



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE**

GRADE 12

ENGINEERING GRAPHICS AND DESIGN P1

FEBRUARY/MARCH 2018

MARKING GUIDELINES

MARKS: 200

These marking guidelines consist of 7 pages.

ANSWERS		
1	2017-08-01	1
2	177 WEST PARK DRIVE	1
3	P1Q1-2017	1
4	MOVE SUBSTATION	1
5	ASPHALT	1
6	14	1
7	10	1
8	D	1
9	1 : 40	1
10	PAVEMENT	1
11	BUILDING LINE	1
12	BOUNDARY OF ADJACENT STAND	1
13	RODDING EYE (RE)	1
14	BLUE	1
15	GULLY	2
16	NORTH EAST	2
17	167 m	2
18	147 m (calculation 1, answer 1, metre 1)	3
19	2192 m ² (calculation 1, answer 1, metre ² 1)	3
20	<i>See below</i>	4

TOTAL: 30

ANSWER 18
Show ALL calculations.

$$L+L+L+L+L+L+L+L$$

$$=14+17,75+4+11+10+16.75+28+45.5$$

$$= 147 \text{ m}$$

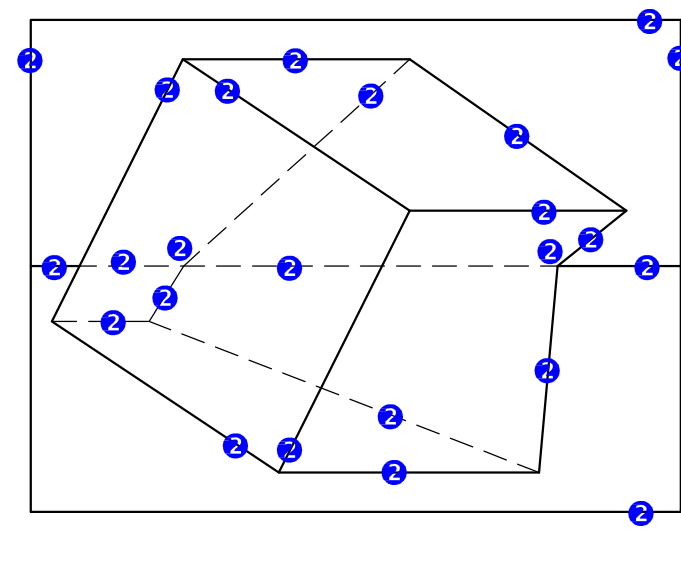
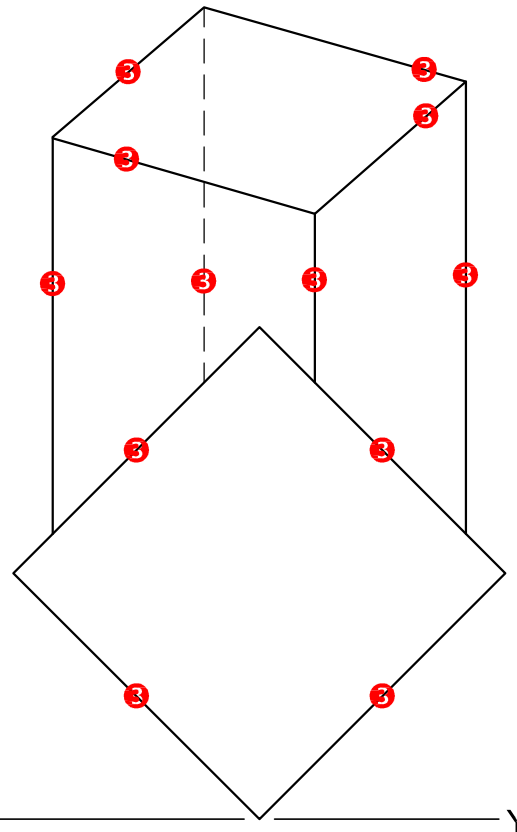
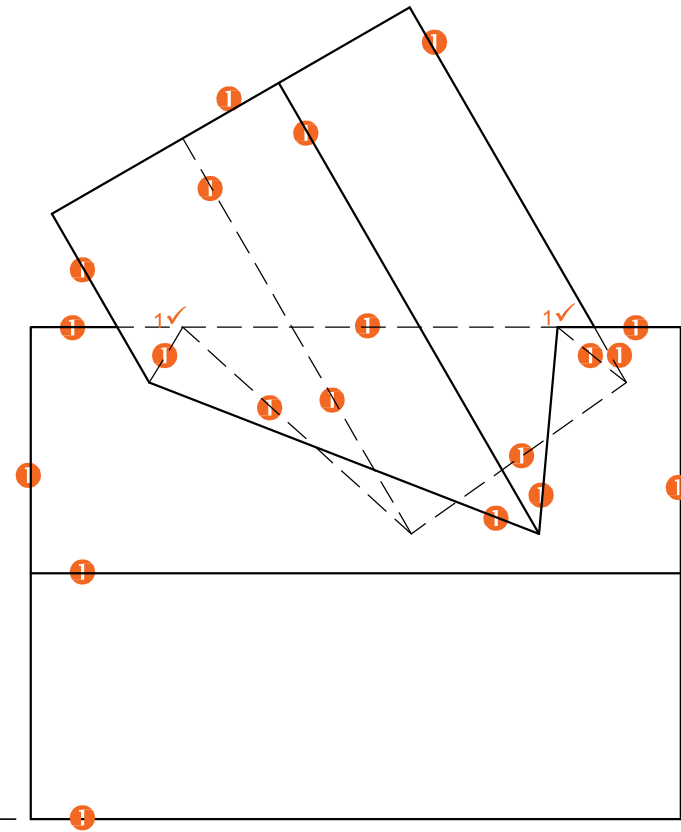
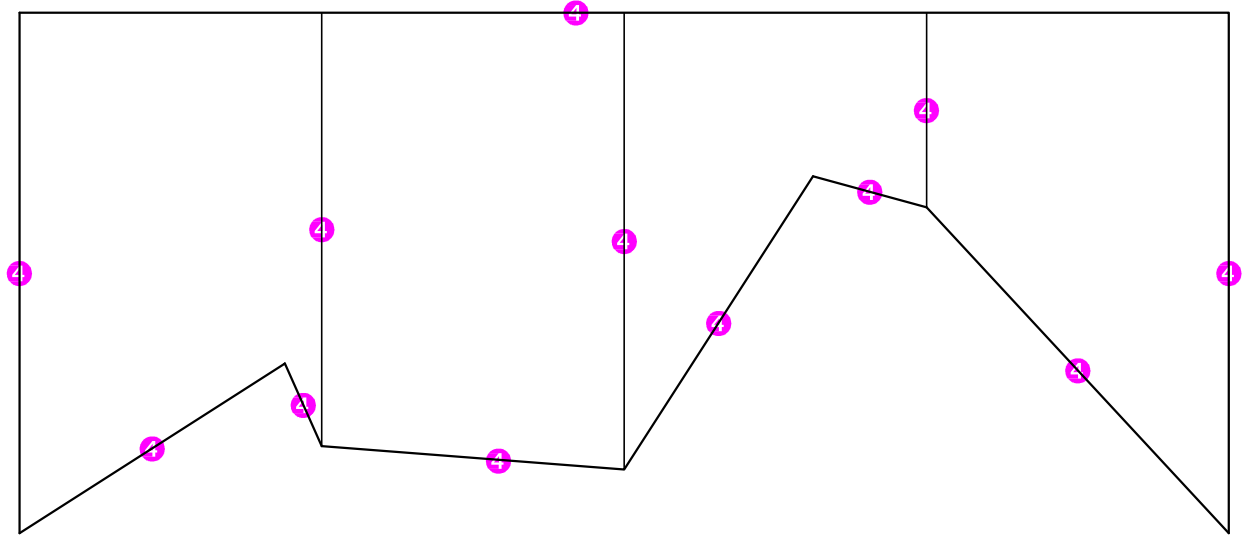
ANSWER 19
Show ALL calculations.

