

DESIGN OF SEPTIC TANK WITH UPFLOW FILTER

COMMERCIAL AREA = 1596.76

EQUIVALENT DWELLING UNIT = 1696.76/50 = 31.93 NOS. SAY 32 NOS.

NO OF USERS = 32 X 5 = 160 NOS.

FIXTURE UNIT PER DWELLING = 2 X 32 = 64 NOS.

TOTAL NO OF FIXTURE UNIT = 2 X 32 = 64 NOS.

ASSUME A PEAK FACTOR OF 6LPM/FIXTURE UNIT SEPTIC TANK

SURFACE AREA REQUIRED = $320 \times 0.92 = 294.4M^2$

VOLUME OF FREE BOARD = $29.44 \times 0.30 = 8.83M^3$

VOLUME OF SEDIMENTATION = $29.44 \times 0.30 = 8.83M^3$

VOLUME OF DIGESTION = $160 \times 0.030 = 4.80M^3$

VOLUME OF SLUDGE = $160 \times 360 \times 0.0002 = 11.66M^3$

TOTAL VOLUME = $34.14M^3$

DEPTH OF SEPTIC TANK $34.14/29.44 = 1.16$

PROVIDING L X B = 2.51

SIZE OF SEPTIC TANK = $5.55M \times 2.54 \times 1.44$

