Design calculation sheet

Project no: Date: Sheet no.: 2 of 2 Computed by:
Subject: Checked by:

Stairwell Pressurisation with some doors opened. Summer Approved by:

QT = 10.9 m3 / sec = 23097 cfm = 10900 l/s

at 2500 fpm => f = 0.5 "/100 ft

Duct Length = 70 m

Friction Loss through duct: = (Duct Length x 1.25 x 3.28 x f)

Friction Loss = 1.44 "

Total Static Pressure = (PD at Register + Friction Loss + Volume Damper)*30%
= 0.20 + 1.44 + 0.2
= 2.40 "
= 6.1 mm
= 597 Pa

Total Static Pressure on Fan = 597 + 25

Total Fan Static Pressure = 622 Pa = 2.5 " = 63.5 mm

Relief Damper Sizing :

Air to be releived = Q2 = 7.6 m3 /sec

Area of Pressure Relief A = 7.6 / 0.827 x 25½

A = 1.83 m2

Since we are using two fans:

Air flow per Fan = 11549 cfm = 5450 lps
@ 2500 fpm Φ = 600 mm

Total Static Pressure on Fan = 415 + 25

Total Static Pressure on Fan = 440 Pa = 1.7 "

Design calculation sheet

Project no:	Date:	Sheet no : 1 of 2	Computed by: [redacted]
Subject: Stairwell Pressurisation with some doors opened. Summer			Checked by: [redacted] Approved by:

Conditions :

Fire Escape on : 18 Floors
Stair Doors: 18
Escape Door : 1
Building Height : 79.0 m

Pressure Level : 25 Pa

1- Air volume required when all doors are closed : [redacted]

$Q1 = 0.827 \times AE \times P1/n$

Q = Volume of Air Required (m3)

AE = Leakage Area from the space (m2)

= 0.030 (m2) for Double Leaf Doors with or without Central Rebate
= 0.540 (m2) for 18 Stair Doors

P = Pressure Differential = 25 Pa n = Leakage Factor = 2

$Q1 = 0.827 \times 0.54 \times 25^{1/2}$: Q1 = 2.23 m3 / sec

Although the effective leakage area is known, there are other leaks we are not aware of.
To account for these leaks, Q is increased by 50%, hence:

$Q1 = 2.23 + 50\%$ = Q1 3.35 m3 / s

2- Air volume required when doors are opened :

Door Area = 2.1 x 0.9 = 1.89 m2
Air Velocity Across Door = 2 m/s = 394 fpm

Minimum Number of Opened Doors = main escape doors + 10% of remaining straiwell doors
= 1 + 2

Open door area = Area of escape doors + 50% of the area of the other doors
= 1.89 + 1.89
= 3.78 m2

$Q2 = A \times V$ => Q2 = 7.56 m3 / s

3- Total Air Supplied by the fan :

$QT = Q1 + Q2$ => QT = 10.9 m3 / s = 23097 cfm

SMOKE VENTILATION CALCULATION FOR CORRIDOR

FLOOR HIGHT = 4 m

AREA AF = 9 m2

PARAMETER = 14 m

Qf = 2700 KW

MASS FLOW OF HOT GASES (Mf) CAN BE CALCULATED

0.19 X P X Y^3/2

Mf = 0.19X 14X 2.5^3/2 = 10.51Kg / sec

TEMPERATURE RISE OF SMOKE LAYER ABOVE AMBIENT

θ = Qf / (Mf . Cp)

Cp = 1.01

θ = 2700 / (10.51X 1.01) =

θ = 254.35 K

CALCULATION OF MECHNICAL TYPE OF VENTILATION.

V = Mf. Tc / (Po .To)

where :-

To = 303 K

Tc = To + θ

Tc = 303+254.35

Tc = 557.35 K = 284.35°C <500°C

V = (10.51X557.35) / (1.2 X 303)

V = 16.11 m^3/sec

=35,000 cfm

WE WILL INSTALL two speed two SMOKE FANS EACH WITH CAPACITY OF 17,500 CFM .AS SHOWN ON DRAWINGS.

FRESH AIR SHALL BE two speed two fresh air fan EACH with capacity of 16,000 CFM .AS SHOWN ON DRAWINGS.

ALL THE FANS SHALL BE CONNECTED TO THE FLOW SWITCH OR FIRE ALARM SYSTEM AND WILL RUN WHILE GETTING A SIGNAL FROM IT,IT CAN ALSO BE RUN MANUALLY WITH ON / OFF SWITCH AT THE MAIN GATE OF THE BUILDING.

SMOKE VENTILATION CALCULATION (CAR BARKING).

FLOOR HIGHT = 3.00m

AREA AF = 10 m2

PARAMETER = 14 m
Qf = 4000 KW

MASS FLOW OF HOT GASES (Mf) CAN BE CALCULATED
0.19 X P X Y^3/2

Mf = 0.19X 14X 2.5^3/2 = 10.5Kg / sec

TEMPERATURE RISE OF SMOKE LAYER ABOVE AMBIENT
θ = Qf / (Mf . Cp)

Cp = 1.01
θ = 4000 / (10.5X 1.01) =
θ = 377.18 K

LESS THAN FLASH-OVER POINT

where :-

CALCULATION OF MECHNICAL TYPE OF VENTILATION.

V = Mf. Tc / (Po .To)

To = 303 K
Tc = To + θ

Tc = 303+377.18
Tc = 680.18

V = (10.5X680.18) / (1.2 X 303)

V = 19.64 m^3/sec

=42,000 cfm

WE WILL INSTALL two speed two SMOKE FANS EACH

WITH CAPACITY OF 21,000 CFM .AS SHOWN ON DRAWINGS.

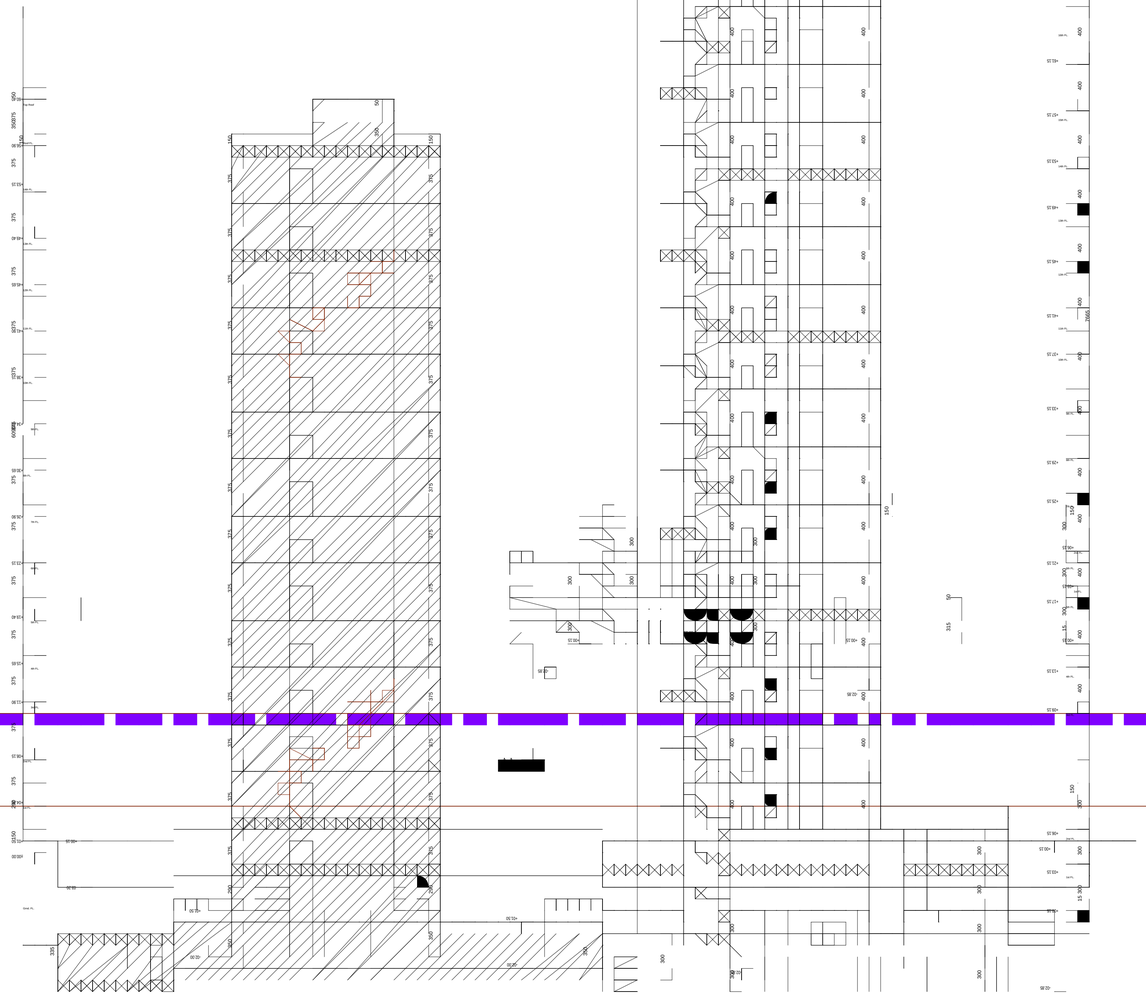
FRESH AIR SHALL BE two speed two fresh air fan EACH

with capacity of 19,000 CFM .AS SHOWN ON DRAWINGS.

ALL THE FANS SHALL BE CONNECTED TO THE FLOW
FLOW SWITCH OR FIRE ALARM SYSTEM AND WILL RUN WHILE
GETTING A SIGNAL FROM IT,IT CAN ALSO BE RUN MANUALLY
WITH ON / OFF SWITCH AT THE MAIN GATE OF THE BUILDING.

