UNIVERSITY OF SWAZILAND
Faculty of Health Sciences

DIPLOMA IN ENVIRONMENTAL HEALTH

FINAL EXAMINATION PAPER 2007/2008

TITLE OF PAPER	:	**BUILDING CONSTRUCTION TECHNOLOGY II**
COURSE CODE	:	**EHS 211**
DURATION	:	**2 HOURS**
MARKS	:	**75**
INSTRUCTIONS	:	**READ THE QUESTIONS & INSTRUCTIONS CAREFULLY**
	:	**ANSWER ANY THREE (3) QUESTIONS**
	:	**EACH QUESTION CARRIES 25 MARKS**
	:	**WRITE NEATLY & CLEARLY**
	:	**NO PAPER SHOULD BE BROUGHT INTO NOR OUT OF THE EXAMINATION ROOM**
	:	**BEGIN EACH QUESTION ON A SEPARATE SHEET OF PAPER**

DO NOT OPEN THIS QUESTION PAPER UNTIL PERMISSION IS GRANTED BY THE INVIGILATOR

QUESTION ONE

This question relates to the attached drawings A & B.

(A) Using the **drawing A** answer the following questions.

1. If the scale is 1:50 what would be the size of :
   a, b, c. [3]

2. In a scale of 1:150 what would be the size of: a, b, c. [3]
3. What is the name of the dimension lines being used in the drawing? [2]
4. What view does this drawing represent? [1]
5. For a habitable room what is the minimum size for b [2]
6. What are the minimum dimensions for the window area [2]

(B) Using the site plan in drawing B answer the following questions:

1. What is the scale used by the architect in this site plan? [2]
2. What is the total area of this plot in m^2?[2]
3. How far from the house is the septic tank and what is the most important thing about location of a septic tank? [2]
4. Is the access placed at the correct position in terms of the building act? Please explain [2]
5. In a separate piece of paper show what else would be there to complete this drawing layout [2]
6. In just one paragraph describe PTN 876 [2]

QUESTION TWO

(A) This question refers to **drawing C.**

1. In a building construction site what would be name of Drawing C. Comment on its utility? [2]
2. After how many months are partitions finished? [3]
3. If glazing is delayed by ten weeks after how many months will it then be finished [3]
4. What are the implications in this drawing for a delay in one of the activities? [2]

(B) This question refers to **Drawing D and E.**

1. What does a, b, c, d, e, and f represent in drawing D? [10]
2. What is the technical name for the left window in c of drawing D? [1]
3. What is the technical name of the left and right windows in f of drawing D? [1]
4. What is the purpose of a in drawing D? [2]
4. In drawing **E** which one represents the first floor plan? [1]

QUESTION THREE

(a) State three basic rules for a balanced presentation of finished drawings [6]
(b) Illustrate with the aid of a sketch the following types of symbols used in a drawing office: [10]

1 Soil
2. Mass concrete
3. brickwork
4. reinforced concrete
5. bath
6. hardcore
7. water closet
8. shower
9. electric cooker
10. soil vent pipe

(c) This question refers to working **drawing F.** From the public health point of view what is glaringly wrong about this plan? [1]
(d) What are the three subsets of the Building Construction Technology course? [3]
(e) Outline the municipal planning application procedures & requirements in Swaziland [5]

QUESTION FOUR

(a) Write a few notes on the use of scale in working drawings giving examples of appropriate scales for the component parts of working drawings [5]

(b) Outline the health and safety standards applicable in a building site [5]

(c) Outline the things you look for in interpreting, approving, and scrutinizing drawings and building plans [10]

