FGBC Green Commercial Standard v2

Dr. Jennifer Languell  www.trifectaconstruction.com
Non-profit organization formed in 2000
Consensus based Standards development process
Breadth of Expertise includes people from:
Construction & Development
Design & Analysis
Academic & Research
Product Development
Real Estate & Finance
Government & Public Advocates
FGBC’s Success Story

FGBC Standards are endorsed by:

- The Florida Legislature
- The Florida League of Cities
- Florida League of Mayors
- The Florida Home Builders Association
Florida Green Building Coalition

Floridaagreenbuilding.org

Homes 3,401
Developments 11 59
Local Governments (for Cities and Counties) 29 54
Commercial 3 12
High-Rise Residential

May 2011

New Revision 2011
Several years ago Fermi Award winning physicist and former California Energy Commissioner Dr. Art Rosenfeld, stated that **the energy lost through our inefficient windows alone represents about 2 million barrels per day**.
Energy Efficiency

(A Green Florida for a Blue Planet)

Electric Consumption (kWh)

Gas Consumption (Btu)

Legend:
- Area Lighting
- Task Lighting
- Misc. Equipment
- Exterior Usage
- Pumps & Aux.
- Ventilation Fans
- Water Heating
- Ht Pump Supp.
- Space Heating
- Refrigeration
- Heat Rejection
- Space Cooling
Commercial Building Energy Users

- Office
- Education
- Health Care
- Lodging
- Service
- Food Service
- Public Assembly
- Retail (Other Than Mall)
- Warehouse and Storage
- Other
- Food Sales
- Religious Worship
- Vacant

Trillion Btu
• Category 1  Project Management
• Category 2  Energy
• Category 3  Water
• Category 4  Site
• Category 5  Health
• Category 6  Materials
• Category 7  Disaster Mitigation
• Category 8  Environmental Innovation
### Point Totals and Certification

<table>
<thead>
<tr>
<th>Category</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1</td>
<td>Project Management</td>
<td>9</td>
</tr>
<tr>
<td>Category 2</td>
<td>Energy</td>
<td>144</td>
</tr>
<tr>
<td>Category 3</td>
<td>Water</td>
<td>76</td>
</tr>
<tr>
<td>Category 4</td>
<td>Site</td>
<td>74</td>
</tr>
<tr>
<td>Category 5</td>
<td>Health</td>
<td>42</td>
</tr>
<tr>
<td>Category 6</td>
<td>Materials</td>
<td>36</td>
</tr>
<tr>
<td>Category 7</td>
<td>Disaster Mitigation</td>
<td>35</td>
</tr>
</tbody>
</table>

**Points for Certification**: 100  
**Maximum Available Points**: 386  

Bronze 100-150  
Silver 151 - 200  
Gold 201 - 250  
Platinum 251+
Category 1: Project Management

Required Category Minimum Points: 0
Maximum Available Points: 11

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite 1</td>
<td>Green Project Meeting</td>
<td>Required</td>
</tr>
<tr>
<td>PM1</td>
<td>Building Information Modeling</td>
<td>3</td>
</tr>
<tr>
<td>PM2</td>
<td>Cost Benefit Analysis</td>
<td>5</td>
</tr>
<tr>
<td>PM3</td>
<td>Green Education</td>
<td>1</td>
</tr>
</tbody>
</table>
Category 1: Project Management

• **PM1** Building Information Modeling (3)
  - Project team – design and contractor

• **PM3** Cost Benefit Analysis (5)
  - Energy and Water credits

• **PM4** Green Education (1)
## Category 2: Energy

**Required Category Minimum Points** 30  
**Maximum Available Points** 144

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite 1</td>
<td>Owner Project Requirements (OPR)</td>
<td>Required</td>
</tr>
<tr>
<td>Prerequisite 2</td>
<td>Basis of Design</td>
<td>Required</td>
</tr>
<tr>
<td>Prerequisite 3</td>
<td>Testing and verification of installed equipment</td>
<td>Required</td>
</tr>
<tr>
<td>Prerequisite 4</td>
<td>Minimum Energy Performance</td>
<td>Required</td>
</tr>
<tr>
<td>Prerequisite 5</td>
<td>Ozone Depletion Potential Management</td>
<td>Required</td>
</tr>
</tbody>
</table>
## Category 2: Energy

