2011

THE PENNSYLVANIA STATE UNIVERSITY

LEED POLICY 2011 UPDATE

01/2011

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OVERVIEW

This document prioritizes the implementation of sustainable elements in the design of University facilities in accordance with the *United States Green Building Council's Leadership in Energy and Environmental Design® (LEED) Reference Guide for Green Building Design and Construction: Version 3.0* document. LEED for *New Construction* shall be used as the rating system in the application of this policy document. This policy shall be used in conjunction with Penn State's Office of the Physical Plant (OPP) *Design and Construction Standards*, to guide design consultants in the implementation of requirements to attain LEED® certification for campus projects.

This document also reinforces the fundamental idea of the LEED® process, which calls for an integrated, holistic approach to building design; one that yields energy-efficient, comfortable, healthy, and ecologically-responsible facilities. Implementation on future projects in agreement of this document will aid prevention of random pursuit of credits to achieve a higher score.

In order to customize the LEED® process for Penn State and focus on issues that are most important to the University, a committee was formed with broad representation across the University's operational groups. Individuals included represent the following areas:

- Engineering Services – MEP design
- Architecture
- Landscape
- Storm Water Management
- Transportation/Parking
- Purchasing
- Project Management
- Maintenance
- Janitorial
- Health and Safety

CRITERIA APPLIED

The following issues are integrated within all reviewed sustainable design metrics and important to Penn State, therefore they are key drivers for classification of each credit. Identified issues are listed below in no particular order:

- Energy conservation
- Natural resources conservation
- Prevention of environmental degradation
- People's health, well-being and comfort
- Total cost of ownership

CREDIT CLASSIFICATION DEFINITIONS

MANDATORY- credit compliance is required on all Penn State University construction projects. Credits may be inherently achieved through current campus layout, location of new construction, or typical OPP construction methodology. However, if not already present, credit achievement must be completed prior to project completion.

SIGNIFICANT EFFORT- proof of serious attempts at credit achievement must be completed and proven to reviewing OPP personnel. If compliance is not achieved, failure reasoning must be demonstrated by design professional and accepted by The Pennsylvania State University.

MINIMAL EFFORT- investigation of possible credit compliance must be completed and approved by The Pennsylvania State University. If credit requirements are beyond a project's programmatic requirements, documentation must be completed; however, no additional efforts or resources will be dedicated towards it.

NOT PURSUED- credits will not be pursued on Penn State University construction projects and documentation will not be required.

ADDITIONAL PROVISIONS

1. While not specifically addressed by this document, it should be obvious that all prerequisites are mandatory.
2. While each credit is addressed specifically as it relates to University renewal projects, it is evident that a number of credits will be impacted by broader campus-wide initiatives and institutional commitments. These credits will fall into the "mandatory" category, for example: *transportation and parking issues, storm water issues, wastewater issues, etc.…*
3. This document is directed to the design professionals of a specific project, and the level of effort assigned to a particular credit refers to the effort required from that professional within the scope of that specific project. It does not reflect the importance that the University attaches to the issue addressed by that specific credit outside the scope of the project. For example: *Alternative Transportation: Public Transportation Access, is classified in this document as "minimal effort." This means that the design professional for the specific project will exert nominal efforts in achieving this credit because typically a site for the project is established prior to the involvement of a professional and that is a determining factor in attaining this credit. The University puts forth a great deal of effort in providing public transportation to its constituents and addresses the issue globally.*
4. This policy applies to all projects exceeding a Total Project Cost of ***$ 5,000,000***, including new construction and/or substantial renovation. Differences inherent between

new construction and renovation projects are addressed in the specific description for each credit.

5. This policy applies to all Penn State University campus locations. If local circumstances dictate specific requirements, these are addressed in the specific description for each credit.
6. If the design team for a project, including the OPP Project Leader, feels that there is a compelling reason to waive a *mandatory* credit or entire project certification, they will submit the request and supporting documentation to the PSU LEED® Committee. The appropriate members of the Committee will then formulate a recommendation and submit it to the Associate Vice President for Physical Plant, who will make the ultimate decision and inform the project team.

PROJECT NAMING GUIDIANCE

The design professional is required to verify the exact naming format with the PSU Project Leader prior to project registration. This is necessary to ensure consistency across all PSU LEED Projects.