$$(LxB \times 5) + (LxB)$$

$$=(14 \times 32.5 \times 5) + (14 \times 45,5)$$

$$= 2192 \text{ m}^2$$

ANSWER 20
FREEHAND ①



ASSESSMENT CRITERIA		
1	FRONT VIEW	12
2	TOP VIEW	12
3	LEFT VIEW	6
4	DEVELOPMENT	6
PENALTIES (-)		
TOTAL		36

PAPER 1 QUESTION 2
 GRADE 12
 DBE/Feb.-Mrt. 2018
 MARKING GUIDELINES

PP

HL

GL

VPL POSITION

VPR

SP

5✓ CIRCLE CONSTR

5✓ CIRCLE CONSTR

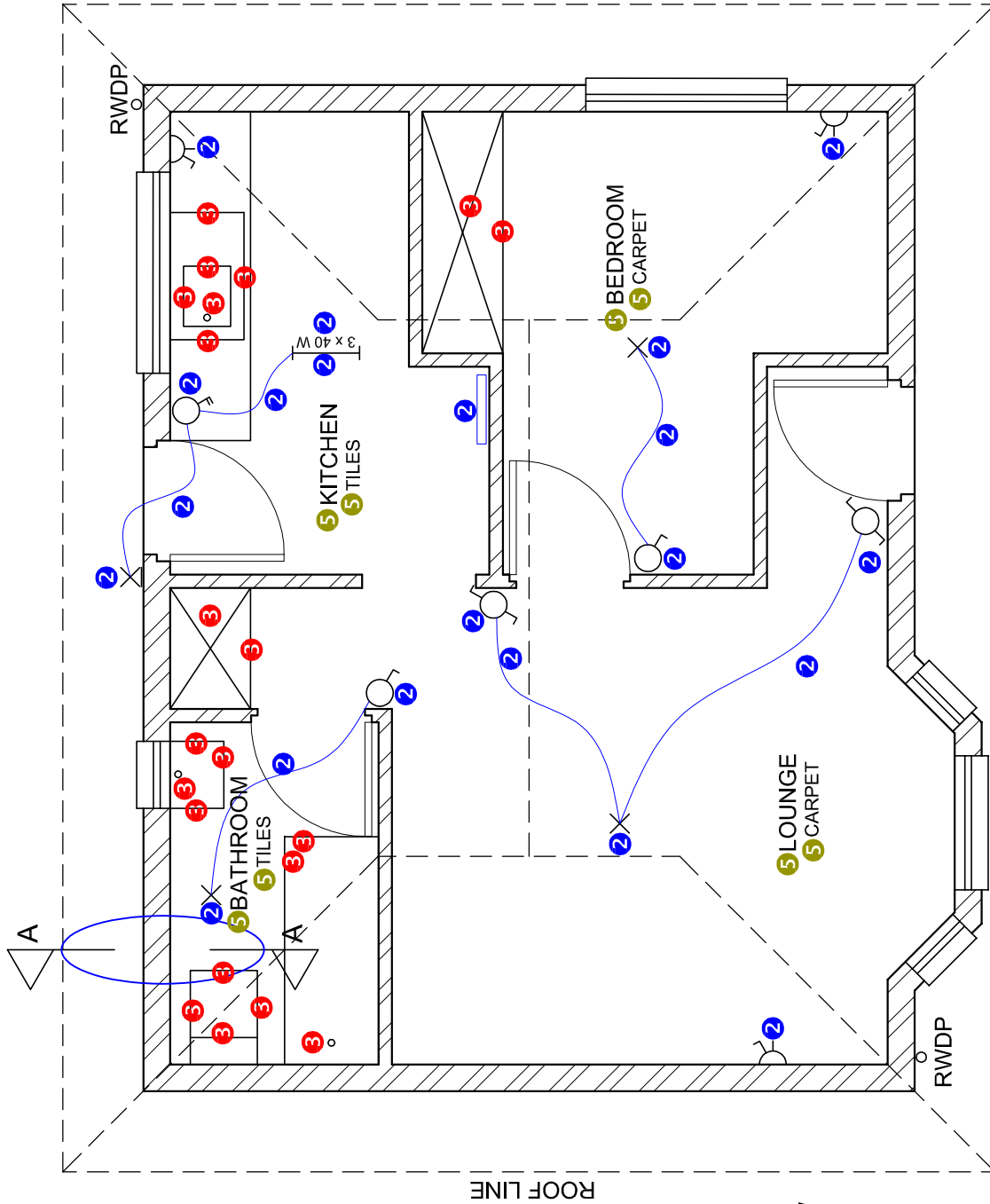
2✓

ASSESSMENT CRITERIA

Criteria Number	Criteria Description	Marks
1	VP's + CONSTRUCTION	6
2	WALLS	13
3	PYRAMID	7
4	OPENINGS	8
5	ARC + CONSTRUCTION	5
TOTAL		39