ALL FANS SHALL WORKING AT LOW SPEED AT LEAST 50% ALL TIME

AND 100% INCASE OF FIRE

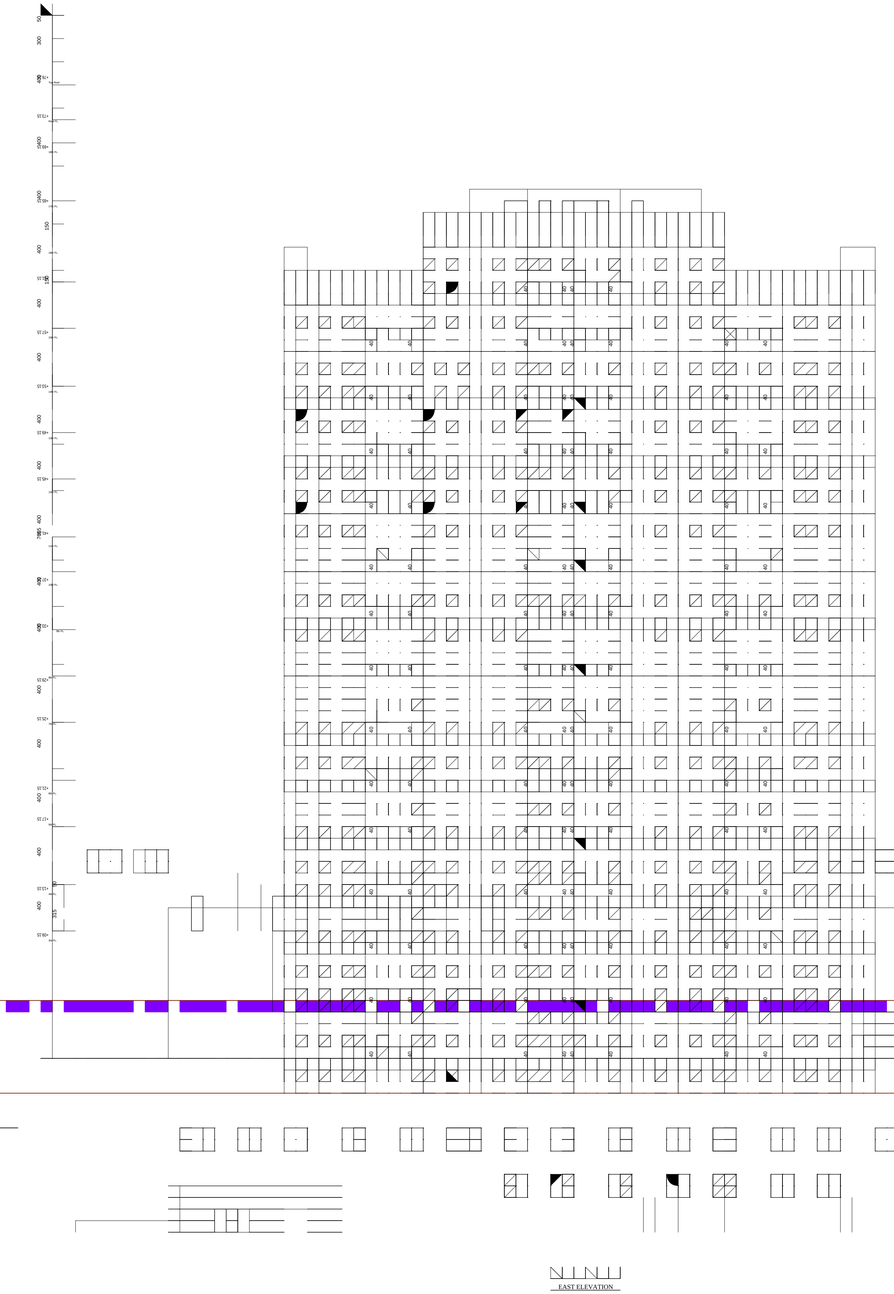


SECTION LIFT 1 + 2 + 3

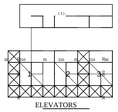
LIFT SPECIFICATION

CAPACITY	SPEED	NO. OF PERSON	LIFT NO. / TYPE
1000 KG	150 M/Sec	13 PERSON	1 + 2 + 3

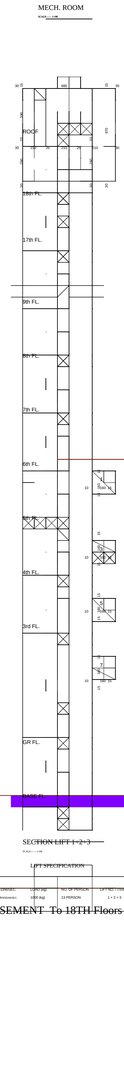
BASEMENT To 18TH Floors



EAST ELEVATION



ELEVATORS



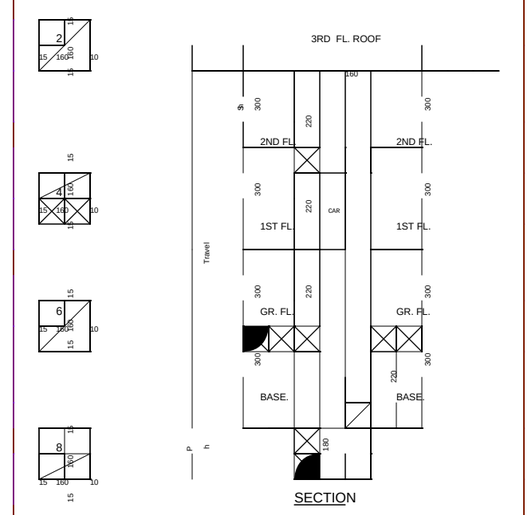
N
E
W
S

OPEN AREA, 14.60 M
1460
5465
OPEN AREA, 54.65 M
WALK WAY, 31.35 M
3135
3840
OPEN AREA, 38.40 M
385
385
+76.15
Top Roof
520
520
190
190
NEIGHBOUR, 24.90 M
2490
2423
NEIGHBOUR, 24.23 M

UPPER ROOF FLOOR PLAN

SCALE ------- 1/100

4000
4000
NEIGHBOUR, 40.00 M
NEIGHBOUR, 40.00 M
S \ STREET, 25.00 M
2500



SECTION

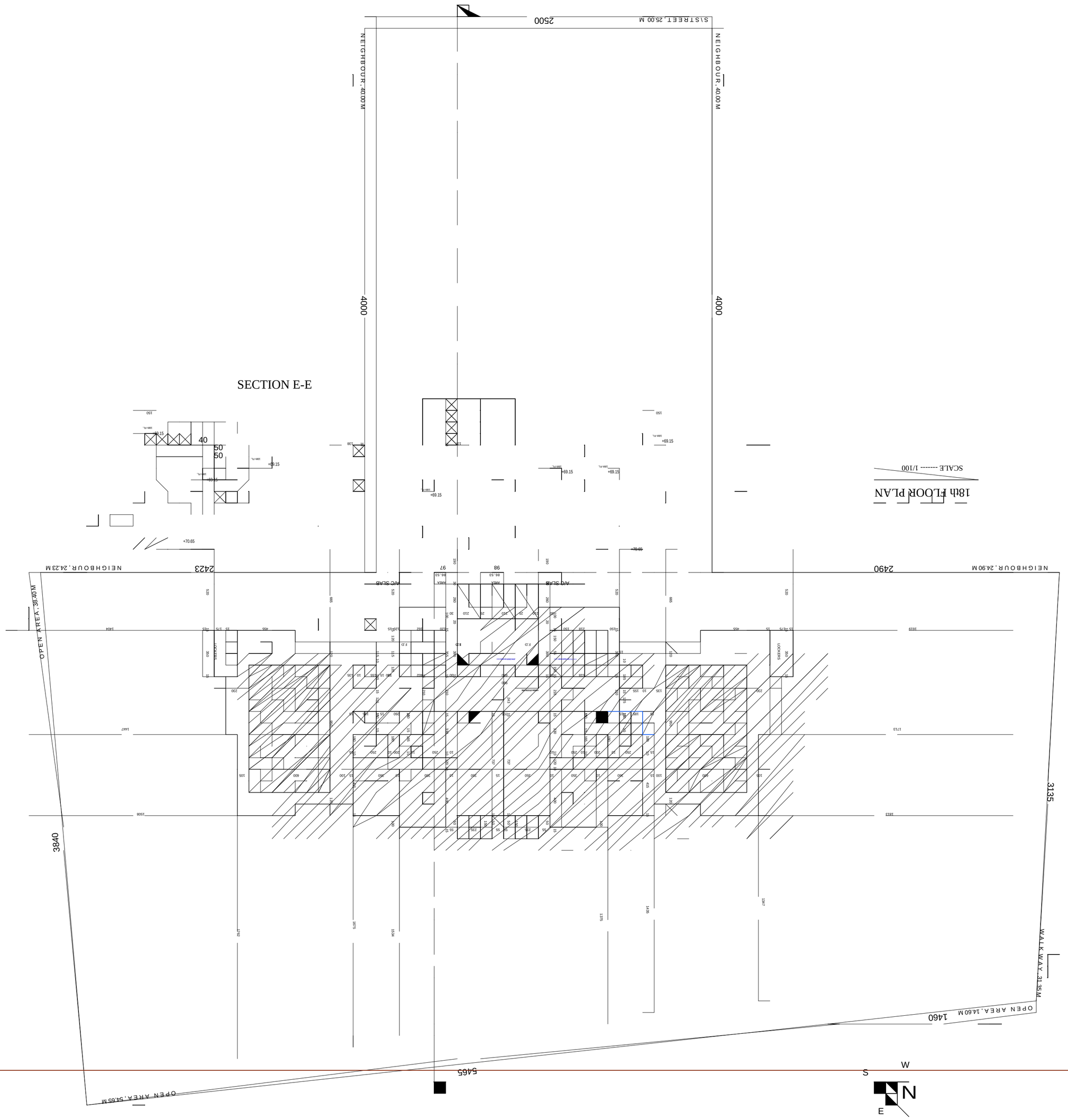
LIFT SPECIFICATION

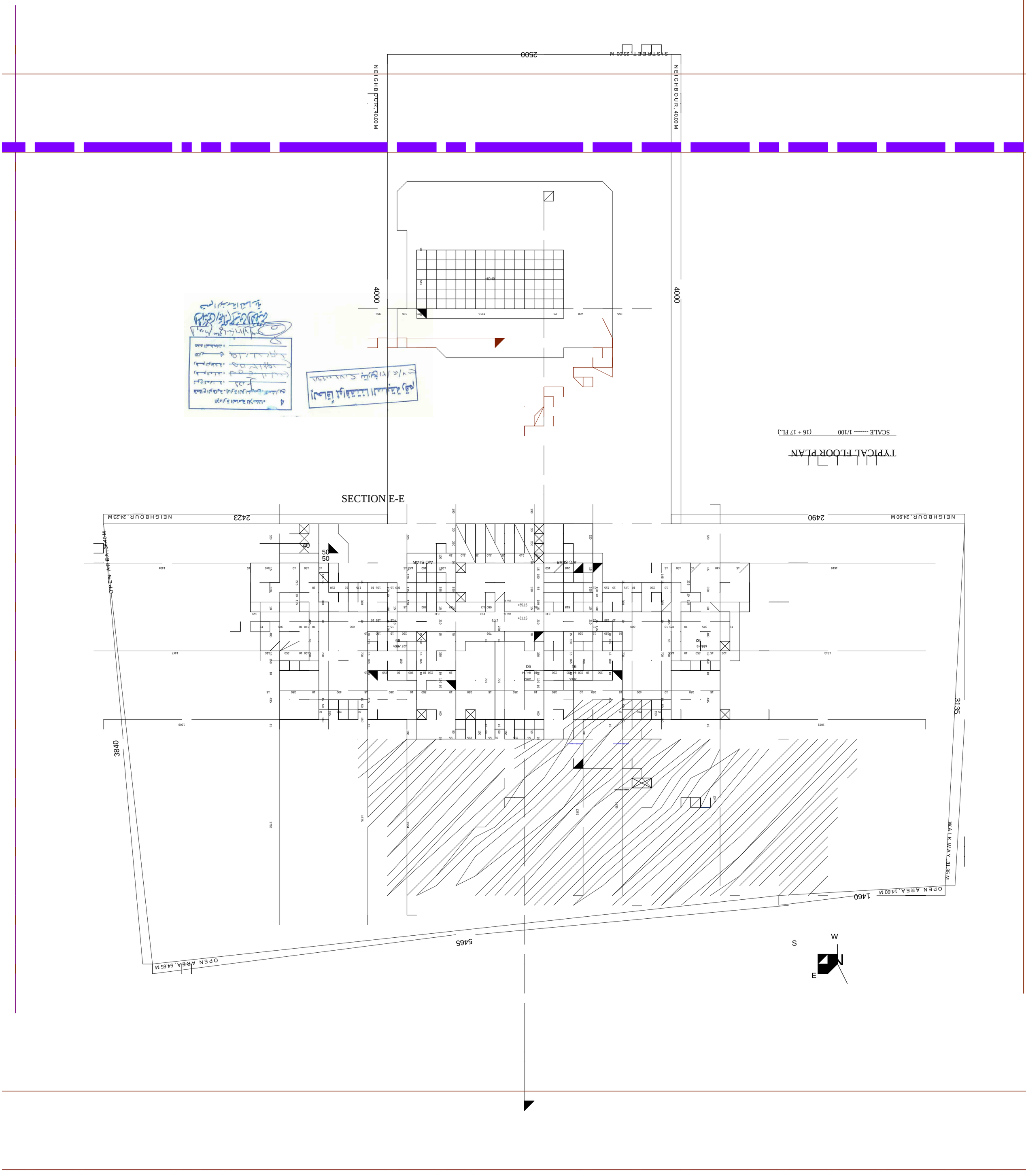
SPEED/M/SEC.	LOAD (kg)	NO. OF PERSON	LIFT NO.
1.00 / SPEED/M/SEC.	450 (kg)	6 PERSON	1+2+3+4+5+6+7+8



ROOF FLOOR PLAN

SCALE ------- 1/100


2500
S\STREET, 25.00 M
NEIGHBOUR, 40.00M
NEIGHBOUR, 40.00M
4000
4000
SECTION E-E
18th FLOOR PLAN
SCALE ------- 1/100
NEIGHBOUR, 24.23M
2423
NEIGHBOUR, 24.90 M
2490
OPEN AREA, 38.40 M
3840
OPEN AREA, 54.65 M
5465
OPEN AREA, 14.60 M
1460
3135
WALK WAY 3135M
AVG SLAB
AVG SLAB
W
S
N
E



SECTION E-E

TYPICAL FLOOR PLAN

SCALE ------- 1/100 (16 + 17 FL.)