United States Green Building Council's Leadership in Energy and Environmental Design® (LEED) Reference Guide for Green Building Design and Construction: Version 3.0

SUSTAINABLE SITES

SS Credit 1.0: Site Selection ***MINIMAL EFFORT***
Typically, site selection is addressed at the campus master planning level and is established by the University prior to beginning of design.

SS Credit 2.0: Development Density and Community Connectivity ***MINIMAL EFFORT***
Channel development to urban areas with existing infrastructure, protect greenfields and preserve habitat and natural resources.

SS Credit 3.0: Brownfield Redevelopment ***MINIMAL EFFORT***
Rehabilitate damaged sites where development is complicated by environmental contamination and to reduce pressure on undeveloped land.

SS Credit 4.1: Alt. Transportation: Public Transportation Access ***MINIMAL EFFORT***
Typically site selection is addressed at the campus master planning level and is established by the University prior to beginning of design. Public transportation is addressed globally and is

typically outside the purview of individual projects. In addition, local public transportation circumstances may be dealt with differently in the various Penn State locations.

SS Credit 4.2: Alt. Trans.: Bicycle Storage & Changing Rooms ***SIGNIFICANT EFFORT***
At University Park, the University provides bicycle racks as part of its inter-modal transportation system and will continue to do so. If it makes programmatic sense to provide the necessary changing facilities in a project, we will do so but not require it. At locations other than University Park, local circumstances related to bicycle use will dictate implementation of this credit

SS Credit 4.3: Alt. Trans.: Low Emitting and Fuel Efficient Vehicles ***MINIMAL EFFORT***
This credit may be accomplished by implementation of comprehensive University policies dealing with parking and/or transportation at each location. It is not addressed by individual projects.

SS Credit 4.4: Alt. Transportation: Parking Capacity ***MINIMAL EFFORT***
This credit may be accomplished by implementation of comprehensive University policies dealing with parking and/or transportation at each location. It is not addressed by individual projects.

SS Credit 5.1: Site Development: Protect or Restore Habitat ***MINIMAL EFFORT***
This is addressed at the campus master planning level.

SS Credit 5.2: Site Development: Maximize Open Space ***SIGNIFICANT EFFORT***
It is important to maximize the efficient use of land (a finite resource). This will help with storm water infiltration and provide natural areas for informal use.

SS Credit 6.1: Stormwater Design: Quantity Control ***MANDATORY***
Regulatory compliance generally results in achieving this credit.

SS Credit 6.2: Stormwater Design: Quality Control ***SIGNIFICANT EFFORT***
Storm water can have a significant impact on existing natural water resources. It is imperative that the quality of storm water be as high as possible before it leaves a project site.

SS Credit 7.1: Heat Island Effect: Non-Roof ***MINIMAL EFFORT***
Current design standards for exterior pavers do not comply with the requirements of this credit making it very difficult to attain. It is also not of significant impact when judged against our primary criteria.

SS Credit 7.2: Heat Island Effect: Roof ***SIGNIFICANT EFFORT***
Current roofing materials technology (including vegetated roofs or high SRI roofs) makes this a worthwhile credit to pursue; however, careful analysis of longevity, performance, cost and maintainability must be performed.

SS Credit 8.0: Light Pollution Reduction ***NOT PURSUED/SIGNIFICANT EFFORT***

University Park: ***NOT PURSUED***
Current Penn State design standards for exterior light fixtures at University Park do not comply with the requirements of this credit.

Non-University Park locations: ***SIGNIFICANT EFFORT***
Many municipalities require compliance. The benefit of pursuing this credit must be based on the circumstances particular to each campus.

SS Credit 9.1: Tenant Design and Construction Guidelines
Only applicable to Core and Shell Projects; to educate tenants about implementing sustainable design and construction features in their tenant improvement build-out.

SS Credit 9.2: Site Master Plan
Only applicable to School Projects; to ensure that the environmental site issues included in the initial development of the site and project are continued throughout future development caused by changes in programs or demography.

SS Credit 10.0: Joint Use of Facilities
Only applicable to School Projects; to make the school a more integrated part of the community by enabling the building and its playing fields to be used for nonschool events and functions.

WATER EFFICIENCY

WE Credit 1.0: Water Efficient Landscaping: Reduce by 50% or No Potable Water Use or Irrigation ***MINIMAL EFFORT***
Current landscape design goals dictate attainment of this credit; all projects should attempt to remove all permanent irrigation requirements.

