

Universal Design and Green Building Construction

Indoor Air Quality:

“The Environmental Protection Agency (EPA) and its Science Advisory Board report that indoor air pollution is among the top five environmental risks to public health. EPA studies show that levels of some indoor air pollutants can reach more than 100 times that of outdoor air pollutants. Indoor air pollutants such as dust mites, bacteria, and pollen come from almost everything in our homes including cleaning supplies, smoke, dust, molds, paint, carpets, drapes, upholstery, furnaces, gas burners, wood, and other building materials. Central air purification systems reduce the amounts of these particulates in indoor air.”¹

“Continuously monitoring relative indoor air humidity not only can maintain the desired comfort level for habitants or plants, it also helps improve indoor air quality by lowering the risk of fungus, mold or mildew and cuts heating and/or cooling costs all year long.”²

“Microprocessor-based controls can balance ventilation with energy conservation because they can be programmed to operate intermittently.”³

“Not so long ago, it was common for fumes to drive people from their homes during repainting. Most conventional paints contained high levels of VOCs (volatile organic compounds) that produced a breathable gas when applied. The VOCs diminish air quality, and may be detrimental to your health. Today, alternative manufacturing techniques have allowed the development of low- and no-VOC paints that release no, or minimal VOC pollutants, and are virtually odor free.”⁴

Lighting Systems:

“Perhaps the most interesting intersection between green and universal design is in the lighting systems. Indirect lighting with high-efficiency lamps is popular in green projects, but here it is also favored because the more even light distribution aids those with visual impairments, and electronic ballasts reduce the risk of seizures induced by fluorescent lighting.”⁵

Automatic sensors:

“Daylight sensors automatically control both lighting levels and motorized shades to save energy, but motorized shades also allow someone who cannot reach or manipulate standard controls to use a simple electronic switch.”⁶

¹ Central Air Purification/Ventilation/ Dehumidification Systems (ToolBase Services)

<http://www.toolbase.org/Home-Building-Topics/Indoor-Air-Quality/central-air-purification-ventilation-dehumidification>

² Humidity-Sensing Control Device (ToolBase Services)

<http://www.toolbase.org/Home-Building-Topics/Indoor-Air-Quality/humidity-sensing-control-device>

³ Ventilation Control Systems (ToolBase Services) <http://www.toolbase.org/Home-Building-Topics/Indoor-Air-Quality/ventilation-control-systems>

⁴ Low- or No-VOC Paints (ToolBase Services)

<http://www.toolbase.org/Home-Building-Topics/Indoor-Air-Quality/low-voc-paints>

⁵ & ⁶ Access Living (GreenBean) http://greenbean.typepad.com/greenbean/2007/04/access_living.html