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>EPA Target Finder</td>
<td>2</td>
</tr>
<tr>
<td>E2</td>
<td>Portfolio Manager</td>
<td>2</td>
</tr>
<tr>
<td>E3</td>
<td>Commissioning</td>
<td>10</td>
</tr>
<tr>
<td>E4</td>
<td>Energy Performance Improvement</td>
<td>70</td>
</tr>
<tr>
<td>E5</td>
<td>Envelope Performance Test</td>
<td>2</td>
</tr>
<tr>
<td>E6</td>
<td>Renewable Energy Production</td>
<td>28</td>
</tr>
<tr>
<td>E7</td>
<td>Green Power</td>
<td>4</td>
</tr>
</tbody>
</table>

**Required Category Minimum Points**: 30  
**Maximum Available Points**: 143
Category 2: Energy

- **E1** EPA Target Finder (2)
  - 1 point for using Target Finder
  - 2 points for achieving a Target Finder score > 75

- **E2** Portfolio Manager (1-2)
  - **E2.1** Use EPA Portfolio Manager (1)
  - **E2.2** Grant FGBC access (1)

• **E4** Energy Performance Improvement (1-70)
  • FLA/COM software – or FL energy code approved
• **E5** Envelope Testing
• **E6** Renewable Energy Production (1-28)
  • Can not claim until 20% reduction in E4 achieved
### Category 2: Energy

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>E8</td>
<td>Daylight Sensors</td>
<td>4</td>
</tr>
<tr>
<td>E9</td>
<td>Occupancy Sensors</td>
<td>4</td>
</tr>
<tr>
<td>E10</td>
<td>Interior Lighting</td>
<td>1</td>
</tr>
<tr>
<td>E11</td>
<td>Lighting Power Density (&lt;0.8 W/SF)</td>
<td>5</td>
</tr>
<tr>
<td>E12</td>
<td>Solar Study of Building</td>
<td>2</td>
</tr>
<tr>
<td>E13</td>
<td>Energy Monitoring Interface</td>
<td>10</td>
</tr>
</tbody>
</table>

Required Category Minimum Points: 30
Maximum Available Points: 143
### Category 3: Water

**Required Category Minimum Points**: 30  
**Maximum Available Points**: 76

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite 1</td>
<td>Water Use Reduction</td>
<td>Required</td>
</tr>
<tr>
<td>Prerequisite 2</td>
<td>No Invasive Plants</td>
<td>Required</td>
</tr>
<tr>
<td>Prerequisite 3</td>
<td>Irrigation zones for turf and landscape beds are separate</td>
<td>Required</td>
</tr>
<tr>
<td>Prerequisite 4</td>
<td>Rain shut off device installed CORRECTLY and operable</td>
<td>Required</td>
</tr>
<tr>
<td>Prerequisite 5</td>
<td>Drought Tolerant Landscape, 25%</td>
<td>Required</td>
</tr>
</tbody>
</table>
# Category 3: Water

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1</td>
<td>Interior Water Use</td>
<td>15</td>
</tr>
<tr>
<td>W2</td>
<td>Greywater Reuse</td>
<td>4</td>
</tr>
<tr>
<td>W3</td>
<td>Rainwater Harvesting</td>
<td>10</td>
</tr>
<tr>
<td>W4</td>
<td>Installed Landscape</td>
<td>25</td>
</tr>
<tr>
<td>W5</td>
<td>Water Conservation Certifications</td>
<td>7</td>
</tr>
<tr>
<td>W6</td>
<td>Installed Irrigation</td>
<td>15</td>
</tr>
</tbody>
</table>

**Required Category Minimum Points**: 30

**Maximum Available Points**: 66
Category 3: Water

- **W1** Interior Water Use (15)
  - **W1.1** Toilets
    - ≤ 1.28 gpf (1)
    - Dual Flush (2)
    - ≤ 0.5 gpf (3)
  - **W1.2** Urinals
    - ≤ 0.5 gpf (1)
    - Waterless (2)
  - **W1.3** Lavatory Faucets
    - ≤ 2.0 gpm (1)
    - ≤ 1.5 gpm (2)
    - WaterSense Certified (2)
    - Motion Sensor self closing faucet (0.25 gal/metering)
Category 3: Water

• W2 Greywater Reuse (4)
  • W2.1 AC condensate collected and use to reduce potable water (1)
  • W2.2 Greywater System dual piping system installed throughout building (3)

