Eco Charrette Results

Strategy Report

Lakewood Park Family Center

Prepared for:
The Technology Access Foundation

King County Solid Waste Division
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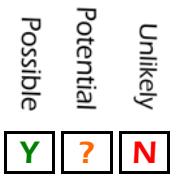
How to interpret this report

This report compiles the ideas generated at the Eco Charrette. At the Eco Charrette and in this report, ideas are grouped by the six LEED categories, of Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources, Indoor Environmental Quality, and Innovation and Design.

Credits were subdivided differently in the Eco Charrette than in this report. During the Eco Charrette ideas were organized using general sustainability topics for ease of understanding. This Eco Charrette Report assigns the ideas to specific LEED prerequisites and credits. While the report shows ideas under the credit that they support, not every idea needs to be completed to earn a credit. Conversely, an Eco Charrette idea that helps more than one credit appears in multiple credits.



Prerequisites must be achieved while credits can be pursued at the discretion of the design team. Some credits are more likely to be implemented than others. As shown to the left, credits that seem feasible are marked "Possible". More challenging credits are marked "Potential". Credits not likely to be pursued are marked "Unlikely".

An Eco Charrette Scorecard is also provided showing a preliminary evaluation of LEED performance. The Scorecard shows all prerequisites and credits, whether ideas were generated or not.

In combination, the Eco Charrette Report and Scorecard present a starting point for LEED certification. The next step for the design team is to discuss and evaluate these assumptions, integrating the most effective ideas into the design and development of the project.

Note: LEED$_{TM}$ is a registered trademark of the US Green Building Council.

Project Description

The Lakewood Family Center is envisioned as a 20,000 sf facility to serve as an after school community center for school children and daytime center for families. The center is planned for the northeast portion of Lakewood Park. It will offer community services as well as house the Technology Access Foundation (TAF), a non-profit organization devoted to providing children with skills necessary to succeed in the 21st century.

The Lakewood Family Center is part of the White Center Community Enhancement Initiative being spearheaded by King County. The design process is being led by Miller|Hull, a Seattle-based architecture firm, in association with Public Architecture, a San Francisco-based nonprofit organization.

TAF and King County have identified LEED Green Building certification as a major goal for this project. LEED, Leadership in Energy and Environmental Design, is a third party green building rating system, developed by the United States Green Building Council (USGBC). Use of the LEED system allows design teams and owners to guage green building progress against an established metric; achievement of a LEED rating can also be useful in marketing and environmental reporting by buliding owners. The LEED system is divided into 5 categories, Sites, Water, Energy, Materials and Indoor Quality, plus a "wild card" category called Innovation in Design (ID).

Paladino and Company facilitated an Eco Charrette, a strategy meeting designed to focus on green building strategies that may help the project achieve a LEED certification. Since the design team has a particular emphasis in sustainable materials use, the charrette was planned around the other sustainability categories. So, although this report shows a few key strategies for sustainable materials design, several additional strategies have been identified by the project team and will be pursued.

Possible | Potential | Unlikely

Sustainable Sites

Possible Points 14

The ideas presented during the brainstorming session when viewed together form a picture of low-impact site design. Through bio-swales and bio-retention areas landscaped with native and drought-tolerant plants, stormwater can be infiltrated on-site. In conjunction with a green roof, the site may not require a detention pond, a stated goal of King County. Views to the park and to the parking lot were also an important element, addressing connecting the building to the existing community, reducing a community nuisance in the parking lot, and integrating the building into the park setting.

	?	

Alternative Transportation, Public Transportation Access

SS Credit 4.1

- Encourage the use of public transit

Y		

Alternative Transportation, Parking Capacity

SS Credit 4.4

- Negotiate with King County and TAF to reduce on-site parking spaces
- Drop-off driveway instead of lots of parking spaces

Y		

Reduced Site Disturbance, Protect or Restore Open Space

SS Credit 5.1

- Preserve existing landscape by limiting site disturbance.
- Preserve existing trees on site

	?	

