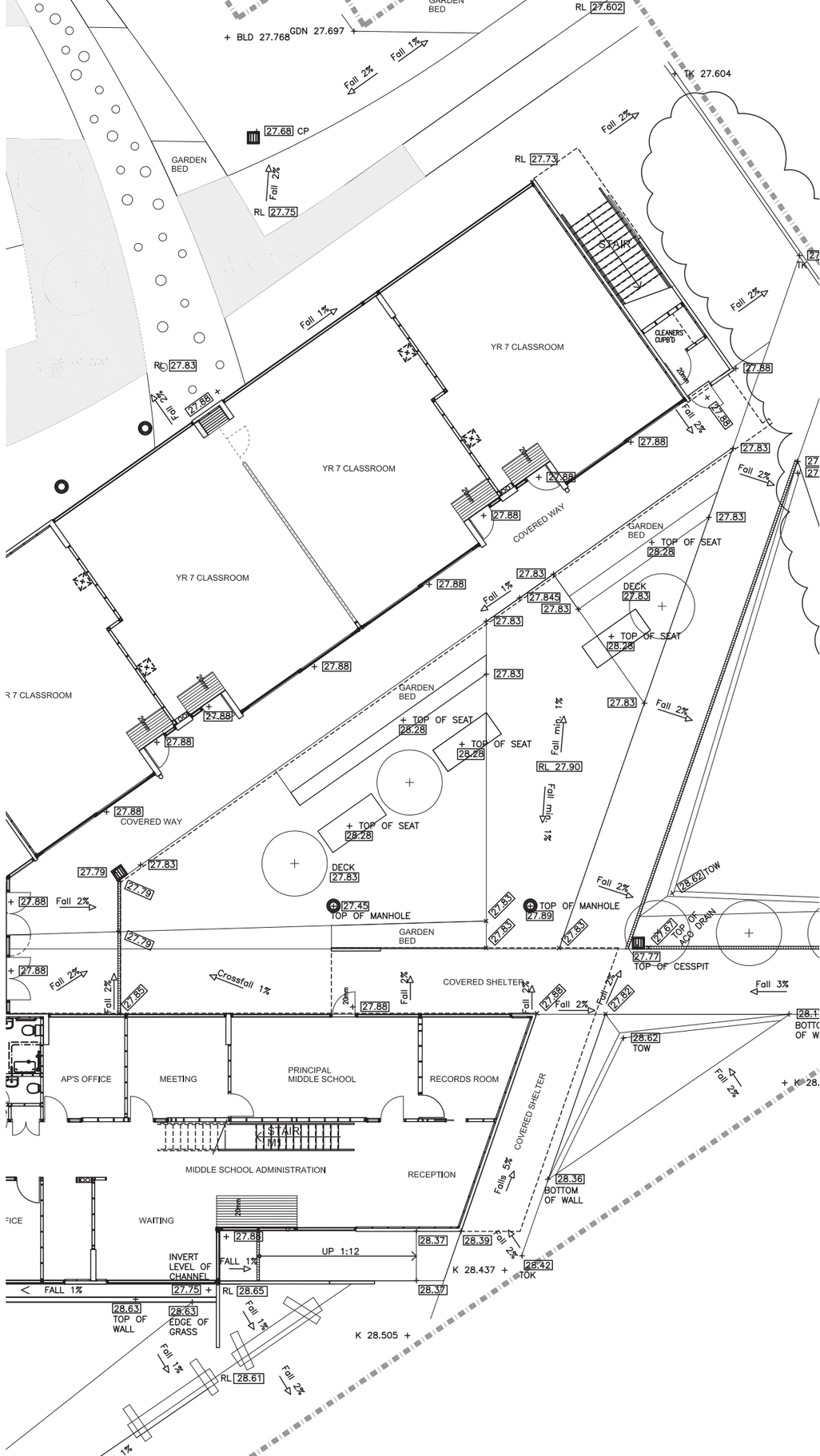