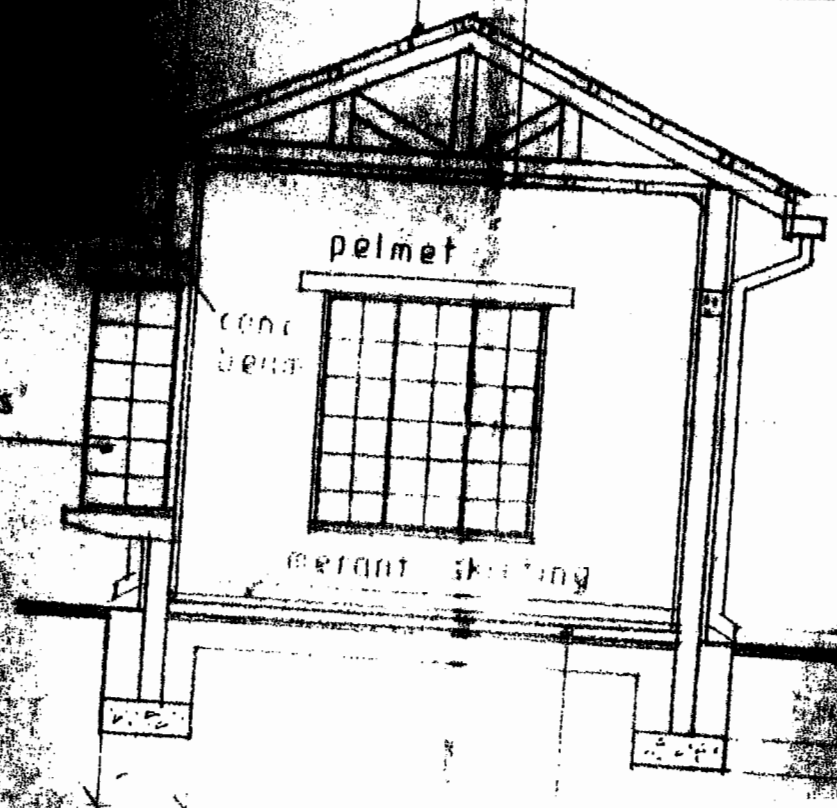
(d) 2mm is the size of a roads drive leading to a building site. On a scale 1:1000, what is the size of the road in meters? [1]

(e) What is the volume of a mineral which presents with a density of 7.5 g/m^3 and a mass of 375? [1]

(f) Calculate the width of a strip foundation when the load bearing wall is transmitting a load of 25kn/m and the self bearing capacity of the subsoil is 75kn/m2 [2]

(g) Specific gravity=weight in air/weight in air-weight in water. Now for a mineral whose specific gravity is 1.07, and its weight on air is 240.what is the mineral weight in water?[1]

