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## **GREEN GUIDELINES & SUGGESTIONS**

<u>Green Building</u> is more than simply using recycled materials. At organicARCHITECT, we look at the entire building as a system. Using this approach, we divide the project into three categories:

a. Materials: every material put into the building is evaluated for it's beauty as well as its eco impact at all points along it's life cycle. The life cycle is typically seen as:



- b. Structure: rather than traditional frame building, which is inefficient, numerous alterative systems of how to build the shell of the building exist. From ancient methods such as adobe to rammed earth, to cutting edge systems, such as structural insulated panels (SIP's) and insulated concrete forms (ICF's), we select the proper method as needed for the specific project.
- c. Systems: the management of energy, waste and resources is a vital component of green building. Hundreds of systems are available to maximize the use of our resources and the inflows and outflows of a building. Such devices as photovoltaic systems, grey water systems, geo thermal heat, etc., can save our valuable natural resources. By stressing a

return on investment, we can show you how the right system can actually save you money.

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Numerous design factors and alternative materials are available to incorporate into our business that contribute to more sustainable construction for the long term good of our planet and future generations who will inhabit it. The following are some of the guidelines and alternatives we are using at organicARCHITECT to further our goal to create more energy and resource efficient, healthy homes and commercial buildings.

In comparing relative measures it's useful to consider the environmental issues affected by each measure and the scale of impact.

	Related Environmental Categories						Scale of Impact			
	Air Quality	Water Quality	Land & Soil Quality	Virgin Resource Depletion	Biodiversity	Occupant Health	Global	Regional	Local	
Save Energy										
Recycle Buildings										
Create Community										
Reduce Material Use										
Protect/Enhance Site										
Select Benign Materials										
Maximize Longevity										
Save Water										
Make the Building Healthy										
Minimize C&D Waste										
Green Your Business										
1										
		High Relevance								
-		Some Relevance								
		Minimal Relevance								

## A. Resource Efficiency:

- 1. Avoid the use of products from endangered or threatened tree species, substituting, where possible,
  - a) Certified, sustainable-yield lumber
  - b) Cement fiber shakes and siding
  - c) Plastic lumber, such as Trex decking
  - d) Recycled lumber
- 2. Substitute Flyash for cement (up to 50%) in concrete to reuse waste products and reduce pollution
- 3. Durability Avoid products with short term lifespans (unless they are made from low-impact, renewable materials and are recyclable)
- 4. Recycle and reuse materials where practical
- 5. Recycle aluminum windows and door frames
- 6. Recycling containers on all jobsites

#### B. Energy Efficiency:

- 1. Passive solar with thermal mass uses natural heating and reduces use of energy and pollution
- 2. Daylighting: Use of skylights and solartubes
- 3. Radiant heat in floors not only saves energy but is more comfortable and healthier
- 4. Energy-efficient appliances save energy
- 5. Compact flourescent lamps on front exterior lights and interior where lighting is used more than 45 minutes per day.
- 6. Natural ventilation reduces need for mechanical cooling. Use operable windows to optimize air flow.
- 7. High-efficiency fireplaces cut heating bills and pollution

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- 8. Solar heating for hot water
- 9. Photovoltaic reduces energy bills and offers an emergency backup system

#### C. Healthy Buildings

- 1. Avoid the use of vinyl: PVC, carpets and wallcoverings
- 2. Avoid use of pressure-treated lumber containing arsenic- substitute ACQ pressure-treated lumber
- 3. Avoid use of materials with formaldehyde in glues- specify OSB with MDI binder
- 4. Use non-toxic paints

These are some of the primary suggestions we offer to our clients. The Green Building Industry is evolving, and new materials and practices are continually being discovered.

#### TIP SHEET:

Quick and easy green ideas for every new construction project

- 50% fly ash mixture in the concrete adds to strength, workability, thermal mass and reduces the amount of Portland Cement (which produces greenhouse gases from it's manufacture)
- Salvage all demolition materials for reuse in the new project. This includes all removed fixtures, doors, windows, appliances and lighting.
- Salvage all demolition materials unable to be reused to a salvage and recycling center.
- Use FSC (or equal) Certified Lumber whenever possible.
- Place non-bearing studs on 24" on center instead of 16" o.c. to save the number of studs needed.
- Use a natural insulation, such as Ultratouch made from reclaimed blue jeans.
- Use more that the minimum required amount of insulation (exceed Title 24 standards).
- Use Greenfiber (recycled newspaper) cellulose insulation in ceilings.
- Use Tyvek building wrap with at least 25% recycled content.
- Use radiant floor heating systems to stabilize temperatures and lower energy bills.
- Use cement fiber siding such as Hardiboard.
- Use double-paned and low-e windows to save energy.
- Take advantage of daylighting and natural ventilation whenever possible.
- Use all natural wheatboard or certified wood for interior millwork.
- Use all natural carpet such as Interface.
- Use healthy paints, such as AFM Safecoat.
- Use only Energy Star rated appliances.
- Put all lights on dimmers to save energy.
- Use a sustainable wood floor, such as bamboo, palm or reclaimed woods whenever possible.