

Chapter 13: Foundations

1. What are the functions of a foundation?

2. Explain **any three** factors that influence the structural design of foundations:

3. Explain, in your own words and using a neat annotated sketch, the effect of trees on a foundation.

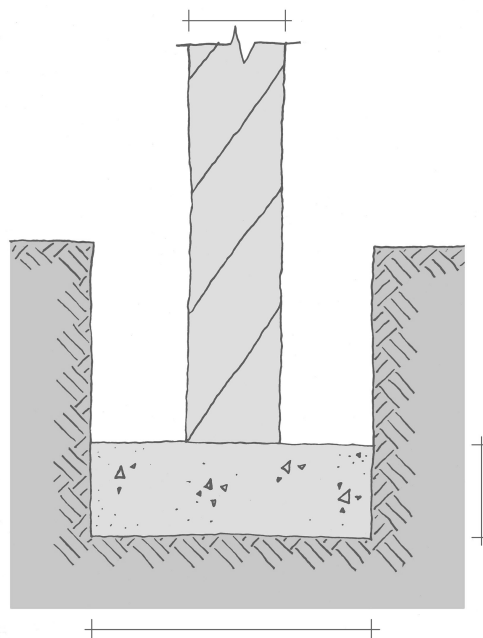
4. When are the following types of foundation used?

strip foundation:

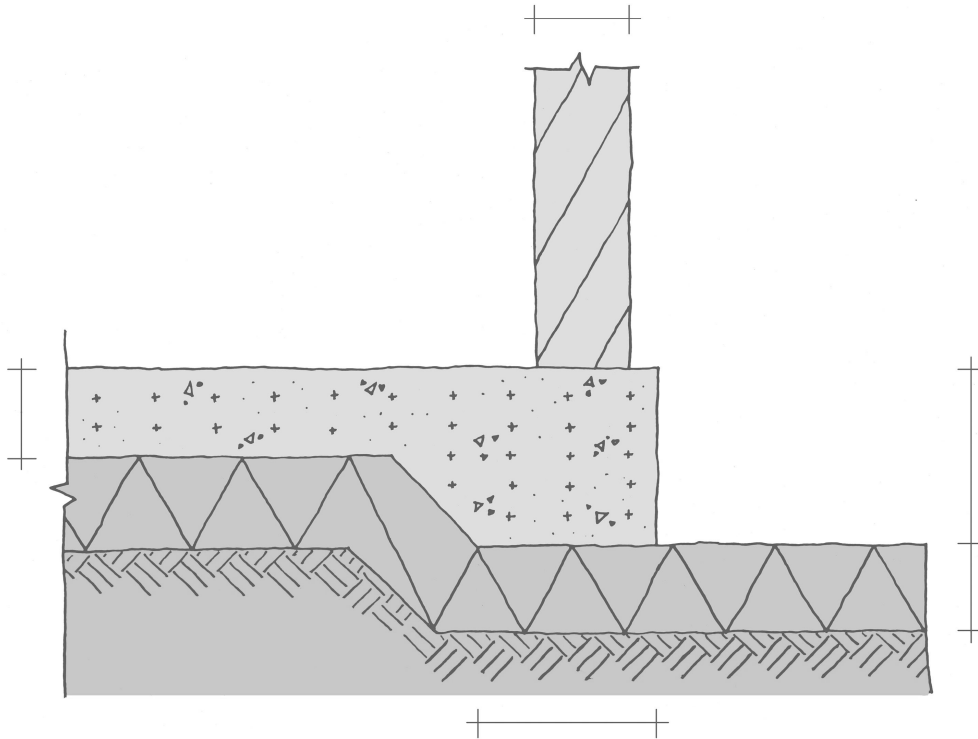
raft foundation:

piled foundation:

