

Braced vs Moment Frame

Civil Engineering

Two ways to carry lateral load.

Braced frame

- Diagonals or a core take the lateral load
- Beam to column joints can stay simple
- Stiff, so drift is easy to control
- Bracing blocks openings and services
- Usually the cheaper steel solution

Moment frame

- Rigid joints carry the moment
- Clear bays, nothing in the opening
- More flexible, drift often governs
- Heavier members, costly connections
- Ductile detailing suits seismic zones

THE DIFFERENCE THAT MATTERS

Brace it where you can. Moment-frame it where the plan will not take a diagonal.

Educational reference. Choosing a lateral system is design work for a qualified engineer under the governing code.