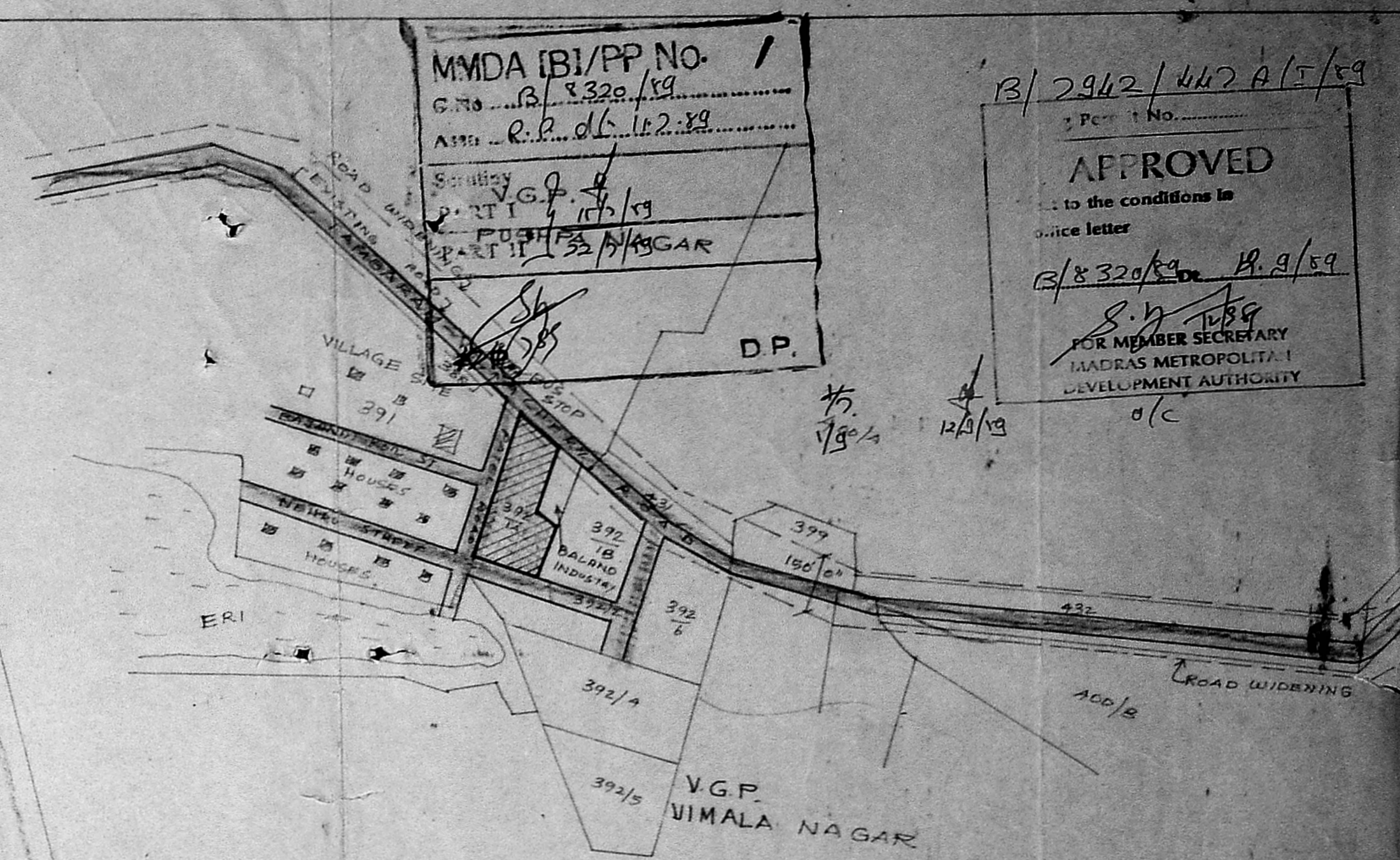


MMDA (B)/PP NO. 1
 G.No. B 332/89
 Area 0.26.16.2.89
 Survey V.G.P. 4
 P. RTI 10/1/89
 PART I 33/8/1989
 D.P.
 13/2942/442 A/T/89
 Part No. _____
APPROVED
 to the conditions in
 notice letter
 B/8320/89 B.A./89
 S. H. 189
 FOR MEMBER SECRETARY
 MADRAS METROPOLITAN
 DEVELOPMENT AUTHORITY
 o/c



KEY PLAN
 (NOT TO SCALE)

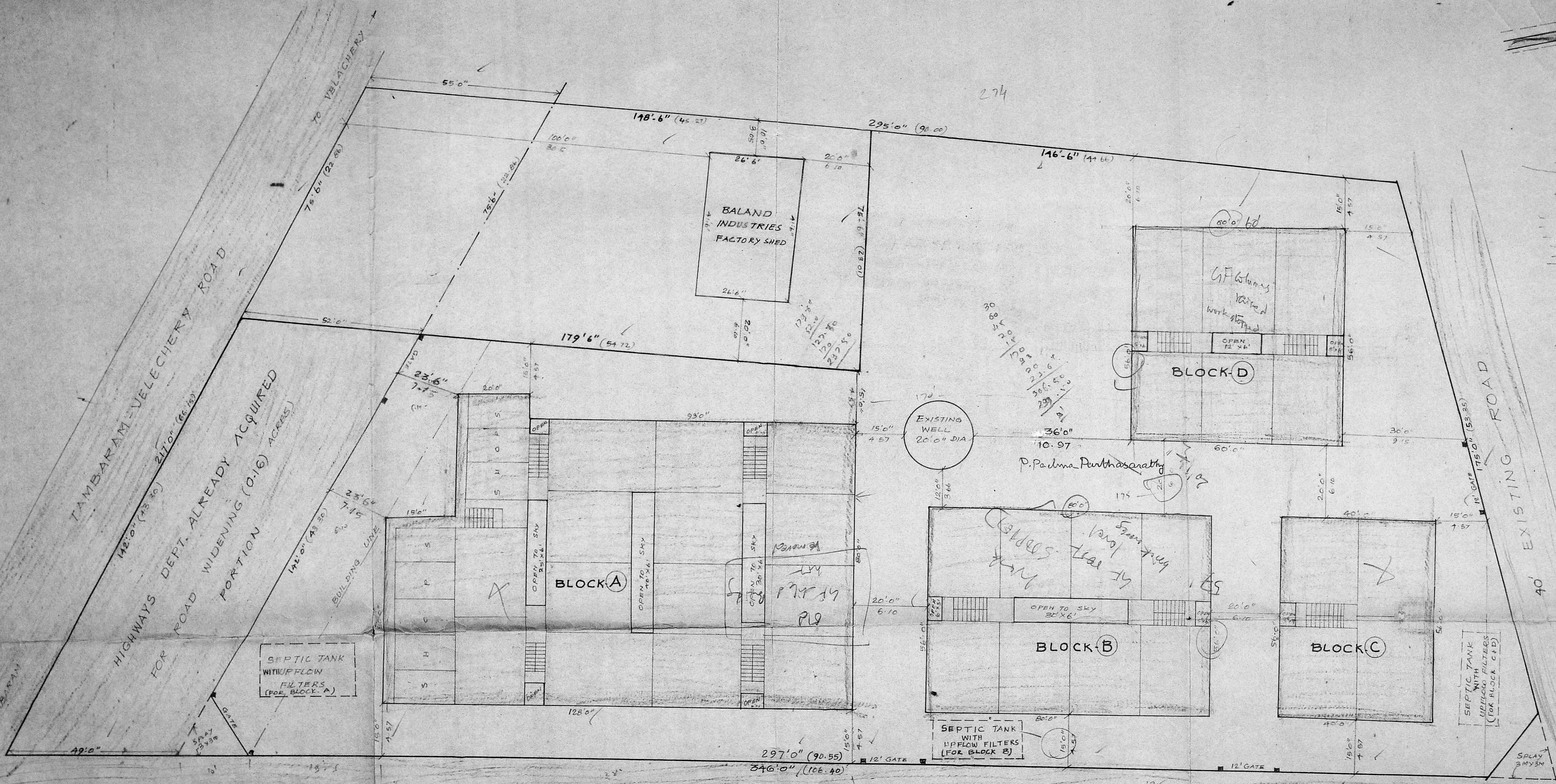
PLAN SHOWING THE PROPOSED CONSTRUCTION OF SHOPS & RESIDENTIAL FLATS AT DOOR NO. 160/3, VELECHERY MAIN ROAD, IN R.S. NO. 392/IA OF MEDAVAKKAM VILLAGE, SAIDAPET TALUK, CHINGLEPUT DISTRICT.

PROPOSED SITE UNDER REFERENCE: 106.43.46.360 430

PORTION ACQUIRED FOR ROAD WIDENING: 16.0 6970 64
 PORTION ALREADY DISPOSED OFF: 27.57 12000 1115
 TOTAL: 150 65340 6012

BLOCK	G. FLOOR	F. FLOOR	S. FLOOR	TOTAL
A. SHOPS	1440 SQFT	— SQFT	— SQFT	—
OFFICE	—	1680 SQFT	2800 SQFT	—
RESIDENCE	1750 SQFT	1950 SQFT	6750 SQFT	20450 SQFT
B. RESIDENCE	4240 SQFT	4240 SQFT	4240 SQFT	12720 SQFT
C. RESIDENCE	2205 SQFT	2205 SQFT	2205 SQFT	6615 SQFT
D. RESIDENCE	3228 SQFT	3228 SQFT	3228 SQFT	9684 SQFT
TOTAL				37450 SQFT

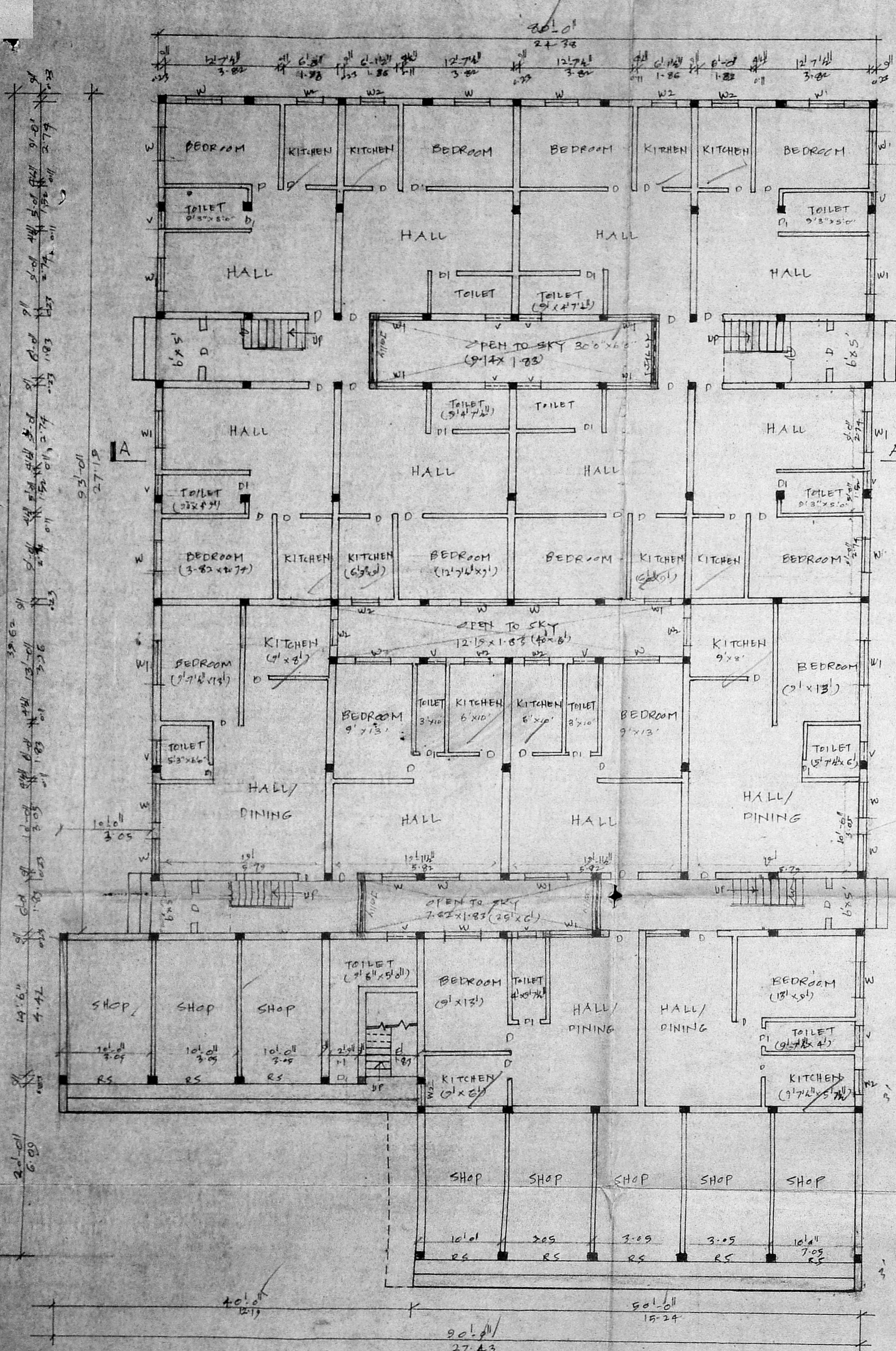
K. Venugopal
 K. VENUGOPAL
 CONSULTING CIVIL ENGINEER
 1320
 LICENSED SURVEYOR



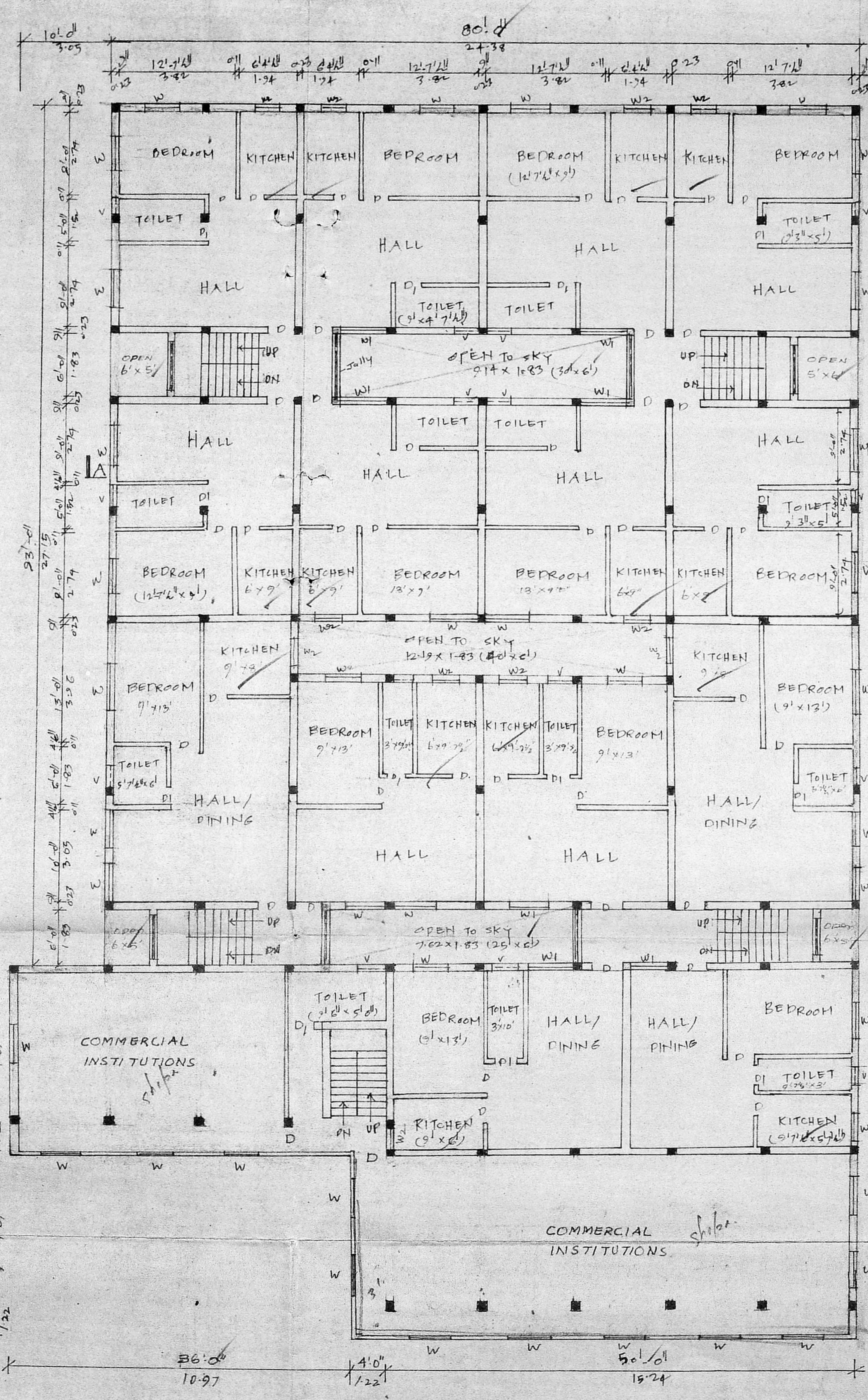
SITE PLAN
 SCALE: 1 INCH = 16' 0"