S\STREET, 25.00 M

2500

NEIGHBOUR, 40.00

NEIGHBOUR, 40.00

4000

4000

SECTION E-E

15th FLOOR PLAN

SCALE ------ 1/100

NEIGHBOUR, 24.23M

2423

NEIGHBOUR, 24.90M

2490

OPEN AREA, 38.40 M

3840

3135

WALK WAY, 31.35 M

OPEN AREA, 14.60 M

1460

OPEN AREA, 54.65 M

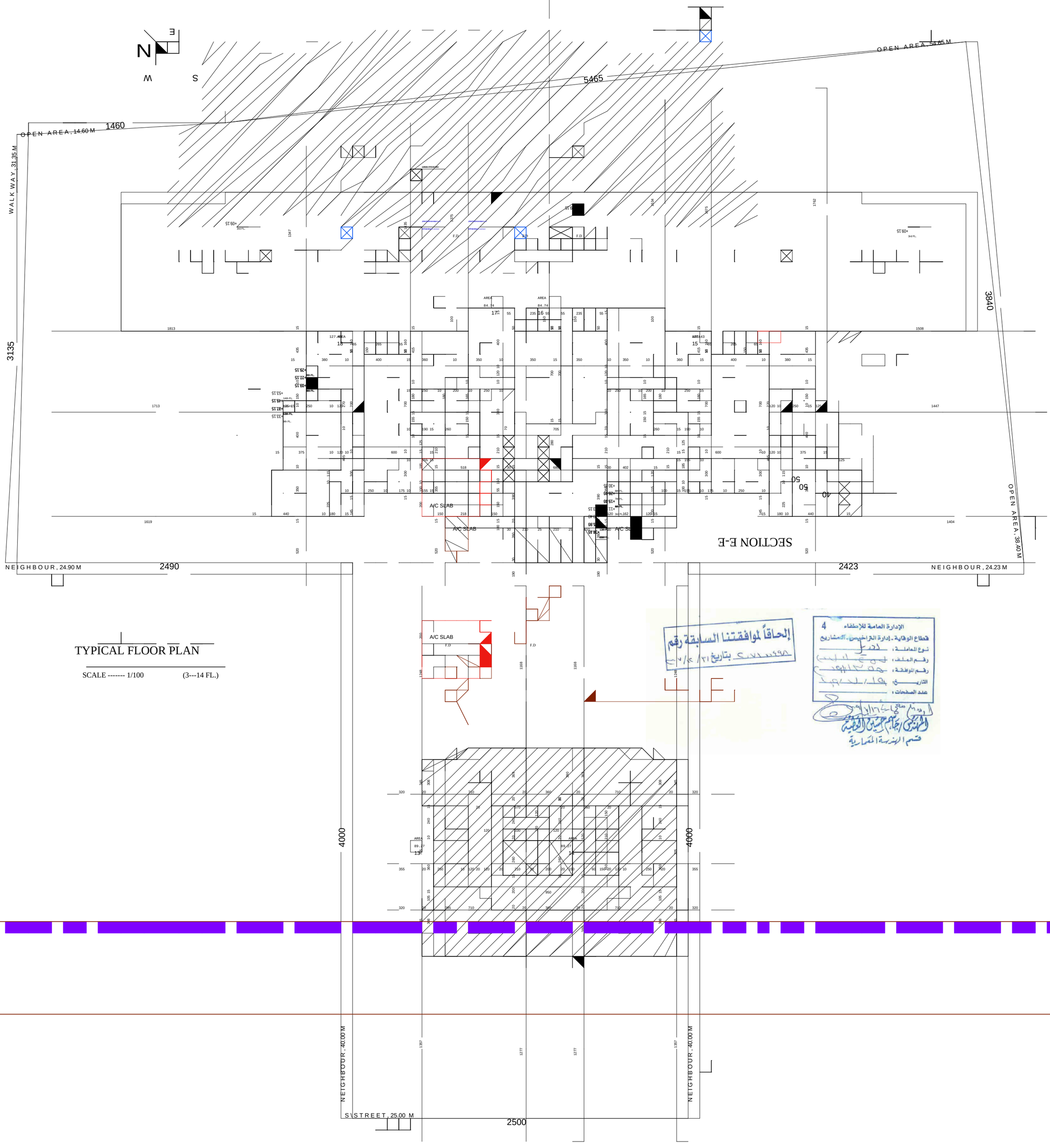
5465

W

S

N

E



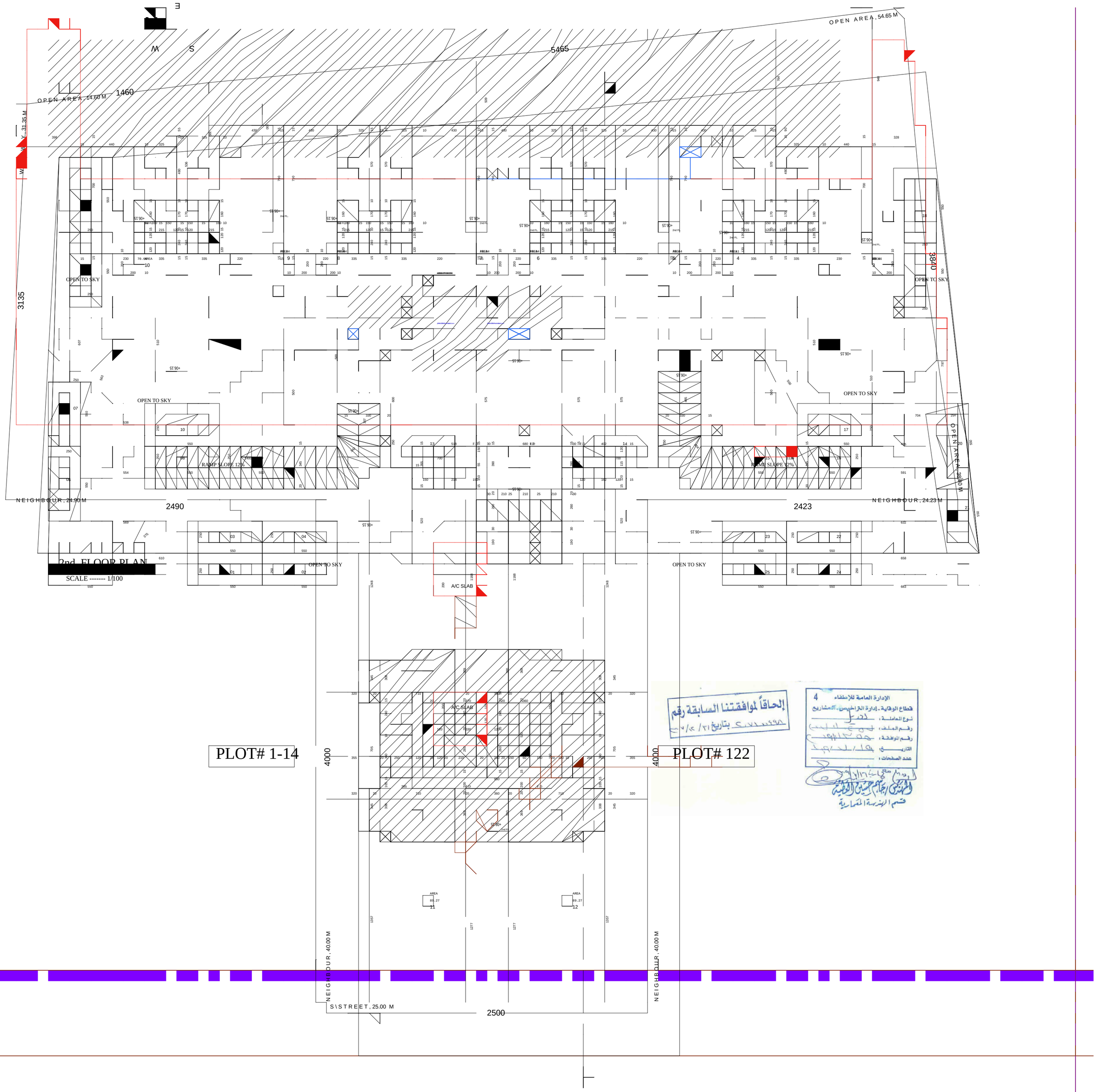
TYPICAL FLOOR PLAN

SCALE ------- 1/100 (3---14 FL.)

إلحاقاً لموافقتنا السابقة رقم ٤٩٨٠٠٤٠٠٤٠٠٤٠٠٤ بتاريخ ٢١/٧/٢٠٠٤

الإدارة العامة للإطفاء
قطاع الوقاية - إدارة التراخيص - المشاريع
نوع المعاملة :
رقم الملف :
رقم الموافقة :
التاريخ :
عدد الصفحات : 4

المهندس / جمال حسين الوقاية
قسم الهندسة المعمارية


OPEN AREA, 54.65 M
OPEN AREA 14.60 M
1460
5465
3135
OPEN TO SKY
OPEN TO SKY
OPEN TO SKY
OPEN TO SKY
OPEN TO SKY
OPEN AREA, 39.90 M
RAMP SLOPE 12%
RAMP SLOPE 12%
NEIGHBOUR, 24.90 M
2490
2423
NEIGHBOUR, 24.23 M
2nd FLOOR PLAN
SCALE ------- 1/100
A/C SLAB
A/C SLAB
PLOT# 1-14
4000
PLOT# 122
4000
NEIGHBOUR, 40.00 M
S\STREET, 25.00 M
2500
NEIGHBOUR, 40.00 M
AREA
89.27
11
AREA
89.27
12

N

W

S

E

5465

OPEN AREA, 54.65 M

1460

OPEN AREA, 14.60 M

WALK WAY - 31.35M

3135

3840

OPEN AREA, 38.40 M

2490

2423

NEIGHBOUR, 24.90 M

NEIGHBOUR, 24.23 M

RAMP SLOPE 12%

RAMP SLOPE 12%

1st FLOOR PLAN

SCALE ------- 1/100

PLOT# 1-14

A/C SLAB

A/C SLAB

4000

4000

NEIGHBOUR, 40.00 M

NEIGHBOUR, 40.00 M

S\STREET, 25.00 M

2500

PLOT# 122

إلحاقاً لموافقتنا السابقة رقم ٦٩٥٣٤٤٤ بتاريخ ٣١/ ١٢/ ٢٠١٧

الإدارة العامة للإطفاء
قطاع الوقاية - إدارة التراخيص - المشاريع
نوع المعاملة :
رقم الملف :
رقم الموافقة :
التاريخ :
عدد الصفحات :