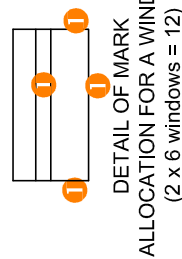
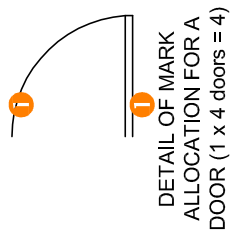
PAPER 1 QUESTION 3
 GRADE 12
 DBE/Feb.-Mrt. 2018
 MARKING GUIDELINES

SP



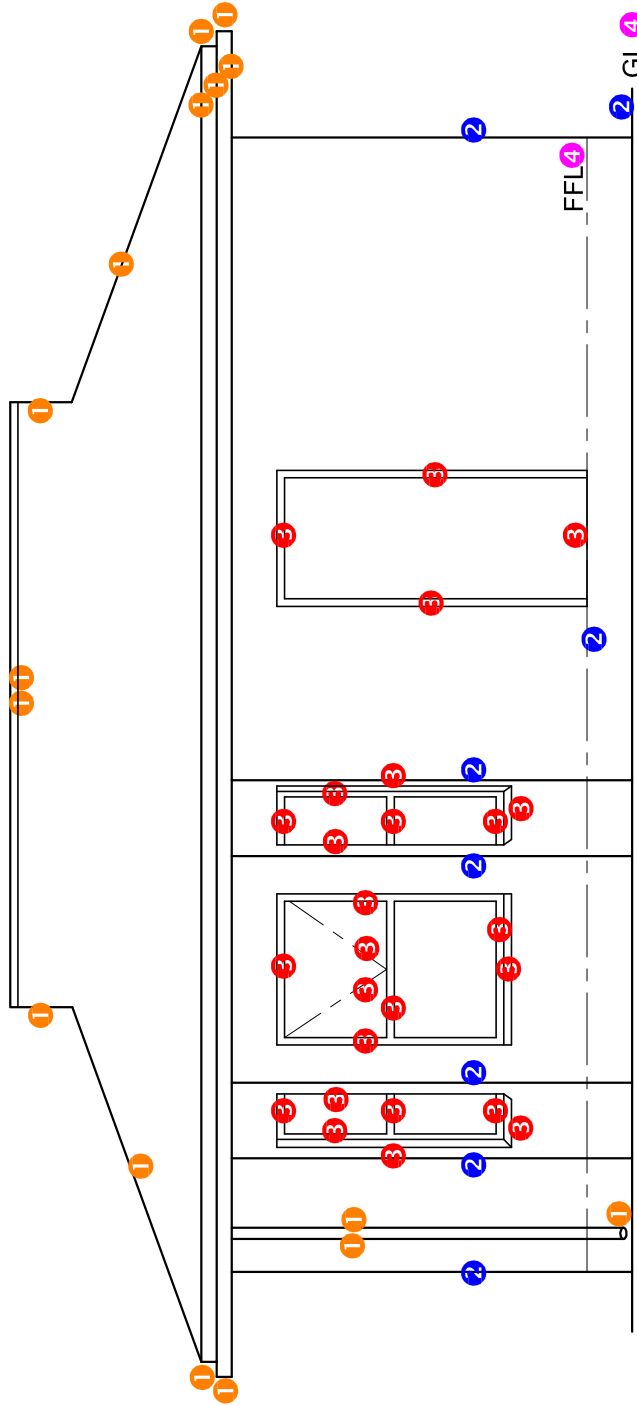
FLOOR PLAN		
1	DOORS + WINDOWS	16
2	ELECTRICAL	10½
3	FIXTURES	10½
4	HATCHING	3
5	LABELS	4
SUBTOTAL		44