- PROPOSED SITE BOUNDARY
- PROPOSED CONSTRUCTIONS
- EXISTING ROADS

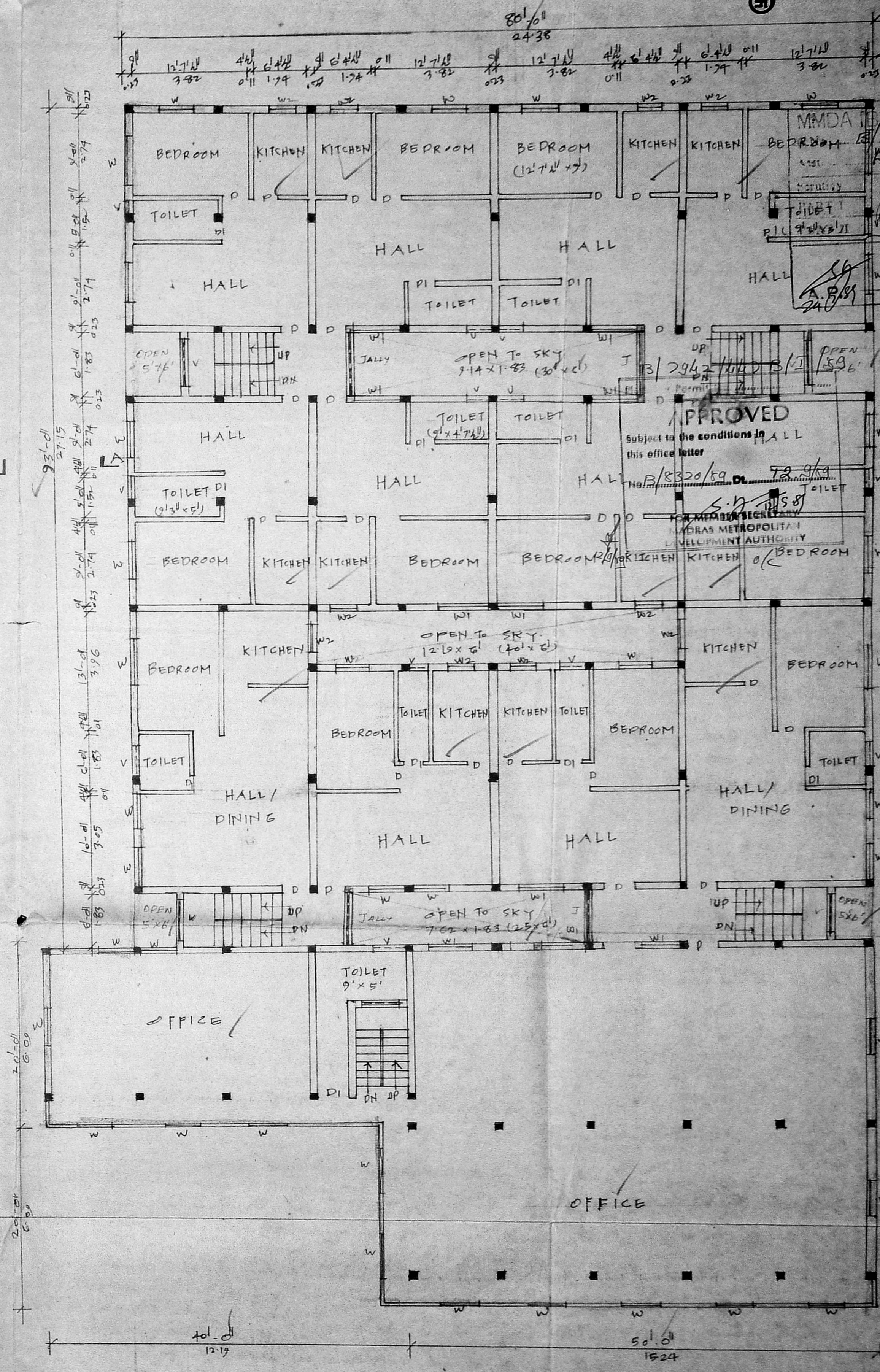
SIGNATURE OF OWNER _____
 LICENSED SURVEYOR



GROUND FLOOR PLAN



FIRST FLOOR PLAN



SECOND FLOOR PLAN

MMDA APP NO. 8320/83
 P. dt. 26.6.89
 APPROVED
 Subject to the conditions in this office letter
 No. P/8320/89
 7.2.9/3
 PLAN SHOWING THE PRO. RESIDENTIAL FLATS AT D.N. 14/6 IN S.N. 392/1A MEDAVAKKAM VELACHERY, ROAD

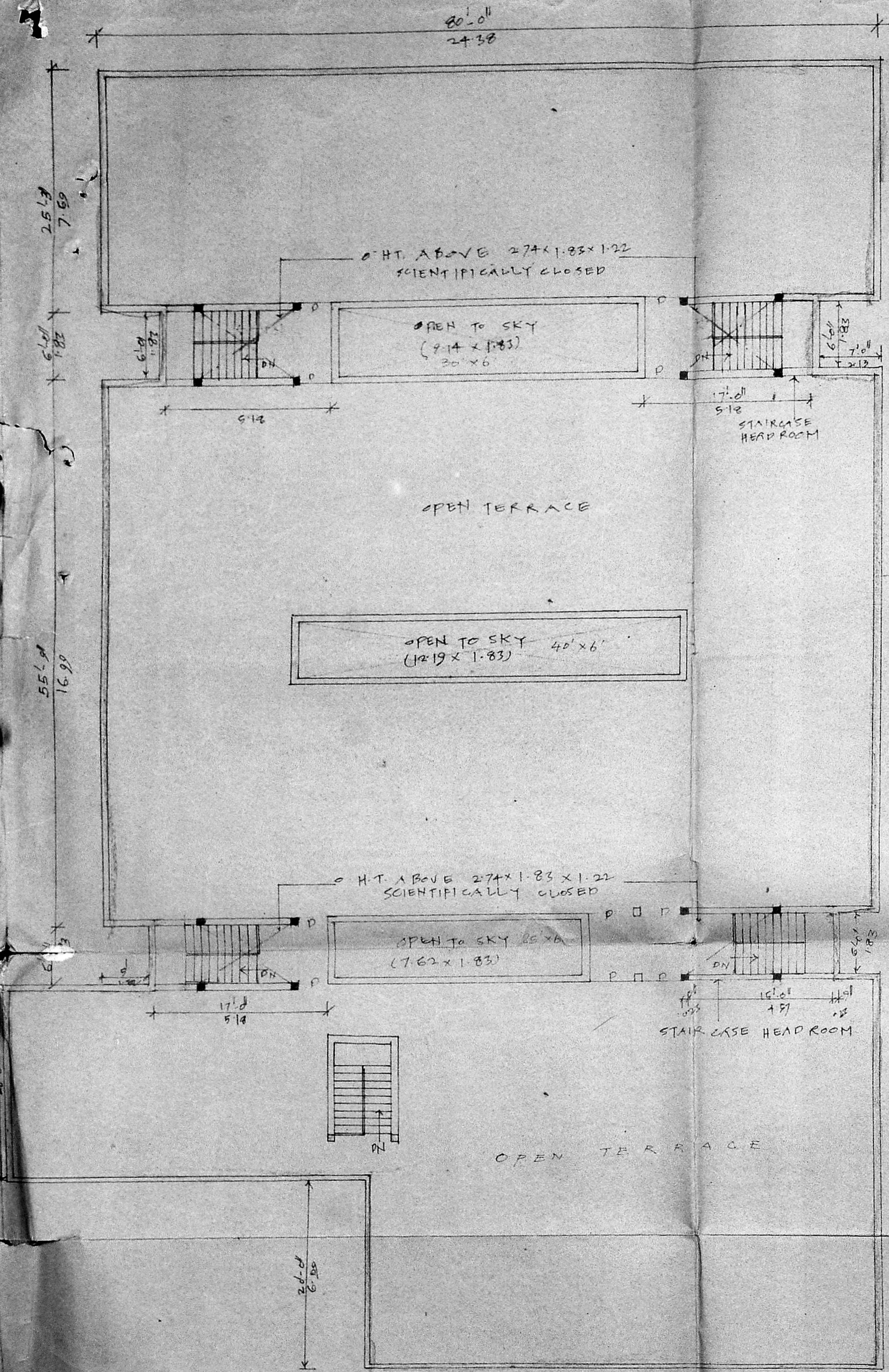
JOINERY DETAILS
 D DOOR 0.91x2.00
 DI DOOR 0.76x2.00
 W WINDOW 1.22 x 1.57
 WI WINDOW 1.50 x 1.57
 WS WINDOW 0.71 x 1.57
 V VENTILATOR 0.76 x 0.51
 R ROLLING SHUTTER 2.74 x 2.44

FLOOR PLANS
 SCALE: 1:100 (1"=8'0")
 BLOCK "A"
 SHEET NO. I

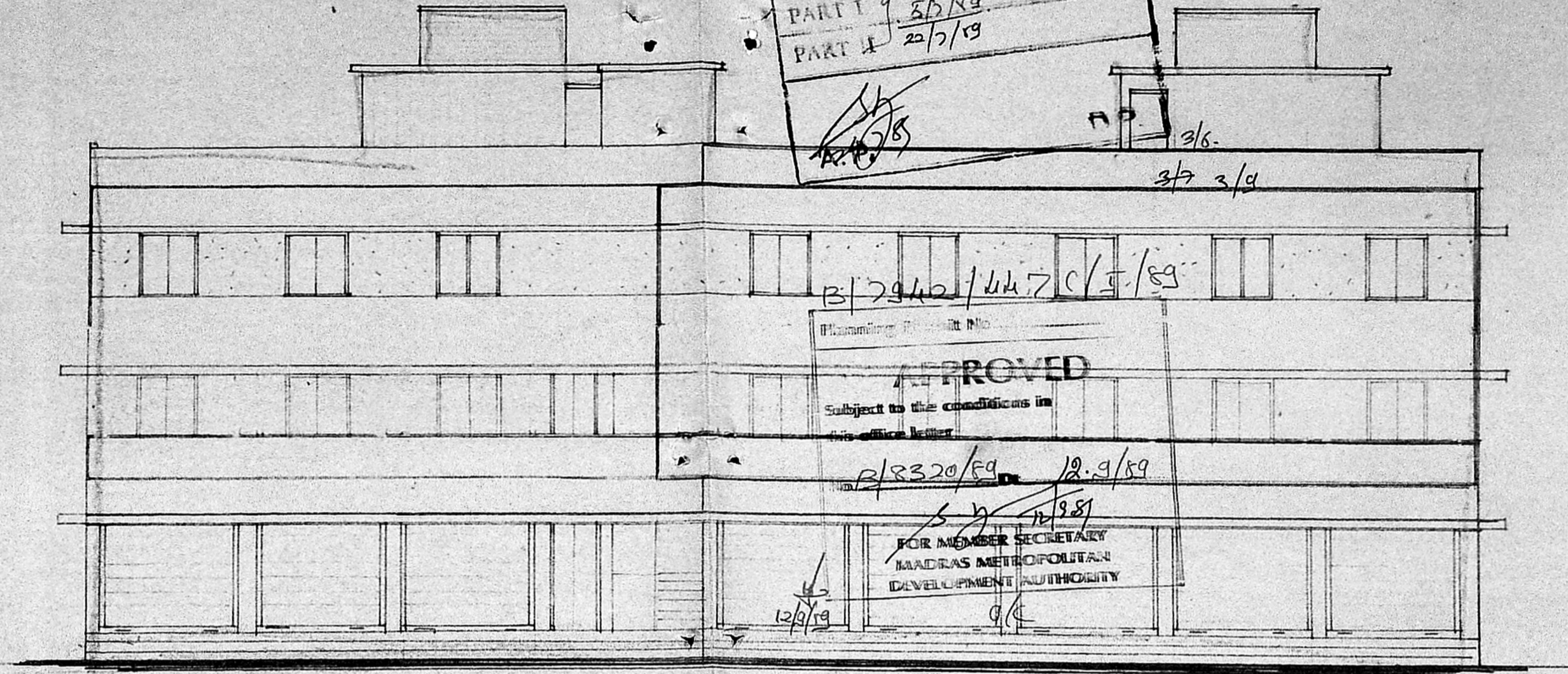
P. Padma Prasad
 SIGNATURE OF OWNER

K. VENUGOPAL
 LICENSED CIVIL ENGINEER
 LICENSE NUMBER: 1524
 CORPORATION OF MADRAS
 3, VELAMMAL STREET
 NUNDAKURAI, LAKSHMI
 MADRAS - 600 094

