

Wall System

- Vertical construction of buildings that

- enclose
- separate
- protect its interior spaces
- Support vertical loads
- must be able to withstand horizontal wind loading
- should control the passage of heat, infiltrating, air, sand, moisture, and water vapor.
- durable and resistant to Sun, wind, and rain



- Structural Frame

- Concrete

- Steel

- Concrete and steel

- Concrete and masonry walls

- Strong in compression, weak in tension

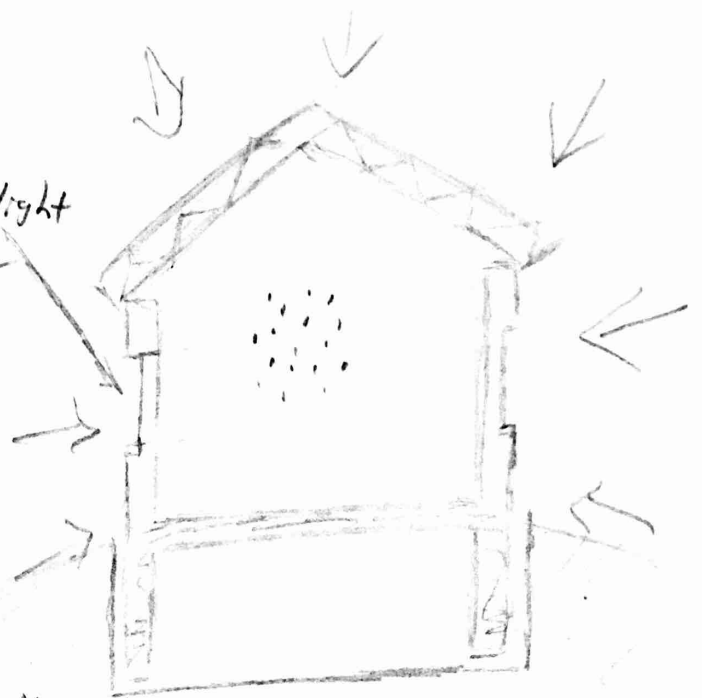
- Metal and wood stud walls

Exterior Wall

Envelop

- Protection
- Wind, Rain, heat, Movement
- Control
- Pressure

Aperture
- Control of light
temperature



Thermal bridge

System to control temperature

- Capillary action
- Condensation

temperature can
go through

Membrane
to prevent water

Thermal break



- prevent temperature
go through interior

Insulation

- Stop temperature
to go through interior

Primary functions of an exterior wall

- Keep water out
- Prevent air leakage
- Control light
- Control radiation of heat (space)
- Control conduction of heat (touching)
- Control sound

Secondary functions of an exterior wall

- Resist wind loads
- Control water vapor
- Adjust to movement
- Resist fire
- Weather gracefully
- Easy to install