المهندس / جاسم حسين الوطيه
قسم الهندسة المعمارية

GROUND FLOOR PLAN

SCALE ------ 1/100

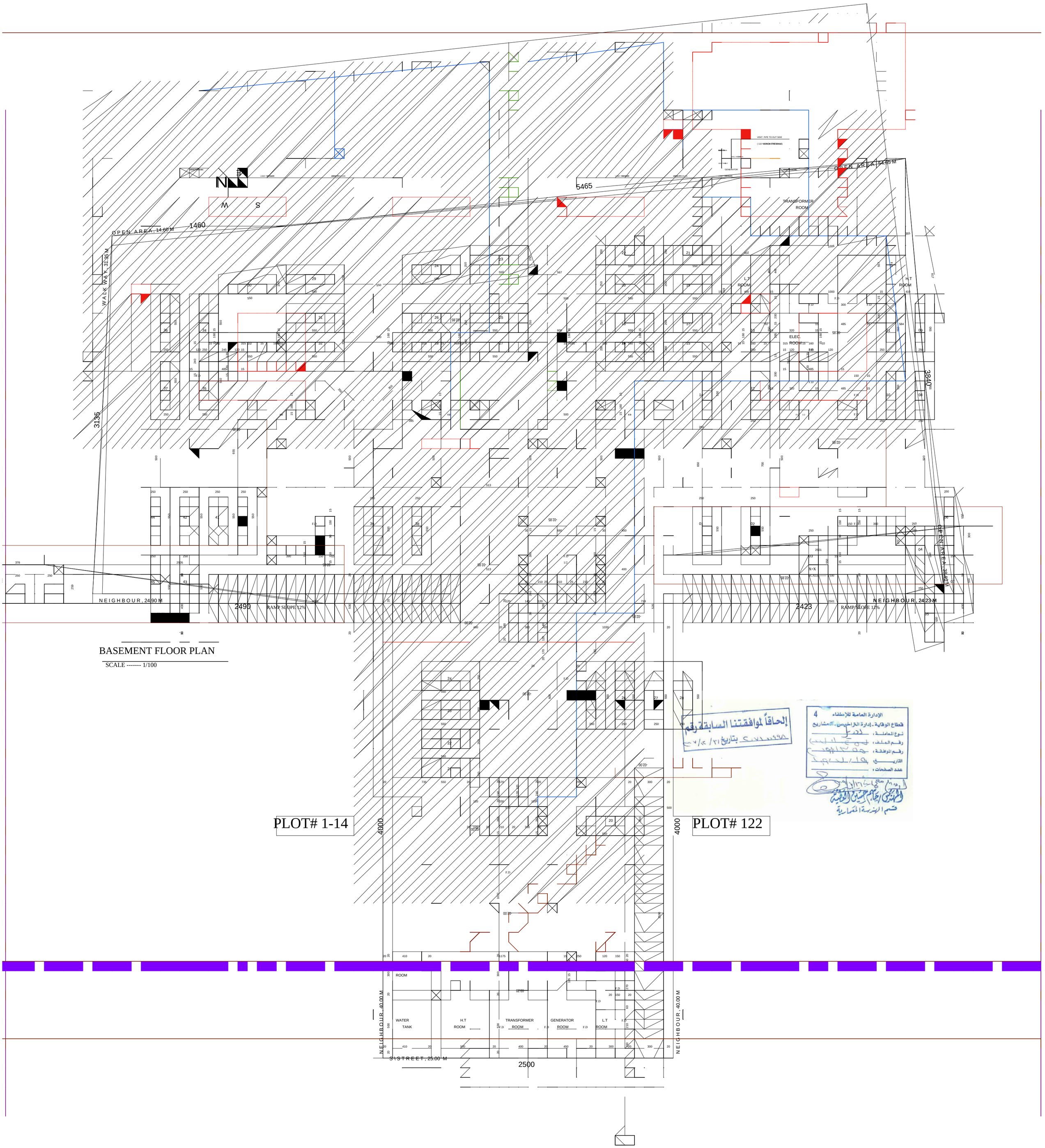
PLOT# 1-14

PLOT# 122

إلحاقاً لموافقتنا السابقة رقم ٤٩٦٥٠٠٠٠٠٠٠٠٠٠٠٠ بتاريخ ٢١/ ٢/ ٢٠٠٧

الإدارة العامة للإطفاء 4
قطاع الوقاية - إدارة التراخيص والمشاريع
نوع المعاملة :
رقم المعلن :
رقم الموافقة :
التاريخ :
عدد الصفحات :

المهندس/ جاسم حسين الوقيان
قسم الهندسة المعمارية

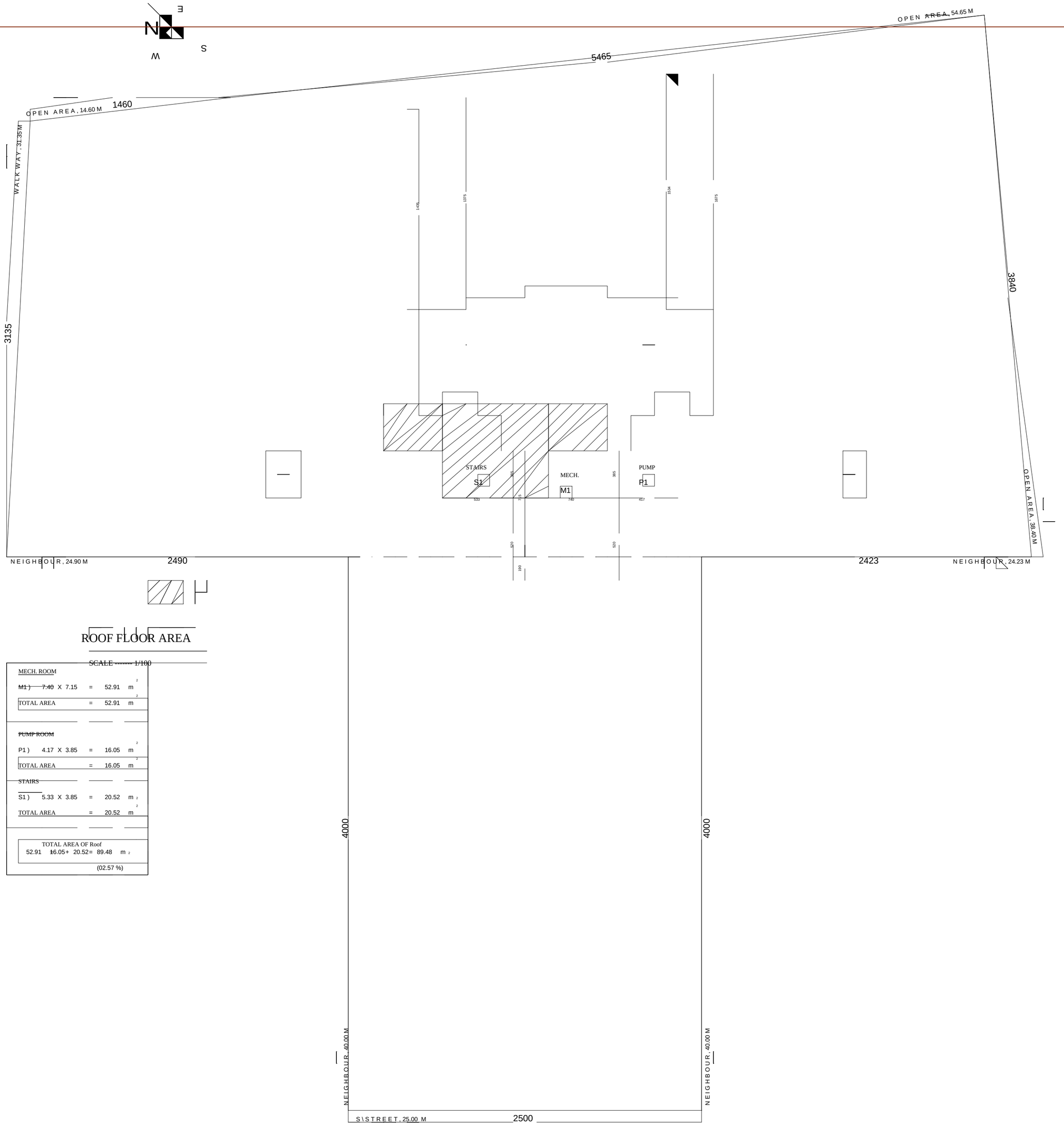


BASEMENT FLOOR PLAN

SCALE ------- 1/100

إلحاقاً لموافقتنا السابقة رقم ٦٩٣٥٤٤ بتاريخ ٢١/ ٢/ ٢٠٠٧

الإدارة العامة للإطفاء
قطاع الوقاية - إدارة التراخيص والمشاريع
نوع المعاملة :
رقم المعلف :
رقم الموافقة :
التاريخ :
عدد الصفحات :



ROOF FLOOR AREA

SCALE ------- 1/100

MECH. ROOM

M1) ~~7.40~~ X 7.15 = 52.91 m^2

TOTAL AREA = 52.91 m^2

~~PUMP ROOM~~

P1) 4.17 X 3.85 = 16.05 m^2

TOTAL AREA = 16.05 m^2

~~STAIRS~~

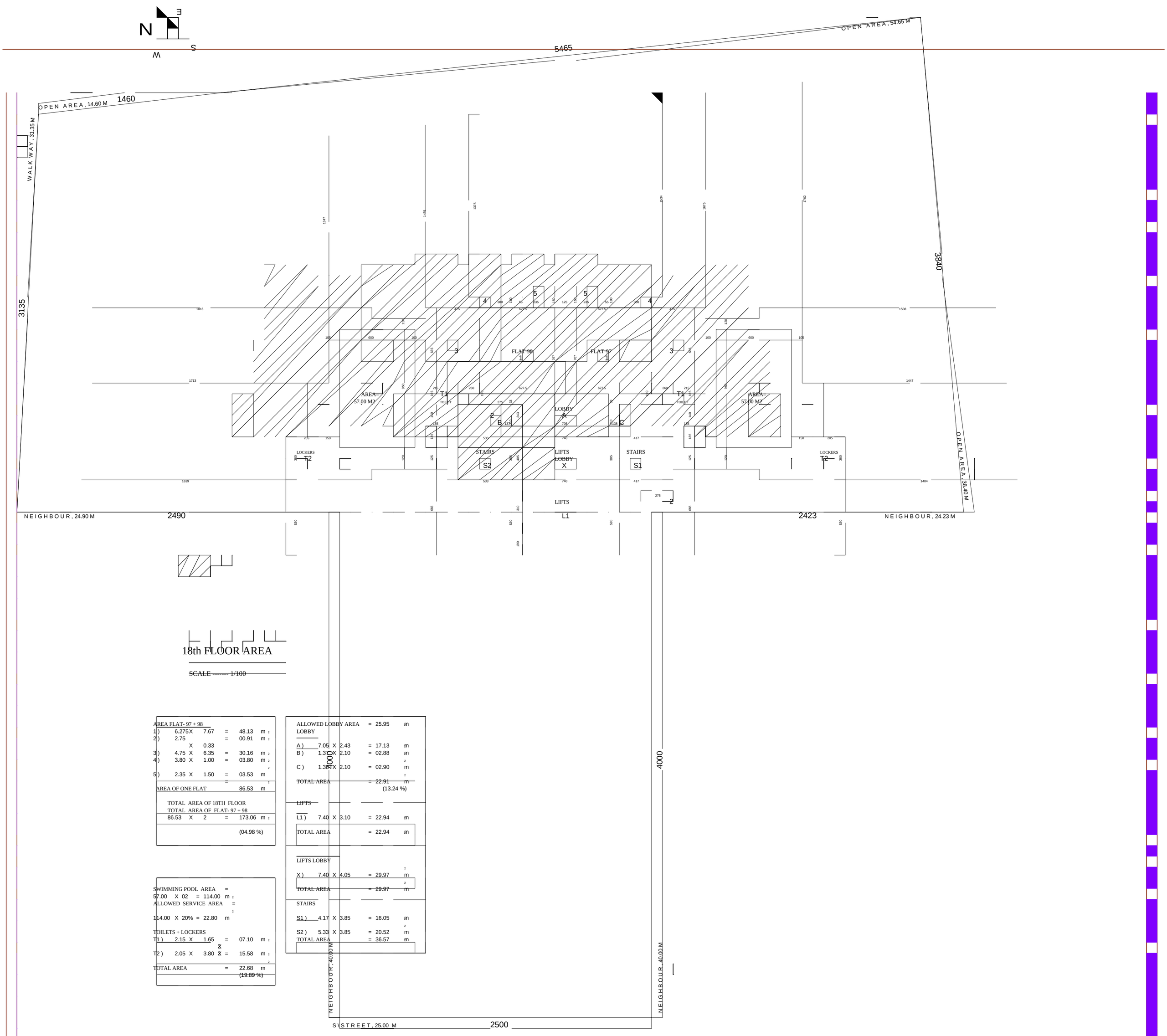
S1) 5.33 X 3.85 = 20.52 m^2

TOTAL AREA = 20.52 m^2

TOTAL AREA OF Roof

52.91 ~~+~~6.05+ 20.52= 89.48 m^2

(02.57 %)



18th FLOOR AREA

SCALE ------- 1/100

AREA FLAT- 97 + 98

1)	6.275	X 7.67	=	48.13	m	2
2)	2.75		=	00.91	m	2
		X 0.33				
3)	4.75	X 6.35	=	30.16	m	2
4)	3.80	X 1.00	=	03.80	m	2
5)	2.35	X 1.50	=	03.53	m	2
			=			2

AREA OF ONE FLAT 86.53 m

TOTAL AREA OF 18TH FLOOR
TOTAL AREA OF FLAT- 97 + 98

86.53 X 2 = 173.06 m 2

(04.98 %)

SWIMMING POOL AREA =
57.00 X 02 = 114.00 m 2
ALLOWED SERVICE AREA = 2

114.00 X 20% = 22.80 m

TOILETS + LOCKERS

T1)	2.15	X 1.65	=	07.10	m	2
		X				
T2)	2.05	X 3.80 X	=	15.58	m	2
						2

TOTAL AREA = 22.68 m
(19.89 %)

ALLOWED LOBBY AREA = 25.95 m

LOBBY

A)	7.05	X 2.43	=	17.13	m
B)	1.37	X 2.10	=	02.88	m
					2
C)	1.38	X 2.10	=	02.90	m
					2
TOTAL AREA			=	22.91	m

(13.24 %)