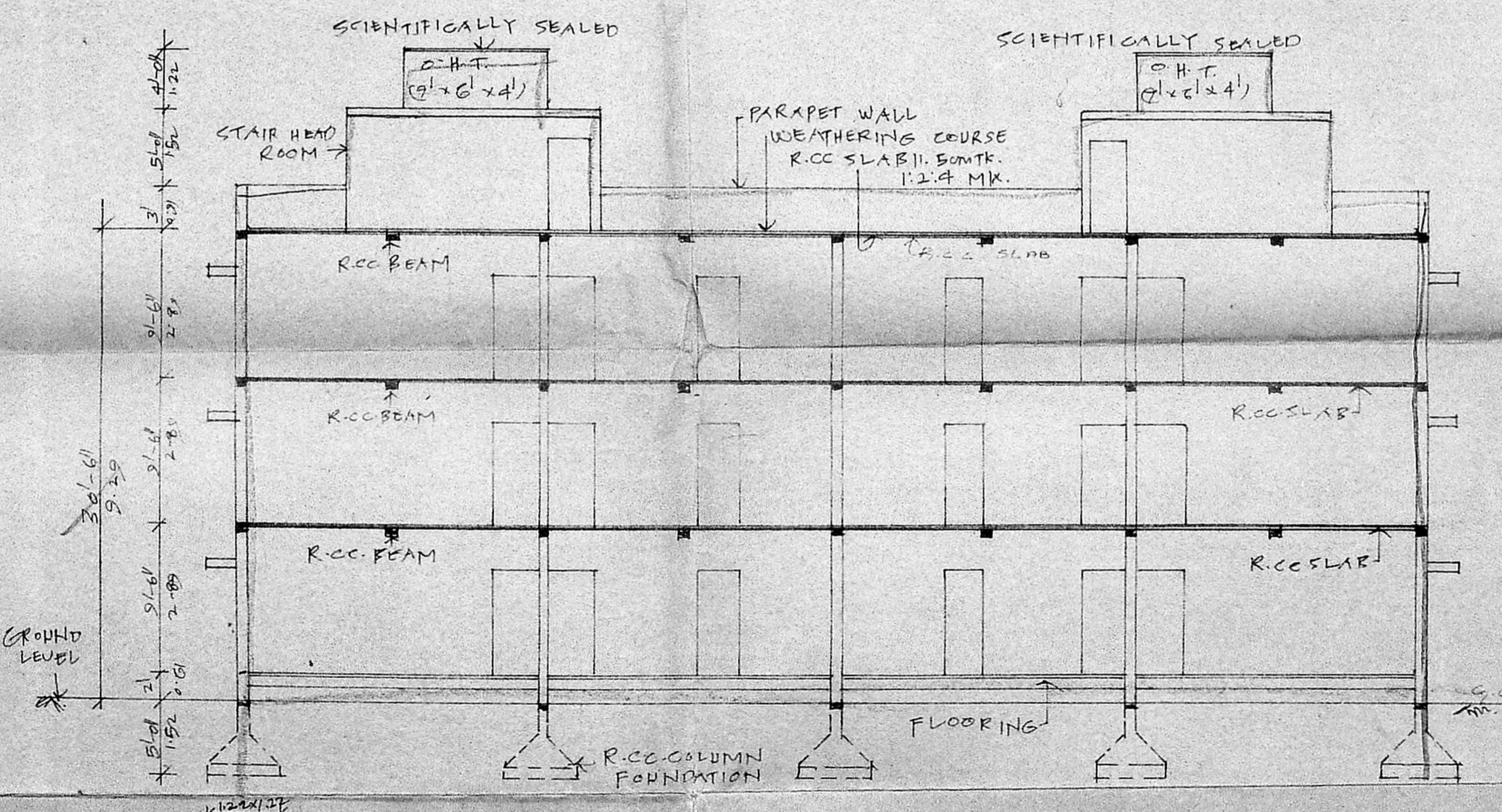
SIGNATURE OF LICENSED SURVEYOR



TERRACE FLOOR PLAN



ELEVATION



SECTION 'AA'

GROUND FLOOR: 9190 Sqft.
 FIRST FLOOR: 9630 Sqft.
 SECOND FLOOR: 9630 Sqft.
 TOTAL: 28450 Sqft.

SHOPS :
 OFFICE :
 RESIDENTIALS :

JOINERY DETAILS:-

R	ROLLING SHUTTER	2.44 x 2.99
D	DOOR	0.91 x 2.00
DI	DOOR	0.76 x 2.00
W	WINDOW	1.22 x 1.37
WI	WINDOW	1.54 x 1.37
W2	WINDOW	0.91 x 1.37
V	VENTILATOR	0.76 x 0.61

PROPOSED WORK PLOT BOUNDARY
 EXISTING STREET

PLAN SHOWING THE PROPOSED
 RESIDENTIAL FLATS AT
 D. No 160/3 IN S.No. 392/1A
 MEDAVAKKAM VILLAGE
 VELACHERY ROAD
 SAIDAPET TALUK

TERRACE FLOOR PLAN
 SECTION AND ELEVATION

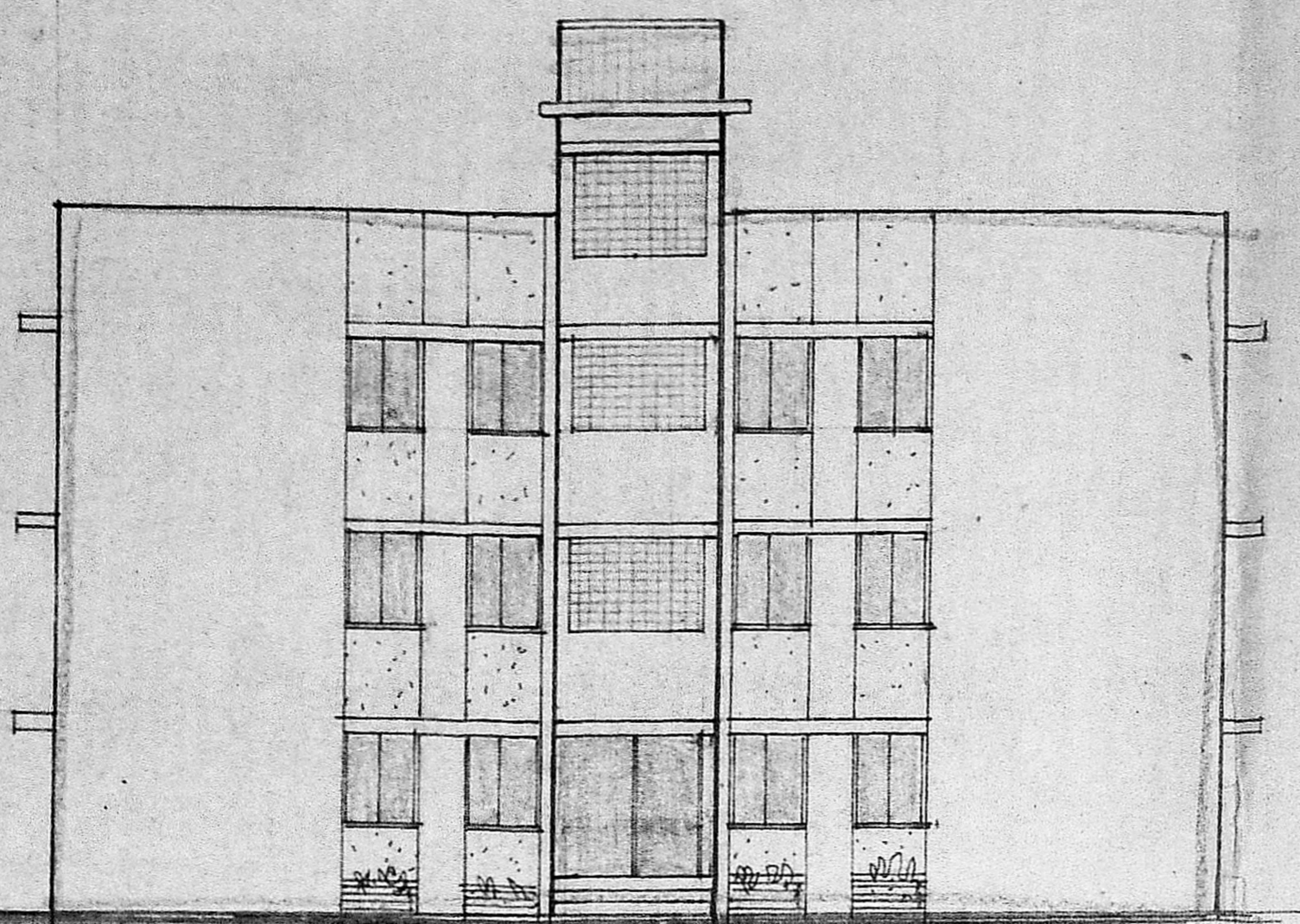
SCALE (1" = 8'-0") 1:100

BLOCK 'A' SHEET No - II

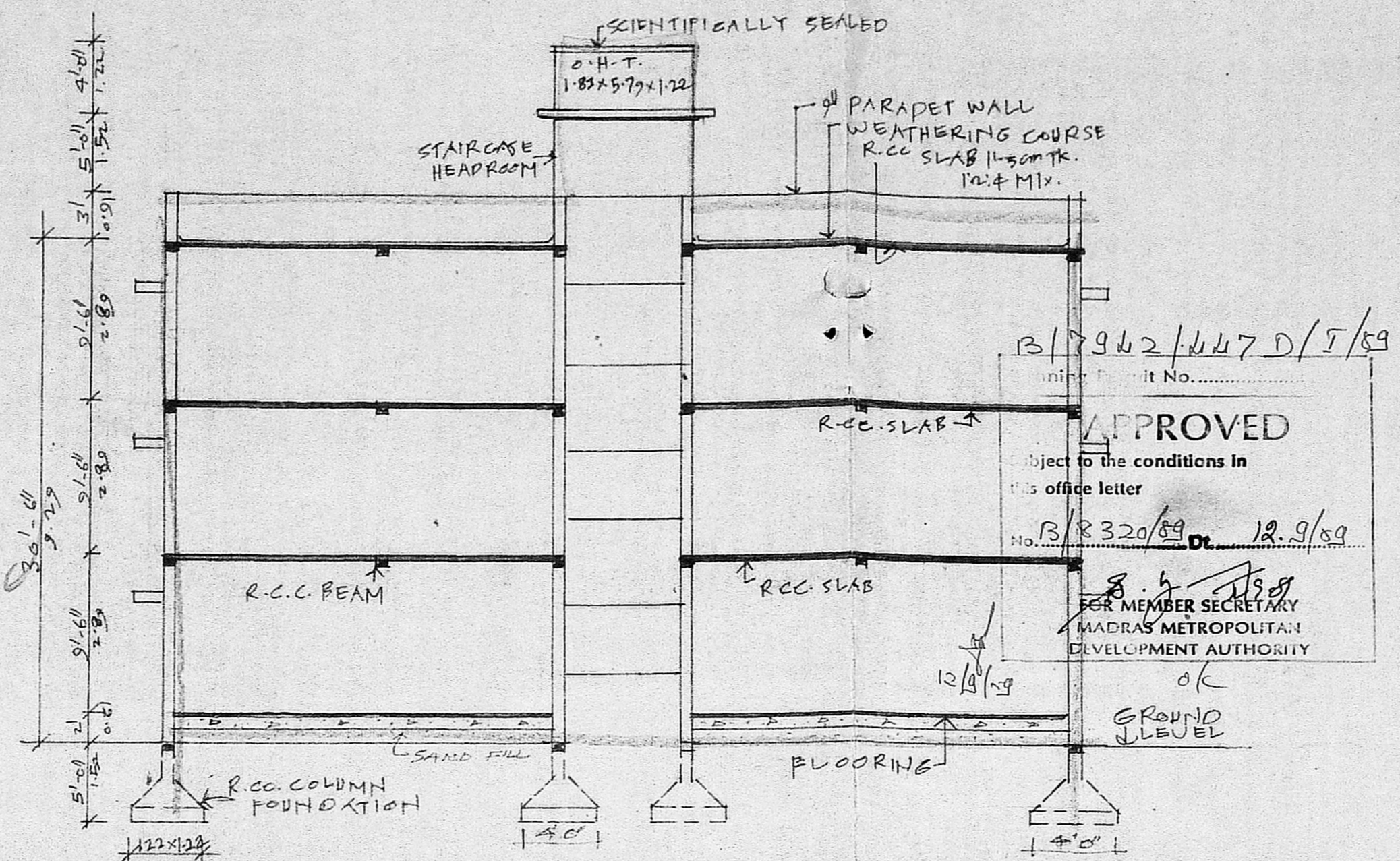
LICENSED SURVEYOR

K. VENUGOPAL
 ARE (1943)
 CONSULTING CIVIL ENGINEER
 LICENSE SURVEYOR CLASS I
 CORPORATION OF MADRAS
 3, PELLAI...
 NUNGABBIKK...
 MADRAS 600 034

OWNER:



ELEVATION



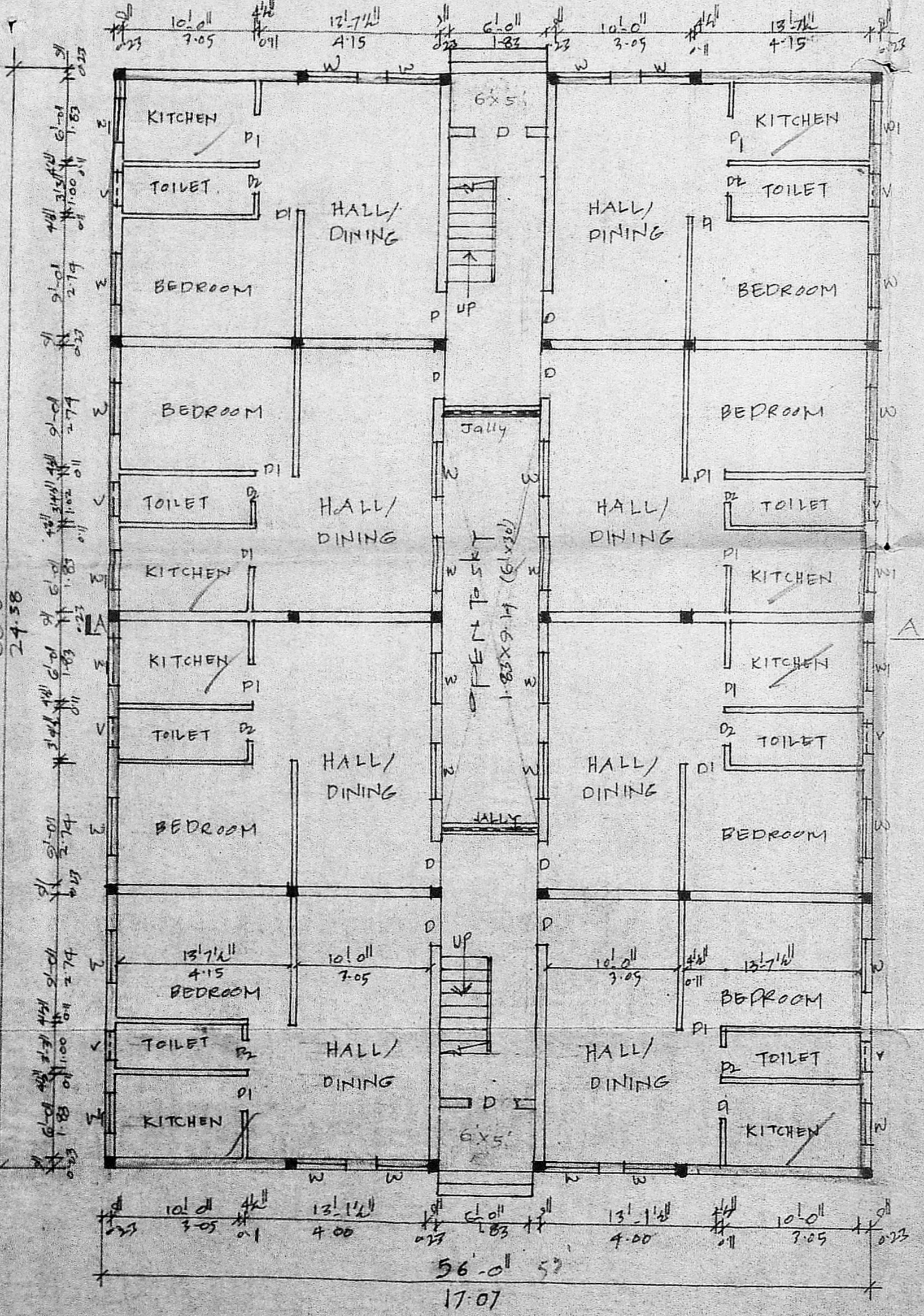
SECTION "A-A"

