The Green Building Initiative®
AIA Provider Number: G478

Green Globes®
for New Construction
Course Number: GBIGGNCFeb16

Date Recorded: 4/26/16
Presenter: Dianne Elliott
Kevin Stover
Green Globes for New Construction
AIA Registered Course

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Green Globes for New Construction

Course Description

This course is intended for design and construction professionals interested in green building rating systems. It provides an overview of the Green Globes rating system with a primary focus on the New Construction (NC) program, which is based on an ANSI Standard (ANSI/GBI 01-2010: Green Building Assessment Protocol for Commercial Buildings).
Green Globes for New Construction

Learning Objectives

At the end of the course, participants will be able to:

- Explain the relationship of the Green Building Initiative with the Green Globes Rating System
- Recognize the strength of Green Globes and the benefits of certification
- Describe Green Globes for New Construction assessment areas and scoring method
- Describe the Green Globes Assessment Process
- Identify the available user support tools
Green Globes for New Construction
Syllabus

- Introduction to the Green Building Initiative (GBI)
- Introduction to Green Globes
- Benefits of Certification
- Green Globes Overview
- Green Globes Eligibility Guidance
- New Construction (NC) Assessment Areas and Point Allocations
- NC Program Features
- Assessment Process
- Roles and Responsibilities
- Free Trial, Support, and Exam Instructions
Who is GBI?
Green Globes for New Construction
The Green Building Initiative Introduction

*GBI is dedicated to accelerating the adoption of building practices that result in resource efficient, healthier and environmentally sustainable buildings.*

*We advance this mission through credible and practical green building approaches for more sustainable communities.*
Green Globes for New Construction
The Green Building Initiative Introduction

ANSI/GBI 01-2010: Green Building Assessment Protocol for Commercial Buildings
Green Globes for New Construction
32 - Member Balanced Consensus Body

Users

- SLAM
- CLARK CONSTRUCTION
- Const. Grumman/Butkus Associates
- University of Florida
- Southern Nevada Water Authority

Government Agencies

- GSA
- United States Courts
- American Lung Association
- American Lung Association

General Interest

- Alliance for Water Efficiency

Testing & Standards Organizations

- ICC
- UL
- Underwriters Laboratories
- NSF
- AIA

Producers

- JELD-WEN
- Mitsubishi Electric
- ConTech Lighting
- Kingspan
What is Green Globes?
Green Globes for New Construction
Distinguished Lineage

4,000 buildings certified
GREEN GLOBES AND LEED BOTH USEFUL FOR FEDERAL PROJECTS

In 2006, nineteen federal agencies signed a Memorandum of Understanding (MOU), committing themselves to the Guiding Principles for Federal Leadership in High Performance and Sustainable Buildings. The MOU led to Executive Order (EO) 13423 (Jan 2007), requiring 15% of existing agency buildings to incorporate the sustainability measures of the Guiding Principles by 2015. With this EO, the Federal Government committed itself to providing national leadership in implementing goals and strategies for maintaining high performance and sustainable buildings.

As part of their bi-annual revision process, the Interagency Sustainability Working Group (ISWG) provided High Performance and Sustainable Buildings Guidance in 2008, establishing separate Guiding Principles for Sustainable Existing Buildings and clarifying reporting requirements for accuracy and consistency across agencies. Following this document, the White House issued Executive Order 13514 in 2009.

Each of these Guiding Principles have multiple criteria, ranging from reducing building energy use to meeting EPA’s recycled content recommendations. Details on these criteria can be found in the Resources section at the bottom of this page as well as on the Whole Building Design Guide’s (WBDG) website on Guiding Principles.