LIFTS

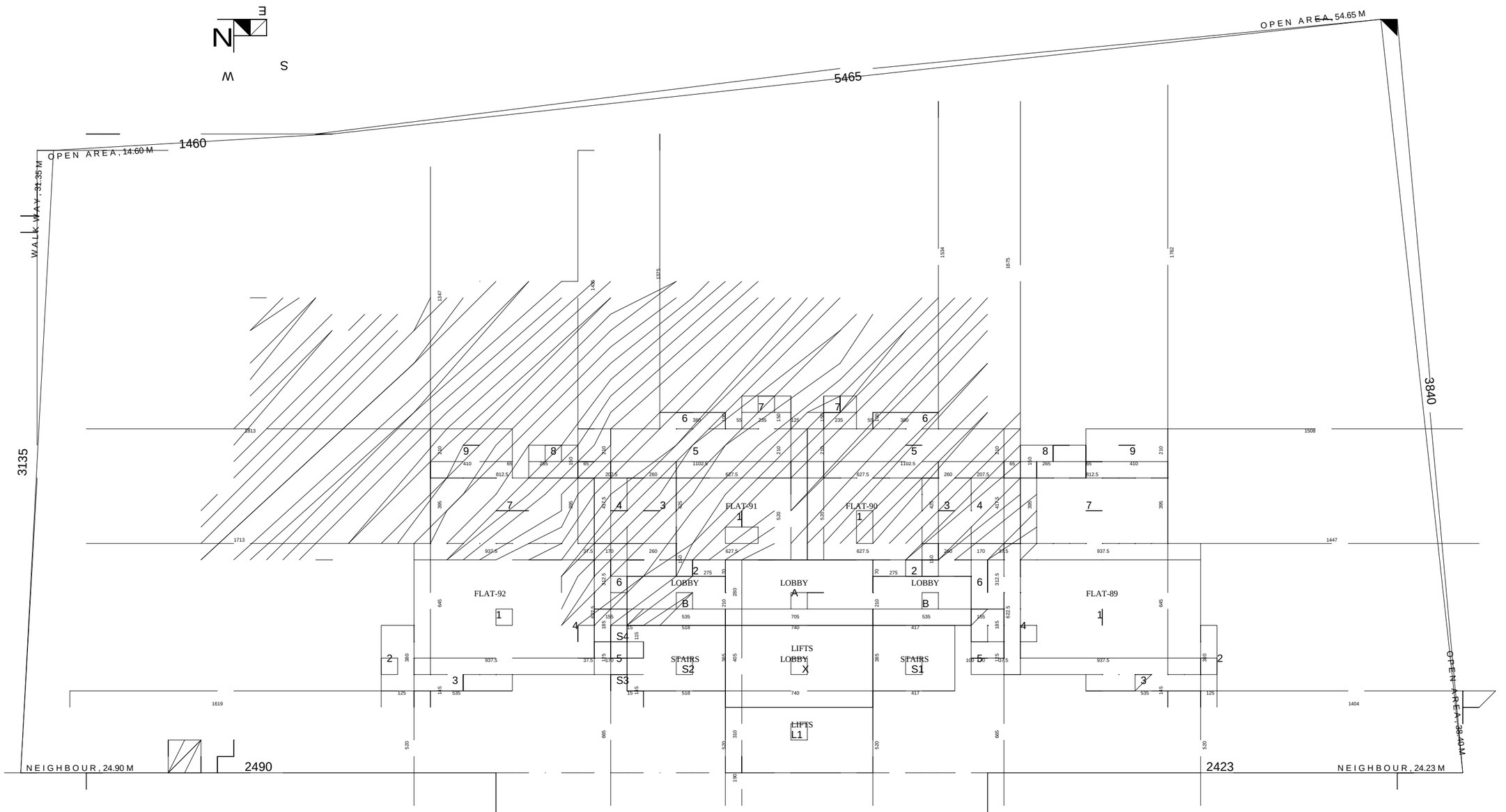
L1)	7.40	X 3.10	=	22.94	m
TOTAL AREA			=	22.94	m

LIFTS LOBBY

					2
X)	7.40	X 4.05	=	29.97	m
					2
TOTAL AREA			=	29.97	m

STAIRS

S1)	4.17	X 3.85	=	16.05	m
					2
S2)	5.33	X 3.85	=	20.52	m
TOTAL AREA			=	36.57	m



TYPICAL FLOOR AREA

SCALE ------- 1/100 (16 + 17 FL.)

AREA FLAT- 89 + 92

1) 9.375 X 6.45 = 60.47 m²
2) 1.25 X 3.80 = 04.75 m²
3) 5.35 X 1.45 = 07.76 m²
4) 0.375 X 6.225 = 02.33 m²
5) 1.70 X 1.25 = 02.13 m²
6) 1.70 X 3.125 = 05.31 m²
7) 8.125 X 3.95 = 32.09 m²
8) 2.65 X 1.50 = 03.98 m²
9) 4.10 X 2.10 = 08.61 m²

AREA OF ONE FLAT = 127.43 m²

TOTAL AREA OF FLAT- 89 + 92
127.43 X 2 = 254.86 m²

AREA FLAT- 90 + 91

1) 6.275 X 5.20 = 32.63 m²
2) 2.75 X 0.70 = 01.93 m²
3) 2.60 X 4.25 = 11.05 m²
4) 2.075 X 4.175 = 08.66 m²
5) 11.025 X 2.10 = 23.15 m²
6) 3.80 X 1.00 = 03.80 m²
7) 2.35 X 1.50 = 03.52 m²

AREA OF ONE FLAT = 84.74 m²

TOTAL AREA OF FLAT- 90 + 91
TOTAL AREA OF 16TH FLOOR = 169.48 m²

TOTAL AREA OF FLAT 89 + 90 + 91 + 92
254.86 + 169.48 = 424.34 m²
(12.218 %)

TOTAL AREA OF 02 (16 + 17) FLOORS
424.34 X 02 = 848.68 m²
(24.43 %)

ALLOWED LOBBY AREA = 63.65 m²

LOBBY
A) 7.05 X 2.80 = 19.74 m²

TOTAL AREA = 42.21 m²

B) 5.35 X 2.10 X 2 = 22.47 m²
(09.95 %)

LIFTS
L1) 7.40 X 3.10 = 22.94 m²

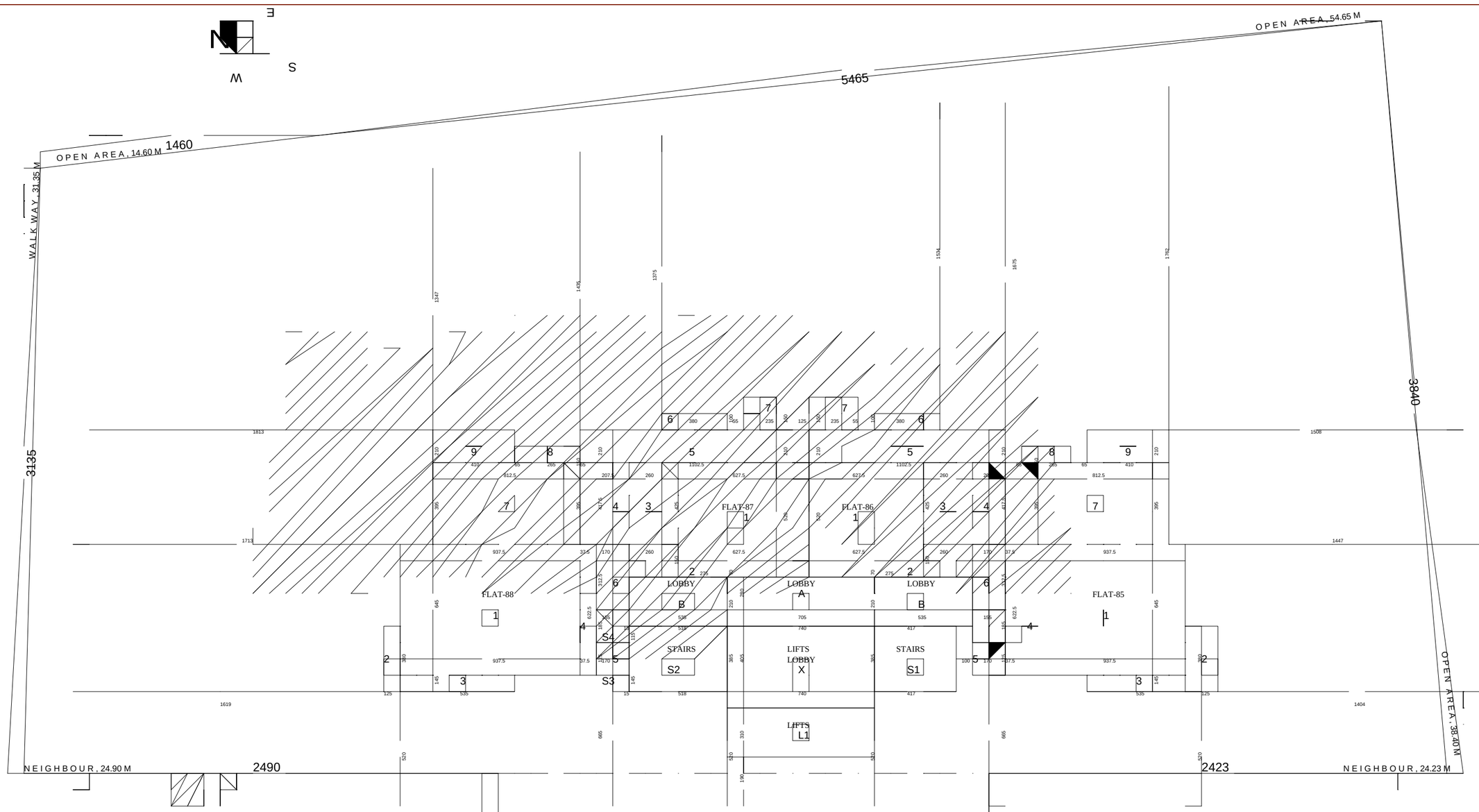
TOTAL AREA = 22.94 m²

LIFTS LOBBY
X) 7.40 X 4.05 = 29.97 m²

TOTAL AREA = 29.97 m²

STAIRS
S1) 5.13 X 3.85 = 19.75 m²
S2) 5.13 X 3.85 = 19.75 m²
S3) 0.15 X 1.45 = 00.22 m²
S4) 0.15 X 1.15 = 00.17 m²

TOTAL AREA = 56.38 m²



15th FLOOR AREA

SCALE ------- 1/100

AREA FLAT- 85 + 88

1)	9.375	X	6.45	=	60.47	m²
2)	1.25	X	3.80	=	04.75	m²
3)	5.35	X	1.45	=	07.76	m²
4)	0.375	X	6.225	=	02.33	m²
5)	1.70	X	1.25	=	02.13	m²
6)	1.70	X	3.125	=	05.31	m²
7)	8.125	X	3.95	=	32.09	m²
8)	2.65	X	1.50	=	03.98	m²
9)	4.10	X	2.10	=	08.61	m²

AREA OF ONE FLAT = 127.43 m²

TOTAL AREA OF FLAT- 85 + 88

127.43 X 2 = 254.86 m²

AREA FLAT- 86 + 87

1)	6.275	X	5.20	=	32.63	m²
2)	2.75	X	0.70	=	01.93	m²
3)	2.60	X	4.25	=	11.05	m²
4)	2.075	X	4.175	=	08.66	m²
5)	11.025	X	2.10	=	23.15	m²
6)	3.80	X	1.00	=	03.80	m²
7)	2.35	X	1.50	=	03.52	m²

AREA OF ONE FLAT = 84.74 m²

TOTAL AREA OF FLAT- 86 + 87

TOTAL AREA OF 15TH FLOOR 84.74 X 2 = 169.48 m²

TOTAL AREA OF FLAT 85 + 86 + 87 + 88

254.86 + 169.48 = 424.34 m²

(12.22 %)

ALLOWED LOBBY AREA = 63.65 m²

LOBBY

A)	7.05	X	2.80	=	19.74	m²

TOTAL AREA = 42.21 m²

B)	5.35	X	2.10	X 2	22.47	m²

(09.95 %)

LIFTS

L1)	7.40	X	3.10	=	22.94	m²

TOTAL AREA = 22.94 m²

X)	7.40	X	4.05	=	29.97	m²

TOTAL AREA = 29.97 m²

STAIRS

S1)	4.17	X	3.85	=	16.05	m²
S2)	5.18	X	3.85	=	19.94	m²
S3)	0.15	X	1.45	=	00.22	m²
S4)	0.15	X	1.15	=	00.17	m²