UPFLOW FILTER

CAPACITY PEAK GRAVITY = $32 \times 0.045 = 1.44M^3$

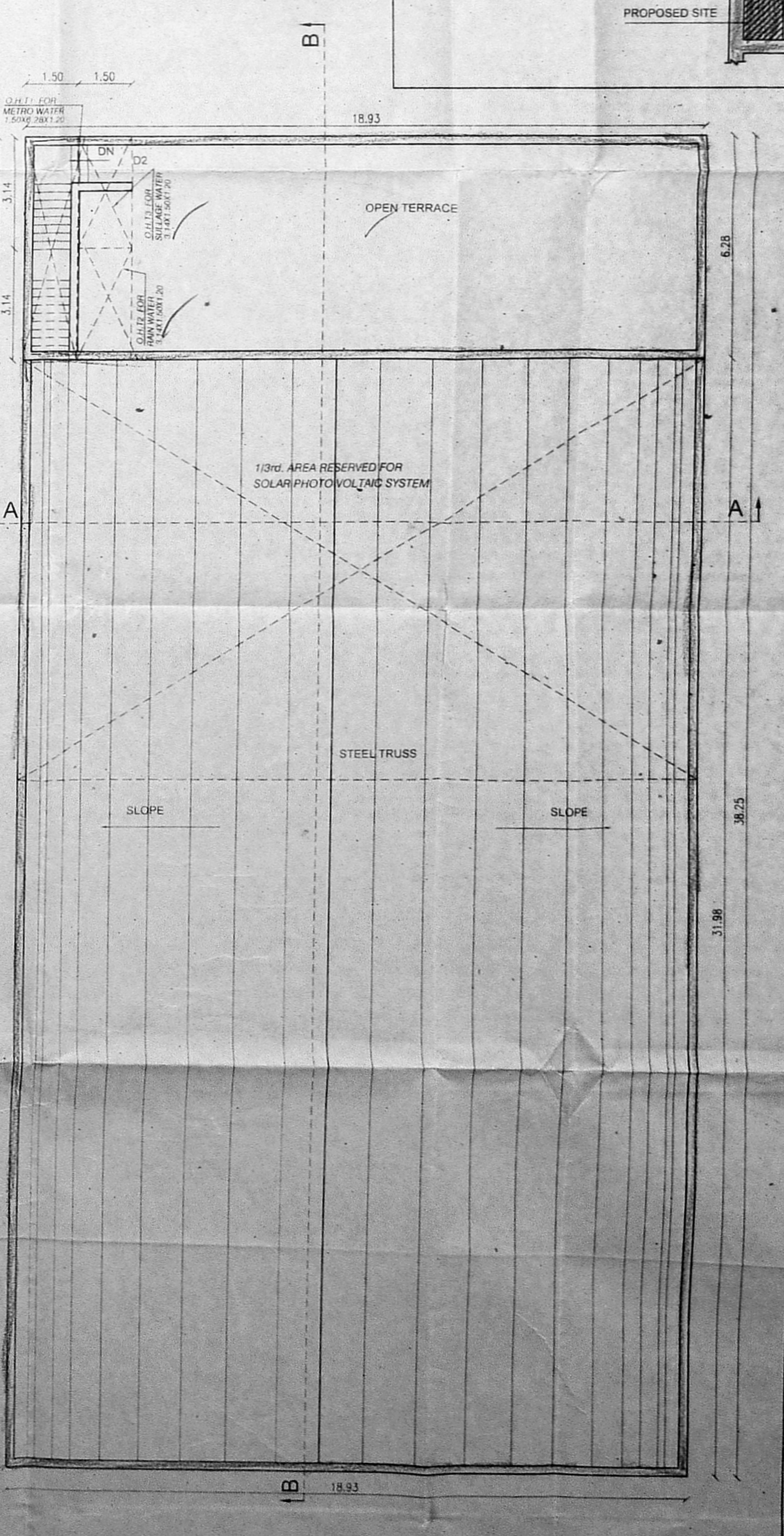
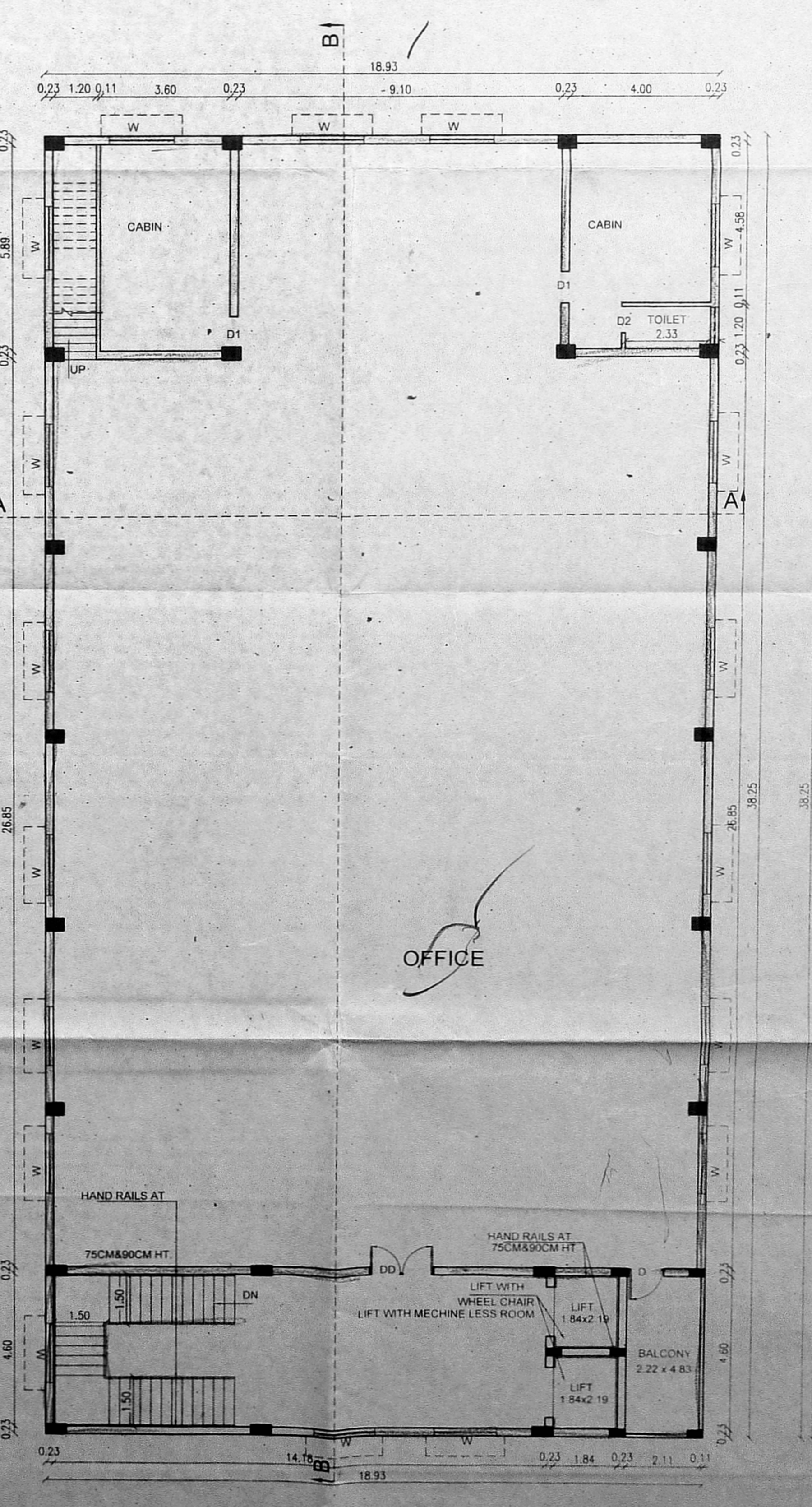
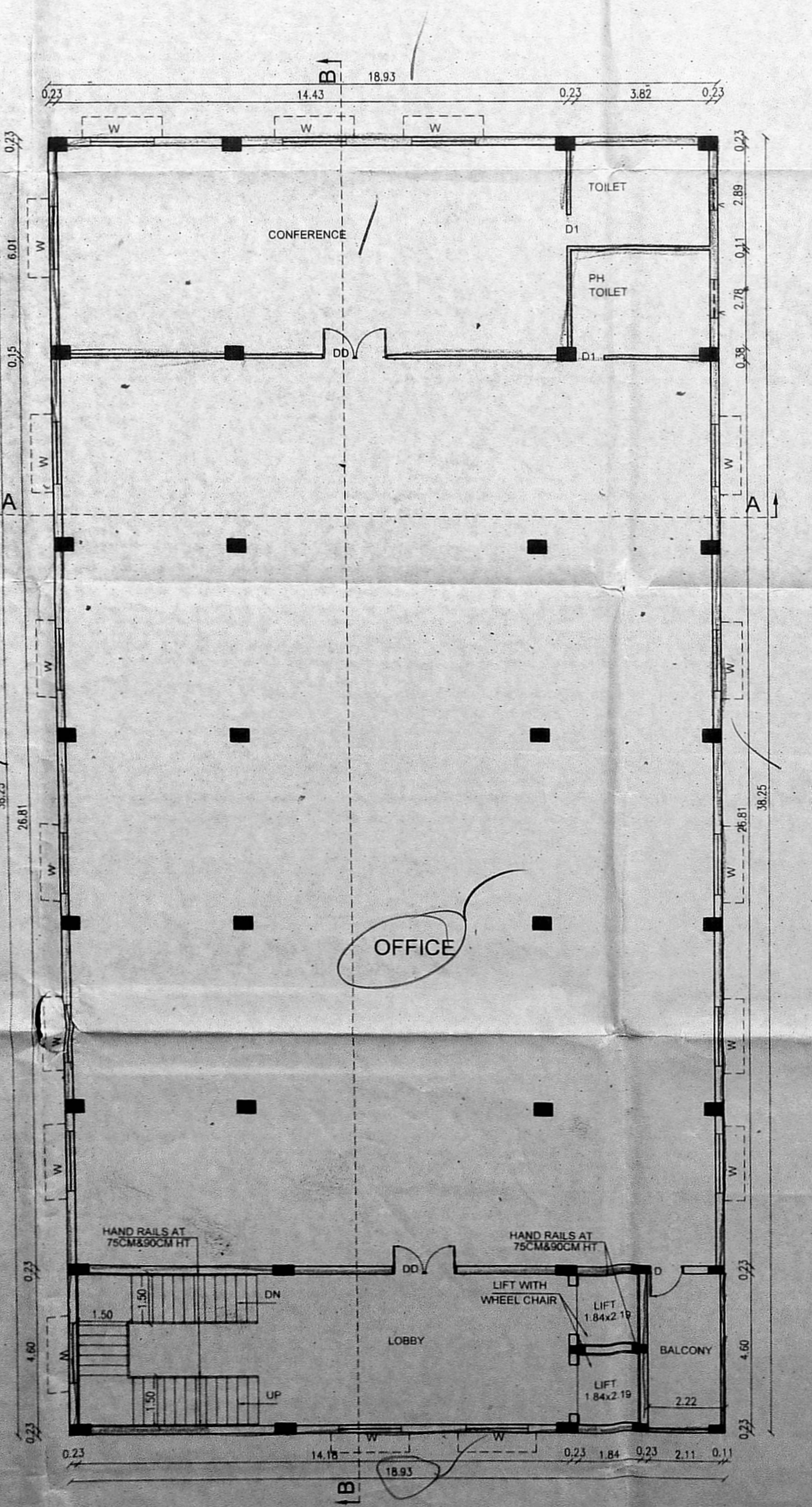
