



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P1

FEBRUARY/MARCH 2015

MEMORANDUM

MARKS: 100

This memorandum consists of 7 pages.

ANSWERS		
1	1VG2014	1
2	INCLUDE A SOAK PIT	1
3	1 : 300	1
4	2	1
5	BRICK PAVING	1
6	DWELLING	1
7	BLACK	1
8	GREEN	1
9	2000 / 2 m	1
10	WIRE FENCE	1
11	CORNER HEIGHT/HEIGHT ABOVE SEA LEVEL	1
12	BUILDING LINE	1
13	ELECTRICAL METER	1
14	NORTH POINT	1
15	NORTH-WEST	2
16	8,378	2
17	37,8	2
18	44 m [calculation 1, answer 1, converted to metres 1]	3
19	789,7 m ² [calculation 1, answer 1, metres ² 1]	3
20	(See below)	4

TOTAL: 30

ANSWER 18
Show ALL calculations.

$$15+3.5+3.1+8.8+3.5+3.1+3.5 = 44 \text{ m}$$

ANSWER 19
Show ALL calculations.

$$37,8 - (5+3) = 29,8$$

$$30 - (0,5+3) = 26,5$$

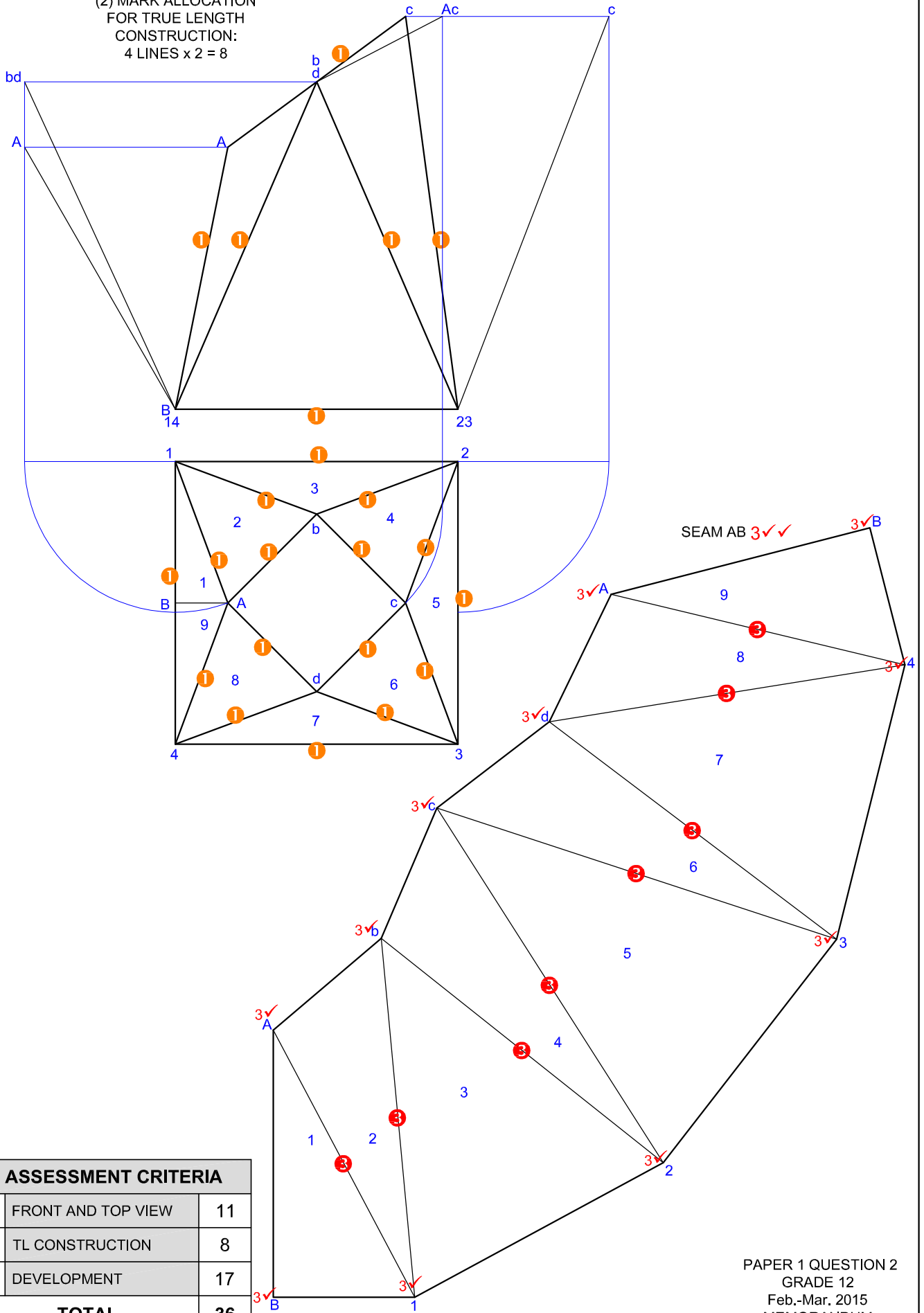
$$29,8 \times 26,5 = 789,7 \text{ m}^2$$