B/1942/447 D/1/59
 APPROVED
 Subject to the conditions in this office letter
 No. B/18320/59 Dt. 12.9.59
 MEMBER SECRETARY
 MADRAS METROPOLITAN DEVELOPMENT AUTHORITY

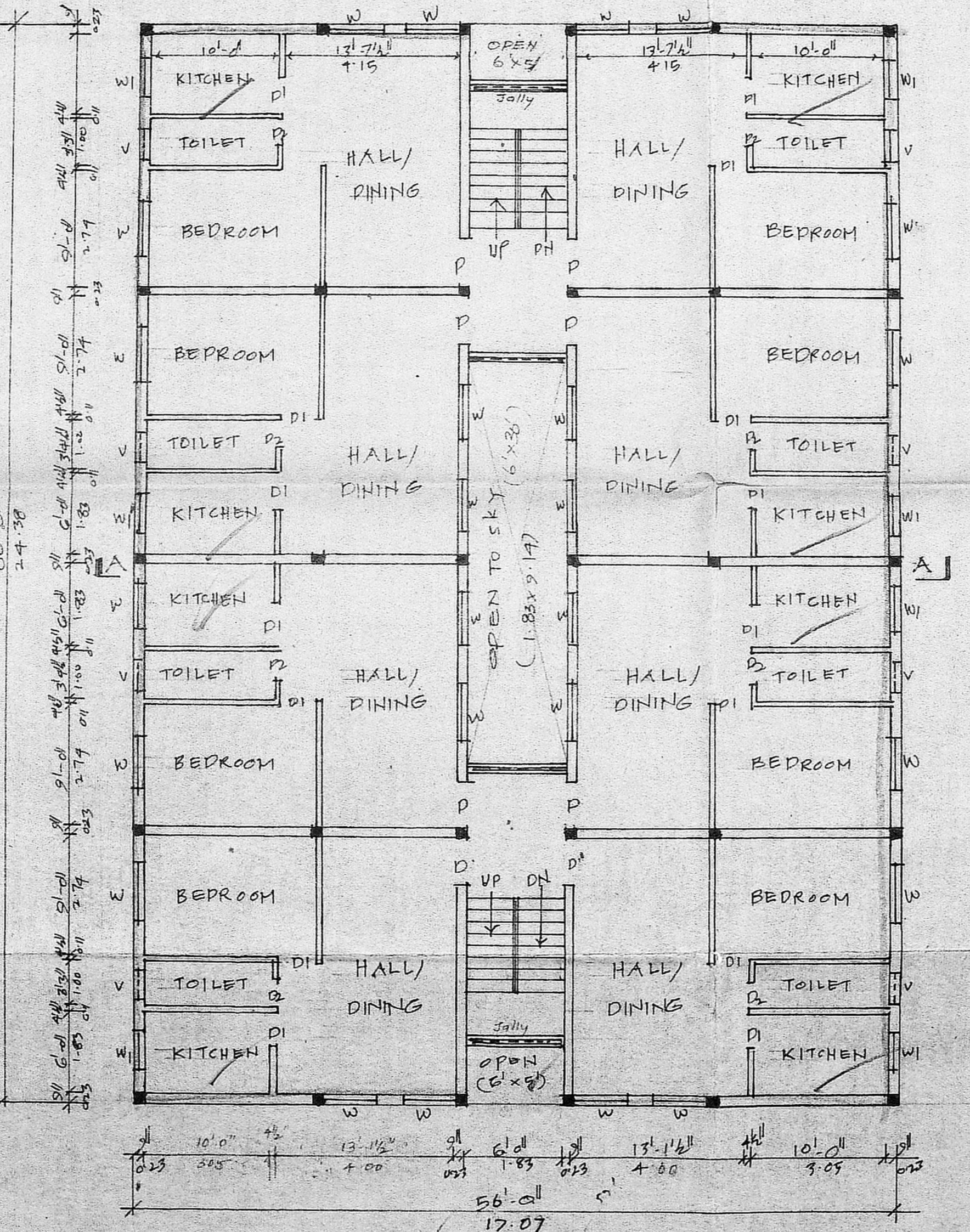
GROUND FLOOR = 4240 SQ.FT
 FIRST FLOOR : 4240 SQ.FT.
 SECOND FLOOR : 4240 SQ.FT.
 TOTAL 12720 SQ.FT.

MMDA 181/PP No. 1
 G.No. B/18320/59
 A.P. R.P. 15-26.6.59
 PART I 22/7/59
 DP.
 46.
 47.
 4/9

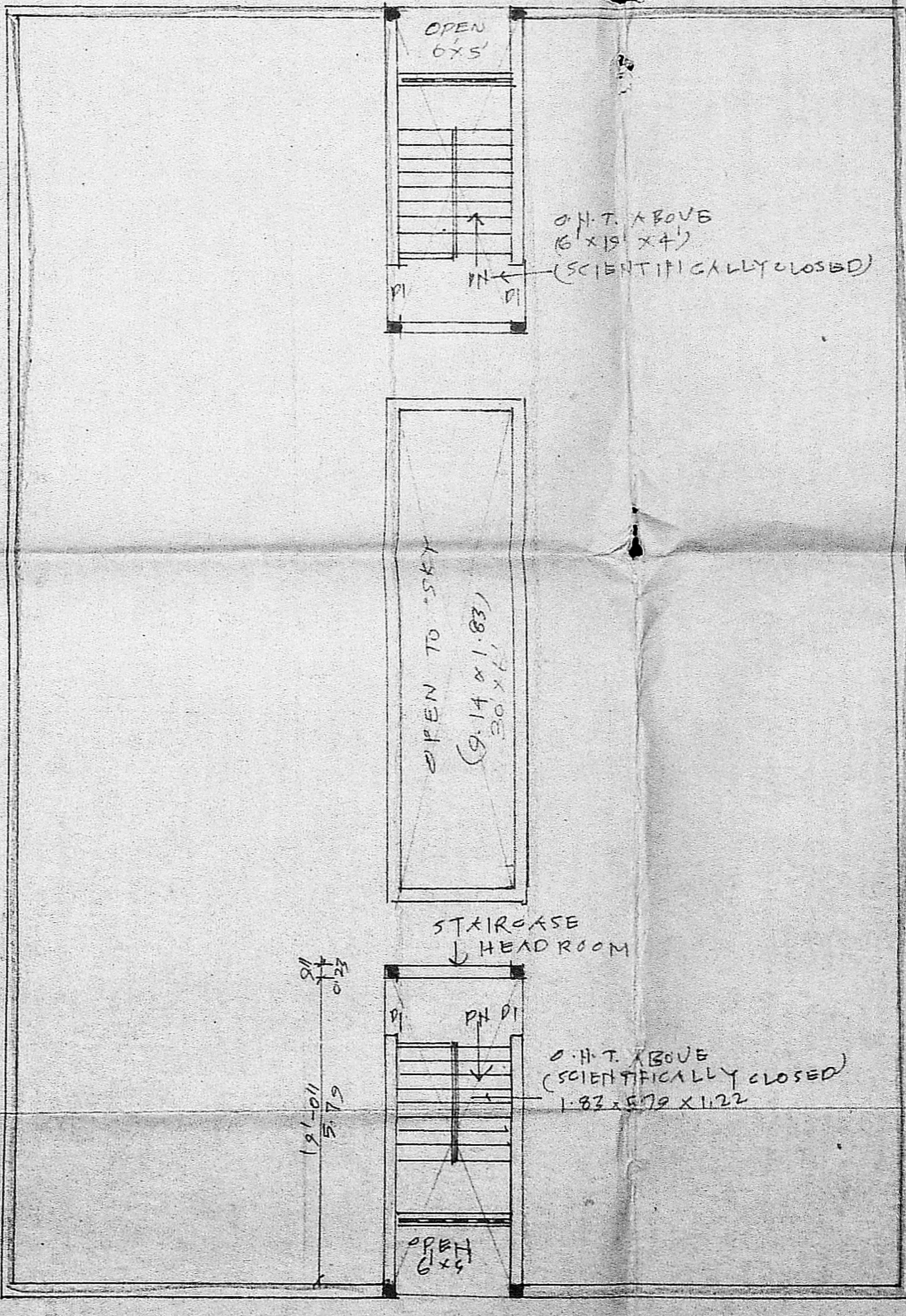
PROPOSED WORK PLOT BOUNDARY
 EXISTING ST.



GROUND FLOOR PLAN



TYPICAL FIRST AND SECOND FLOOR PLAN



TERRACE FLOOR PLAN

JOINERY DETAILS:-

P DOOR	1.00 x 2.00
P1 DOOR	0.91 x 2.00
D2 DOOR	0.76 x 2.00
W WINDOW	1.22 x 1.37
W1 WINDOW	0.91 x 1.37
V VENTILATOR	0.76 x 0.61

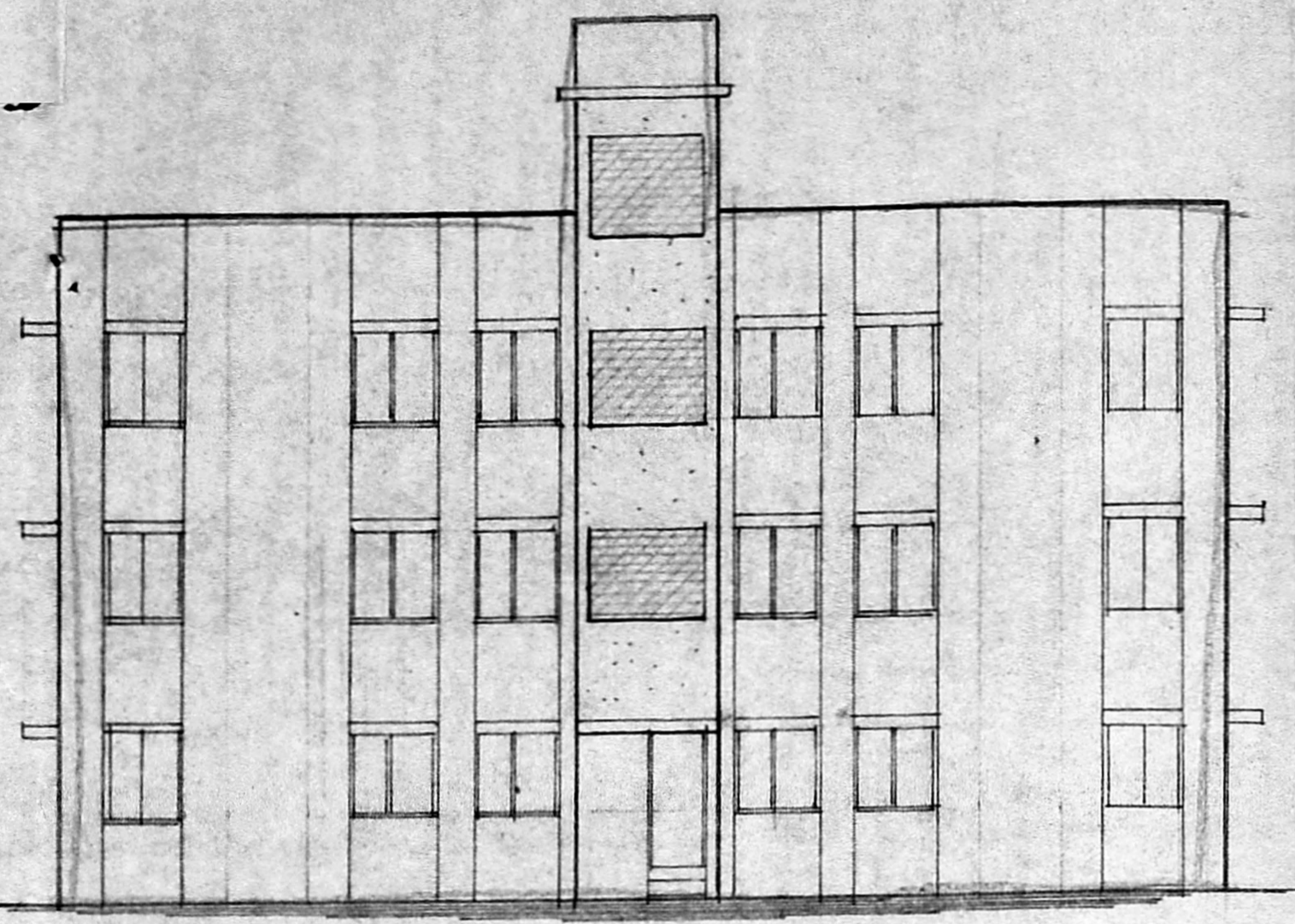
PLAN SHOWING THE PROPOSED RESIDENTIAL FLATS AT D.No. 160/3 IN S.No. 392/1A MEDAVAKKAM VILLAGE VELACHERY MAIN ROAD SAIDAPET TALUK.

BLOCK - 'B'
 SCALE: (1" = 20') 1:100

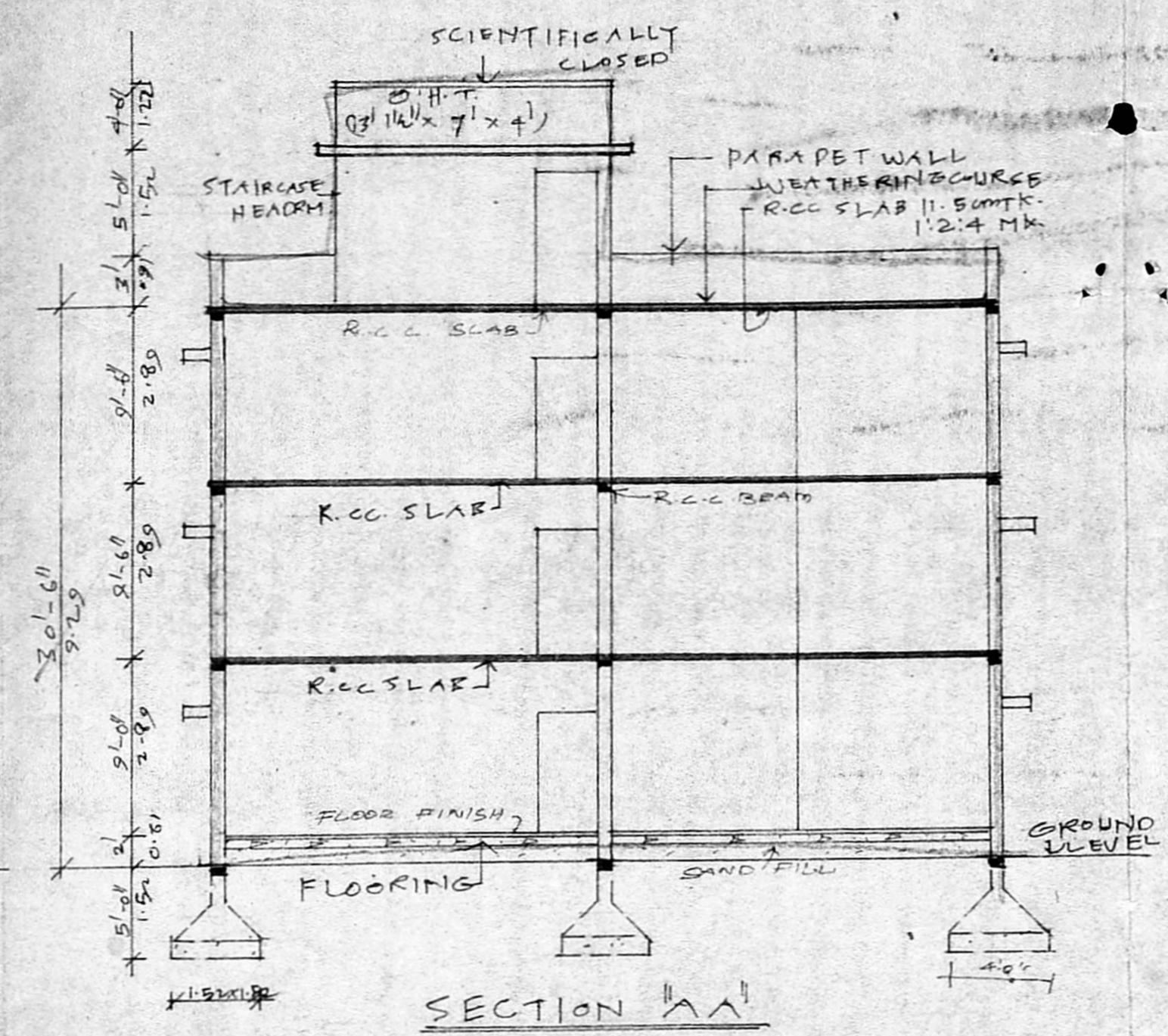
P. Padma Parthasarathy
 OWNER

K. VENKOPAL
 CONSULTING CIVIL ENGINEER
 LICENSE SURVEYOR CLASS I
 CORPORATION OF MADRAS
 3, BELLAIR STREET
 HUNGAMBAKKAM AREA
 MADRAS 600 034

LICENSED SURVEYOR



ELEVATION



SECTION "AA"

MMDA (BI/PP NO. /
 S.No. 12/8320/89
 Assn. R.P. dt. 28.6.89
 Scrutiny
 PART I 9/5/89
 PART II 22/5/89
 A.P. 89 B.P.