Reduced Site Disturbance, Development Footprint

SS Credit 5.2

- Locate building near or at/on existing parking lot. Co-ordinate with Lake Hicks and connection at park
- Consolidate parking with neighborhood health facilities

Y		

Stormwater Management, Rate and Quantity

SS Credit 6.1

- Pervious parking
- Limit increase in storm water drainage
- Provide Bio-retention swales with native plants
- Provide French drains around the building
- Reduce impervious surface
- Evaluate strategies to handle overflow parking (i.e) Grass pave

Y		

Stormwater Management, Treatment

SS Credit 6.2

- Use Bio infiltration swales to treat storm water on-site.
- Provide rain gardens/ swales within parking lots
- Filter parking lot water run-off to prevent the lake pollution

Possible	Potential	Unlikely	
Y			**Landscape & Exterior Design to Reduce Heat Islands, Roof Surfaces**

SS Credit 7.2

- Provide Green roofs

Possible	Potential	Unlikely	
Y			**Light Pollution Reduction**

SS Credit 8

- Provide low light bollard pathway lighting from building to parking
- Provide full cut-off downlight fixtures
- Use human scale light fixtures
- Use lighting design to address safety and security concerns. [Co
- Use lighting design to increase safety and security.

Possible | Potential | Unlikely

Water Efficiency

Possible Points 5

Efficient fixtures emerged as the most likely path for water efficiency. Low-flow toilets, showerheads and faucets are a low-cost and low-maintenance strategy for conserving water.

Y | | | **Water Efficient Landscaping, Reduce by 50%**

WE Credit 1.1

- Design maintenance free landscaping
- Design water efficient irrigation systems
- Design rainwater cistern for irrigation

Y | | | **Water Efficient Landscaping, No Potable Use or No Irrigation**

WE Credit 1.2

- Review strategy ideas listed in WE Credit 1.1

| ? | | **Innovative Wastewater Technologies**

WE Credit 2

- Harvest rainwater to flush toilets

Y | | | **Water Use Reduction, 20% Reduction**

WE Credit 3.1

- Minimalist landscaped areas
- Use low flow fixtures and waterless urinals [Concerns: select reliable model/ identify why KC had problems; Opportunities: Identify appropriate usage]
- Provide water efficient commercial dishwasher
- Explore opportunities to reuse shower water [Concern: Infrequent shower usage; Oppurtunity: include shower water reuse with other water capture systems]
- Provide foot control faucets in restroom sinks

Y | | | **Water Use Reduction, 30% Reduction**

WE Credit 3.2

- Review strategy ideas listed in WE Credit 1.1

Possible | Potential | Unlikely

Energy & Atmosphere

Possible Points 17

This building will house an organization that focuses technology education. A natural link emerged during the Eco Charrette with the technological and energy-efficiency goals. Ideas include natural ventilation in Admin areas, along with a high-efficiency envelope, along with LCD monitors and Energy Star equipment to minimize cooling loads. Efficient mechanical design elements, which may include ground source heat pumps, radiant heating, thermal zoning and a UFAD system, would meet the remaining load.

Y | | | **Optimize Energy Performance, 20% New /10% Existing**

EA Credit 1.1

- Provide automated interior lighting control using lighting schedule switches and motion sensors
- Locate building to maximize the shade from existing trees
- Provide motion sensors for automated exterior lighting control
- Explore direct-indirect evaporative cooling in place of conventional HVAC systems [Concerns: increased potable water consumption; Opportunity: minimize loop size by using natural ventilation or extended comfort zone to meet cooling load]]
- Explore passive solar heating strategies
- Provide night cooling
- Use lake loop for the condenser cooling cycle [Concerns:low lake levels in summer; Opportunities: lake water temperature is 60F]
- Use a ground source heat pump [Concerns: the need for excavation; Opportunities: lake as a heat source]
- Raised access floor system [Concerns: Humidity; Opportunities: Excellent for cable management]
- Reduce internal heat gain by providing LCD monitors
- Specify Energy Star Appliances
- Provide a high efficiency envelope (i.e. insulation and glazing0
- Provide spot cooling at high intensity load zones
- Provide radiant cooling in place of conventional HVAC systems
- Thermal Zoning – Separate office and education areas
- Consolidate loads for improved HVAC sizing
- Locate computer labs to minimize external gains
- Provide daylight dimming controls
- Explore energy efficient opportunities for an industrial kitchen
- Supplement natural ventilation with natural cooling