To measure compliance with the Guiding Principles, federal agencies have a few options, including EPA’s Federal High Performance Sustainable Buildings Checklist, subjective paper evaluations...
Green Globes for New Construction
Clients Across Government and Industry
Benefits of Green Globes Certification
Green Globes for New Construction
Benefits of Green Globes Certification

THE GREEN GLOBES SOLUTION

1 Enhances sustainability and supports continuous improvement throughout the building service life.
Green Globes for New Construction
Benefits of Green Globes Certification

THE GREEN GLOBES SOLUTION

2 Makes it CLEAR to design and operations teams what they should focus on to achieve sustainable outcomes.
3 Helps REDUCE FUTURE energy and water OPERATING COSTS.
4 Provides a ROAD MAP for getting these results.

THE GREEN GLOBES SOLUTION

- Benchmark
- Determine Gaps/ Set Goals
- Develop Improvement Plans
- Implement Plans
- Get Results
The review verifies for stakeholders that their company, agency or institution STANDS FOR SUSTAINABILITY.
6 Home Page video www.thegbi.org - Hear what clients say
Green Globes Overview
Green Globes for New Construction (NC)
- Guides the integrated design process at each stage of the project

Green Globes for Existing Buildings (EB)
- Establishes a baseline and guides improvement for individual buildings or portfolios

Green Globes EB for Healthcare
- Specializes for healthcare buildings with licensed in-patient beds

Green Globes for Sustainable Interiors (SI)
- Designed for tenant improvement projects, fit-outs and remodels
Green Globes for New Construction

Features

- An interactive online evaluation

- No prerequisites

- Minimum Energy Performance
- Water Use Reduction
- Storage and Collection of Recyclables
Green Globes for New Construction
Features

- “Non-applicable” provision

- Thresholds for incremental recognition
Green Globes for New Construction

Features

- On-site assessment by a sustainability expert
- A detailed final assessment report
- GBI staff support (project managers and technical experts)

High Touch Customer Service, High Value
Green Globes for New Construction
The Green Globes Continuum

NC
NEW CONSTRUCTION

SI
SUSTAINABLE INTERIORS

EB
EXISTING BUILDINGS

Intended Performance

Design & Construction

Continuous Improvement

Actual Management & Performance

Occupancy
Eligibility Guidance
Green Globes for New Construction
Eligibility Decision Chart

START
Is this project for new construction (or build-out)?

Yes
Is this project a ground-up construction?

Yes
Does this refit or repurpose involve gutting or replacing more than one of these systems: lighting, mechanical/HVAC, envelope or does the renovation exceed 25% of the replacement value?

Yes
Does the project scope primarily include interior fit-out?

Yes

Choose Green Globes SI – Sustainable interiors

No

Choose Green Globes NC – New Construction

No

Refit or re-purpose

Yes

Ground-up

Choose Green Globes EB – Existing Buildings

EXISTING (more that 18 months since initial occupancy and/or 12 consecutive months utility bills)

No

Does this refit or repurpose involve gutting or replacing more than one of these systems: lighting, mechanical/HVAC, envelope or does the renovation exceed 25% of the replacement value?

No

Does the project scope primarily include interior fit-outs?

No

Contact GBI
Green Globes for New Construction

Green Globes NC – Eligibility Guidance

- General
- Size
- Permanence
- Building/Project Types
- Occupancy & Conditioned Space
- Energy Systems
- Water Systems
- Special Considerations
Criteria & Scoring Protocols
Buildings that achieve 35% or more of the points possible in the Green Globes rating system are eligible for a certification of one, two, three, or four Green Globes.