WE Credit 2.0: Innovative Wastewater Technologies ***MINIMAL EFFORT***
While we do implement a number of wastewater reduction initiatives such as use of low flow fixtures, and some dedicated gray water riser systems, achieving this point would require a higher level of commitment and potential benefits do not justify the investment at this point.

WE Credit 3.0: Water Use Reduction: 30%-40% Reduction
This is attainable with current technology but will require consideration of multiple water-saving strategies including ultra low-flow or waterless urinals, no-touch or spring-loaded faucets and dual-flush toilets. It should be explored on a case by case basis.

30% ***SIGNIFICANT EFFORT***
35% ***MINIMAL EFFORT***
40% ***MINIMAL EFFORT***

WE Credit 4.0: Process Water Use Reduction
Only applicable to School Projects; to maximize water efficiency within buildings to reduce the burden of municipal water supply and wastewater systems.

ENERGY AND ATMOSPHERE

EA Credit 1.1-1.21: Optimize Energy Performance

University Park within the footprint of the central heating and cooling plants:
1 -10 ***MANDATORY***
11-19 ***NOT PURSUED***

Non-University Park locations:
1 -10 ***MANDATORY***
11-19 ***MINIMAL EFFORT***

CREDIT REQUIREMENTS: This is a key goal identified in the initial charge establishing the requirement to get LEED® certification. As clarification to the initial charge, the goal is to achieve 30% energy savings over the "most recent" applicable version of the ASHRAE 90.1 standard for new construction. Additionally, refer to the Division 01 Performance Requirements Section of the University's Design and Construction Standards for guidance in achieving optimized energy efficiency.

The Compliance shall be achieved using the "OPTION 1. Whole Building Energy Simulation" method. In implementing this credit, it is important to note that the design team will be required to validate their envelope design vis-à-vis alternate concepts. Computer generated whole building energy simulations should be performed in a basic shoebox format early in the design to influence decisions. Energy simulations should increase in detail with the design until the design is complete and the final simulation is performed for credits. It should also be noted that expectations for this credit will vary between new construction and renovation projects.

Projects located at University Park within the footprint of the central heating and cooling plants must use the "Option 1 Streamlined" approach from the "Treatment of District or Campus Thermal Energy in LEED®" Document. It is undesirable to have each building design team simulate the performance of the central heating and cooling plants. Utility rates shall be those provided by OPP-Engineering Services.

EA Credit 2.1-2.7: On-Site Renewable Energy ***SIGNIFICANT EFFORT***
Due to the pace of technological advances in this field, every effort should be made to utilize new technologies that help reduce the consumption of fossil fuels.

EA Credit 3.0: Enhanced Commissioning ***MANDATORY***
We already do this in an effort to attain the most efficient systems and operation. Future PSU contracts for new building commissioning services will include the scope of work required by the Enhanced Commissioning credit.

EA Credit 4.0: Enhanced Refrigerant Management ***MANDATORY***
At University Park the central chilled water plant already complies. A calculation documenting the central plant refrigerant management will be provided by PSU for all buildings connected to the central plant. Individual systems at University Park and at other locations should be designed to meet this requirement and documentation provided by the design consultant.

EA Credit 5.1: Measurement and Verification - Base Building ***NOT PURSUED***
We cannot justify implementing the specific strategies required to accomplish this credit, including staffing commitment. Accountability of building energy consumption is valuable and can be accomplished in other ways that are more manageable but will not satisfy the requirements of this credit.

EA Credit 5.2: Measurement and Verification - Tenant Submetering ***NOT PURSUED***
To provide for ongoing accountability of building electricity consumption performance over time.

EA Credit 6.0: Green Power ***MANDATORY***
The University has made a commitment to the use of renewable energy in the form of Renewable Energy Certificates. It will be necessary to implement a documentation process as we continue to add LEED® certified projects.

MATERIALS AND RESOURCES

MR Cr. 1.1: Bldg Reuse: Main. 55-95% of Exist. Walls, Floors & Roof ***MINIMAL EFFORT***
Master planning, programmatic and aesthetic decisions will take precedence regarding the scope of reuse of existing facilities.

CREDIT REQUIREMENTS: Maintain the existing building structure (including structural floor and roof decking) and envelope (the exterior skin and framing, excluding window assemblies and nonstructural roofing materials). Hazardous materials that are remediated as a part of the project must be excluded from the calculation of the percentage maintained.

