Glossary of Terms; Facilities and Sustainability Related

Acre: 43,560 square feet equals one acre of land.

Acreage (Maintained): The amount of land in acres that is mowed, plowed, planted, or otherwise played on for sports or extra-curricular recreational type activities. Maintained acreage is cared for whereas non-maintained acreage is land that is left in a natural state, such as prairie, wetlands, forested areas, etc.

Acreage (Non-maintained): Natural areas that are not closely maintained such as: wetland area, wilderness areas, forests, areas that are too steep for maintenance, areas planted with prairie or other grasses that do not require regularly weekly or monthly maintenance.

Active Learning Space: flexible area for interaction with individual, group and other areas that indicates that to learn, students must do more than just listen: They must read, write, discuss, or be engaged in solving problems. In particular, students must engage in such higher-order thinking tasks as analysis, synthesis, and evaluation.

Acquisition - The act of acquiring something (real property). Also refers to something (real property) that has been acquired or gained.

American Council for an Energy-Efficient Economy – (ACEEE) serves to advance energy efficient policies and harness full potential of energy efficiency to achieve greater economic prosperity, energy security and environmental protection. More robust energy definitions at http://www.aceee.org/glossary

APPA : The Association of Higher Education Facilities Officers is a professional organization that offers many publications, seminars and conferences on facilities and related issues. www.appa.org
More robust facilities definitions from this organization can be at
http://www.appa.org/files/pdfs/APPAglossary.pdf

Area Classifications for Buildings (refer to the three following classifications and the varying methods for calculating square footages of a building):

1.**Assignable Square Feet or Net Assignable Square Foot (ASF or NASF):** Sum of all space on all floors in a building available for assignment to an occupant for specific use according to the following room use categories: classroom, laboratory, office, study, special use, general use, support, healthcare, residential, or unclassified.

Assignable Area = Total square footage of area classified as dedicated spaces measured from inside wall to inside wall.

2.Net Useable Area or Net Square Feet (NSF): The sum of all areas on all floors of a building either assigned for a specific room use and areas necessary for the general operation (nonassignable area) of a building. Area taken up by structural building features should not be included in the calculation for Net Useable Area.

Nonassignable Area: The area required for the general operation of a building such as: building service areas (restrooms and storage areas), circulation areas (common spaces and hallways), or mechanical areas (boiler rooms).

Nonassignable Area = Building Service Space + Circulation Space + Mechanical Space.

Net Useable Area = Assignable Area + Nonassignable Area (measured from inside wall to inside wall)

3.Gross Square Feet (GSF): The sum of all areas on all floors of a building included within the outside faces of its exterior walls, including floor penetration areas. Gross area is calculated by physically measuring the outside faces of exterior walls.

Gross Area = Assignable Area + Nonassignable Area + Structural Area. This is the entire area of a structure encompassing the entire square footage from all exterior walls. Gross Area also = Net Usable Area + Structural Area

Asset Preservation: There is no legal or generally accepted definition for asset preservation, but the general definition in as "committing necessary resources to preserving, repair, or adaptive re-use of current assets". Such projects are identified by including a dollar amount in the renewal (or asset preservation) column on the Project Construction spreadsheet in the official capital budget submission. Renewal in this context is defined as "expenditures to keep the physical plant in reliable operating condition for its present use, without programmatic change".

Building: A roofed structure with mechanical/electric/plumbing for permanent or temporary shelter of persons, animals, plants, or equipment.

Capital Budget: Official request for funding for improvements of a capital nature; landscape, building or other structures. This is done through the sale of general obligation bonds, donations, loans, gifts, etc. Budget should include all hard costs (construction, furniture, fixtures) as well as soft costs (design, contingency, testing, auxiliary consulting such as surveyors, hazardous waste, acoustics, etc.).

Clean Room: A room in which the concentration of airborne particulates generated by people, processes and equipment is controlled to specified limits.

Current Replacement Value (of buildings): Current replacement value is the cost to replace the institutional, educational, student services, and general facilities. The cost of replacement is defined as the requirement to duplicate the internal and external building envelope providing the same level of

functionality based upon accurate local labor and material costs, as well as soft costs (design, program management, etc.). It does not include the value of land. *Note: Insurance or book values may or may not equal the CRV.*

Debt Service: The amount of principle and interest that must be paid to retire debt assumed to construction improvements of a capital nature.

