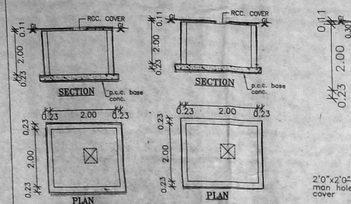
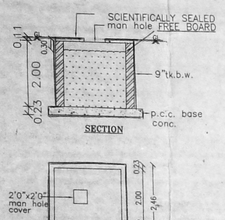
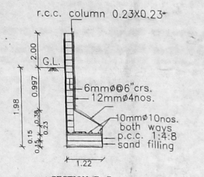
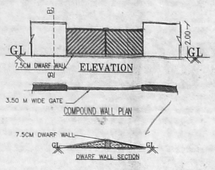
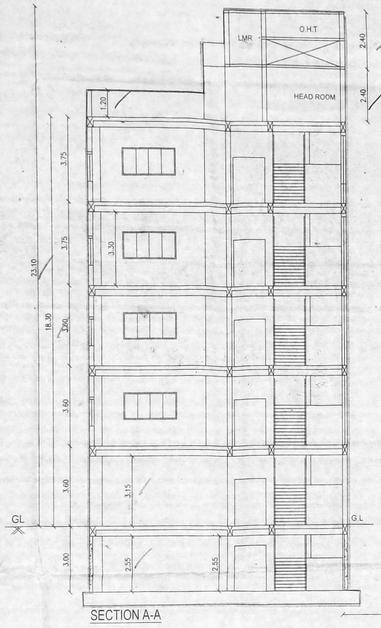
OFFICE COPY