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>85-100%</td>
<td>Demonstrates national leadership and excellence in the practice of energy, water, and environmental efficiency to reduce environmental impacts.</td>
</tr>
<tr>
<td>70-84%</td>
<td>Demonstrates leadership in applying best practices regarding energy, water, and environmental efficiency.</td>
</tr>
<tr>
<td>55-69%</td>
<td>Demonstrates excellent progress in the reduction of environmental impacts and use of environmental efficiency practices.</td>
</tr>
<tr>
<td>35-54%</td>
<td>Demonstrates a commitment to environmental efficiency practices.</td>
</tr>
</tbody>
</table>
## Green Globes for New Construction
### Assessment Areas

<table>
<thead>
<tr>
<th>SI</th>
<th>NC</th>
<th>EB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Management</td>
<td>Project Management</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>Site</td>
<td>N/A (Included within Resources)</td>
</tr>
<tr>
<td>Energy</td>
<td>Energy</td>
<td>Energy</td>
</tr>
<tr>
<td>Water</td>
<td>Water</td>
<td>Water</td>
</tr>
<tr>
<td>Materials &amp; Resources</td>
<td>Materials &amp; Resources</td>
<td>Resources</td>
</tr>
<tr>
<td>Emissions</td>
<td>Emissions</td>
<td>Emissions, Effluents &amp; Pollution Controls</td>
</tr>
<tr>
<td>Indoor Environment</td>
<td>Indoor Environment</td>
<td>Indoor Environment</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>Environmental Management</td>
</tr>
</tbody>
</table>
Green Globes for New Construction
Organization of Criteria

Environmental Assessment Area
(Energy)

Section
(Energy Demand)

Subsection
(Passive Demand Reduction)

Criteria
Does a minimum of 20% of the building envelope gross wall area have either of the following:
Green Globes for New Construction
NC Point Allocation

New Construction

- Project Management: 5.0%
- Site: 11.5%
- Emissions: 5.0%
- Energy: 39.0%
- Water: 11.0%
- Materials & Resources: 12.5%
- Indoor Environment: 16.0%

7 Areas of Assessment

1000 Possible Points
1 Project Management

Integrated Design and Management
Environmental Purchasing
Whole Building Commissioning
Environmental Management - during & post-construction
Emergency Response Plan
2 Site

Development Area

**Ecological Impacts** - erosion, heat island, light pollution

**Watershed Features and Onsite Water Management**

**Site Ecology Enhancement and Landscaping**

**Site Construction Best Practices**
3 Energy

Energy Performance - four paths described on the next slide

Reduced Demand - space optimization, microclimatic design, day-lighting, envelope design, metering, peak demand response

Energy Efficiency Features - lighting, heating & cooling equipment

Metering and Submetering - measurement and performance

Renewable Energy - including ground source

Transportation
Four paths for Energy Performance:

A. ENERGY STAR® Target Finder
B. ASHRAE 90.1-2010, Appendix G
C. ANSI/GBI 01-2010 Energy Performance Building Carbon Dioxide Equivalent Emissions (CO₂e)
D. ASHRAE Building Energy Quotient (bEQ) ‘As Designed’ assessment

Note for Multi-residential projects RESNET can be used as an acceptable method (not in survey)
4 Water

**Water Performance** - benchmark using the GBI Water Calculator described on the next slide

**Water Conserving Features** - plumbing, fixtures, fittings, appliances, and equipment, incl. medical, food service, laundry, cooling towers, boilers, water heaters, special water features, and water treatment

**Alternate Water Sources**

**Metering and Submetering**

**Irrigation Design**
4 Water (cont’d)

GBI Water Calculator

- Excel-based program that allows the user to gauge a proposed building’s water performance by benchmarking against a base building
- Input Assumptions include data regarding building size and type, operating hours, and fixture use frequency
- Output Page displays calculated baseline water use and allows addition of other water consumption features including HVAC systems, pools, fountains, commercial kitchens, etc.
- Project Use Analysis – includes water performance improvement over the baseline
- Parallel program for Multi–Unit Residential Buildings (MURB)
5 Materials & Resources

Building Assembly & Interior Fit-Out

**Performance Path** – Life Cycle Assessment

**Prescriptive Path** – Environmental Product Declarations (EPD) or 3rd Party Certification (utilizes consistent Product Category Rules and conforms to ISO standards)