DRAWING : A



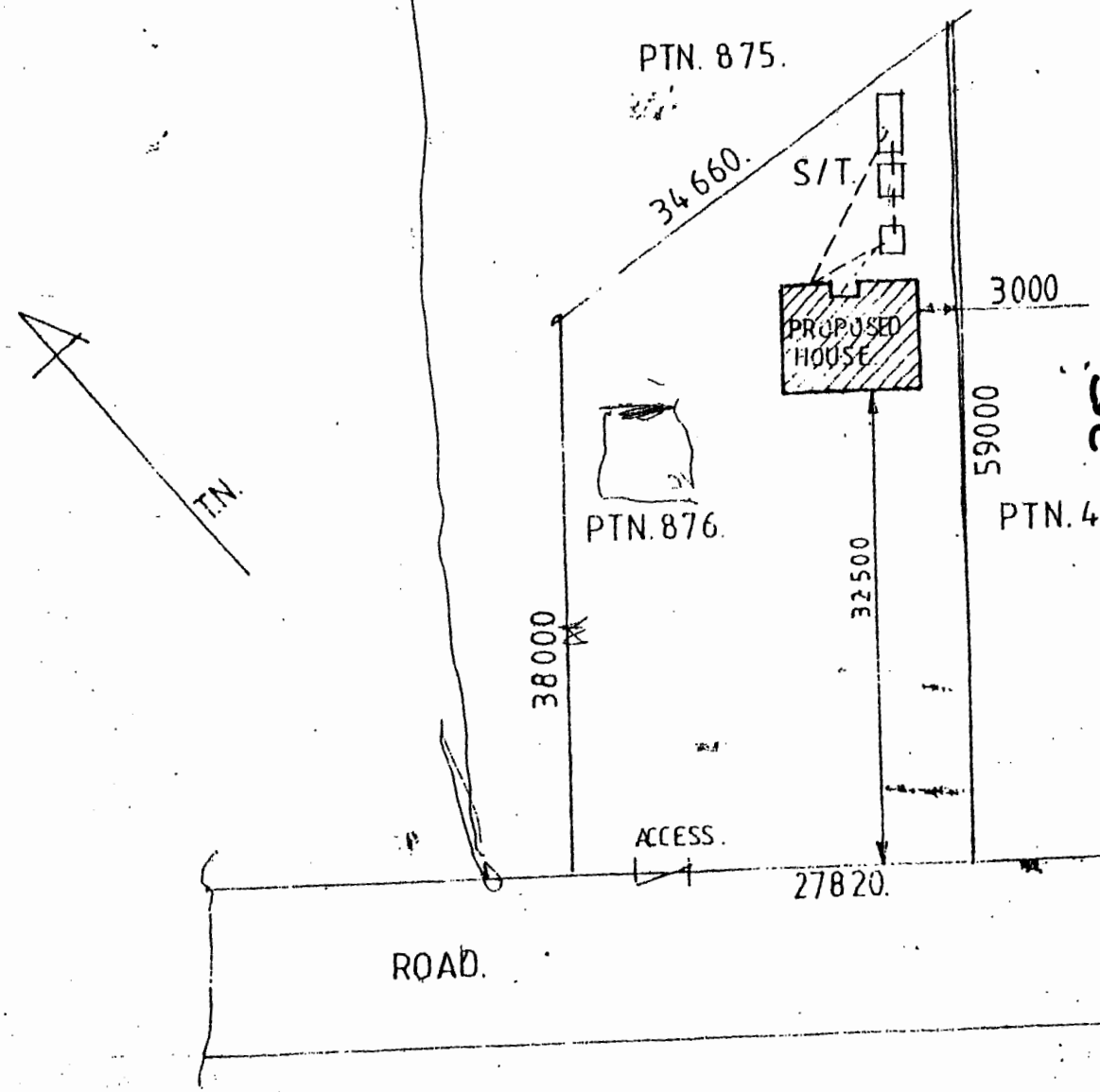
SECTION on A-A
scale

40 mm
100 mm
details
on

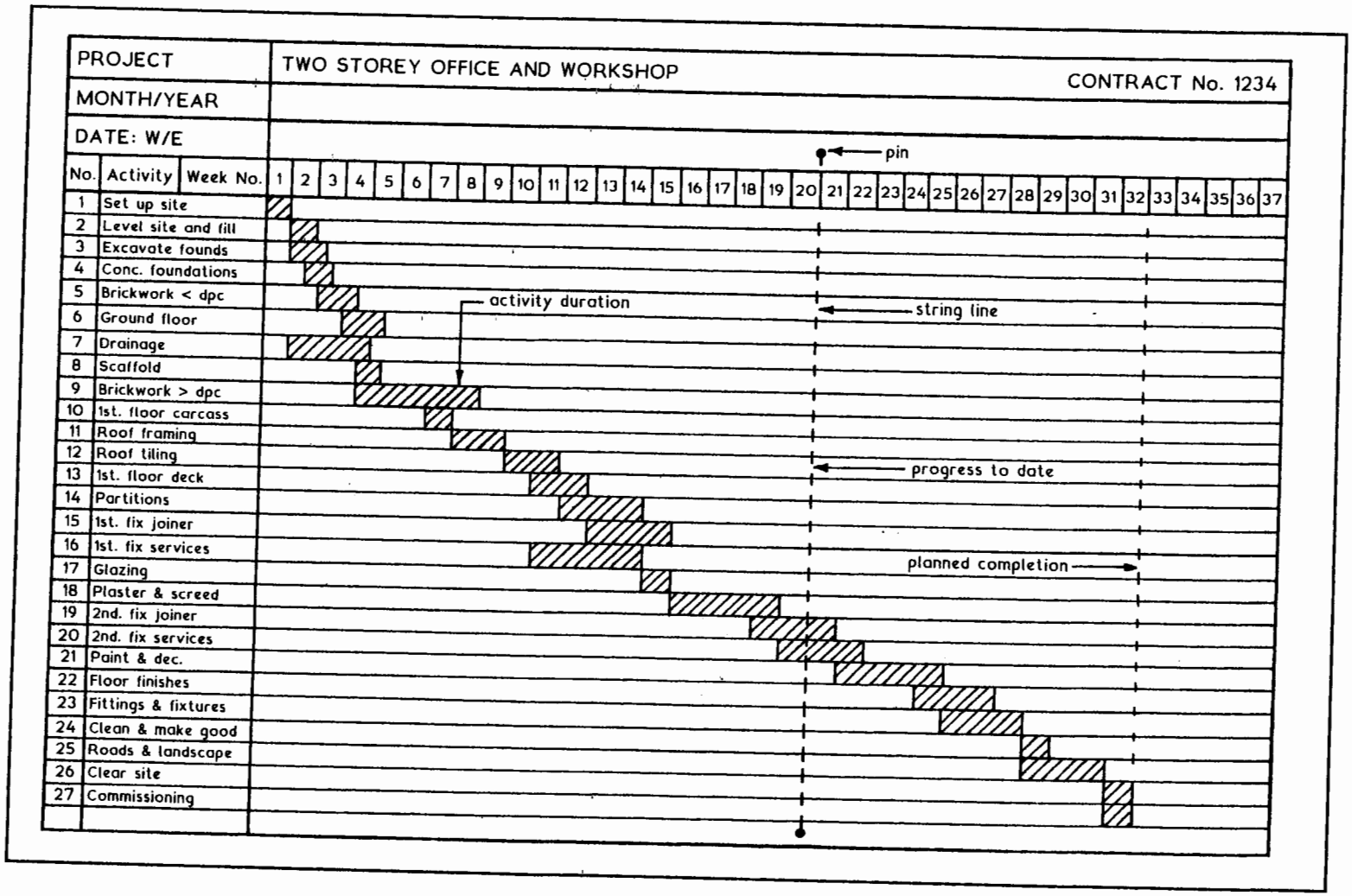
building line

ALL
could be
building
2 300

DRAWING : B


PTN. 875.
34660.
S/T.
3000
PROPOSED HOUSE