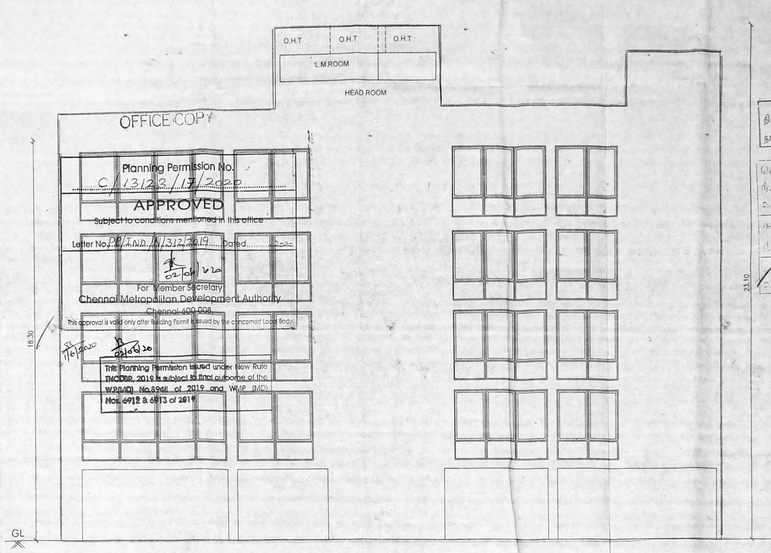


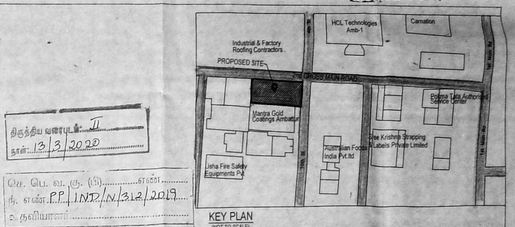


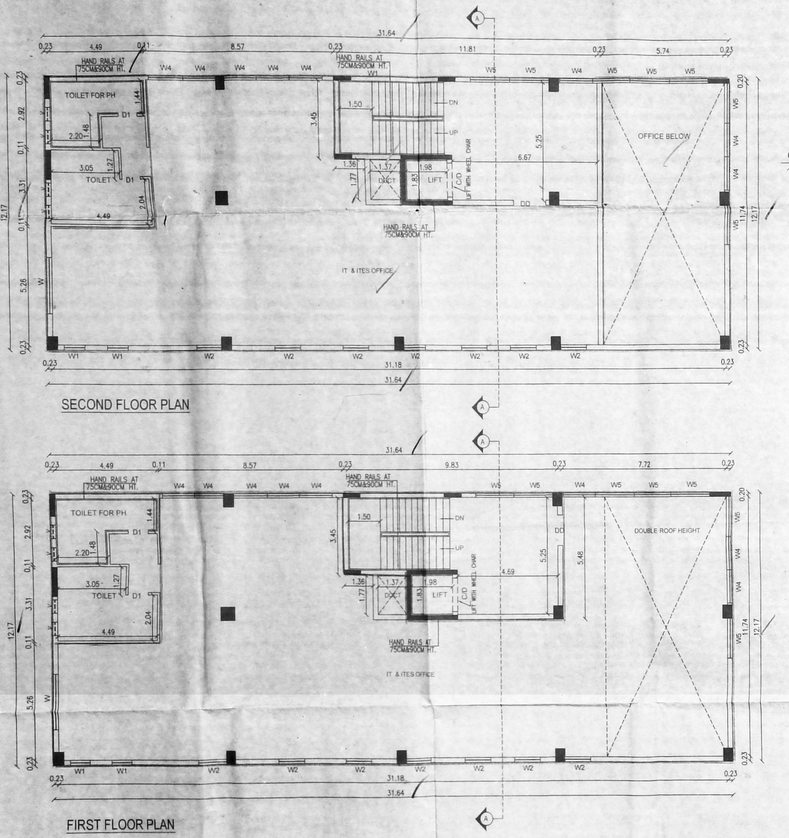


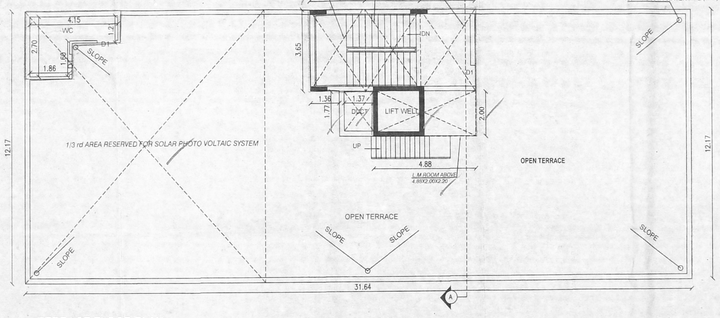


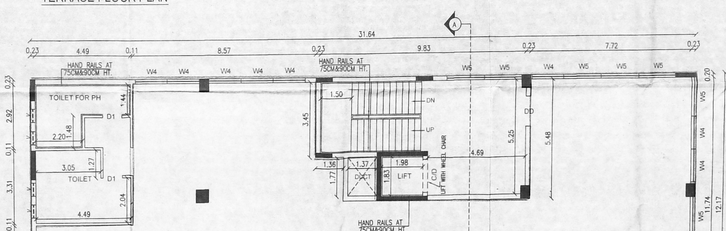


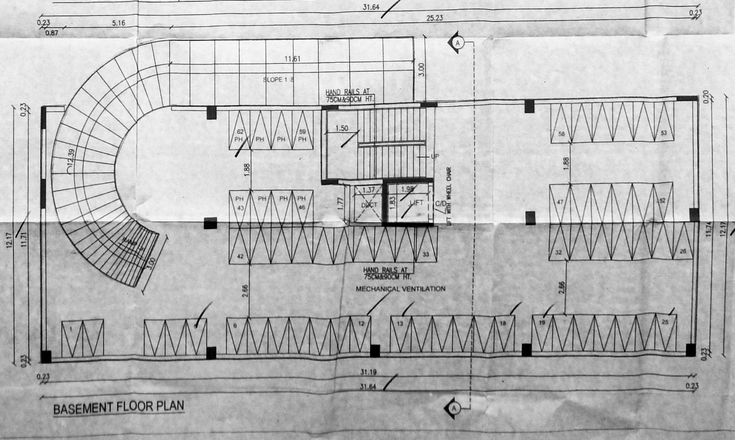


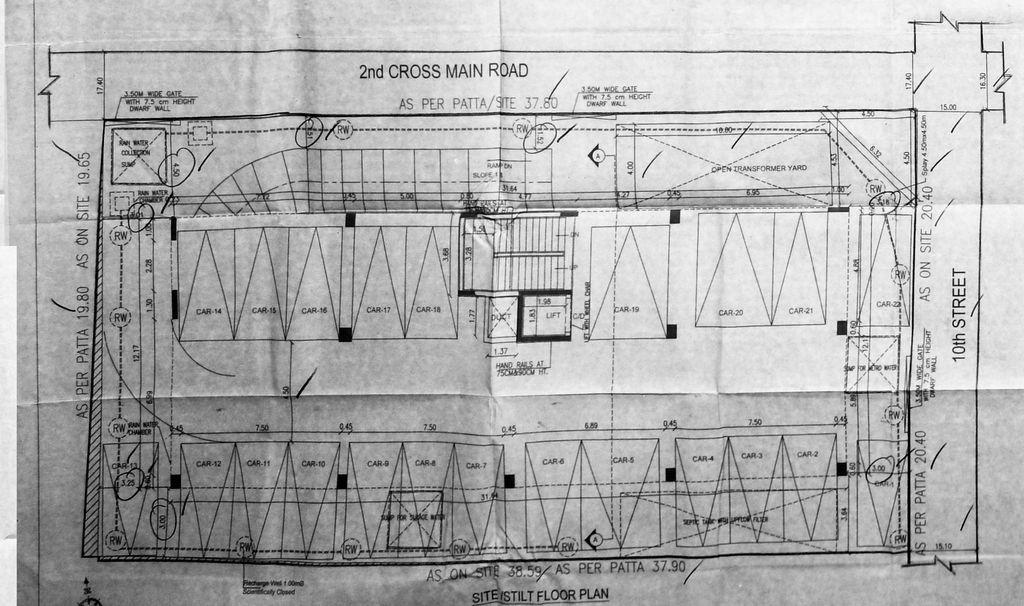


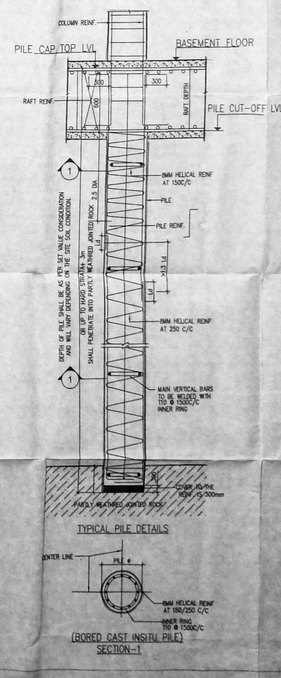


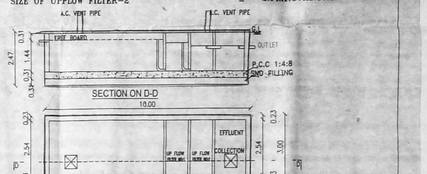












DESIGN OF SEPTIC TANK WITH UPFLOW FILTER

COMMERCIAL AREA = 1463.34

EQUIVALENT DWELLING UNIT = 1463.34/50 = 29.27 NOS. SAY 30NOS.

NO OF USERS = 30 X 5 = 150 Nos.

FIXTURE UNIT PER DWELLING

TOTAL NO OF FIXTURE UNIT = 2 X 30 = 60 NoS.

ASSUME A PEAK FACTOR OF 6LPM/FIXTURE UNIT = 2X150=300LPM

