

Environmental Rating System Matrix – Commercial Construction 3-19-07

Rating System	Description	Certification Levels	Categories of Evaluation	Points Doors and Windows Can Contribute To	Assessment/Evaluation
LEED (Leadership in Energy and Environmental Design)	<p>www.usgbc.org – US Green Building Council’s Leadership in Energy and Environmental Design (LEED) – used for commercial buildings. The US Green Building Council oversees the LEEDS Rating System.</p> <p>LEED Rating System Product Portfolio</p> <ul style="list-style-type: none"> • LEED-NC for New Construction • LEED-EB for Existing Buildings • LEED-CI for Commercial Interiors • LEED-CS for Core & Shell • LEED-H for Homes • LEED-ND for Neighborhood Development 	<ul style="list-style-type: none"> • LEED Certified (26-32 Points) • Silver Level (33-38 Points) • Gold Level (39-51 Points) • Platinum Level (52+ Points) 	<p>69 Total Points</p> <ul style="list-style-type: none"> • Sustainable Sites (SS) - 14 Points • Water Efficiency (WE) – 5 Points • Energy & Atmosphere (EA) – 17 Points • Material & Resources (MR) – 13 Points • Indoor Environmental Quality (EQ) – 15 Points • Innovation and Design Process (ID) – 4 Points • LEED Accredited Professional – 1 Point 	<p>DOORS</p> <ul style="list-style-type: none"> • MR 4.1 – Recycled Content - 10% • MR 4.2 – Recycled Content – 10% • MR 5.1 Regional Materials – 10% Extracted, Processed & Manufactured Regionally • MR 5.2 Regional Materials – 20% Extracted, Processed & Manufactured Regionally • MR 6.0 – Rapidly Renewable Materials • MR 7.0 Certified Wood • EQ 4.4 Low-Emitting Materials: Composite Wood and Agrifiber Products <p>WINDOWS</p> <p>LEED-NC</p> <ul style="list-style-type: none"> • MR 4.1 – Recycled Content - 10% • MR 4.2 – Recycled Content – 10% • MR 5.1 Regional Materials – 10% Extracted, Processed & Manufactured Regionally • MR 5.2 Regional Materials – 20% Extracted, Processed & Manufactured Regionally • MR 7.0 Certified Wood • VOCs • EQ 4.1 • Low VOC Sealants and Adhesives • EQ 4.2 • Low VOC Paints and Coatings <p>LEED-H</p> <ul style="list-style-type: none"> • ID 2. Quality Management 	<p>The LEED Letter Templates and additional submittals for each prerequisite and credit are reviewed for compliance. Within 30 days of administrative approval, the USGBC issues a Preliminary LEED Review document noting credit achievement anticipated, pending and denied. In addition, up to six prerequisites and/or credits shall be selected for audit. The project team has 30 days from the receipt of the Preliminary Review to provide corrections and/or additional supporting documents (e.g., calculations, cut sheets and other backup) as a supplementary submittal to the application. The USGBC conducts a Final LEED Review of the application within three weeks of receiving the resubmittal and notifies the project contact of certification status. If two or more audited credits are denied, additional credits shall be selected for a second audit and will prompt a Second Preliminary LEED Review prior to a Final LEED Review.</p>

				<ul style="list-style-type: none"> for Durability ID 2.1 Durability Plan – Pre-design and design stage Technologies & Strategies: Openings (Windows & Doors) Longevity of products – warranty Openings (Windows & Doors) Testing of products – air, water, structural EA 4. Windows Energy Star Matrix <p>1 point Required Energy Star (Good)</p> <p>2 points >= 10% of Energy Star (Better)</p> <p>3 points >= 20% of Energy Star (Best)</p> <p>See LEED-H Exhibit EA4-A</p>	
Green Globes	The Green Globes system (www.greenglobes.com) is an online building assessment tool that evaluates and rates the environmental performance of new buildings. The program is a trademark of the Green Building Initiative (BGI) (www.thegbi.org), which operates and maintains the assessment tool.	<ul style="list-style-type: none"> 4 Globes – 850–1000 Project Points 3 Globes – 700–849 Project Points 2 Globes – 550–699 Project Points 1 Globe – 350–549 Project Points. 	<p>1000 Total Points</p> <ul style="list-style-type: none"> A – Project Management Process – 50 Points B – Site – 115 Points C – Energy – 380 Points D – Water – 85 Points E – Resources – 100 Points F – Emissions, Effluents & Other Impacts – 70 Points G – Indoor Environment – 200 Points 	<p>DOORS</p> <ul style="list-style-type: none"> E.1 – Low Impact Systems and Materials – 40 Points E.2 – Minimal Consumption of Resources – 15 Points E.4 – Building Durability, Adaptability, and Disassembly – 15 Points F.4 – Pollution Minimization – 25 Points G.2 – Control of Indoor Pollutants – 45 Points G.5 – Acoustic Comfort – 30 Points <p>WINDOWS</p> <ul style="list-style-type: none"> A.2. Environmental Purchasing A 2.1 Third Party Certification & Specification reference. – 5 points for listing 3 or 	<p>Buildings cannot be promoted as having achieved a Green Globes rating until the information submitted has been verified by a qualified third party.</p> <p>By having an independent third party verify that the property has achieved the percentage of points indicated in the self-assessment, project credibility is added in the market, the community, and among occupants and tenants. Only designs that achieve a score of 35% or more out of 1000 total points are eligible to receive a Green Globes™ rating, which ranges from one to four globes. Following third-party verification, certified buildings receive a plaque and are entitled to publicize their achievement.</p>