Deferred Maintenance Backlog: The existing major maintenance repairs and replacement projects of buildings, grounds, fixed equipment, and infrastructure needs. It does not include projected replacement or other types of work associated with program improvements or new construction; these items are considered capital needs.

Design:
The four levels of design are as follows:

1. **Predesign** - Preliminary document that defines the scope, cost and schedule prior to starting the actual design. This is the programming phase that explains the "who, what, where, when, and why" of an intended expansion or renovation project. The scope of project explains the purpose and contents of the design. The cost of the project includes hard construction, soft cost such as design, occupancy, inflation, and long term operating expenses associated with the project. The schedule of a project explains the "when", which is the time frame for design, construction, staging, and occupancy of project. Each component of cost, scope and schedule impact each other.
2. **Schematic design** - understood to be overall design intent, location of site, understanding of general floor plan, selection of exterior and interior materials, general layout outline specification of major systems: HVAC, utilities, structural system, technology feed, egress and exit, general locations of overall rooms and building materials.
3. **Design Development** - more specific design issues - if the schematic design gives you an office then design development locates the door and door swing, usually this is the last opportunity for user comment in the overall design.
4. **Contract Documents** - the final “working drawings” and specifications that form the basis for the bidding, issue and construction contract by which the terms of project are agreed upon and built.

Energy Terms: One of best glossary of energy terms at http://www.eia.gov/tools/glossary/index.cfm
Energy: The capacity for doing work as measured by the capability of doing work (potential energy) or the conversion of this capability to motion (kinetic energy). Energy has several forms, some of which are easily convertible and can be changed to another form useful for work. Most of the world's convertible energy comes from fossil fuels that are burned to produce heat that is then used as a transfer medium to mechanical or other means in order to accomplish tasks. Electrical energy is usually measured in kilowatt hours, while heat energy is usually measured in British thermal units (Btu).

Energy audit: A program carried out by a utility company in which an auditor inspects structures and suggests ways energy can be saved.

Energy broker system: Introduced into Florida by the Public Service Commission, the energy broker system is a system for exchanging information that allows utilities to efficiently exchange hourly quotations of prices at which each is willing to buy and sell electric energy. For the broker system to operate, utility systems must have in place bilateral agreements between all potential parties, must have transmission arrangements between all potential parties, and must have transmission arrangements that allow the exchanges to take place.

Energy charge: That portion of the charge for electric service based upon the electric energy (kWh) consumed or billed. Charge usually based on demand (amount used) and peak of use.

Energy conservation features: This includes building shell conservation features, HVAC conservation features, lighting conservation features, any conservation features, and other conservation features incorporated by the building. However, this category does not include any demand-side management (DSM) program participation by the building. Any DSM program participation is included in the DSM Programs.

Energy consumption: The use of energy as a source of heat or power or as a raw material input to a manufacturing process.

Energy deliveries: Energy generated by one electric utility system and delivered to another system through one or more transmission lines.

Energy demand: The requirement for energy as an input to provide products and/or services.

Energy effects: The changes in aggregate electricity use (measured in megawatthours) for consumers that participate in a utility DSM (demand-side management) program. Energy effects represent changes at the consumer's meter (i.e., exclude transmission and distribution effects) and reflect only activities that are undertaken specifically in response to utility-administered programs, including those activities implemented by third parties under contract to the utility. To the extent possible, Energy effects should exclude non-program related effects such as changes in energy usage attributable to non participants, government-mandated energy-efficiency standards that legislate improvements in building and appliance energy usage, changes in consumer behavior that result in greater energy use after initiation in a DSM program, the natural operations of the marketplace, and weather and business-cycle adjustments.

Energy Efficiency: A ratio of service provided to energy input (e.g., lumens to watts in the case of light bulbs). Services provided can include buildings-sector end uses such as lighting, refrigeration, and heating: industrial processes; or vehicle transportation. Unlike conservation, which involves some reduction of service, energy efficiency provides energy reductions without sacrifice of service. May also refer to the use of technology to reduce the energy needed for a given purpose or service.