**Wood Certification** – 4 options (incorporated in Prescriptive Path)

Whole Building Life Cycle:
- Reuse of Existing Buildings
- Building Life Service Plan - Durability, Adaptability, and Disassembly

Construction Waste Management

Design & Construction of Waste Management Space
6 Emissions & Other Impacts

**Air Emissions** - heating equipment, including District Heating

**Refrigerants** - ODP and GWP; GreenChill best design practices

**Pollution Control** - procedures, compliance with standards
7 Indoor Environment

**Ventilation System** - including HVAC access

**Lighting** - daylighting & electric lighting integration

**Source Control and Indoor Pollutants**

**Integrated Pest Management**

**Thermal Comfort**

**Acoustic Comfort**

*Insulated cavity closer discourages mold and bacteria growth*
Summary of Changes in ANSI BSR/GBI 01-201X

- Six instead of Seven Assessment areas
- A minimum of 20% of applicable points within each area to achieve certification
- Three Energy Performance paths instead of four
- Point distribution updated
- Transportation is included within site
- Water Calculator no longer used
- Materials and Resources restructured
New Construction Features
New construction, major renovations and additions

- Guides the integrated design process and measures intended performance
- Four Online Surveys
- Includes two mandatory reviews
- Eligibility
Green Globes for New Construction
Information Flow

- Construction Documents and Post Construction surveys have two versions
  - Client
  - Assessor
  - Each version retained
- Information flows between versions
Green Globes for New Construction
Projects Page

- Projects Page
Green Globes for New Construction
Project Dashboard

- Project Dashboard

![Project Status Dashboard]

Status key:
- Red = User Edit
- Purple = Assessor Edit
- Yellow = Admin Review
- Green = Completed

Surveys

<table>
<thead>
<tr>
<th>Name</th>
<th>Progress</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Information</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Predesign</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>Schematic Design</td>
<td>70%</td>
<td></td>
</tr>
<tr>
<td>Construction Documents - Client</td>
<td>100%</td>
<td>81%</td>
</tr>
<tr>
<td>Construction Documents - Assessor</td>
<td>100%</td>
<td>54%</td>
</tr>
<tr>
<td>Post Construction - Client</td>
<td>100%</td>
<td>54%</td>
</tr>
<tr>
<td>Post Construction - Assessor</td>
<td>100%</td>
<td>54%</td>
</tr>
</tbody>
</table>

Basic Information, Predesign and Schematic Design may always be updated while project is active.
Green Globes for New Construction Navigation

- Left navigation
  - Easy to access
    - Surveys
    - Environmental Areas
    - Sub Areas
    - Sections

IDP Progress Meetings for Design

1. Did the integrated design and delivery team hold progress meetings prior to the completion of the following project phases:

2. At the Concept Design Phase?
   - Yes
   - No

3. At the Design Development Phase?
   - Yes
   - No

4. At the Construction Documents Phase?
   - Yes
   - No

5. Is there a requirement that the integrated design and delivery team hold progress meetings prior to the completion of the following project milestones:

6. Pre-Construction?
   - Yes
   - No
Green Globes for New Construction
Path Options

- Path Options
  - More than one option to achieve points
  - Option to select one of the available paths
  - Cannot combine points from multiple options

INTERIOR FIT-OUT (INCLUDING FINISHES AND FURNISHINGS)

Green Globes provides two paths for assessing interior fit-outs (including finishes and furnishings):
- Path A: Performance Path for Interior Fit-outs - 16 points
- Path B: Prescriptive Path for Interior Fit-outs - 10 (out of 16) points

Points cannot be combined between paths. Please review and select one of the two pathways below.

Path A: Performance Path for Interior Fit-outs

Was life cycle assessment and relative comparison of a minimum of two alternative interior fit-outs (based on a complete unit, including finishes and furnishings) performed during design, which resulted in the selection of an interior fit-out that is the most environmentally favorable based upon comparable applications?