59000
PTN. 876.
PTN. 4
T.N.
38000
32500
ACCESS.
27820.
ROAD.

DRAWING: C



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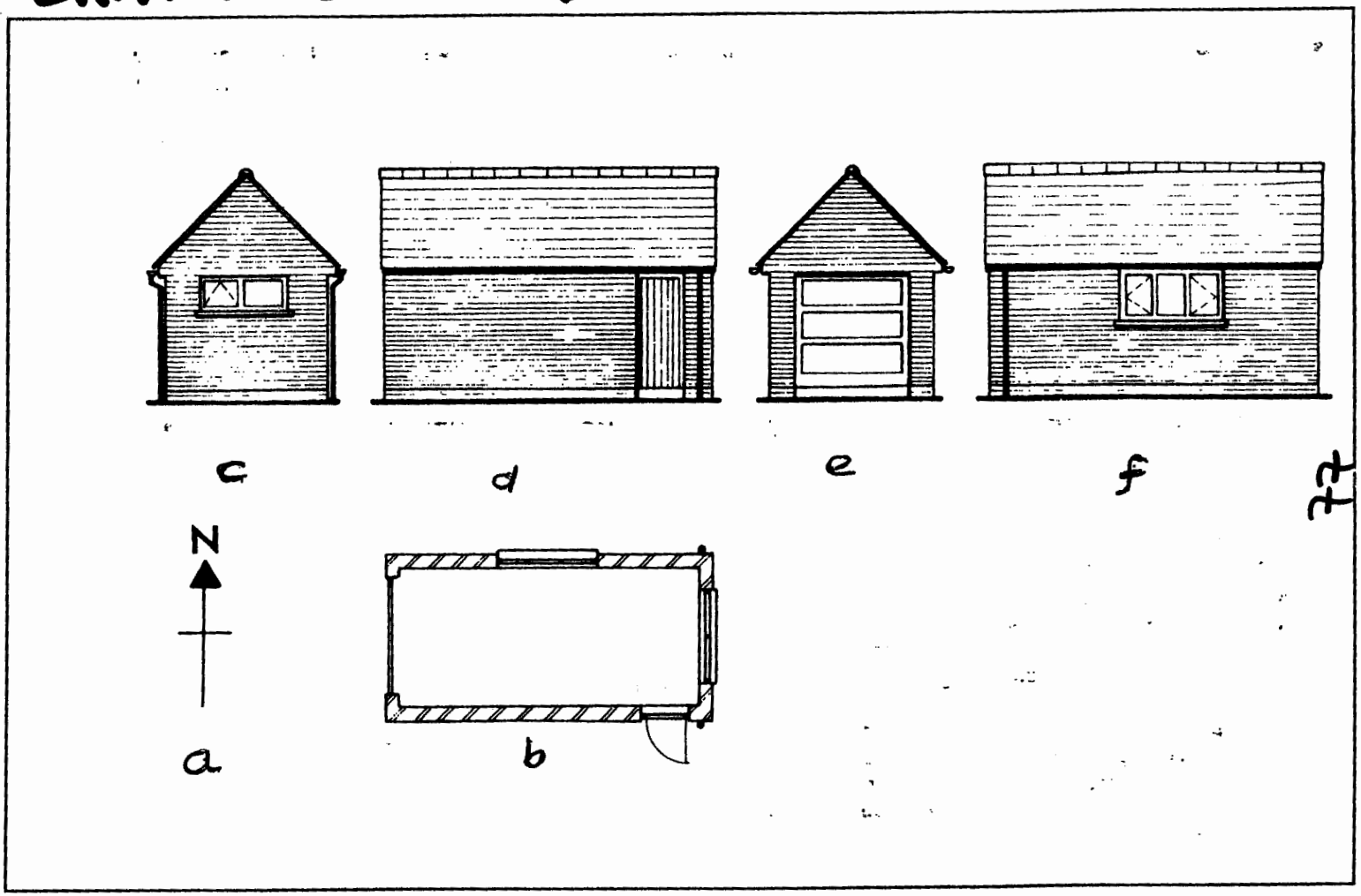
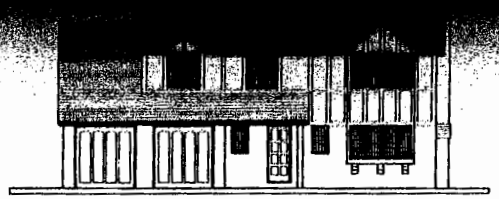
Given the Ff Gantt chart