| ? | | **Measurement & Verification**

EA Credit 5

- Outdoor lab- landscape and green building feature monitoring

| ? | | **Green Power**

EA Credit 6

- Generate or purchase Green power

Possible | Potential | Unlikely

Materials & Resources

Possible Points 13

Public Architecture will lead the development of a building rich in re-used and recycled materials. The group discussed using these materials in a creative way to tell the story of this project and provide art and cultural links to the community. Involving the community and students in selected elements of the project was a recurring thread throughout the Eco Charrette.

Y | | | **Storage & Collection of Recyclables**

MR Prerequisite 1

- Provide recycling facilities both in interior and exterior of the building

Y | | | **Recycled Content, Specify 5%**

MR Credit 4.1

- Incorporate recycled items into building elements and as art installations
- Design furniture for kids using recycled materials (example: recycled lunch tray blocks)
- Use recycled wood
- Reuse local cultural artifacts

Y | | | **Local/Regional Materials, 20% Manufactured Locally**

MR Credit 5.1

- Specify natural materials for the building exterior
- Incorporate materials from the White Center deconstruction into project design
- Use salvaged wood – urban hardwood
- Use salvaged materials from community

| | | N **Rapidly Renewable Materials**

MR Credit 6

- Specify natural floor finishes like cork flooring and bamboo flooring

Possible | Potential | Unlikely

Indoor Environmental Quality

Possible Points 15

Improved indoor air quality, access to daylight and high quality lighting emerged as key design moves for the building. These moves align closely with creating a great place to work and a great place to learn. Daylight, view control, and acoustic control will also need to be addressed.

Y | | | **Minimum IAQ Performance**

EQ Prerequisite 1

- Design for good indoor air quality for kids

Y | | | **Increase Ventilation Effectiveness**

EQ Credit 2

- Use upper transform windows to exhasut air
- Provide natural ventilation in the project building
- Provide better ventilation
- Design a narrow building plate to maximize daylighting, views and natural ventilation
- Provide natural ventilation in Administration areas [Concern: Acoustic problems;Opportunity: soft surface required]
- Provide operable windows

Y | | | **Construction IAQ Management Plan, During Construction**

EQ Credit 3.1

- MERV 13 requirement

Y | | | **Low-Emitting Materials, Adhesives & Sealants**

EQ Credit 4.1

- Specify low VOC level paints/ adhesives and other interior finishes
- Specify natural floor finishes like cork flooring and bamboo flooring

Y | | | **Low-Emitting Materials, Carpet**

EQ Credit 4.3

- Minimize the use of carpet in the project

Y | | | **Controllability of Systems, Perimeter**

EQ Credit 6.1

- Provide operable windows
- Provide user control over temperature
- Identify needs of staff and students in terms of temperature control and ergonomics
- Provide operable windows/ walls/ doors in the cafeteria for access to exterior picnic tables

Possible	Potential	Unlikely	
Y			**Daylight and Views, Daylight 75% of Spaces**

EQ Credit 8.1

- Provide well distributed natural light in interior spaces
- Provide maximum natural daylight by means of direct and indirect daylighting methods
- Provide glare control to maintain comfortable indoor lighting quality
- Provide skylights for glare control and to bring day lighting deep into the building interior
- Provide light colored ceilings
- Prioritize daylighting by space use
- Control glazing amount for different spaces – labs vs office
- Provide daylight dimming controls
- Provide good sunlit spaces in the common areas
- Design a narrow building plate to maximize daylighting, views and natural ventilation