- Yes
- No

Path B: Prescriptive Path for Interior Fit-outs

Based upon the appropriate application and specification of comparable products, what percentage of the interior fit-out materials and products (including finishes and furnishings) selected (based upon cost) have:
Green Globes for New Construction Collaboration

- Collaboration

Test Project GGP

Status: Active
Type: Green Globes for New Construction (GG NC)
Quote Request: March 24, 2015: TEST PROJECT GGP
Project Registration: Registered

Collaborators:
Mark Scherrer (owner)
Jane Smith
John Doyle
Green Globes for New Construction
Printable Blank Survey

Access to Printable Blank Survey

This document provides a preliminary Green Globes score based upon the answers selected in the corresponding online survey. The final Green Globes score and rating will be based upon third-party verification and provided within the assessor's Stage II report.

**Overall Score:** 59%

**Overall Score:** 863 / 512.5

**Project Management:** 34%

**Project Management:** 49 / 16.5

**Integrated Design Process (IDP):**

<table>
<thead>
<tr>
<th>Pre-Design Meetings</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>3</td>
</tr>
</tbody>
</table>
Green Globes for New Construction
Printable Blank Survey with Scores

Access to Printable Survey with Scores

Test Project GGP Training
Client: Sustainability Corporation
Report Generated: Jan 27, 2016

This document provides a preliminary Green Globes score based upon the answers selected in the corresponding online survey. The final Green Globes score and rating will be based upon third-party verification and provided within the assessor’s Stage II report.

OVERALL SCORE - 74%

<table>
<thead>
<tr>
<th>PROJECT MANAGEMENT</th>
<th>86%</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTIMATED DESIGN PROCESS (IDP)</td>
<td></td>
</tr>
</tbody>
</table>

Pre-Design Meetings

- Architect? (Yes/No)
- Building Science or Building Forensics Expert? (Yes/No)

Surveys Completion

Printable Survey with Scores
Assessment Process
Green Globes for New Construction
Process Flow Chart – NC

Stage I
Design Review

Project Manager/Client Completes and Submits GG NC Survey

GBI Schedules Preliminary Review

Project Manager/Client Gathers and Submits Documentation for Assessor Review

Stage II
On-site Assessment & Certification

Assessor On-Site Review and Final Report

Assessor Design Review and Preliminary Report

GBI Reviews and Issues Preliminary Report

GBI Reviews and Issues Final Report

GG NC Rating & Certification

GBI Schedules On-site Assessment

Project Manager/Client Updates and Submits GG NC Survey and Gathers Missing Documentation
### Green Globes for New Construction
#### NC Certification Timeline

<table>
<thead>
<tr>
<th>Stage I: Design</th>
<th>Stage II: On-Site Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process Begins</td>
<td>Report prepared, reviewed, approved, issued to client</td>
</tr>
<tr>
<td>1 – 2 weeks</td>
<td>Construction finished and post-construction survey completed</td>
</tr>
<tr>
<td>4 – 6 weeks</td>
<td>Stage II: On-Site Assessment scheduled &amp; completed</td>
</tr>
<tr>
<td>Design Time</td>
<td>Report prepared, reviewed, approved, issued to client</td>
</tr>
<tr>
<td>1 – 2 weeks</td>
<td>Recognition order &amp; delivery</td>
</tr>
</tbody>
</table>

- **Timeframes are estimates***

---

4 – 6 months *excluding design and construction time*
### Green Globes for New Construction
#### NC Estimated Work Hours