FLOOR PLAN
SCALE 1 : 50



4 HATCHING ALLOCATION

SANS COMPLIANT (TYPE)	1
HATCHING CORRECTLY APPLIED	2
TOTAL	3

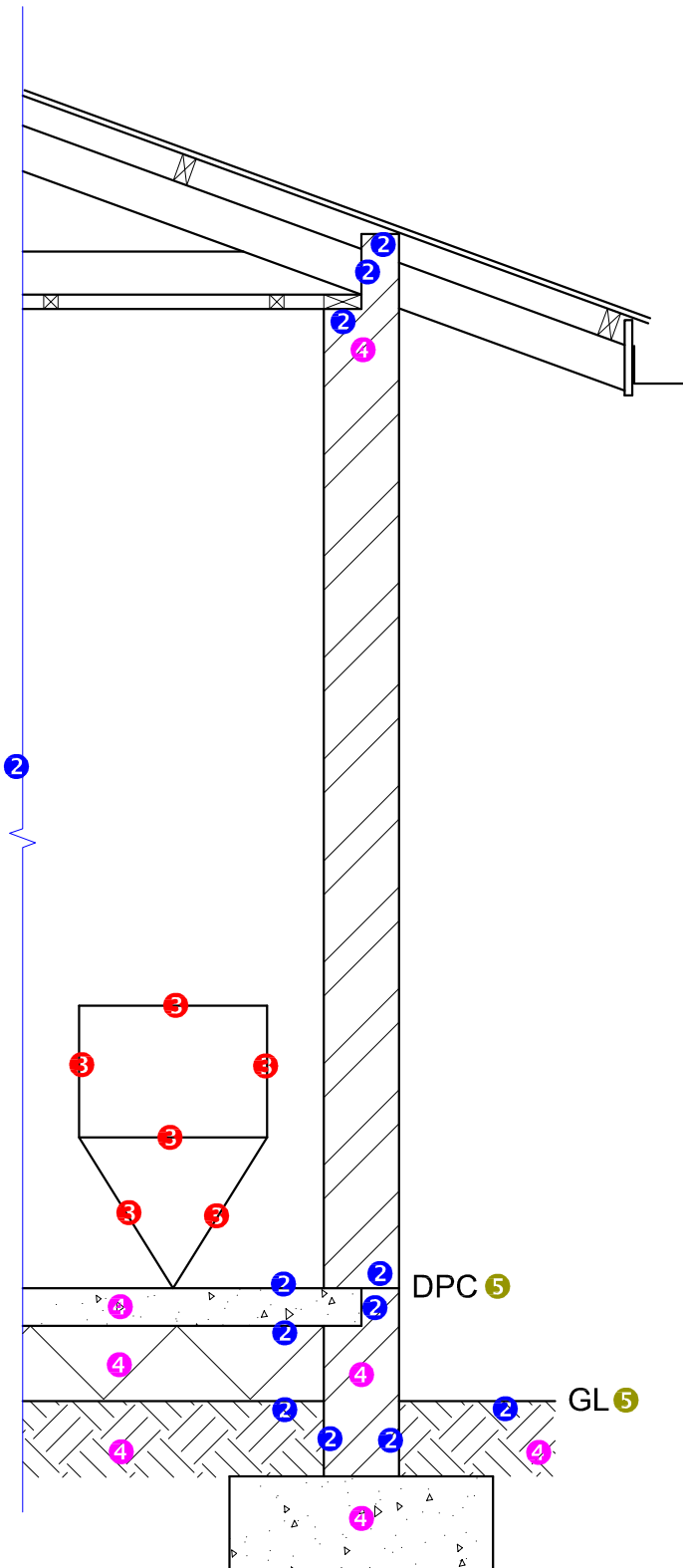


NORTH ELEVATION 4

NORTH ELEVATION		
1	ROOF + RWDP	8
2	WALLS + FFL	4
3	DOOR + WINDOW	13
4	LABELS	1 1/2
SUBTOTAL		26 1/2

MARK ALLOCATION FOR ROOF (1)

A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN	1
D: PURLIN SPACING	½
E: TRUSS	3
F: FASCIA BOARD	1
G: WALL PLATE	1
H: BRANDERING	1
I: CEILING BOARD	½
J: GUTTER	1
TOTAL	11