55% = 1 point
75% = 2 points
85% = 3 points

MR Cr. 1.2: Maintain Interior Nonstructural Elements ***MINIMAL EFFORT***
Master planning, programmatic and aesthetic decisions will take precedence regarding the scope of reuse of existing facilities.

CREDIT REQUIREMENTS: Use existing interior nonstructural elements (i.e. interior walls, doors, floor coverings, and ceiling systems) in at least 50% of the completed building, including additions. If the project includes an addition with square footage more than 2 times the square footage of the existing building, this credit is not applicable.

MR Cr. 2.1: Construction Waste Mgmt: Divert 50-75% from Disposal ***MANDATORY***
The University has made a broad commitment to recycling in general. At this point it is reasonable to expect from construction managers a waste collection and removal process that accomplishes this.

MR Credit 3.0: Materials Reuse: 5%-10% ***MINIMAL EFFORT***
Potential benefit may not justify level of effort.

MR Cr. 4.0: Recycled Content: 10-20% (post-consumer+½ pre-consumer)
This is achievable given the amount of recycled material currently being used in basic construction products such as steel, carpeting, etc...

CREDIT REQUIREMENTS: Use materials with recycled content such that the sum of the postconsumer recycled content plus ½ of the preconsumer content constitutes at least 10% or 20% based on cost, of the total value of the materials in the project. The minimum percentage materials recycled for each point threshold is as follows:

10% = 1 point ***MANDATORY***
20% = 2 points ***SIGNIFICANT EFFORT***

The recycled content value of a materials assembly is determined by weight. The recycled fraction of the assembly is them multiplied by the cost of assembly to determine the recycled content value.

Mechanical, electrical and plumbing components, and specialty items such as elevators cannot be included in this calculation. Include only materials permanently installed in the project. Furniture may be include if it is included consistently with MR Credit 3: Materials Reuse through MR Credit 7: Certified Wood.

MR Cr.5.1: Regional Materials: 10-20%Extracted, Processed & Manufactured ***MANDATORY***
We are conveniently located within a 500-mile radius of sources for numerous building materials. The challenge for this credit is the documentation.

MR Credit 6.0: Rapidly Renewable Materials ***MINIMAL EFFORT***
At this point our facilities do not lend themselves to the use of these materials to the extent required.

MR Credit 7.0: Certified Wood ***MANDATORY***
The type of wood products we typically use in our buildings lends itself to achieving this credit.

INDOOR ENVIRONMENTAL QUALITY

IEQ Credit 1.0: Outdoor Air Delivery Monitoring ***MANDATORY***
This is a very important strategy that helps control the amount of ventilation, thus reducing the potential waste of energy to temper outside air. It requires very careful design to be effective and cost efficient.

IEQ Credit 2.0: Increased Ventilation ***NOT PURSUED***
Good air quality is mandated by prerequisite 1. Additional ventilation requires energy to condition and the benefit does not justify the effort.

IEQ Cr. 3.1: Construction IAQ Management Plan: During Construction ***MANDATORY***
This is an important strategy in addressing the health and well being of building occupants.

IEQ Cr. 3.2: Construction IAQ Management Plan: Before Occupancy ***MANDATORY***
This is an important strategy in addressing the health and well being of building occupants.

IEQ Credit 4.1: Low-Emitting Materials: Adhesives and Sealants ***MANDATORY***
This is an important strategy in addressing the health and well being of building occupants. Current industry standards make this relatively easy to attain.

IEQ Credit 4.2: Low-Emitting Materials: Paints and Coatings ***MANDATORY***
This is an important strategy in addressing the health and well being of building occupants. Current industry standards make this relatively easy to attain.

IEQ Credit 4.3: Low-Emitting Materials: Carpet Systems ***MANDATORY***
This is an important strategy in addressing the health and well being of building occupants. Current industry standards make this relatively easy to attain.

IEQ Cr. 4.4: Low-Emitting Materials: Composite Wood & Agrifiber Products ***MANDATORY***
This is an important strategy in addressing the health and well being of building occupants. Current industry standards make this relatively easy to attain.

IEQ Cr. 4.5: Low-Emitting Materials: Furniture and Furnishings
Only Applicable to School Projects. To reduce the quantity of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of installers and occupants.

IEQ Cr. 4.6: Low-Emitting Materials: Ceiling and Wall Systems
Only applicable to School Projects. To reduce the quantity of indoor air contaminants that are odorous, irritating, and/or harmful to the comfort and well-being of installers and occupants.