<table>
<thead>
<tr>
<th>Green Globes Projects Tasks for NC</th>
<th>Estimated Work Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project management &amp; client meetings</td>
<td>6 - 16</td>
</tr>
<tr>
<td>Gather and assemble data for the online surveys</td>
<td>5 - 10</td>
</tr>
<tr>
<td>Complete online surveys</td>
<td>5 - 14</td>
</tr>
<tr>
<td>Prepare documentation package for the assessor for Stage I review</td>
<td>10 - 20</td>
</tr>
<tr>
<td>Prepare documentation package for the assessor for Stage II review</td>
<td>4 - 14</td>
</tr>
<tr>
<td>Plan and attend the Stage II on-site assessment</td>
<td>4 - 12</td>
</tr>
<tr>
<td>Post assessment action items (deliver additional documentation, if needed, review report and share results)</td>
<td>4 - 8</td>
</tr>
<tr>
<td>Recognition</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total Estimated Hours</strong></td>
<td><strong>39 - 95</strong></td>
</tr>
</tbody>
</table>
Roles & Responsibilities
GBI Personnel Certifications

GREEN GLOBES® PROFESSIONAL

GREEN GLOBES® ASSESSOR
Green Globes for New Construction
Roles and Responsibilities

Green Building Initiative Staff
Support the assessment process, including: order review, assignment, assessment scheduling, report review, delivery of final building rating and certification fulfillment. Provide technical clarifications and guidance.

Client / Project Manager
Complete online survey(s), provide documentation to assigned assessor for review, confirm site visit requirements (space, personnel, time), assembles team for site visit, and reviews assessors findings.

Green Globes Professional (GGP)
Assist clients in the Green Globes assessment and certification process. Varying duties dependent upon contract with client ranging from all client-related tasks to technical support and consulting.

Green Globes Assessor (GGA)
Reviews documentation, visits site to interview key personnel and tour building to determine point awards. Writes the final building report and recommends certification rating based upon the verified number of points achieved.
Green Globes for New Construction
Free Trial and Supporting Materials

- SI 30-day Free Trial Available
- Training & Resources\User Resources\Downloads
# Green Globes for New Construction

## Project Checklist

### Important Note:
This document is intended to provide information regarding the areas assessed and associated maximum points available under the Green Globes for New Construction program. Each of the areas presented here contain more specific criteria which are scored within the online Construction Documents Survey. Please refer to the Technical Reference Manual to view all assessed criteria, associated maximum points possible, ToolTips and references. Please purchase and complete the online Construction Documents Survey for the most accurate self-evaluation of a project. Final Green Globes certification is based upon third-party assessor verified points at the conclusion of an assessment.