• W3 Rainwater Harvesting (10)
  • Simple collection (1)
  • Dedicated use for irrigation (3)
  • Used in lieu of potable water for flushing toilets and urinals (5)
  • Collect and treated to potable standards (10)
Cisterns
A GREEN FLORIDA FOR A BLUE PLANET
Category 3: Water

- **W4 Installed Landscape (25)**
  - **W4.1 Florida Friendly Low Water Usage**
    - 60%, 80%, 100%
  - **W4.2 Turf/Sod Percentage (1-5)**
    - < 50%, 40%, 30%, 20%, 10%
  - **W4.3 NO turf/sod and NO installed Irrigation (10)**
  - **W4.4 All plants/trees compatible with local environment (2)**
  - **W4.5 Evenly shaped turf, no turf on berms (2)**
  - **W4.6 Plants with similar maintenance requirements grouped together (2)**
  - **W4.7 Mulch (non-cypress) applied 3-4 in. deep around plants (1)**
## Category 4: Site

**Required Category Minimum Points:** 10  
**Maximum Available Points:** 74

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite 1</td>
<td>Copy of SWPPP and FDEP notice of intent onsite required</td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td>FDEP Professional</td>
<td>3</td>
</tr>
<tr>
<td>S2</td>
<td>Site Selection</td>
<td>22</td>
</tr>
<tr>
<td>S3</td>
<td>Site Enhancement</td>
<td>7</td>
</tr>
<tr>
<td>S4</td>
<td>Reduce Heat Islands – Hardscapes</td>
<td>9</td>
</tr>
<tr>
<td>S5</td>
<td>Reduce Heat Islands – Roof</td>
<td>4</td>
</tr>
<tr>
<td>S6</td>
<td>Reduce Heat Islands – Building</td>
<td>4</td>
</tr>
<tr>
<td>S7</td>
<td>Stormwater</td>
<td>18</td>
</tr>
<tr>
<td>S8</td>
<td>Vehicular Transportation Alternatives</td>
<td>4</td>
</tr>
<tr>
<td>S9</td>
<td>Exterior Lighting (not attached to building)</td>
<td>1</td>
</tr>
</tbody>
</table>
Category 4: Site

• S Prereq. 1 Copy of Stormwater Pollution Prevention Plan (SWPPP) & FL Department of Environmental Protection (FDEP) Notice of Intent onsite (required)

• S1 FDEP Professional (3)
Category 4: Site

- **S7 Stormwater (18)**
  - **S7.1** Less than 10 acres, less than 2 acres of impact
    - 50%, 100%, 150%
  - **S7.2** Standard General (1-3)
    - 50% increased quality, max. 85%, 75%, 65% predevelopment discharge
  - **S7.3** Treat Stormwater from adjacent sites (1-3)
    - 10%, 20%, 30%
  - **S7.4** Littoral Vegetation of Manmade Stormwater Detention (1-3)
    - 50%, 75%, 100%
  - **S7.5** Pervious Hardscape (1-3)
    - 25%, 50%, 75%
  - **S7.6** Alternative Stormwater Detention (1-3)
    - 50%, 75%, 100%
## Category 5: Health

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite 1</td>
<td>Environmental Tobacco Smoke (ETS) Control</td>
<td>Required</td>
</tr>
<tr>
<td>Prerequisite 2</td>
<td>Indoor Air Quality (IAQ) Management Plan, During Construction</td>
<td>Required</td>
</tr>
<tr>
<td>H1</td>
<td>Protect, Monitor, &amp; Remediate Poor IAQ</td>
<td>14</td>
</tr>
<tr>
<td>H2</td>
<td>Low Emitting Materials</td>
<td>7</td>
</tr>
<tr>
<td>H3</td>
<td>System Controls</td>
<td>8</td>
</tr>
<tr>
<td>H4</td>
<td>Productive Work Environment</td>
<td>13</td>
</tr>
</tbody>
</table>

**Required Category Minimum Points**: 10  
**Maximum Available Points**: 42
Category 5: Health

- **H2 Low Emitting Materials (7)**
  - H2.1 Adhesives and Sealants (1)
  - H2.2 Paints and Coatings (1)
  - H2.3 Carpet Systems (1)
  - H2.4 Healthy Flooring (1)
  - H2.5 Composite Wood and Agrifiber (1)
  - H2.6 Insulation (1)
  - H2.7 Cleaning Products (1)
Category 5: Health

