

E. Resources, Building Materials and Solid Waste (100 points)

E.1 Materials with low environmental impact (40 points)

Objectives:

- Select environmentally preferable products and materials with the lowest life cycle environmental burden and embodied energy.
- Encourage the designer to consider relative environmental merits of products and materials.

E.1.1 (Educational criteria) Have the following assemblies been selected based on a life cycle assessment of their embodied energy, and green house gas emissions using the ATHENA “Environmental Impact Estimator” or NIST BEES?	
Foundation and floor assembly materials	10 points
Structural systems (column and beam or post and beam combinations) and walls	10 points
Roof assemblies	10 points
Other envelope assembly materials (cladding, windows, etc.) Describe _____	10 points

Final verification: Review whether a life cycle assessment has been done for the building materials and assemblies used in foundations, floor, structural system, roof and envelope assembly. The LCA assessment should have been conducted through use of assessment tools such as the Athena Institute *Environmental Impact Estimator* in the schematic design stage, or NIST *BEES* at the construction documents stage.

E.2 Minimized consumption and depletion of material resources (30 points)

Objective: Conserve resources and minimize the energy and environmental impact of extracting and processing non-renewable materials.

E.2.1 What proportion of building materials and components are re-used?	Points are awarded where 1-10 % or more of materials used are “re-used”. The Green Globes system will calculate this based on the percentage cost of re-used materials versus the total cost of materials. Maximum points = 10 points	
	Cost of materials displaced by the re-used materials	Total Cost (new and re-used)
Flooring		
Paneling		

Fixtures and cabinetry		
Thermal Insulation		
Asphalt Paving		
Concrete		
Steel		
Large-dimension structural lumber (beams & posts)		
Sheet metal		
Bricks		
Doors and frames		
Windows		
Others:		
Total:		
Provide references to specifications. _____		

Verification: Review specifications for re-used materials.

Final verification: Review bills showing how much re-used material was purchased.

<p>E.2.2 What proportion of building materials contain recycled post-consumer content?</p> <p><i>Federal Recommended Recycled Content for Products Guidelines and EPA's List of Designated Products at minimum</i></p>	<p>Points are awarded where 1-20% or more of the materials contain recycled content. The Green Globes system will calculate points awarded based on the percentage cost of recycled materials versus the total cost of materials.</p> <p>Maximum points = 10 points</p>	
	<p>Cost of post-consumer and post-industrial recycled materials</p>	<p>Total Cost (new and post-consumer recycled materials)</p>
Thermal insulation		
Carpet		
Concrete		
Asphalt		
Gypboard		
Floor tiles		
Patio blocks		
Roofing materials		
Metals		
Others: describe		
Total:		
Provide references to specifications. _____		

Verification: Review cut sheets for recycled-content. Review letters from manufacturers declaring recycled content.

Final verification: Review bills showing how much material was purchased that contains post-consumer recycled content.

E.2.3 What proportion of materials are bio-based products, such as green insulation, natural fibers and natural structural materials?	Points are awarded where 1-20% or more of materials used are bio-based. The Green Globes system will calculate points awarded based on the percentage cost of bio-based materials versus the total cost of materials. Maximum points = 5 points
Total cost of materials	Total cost of bio-based materials
Describe the bio-based products. _____	
Provide references to specifications. _____	

Verification: Review specifications for bio-based products and materials.

Final verification: Review bills showing how much bio-based material was purchased.

E.2.4 What proportion of solid lumber and timber panel products originate from sustainable sources that are third-party certified by the Sustainable Forestry Initiative (SFI), CSA Sustainable Forest Management (SFM), Forestry Stewardship Council (FSC), or American Tree Farm System (AFS)?	Points are awarded where 1-100% of the wood used comes from third-party certified acreage. The Green Globes system will calculate points awarded based on the percentage cost of certified wood products versus the total cost of wood products. Maximum points = 5 points
Total cost of wood	Cost of certified wood
Provide references to specifications. _____	

Verification: Review cut sheets for wood that meets third-party certified wood standards, such as SFI (Sustainable Forestry Initiative), SFC (Sustainable Forestry Council), CSA sustainable forest management (SFM), and AFS (American Tree Farm System).

Final verification: Review evidence that the wood used was certified to third party standards.

E.3 Re-use of existing structures (10 points)

Objective: Conserve resources and minimize the energy and environmental impacts of extracting/harvesting and processing resources.

E.3.1 Where there is an existing structure on the site, what proportion of its facades are integrated in the new building? Mark "not applicable" if there is no existing building or where the existing building is less than 1000 square feet.	Points are awarded where 1-100% of existing facades are integrated in the project. The Green Globes system will calculate points awarded based on the percentage of façade retained. Maximum points = 5 points
Total existing building façade area	Area of façade retained