TOTAL AREA = 36.38 m²

STAIRS & MECH

EXISTING AREA

AREA OF ROOF

= 54.38 m²

=

TOTAL AREA 54.38 m²

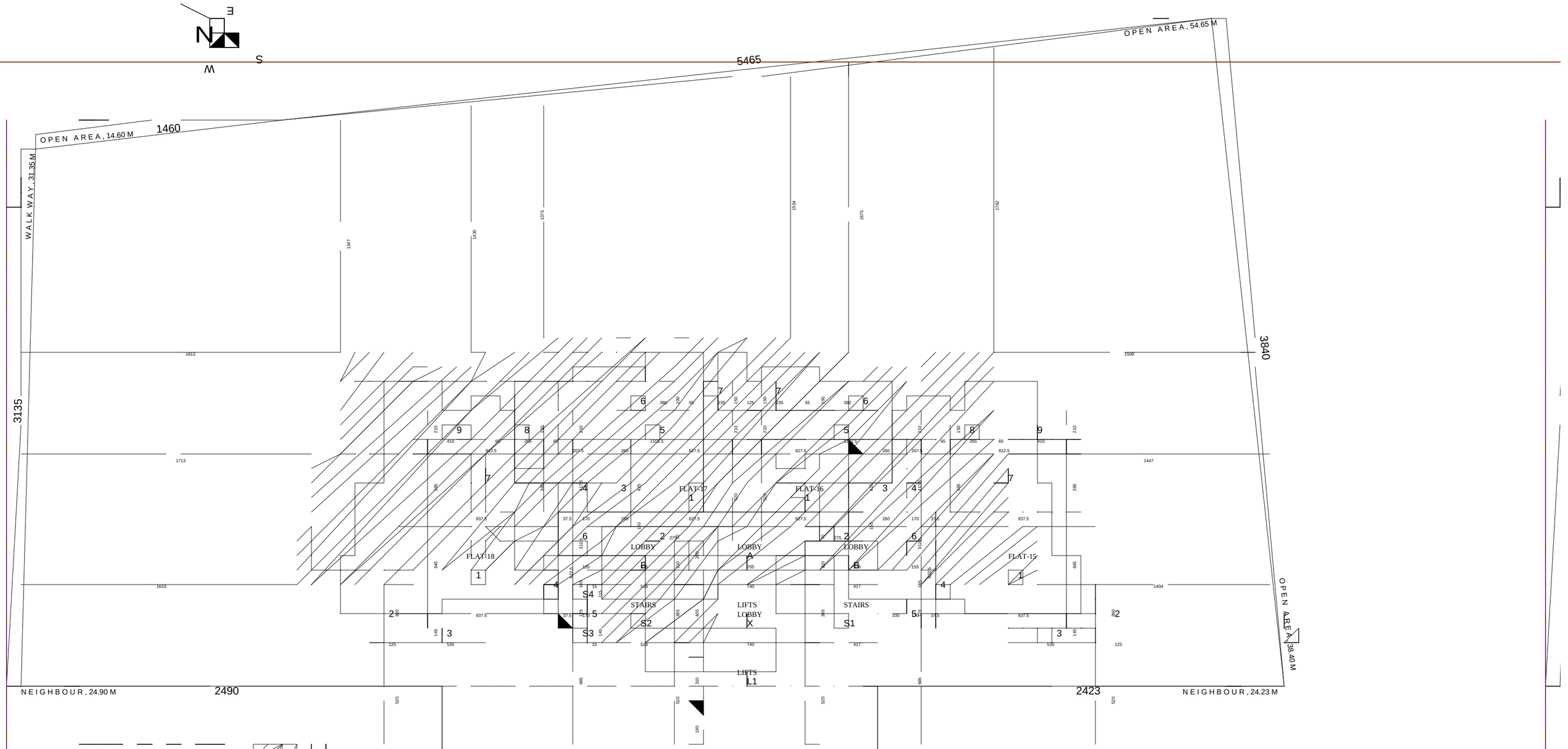
(01.56 %)

NEIGHBOUR, 40.00 M

NEIGHBOUR, 40.00 M

S \ S T R E E T, 25.00 M

2500



TYPICAL FLOOR AREA

SCALE ------- 1/100 (3---14 FL.)

AREA FLAT- 15 + 18

1) 9.375 X 6.45 = 60.47 m²
2) 1.25 X 3.80 = 04.75 m²
3) 5.35 X 1.45 = 07.76 m²
4) 0.375 X 6.225 = 02.33 m²
5) 1.70 X 1.25 = 02.13 m²
6) 17.43 X 8.125 = 141.63 m²
7) 8.125 X 3.95 = 32.09 m²
8) 2.65 X 1.50 = 03.98 m²
9) 4.10 X 2.10 = 08.61 m²

AREA OF ONE FLAT = 127.43 m²

TOTAL AREA OF FLAT- 15 + 18

127.43 X 2 = 254.86 m²

AREA FLAT- 16 + 17

1) 6.275 X 5.20 = 32.63 m²
2) 2.75 X 0.70 = 01.93 m²
3) 2.60 X 4.25 = 11.05 m²
4) 2.075 X 4.175 = 08.66 m²
5) 11.025 X 2.10 = 23.15 m²
6) 3.80 X 1.00 = 03.80 m
7) 2.35 X 1.50 = 03.52 m²

AREA OF ONE FLAT = 84.74 m²

TOTAL AREA OF 3RD FLOOR

TOTAL AREA OF FLAT 15 + 18 + TOTAL AREA OF FLAT- 16 + 17

254.86 + 169.48 = 424.34 m²

(12.218 %)

TOTAL AREA OF 12 (3---14) FLOORS

424.34 X 12 = 5092.08 m²

(146.62 %)

ALLOWED LOBBY AREA = 63.65 m²

LOBBY

A) 7.05 X 2.80 = 19.74 m²

TOTAL AREA = 42.21 m²

(09.95 %)

LIFTS

L1) 7.40 X 3.10 = 22.94 m²

TOTAL AREA = 22.94 m²

B) 5.35 X 2.10 X 2 = 22.47 m²

X) 4.17 X 4.05 = 29.97 m²

TOTAL AREA = 29.97 m²

S1)

S2) 5.18 X 3.85 = 19.94 m²

S3) 0.15 X 1.45 = 00.22 m²

EXISTING AREA

AREA FLAT- 13 + 14

FLAT # 13 = 89.27 m²
FLAT # 14 = 89.27 m²

TOTAL AREA = 178.54 m²

(05.14 %)

TOTAL AREA OF 12 (3---14) FLOORS

178.54 X 12 = 2142.48 m²

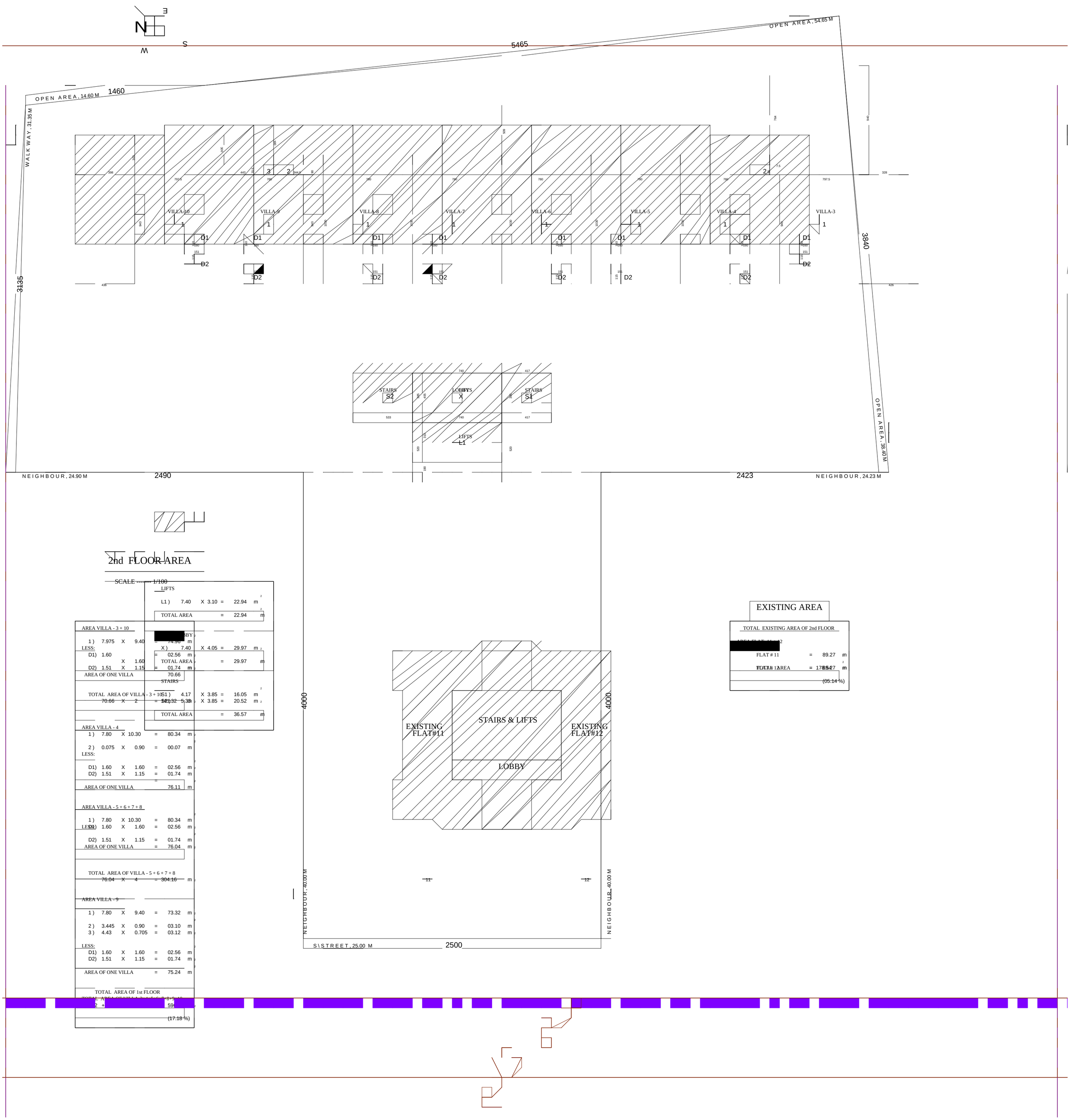
(61.69 %)

EXISTING FLAT#13

STAIRS & LIFTS

EXISTING FLAT#14

LOBBY



2nd FLOOR AREA

SCALE ------ 1/100

LIFTS

L1) 7.40 X 3.10 = 22.94 m²

TOTAL AREA = 22.94 m²

AREA VILLA - 3 + 10

[redacted]

1) 7.975 X 9.40 = 74.96 m²

LESS:

D1) 1.60 X 1.60 = 02.56 m²

D2) 1.51 X 1.15 = 01.74 m²

AREA OF ONE VILLA 70.66

TOTAL AREA OF VILLA - 3 + 10

70.66 X 2 = 141.32 m²

AREA VILLA - 4

1) 7.80 X 10.30 = 80.34 m²

2) 0.075 X 0.90 = 00.07 m²

LESS:

D1) 1.60 X 1.60 = 02.56 m²

D2) 1.51 X 1.15 = 01.74 m²

AREA OF ONE VILLA 76.11 m²

AREA VILLA - 5 + 6 + 7 + 8

1) 7.80 X 10.30 = 80.34 m²

LESS:

D1) 1.60 X 1.60 = 02.56 m²

D2) 1.51 X 1.15 = 01.74 m²

AREA OF ONE VILLA = 76.04 m²

TOTAL AREA OF VILLA - 5 + 6 + 7 + 8

76.04 X 4 = 304.16 m²

AREA VILLA - 9

1) 7.80 X 9.40 = 73.32 m²

2) 3.445 X 0.90 = 03.10 m²

3) 4.43 X 0.705 = 03.12 m²

LESS:

D1) 1.60 X 1.60 = 02.56 m²

D2) 1.51 X 1.15 = 01.74 m²

AREA OF ONE VILLA = 75.24 m²

TOTAL AREA OF 1st FLOOR

2 + 590

(17.18 %)