20

FREEHAND ①

The diagram shows a freehand drawing of a building plan. It consists of a main rectangular area with a smaller rectangle inside. There are four red circled '1' marks: one on the top horizontal line, one on the bottom horizontal line, one on the left vertical line, and one on the right vertical line. There is also a small circle with a red '1' inside the main rectangle.

(2) MARK ALLOCATION
FOR TRUE LENGTH
CONSTRUCTION:
4 LINES x 2 = 8

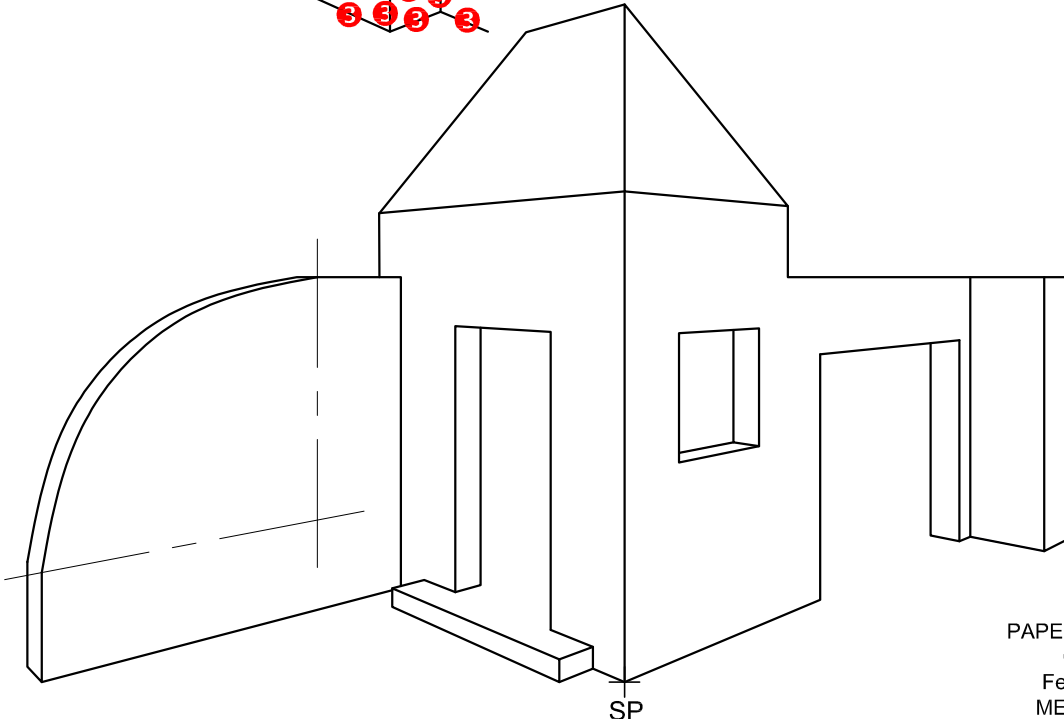
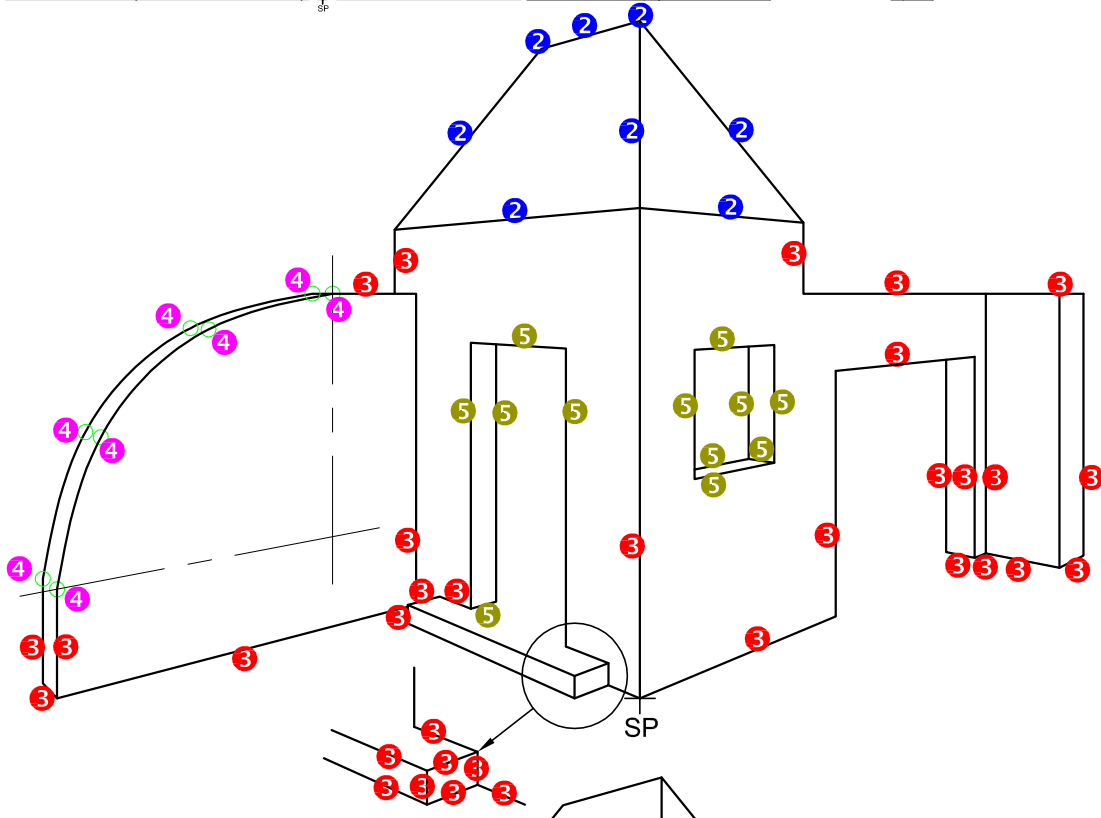
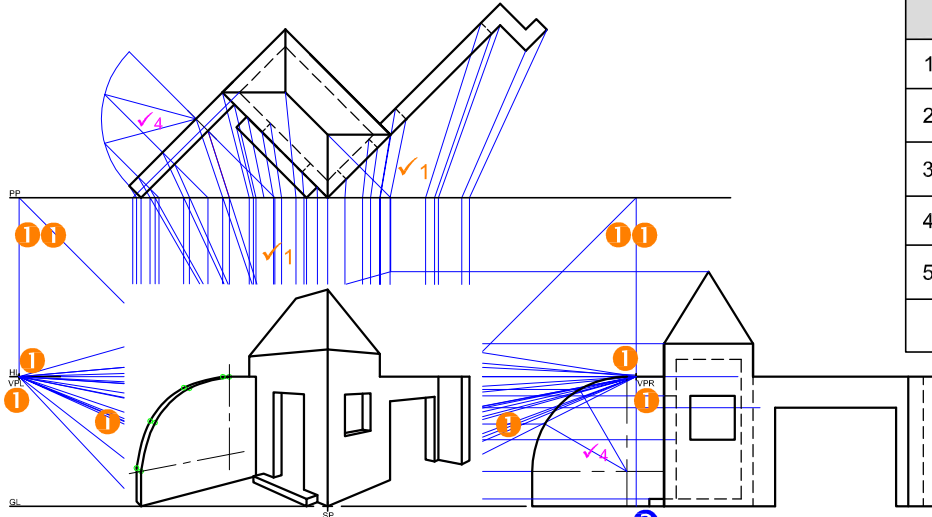