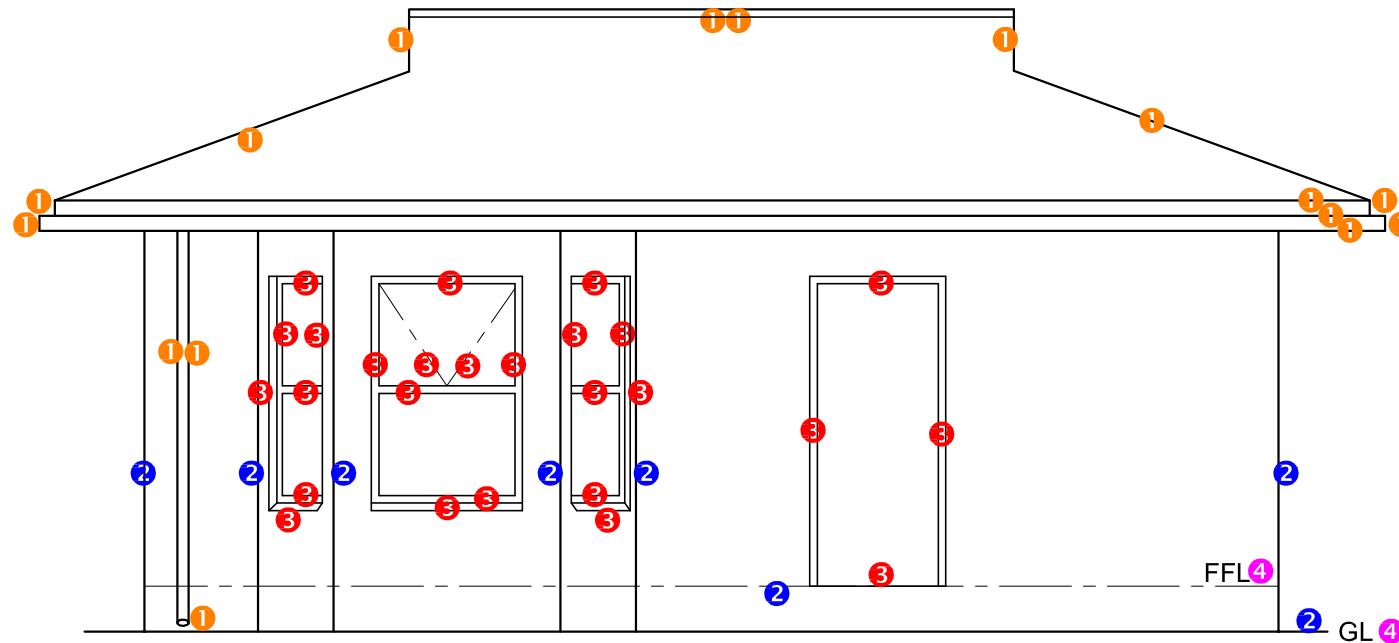
DETAILED SECTION A-A
SCALE 1 : 20

PAPER 1 QUESTION 4
GRADE 12
DBE/Feb.-Mrt. 2018
MARKING GUIDELINES

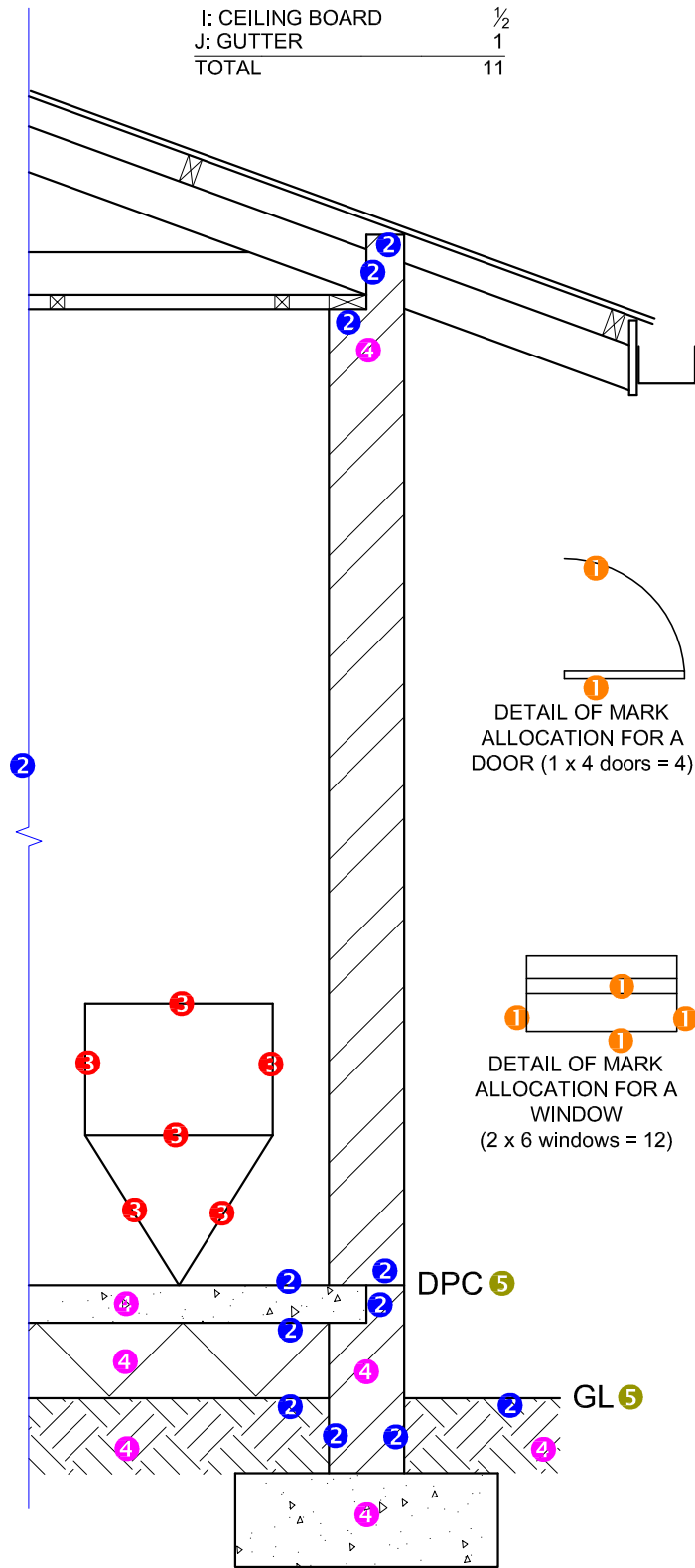
DETAILED SECTION		
1	ROOF DETAIL + RWDP	11
2	FOUNDATION + WALL + SLAB	6
3	WC	3
4	HATCHING	3½
5	LABELS	1
SUBTOTAL		24½

MARK ALLOCATION FOR ROOF (1)

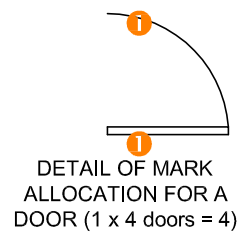
A: ROOF ANGLE	1
B: ROOF SHEET	1
C: PURLIN	1
D: PURLIN SPACING	1/2
E: TRUSS	3
F: FASCIA BOARD	1
G: WALL PLATE	1
H: BRANDING	1
I: CEILING BOARD	1/2
J: GUTTER	1
TOTAL	11