Y			**Daylight and Views, Views for 90% of Spaces**

EQ Credit 8.2

- Capitalize on the availability of views to the park by opening up the building to the outside
- Improve building transparency by providing windows facing pedestrian walkways
- Provide access to views for all users on the second floor
- Provide semi-enclosed outdoor rooms for computer use

Possible | Potential | Unlikely

Innovation & Design Process

Possible Points 5

Innovation in Design

ID Credit 1.1

- Provide pedestrian trails linking parking lots
- Provide internal gardens/planter areas on the first floor.
- Enhance safety by providing covered pick-up area

Community Participation

ID Credit 1.2

- Investigate potential partnering with local non-profits with complementary programs or funding.
- Reach out to developers for donation of materials/ excess materials
- Use Boeing surplus materials store and potential partnership/ donations
- Solicit community participation
- Partnership opportunities with steel companies
- Look for non- profit funding network

Patronize Local Art

ID Credit 1.3

- Reflect Diversity and collaborate with arts council
- Incorporate art
- Design an Amphitheatre space for performances

Human Health and Productivity

ID Credit 1.4

- Provide good acoustics
- Design the building exterior to minimize acoustic impacts on the park
- Provide high windows on 1st floor to minimize visual distraction
- Mitigate visual and audio distractions
- Help change negative uses in parking lot
- Design ergonomically superior furniture including laptop stations

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Green Building Strategies

Appendix: Eco Charrette Focus Groups

Lakewood Park Family Center

After the brainstorming session, the Eco Charrette participants split into three groups to address the ideas generated. The key ideas and strategies from these focus groups are outlined below, along with key concepts that emerged from presentations that each group gave to the rest of the participants.

Site Group

The Site Group addressed questions regarding the exterior environment, such as coordination with existing park use groups, context, landscape, stormwater, open space and access to nature.

Key Concepts Presented:

- Community Participation. Several members of local community and neighborhood groups participated in the Eco Charrette. Several ideas were presented with the goal of creating a sense of "ownership" in the community, particularly addressing local children.
    - Create a partnership with the local school: The group discussed the possibility of a weekend program where the students would create art that would be a part of the project. Recycled and salvaged materials may be used. Also discussed was the integration of local cultural or historical artifacts.
    - Coordinate with User Groups: In order to minimize impact on local sports and other groups using the park, an overlay of park uses was suggested. Layout existing frisbee and snow sled areas; coordinate with a group representative about rerouting if required.
    - Design for Security: Site lighting design and building views toward the parking lot can combine to create a more visible parking lot. Lighting for security, however, includes consideration of distribution and contrast, in addition to illumination levels alone. Creating a safe parking lot that discourages illegal activities is desired.

Figure 1. Green Parking Design

Bio-swales in the parking lot can infiltrate and treat run-off. Curb cuts must be provided to allow water to flow into the swales. A gravel infiltration trench and overflow piping can be provided to increase infiltration and accommodate larger rain events.

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- Site-Building Integration: There are two desired outcomes. First, integrate the building into the landscape of the park. Second, provide enclosure so that students have a safe and focused area in which to concentrate and learn. To achieve both outcomes, design at the "edges" where the building site passes into the rest of the park. The current massing of the building tucks the building into the existing hill, which complements these desired outcomes.
    - Terrace seating areas: Landscape walls may double as benches. More enclosed areas immediately surrounding the building may be softened by terraced grass areas for seating – this area bridges the "building site" and the rest of the park.
    - Create a Gateway: Create a welcoming, connecting feature with landscape features, outdoor rooms, seating or other features.
    - Green Roof: The installation of a green roof can infiltrate and evaporate storm water that falls on the roof, and extend the life of the roof membrane.

- Low-Impact Site Design: Low-cost, environmentally friendly and low-maintenance measures are desired.
    - Infiltrate Stormwater: The County desires there to be no additional retention ponds associated with this capital improvement.
    - Native Plants: A low-maintenance and irrigation-free design is desired. The delineation between landscaping provided and maintained by the County and that by TAF is to be determined.
    - Bio-swales: Filter parking lot stormwater run-off with shoulders of vegetated bio-swales in the parking lot. Landscape features down hill from the building can be designed to double as a visual fence and bio-swales.

