIMITED (A Government of India Undertaking) Ministry of Jal Shakti Regional Office (Kerala) 1st Floor, JP Krishna Building Pallimukku, Pettah Trivandrum 695024, Kerala	APPROVED BY -	CHECKED BY -	REVISIONS			PROJECT NAME : UNIVERSITY OF KERALA PM-USHA PROJECT FOR MULTI-DISCIPLINARY EDUCATION & RESEARCH UNIVERSITIES (MERU)	DATE : 29/03/2025	
				NO.	DESCRIPTION	DATE		SCALE : NTS	
							SHEET TITLE : PROPOSED GENTS HOSTEL BLOCK - FRONT ELEVATION	SHEET SIZE : A3	
								SHEET NO :	
								DRAWN BY :	
								DRAWING NO :	
								DRAWING STATUS : FOR TENDER	



DOOR & WINDOW SCHEDULE			
SNO.	NAME	DESCRIPTION	SIZE
1.	D	Main door	2x2.4m
2.	TD	Double door	1.5x2.4m
3.	D1	Door	1.2x2.4m
4.	D2	Door/ toilet door	1x2.1m
5.	D3	Toilet door	0.8x2.1m
6.	W2	Window	1X1.5m
7.	W3	Window	1.5x1.5m
8.	V1	Ventilator	0.6x0.6m

AREA STATEMENT	
GROUND FLOOR	1922.86 SQM
FIRST FLOOR	1846.25 SQM
SECOND FLOOR	1846.25 SQM
TERRACE	148.56 SQM
TOTAL B/UP AREA	5763.74 SQM

NOTES : • ALL MEASUREMENTS ARE IN cm unless specified otherwise. • This drawing should not be scaled. • The measurements are to be checked on site before construction.	 WAPCOS LIMITED (A Government of India Undertaking) Ministry of Jal Shakti Regional Office (Kerala) 1st Floor, JP Krishna Building Pallimukku, Pettah Trivandrum 695024, Kerala	APPROVED BY -	CHECKED BY -	REVISIONS			PROJECT NAME : UNIVERSITY OF KERALA PM-USHA PROJECT FOR MULTI-DISCIPLINARY EDUCATION & RESEARCH UNIVERSITIES (MERU)	DATE : 29/03/2025				
				NO.	DESCRIPTION	DATE		SCALE : NTS				
								SHEET SIZE : A3				
								SHEET NO :				
				SHEET TITLE : PROPOSED GENTS HOSTEL BLOCK GROUND FLOOR PLAN							DRAWN BY :	
											DRAWING NO :	
											DRAWING STATUS : FOR TENDER	



DOOR & WINDOW SCHEDULE		
SNO.	NAME	DESCRIPTION SIZE
1.	D	Main door 2x2.4m
2.	TD	Double door 1.5x2.4m
3.	D1	Door 1.2x2.4m
4.	D2	Door/ toilet door 1x2.1m
5.	D3	Toilet door 0.8x2.1m
6.	W2	Window 1X1.5m
7.	W3	Window 1.5x1.5m
8.	V1	Ventilator 0.6x0.6m

AREA STATEMENT		
GROUND FLOOR	1922.86 SQM	
FIRST FLOOR	1846.25 SQM	
SECOND FLOOR	1846.25 SQM	
TERRACE	148.56 SQM	
TOTAL B/UP AREA	5763.74 SQM	

NOTES :

- ALL MEASUREMENTS ARE IN cm unless specified otherwise.
- This drawing should not be scaled.
- The measurements are to be checked on site before construction.



(A Government of India Undertaking)

Ministry of Jail Street)
Regional Office (Kerala)
1st Floor, 'A' Kinfra Building
Pattimukku Petham
Thiruvananthapuram 695024, Kerala

APPROVED BY -

CHECKED BY -

REVISIONS		
NO.	DESCRIPTION	DATE

PROJECT NAME :

UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED GENTS HOSTEL BLOCK
FIRST FLOOR PLAN