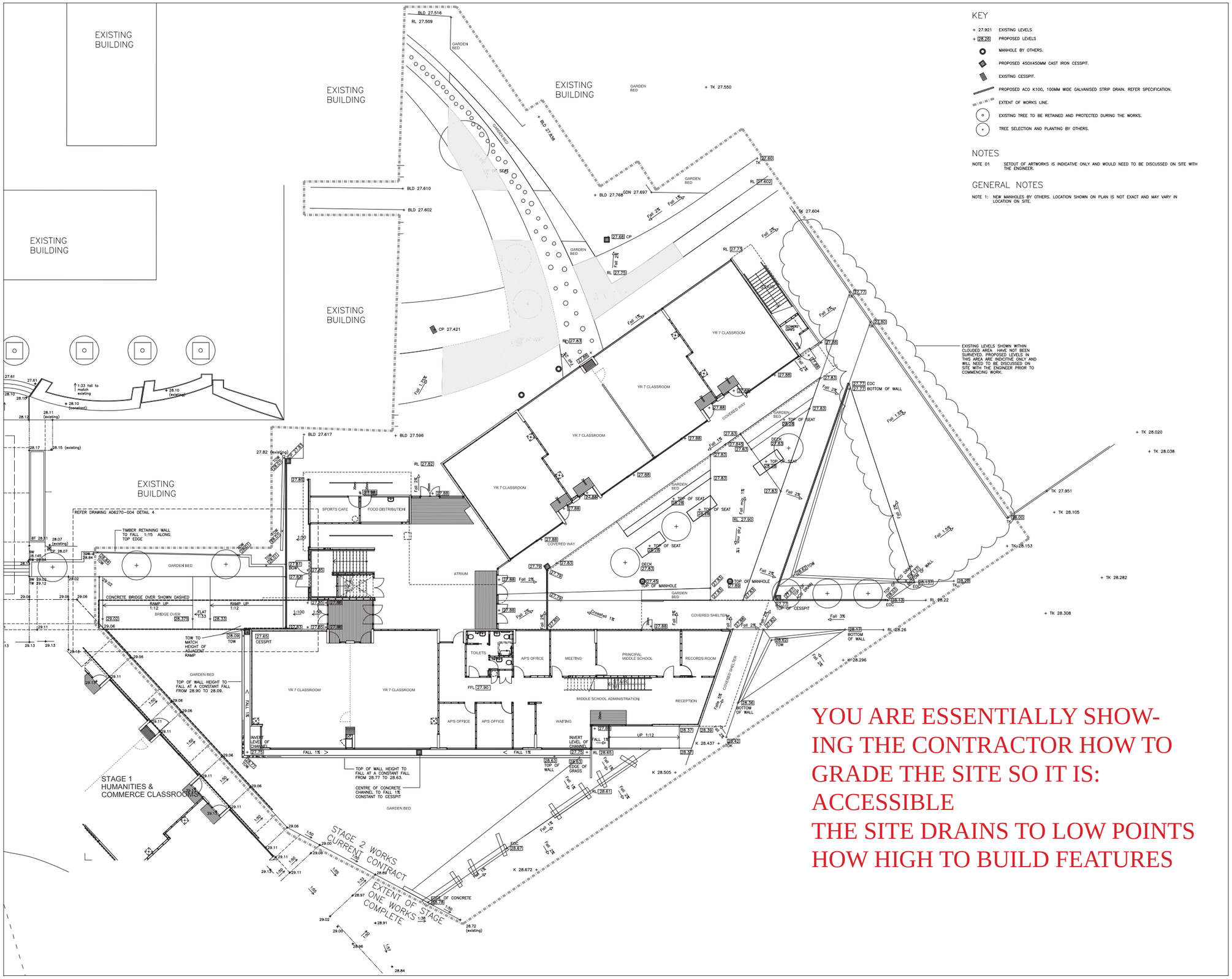
LEVELS

