

What's Working

Green from the Ground Up

Residential Green Building

Today's environmentally conscious client prefers structures that are: energy and water efficient, durable and disaster resistant, healthier and environmentally friendly. Green from the Ground Up instructs builders, contractors, architects and city officials in the fundamentals of green building.

David Johnston presents a full day seminar that covers Indoor Air Quality, Resource Conservation and Energy Efficiency from a builder's perspective. Using his 30 years of experience in construction, solar energy and green design, David will give you the tools to build more efficient homes that are healthy for the client and will save you and the client money.

Curriculum

Objective: To educate attendees on the latest in "green" practices, technologies and techniques of residential building.

Pedagogy: Through his power point presentation, David Johnston will illustrate, explain and detail the different "green" practices, technologies and techniques with diagrams, images and bulleted information, enhanced by his own experience and expertise in the field. The presentations will be as follows:

- Green Building Basics
 - Energy efficiency
 - Conservation of natural resources
 - Indoor air quality
- The House as a System
 - Energy movement
 - How the house fits in its environment
 - Air movement
 - Moisture
- Planning and Design
 - Get the team together at the beginning
 - Solar orientation
 - Site conditions
 - Room layout

- Foundations
 - Resource conservation
 - Energy conservation
 - Moisture control
- Framing
 - Advanced framing
 - Engineered lumber
 - Structural Insulated Panels (SIPs)
 - FSC certified
- Roofs and Attics
 - Frame with trusses
 - Super insulation
 - Sheathing and membranes
 - Durability of materials
 - Green roofs
- Windows and Doors
 - Window frames
 - Glazing
 - Window ratings
 - Natural ventilation
 - Door installation
- Plumbing
 - Water efficiency
 - Energy efficiency
 - Water heaters
 - Pipe insulation
- Heating, Ventilation, and Air-conditioning
 - HVAC designed as a system
 - Forced air systems
 - Radiant systems
 - Heating appliances
 - Geothermal
 - Ventilation
 - Cooling
- Electrical
 - Peak demand
 - Lighting
 - Energy-efficient appliances
 - Solar and Wind

- Insulation
 - Infiltration
 - Insulation choices
 - Loose-fill insulation
 - Spray-in insulation
 - Rigid foam
 - Radiant barriers

- Siding and Decking
 - Installation
 - Drainage planes
 - FSC certified
 - Recycled content

- Solar Energy
 - Solar orientation
 - Solar hot water
 - Solar collectors
 - Photovoltaic's
 - Zero energy homes

- Indoor Air Quality
 - Contaminants
 - Mold
 - Building products that off-gas
 - Filtering the air

- Interior Finishes
 - Toxicity
 - Durability
 - Resource conservation
 - Sustainability

- Landscaping
 - Water consumption
 - Energy efficiency
 - Reduced runoff and cleaner air
 - Resource conservation