13/2942/4425/5/89
 Permit No.
APPROVED
 Subject to the conditions in
 this office letter
 No. 12/8320/89 dt. 18.9.89
 S. H. J. S. 89
 FOR MEMBER SECRETARY
 MADRAS METROPOLITAN
 DEVELOPMENT AUTHORITY

	89 FT.	59 M
G. FLOOR	2205	
F. FLOOR	2205	
S. FLOOR	2205	
TOTAL	6615	

JOINERY DETAILS:-

D DOOR	1.00 x 2.00
D1 DOOR	0.91 x 2.00
D2 DOOR	0.76 x 2.00
W WINDOW	1.22 x 1.37
W1 WINDOW	0.91 x 1.37
V VENTILATOR	0.76 x 0.61

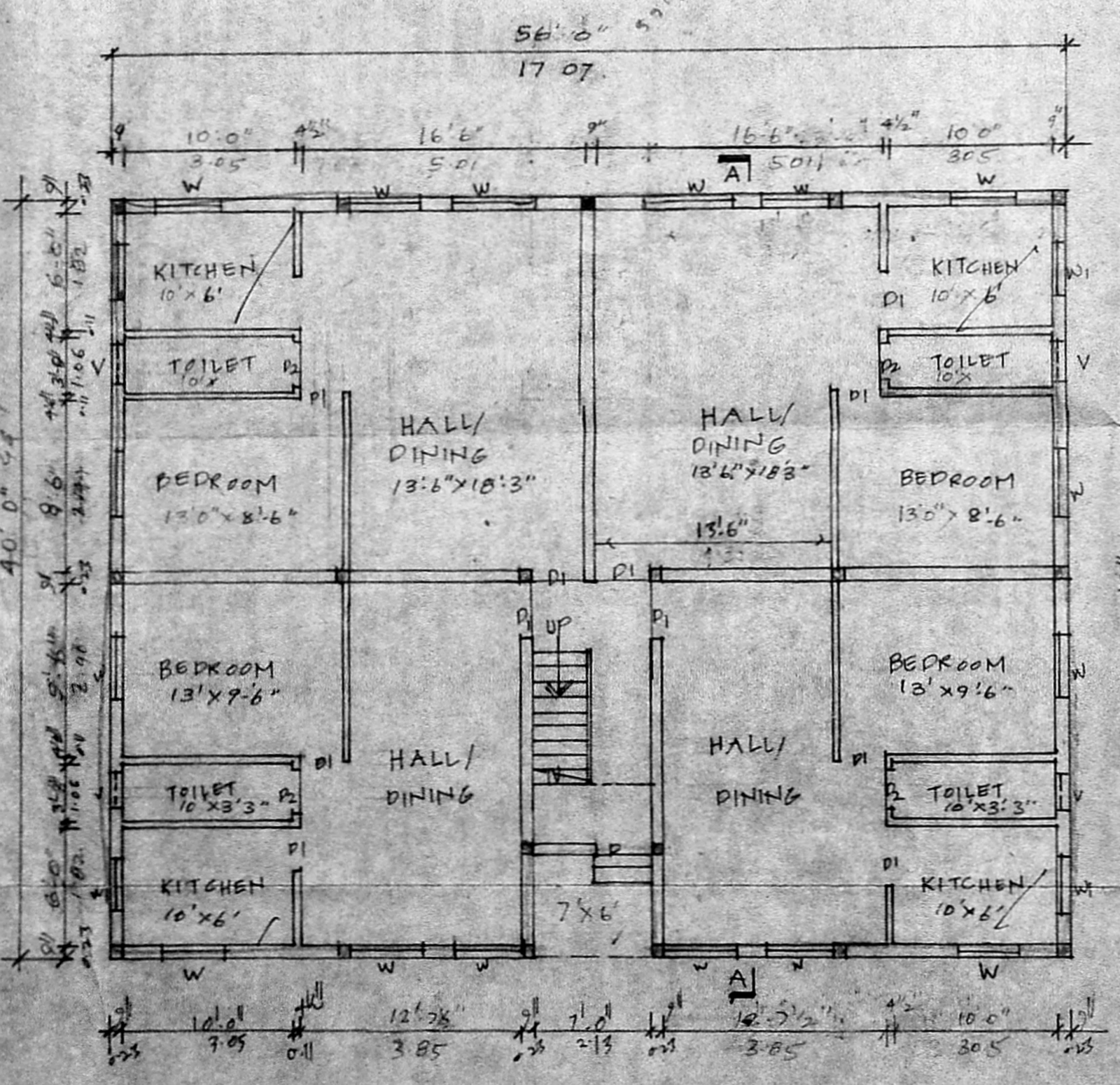
PROPOSED CONSTRUCTION OF
 RESIDENTIAL FLATS AT
 DOOR NO. 160/3, VELACHERY
 MAIN ROAD, IN R.S. NO. 392/1A
 MEDAVAKKAM VILLAGE
 SAIDAPET TALUK.

SCALE (1" = 8'-0") 1:100
 PROPOSED WORK
 EXISTING ST.
 PLOT BOUNDARY

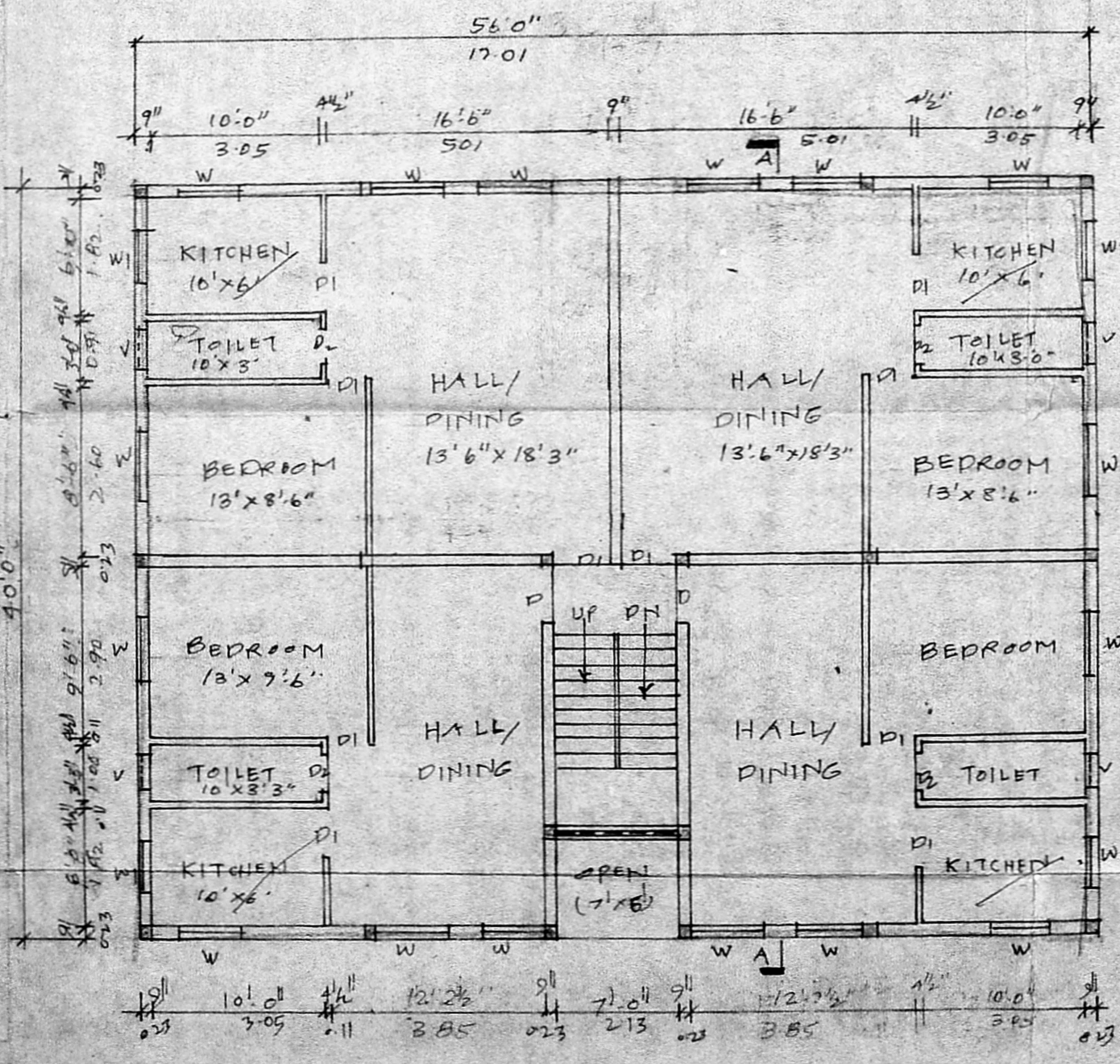
BLOCK-C

P. Padma Parthasarathy
 SIGNATURE OF OWNER

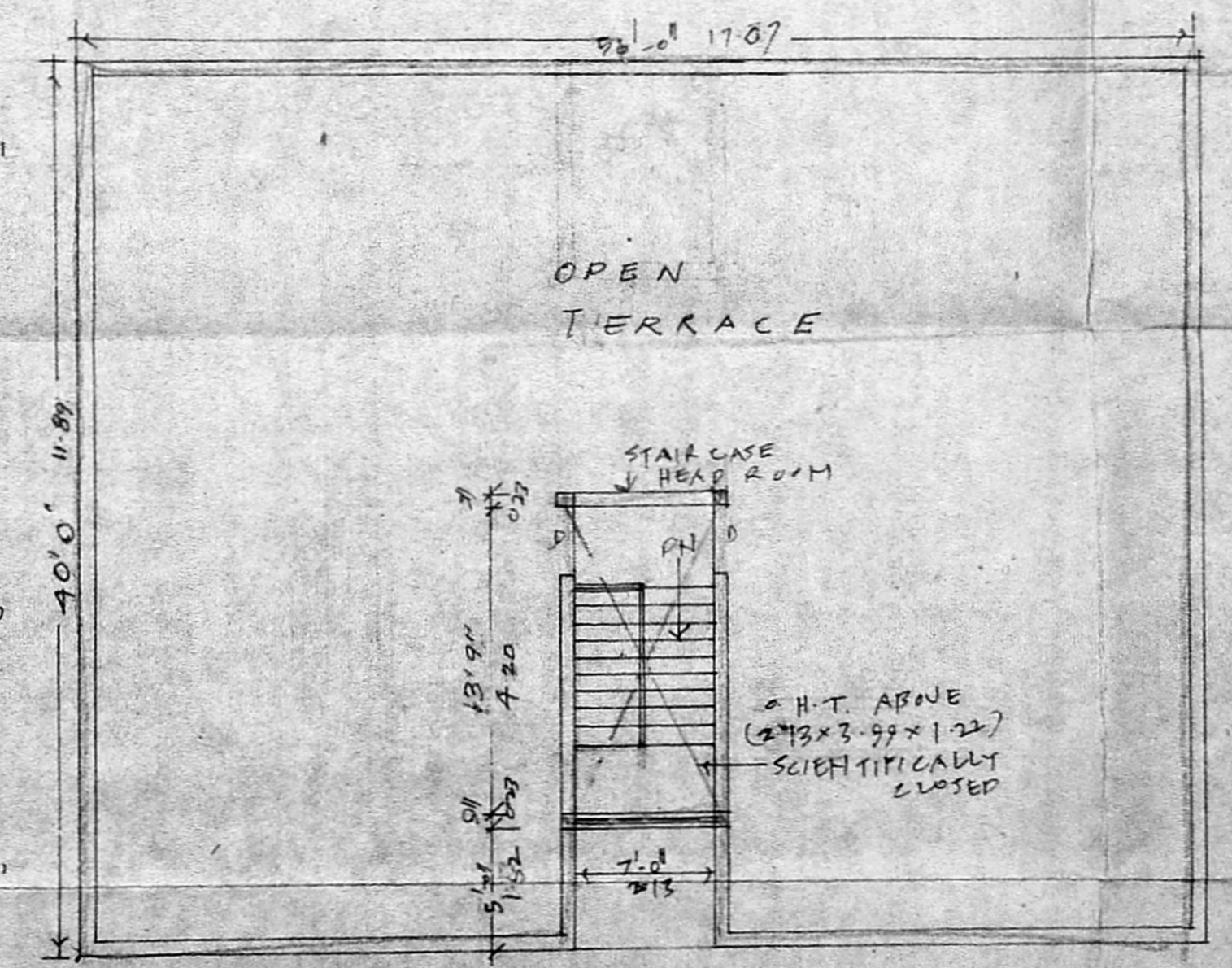
K. Venugopal
K. VENUGOPAL
 AND (P) 100
 CONSULTING CIVIL ENGINEER
 LICENSE SURVEYOR CLASS 1
 CORPORATION OF MADRAS
 3, HELLARPODA STREET
 NUNGAMBAKKAM, CHENNAI
 MADRAS-600 034
 SIGNATURE OF LICENSED SURVEYOR



GROUND FLOOR PLAN



TYPICAL FIRST AND SECOND FLOOR PLAN



TERRACE FLOOR PLAN

PLAN SHOWING THE PROPOSED RESIDENTIAL FLATS AT DOOR NO. 160/3, VELECHERI MAIN ROAD IN R.S. NO. 392/1A, OF MEDAVAKKAM VILLAGE SAIDAPET TALUK CHINGLEPUT DISTRICT.

SCALE: 1 INCH = 8 FEET.