SEPTIC TANK

SURFACE AREA REQUIRED	= 300 X 0.92 / 10	=	27.60M^2
VOLUME OF FREE BOARD	= 27.60 X 0.30	=	8.28M^3
VOLUME OF SEDIMENTATION	= 27.60 X 0.30	=	8.28M^3
VOLUME OF DIGESTION	= 150X0.030	=	4.50M^3
VOLUME OF SLUDGE	= 150X365X0.0002	=	10.95M^3
	TOTAL VOLUME		32.01M^3
DEPTH OF SEPTIC TANK 32.01/29.27		=	1.09
PROVIDING L X B		=	2:1
SIZE OF SEPTIC TANK		=	5.55M X 2.54 X 1.44

UPFLOW FILTER

CAPACITY PEAK GRAVITY		=	30 X 0.045 = 1.35M^3
ASSUME DEPTH		=	0.80M
HENCE AREA OF FINAL EFFLUENT SUMP		=	1.98/0.80 = 2.48M^2
SIZE OF FINAL EFFLUENT SUMP		=	2.54X1.64X0.80M
SIZE OF UPFLOW FILTER-1		=	2.54X1.07X1.30M
SIZE OF UPFLOW FILTER-2		=	2.54X1.07X1.30M

NOTE FOR BORED CAST INSITU PILES :