• **H1** Protect, Monitor and Remediate Poor IAQ (14)
  • **H1.1** Carbon Dioxide (1)
  • **H1.2** Humidity Monitoring & Control (5)
  • **H1.3** Building Entrance – Outdoor Pollutants (1)
  • **H1.4** Building Entrance – Covered Entrance (1-2)
    • Main entrance covered with no less than 50sf roof
    • Covered path from parking to entrance
  • **H1.5** High Efficiency Air Filtration System (2)
    • MERV 13
  • **H1.6** Chemical and Cleaning Product Storage (1)
  • **H1.7** Radon Mitigation (1)
  • **H1.8** Pre Occupancy IAQ Testing
• **H4** Productive Work Environment (13)
  • **H4.1** Daylighting (1-4)
    • 25%, 50%, 75%, 100%
  • **H4.2** Acoustics (1-4)
    • Exterior wall and roof assembly have STC rating ≥ 50
    • Fenestration STC rating ≥ 30
    • Interior spaces: private adjacent to private STC ≥ 30
    • Interior spaces: Private adjacent to public/common space STC ≥ 55
  • **H4.3** Views (1-4)
    • 25%, 50%, 75%, 100%
  • **H4.4** Outdoor space provided for employees (1)
## Category 6: Materials

Required Category Minimum Points: 5  
Maximum Available Points: 36

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite 1</td>
<td>Storage &amp; Collection of Recyclables</td>
<td>Required</td>
</tr>
<tr>
<td>M1</td>
<td>Material Efficiency and Global Responsibility</td>
<td>21</td>
</tr>
<tr>
<td>M2</td>
<td>Waste Management</td>
<td>13</td>
</tr>
<tr>
<td>M3</td>
<td>Local/Regional Materials</td>
<td>9</td>
</tr>
</tbody>
</table>
Category 6: Materials

- **M2** Waste Management (13)
  - **M2.1** Construction Waste Recycling (1-4)
    - 25%, 50%, 75%, 100%
  - **M2.2** Leased Floor Coverings (1)
  - **M2.3** Recyclable Materials (1)
  - **M2.4** Demountable / Adaptable Interiors
  - **M2.5** Durable Materials, Exterior Finish Materials (1)
  - **M2.6** Low Maintenance Finishes (1)
## Category 7: Disaster Mitigation

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM1</td>
<td>Hurricane Resistance</td>
<td>18</td>
</tr>
<tr>
<td>DM2</td>
<td>Pest Management</td>
<td>9</td>
</tr>
<tr>
<td>DM3</td>
<td>Flood</td>
<td>6</td>
</tr>
<tr>
<td>DM4</td>
<td>Wildfire</td>
<td>2</td>
</tr>
</tbody>
</table>

**Required Category Minimum Points**: 10  
**Maximum Available Points**: 35
Category 7: Disaster Mitigation

- **DM1** Hurricane Resistance (18)
  - DM1.1 Impact Glazing (3)
  - DM1.2 Building Integrated Hurricane Shutters (3)
  - DM1.3 Building Hardening (2)
  - DM1.4 Envelope Testing (2)
  - DM1.5 Uninterrupted Operations (3)
  - DM1.6 Building is a Designated Hurricane Shelter (5)
Category 7: Disaster Mitigation

- **DM2** Pest Management (9)
  - DM2.1 Termite Prevention (3)
  - DM2.2 Physical Termite Barrier (3)
  - DM2.3 Integrated Pest Management (3)

- **DM3** Flood (6)
  - DM3.1 Finished Floor Elevation (FFE) (2)
  - DM3.2 All mechanical equipment pads (2)
    - 12” above 100 year flood plain or grade
  - DM3.3 If building is within the 1 Coastal Mile Zone (2)
    - FFE and equipment 24” above 100 year flood plain

- **DM4** Wildfire, Fire Resistant Exterior Finishes
### Category 8: Environmental Innovation

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI1</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
<tr>
<td>EI2</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
<tr>
<td>EI3</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
<tr>
<td>EI4</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
<tr>
<td>EI5</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
</tbody>
</table>

**Required Category Minimum Points**: 0  
**Maximum Available Points**: 5
What Else Can You Look For…
A GREEN FLORIDA FOR A BLUE PLANET