SCHEDULE OF JOINERY

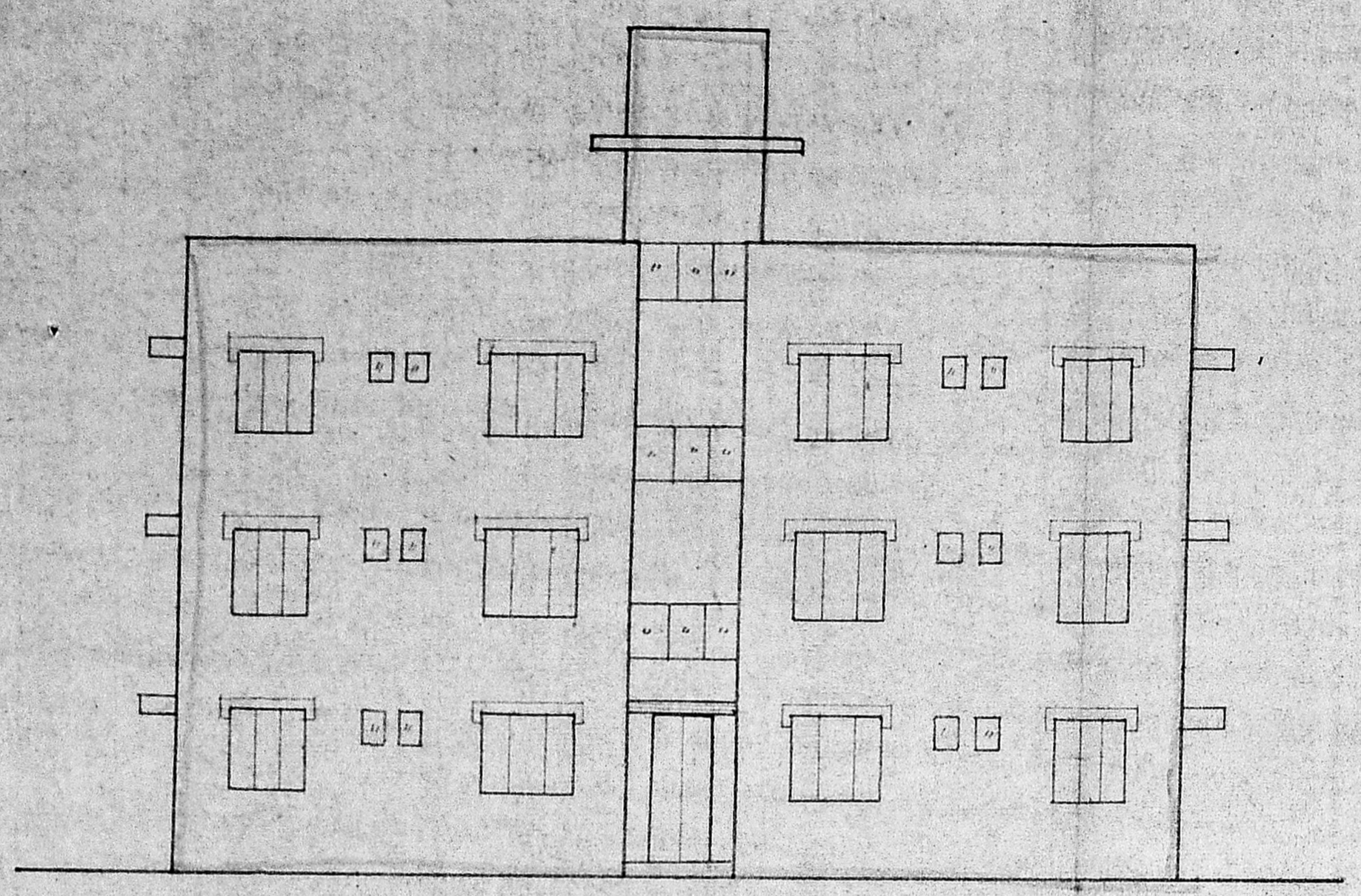
M.D. - MAIN DOOR	3'0" x 8'0"
D - DOOR	3'0" x 7'0"
P ₁ - WINDOW	2'6" x 6'6"
W - WINDOW	4'0" x 4'6"
W ₁ - WINDOW	5'0" x 4'6"
U - UNITILATOR	6'0" x 3'0"
V ₁	1'6" x 2'0"
V	3'0" x 2'0"

BLOCK-D

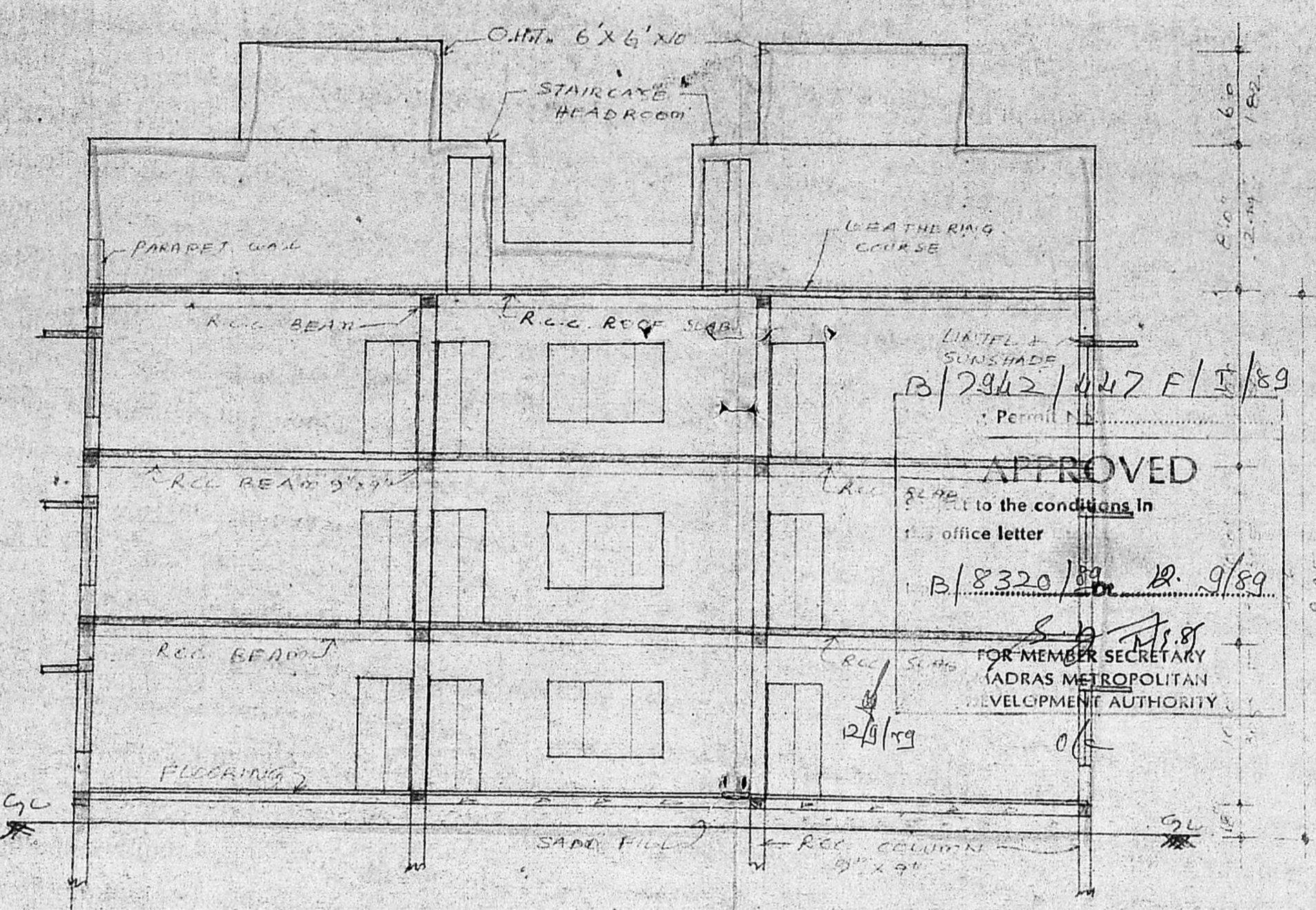
GROUND FLOOR	: 3328	Sq. Ft.
FIRST FLOOR	: 3328	Sq. Ft.
SECOND FLOOR	: 3328	Sq. Ft.
TOTAL	: 9984	Sq. Ft.

P. Pudma Parthasarathy
SIGNATURE OF OWNER

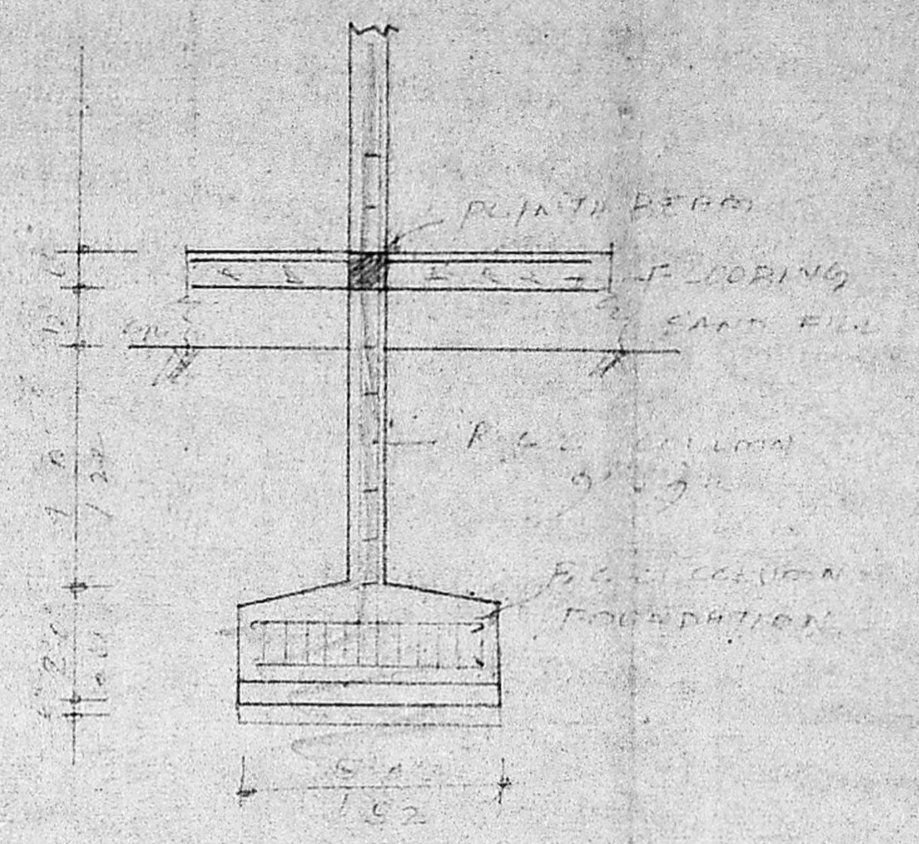
K. VENUGOPAL
CONSULTING CIVIL ENGINEER
LICENSE SURVEYOR CLASS I
CORPORATION OF MADRAS
3, NEELAKANDAN STREET
MUNGAMBAKKAM LAKE AREA
MADRAS-600 034
LICENSED SURVEYOR