WORKING IN THE 3RD DIMENSION



TYPICAL LEVELS PLAN



Notes

1. Contractors to verify all dimensions on site prior to commencing work.
2. Contractors are responsible for confirming the location of all underground services on site prior to commencing work.
3. Figured dimensions to be taken in preference to scaled dimensions.

- 31.03.08 FOR TENDER

Revision

Issued for:

TENDER

Design YT
Drawn SK
Check YT
Appv'd JP

SCALE
1:150 @ A1
1:300 @ A3

Prepared for

KRISTIN SCHOOL

Boffa Miskell

Boffa Miskell Limited
Level 3, IBM Centre 82 Wyndham Street
PO Box 91 250, Auckland, New Zealand
Tel: 64-9-358-2526 **Fax:** 64-9-359-5300
www.boffamiskell.co.nz

24 CLASSROOM BLOCK
STAGE 2
SETOUT AND LEVELS

DRAWING NO. A06270-002

REVISION -

KEY

+ 27.921 EXISTING LEVELS

+ 28.26 PROPOSED LEVELS

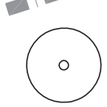
MANHOLE BY OTHERS.

PROPOSED 450X450MM CAST IRON CESSPIT.

EXISTING CESSPIT.

PROPOSED ACO K100, 100MM WIDE GALVANISED STRIP DRAIN. REFER SPECIFICATION.

EXTENT OF WORKS LINE.



EXISTING TREE TO BE RETAINED AND PROTECTED DURING THE WORKS.

TREE SELECTION AND PLANTING BY OTHERS.

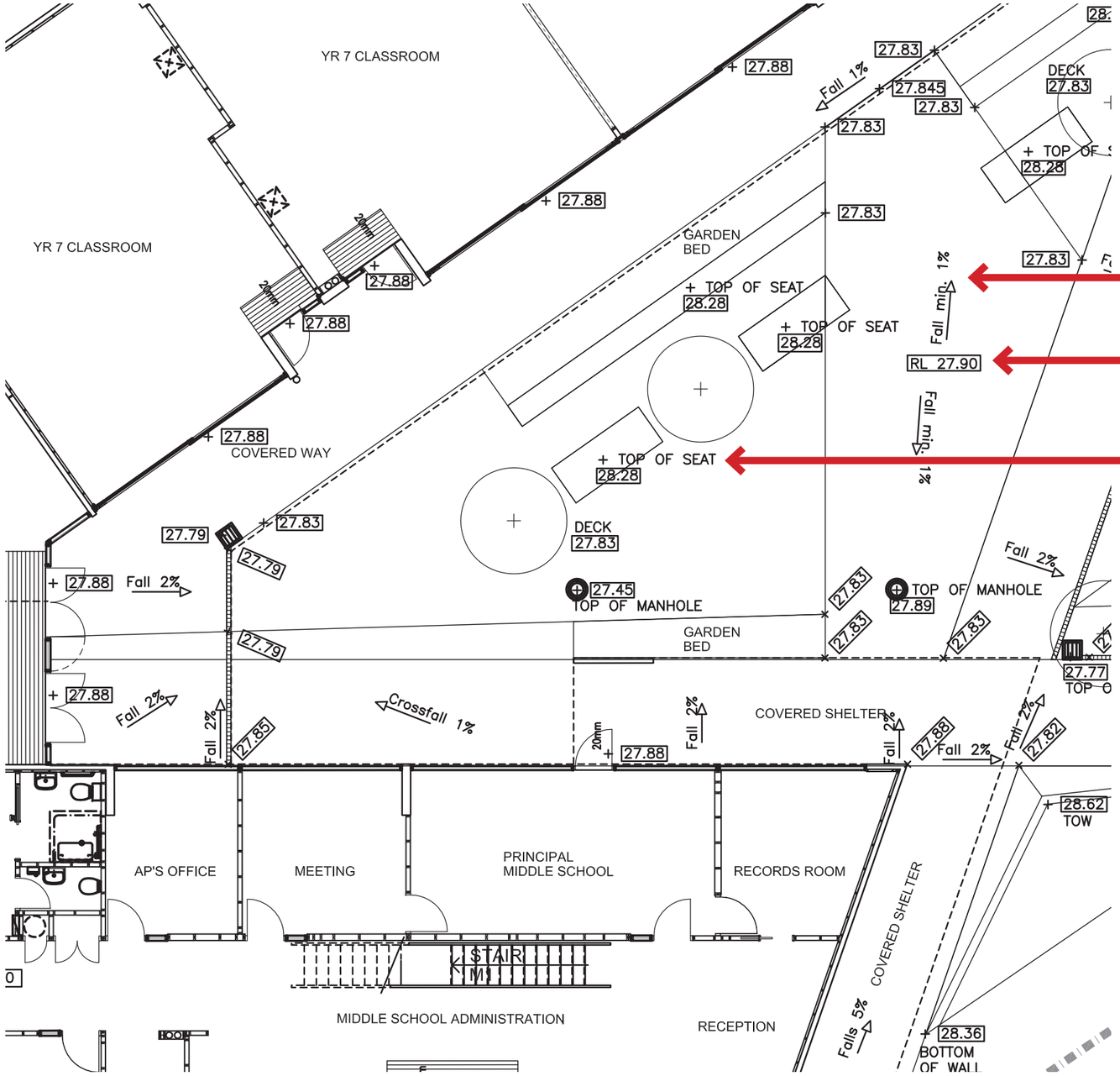
NOTE HOW THE LEVELS ARE KEYED SO IT IS CLEAR WHAT IS NEW AND WHAT IS EXISTING

NOTES

NOTE 01 SETOUT OF ARTWORKS IS INDICATIVE ONLY AND WOULD NEED TO BE DISCUSSED ON SITE WITH THE ENGINEER.