IEQ Credit 5.0: Indoor Chemical and Pollutant Source Control ***MANDATORY***
This is a relatively easy requirement to address and has substantial impact on the well-being and comfort of occupants as well as the maintainability of a facility. Strategy to be reviewed by PSU OPP Environmental, Health, and Safety Division.

IEQ Credit 6.1: Controllability of Systems: Lighting ***MANDATORY***
Current practice makes it reasonable to expect achieving this credit.

IEQ Credit 6.2: Controllability of Systems: Thermal Comfort ***SIGNIFICANT EFFORT***
This is an important goal with significant benefit to the well-being and productivity of occupants; considerable thought must be given to the relationship between programmatic demands, cost, and benefit of the occupants.

CREDIT REQUIREMENTS: Design heating, ventilating and air conditioning (HVAC) systems and the building envelope to meet the requirements of ASHRAE 55-2004, Thermal Environmental Conditions for Human Occupancy (with errata but with addenda). Demonstrate design compliance in accordance with the Section 6.1.1 documentation.

IEQ Credit 7.1: Thermal Comfort: Design ***SIGNIFICANT EFFORT***
This requires humidification and de-humidification that is not part of our standard practice. We can reach adequate comfort levels without this requirement.

IEQ Credit 7.2: Thermal Comfort: Verification ***MANDATORY***
The documentation required to achieve this credit is incorporated into the bond inspection process. Design professional to coordinate with PSU Project Leader.

IEQ Credit 8.1: Daylight and Views: Daylight ***SIGNIFICANT EFFORT***
This is a very worthwhile goal with a potentially significant benefit to the well being of occupants; however, in some instances it may not be achievable without programmatic compromise.

CREDIT REQUIREMENTS: 75% of regularly occupied spaces must achieve daylighting for 1 point.

Option 1: *Simulation*- demonstrate through computer simulations that 75% or more of all regularly occupied spaces achieve daylight luminance levels of a minimum of 25 footcandles and a maximum of 500 footcandles in a clear sky condition on September 21st at 9 a.m. and 3 p.m.; areas will luminance levels below or above the range do not comply.

Option 2: *Prescriptive* for side-lighting daylight zone

Option 3: *Measurement*

Option 4: *Combination*

IEQ Credit 8.2: Daylight and Views: Views ***MINIMAL EFFORT***
Same reasoning as previous credit but harder to achieve; requirements are very prescriptive.

CREDIT REQUIREMENTS: Achieve a direct line of sight to the outdoor environment via vision glazing between 20 inches and 90 inches above the finish floor for building occupants in 90% of all regularly occupied areas. Determine the area with direct line of sight by totaling the regularly occupied square footage that meets the following criteria:

- In plan view, the area is within sight lines drawn from perimeter vision glazing
- In section view, a direct sight line can be drawn from the area to perimeter vision glazing

The line of sight may be drawn through interior glazing. For private offices, the entire square footage of the office may be counted if 75% or more of the area has a direct line of sight to perimeter vision glazing. For classrooms and other multi-occupant spaces, the actual square footage with a direct line of sight to perimeter vision glazing is counted.

IEQ Credit 9.0: Enhanced Acoustical Performance
Only applicable to School Projects; to provide classrooms that facilitates better teacher-to-student and student-to-student communications through effective acoustical design.

IEQ Credit 10.0: Mold Prevention
Only applicable to School Projects; to reduce the potential presence of mold in schools through preventative design and construction measures.

INNOVATION AND DESIGN PROCESS

ID Credit 1.0: Innovation in Design ***SIGNIFICANT EFFORT***
The University supports exceptional efforts beyond the requirements set forth in the LEED Green Building Rating System.

ID Credit 2.0 LEED® Accredited Professional ***MANDATORY***
The inclusion of a LEED® accredited professional in the design team is standard procedure.

ID Credit 3.0: The School as a Teaching Tool
Only applicable to School Projects; to integrate the sustainable features of a school facility with the school's educational mission.

REGIONAL PRIORITY

RP Credit 1.0: Regional Priority ***MINIMAL EFFORT***
To provide an incentive for the achievement of credits that address geographically specific environmental priorities.

