

The Cantilever Design

A cantilever (pronounced kan·til·e·ver , 'kan(t)l,ē vər) is a beam or compound structure like a truss that is fixed at one end only.

Best example might be a something like a diving board.

The **advantages** of a cantilever are as follows:

- single sided support (only have to attach one end)
- no need to build false work in the construction of the bridge. You just build out along the cantilever
- good design for steep canyon walls and rivers prone to flooding since no center column is required
- span between two piers can be longer than a simple beam since the beam can be placed between the ends of cantilevers
- faster construction
- can tolerate thermal expansion and ground movements better than many other designs

The disadvantages are as follows:

- expensive to build
- large stresses require more material which drives up cost