DRAWING : D



DRAWING: E



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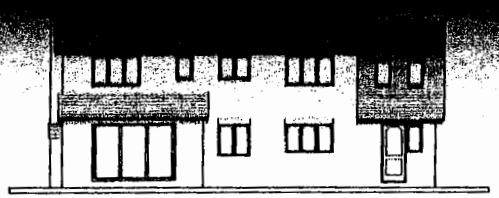

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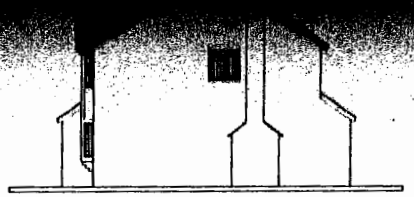

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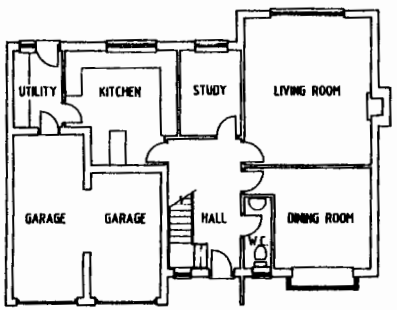
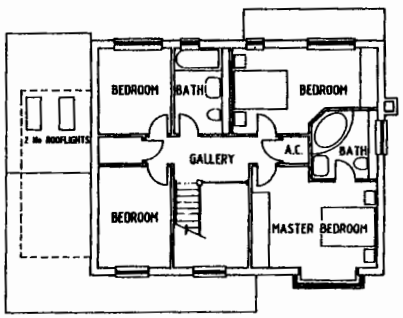


g



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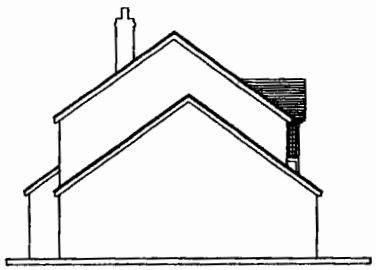