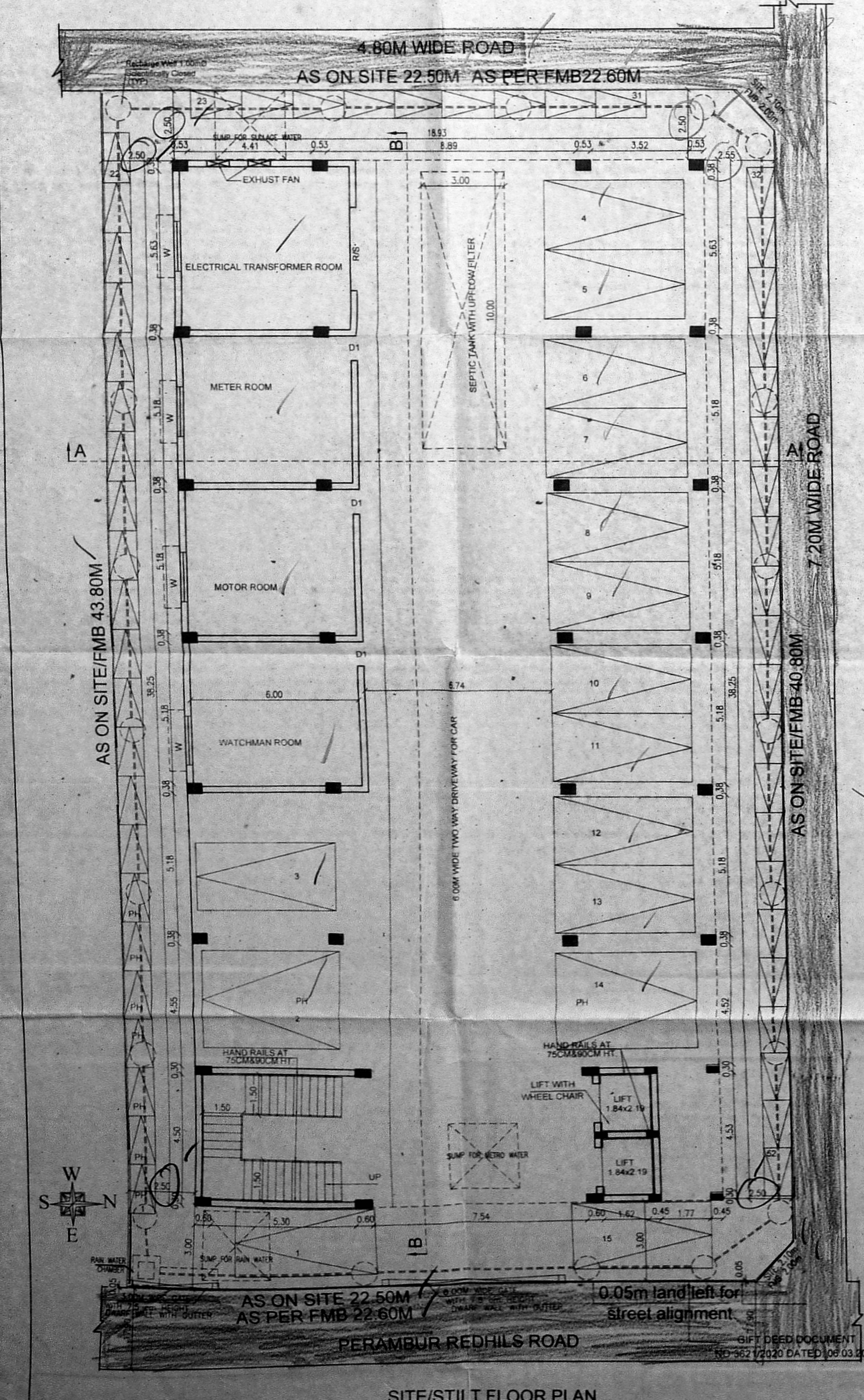
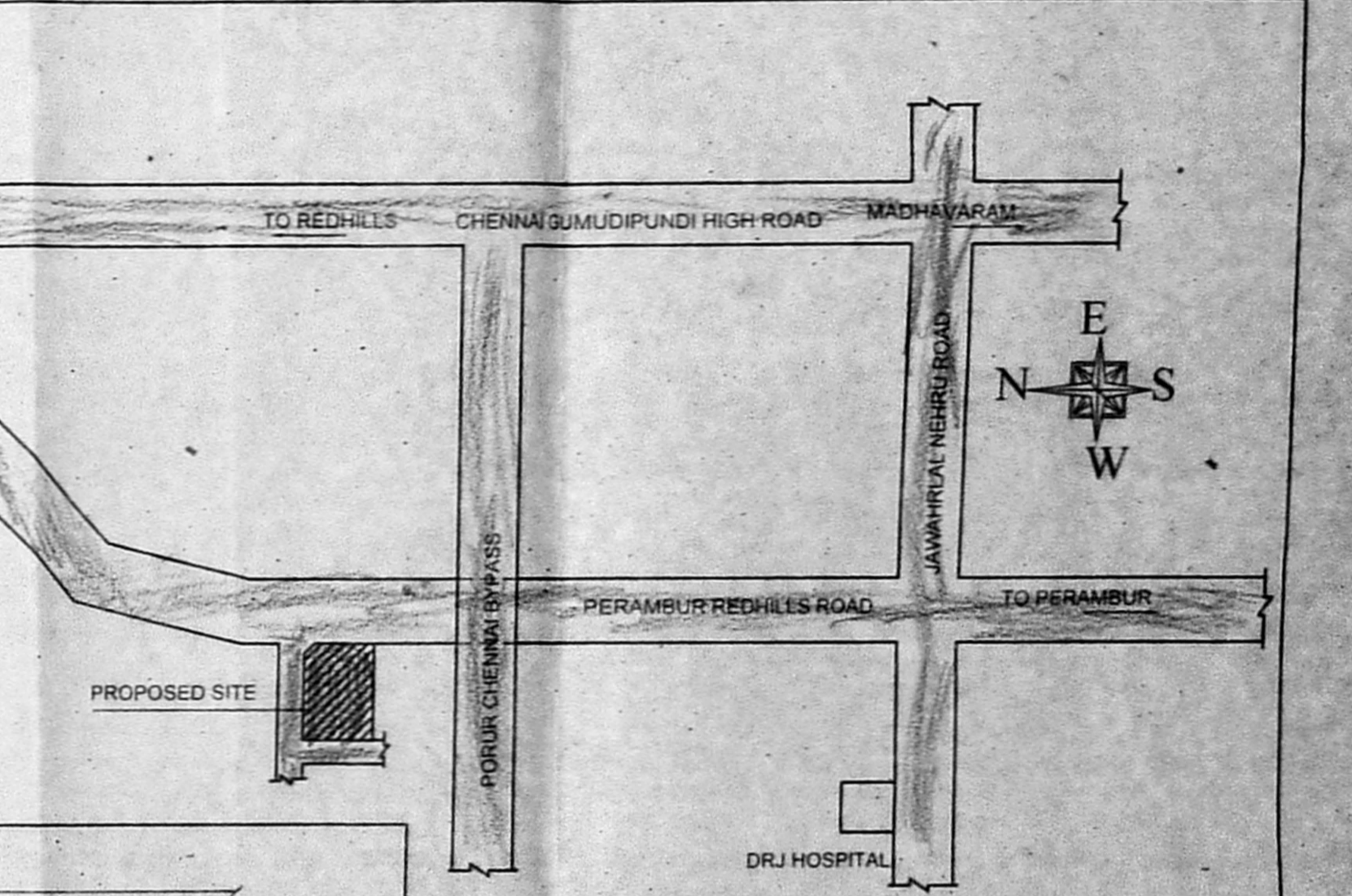
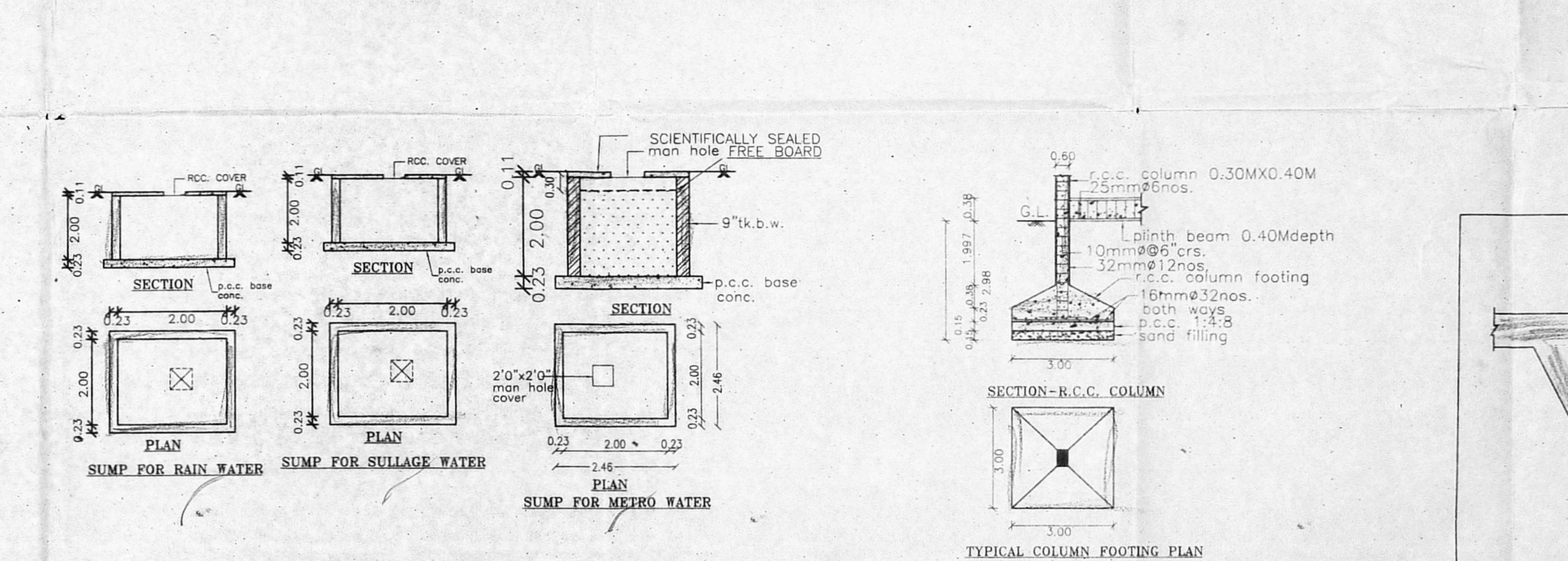
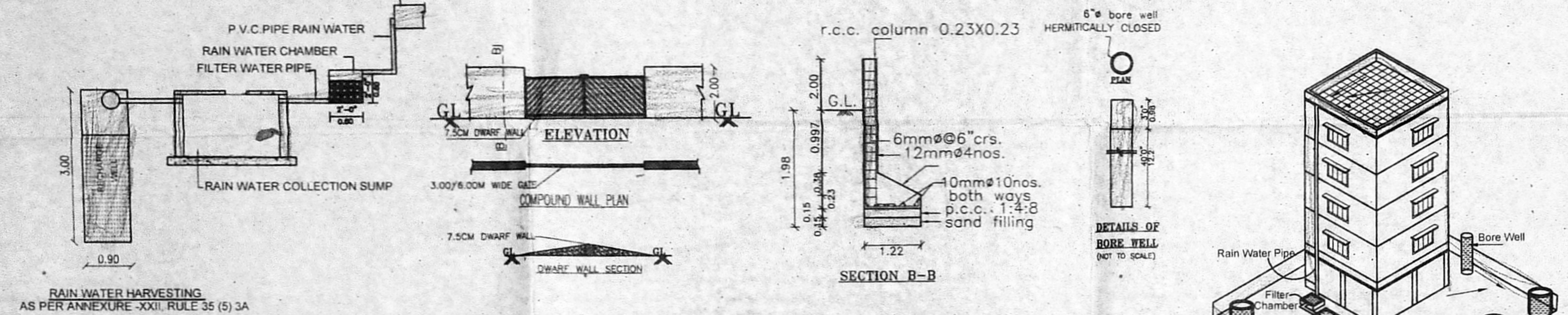
ASSUME DEPTH = 0.60M