SUMMARY of OPP LEED Policy 2011 Update

Sustainable Sites

Credit Number	Credit Name	Credit Classification	Credit Description
1.0	Site Selection	Minimal	Picking an appropriate site that is suitable for new construction
2.0	Development Density and Community Connectivity	Minimal	Channeling construction to urban areas, protecting greenfields, connecting with the community
3.0	Brownfield Redevelopment	Minimal	Developing Brownfield or documented contaminated locations
4.1	Alt. Transportation: Public Transportation Access	Minimal	Having appropriate proximity to bus stops and other public transportation
4.2	Alt. Transportation: Bicycle Storage & Changing Rooms	Significant	Providing Bike racks and changing rooms to encourage biking to work
4.3	Alt. Transportation: Low Emitting and Fuel Efficient Vehicles	Minimal	Providing preferred parking for fuel efficient and low emitting vehicles/incentives to share rides in these vehicles
4.4	Alt. Transportation: Parking Capacity	Minimal	Parking lot sizes and limiting. Also providing preferred parking for carpooling
5.1	Site Development: Protect of Restore Habitat	Minimal	Limiting site development and disturbance/restoring previously developed sites
5.2	Site Development: Maximize Open Space	Significant	Providing a vegetated open space adjacent to the building equal to the footprint
6.1	Storm water Design: Quantity Control	Mandatory	Reducing impervious covering to limit disruption of natural hydrology/increasing on site filtration
6.2	Storm water Design: Quantity Control	Significant	Managing storm water runoff to reduce pollution
7.1	Heat Island Effect: Non-Roof	Minimal	Providing shade from structures covered with materials with at least an SRI of 29 or solar panel shading
7.2	Heat Island Effect: Roof	Significant	Effectively eliminating the heat island effect with "green" roofs or SRI 78 material for low slope
8.0	Light Pollution Reduction*	Not Pursued / Significant	Minimizing building to site light, reducing sky-glow, improve nighttime visibility
9.1	Tenant Design and Construction Guidelines		[Only applicable to core and shell projects] Educate tenants about implementing sustainable design and construction
9.2	Site Master Plan		[Only applicable to school projects] Ensure any environmental changes are changed in the Master Plan.
10.0	Joint Use of Facilities		[Only applicable to school projects] Make the school a more integrated part of the community.

Water Efficiency

Credit Number	Credit Name	Credit Classification	Credit Description
1.0	Water Efficient Landscaping: Reduce by 50%	Minimal	Reduce potable water consumption by 50% from midsummer baseline/ using other sources for irrigation
2.0	Innovative Wastewater Technologies	Minimal	A higher level of commitment than following the usual wastewater reduction initiatives.
3.0	Water Use Reduction: 30-40% Reduction	Varies	This is attainable with current technology but will require consideration of multiple strategies.
4.0	Process Water Use Reduction		[Only applicable to school projects] Maximize water efficiency within buildings to reduce the burden of municipal water.

Energy and Atmosphere

Credit Number	Credit Name	Credit Classification	Credit Description
1.1-1.21	Optimize Energy Performance	Varies	Perform a whole building energy simulation. Various levels of energy cost savings percentages will get you various points.
2.1-2.7	On-Site Renewable Energy	Significant	Use on-site renewable energy to reduce the cost of running the building systems.
3.0	Enhanced Commissioning	Mandatory	Implement or contract a commissioner to further commission the building
4.0	Enhanced Refrigerant Management	Mandatory	Eliminate Refrigerants all together/ minimize as much as possible
5.1	Measurement and Verification - Base Building	Not Pursued	Develop a measurement and verification plan that will cover 1 year of post-construction occupancy minimum
5.2	Measurement and Verification - Tenant Submetering	Not Pursued	Develop a measurement and verification plan that will cover 1 year of post-construction occupancy minimum
6.0	Green Power	Mandatory	Engage in at least a 2-year renewable energy contract to provide at least 35% of buildings electricity