STAIRS

S1) 4.17 X 3.85 = 16.05 m²

X 3.85 = 20.52 m²

TOTAL AREA = 36.57 m²

EXISTING AREA

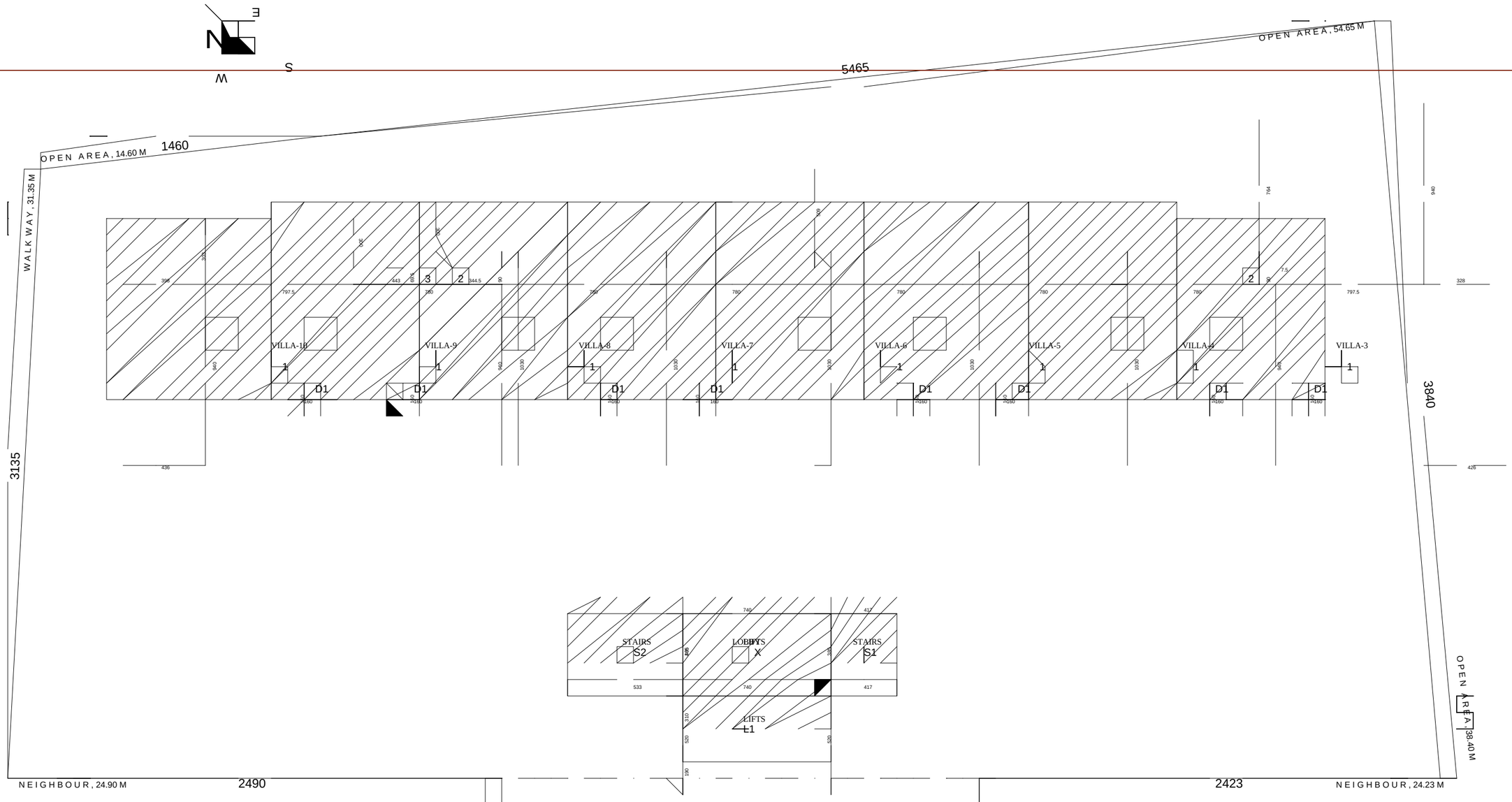
TOTAL EXISTING AREA OF 2nd FLOOR

[redacted]

FLAT # 11 = 89.27 m²

TOTAL AREA = 178.54 m²

(05.14 %)



1st FLOOR AREA

SCALE ------- 1/100

LIFTS

L1) 7.40 X 3.10 = 22.94 m²

TOTAL AREA = 22.94 m²

AREA VILLA - 3 + 10

1) 7.975 X 9.40 = 74.96 m²

LESS:

D1) 1.60 X 1.60 = 02.56 m²

AREA OF ONE VILLA = 72.40 m²

TOTAL AREA OF VILLA - 3 + 10

72.40 X 2 = 144.80 m²

AREA VILLA - 4

1) 7.80 X 10.30 = 80.34 m²

2) 0.075 X 0.90 = 00.07 m²

LESS:

D1) 1.60 X 1.60 = 02.56 m²

AREA OF ONE VILLA = 77.85 m²

AREA VILLA - 5 + 6 + 7 + 8

1) 7.80 X 10.30 = 80.34 m²

LESS:

D1) 1.60 X 1.60 = 02.56 m²

AREA OF ONE VILLA = 77.78 m²

TOTAL AREA OF VILLA - 5 + 6 + 7 + 8

77.78 X 4 = 311.12 m²

AREA VILLA - 9

LESS:

D1) 1.60 X 1.60 = 02.56 m²

AREA OF ONE VILLA 2) = 76.98 m²

TOTAL AREA OF 1st FLOOR

TOTAL AREA OF VILLA-3+4+5+6+7+8+9+10

144.80 + 77.85 + 311.12 + 76.98 = 610.75 m²

(17.59 %)

STAIRS

S1) 5.33 X 3.85 = 20.52 m²

S2) 4.80 X 3.85 = 16.05 m²

TOTAL AREA = 36.57 m²

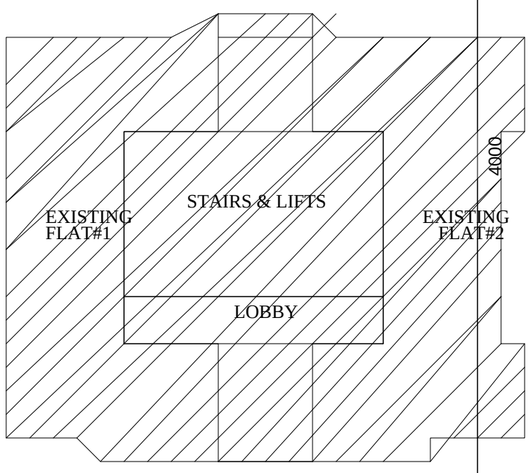
LIFTS & STAIRS

L1) 7.40 X 3.10 = 22.94 m²

S1) 5.33 X 3.85 = 20.52 m²

S2) 4.80 X 3.85 = 16.05 m²

TOTAL AREA = 59.51 m²



EXISTING AREA

TOTAL EXISTING AREA OF 1st FLOOR

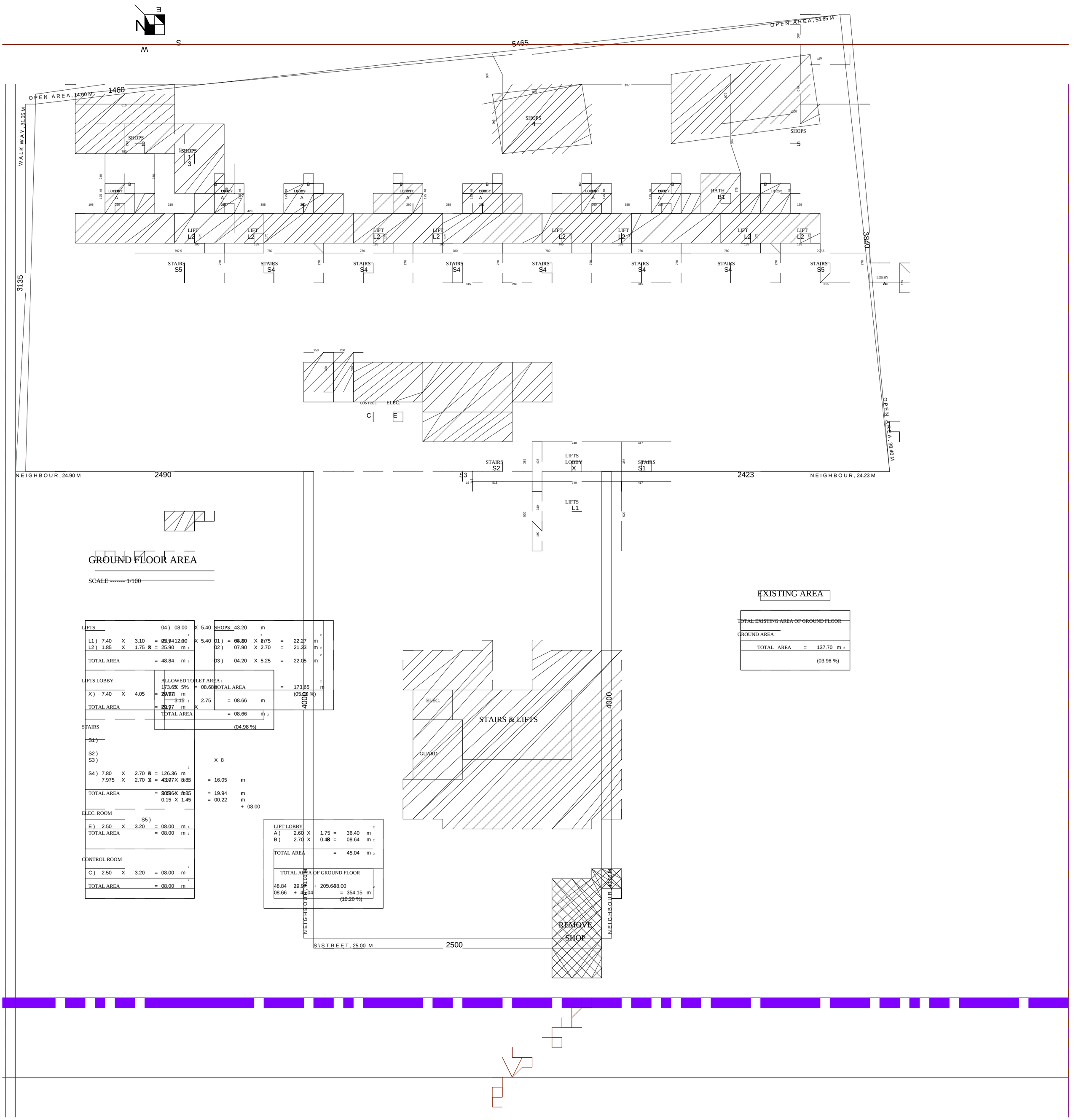
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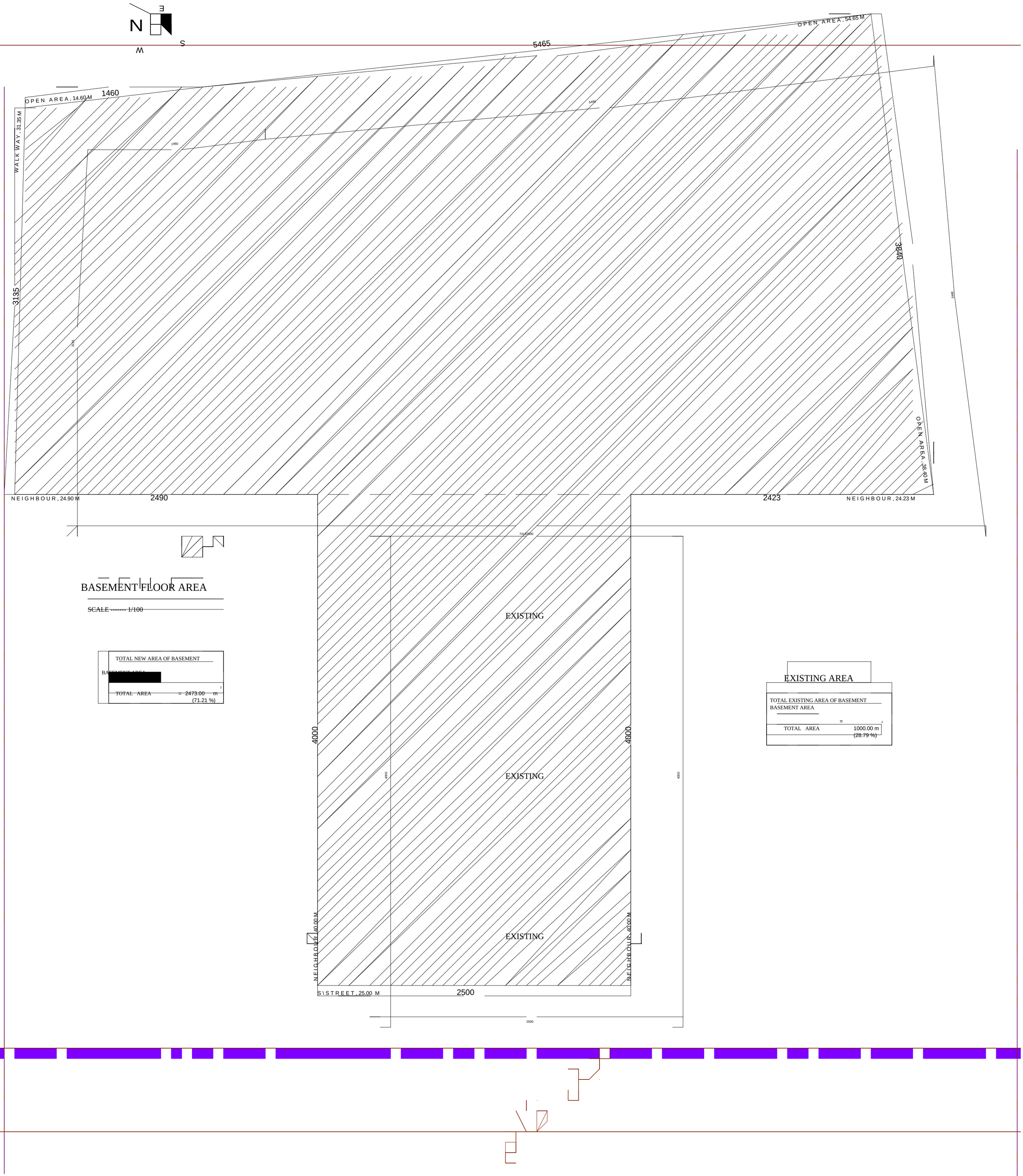
FLAT # 1 = 89.27 m²