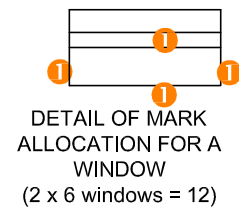
NORTH ELEVATION 4



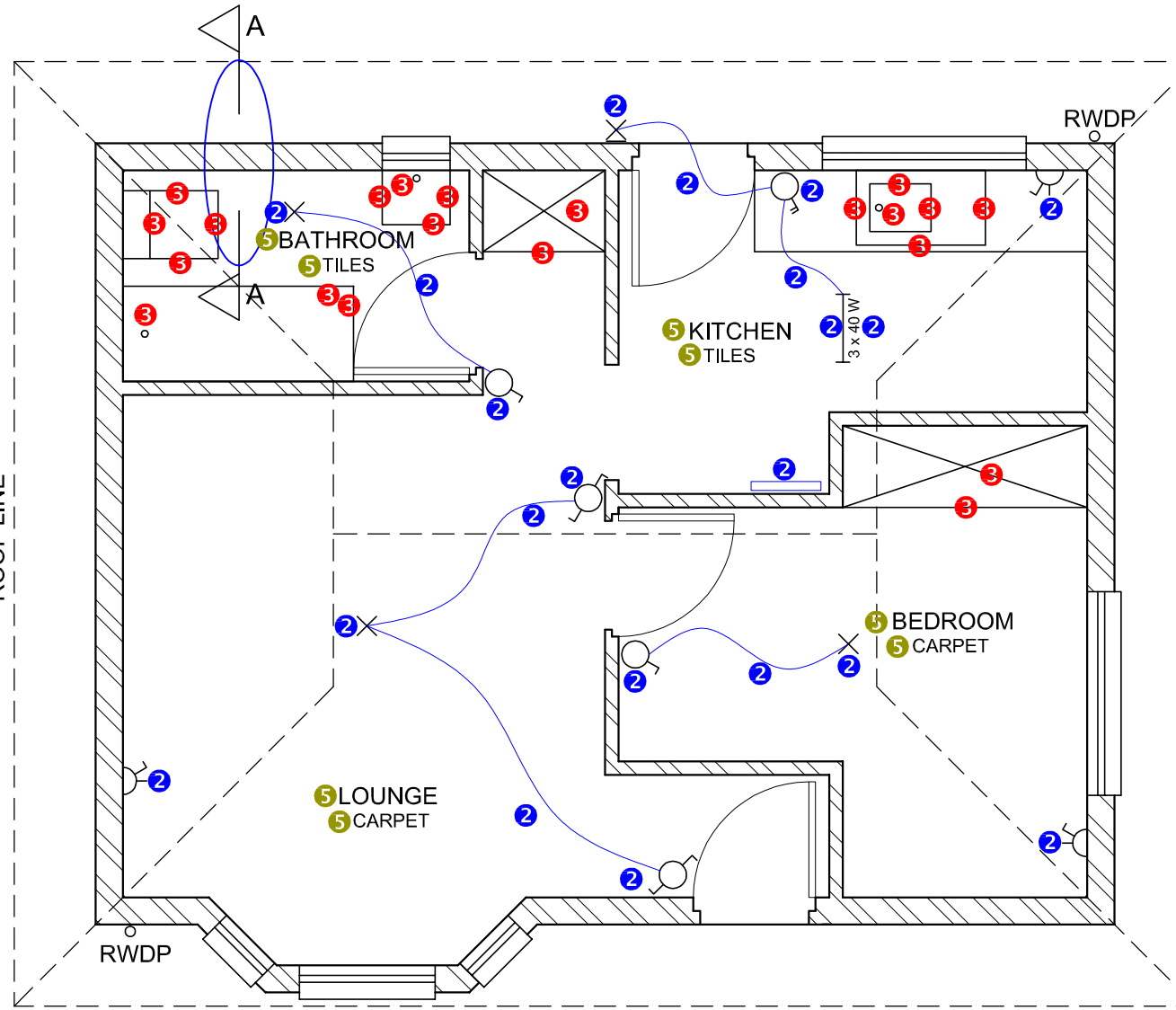
**DETAILED SECTION A-A
SCALE 1 : 20**



DETAIL OF MARK ALLOCATION FOR A DOOR (1 x 4 doors = 4)



DETAIL OF MARK ALLOCATION FOR A WINDOW (2 x 6 windows = 12)



**FLOOR PLAN
SCALE 1 : 50**

4 HATCHING ALLOCATION

SANS COMPLIANT (TYPE)	1
HATCHING CORRECTLY APPLIED	2
TOTAL	3

FOR OFFICIAL USE ONLY

INCORRECT SCALE(S) USED		
NON-ALIGNMENT OF VIEWS		
VIEW(S) ROTATED		
SECTION VIEWED INCORRECTLY		
INCORRECT LETTERING		
TOTAL PENALTIES (-)		

MARK ALLOCATION FOR ROOF SECTION

A	B	C	D	E	F	G	H	I	J

ASSESSMENT CRITERIA

FLOOR PLAN

	POSSIBLE	OBTAINED	SIGN	MODERATED
1 DOORS + WINDOWS	16			
2 ELECTRICAL	10 1/2			
3 FIXTURES	10 1/2			
4 HATCHING	3			
5 LABELS	4			
SUBTOTAL	44			

NORTH ELEVATION

1 ROOF + RWDP	8			
2 WALLS + FFL	4			
3 DOOR + WINDOW	13			
4 LABELS	1 1/2			
SUBTOTAL	26 1/2			

DETAILED SECTION

1 ROOF DETAIL + RWDP	11			
2 FOUNDATION + WALL + SLAB	6			
3 WC	3			
4 HATCHING	3 1/2			
5 LABELS	1			
SUBTOTAL	24 1/2			

TOTAL 95

PENALTIES (-)

GRAND TOTAL