Materials and Resources

Credit Number	Credit Name	Credit Classification	Credit Description
1.1	Bldg Reuse: Main. 55-95% of Exist. Walls, Floors & Roof	Minimal	Maintaining existing building structure and envelope minimum of 55%
1.2	Maintain Interior Nonstructural Elements	Minimal	Using existing interior nonstructural elements in at least 50% of the complete building, not applicable if addition is double the original size
2.1	Construction Waste Management: Divert 50-75% from Disposal	Mandatory	Recycle or salvage nonhazardous construction and demolition debris. Minimum of 50% recycled/salvaged for minimum points
3.0	Materials Reuse: 5-10%	Minimal	Use salvaged, refurbished or reused materials the sum of 5% or 10 % based on cost of the total value of materials on project
4.0	Recycled Content: 10-20% (post-consumer+1/2pre-consumer)	Mandatory/Significant	Use materials with recycled content such that 10-20% of total cost of all materials includes these materials
5.1	Regional Materials: 10-20% Extracted, Processed & Manufactured	Mandatory	Use materials that have been harvested recovered manufactured within 500 miles of the project site for 10-20% of total cost of all materials
6.0	Rapidly Renewable Materials	Minimal	Use rapidly renewable materials and products for 2.5% of the total value of all building materials and product used on project
7.0	Certified Wood	Mandatory	Use a minimum of 50% of wood based materials and products certified with Forest Stewardship Council for wood building components

Indoor Environmental Quality

Credit Number	Credit Name	Credit Classification	Credit Description
1.0	Outdoor Air Delivery Monitoring	Mandatory	Install permanent monitoring systems to ensure that ventilation systems maintain design minimum requirements.
2.0	Increased Ventilation	Not Pursued	Provide additional outdoor air ventilation to improve indoor air quality and promote occupant comfort, well-being and productivity
3.1	Construction IAQ Management Plan: During Construction	Mandatory	Develop and implement an IAQ management plan for the construction and preoccupancy phases of the building
3.2	Construction IAQ Management Plan: Before Occupancy	Mandatory	Develop and implement an IAQ management plan after all finishes have been installed and the building has been completely cleaned out
4.1	Low-Emitting Materials: Adhesives and Sealants	Mandatory	Reducing quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of occupants
4.2	Low-Emitting Materials: Paints and Coatings	Mandatory	Paints used in the building must comply with the VOC standards set by Green Seal Standards
4.3	Low-Emitting Materials: Carpet Systems	Mandatory	All flooring must comply with standards to ensure the reduction of indoor air contaminants.
4.4	Low-Emitting Materials: Composite Wood & Agrifiber Products	Mandatory	Composite wood and agrifiber products used interior must contain no added urea-formaldehyde resins.
4.5	Low-Emitting Materials: Furniture and Furnishings		[Only applicable to school projects] Reduces the quantity of indoor air contaminants
4.6	Low-Emitting Materials: Ceiling and Wall Systems		[Only applicable to school projects] Reduces the quantity of indoor air contaminants
5.0	Indoor Chemical and Pollutant Source Control	Mandatory	Design to minimize and control the flow of contaminants in the building.
6.1	Controllability of Systems: Lighting	Mandatory	Provide individual lighting controls for 90% minimum of the buildings occupants. Also provide adjustments for group spaces
6.2	Controllability of Systems: Thermal Comfort	Significant	Provide individual controls for 50% minimum of the building occupants. Described in ASHRAE Standard 55-2004
7.1	Thermal Comfort: Design	Significant	Provide permanent monitoring system to ensure building performance meets comfort standards of Credit 7.1
7.2	Thermal Comfort: Verification	Mandatory	Achieve Credit 7.1. Provide permanent monitoring system to ensure building performance meets comfort standards of Credit 7.1
8.1	Daylight and Views: Daylight	Significant	Provide occupants with a connection between indoor and outdoor spaces through the introduction of daylight and views into occupied areas
8.2	Daylight and Views: Views	Minimal	Achieve direct line of sight to the outdoor environment via vision glazing in 90% of occupied areas
9.0	Enhanced Acoustical Performance		[Only applicable to school projects] Provide classrooms that facilitate better communications between teachers and students through acoustical design
10.0	Mold Prevention		[Only applicable to school projects] Reduce the potential of mold in schools

Innovation and Design Process

Credit Number	Credit Name	Credit Classification	Credit Description
1.0	Innovation in Design	Significant	Achieve significant measureable environmental performance using a strategy not addressed in LEED 2009
2.0	LEED Accredited Professional	Mandatory	At least 1 principal participant of the project team shall be a LEED A.P.
3.0	The School as a Teaching Tool		[Only applicable to school projects] Integrate the sustainable features within the school.

Regional Priority

Credit Number	Credit Name	Credit Classification	Credit Description
1.0	Regional Priority	Minimal	Earn 1-4 of the 6 Regional credits. No more than 4 credits may be earned.