HENCE AREA OF FINAL EFFLUENT SUMP = $1.96/0.80 = 2.48M^2$

SIZE OF FINAL EFFLUENT SUMP = $2.54 \times 1.04 \times 0.80M$

SIZE OF UPFLOW FILTER-1 = $2.54 \times 1.07 \times 1.30M$

SIZE OF UPFLOW FILTER-2 = $2.54 \times 1.07 \times 1.30M$



KEY-PLAN

NOT TO SCALE

AREA STATEMENT IN SQ.M

PLOT EXTENT (DOC)	1014.31
PLOT EXTENT (PATT)	1014.00
FLOOR	FLOOR AREA
STILT FLOOR	148.64
FIRST FLOOR	724.07
SECOND FLOOR	724.07
TOTAL	1596.76

F.S.I = 1.575

CAR PARKING PROVIDED : 15 NOS.

TW PARKING PROVIDED : 52 NOS.

LAND LEFT FOR STREET ALIGNMENT = 1.13 SQ.M

COLOUR INDEX

PROPOSED ROAD BOUNDARY

SCALE : 1:100

SCHEDULE OF JOINERY

D0 DOOR	-	1.50X2.13
D1 DOOR	-	0.90X2.13
D2 DOOR	-	0.76X2.13
W WINDOW	-	1.80X1.22
V VENTILATOR	-	0.90X0.60

PLAN SHOWING THE PROPOSED CONSTRUCTION OF STILT FLOOR + 2 FLOORS OFFICE (COMMERCIAL BUILDING) AT COMMERCIAL II PLOT AS APPROVED LAYOUT NO.PPD.LO.NO.34/2018 PERAMBUR REDHILLS ROAD COMPRISED IN S.NO.6/2B2, SOWMIYA NAGAR (AS PER DOC.S.NO.6/114 (AS PER PATT)) OF KATHIRVEDU VILLAGE MADHAVARAM TALUK, CHENNAI. GRATER CHENNAI CORPORATION. ZONE-3 DIVISION-25

ALL MEASUREMENTS ARE IN METRES

REGISTERED ARCHITECT
REGISTERED ENGINEER

REGISTERED STRUCTURAL ENGINEER

OWNERS SIGNATURE