GENERAL NOTES

NOTE 1: NEW MANHOLES BY OTHERS. LOCATION SHOWN ON PLAN IS NOT EXACT AND MAY VARY IN LOCATION ON SITE.

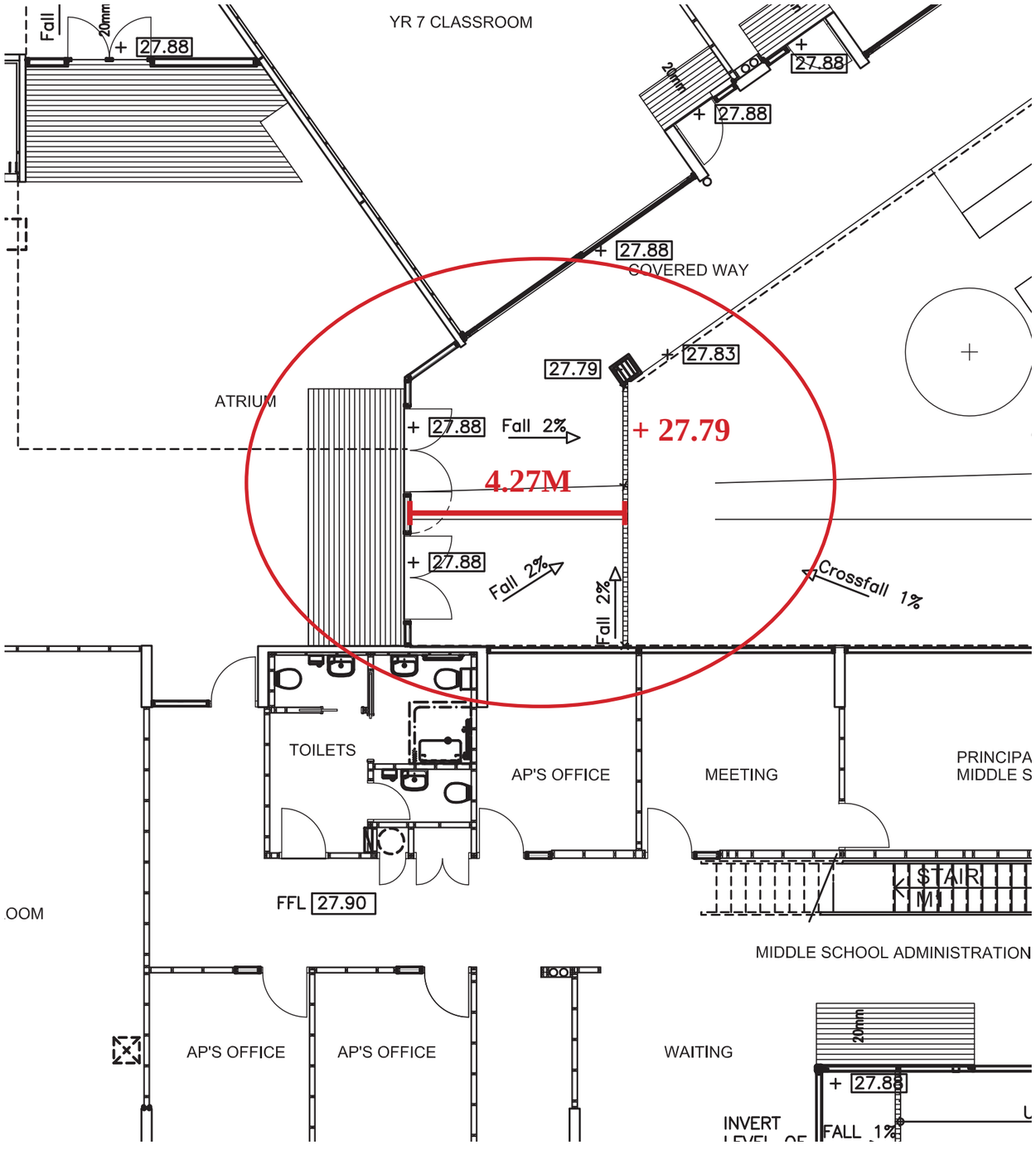


YOU ARE INDICATING THE FALLS

AN RL IS ‘RELATIVE LEVEL’ - AN APPROXIMATION

YOU ARE INDICATING THE HEIGHT OF AN OBJECT

EXERCISE



YOU WANT TO KNOW THE VERTICAL DIFFERERNCE?