i

Title	FOUR BEDROOMED HOUSE
Scale	Date
Drawing Ref.	RG/HNC,D/10

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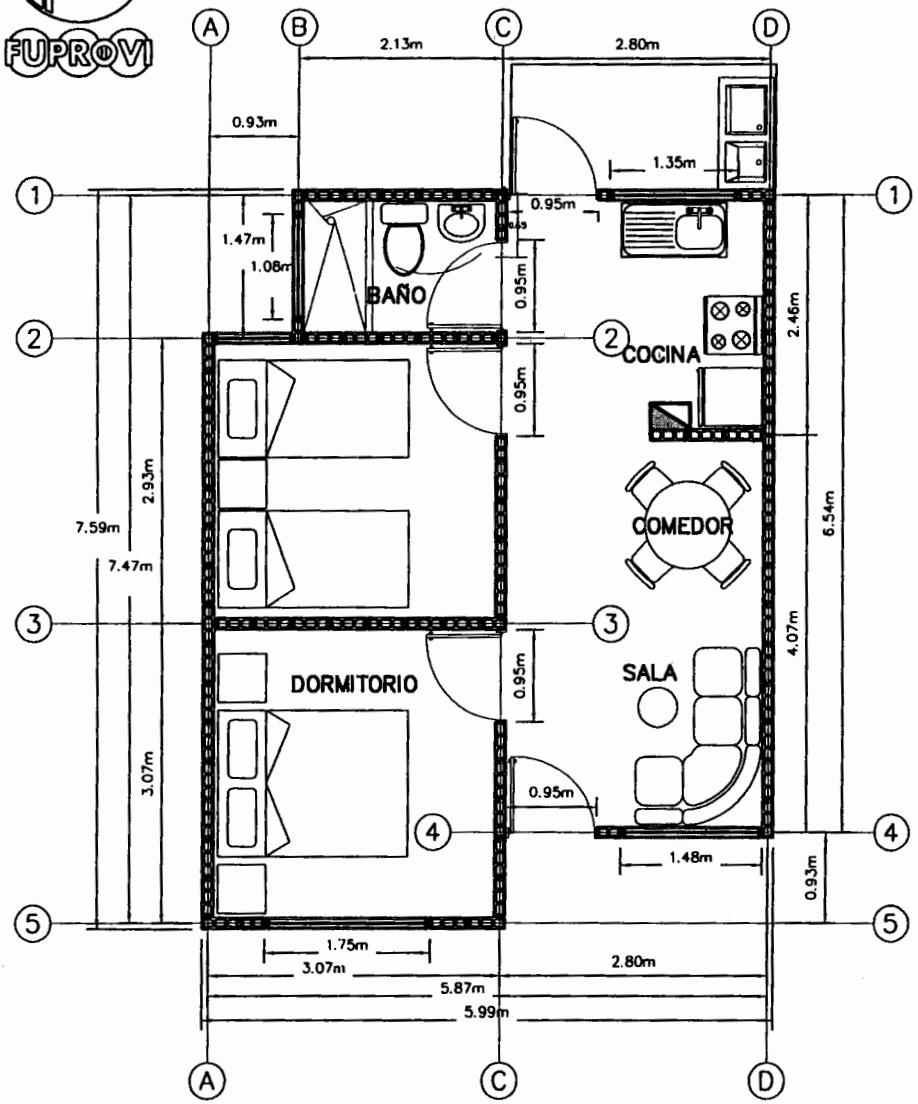
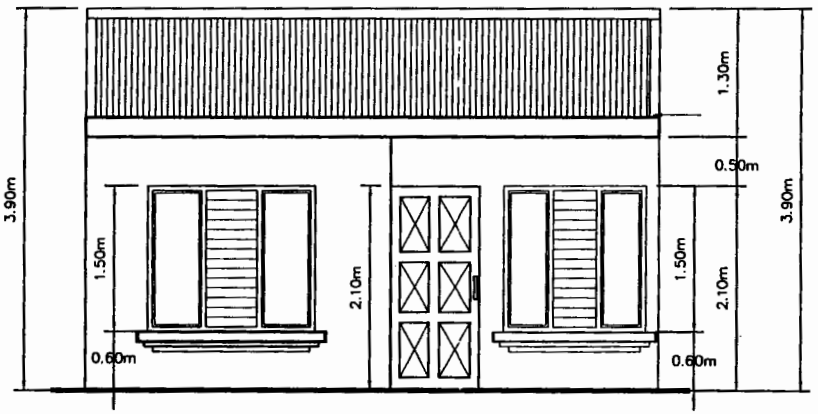
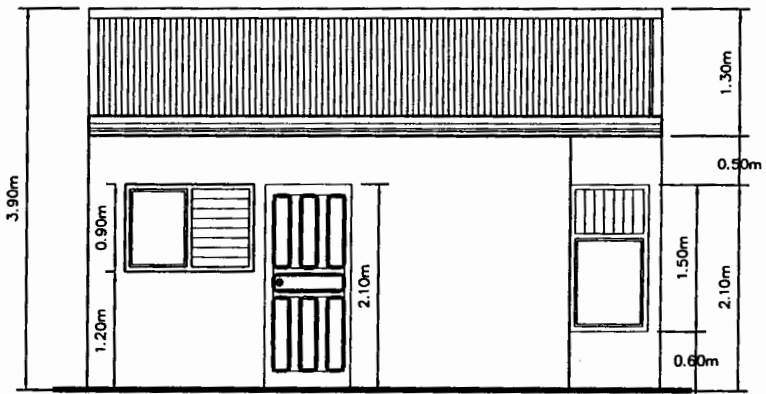
DRAWING : F



PLANTA DE DISTRIBUCION ARQUITECTONICA Y ELECTRICA
Escala. 1 : 50



FACHADA PRINCIPAL
Escala. 1 : 50



FACHADA POSTERIOR
Escala. 1 : 50

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CASA DE HABITACION PROYECTO CAMINO REAL