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INFORMATION

Innovation in Design Credit Catalog

Currently, projects pursuing LEED Certification have the opportunity to earn up to four points for two types of credits in the Innovation & Design Process (ID) credit category: exemplary performance related to existing LEED credits and innovative performance. This document pertains to innovative performance.

Innovation in Design credits for innovative performance are awarded for comprehensive strategies which demonstrate quantifiable environmental benefits not specifically addressed by current LEED Rating Systems. When submitting an ID credit, project teams must outline the proposed credit intent, requirement(s) for compliance, and submittal(s) necessary to demonstrate compliance, as well as provide a summary of potential design approaches that may be used to meet the requirements.

The following is a catalog of ID credits submitted by projects before the summer of 2007. This document is a work in progress and is meant as a brainstorming tool only to assist project teams in the development of new ID credits. It does *not* set any precedent to be upheld during a LEED Certification Review. The information found here is a staff summary of information provided by review teams and should not be considered a detailed or comprehensive portrayal of the original credit submittal. For official rulings in advance of a LEED Certification Review, customers should utilize the Credit Interpretation Ruling (CIR) procedure. Applications for LEED Certification and any associated ID credit submittals will be thoroughly reviewed and scrutinized based on USGBC Member-balloted and approved LEED Rating Systems, as well as CIRs approved by the Technical Advisory Groups (TAGs). For details about the LEED Certification process, please visit www.usgbc.org/leed.

For more information on ID credits, please download the "Guidance on Innovation in Design (ID) Credits" here: http://www.usgbc.org/Docs/LEEDdocs/IDcredit_guidance_final.pdf

U.S. Green Building Council
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Legend

CIR / ID	Cat.	RS	Credit Title	A / D	Credit Description	
Type of submittal *Innovation in Design Credit (ID)* *Credit Interpretation Request (CIR)*	Existing LEED credit category, if any, that addresses issues similar to those in the proposed ID credit or CIR *Sustainable Sites (SS)* *Water Efficiency (WE)* *Energy & Atmosphere (EA)* *Materials & Resources (MR)* *Environmental Quality (EQ)*	Rating System under which the ID credit or CIR was originally submitted *New Construction (NC)* *Exisiting Building (EB)* *Core & Shell (CS)* *Commerical Interior (CI)*	Credit Title	Indicates whether an ID credit was *awarded* or *denied* as originally submitted by the project team	Intent	Summary of the proposed credit intent as originally submitted by the project team
					Requirements	Summary of the proposed credit requirements as originally submitted by the project team
					Submittals	Summary of the proposed credit submittals as originally provided by the project team
					Ruling	For CIRs, this cell contains a ruling summary. This may be abbreviated; for the full text, project teams should refer back to the full text of the CIR as posted online: http://www.usgbc.org/LEED/Credit/CIRMain.aspx?CMSPageID=1432. For denied ID credits, this cell contains the reviewer ruling. Intent, requirements and submittals may be broken out separately.