<table>
<thead>
<tr>
<th><strong>PROJECT MANAGEMENT</strong></th>
<th><strong>SITE</strong></th>
<th><strong>ENERGY (cont’d)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maximum Points: 50</strong></td>
<td><strong>Maximum Points: 115</strong></td>
<td><strong>Maximum Points: 390</strong></td>
</tr>
<tr>
<td><strong>Date:</strong></td>
<td><strong>Project Name:</strong></td>
<td><strong>3.3 Metering, Measurement, and Verification</strong></td>
</tr>
<tr>
<td><strong>1.1 Integrated Design Process (IDP)</strong></td>
<td><strong>2.1 Development Area</strong></td>
<td><strong>3.3.1 Metering</strong></td>
</tr>
<tr>
<td><strong>1.1.1 Pre-Design Meetings</strong></td>
<td><strong>2.1.1 Urban Infill and Urban Sprawl</strong></td>
<td><strong>3.3.2 Measurement and Verification</strong></td>
</tr>
<tr>
<td><strong>1.1.2 IDP Performance Goals</strong></td>
<td><strong>2.1.2 Greenfields, Brownfields and Floodplains</strong></td>
<td><strong>Maximum Points: 12</strong></td>
</tr>
<tr>
<td><strong>1.1.3 IDP Progress Meeting for Design</strong></td>
<td></td>
<td><strong>3.3.1 Metering</strong></td>
</tr>
<tr>
<td><strong>1.1.4 Capital Asset Plan &amp; Business Case Summary (Federal only)</strong></td>
<td><strong>2.2 Ecological Impacts</strong></td>
<td><strong>3.3.2 Measurement and Verification</strong></td>
</tr>
<tr>
<td><strong>Y</strong></td>
<td><strong>2.2.1 Site Disturbance and Erosion</strong></td>
<td><strong>Maximum Points: 8</strong></td>
</tr>
<tr>
<td><strong>N</strong></td>
<td><strong>2.2.2 Tree Integration</strong></td>
<td></td>
</tr>
<tr>
<td><strong>N?</strong></td>
<td><strong>2.2.3 Tree Preservation</strong></td>
<td><strong>Maximum Points: 10</strong></td>
</tr>
<tr>
<td></td>
<td><strong>2.2.4 Heat Island Effect</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>2.2.5 Bird Collisions</strong></td>
<td><strong>Maximum Points: 3</strong></td>
</tr>
<tr>
<td></td>
<td><strong>2.3 Stormwater Management</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2.3.1 Site Stormwater Control</strong></td>
<td><strong>2.4 Landscaping</strong></td>
<td><strong>Maximum Points: 4</strong></td>
</tr>
<tr>
<td><strong>2.3.2 Stormwater Management</strong></td>
<td><strong>2.4.1 Landscape Management</strong></td>
<td></td>
</tr>
<tr>
<td><strong>2.3.3 Stormwater Management</strong></td>
<td><strong>2.5 Exterior Light Pollution</strong></td>
<td><strong>Maximum Points: 8</strong></td>
</tr>
<tr>
<td><strong>2.3.4 Stormwater Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.3.5 Stormwater Management</strong></td>
<td></td>
<td><strong>Maximum Points: 6</strong></td>
</tr>
<tr>
<td><strong>2.3.6 Stormwater Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>2.3.7 Stormwater Management</strong></td>
<td></td>
<td><strong>Maximum Points: 5</strong></td>
</tr>
<tr>
<td><strong>2.3.8 Stormwater Management</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Maximum Points: 10</strong></td>
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Green Globes for New Construction
Free Trial and Supporting Materials

- GG NC Pre-Assessment Checklist

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<td>20 years or</td>
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<td>17</td>
<td>Is all habitat</td>
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<th>PERSON ASSIGNED TO?</th>
<th>DUE DATE</th>
<th>FILE NAME(S)</th>
<th>FILE PATH, NAME, DIRECTORY</th>
<th>NOTES</th>
</tr>
</thead>
</table>

Instructions / Project Management / Site / Energy / Water / Materials and Resources / Emissions / Life Cycle Impact
3.1.2.4 IAQ During Construction

3.1.2.4.1 Criteria:
Is there a requirement for either one of the following best-practices to maintain good indoor air quality:
- The area under construction is to be flushed with 100% outdoor air for 14 consecutive days prior to occupancy, and filters changed after flush out but before it is occupied?
- Baseline Indoor Air Quality testing gives acceptable results as per U.S. Environmental Protection Agency (EPA) Testing for Indoor Air Quality, Section 01 81 09 (December 2007)?

Answers:
- Building flushed 14 days + filters changed (2 points)
- IAQ test yields acceptable results (2 points)
- No (0 points)

ToolTip:
This is verified at the Stage II Site Assessment. The measures should be included in the General Contractors' Environmental Management System as part of the Site and Work Instructions.

References:
- U.S. Environmental Protection Agency (EPA) Testing for Indoor Air Quality: Section 01 81 09 (December 2007)
- California Office of Environmental Health Hazard Assessment list of Chronic Reference Exposure Levels: [http://oehha.ca.gov/air/allrels.html](http://oehha.ca.gov/air/allrels.html)

Assessment Guidance:
Despite construction IAQ best management practices, the indoor environment of any building will contain pollutants and chemicals resulting from the construction process. When the building is ready for occupancy, it is good practice to ensure airborne contaminants have been evacuated from the building. This can be done in two ways:
- Performing a building flush-out
- Indoor Air Quality testing

