

Principles of Environmentally Sustainable Design

Fall Course - Class 6

Stamping the Envelope

The materials and choices for a
visible low emission building

Insulation

- R-Factor
- Environmentally Responsible
- Noise Reduction
- Life Cycle
- Technology / Innovation

Floors

- Heat – Radiant floor, duct, baseboard
- Steel/Concrete – Paints & Underlayments
- Wood – Stains & Subflooring
- Finish
 - Carpet – Low / No VOC adhesives
 - Wood – No VOC Stains
 - Laminate – Low Headache, Short Life Cycle

Walls

- Open Space creates interactivity
- Subdivisions / Japanese Curtains create cozy spaces
- Walls should direct traffic
- Material should be hypo-allergenic – Dens Armor / Green HardBacker / Cement Board Plaster
- Fire / Mold Resistant

Windows

- Low E for Southern Exposures
- Large Windows for Southern Facing
- Small Windows for Northern Facing
- Windows historically provide for fresh air, observation and secure defense position
- Solar film can be applied

Skin

- Material Selection
 - Concrete
 - Steel
 - Glass
 - Brick
 - Wood
 - Engineered Cladding (i.e. Vinyl)
- Physical Presence presents community impact

Color

- Paints, Stains & Dyes – Low / No VOC
- Most Impact (i.e. Palazzo Chupi)
- Beware of Spawling (Moisture vs. Temperature)
- Maintenance Factor
- Unique Technology (i.e. DSSC – Dye Sensitized Solar Cells)

Facade

- Ornamentation – Rain Catchment / Water Filtration / Sun Shade
- Columns – Foyer / Greeting Area / Outdoor Lounge
- Terraces / Verandas – Vistas / Fauna Promotion / Selective Audience
- Curtain Wall – Inviting / Commercial / Open Space