Structural Typologies and Elements

Principles

Reduce resource consumption
Reuse resources
Recycle resources for reuse
Protect nature
Eliminate toxics
Apply life cycle costing ($$$)
Focus on quality

Framework to Sustainable Development

Resources

- Land
- Materials
- Water
- Energy
- Ecosystem

Phase

- Planning
- Development
- Design
- Construction
- Use and Operation
- Maintenance
- Modification
- Deconstruction

Buliding in Context

Bulidings exist for three main reasons
- Support
- House
- Inspire

(Sociocultural, economic, and political needs.)

Green Building

+Sustainable design

To describe any building in a environmentally sensitive manner.

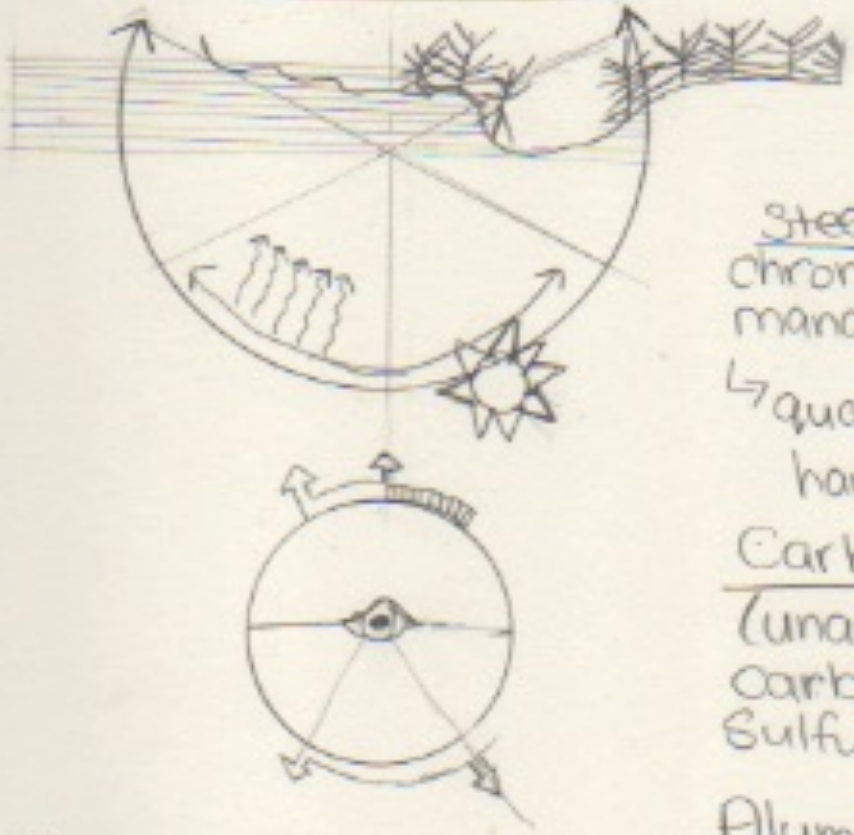
* Generate its own energy from renewable sources *.

Strain
- Body under applied force.
- Change in size and shape

vs

Stress
- External forces used.
- Internal resistance or reaction of elastic body

Site analysis
Studying the influence of how a building, its lay out and space establish the relationship to landscape.
* Gathering physical data is necessary before site survey.*



Steel
chromium, cobalt, copper managanese, molyl
↳ qualities of strength, hardness and elasticity

Carbon steel
(unalloyed steel)
carbon, manganese, phosphorus Sulfur, and Silicon.

Aluminum
↳ windows, door, roofing flashing, trim, and hardware.

*Lead can be heavy, soft, malleable

Brass
consisting of copper and zinc
↳ windows, railings trims and finish hardware.

Enclosure System
roof, exterior walls, windows and doors.

Copper
Ductile malleable metallic
↳ electrical wiring, water piping
Resistance to corrosion
perfect for roofing and material.

Life cycle
Reduce
Reuse
Recycle

Rigid Frame
Steel or reinforced concrete resisting Charges

Shear wall
Wood, concrete, or masonry wall

Static load
Wind loads and earthquake loads

Braced Frame
Timber or steel frame braced with diagonal members