01. GRADE OF CONCRETE FOR PILE IS M30 WITH MINIMUM CEMENT CONTENT OF 400Kg/CUM./APPROVED DESIGN MIX
02. CEMENT IS OF 53 GRADE AND SHALL BE OF ULTRA TECH, ACC, BIRLA OR ZUARI.
03. ALL LAPS IN PILE REINFORCEMENT SHALL BE WELDED TO AN EXTENT OF 10 DIA OF THE BAR (i.e 10 DIA WELD , 10 DIA GAP AND 10 DIA WELD) OR LAPPED WITH TAC WELDING.
04. COVER TO MAIN REINFORCEMENT IS 50mm.
05. MAXIMUM WATER CEMENT RATIO IS 0.50, WITH A SLUMP OF 100 TO 180mm.
06. ALL PILE CAPACITIES ARE BASED ON THE SOIL INVESTIGATION REPORT.
07. ALL PILES ARE TO BE RESTED ON LATERITIC SOIL STRATA.
08. PILE CUT-OFF LEVEL SHALL BE AS SHOWN IN THE TYPICAL PILE DETAILS. BREAKING THE CONCRETE POURED ABOVE PILE CUT-OFF LEVEL SHALL BE AS PER SPECIFICATIONS.
09. ALL THE PILE REINFORCEMENT SHALL BE PROPERLY BENT INTO THE PILE CAP WITH PROPER ANCHORAGE LENGTH AS INDICATED IN THE DRAWINGS.
10. GROUND WATER TABLE SHALL BE MAINTAINED BELOW THE PILE CAP LEVEL UNTIL THE PILE CAP IS CAST BY PUMPING THE WATER USING PUMPS.
11. ALL THE SIDES OF THE EXCAVATED EARTH SHALL BE SUPPORTED BY PROVIDING PROPER SLOPE TO THAT HEIGHT.

SPECIFICATION:

FOUNDATION	-	RCC. PILE WITH PILE CAP
BRICK WORK	-	C.M 1:6 FOR SUPER STRUCTURE
RCC WALL	-	M30 GRADE (150MM THK)
PLASTERING	-	C.M 1:5 FOR WALLS & 1:3 FOR CEILING
FLOORING	-	MOSAIC FLOORING
CEMENT PAINT	-	TWO COATS FOR WALLS & ONE EXTRA COAT FOR CEILING
R.C.C	-	M30 GRADE FOR ALL CONCRETE WORKS
WOOD WORK	-	ALL WOOD WORKS IN BEST QUALITY TIMBER
WEATHERING COURSE	-	AS PER NATIONAL BUILDING CODE

AREA STATEMENT SQ.M

PLOT EXTENT (DOC.)	740.71
PLOT EXTENT (PATTA)	761.00
PLOT EXTENT (LEAST)	740.71

FLOOR	NET F.S.I AREA
FIRST FLOOR	382.63
SECOND FLOOR	315.45
THIRD FLOOR	382.63
FOURTH FLOOR	382.63
TOTAL	1463.34

F.S.I = 1.98

CAR PARKING PROVIDED = 22

TWO WHEELER PARKING PROVIDED = 62

COLOUR INDEX

PROPOSED	
ROAD	
BOUNDARY	

SCALE : 1:100

SHEDULE OF JOINERY

DD	DOOR	-	1.50X2.40
D1	DOOR	-	0.90X2.40
D2	DOOR	-	0.76X2.13
W	WINDOW	-	1.80X2.25
W1	WINDOW	-	0.90X2.25
W2	WINDOW	-	1.20X2.25
W3	WINDOW	-	1.80X2.25
W4	WINDOW	-	1.50X3.15
W5	WINDOW	-	1.80X3.15
V	VENTILATOR	-	0.60X1.20

PLANNING PERMISSION APPLICATION FOR THE PROPOSED CONSTRUCTION OF BASEMENT FLOOR+ STILT FLOOR+4 FLOORS IT & ITES OFFICE BUILDING AT PLOT/SHED NO. K-36,AMBATTUR-SIDCO INDUSTRIAL ESTATE, AMBATTUR, 10TH STREET AND 2ND. CROSS MAIN ROAD, CHENNAI-58 IN OLD S.NO.32 PART AND 30 PART, T.S.NO.10, BLOCK NO.15, WARD-H OF MOGAPPAIR VILLAGE WITHIN THE LIMIT OF GREATER CHENNAI CORPORATION DIVISION-86, ZONE-7

G.R. ARUN
Registered Architect (Grade I) in CMDA
Regd. No.RAGr.I/19/04/166
Date:

REGISTERED ARCHITECT/ REGISTERED ENGINEER

AMARNATH R. BORAIAH
Registered Structural Engineer (Class-I)
CMDA REG. NO. SE/CI/19/03/017
17, C.Block, R.V. Nagar, Ambattur, CHENNAI - 53, Ph : 9731303187

REGISTERED STRUCTURAL ENGINEER

TOUCHSTONE
TOUCHSTONE INFRASTRUCTURE & SOLUTIONS PVT. LTD.
No. 155/1, 17th Main Road, Anna Nagar, Chennai - 600 040. Phone : +91 44 42184285, +91 44 26163633 Email : chennai@tispl.in, Website : www.tispl.in

For Touchstone Infrastructure & Solutions Pvt Ltd
(P. VINOTH KUMAR)
Managing Director

For Touchstone Infrastructure and Solutions Pvt Ltd
Director

OWNER'S SIGNATURE