FLAT # 2 AREA = 178.54 m²

TOTAL = 267.81 m²

(05.14 %)


N
E
S
W
5465
OPEN AREA, 54.65 M
OPEN AREA, 14.60 M
1460
WALK WAY, 31.35 M
3135
3840
SHOPS 2
SHOPS 1 3
SHOPS 4
SHOPS 5
BATH B1
LIFT L2
LOBBY
STAIRS S5
STAIRS S4
CONTROL
ELEC.
C
E
OPEN AREA, 38.40 M
NEIGHBOUR, 24.90 M
2490
S3
STAIRS S2
LIFTS LOBBY X
STAIRS S1
2423
NEIGHBOUR, 24.23 M
LIFTS L1
GROUND FLOOR AREA
SCALE ------- 1/100
LIFTS
04) 08.00 X 5.40 = 43.20 m2
L1) 7.40 X 3.10 = 22.94 m2
L2) 1.85 X 1.75 X 8 = 25.90 m2
TOTAL AREA = 48.84 m2
LIFTS LOBBY
X) 7.40 X 4.05 = 29.97 m2
TOTAL AREA = 29.97 m2
STAIRS
S1)
S2)
S3) X 8
S4) 7.80 X 2.70 X 6 = 126.36 m2
7.975 X 2.70 X 2 = 43.07 m2
TOTAL AREA = 169.43 m2
ELEC. ROOM
S5)
E) 2.50 X 3.20 = 08.00 m2
TOTAL AREA = 08.00 m2
CONTROL ROOM
C) 2.50 X 3.20 = 08.00 m2
TOTAL AREA = 08.00 m2
ALLOWED TOILET AREA
173.65 X 5% = 08.68 m2
SHOPS
01) 08.80 X 2.75 = 22.27 m2
02) 07.90 X 2.70 = 21.33 m2
03) 04.20 X 5.25 = 22.05 m2
TOTAL AREA = 173.65 m2 (05.00 %)
TOTAL AREA = 08.66 m2
(04.98 %)
0.15 X 1.45 = 00.22 m2
+ 08.00
LIFT LOBBY
A) 2.60 X 1.75 = 36.40 m2
B) 2.70 X 0.48 = 08.64 m2
TOTAL AREA = 45.04 m2
TOTAL AREA OF GROUND FLOOR
48.84 + 29.97 + 205.64 + 08.00
08.66 + 45.04 = 354.15 m2
(10.20 %)
4000
ELEC.
STAIRS & LIFTS
GUARD
REMOVE SHOP
NEIGHBOUR, 40.00 M
NEIGHBOUR, 40.00 M
STREET, 25.00 M
2500
EXISTING AREA
TOTAL EXISTING AREA OF GROUND FLOOR
GROUND AREA
TOTAL AREA = 137.70 m2
(03.96 %)



BASEMENT FLOOR AREA

SCALE ------- 1/100

TOTAL NEW AREA OF BASEMENT

BASEMENT AREA

TOTAL AREA = 2473.00 m²
(71.21 %)

EXISTING AREA

TOTAL EXISTING AREA OF BASEMENT
BASEMENT AREA

=

TOTAL AREA 1000.00 m²
(28.79 %)

رخصـــه إطفـــاء للمشـــاريع

رقم الملف	٢٠٧٠١٠٢٥٧	الاستعلال	م/٢٠٦٣٢	مبانى مكتب - سكن استثمارى	
رقم الموافقه	٢٠٧١٠٠٤٩٨	صاحب العلاقة	٢٠٠٧-١٢-٣١	سعود مصطفى درويش الدوباس	
العنـــوان	الشعب - قطعه (٨) - شارع (.) - قسيمه (١٢)				
نوع المعـــامله	طلب الموافقة على مخططات مشاريع المباني الجديدة				
مساحه القسيمـــه	١٠٠٠	المســـاحه الكليه للبنـــاء	٤٩١٠	ارتفاع المبنى	١٣,٨
مكتب الاستشارى	مكتب استشارى				
عـــدد الادوار	ســـرداب - ارضـــى - ميزانين - ١٤ متكرر - ســـطح				
مواصفـــات الهيـــكل الانشـــائى	خرسانه مسلحه				

* أنظمة وشروط مكافحة وإنذار الحريق والخدمات الهندسية المطلوب تنفيذها

م	النوع	الموقع و الإستعمال
١	شبكه فوهات حريق داخليه حائريه	جميع اجزاء المبنى
٢	شبكه سرشات مياه تلقائيه	جميع اجزاء المبنى
٣	تنفيذ مدرسه تثقيفيه المعتمده بتاريخ (٢٨-١-٢٠٠٨)	
٤	نظام بوابه صعود الهواء	الادراج و المصاعد
٥	نظام إنذار حريق يدوى	جميع اجزاء المبنى
٦	نظام إنذار الكتروني	السرداب و المرزع و الادراج و غرفه الحارس و غرفه الكهرباء
٧	نظام إنذار يدوى تلقائى للمخارج	السرداب و المرزع و الادراج
٨	جهاز مفتوح لحريق لغاز لنظام (FD)	كما جاء بمخطط الاطفاء
٩	تجهيز مولد كهربائى	لتشغيل معدات الاطفاء والمصاعد
١٠	تركيب وحدات الانذار	جميع ادوار المبنى
١١	معدات حريق يدويه نوعه ABC وعددهن لايقل عدد (٤) بعد (٦ ك)	جميع الادوار
١٢	تنفيذ مخططات تنفيذيه و يكون وحدات مخططات سبرنكلر و الانذار	من شركه معتمده لدى الاطفاء
١٣	تنفيذ وتجهيز معدات حريق و الانذار و وحدات هندسيه ويحدد فى مخطط	من شركه معتمده لدى الاطفاء
١٤	تجهيز معدات مكافحة حريق مؤقت اثناء مرحلة البناء و حسب موافقة الاطفاء قبل التنفيذ	

نائب المدير العام لشئون الوقاية

العقيد

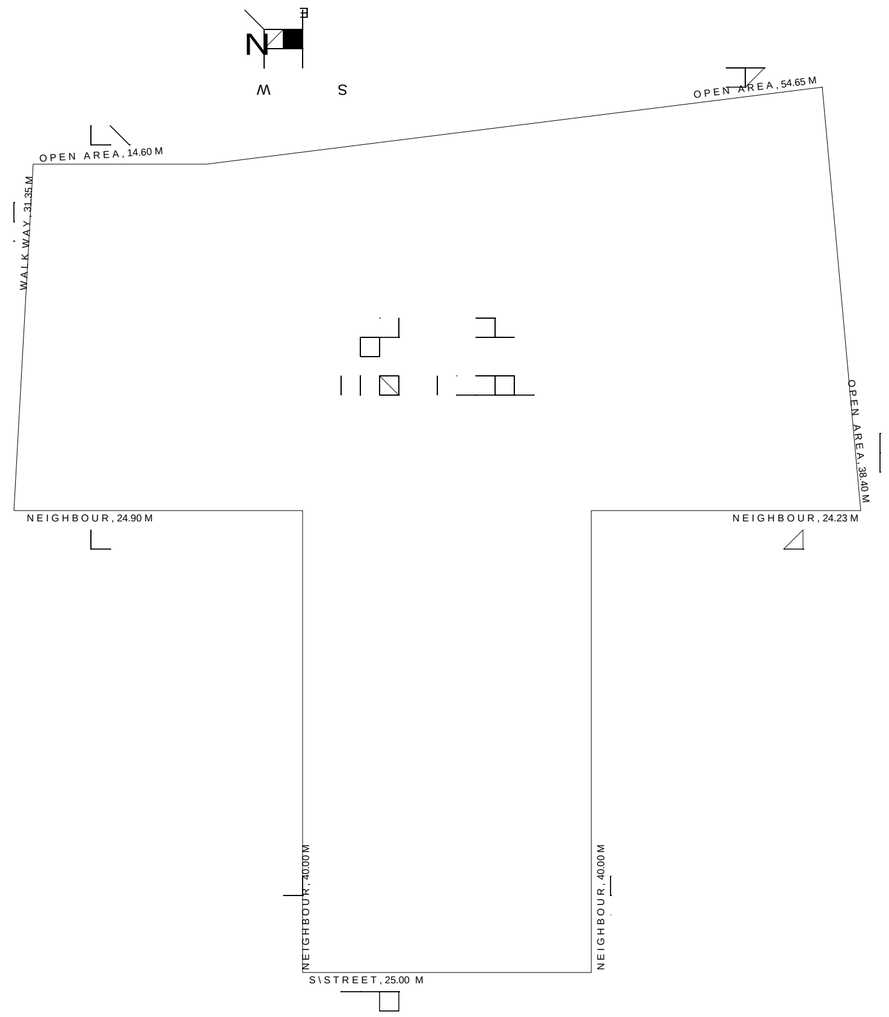
نائب المدير العام لشئون الوقاية

إدارة نظم المستندات

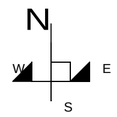
	3.00 M	3473.00 M2	3473.00	M2
	3.00 M	491.85 M2	491.85	M2
	3.00 M	878.77 M2	878.77	M2
	3.00 M	864.85 M2	864.85	M2
	4.00 M	8812.56 M2	734.38 x 12	3 - to - 14
	4.00 M	610.22 M2	610.22	M2
	4.00 M	1111.68 M2	555.84 x 2	16 - to - 17
	4.00 M	308.13 M2	308.13	M2
	3.00 M	89.48 M2	89.48	M2
16640.54 M2				
76.65 M				



SCALE ------- 1/500



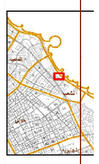
SCALE ------- 1/200



بلدية الكويت

إدارة المساحة - مراقبة المعلومات المساحية





22050005201

147+12

1:1,12

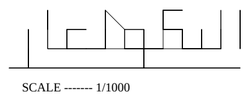
ملاحظات

م / 31545 نتجت عن دمج القسائم أرقام (120+147) الى قسيمة واحدة رقم (150) وذلك بموجب شهادة الأوصاف رقم DET0085312024 بتاريخ 2024/5/11 وكتاب إدارة التنظيم العمراني رقم INT-77-6707-2024-00104 المؤرخ في 2024/5/8 ودفتر المهمات رقم 2024/5 ص 23+24 بتاريخ 2024/5/28

وصف القطعة:

م/32821 هو مخطط تقسيم للمخطط م/5565 & المخطط م/33874 عبارة عن تقسيم القسائم 2ا ، 1/ب2 ، 2/ب من المخطط م/24851ا & تعتمد القطعة بمسمى الشعب قطعة (3) بموجب كتاب ادارة التنظيم رقم (854) بتاريخ 2018/1/23

م	31545
مساحتها	3473 م
تاريخ الطبع:	2024/06/10



SCALE ------- 1/1000

BLOCK NO.

PAGE NO.

1-150

RESIDUAL...
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