Energy efficiency, Electricity: Refers to programs that are aimed at reducing the energy used by specific end-use devices and systems, typically without affecting the services provided. These programs reduce overall electricity consumption (reported in megawatthours), often without explicit consideration for

the timing of program-induced savings. Such savings are generally achieved by substituting technologically more advanced equipment to produce the same level of end-use services (e.g. lighting, heating, motor drive) with less electricity. Examples include high-efficiency appliances, efficient lighting programs, high-efficiency heating, ventilating and air conditioning (HVAC) systems or control modifications, efficient building design, advanced electric motor drives, and heat recovery systems.

Energy efficient motors: Are also known as "high-efficiency motors" and "premium motors." They are virtually interchangeable with standard motors, but differences in construction make them more energy efficient.

Energy exchange: Any transaction in which quantities of energy are received or given up in return for similar energy products.

Energy expenditures: The money directly spent by consumers to purchase energy. Expenditures equal the amount of energy used by the consumer multiplied by the price per unit paid by the consumer.

Energy information: Includes (A) all information in whatever form on fuel reserves, extraction, and energy resources (including petrochemical feedstocks) wherever located; production, distribution, and consumption of energy and fuels wherever carried on; and (B) matters relating to energy and fuels, such as corporate structure and proprietary relationships, costs, prices, capital investment, and assets, and other matters directly related there to, wherever they exist.

Energy Intensity: A ratio of energy consumption to another metric, typically national gross domestic product in the case of a country's energy intensity. Sector-specific intensities may refer to energy consumption per household, per unit of commercial floorspace, per dollar value industrial shipment, or another metric indicative of a sector. Improvements in energy intensity include energy efficiency and conservation as well as structural factors not related to technology or behavior.

Energy intensity (Commercial Buildings Energy Consumption Survey): The ratio of consumption to floor space.

Energy loss: Deleted because there is no need for a general term to encompass all forms of energy loss. Terms referring to losses specific to particular energy sources are defined separately.

Energy loss (power): Also known as Power loss. The difference between electric input and output as a result of an energy transfer between two points.

Energy management and control system(EMCS): An energy conservation feature that uses mini/microcomputers, instrumentation, control equipment, and software to manage a building's use of energy for heating, ventilation, air conditioning, lighting, and/or business-related processes. These systems can also manage fire control, safety, and security. Not included as EMCS are time-clock thermostats.

Energy management practices: Involvement, as a part of the building's normal operations, in energy efficiency programs that are designed to reduce the energy used by specific end-use systems. This includes the following EMCS, DSM Program Participation, Energy Audit, and a Building Energy Manager.

Energy Policy Act of 1992 (EPACT): This legislation creates a new class of power generators, exempt wholesale generators, that are exempt from the provisions of the Public Holding Company Act of 1935 and grants the authority to the Federal Energy Regulatory Commission to order and condition access by eligible parties to the interconnected transmission grid.

Energy production: See production terms associated with specific energy types.

Energy receipts: Energy brought into a site from another location.

Energy reserves: Estimated quantities of energy sources that are demonstrated to exist with reasonable certainty on the basis of geologic and engineering data (proved reserves) or that can reasonably be expected to exist on the basis of geologic evidence that supports projections from proved reserves (probable/indicated reserves). Knowledge of the location, quantity, and grade of probable/indicated reserves is generally incomplete or much less certain than it is for proved energy reserves. Note: This term is equivalent to "Demonstrated Reserves" as defined in the resource/reserve classification contained in the U.S. Geological Survey Circular 831,1980. Demonstrated reserves include measured and indicated reserves but exclude inferred reserves.

Energy sale(s): The transfer of title to an energy commodity from a seller to a buyer for a price or the quantity transferred during a specified period.

Energy savings: A reduction in the amount of electricity used by end users as a result of participation in energy efficiency programs and load management programs.

Energy service provider: An energy entity that provides service to a retail or end-use customer.

Energy source: Any substance or natural phenomenon that can be consumed or transformed to supply heat or power. Examples include petroleum, coal, natural gas, nuclear, biomass, electricity, wind, sunlight, geothermal, water movement, and hydrogen in fuel cells.

Energy supplier: Fuel companies supplying electricity, natural gas, fuel oil, kerosene, or LPG (liquefied petroleum gas) to the household.

Energy supply: Energy made available for future disposition. Supply can be considered and measured from the point of view of the energy provider or the receiver.