ASSESSMENT CRITERIA		
1	FRONT AND TOP VIEW	11
2	TL CONSTRUCTION	8
3	DEVELOPMENT	17
TOTAL		36

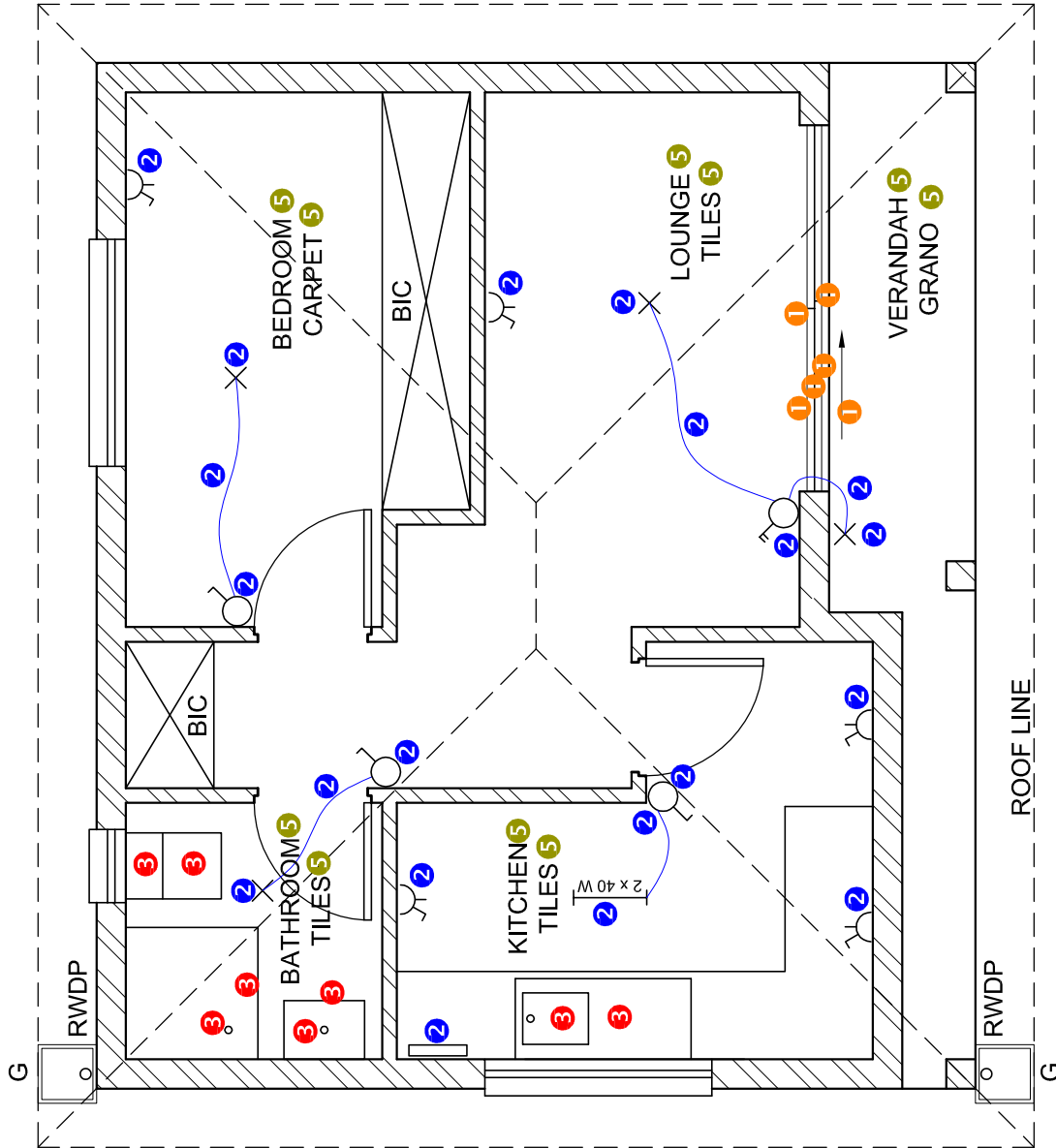
PAPER 1 QUESTION 2
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ASSESSMENT CRITERIA

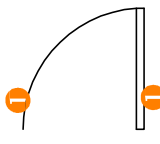
1	CONSTRUCTION + VPs	7
2	ROOF	4
3	WALLS	17
4	QUARTER-CIRCLE	6
5	WINDOW + DOOR	6
TOTAL		40



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DETAIL OF MARK ALLOCATION FOR A WINDOW (2 x 3 windows = 6)