				<ul style="list-style-type: none"> more products <ul style="list-style-type: none"> - Product - Certification - Specification Reference • Examples Green Seal, Green Guard, GreenSpec. • C.2 Energy Demand Minimization • C 2.3 Is daylighting maximized through the following strategies. • Use windows and calculate the wall ratio x visual light transmission meeting daylight needs. • Continuous windows located close to ceiling line to distribute light deeper into space. • North facing clerestory windows. • C.2 Energy Demand Minimization • C 2.5 Does glazing have a minimum visible light to solar heat gain coefficient ratio (VLT/SHGC) of 1.55 or higher? • Indicate values on each elevation of building. • C.2 Energy Demand Minimization • C 2.8 Does the building's fenestration system meet or has lower values than the Energy Star recommended U-factor? • Indicate the window U factor that is used, and the code-required U-factor for fenestration. • Indicate the window U factor of the window based on the building orientation. (each elevation). • C.2 Energy Demand Minimization • C 2.9 Does the Solar Heat Gain Coefficient (SHGC) of the building's fenestration system meet 	
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				<p>or improves upon the Energy Star recommended SHGC?</p> <ul style="list-style-type: none"> • Indicate the window U factor that is used, and the Energy Star recommended SHGC for fenestration. • Indicate the SHGC of the window based on the building orientation. (each elevation). • E.1 Materials with low environmental impact (40 points) • E 1.1 (Educational Criteria) Have the following assemblies been selected based on a life cycle assessment of the embodied energy, and green house gas emissions using the ATHENA "Environmental Impact Estimator" or NIST BEES? • Other envelope assembly materials (cladding, windows, etc.) • G.1 Lighting Design and integration of lighting systems • Objectives: Enhance occupant well being by providing: • Natural light • Views to exterior • G3.2 What percentage of primary interior spaces have views to the building exterior, or to atria with a maximum distance of approximately 20 ft. from desk to window? • Area of primary interior spaces with views vs. total leasable area. 	
Green Guide for Healthcare – Version 2.2	www.gghc.org The Green Guide for Health Care development began in March 2003 with a professionally and geographically diverse group of green health care industry leaders convened as an independent	Not applicable	<p>97 Total Points</p> <ul style="list-style-type: none"> • Integrated Design (ID) – 2 Prerequisites • Sustainable Sites (SS) – 1 Prerequisite; 21 	<p>DOORS</p> <ul style="list-style-type: none"> • MR 3.1 Sustainably Sourced Materials – 10% • MR 3.2 Sustainably Sourced Materials – 20% 	The Green Guide for Healthcare is a voluntary, self-certifying program. No specific documentation is required, but is helpful to benchmark and baseline project performance; consider

	<p>steering committee to guide the document development. The Green Guide for Health Care is convened by the Center for Maximum Potential Building Systems, a non-profit design firm established in 1975, engaged in life cycle design to foster ecological balance. The Green Guide for Health Care is a self-certifying, best practices toolkit; as such, it does not provide achievement level threshold rankings. The point system provides design and construction teams a way to baseline and benchmark their achievement and to support continuous improvement. The Green Guide's organizational structure is borrowed from the USGBC LEED Rating System. The Green Guide is not a LEED Rating System nor a product of the USGBC. Many Green Guide credits parallel LEED credits, but some have been modified to respond to unique needs of health care facilities.</p>		<p>Credits</p> <ul style="list-style-type: none"> • Water Efficiency (WE) – 1 Prerequisite; 6 Credits • Energy & Atmosphere (EA) – 3 Prerequisites; 21 Credits • Materials & Resources (MR) – 2 Prerequisites; 21 Credits • Environmental Quality (EQ) – 3 Prerequisites; 24 Credits • Innovation & Design Process (IN) – 4 Credits 	<ul style="list-style-type: none"> • MR 3.3 Sustainably Sourced Materials – 30% • MR 3.4 Sustainably Sourced Materials 40% • MR 3.5 Sustainably Sourced Materials 50% • EQ 4.1 Low Emitting Materials: Interior Adhesives and Sealants • EQ 4.4 Low Emitting Materials: Composite Wood and Insulation • 9.1 Acoustic Environment: Exterior Noise, Acoustic Finishes, and Room Noise Levels • IN 1 – Innovation in Design (???) <p>WINDOWS (under development)</p>	<p>following the Suggested Documentation criteria outlined in the Green Guide program. Because of it's alignment with the USGBC LEED program, the Green Guide can be used to facilitate teams pursuing LEED certification.</p>
<p>SPiRiT (Sustainable Project Rating Tool) NOTE: The Army will be transitioning to LEED effective with the 2008 Building Cycle</p>	<p>www.cecer.army.mil/sustDesign/SPiRiT.cfm – US Army Corps of Engineer's Sustainable Project Rating System (SpiRiT) is primarily for military and government installations.</p>	<ul style="list-style-type: none"> • SPRT Bronze (25-34 Points) • SPRT Silver (35-49 Points) • SPRT Gold (50-74 Points) • SPRT Platinum (75+ Points) 	<p>100 Total Points</p> <ul style="list-style-type: none"> • Sustainable Sites – 20 Points • Water Efficiency – 5 Points • Energy and Atmosphere – 28 Points • Materials and Resources – 13 Points • Indoor Environmental Quality – 17 Points • Facility Delivery Process – 7 Points • Current Mission – 6 Points • Future Missions – 4 Points 	<p>DOORS</p> <ul style="list-style-type: none"> • 4.C4 Recycled Content • 4.C5 Local/Regional Materials • 4.C6 Rapidly Renewable Materials • 4.C7 Certified Wood • 5.C4 Low Emitting Materials • 5.C9 Acoustics Environment/Noise Control <p>WINDOWS (under development)</p>	<p>SPiRiT is a self-evaluation rating procedure and as such there is no certification process per se. The timing of the self-evaluation is not specified, merely that the projects must be rated.</p>