COMFORT

[Image: A weathered, manual thermostat with settings 'Low', 'Comfort Zone', and 'High' labeled. The word 'Comfort' is visible on the right side of the image.]
What is above those drop ceilings?
A GREEN FLORIDA FOR A BLUE PLANET
1. Non – energized (envelope)
   - Windows
   - Doors
   - Roofs
   - Walls,...
2. Energized

- HVAC
- Lighting
- Water Heating
- Plug Loads
- Process Loads
3. Human

• Come in building, turn things on
• And sometimes off
• Leave door and windows open
• Require heat, light, air...
Flashy, do you mind if I turn up the thermostat a few degrees?

Yes. It's boiling in here.

Would you mind if we built a device that would redirect the radiant heat from your body?

Okay, fine. I should have asked more questions.
A GREEN FLORIDA FOR A BLUE PLANET

www.floridagreenbuilding.org
(850) 894-3422

(239) 278-3175

www.trifectaconstruction.com
jennifer@trifectaconstruction.com
Drlanguell.com
Category 1: Project Management

• PM Prereq. 1 Green Project Meeting (required)
  • Prior to DDs
Category 2: Energy

Prerequisites (Required)

- E Prereq. 1 Owner Project Requirements
- E Prereq. 2 Basis of Design
- E Prereq. 3 Testing and balancing of installed equipment
  - Design Team
- E Prereq. 4 Minimum Energy Performance
  - 10% > current Florida Energy Code
- E Prereq. 5 Ozone Depletion Potential Management
  - No CFC’s and Halons
Category 2: Energy

- **E3 Commissioning (10)**
  - **E3.1** Fundamental Building Systems Commissioning (4)
  - **E3.2** Advanced Building Systems Commissioning (5)
  - **E3.3** Additional Building Systems Commissioning (1)
• **E6** Green Power (1-4)
  • Quantity purchased, length of contract (1-3)
  • Provided by renewable generation in Florida (1)
• **E7** Global Warming Potential Management (1)
  • HCFC Free
• **E8** Daylight Sensors (1-4)
  • 25%, 50%, 75%, 100%
• **E9** Occupancy Sensors (1-4)
  • 25%, 50%, 75%, 100%
• **E10** Interior Lighting (1)
  • “All Off” Policy
Category 3: Water

- **W1** Interior Water Use (contd.)
  - **W1.4** Kitchen Faucets
    - $\leq 2.2 \text{ gpm}$ (1)
    - $1.5 \text{ gpm}$ (2)
  - **W1.5** Showerheads
    - $\leq 2.2 \text{ gpm}$ (1)
    - $\leq 1.75 \text{ gpm}$ (2)
    - $\leq 1.5 \text{ gpm}$ (3)
  - **W1.6** Dishwashers
    - Energy Star qualified with Water Factor ($WF \leq 7.0$) (1)
    - Energy Star qualified with Water Factor ($WF \leq 5.8$) (2)
Category 3: Water

- **W5** Water Conservation Certifications (7)
  - **W5.1** Meet or exceed Florida WaterStar™ or WaterSense (5)
  - **W5.2** Florida Friendly Landscaping™ Program Certification (2)

- **W6** Installed Irrigation (5)
  - Separate zone - Multi program control
  - High volume irrigation < 60% of landscape
  - Head to head coverage
  - Correctly installed micro irrigation
  - Minimize overspray
  - Provide Owner and FGBC with plan and instructions
  - Heads have matched precipitation rates
  - Pop up heads rise above grass
Category 4: Site

- **S2 Site Selection (22)**
  - S2.1 Select Appropriate Site (1)
  - S2.2 Urban Growth Boundary (1)
  - S2.3 Permit Ready Site (1)
  - S2.4 Greyfield / Redeployment of an existing site (3)
  - S2.5 Brownfield Redevelopment (3)
  - S2.6 Access to Public Transportation (2)
  - S2.7 Adjacent to dense residential development (1)
  - S2.8 Access Basic Services (1-10)
  - Places of worship, grocery store, day care, fire station, school, park, etc.
Category 4: Site

- S3 Site Enhancement (7)
  - S3.1 Wetland Protection and Enhancement (2)
  - S3.2 Minimize Site Disturbance (1)
  - S3.3 Site Open Space (2)
  - S3.4 Sidewalks (1)
  - S3.5 Connectivity (1)
Category 4: Site