Envelope and Active Systems Group

The Envelope and Active Systems Group addressed questions regarding how the interior and exterior merge, how the building is conditioned, and how thermal comfort is achieved.

Key Concepts Presented:

- Zoned Design Criteria. For increased energy efficiency and response to the different comfort needs of different building users, provide a zone-based design.
    - Staff Offices: No mechanical cooling required; use energy model to optimize envelope to maintain comfort and communicate interior conditions expected with staff.
    - Computer rooms: Require cooling. Provide dedicated unit(s) for the labs and server rooms.
    - Cafeteria: Cooling not required, except if required in kitchen.

- Underfloor Air Distribution (UFAD): Thermal comfort is important both for staff and for students. Good air quality is one of the top three building design elements that have been shown to improve productivity and learning rates.

UFAD systems can provide high indoor air quality and high thermal comfort while reducing energy use of a typical community center. The concept behind UFAD systems is to provide fresh, conditioned air to the first five to six feet above the floor – where the people are. As shown in Figure 2, air is introduced through floor diffusers and heat and contaminants from occupants and equipment rise to the ceiling in a column of warm air created at each occupant or piece of equipment. Heated air accumulates at the ceiling above the breathing zone and is exhausted from the space.

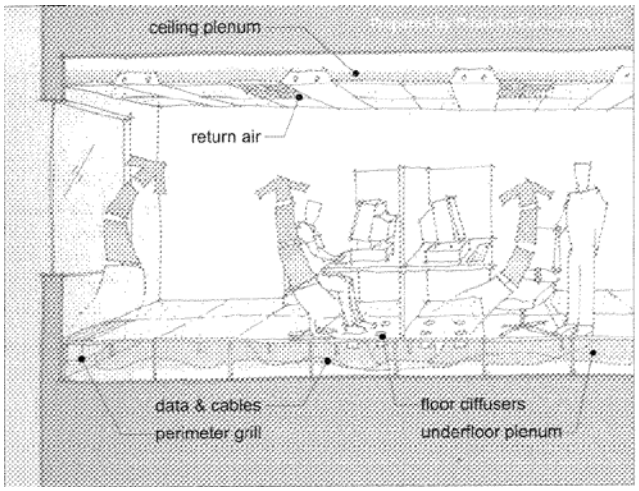

Figure 2. Underfloor Air Distribution (UFAD) Systems

Providing fresh, conditioned air at the floor level instead of at the ceiling means that people are always receiving fresh air that hasn't been mixed with the rest of the room. Air from a UFAD system flows upward to the top of the room, taking heat and contaminants with it.

- Connect Form & Technology: The team discussed expressing the energy-saving technology in the form of the building; also connect concepts of "open" and "high-tech" learning program with aesthetic of the building. Using salvaged materials in the exterior envelope and signage is also an important part of the story for this building.

- Energy Efficiency:
    - Point of use water heaters.
    - Consider purchase of PSE green power.
    - Thermal mass
    - Green roof (extensive, low-depth)
    - Direct/indirect pendant fixtures.
    - Controls: Daylight sensors and dimming. Motion sensors in restrooms, janitor closets, offices and other small enclosed spaces.

Building Interiors Group

The Building Interiors Group addressed questions regarding the interior environment, such as occupant control and interface, comfort, glare control, signage, materials and furniture.