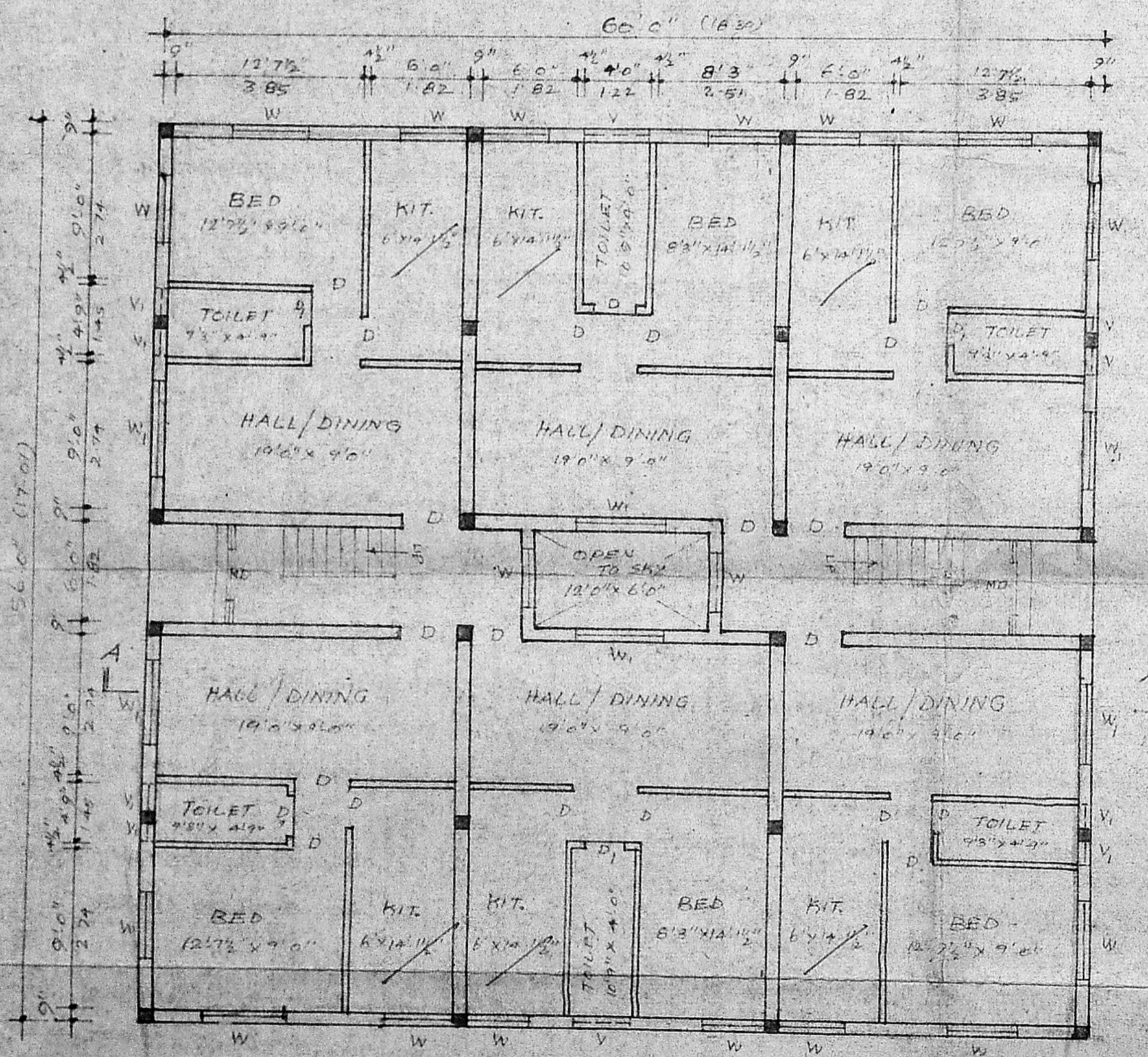
FRONT ELEVATION



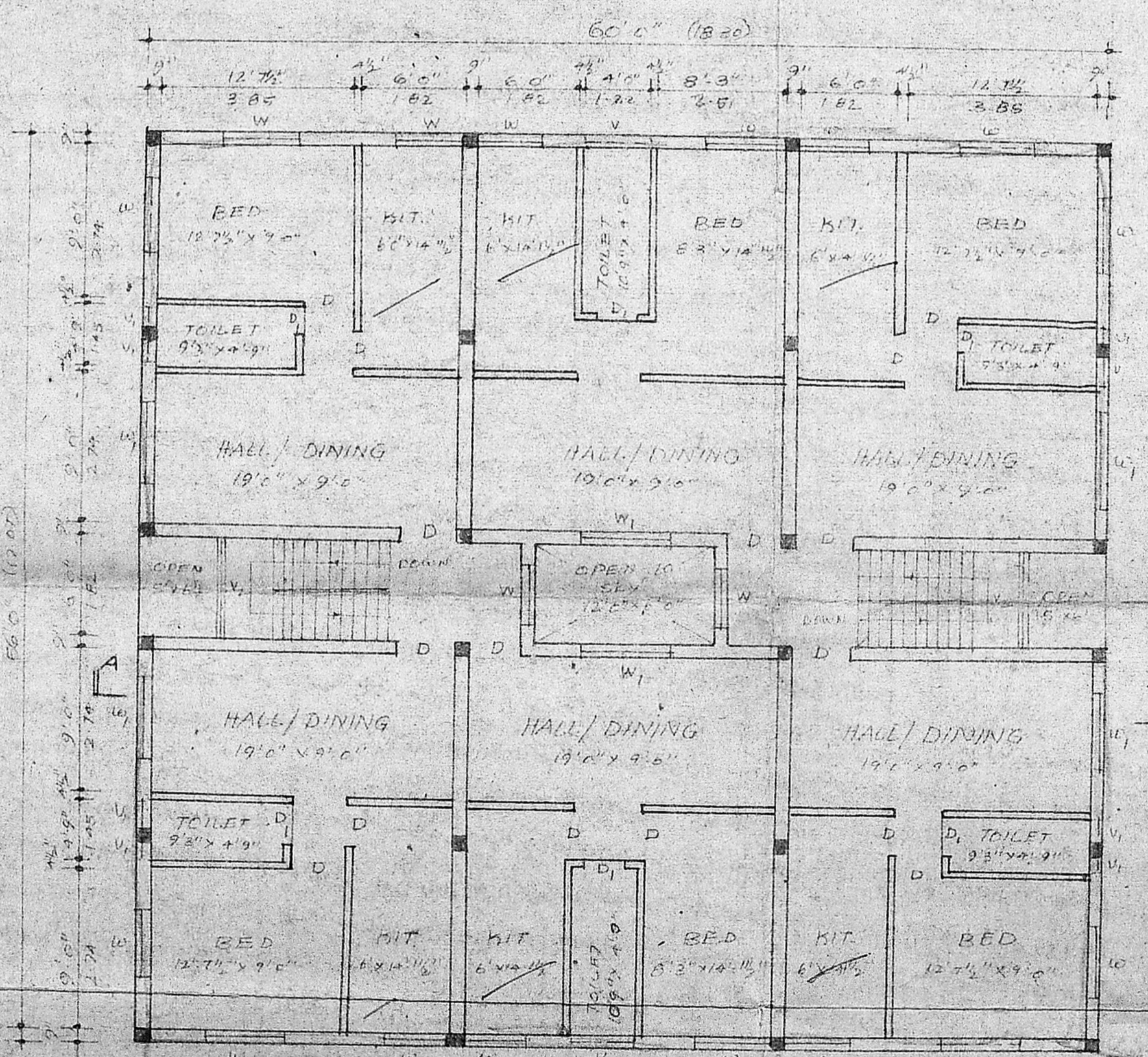
SECTION-AA



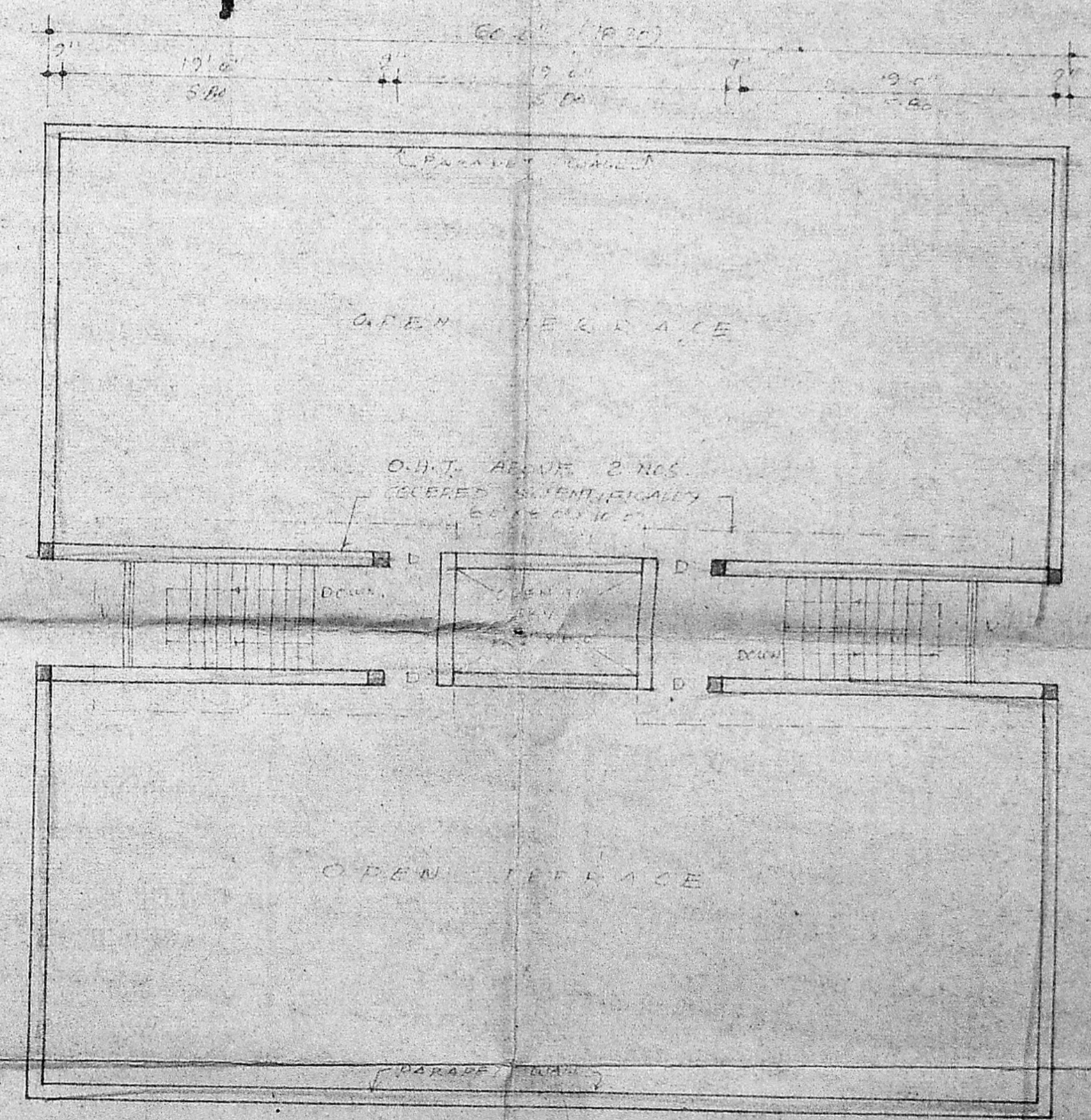
FOUNDATION DETAILS



GROUND FLOOR PLAN

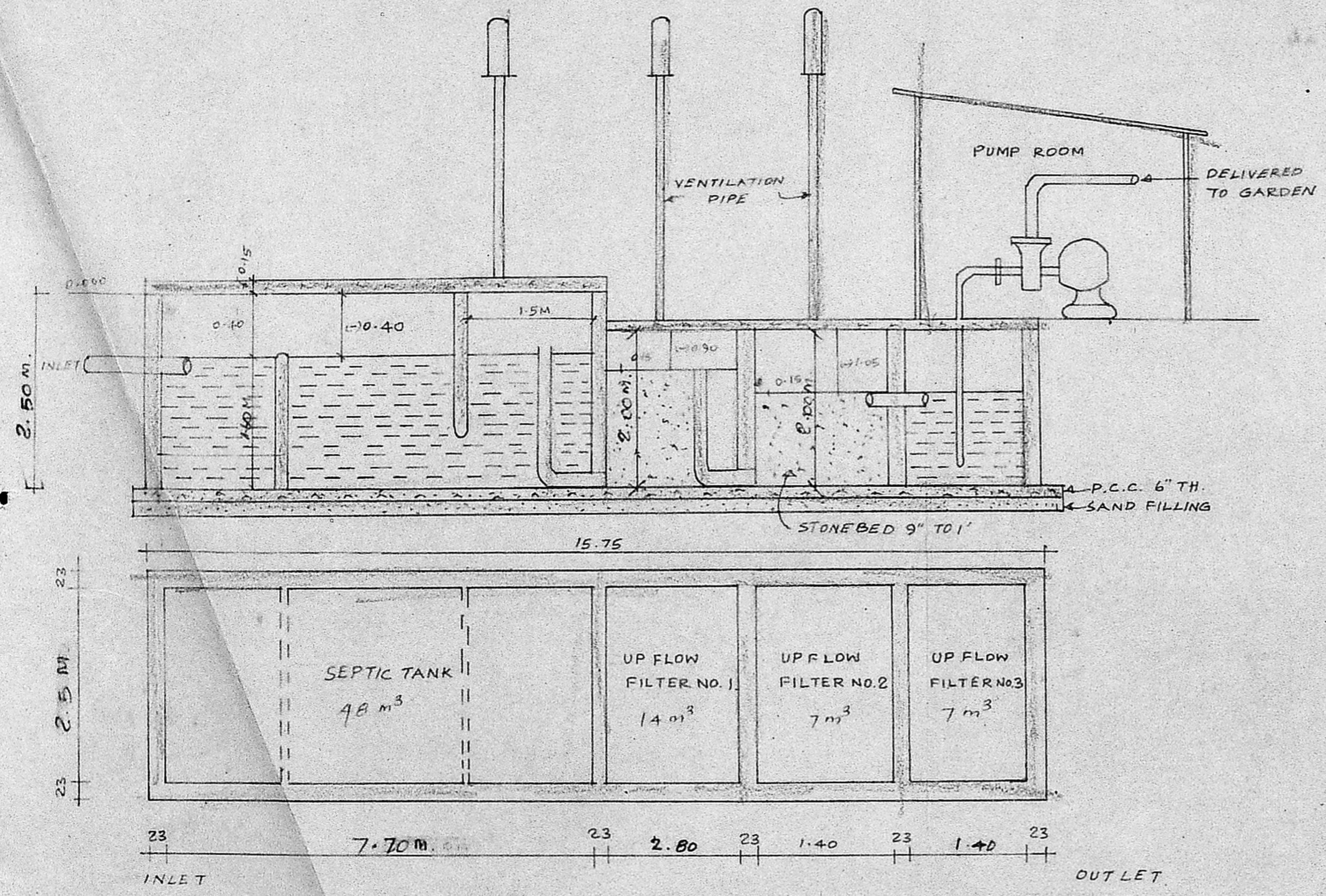


FIRST & SECOND FLOOR PLAN



TERRACE FLOOR PLAN

PROPOSED RESIDENTIAL COMPLEX AT R.S.NO. 392/1A,
 MEDAVAKKAM VILLAGE, IN DOOR NO. 160/3, OF TAMBARAM-
 VELACHERY MAIN ROAD, MADRAS.
 SCALE = 1:75. (1" = 6'0")



DETAIL OF SEPTIC TANK WITH UPFLOW FILTERS.
 SCALE 1:75

BLOCK A

DESIGN OF SEPTIC TANK & UPFLOW FILTERS.

NO. OF DWELLINGS = 40 NOS.
 NO. OF USERS = 40 x 5 = 200 PERSONS
 RATE OF WATER SUPPLY IS = 150 LPH/DAY
 THEN FLOW OF SEWAGE PER DAY = 200 x 150
 = 30000 LITRES.
 DETENTION PERIOD IS = 18 HRS.
 ∴ TANK CAPACITY = 30000 x 18
 = 22,500 LITRES.

THE TANK IS TO BE CLEANED EVERY YEAR SO SLUDGE
 STORAGE CAPACITY AT THE RATE OF 15 LITRES PER PERSON PER YEAR.
 = 200 x 15 = 3000 LITRES.
 ∴ TOTAL TANK CAPACITY = 22,500 + 3000 P. dh. 2.9.59
 = 25,500 LITRES

WITH PROVISION FOR FUTURE EXPANSION, LET THE TOTAL TANK
 CAPACITY BE 30,000 LITRES (OR) 30 M³.
 DEPTH OF LIQUID AS = 1.60 M
 ∴ PLAN AREA OF THE TANK = 30 / 1.60 = 18.75 M²

THE RATIO OF LENGTH TO WIDTH OF TANK BE 3. D.P.
 LENGTH x BREADTH x 3 = 18.75 M²
 BREADTH OF TANK = √(18.75/3) = 2.5 M.
 LENGTH OF TANK = 2.5 x 3 = 7.5 M.

FREE BOARD OF THE TANK = 0.40 M
 ∴ TOTAL DEPTH OF THE TANK = 1.60 + 0.40 = 2.00 M
 ∴ SIZE OF THE SEPTIC TANK = 7.5 x 2.5 x 2.0 M = 37.5 M³
 BUT TO BE PROVIDED SIZE IS = 7.5 x 2.5 x 2.0 M = 37.5 M³
 UP FLOW FILTERS:

DISCHARGE FOR 500 PERSONS = 75000 LITRES. 12.9/59
 VOLUME = 75000 / 24 = 3125 M³
 DEPTH = 1.1 - 0.30 = 0.80 M
 PLAN AREA REQUIRED = 3125 / 0.80 = 3906.25 M²
 ∴ SIZE OF THE UP FLOW FILTERS = 2.5 x 1.4 x 2.0 = 7 M³
 UP FLOW FILTER NO. ① = 2.5 x 2.8 x 2.0 = 14 M³
 UP FLOW FILTER NO. ② = 2.5 x 1.4 x 2.0 = 7 M³
 UP FLOW FILTER NO. ③ = 2.5 x 1.4 x 2.0 = 7 M³