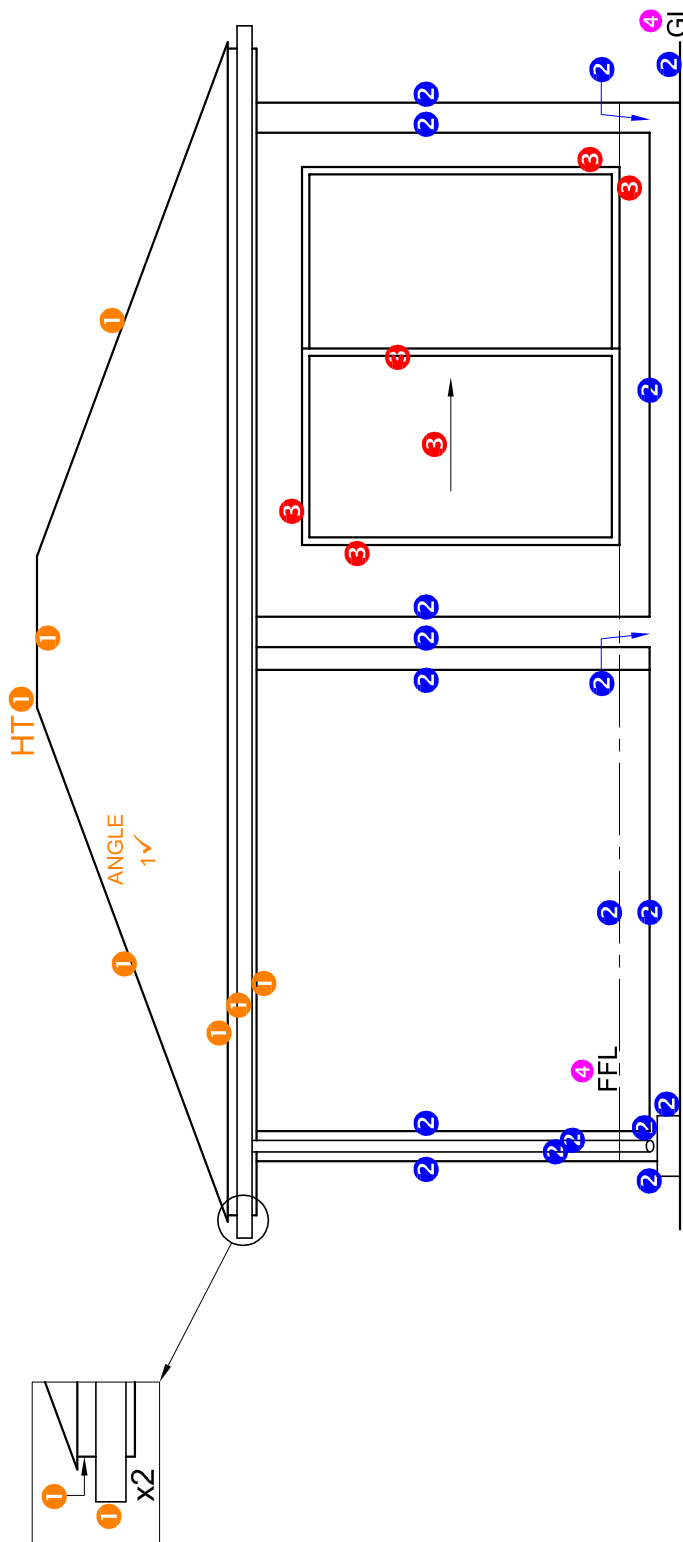


DETAIL OF MARK ALLOCATION FOR A DOOR (1 x 3 doors = 3)

4 HATCHING ALLOCATION
 SANS COMPLIANT (TYPE) 2
 HATCHING CORRECTLY APPLIED 2
 TOTAL 4

FLOOR PLAN
 SCALE 1 : 50

ASSESSMENT CRITERIA		POSSIBLE
FLOOR PLAN		
1	DOORS + WINDOWS	12
2	ELECTRICAL	10
3	FIXTURES	4
4	HATCHING	4
5	LABELS	5
SUBTOTAL		35