YOU KNOW THE GRADIENT IS 1:50

YOU KNOW THE DISTANCE IS 4.27M

1/50 X 4.27 = 0.0854

= 0.085M LEVEL CHANGE

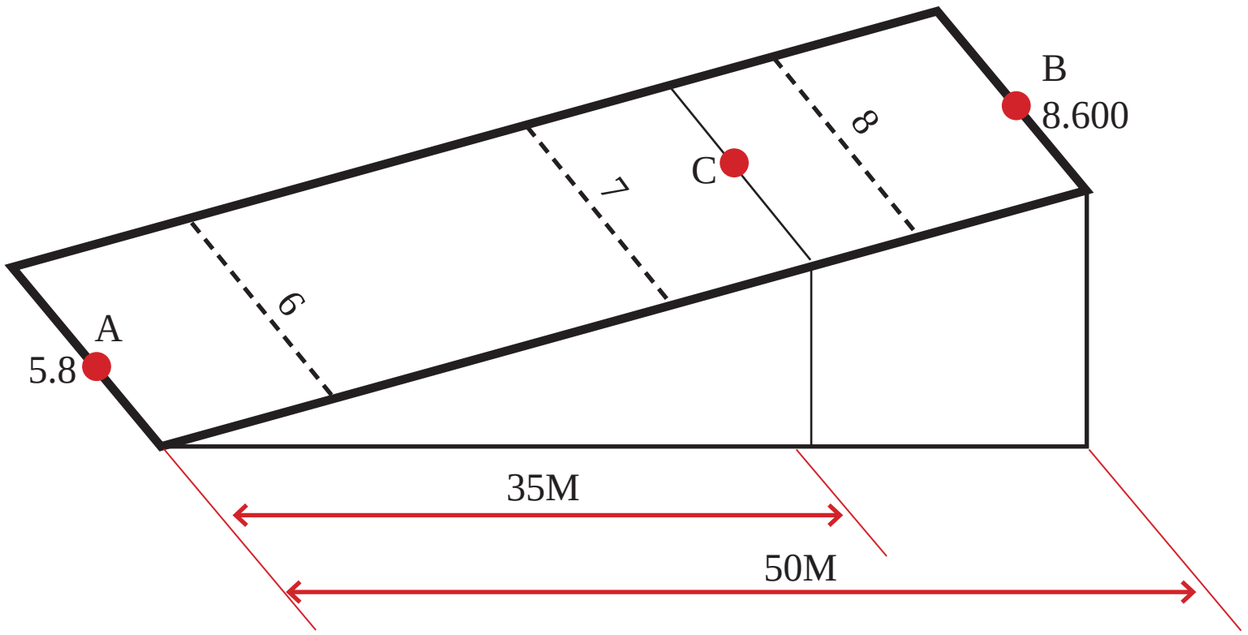
SO 27.88 - 0.085 = 27.79

NOTE:

THE BEST WAY TO WORK OUT A LEVELS PLAN IS TO:

- PRINT YOUR PLAN TO A SCALED A1 AND
- USE A SCALE RULER AND PENCIL AND
- START TO WORK OUT YOUR LEVELS

EXERCISE



G = GRADIENT
D = DISTANCE
L = LENGTH

a) TO FIND THE GRADIENT

$$G = \frac{D}{L}$$

$$= \frac{8.600 - 5.800}{50}$$

$$= \frac{2.800}{50}$$

= 0.056 = 5.6% = 1:17.86

b) TO FIND HORIZONTAL LENGTH
(TO LOCATE CONTOUR 7 IN RELATION TO POINT A)

$$L = \frac{D}{G}$$

$$= \frac{7 - 5.800}{0.056}$$

$$= \frac{1.200}{0.56}$$

= 21.43M

C) TO FIND ELEVATION OF C

D = DIFFERENCE IN ELEVATION:
= L x G
= 35 X 0.056
= 1.960
= 5.800 = 1.960
ELEVATION OF C IS: 7.760