

What is a Curtain Wall?

Curtain wall is a term used to describe a building facade which does not carry any dead load from the building other than its own dead load. These loads are transferred to the main building structure through connections at floors or columns of the building. A curtain wall is designed to resist air and water infiltration, wind forces acting on the building, seismic forces, and its own dead load forces.

Curtain walls are typically designed with extruded aluminium members, although the first curtain walls were made of steel. The aluminium frame is typically infilled with glass, which provides an architecturally pleasing building, as well as benefits such as daylighting. However, parameters related to solar gain control, such as thermal comfort and visual comfort are more difficult to control when using highly-glazed curtain walls. Other common infills include: stone veneer, metal panels, louvers, and operable windows or vents.

Curtain walls differ from storefront systems in that they are designed to span multiple floors, and take into consideration design requirements such as: thermal expansion and contraction; building sway and movement; water diversion; and thermal efficiency for cost-effective heating, cooling, and lighting in the building.