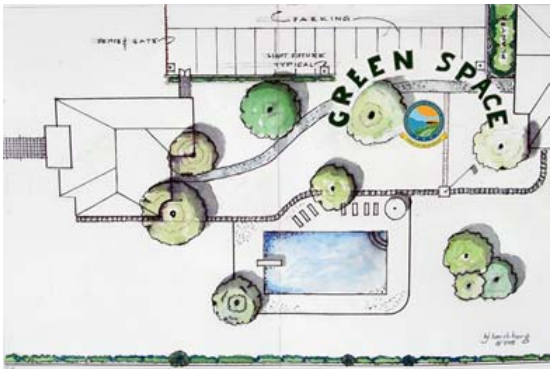
GreenSpace -
COMMONLY USED TERMS



COMMONLY USED TERMS

GREEN BUILDING: A green building is a building that is located and constructed in a sustainable manner that allows it's occupants to live, work and play in a sustainable manner. This means building in such a way that we don't use up or deplete our resources, that is, has the least environmental impact possible. The less the environmental impact, the "greener "the project is.

USGBC: Stands for the U.S. Green Building Council. USGBC created the LEED Certification system as a "Report card" for owners, School Boards or others seeking to build "GREEN Buildings "to see how their overall design would meet accepted "Green building standards." USGBCI also administers the LEED A.P. (the LEED Accredited Professional classification) for personnel passing the latest LEED rating exam.

LEED: Stands for Leadership in Energy and Environmental Design. LEED certification measures how well a building or a community performs as "Sustainable" across the following metrics:

1. Sustainable Siting

2. Water efficiency

3. Energy and Atmosphere

4. Materials and resources

5. Indoor environmental quality

6. Innovation and design process

LEED CERTIFICATION: LEED certification is obtained after submitting an application documenting compliance with the LEED rating system. LEED certification was granted by the U.S.Green Building Council until 4/27/2009. As of April 27, 2009, the US Green building Council USGBCI Institute (USGBCI) is granting LEED Certification to projects.

LEED Certification Classifications:

1. Certified: 40% to 50% of non-innovation points.

2. Silver Certification: 50% - 60% of non-innovation points.

3. Gold: 60 – 80% of non-innovation points.

4. Platinum: 80% or more non-innovation points.

GABION WALL: A gabion wall is a wall comprised of a wirework container filled with broken concrete, rock or other material used in the construction of dams, retaining walls, and planter walls, etc. Historically, gabion walls were comprised of wickerwork, filled with earth or stone and used in fortifications.

1BOG ONE BLOCK OFF THE GRID "One Block off the Grid" is a community based purchasing program for acquiring and installing solar power in New Orleans. Because it is a community based purchasing program, members get over 80% off of the cost of solar installation. 1BOG members also have access to solar educational materials and personal consultation throughout the process.

POROTHERM ™: a HONEYCOMB BRICK PRODUCED IN Austria. The brick's cellular construction gives it an R-35 rating. The use of this brick allows masons to use standard masonry practices.

VOLATILE ORGANIC COMPOUND (VOC): Gases or vapors emitted by solids or liquids many of which have short or long term adverse

health effects. VOCs are generally organic chemical compounds that have high enough vapor pressures under normal conditions to significantly vaporize and enter the atmosphere. Some household products that emit VOCs are paint, paint strippers, cleaning supplies, pesticides, glues and adhesives, building materials, and furnishings. Concentrations of many VOCs are higher indoors (up to ten times higher) than outdoors.

FLY ASH: Fine glass-like powder recovered from gases created by coal-fired electric power generation. U. S. power plants produce millions of tons of fly ash annually, which is usually dumped in landfills. Fly ash is an inexpensive replacement for Portland cement used in concrete, while it actually improves strength, segregation, and ease of pumping of the concrete. Fly ash is also used as an ingredient in brick, block, paving, and structural fills. Fly ash concrete was first used in the U.S. in 1929 for the Hoover Dam, where engineers found that it allowed fro less total cement. It is now used across the country. Consisting mostly of silica, alumina and iron, fly ash is a pozzolan – a substance containing aluminous and silicious material that forms cement in the presence of water. When mixed with lime and water it forms a compound similar to Portland cement. (SOURCE: Toolbase Services, *The Home Building Industry's Technical Information Resource*)

WIND TURBINE: A wind turbine is a rotating machine which converts the kinetic energy in wind into mechanical energy. If the mechanical energy is used directly by machinery, such as a pump or grinding stones, the machine is usually called a windmill. If the mechanical energy is then converted to electricity, the machine is called a wind generator, wind power unit (WPU), or wind energy converter (WEC). Wind turbines require locations with constantly high wind
speeds. With a wind resource assessment, it is possible to estimate the amount of energy the wind turbine will produce. A yardstick frequently used to determine good locations is a Wind Power Density (WPD). It is a calculation relating to the effective force of the wind at a particular location. It usually expressed in terms of the elevation above ground level over a period of time. (SOURCE: Wikipedia, the free encyclopedia)