A building flush-out requires the contractor to run the HVAC system at 100% outdoor air for at least 14 consecutive days in order to dilute and remove off-gassed contaminants from the structure. If the HVAC system has been running during construction, the filters should be changed prior to flush-out and again immediately after the flush-out is complete. There should be brand new filters in all HVAC systems when the building is ready for occupancy. The flush-out should be performed after testing and balancing of the HVAC systems and all commissioning functional tests have been completed, if possible. During the flush-out, it is recommended that the interior conditions remain in an acceptable temperature and humidity range.
Green Globes for New Construction
Free Trial and Supporting Materials

- Training & Resources\User Resources\Green Resource Library

Green Resource Library

The following third-party resources are not specific to the Green Building Initiative but are provided to you here for general information regarding green building.

Perception, Thoroughness, and Consistency

Part 2 of 3: A real-world comparison of sustainable rating systems is a fortunate opportunity. Last month, we compared the costs of having similar buildings Leadership in Energy and Environmental Design (LEED) certified through the United States Green Building Council (USGBC) and Green Globes certified through the Green Building Initiative (GBI). We left you with questions regarding the design documentation and submission fees for LEED and Green Globes and how that may impact the building.

READ MORE

Sustainable Options: A Cost Comparison

Part 1 of 3: A real-world comparison of sustainable rating systems is a fortunate opportunity. “At the University of North Carolina (UNC) Charlotte, we were able to take two similar Residence Hall buildings, on adjacent sites, and have one of them Leadership in Energy and Environmental Design (LEED) Certified and one Green Globes Certified. The process of taking LEED Certified Millimore Hall (at 122,000 square feet), and with a Guaranteed Maximum Price (GMP) of $32,000,000) and Green Globes Certified Belle Hall (at 165,000 square feet), and with a GMP of $27,000,000, from programming through construction, offered a close-up comparison of the rating systems.”

READ MORE

Green Globes*: Differences from LEED® and how tile fits in

Green Globes has emerged as a viable alternative to LEED, and tile is perfectly poised to contribute toward points and compliance with its comprehensive ‘performance plus transparency’ initiatives. Green Squared® and the North American made Ceramic Tile EPD Written by Bill Giese, LEED AP BD+C

READ MORE
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- Project Portfolio\Building Profile Directory

![Building Profile Directory](image)

**Vernonia School District 47J**
The Vernonia School District 47J community built a new 150,000-square-foot K-12 school to serve its 565 students. The district incorporated sustainable measures and green technology to serve as a model for students. “We are forging a niche in education to attract families and create a viable community here,” says Miller. “The Green Globes rating system helped us evaluate our efforts.”

**The Vinyl Institute**
A sustainable interiors project in Washington, D.C., is having far-reaching impacts. The Vinyl Institute wanted to create positive changes inside its new office space despite the lack of control over building systems and building owner decisions.

**Dunedin Fire Station 61**
Green Globes Enhances Fire Station’s Team Collaboration and Wise Stewardship of Public Funds
Green Globes for New Construction

Exam Instructions

- To seek AIA CES LUs or to receive a certificate of completion, you must pass the course exam with a score > 80%
- Access the exam via Survey Monkey: https://www.surveymonkey.com/r/GBIGGNCFeb16Exam
  - The exam is open book
  - If you do not pass the exam, you may retake it
- You will NOT receive an online score upon completion; GBI will provide email notification of your exam results
- If you achieved a passing score, GBI will email a certificate of completion and report 1.5 LU/HSW Hour to AIA (if applicable)
- We value your feedback. Please complete the course evaluation via Survey Monkey at this link: https://www.surveymonkey.com/r/GBIGGNCFeb16Eval
Green Globes for New Construction
AIA Training Complete

This concludes The American Institute of Architects
Continuing Education Systems Course

The Green Building Initiative

Contact Us:
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dianne@thegbi.org

Kevin Stover
717.817.6892
kevin@thegbi.org