Energy-use sectors: A group of major energy-consuming components of U.S. society developed to measure and analyze energy use. The sectors most commonly referred to in EIA are: residential, commercial, industrial, transportation, and electric power.

Energy-weighted industrial output: The weighted sum of real output for all two-digit Standard Industrial Classification(SIC) manufacturing industries plus agriculture, construction, and mining. The

weight for each industry is the ratio between the quantity of end-use energy consumption to the value of real output.

Facilities Condition Audit: The results from evaluation of the cost and life expectancy of systems and the physical structure.

Facilities Condition Index (FCI): This is a term used to evaluate the usefulness of a building structure, defined as the ratio of building deferred conditions divided by building replacement (i.e., if the deferred maintenance is greater than the replacement cost (over 1) , the structure might warrant demolition rather than repair).

FTE: (Full Term Equivalent) the number of credit hours sold per school year divided by 30 (theoretical full-credit load of an undergraduate student) provides the full year equivalent student population. Substitute 20 credit hours for a full credit load to complete a similar calculation for graduate students.

Green Building: The term used to define environmentally friendly products, issues and overall system management. It is taking the long-term view (30-50 years) on many products and designs. (i.e., If window shelves, skylights, or tree plantings assist in shading a building and yielding natural light that limits reliance on electrical lighting or machinery there can be a component of “green”). Using products to clean that are biodegradable can be a component of “green”.

Gross Square Feet (GSF): Refer to "Area Classifications for Buildings" for the definition.

LEED: (Leadership in Energy Environmental Design) a program that provides third-party verification of green buildings created by the US Green Building Council.

Master Plan: On-Going Long Range Facilities and Land Use Plan. Campus master planning is the prioritization of short and long-term academic programmatic needs that translate into site improvements, property acquisition, building expansions, renovations, and preservation type projects. The components of a typical master plan include information such as: campus history, student demographics, economic and regional issues, regional and state demographics, planning processes, academic master planning, analysis of existing facilities, proposed facilities improvements, analysis of existing site, proposed site improvements, project implementation, funding strategies, and master plan updating strategy.

Net Useable Area or Net Square Feet (NSF): Refer to "Area Classifications for Buildings" for the definition.

Off-Campus Facility: A facility located some distance away from the educational institution that operates it.

Postsecondary Higher Education Facilities Inventory and Classification Manual (FICM): 2006 Edition lists the terms and database for common identification and inventory of space by building, room, space number and type. http://nces.ed.gov/pubs2006/2006160.pdf

Real Estate: Land, buildings and things permanently attached to land and buildings. Also called realty and real property.

Room Use Codes: Higher Education Classifications deriving from the July 1992 Postsecondary Education Facilities Inventory and Classification Manual published by the National Center for Education Statistics of Classroom, Teaching Lab, Open Lab., Office, General Use, Special Use, Support, etc. Location of full definitions can be found at web site: www.nces.ed.gov click on Electronic Catalog and enter NCES #92165.

SCUP - Society of College and University Planners: National organization that offers seminars, conference and publications on issues relating to their namesake. Contact www.scup.org

Space Utilization The impact on assigned spaces within the overall capacity of a room. Indications of use are created from the institution's projections of FYE are reviewed and incorporated into modeling to express overall campus surplus and deficit in areas of classroom, laboratory, office, auxiliary, and physical plant/storage space. It is the hours per week a room is used, the number of seats filled and the space (in square feet) per student or faculty for that particular type of institution.

Space Needs Modeling: Number of students per campus and institution evaluated with the use of chosen guideline to establish a quantity of space that exceeds modeling factors or establishes a deficit of quantity of space that is less than modeling factors.

Sustainability: One of the best terms used for Sustainability is: "the ability to meet current needs without compromising the ability for future generations to do the same". Components of sustainability are recycling and solid waste issues, water, energy, purchasing, construction and development and grounds maintenance.

United State Energy Information Administration: one of the best energy glossary sites is at http://www.eia.gov/tools/glossary/index.cfm?id=A

United States Green Building Council (USGBC) – mission is to improve the quality of life by transforming the design, composition, and operation of the places where we live, learn, work, and play within the short space of a generation with community, LEED, advocacy and initiatives. Creator of LEED and Green Building verification www.usgbc.org.

Unclassified space: Inactive Area + Alteration or Conversion Area + Unfinished Area

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