SMART GRID: a Smart Grid delivers electricity from suppliers to consumers using digital technology to save energy, reduce cost, and increase reliability and transparency. Such a modernized electricity network is being promoted by many governments as a way of addressing energy independence, global warming and emergency resilience issues. Building the Smart Grid means adding computer and communications technology to the existing electricity grid. With an overlay of digital technology, the grid promises to operate more efficiently and reliably. The Smart Grid will also accommodate more soalr and wind power which are inconsistent energy sources that can become more reliable with better controls. The Smart Grid will deliver more detailed information to consumer's homes. This will enable families to have a real-time view iof the energy the household is consuming and will hopefully be a major step in the reduction of the nation's overall energy consumption. (SOURCE: Wikipedia, the free encyclopedia)

FLORIDA GREEN BUILDING COALITION (FGBC): A nonprofit Florida corporation dedicated to improving the built environment. Its mission is "to provide a statewide green building program that defines, promotes, and encourages sustainable efforts with environmental and economic benefits." (SOURCE: *FloridaGreenBuilding Magazine*)

AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA): ARRA is a bill passed by President Obama in February 2009 as an economic stimulus package. The money set aside by this program is being distributed through a variety of agencies, and is dedicated to improving education, building roads, public transportation, criminal justice, health care; and reducing energy consumption among other things. The U. S. Government is hopeful that this package will create jobs, and provide many other economic benefits. (SOURCE: www.investorwords.com)

GREEN ROOF: a green roof is the roof of a building that is partially or completely covered with vegetation and soil or a growing medium planted over a waterproofing membrane. A green roof may also include additional layers such as a root barrier, drainage, and irrigation systems. Green roofs serve several purposes for a building such as absorbing rainwater, providing insulation, creating a habitat for wildlife, helping to lower urban air temperatures, and combating the heat island effect. Green roofs can be categorized as intensive, semi-intensive, or extensive; depending on the depth of the planting medium and the amount of maintenance they need. (SOURCE: www.en.wikipedia.org)

COOL RATED ROOF: A "cool rated roof" or cool roof is both highly reflective and highly emissive transferring less heat into the building than a darker colored standard non-cool roof. A cool roof provides the following benefits in all climates throughout the U.S.:

- Cool roofs can be 70 degrees cooler during the summer when compared to traditional roofs.
- Cool roof systems save money and energy during peak cooling demand periods when electricity costs are highest.
- A cool roof can reduce the cost of operating a roof top HVAC unit because the unit will use cooler air than if mounted on a standard darker roof surface.
- Cool roof systems help reduce the urban heat island effect by reflecting solar heat rather than absorbing it and transferring it to buildings.
- By keeping moisture out while reflecting ultraviolet (UV) and infrared (IR) radiation, a cool roof can help protect underlying insulation and the roofing substrate from deterioration. (SOURCE: www.coolroofs.org)

SUSTAINABLE ROOF: A sustainable roof is generally a High Performance Roof (HPR) that meets or surpasses ASHRAE Standard 90.1, and complies with the five "E's" of an HPR installation.

- Endurance – They must meet or exceed traditional performance standards.
- Economics – HPR systems must be cost effective based on initial cost and on life cycle costs.
- Energy - HPR systems help reduce energy consumption and improve the energy efficiency of the building envelope.
- Environment - HPR systems help reduce the overall impact on the external environment, while creating and maintaining a healthy and productive indoor environment.
- Engineering - Smart engineering and design are the great enablers of HPR systems. Engineering impacts everything from intelligent design and installation to life cycle costs and long term performance in various weather conditions. (SOURCE: www.greenerbuildings.com)

VENTURI EFFECT: When a fluid flows through a constricted section of pipe it's velocity increases to compensate for lowering of the fluid pressure which occurs as the liquid is passing through the constriction (the Venturi Principle). This is the principle employed in a "cooling chimney" design (see Gunning Residence). The breezes enter the house through the shutters and windows on the lower floors. Their combined velocity increases when the breezes enter the "cooling chimney" and exit through the skylight at the top og the chimney. The increased velocity

of the breezes wafting through the house and quickly exiting through the skylight accomplishes the cooling. (SOURCE: www.en.wikipedia.org/wiki/Venturi)

HYDRONIC SYSTEM: Hydronic heating uses hot water to provide whole home heating. A hydronic heating system can also provide domestic hot water. Heating water is heated in a boiler and sent to a pump which circulates the hot water throughout a piping system in the slab. Hot potable water is circulated to the kitchen and bathrooms in the same way. (www.sustainability.vic.gov.au)

CALIFORNIA TITLE 24 STANDARDS: Title 24, part 6, of the California Code of Regulations are energy efficiency standards for residential and nonresidential buildings. They were established in 1978 in response to a legislative mandate to reduce California's energy consumption. These standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2008 standards are effective on January 1, 2010. Any residential or nonresidential building permit submitted on or after January 1, 2010 must meet the 2008 standards. California's building Efficiency and Energy Efficiency Appliance Standards have saved more than $56 billion in electricity and natural gas costs since 1978. It is estimated that the 2008 standards will save an additional $23 billion by 2013. (SOURCE: www.energy.ca.gov/title24)