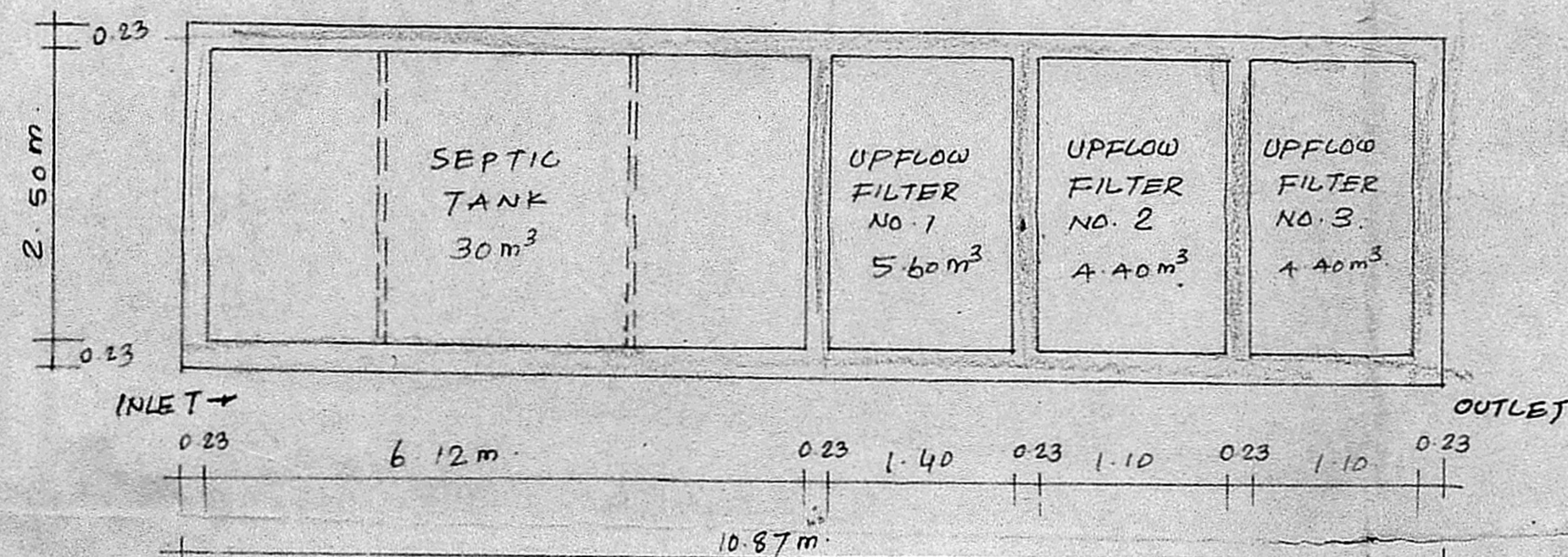
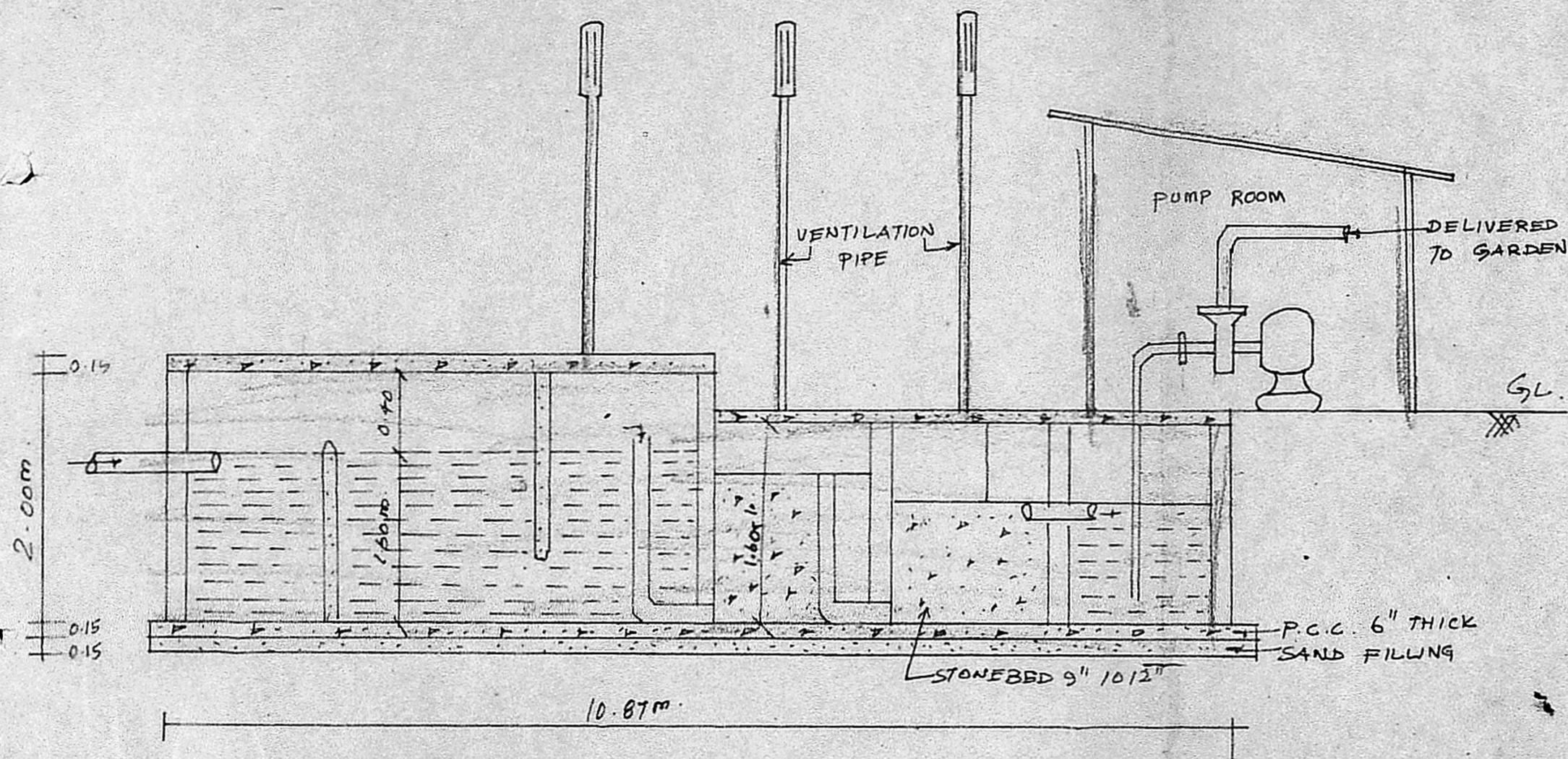
APPROVED 7.5 x 2.5 x 2.0 M
 Subject to the conditions in
 this office letter
 No. B/8320/19
 12.9/59
 FOR MEMBER SECRETARY
 MADRAS METROPOLITAN
 DEVELOPMENT AUTHORITY

K. Venugopal

K. VENUGOPAL
 (P.E.)
 CONSULTING CIVIL ENGINEER
 LICENSE SURVEYOR CLASS I
 CORPORATION OF MADRAS
 3, NELLANKAVI STREET,
 MADRAS 600 034
 LICENSED SURVEYOR

P. Padma Ramesh
 OWNER

PROPOSED RESIDENTIAL COMPLEX AT
 R. S. NO. 392/1A1 OF MEDAVAKKAM VILLAGE IN
 DOOR NO. 160/3, TAMBARAM - VELACHERY MAIN ROAD
 MADRAS.



DETAILS OF SEPTIC TANK WITH UPFLOW FILTER.

BLOCK B.
DESIGN OF SEPTIC TANK

NO. OF DWELLINGS : 24 NOS.
 NO. OF USERS : 24 x 5 = 120 PERSONS
 RATE OF WATER SUPPLY IS : 150 LPA/DAY
 THEN FLOW OF SEWAGE PER DAY: 120 x 150 = 18000 LITRES

DETENTION PERIOD : 13/8336/89
 TANK CAPACITY : R.A. 18000/24 = 750 LITRES
 THE TANK IS TO BE CLEARED EVERY YEAR. SO SLUDGE STORAGE CAPACITY AT THE RATE OF 15 LITRES PER PERSON PER YEAR : 120 x 15 = 1800 LITRES.

TOTAL TANK CAPACITY : 13500 + 1800 = 15300 LITRES.

WITH PROVISION FOR FUTURE EXPANSION, LET THE TOTAL TANK CAPACITY BE 20,000 LITRES OR 20 m³.

DEPTH OF LIQUID IS : 1.60 m.

PLAN AREA OF THE TANK : 20/1.60 = 12.5 m²
 THE RATIO OF LENGTH TO WIDTH OF TANK BE 3
 LENGTH x BREADTH x 3

APPROVED
 Subject to the conditions in this office letter
 No. B/8320/89 Dtd. 18.9.89

BREADTH OF TANK = 2.04 m.
 LENGTH OF TANK = 2.04 x 3 = 6.12 m.
 FREE BOARD OF THE TANK = 0.20 m.
 TOTAL DEPTH OF THE TANK = 2.00 m.

REQUIRED SEPTIC TANK OF SIZE 6.12 x 2.00 m.
 UPFLOW FILTERS PROVIDED BY DEVELOPMENT AUTHORITY 2.00 m x 1.10 m = 30 m³
 DISCHARGE FOR 200 PERSONS : 7500 LITRES.
 VOLUME : 200 x 0.045 = 9 m³
 DEPTH : 1.10 - 0.30 = 0.80 m
 PLAN AREA REQUIRED : 9 / 0.80 = 11.25 m²
 ∴ SIZE OF THE UPFLOW FILTERS 1.10 x 1.125 x 1.10 m³

PROVIDE UPFLOW FILTER NO. ① 2.5 x 1.40 x 1.60 = 5.60 m³
 UPFLOW FILTER NO. ② 2.5 x 1.10 x 1.60 = 4.40 m³
 UPFLOW FILTER NO. ③ 2.5 x 1.10 x 1.60 = 4.40 m³
 (SUMP)
 HENCE SAFE

K. Venugopal
 K. VENUGOPAL /320
 AEE (Rtd.)
 CONSULTING CIVIL ENGINEER
 LICENSE SURVEYOR CLASS I
 CORPORATION OF MADRAS
 3, NEELAKANDAN STREET
 NUNGAMBAKKAM (LAKE AREA)
 MADRAS 600 034

P. Padma Parthasarathy

PROPOSED RESIDENTIAL COMPLEX AT R.S. NO. 392/1A1
 OF MEDAWAKKAM VILLAGE, IN DOOR NO. 160/3, OF TAMBARAM-
 VELACHERI MAIN ROAD, MADRAS.
 SCALE : 1 INCH = 6 FEET (1:75)

BLOCK - C & D

DESIGN OF SEPTIC TANK

NO. OF DWELLINGS : C + D = 12 + 18 = 30 NOS.
 NO. OF USERS = 30 x 5 = 150 PERSONS
 RATE OF WATER SUPPLY IS = 150 LPH/DAY
 THEN FLOW OF SEWAGE PER DAY = 100 x 150 x 150
 22500 LITRES.
 DETENTION PERIOD IS = 18 HRS
 TANK CAPACITY = 22500 x 18
 16875 LITRES.

THE TANK IS TO BE CLEANED EVERY YEAR SO SLUDGE
 STORAGE CAPACITY AT THE RATE OF 15 LITRES PER PERSON PER YEAR

MMDA B/8320/89
 C.No. B/8320/89
 R.P. 2250 LITRES
 16875 + 2250
 19125 LITRES
 WITH PROVISION FOR FUTURE EXPANSION, THE TOTAL TANK
 CAPACITY BE 30,000 LITRES (OR 30 M³)
 SEPTIC TANK, HAVING A CAPACITY OF 30 M³
 DEPTH OF LIQUID AS = 1.60 M.
 PLAN AREA OF THE TANK = $\frac{30}{1.60} = 19 \text{ m}^2$ DP.
 A.P.

TOTAL TANK CAPACITY

WITH PROVISION FOR FUTURE EXPANSION, THE TOTAL TANK
 CAPACITY BE 30,000 LITRES (OR 30 M³)
 SEPTIC TANK, HAVING A CAPACITY OF 30 M³
 DEPTH OF LIQUID AS = 1.60 M.
 PLAN AREA OF THE TANK = $\frac{30}{1.60} = 19 \text{ m}^2$ DP.

THE RATIO OF LENGTH TO WIDTH OF TANK BE 3.
 LENGTH X BREADTH X 3 = 19 m²
 BREADTH OF TANK = $\sqrt{19/3} = 2.5$

LENGTH OF TANK = 2.00 M
 FREE BOARD OF THE TANK = 0.40 M
 TOTAL DEPTH OF THE TANK = 2.00 M

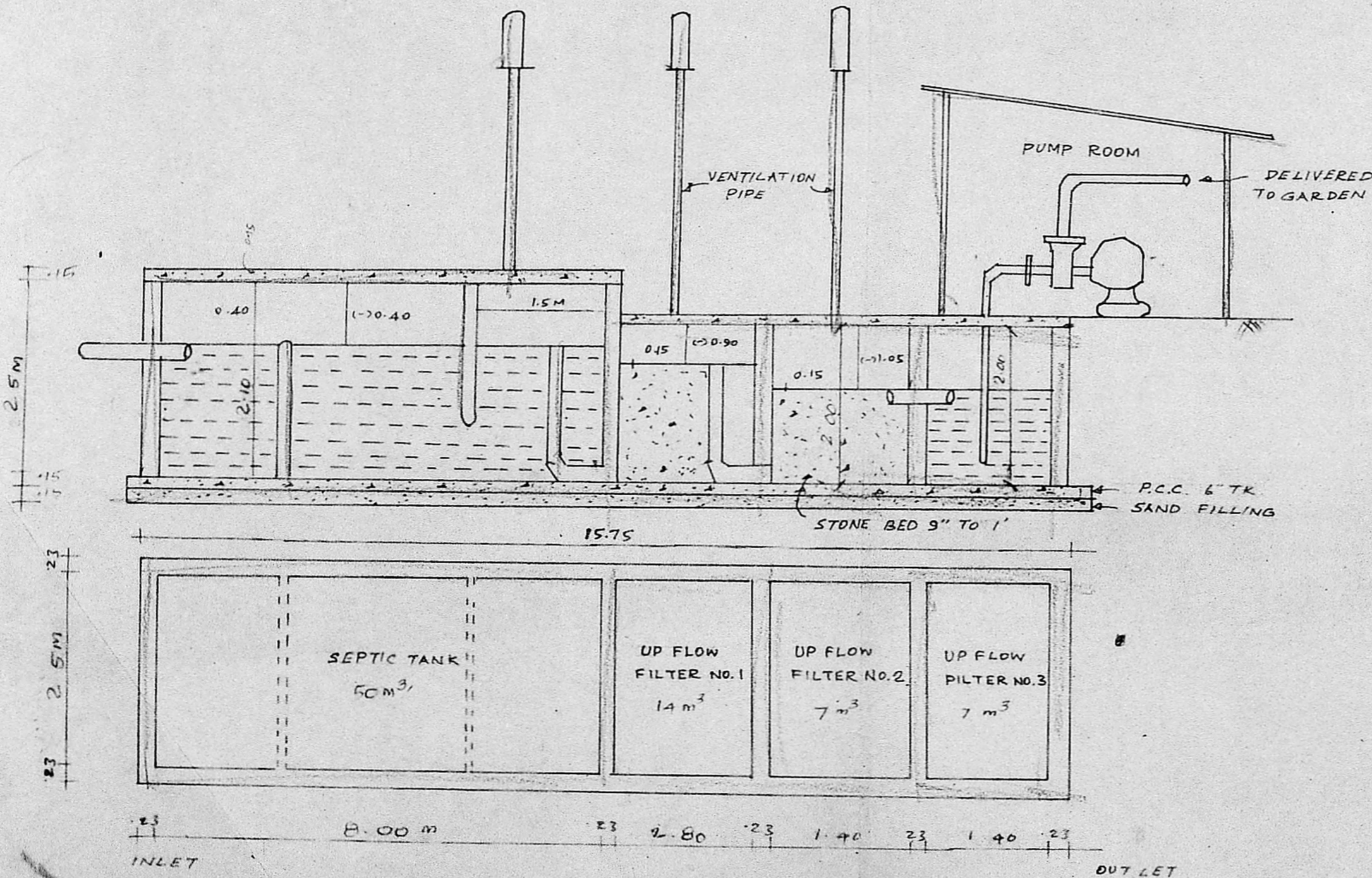
REQUIRED SEPTIC TANKS BUT PROVIDED:

UP FLOW FILTERS :
 DISCHARGE FOR 500 PERSONS VOLUME
 DEPTH
 PLAN AREA REQUIRED
 SIZE OF THE UP FLOW FILTERS
 UP FLOW FILTER NO. ① = 1.4 x 0.7 x 0.8
 UP FLOW FILTER NO. ② = 1.4 x 0.7 x 0.8

SAY 3 PERMITS
 APPROVED
 Subject to the conditions in this office letter
 No. B/8320/89
 FOR MEMBER SECRETARY
 MADRAS METROPOLITAN
 DEVELOPMENT AUTHORITY

K Venugopal

K VENUGOPAL
 A.E.E (RID)
 CONSULTING CIVIL ENGINEER
 LICENCE SURVEYOR CLASS I No. 320
 CORPORATION OF MADRAS
 3, NELLAKANDAN STREET
 (MADRAS)



DETAIL OF SEPTIC TANK
 SCALE 1:75

P. Padma