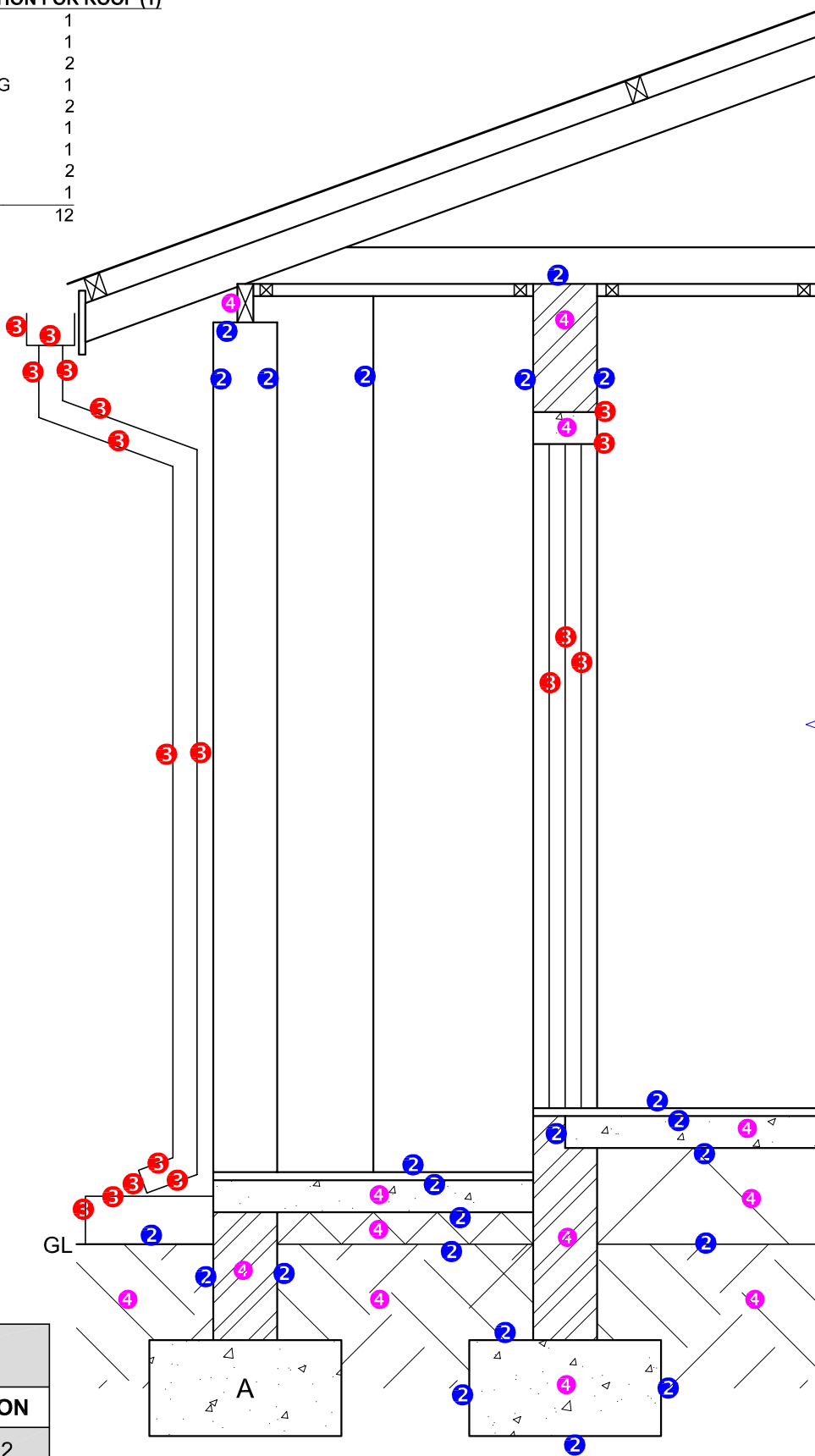


SOUTH-WEST ELEVATION

ASSESSMENT CRITERIA		
SOUTH-WEST ELEVATION		
1	ROOF	6½
2	WALLS + RWDP + FFL + GULLY	9
3	DOOR	3
4	LABELS	1½
SUBTOTAL		20

MARK ALLOCATION FOR ROOF (1)

ROOF ANGLE	1
ROOF SHEET	1
PURLIN	2
PURLIN SPACING	1
TRUSS	2
TIMBER BEAM	1
FASCIA BOARD	1
BRANDERING	2
CEILING BOARD	1
TOTAL	12



DETAILED SECTION
SCALE 1 : 20

ASSESSMENT CRITERIA		
DETAILED SECTION		
1	ROOF DETAIL	12
2	FOUNDATIONS + WALLS + SLAB	11½
3	DOOR + GULLY RWDP + GUTTER	9
4	HATCHING	6½
SUBTOTAL		39