Key Concepts Presented:

- Balance openness to park with academic rigor. In order to allow students to focus, some zones may require different degrees of view access. High windows can be used to allow daylight penetration and can be combined with limited view windows in student learning areas. The cafeteria can be more open. Note that window coverings can also be used to control both glare and views, to allow more flexible use of spaces. Partially opaque shades, such as Mechoshades, allow some light inside, but obscure views.
- Create secure zones. Security between the ground floor and the first floor is required.
- Provide acoustic separation. Locate areas where quiet learning or work is required away from more open, variable spaces. Provide acoustic dampening strategies between the office and lab floors.
- Create flexible spaces. Movable walls in the multi-purpose spaces and between labs can allow reconfiguration to accommodate different class sizes and uses. Design areas for flexibility and multiple uses.
- No Mechanical Cooling. The TAF staff is open to a naturally ventilated design. Operable windows are desired. A critical next step discussed at the meeting was energy and thermal comfort modeling, to show the interior conditions occupants can expect. A wider range of conditions is acceptable, and should be clarified in the basis of design once the design phase begins.
- Involve the students. A variety of ideas were discussed that dealt with student involvement. Examples included displaying student work in the lobby on plasma screens, polling student's views on good buildings, reflecting local culture in the interior design, and showcasing local artists in the hallways.
- Recognition by design. Coordinate with corporate donors and offer different paths for their recognition. Some donors may want to sponsor a particular program, and some may donate funds for a specific building component. A recognition tree in the lobby, or engraved pavers were display options discussed.

Figure 3. Views & Daylight

In this multi-use space at Terrace Park Elementary School, high windows bring daylight into the space. Limited view windows balance connection to nature with the ability to concentrate. In spaces where occupants can move around direct solar penetration can be desirable; where occupants are at fixed seating glare control, such as mini-blinds or operable shades, are necessary.

Lakewood Park Family Center
Technology Access Foundation

Eco Charrette: Preliminary LEED™ Scorecard
November 22, 2005

This Scorecard reflects green building ideas discussed at the Eco Charrette as well as credits typically achievable for this project type. Provided for design team guidance only.

33 | 16 | 11 Total Project Score — Possible Points 69

Certified: 26 to 32 points Silver: 33 to 38 points Gold: 39 to 51 points Platinum: 52 or more points

7 | 3 | Sustainable Sites — Possible Points 14

easy	mod.	diff.			
Y			Prereq 1	**Erosion & Sedimentation Control**	
		NA	Credit 1	**Site Selection**	1
		NA	Credit 2	**Development Density**	1
		NA	Credit 3	**Brownfield Redevelopment**	1
	1		Credit 4.1	**Alternative Transportation**, Public Transportation Access	1
1			Credit 4.2	**Alternative Transportation**, Bicycle Storage & Changing Rooms	1
		N	Credit 4.3	**Alternative Transportation**, Alternative Fuel Refueling Stations	1
1			Credit 4.4	**Alternative Transportation**, Parking Capacity	1
1			Credit 5.1	**Reduced Site Disturbance**, Protect or Restore Open Space	1
	1		Credit 5.2	**Reduced Site Disturbance**, Development Footprint	1
1			Credit 6.1	**Stormwater Management**, Rate or Quantity	1
1			Credit 6.2	**Stormwater Management**, Treatment	1
	1		Credit 7.1	**Landscape & Exterior Design to Reduce Heat Islands**, Non-Roof Surfaces	1
1			Credit 7.2	**Landscape & Exterior Design to Reduce Heat Islands**, Roof Surfaces	1
1			Credit 8	**Light Pollution Reduction**	1

4 | | 1 Water Efficiency — Possible Points 5

easy	mod.	diff.			
1			Credit 1.1	**Water Efficient Landscaping**, Reduce by 50%	1
1			Credit 1.2	**Water Efficient Landscaping**, No Potable Use or No Irrigation	1
		1	Credit 2	**Innovative Wastewater Technologies**	1
1			Credit 3.1	**Water Use Reduction**, 20% Reduction	1
1			Credit 3.2	**Water Use Reduction**, 30% Reduction	1