DATE : 29/03/2025

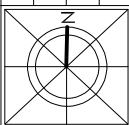
SCALE : NTS
SHEET SIZE : A3

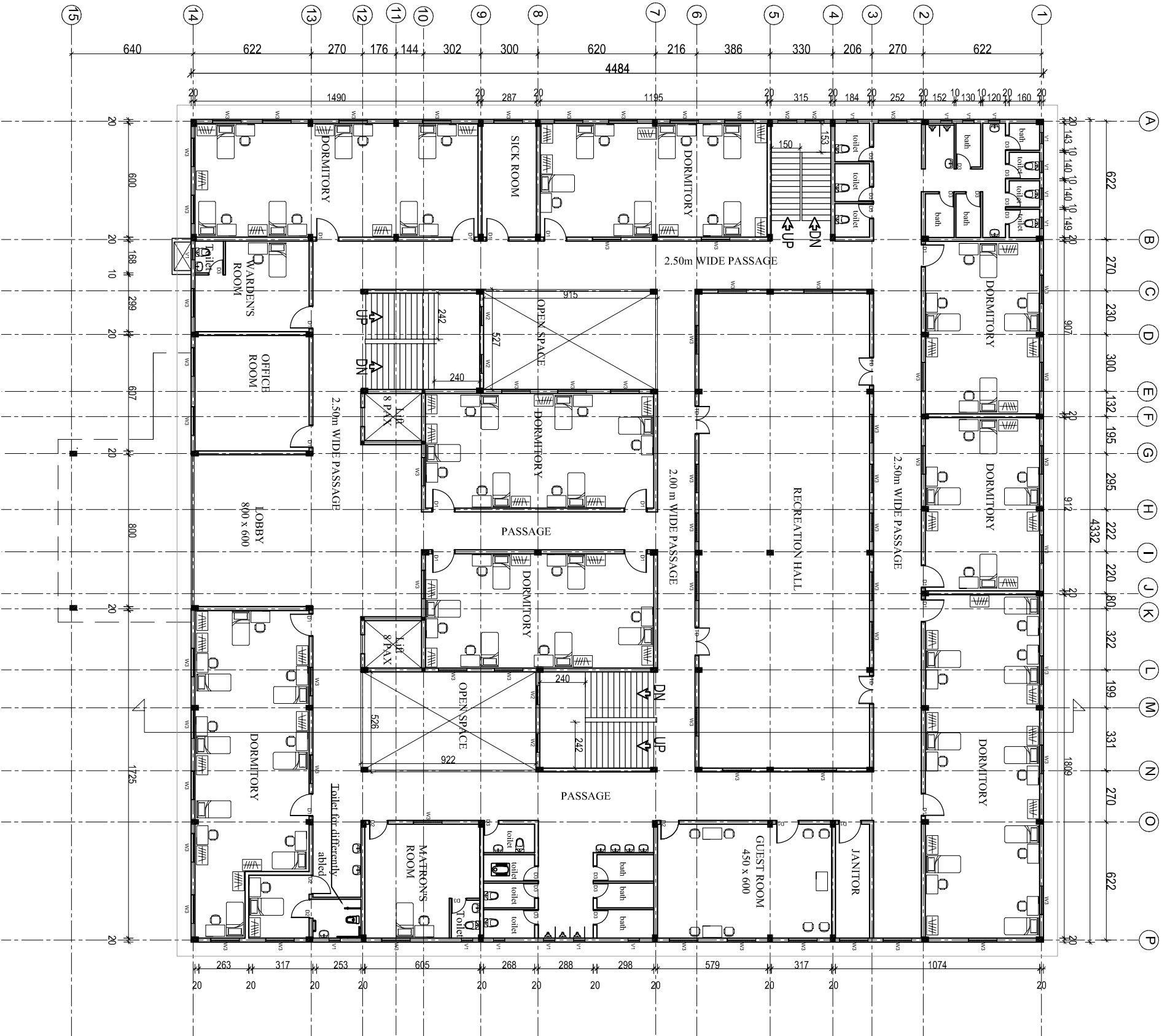
SHEET NO :

DRAWN BY :

DRAWING NO :

DRAWING STATUS : FOR TENDER





DOOR & WINDOW SCHEDULE		
SNO.	NAME	DESCRIPTION SIZE
1.	D	Main door 2x2.4m
2.	TD	Double door 1.5x2.4m
3.	D1	Door 1.2x2.4m
4.	D2	Door/ toilet door 1x2.1m
5.	D3	Toilet door 0.8x2.1m
6.	W2	Window 1x1.5m
7.	W3	Window 1.5x1.5m
8.	V1	Ventilator 0.6x0.6m

AREA STATEMENT	
GROUND FLOOR	1922.86 SQM
FIRST FLOOR	1846.25 SQM
SECOND FLOOR	1846.25 SQM
TERRACE	148.56 SQM
TOTAL B/UP AREA	5763.74 SQM

- NOTES :
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WAPCOS LIMITED
(A Government of India Undertaking)
Ministry of Jal Shakti
Regional Office (Kerala)
1st floor, 3rd Kerala Building
Palamuru, Palani
Tirunelveli 625024, Kerala

APPROVED BY -

CHECKED BY -

NO.

DESCRIPTION

DATE

PROJECT NAME :

UNIVERSITY OF KERALA
PM-USHA PROJECT FOR MULTI-DISCIPLINARY
EDUCATION & RESEARCH UNIVERSITIES (MERU)

SHEET TITLE : PROPOSED GENTS HOSTEL BLOCK

SECOND FLOOR PLAN

DATE : 29/03/2025

SCALE : NTS

SHEET SIZE : A3

SHEET NO :

DRAWN BY :

DRAWING NO :

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**Ministry of Jal Shakti
(A Government of India undertaking)**

**1st Floor, JP Krishna Building, Pallimukku, Pettah
Trivandrum - 695024**

TENDER DOCUMENT FOR

**Construction of Accommodation complex(Gents
Hostel,Ladies Hostel & Residential complex)
,Karyavattom Campus ,Trivandrum**

WAP/INFRA/KERALA/2025/KUB/508

Date: 29-03-2025

Volume-II DRAWINGS