• S4 Reduce Heat Islands – Hardscape (9)
  • S4.1 Minimize Provided Parking (2)
  • S4.2 Under Building Parking (3)
  • S4.3 Shaded, covered or high reflectance hardscape
    • 20%, 40%, 60%, 80%

• S5 Reduce Heat Islands – Roof (1-4)
  • 20%, 40%, 60%, 80%

• S6 Reduce Heat Islands – Building (1-4)
  • 20%, 40%, 60%, 80%
S8 Vehicular Transportation Alternatives (4)

- S8.1 Bicycle Storage (1)
  - 1 rack per 10,000sf of retail, 25,000sf of commercial
- S8.2 Changing Rooms (1)
  - 1 per 15,000sf
- S8.3 Showering Facility (1)
  - Located within 200yds or onsite 1 shower per .5% full time occupant
- S8.4 Low-Emitting, Fuel-Efficient and High Occupancy Vehicles (1)
  - 3% of parking capacity
• **S9** Exterior Lighting (not attached to building (3)
  • **S9.1** Meets Dark Sky Requirements (1)
    • 1 rack per 10,000sf of retail, 25,000sf of commercial
  • **S9.2** Lights provide >95 lumens/watt (1)
  • **S9.3** Lights are Solar Powered (1)
Category 5: Health

- H3 Systems Control (8)
  - H3.1 Lighting (1-4)
    - 25%, 50%, 75%, 100%
  - H3.2 Thermal Comfort (1-4)
    - 25%, 50%, 75%, 100%

**Flashy, do you mind if I turn up the thermostat a few degrees?**

**Yes. It’s boiling in here.**

**Would you mind if we built a device that would redirect the radiant heat from your body?**

**Okay, fine.**

**I should have asked more questions.**
Category 6: Materials

- **M1** Material Efficiency and Global Responsibility (14)
  - **M1.1** Remodel Existing Building (10)
  - **M1.2** Recycled Content (1-4)
    - 5%, 10%, 15%, 20%
  - **M1.3** Rapidly Renewable Materials (1-3)
    - 3%, 5%, 7%
  - **M1.4** Certified Wood (1-3)
    - 50%, 75%, 100%
  - **M1.5** Biobased Materials (1)
Category 6: Materials

• M3 Local/Regional Materials (9)
  • M3.1 Local Manufacturing (1-4)
    • 25%, 50%, 75%, 100% - manufactured within 700 mile radius
  • M3.2 Local Raw Material Extraction (1-3)
    • 10%, 20%, 30% - harvested, extracted or recovered within 700 mile radius
  • M3.3 Resource Reuse (1-2)
    • 5%, 10% - salvaged, refurbished or reused
Category 7: Disaster Mitigation

- **DM1** Hurricane Resistance (18)
  - DM1.1 Impact Glazing (3)
  - DM1.2 Building Integrated Hurricane Shutters (3)
  - DM1.3 Building Hardening (2)
  - DM1.4 Envelope Testing (2)
  - DM1.5 Uninterrupted Operations (3)
  - DM1.6 Building is a Designated Hurricane Shelter (5)
A GREEN FLORIDA FOR A BLUE PLANET

Category 7: Disaster Mitigation

• DM2 Pest Management (9)
  • DM2.1 Termite Prevention (3)
  • DM2.2 Physical Termite Barrier (3)
  • DM2.3 Integrated Pest Management (3)

• DM3 Flood (6)
  • DM3.1 Finished Floor Elevation (FFE) (2)
  • DM3.2 All mechanical equipment pads (2)
    • 12” above 100 year flood plain or grade
  • DM3.3 If building is within the 1 Coastal Mile Zone (2)
    • FFE and equipment 24” above 100 year flood plain

• DM4 Wildfire, Fire Resistant Exterior Finishes
### Category 8: Environmental Innovation

<table>
<thead>
<tr>
<th>Credit</th>
<th>Name</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI1</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
<tr>
<td>EI2</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
<tr>
<td>EI3</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
<tr>
<td>EI4</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
<tr>
<td>EI5</td>
<td>Environmental Innovation</td>
<td>1</td>
</tr>
</tbody>
</table>

**Required Category Minimum Points:** 0

**Maximum Available Points:** 5