3 | 5 | 7 Energy & Atmosphere — Possible Points 17

easy	mod.	diff.			
Y			Prereq 1	**Fundamental Building Systems Commissioning**	
Y			Prereq 2	**Minimum Energy Performance**	
Y			Prereq 3	**CFC Reduction in HVAC&R Equipment**	
2			Credit 1.1	**Optimize Energy Performance**, 20% New / 10% Existing	2
	2		Credit 1.2	**Optimize Energy Performance**, 30% New / 20% Existing	2
	1	1	Credit 1.3	**Optimize Energy Performance**, 40% New / 30% Existing	2
		2	Credit 1.4	**Optimize Energy Performance**, 50% New / 40% Existing	2
		2	Credit 1.5	**Optimize Energy Performance**, 60% New / 50% Existing	2
		1	Credit 2.1	**Renewable Energy**, 5%	1
		N	Credit 2.2	**Renewable Energy**, 10%	1
		N	Credit 2.3	**Renewable Energy**, 20%	1
	1		Credit 3	**Additional Commissioning**	1
1			Credit 4	**Ozone Depletion**	1
	1		Credit 5	**Measurement & Verification**	1
		1	Credit 6	**Green Power**	1

6 | 3 | 1 Materials & Resources — Possible Points 13

easy	mod.	diff.			
Y			Prereq 1	**Storage & Collection of Recyclables**	
		NA	Credit 1.1	**Building Reuse**, Maintain 75% of Existing Shell	1
		NA	Credit 1.2	**Building Reuse**, Maintain 100% of Existing Shell	1
		NA	Credit 1.3	**Building Reuse**, Maintain 100% Shell & 50% Non-Shell	1
1			Credit 2.1	**Construction Waste Management**, Divert 50%	1
1			Credit 2.2	**Construction Waste Management**, Divert 75%	1
1			Credit 3.1	**Resource Reuse**, Specify 5%	1
	1		Credit 3.2	**Resource Reuse**, Specify 10%	1
1			Credit 4.1	**Recycled Content**, Specify 5%	1
1			Credit 4.2	**Recycled Content**, Specify 10%	1
1			Credit 5.1	**Local/Regional Materials**, 20% Manufactured Locally	1
	1		Credit 5.2	**Local/Regional Materials**, of 20% Above, 50% Harvested Locally	1
		1	Credit 6	**Rapidly Renewable Materials**	1
	1		Credit 7	**Certified Wood**	1

11 | 2 | 2 Indoor Environmental Quality — Possible Points 15

easy	mod.	diff.			
Y			Prereq 1	**Minimum IAQ Performance**	
Y			Prereq 2	**Environmental Tobacco Smoke** (ETS) **Control**	
	1		Credit 1	**Carbon Dioxide** (CO_2) **Monitoring**	1
1			Credit 2	**Increase Ventilation Effectiveness**	1
1			Credit 3.1	**Construction IAQ Management Plan**, During Construction	1
1			Credit 3.2	**Construction IAQ Management Plan**, Before Occupancy	1
1			Credit 4.1	**Low-Emitting Materials**, Adhesives & Sealants	1
1			Credit 4.2	**Low-Emitting Materials**, Paints	1
1			Credit 4.3	**Low-Emitting Materials**, Carpet	1
1			Credit 4.4	**Low-Emitting Materials**, Composite Wood	1
1			Credit 5	**Indoor Chemical and Pollutant Source Control**	1
	1		Credit 6.1	**Controllability of Systems**, Perimeter	1
		1	Credit 6.2	**Controllability of Systems**, Non-Perimeter	1
1			Credit 7.1	**Thermal Comfort**, Comply with ASHRAE 55-1992	1
		1	Credit 7.2	**Thermal Comfort**, Permanent Monitoring System	1
1			Credit 8.1	**Daylight & Views**, Daylight 75% of Spaces	1
1			Credit 8.2	**Daylight & Views**, Views for 90% of Spaces	1

2 | 3 | Innovation & Design Process — Possible Points 5

easy	mod.	diff.			
1			Credit 1.1	**Innovation in Design**: Specific Title	1
	1		Credit 1.2	**Innovation in Design**: Specific Title	1
	1		Credit 1.3	**Innovation in Design**: Specific Title	1
	1		Credit 1.4	**Innovation in Design**: Specific Title	1
1			Credit 2	**LEED™ Accredited Professional**	1