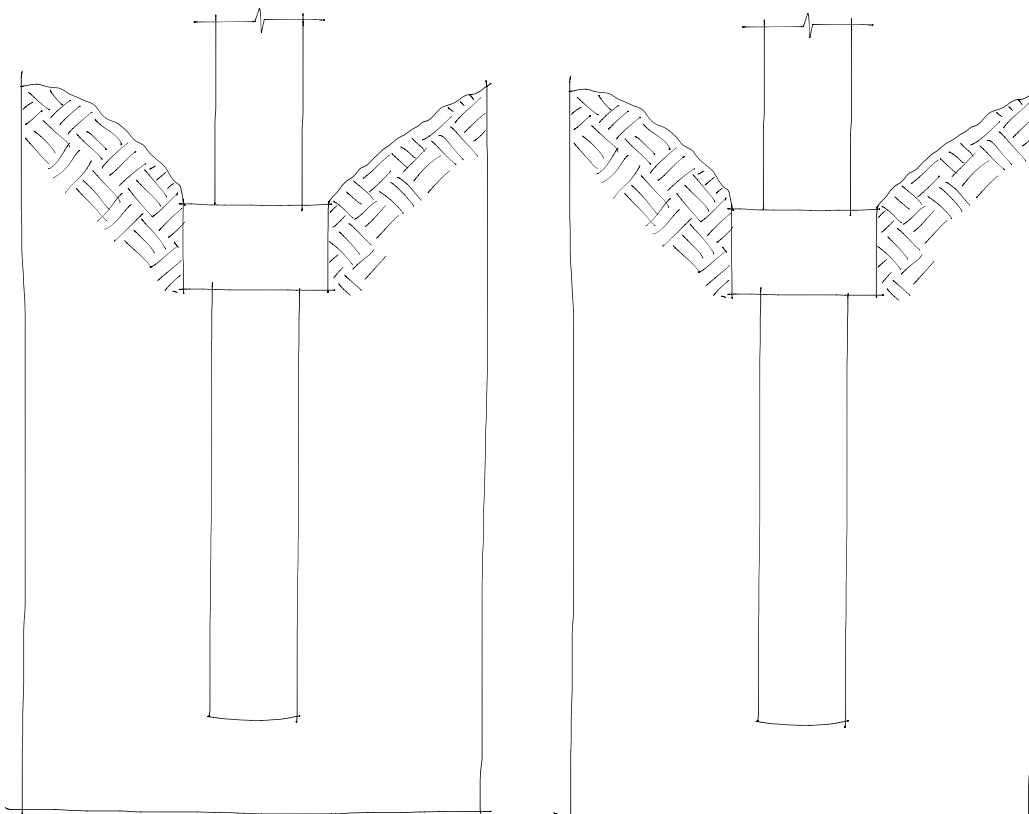
5. Label each part and explain, by annotating the drawing, the relationship between the size of the wall and the size of the strip foundation shown.



6. Label each part and explain, by annotating the drawing, the relationship between the size of the wall and the size of the raft foundation shown.

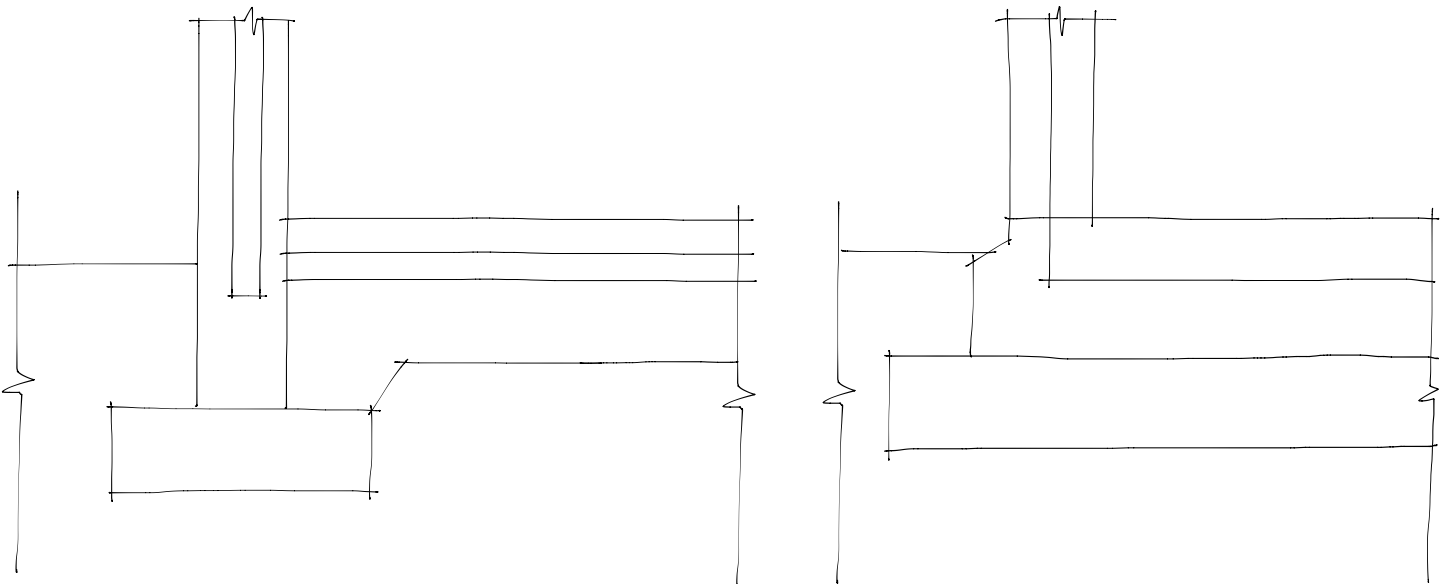


7. Complete and annotate the sketch outlined below to explain how each type of pile supports the imposed load.



8. Outline three advantages of insulated foundations.

9. Complete and annotate the sketch outlined below to explain how thermal bridging occurs in traditional foundations but is prevented in insulated foundations.



10. Explain fully any three properties of expanded polystyrene (EPS) that make it suitable for use in insulated foundations.

11. Describe, using a neat annotated sketch, an insulated foundation suitable for a wide cavity concrete block wall.

12. Describe, using a neat annotated sketch, an insulated foundation suitable for a single leaf timber frame wall.