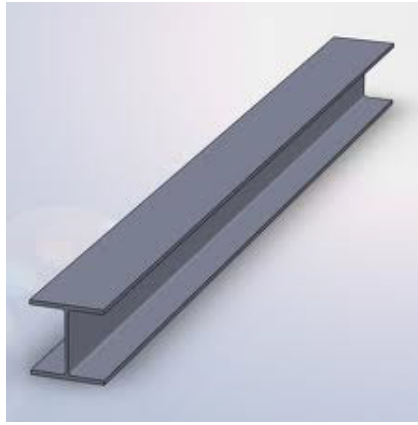


Steel H column.



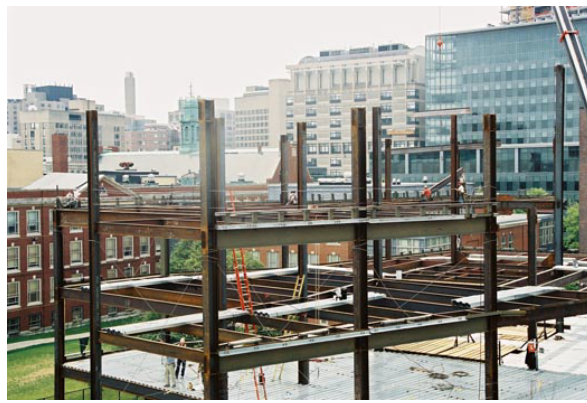
Building: 5 BroadGate
Architect: Make
Contractor: Mace
Structural Engineer: Burro Happold
Site visit Nov 27 with Anya

This building is constructed using a skeleton framing system. Where vertical H columns and horizontal I beams constructed a rectangular grid. This supports the floors.



Building component

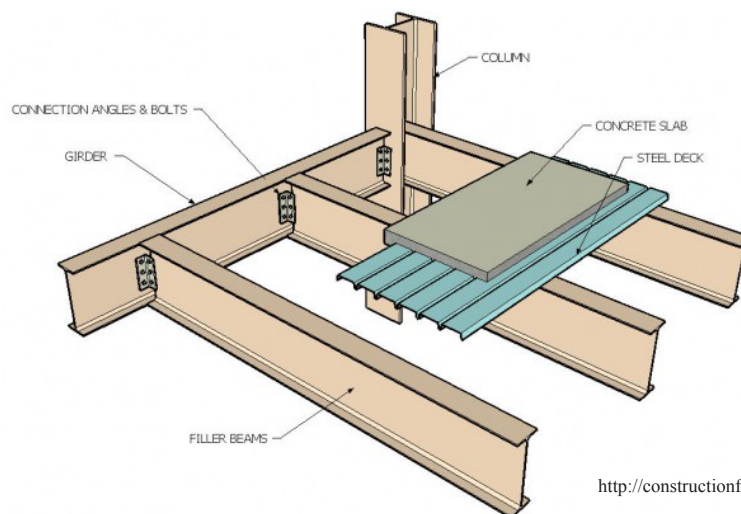
The building component I have chosen is a Steel column, which is 2.7 m in height and .4M in width. The column is constructed off site then erected in place.



Materials.

These I columns are commonly made out of structural steel. Structural steel is a material formed with a specific shape or cross section. Within each country there is a different regulation for structural steel, The normal yield strength in Europe grades available are 195, 235, 275, 355, 420, and 460.

These I columns are constructed off site using a process called “Hot Rolling”. This is done by recrystallizing the structural steel. After the grains deform during this process they recrystallize.



These columns need to be protected from Fire. These columns, which are currently exposed, will be covered using masonry, plasterboard or sprayed with a coating. If the columns were not been protected in some way a fire could possible weaken the material nature and cause a collapse. But it would take a substantial amount of heat to cause this , around 700C.

The difference between columns and the beams which are attached to it, is that the goal of the column is to take the compression load from the structure.