CIR / ID	CAT.	RS	CREDIT TITLE	A / D		CREDIT DESCRIPTION
SITE DISTURBANCE REDUCTION						
ID	SS	NC	Reduce Site Disturbance	A	Intent	Conserve resources, and integrate the building and environment.
					Requirements	Significantly reduce the use of raw materials and integrate site features with the natural environment. Avoid the fabrication, transportation and construction impacts by using locally recovered boulders; Use native raw materials to satisfy structural security requirements.
					Submittals	· Narrative describing design approach · Photos of building perimeter significantly covered by boulders
ID	SS	NC	Reduce Site Disturbance - Tunneling	A	Intent	Reduce site disturbance.
					Requirements	Implement a tunnel boring strategy.
					Submittals	· Narrative and calculations demonstrating environmental benefits and significance of tunnel boring versus extensive trenching
ID	SS	NC	Innovative Siting	A	Intent	Preserve open space and reduce materials use.
					Requirements	Preserve open space by locating a building on top of the campus chilled water reservoir tank. Size the storage tank with 30" thick concrete walls and steel superstructure to support the building above. Maintain or enhance pedestrian access.
					Submittals	
ID	SS	NC	Integrated Development	D	Ruling	Proposal for an ID credit for the project's collaborative development with the local municipality. The project provided calculations demonstrating a site area reduction of 60.4% as a result of this collaboration. While the collaboration outlined is laudable, it does not represent an innovative approach with quantifiable environmental benefits.
SITE RESTORATION AND REMEDIATION						
ID	SS	NC	Radon Mitigation	A	Intent	Reduce a recognized hazard and improve occupant health.
					Requirements	Demonstrate that neither state, nor local building codes require radon mitigation. Perform Radon mitigation measures including soil depressurization, building pressurization and sealing radon entry routes in to the building. Outline O&M procedures and guidelines for measuring radon levels.
					Submittals	· Text from EPA/625/R·92/016: Radon Prevention in the Design and Construction of Schools and Other Large Buildings · Narrative describing measures implemented and the effectiveness of these measures
ID	SS	NC	Donation and Protection of Open Space	A	Intent	
					Description	The project is pursuing an innovation credit for donating 190 acres of open space upstream of the project site to the local municipality, and protecting this land through a conservation easement with the a land trust as a voluntary measure separate from required wetland mitigation. While not physically connected to the site, the documentation demonstrates the connection between the project site and the open space area, both ecologically and financially. The narrative explains that the open space area is part of the view of the project and the nearby town, and is upstream from the project in the associated watershed.
					Submittals	· Narrative describing donation and mitigation efforts · Description of the net environmental benefits of the open space, including a detailed explanation of voluntary mitigation efforts
ID	SS	NC	Clean Marina Program	A	Intent	
					Requirements	Demonstrate exceptional performance regarding prevention or reduction of coastal water pollution.
					Submittals	· Signed certificate indicating successful implementation of the Clean Marinas California program, a comprehensive third·party program
ID	SS	NC	Brownfield Remediation of Adjacent Non-Project Site	A	Intent	
					Requirements	Remediate the full parcel area versus limiting remediation efforts to the immediate project area.
					Submittals	· Letter from local, state or federal government agency classifying as a Brownfield site · Copy of the remediation report · Narrative noting dimensions of site area in relation to total parcel size

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	SS	NC	Canal Rehabilitation	A	Intent	
					Requirements	Use private funds to rehabilitate a public·accessible greenway for recreational activities such as biking, jogging, and roller·blading. Demonstrate a comprehensive approach to rehabilitation including the use of native vegetation and stormwater bioswales.
					Submittals	· Narrative describing decision to preserve the space and thereby provide unimpeded public access to trails · Description of rehabilitation efforts to entire portion of canal that runs through the campus (not just portion adjacent to project site) and associated quantifiable environmental benefits
FAUNA PROTECTION						
CIR	SS	NC	Minimize Impact on Avian Migration	—	Ruling	It is true that migratory birds are not specifically addressed, but several relevant statements are contained in the Reference Guide (formatted version of June 2001, page 40), "Consider the impacts of the proposed development on existing natural and built systems and propose mitigations to negative impacts." This project has obviously considered the impacts and has proposed glazing to mitigate the negative effects. Also, the intent of the Sustainable Sites Reduced Site Disturbance (SS Credit 5.1) states under the credit intent, "Conserve existing natural areas and restore damaged areas to provide habitat and promote diversity." The Design Approach section of the Reference Guide states, "survey existing ecosystems" and an ecosystem is defined in the Reference Guide as "a basic unit of nature that includes a community of organisms and their nonliving environment linked by biological, chemical and physical process," which certainly includes the air above the land. The project's evaluation of the site "airspace" in relation to migrating birds, and the mitigating effects of special glazing are considered efforts to reduce site disturbance, which should qualify under the existing credit. However, the requirements and submittals for the credit are clearly related to the LAND, and therefore are not written to accept the additional information provided. Also, because of the existing requirements for this credit, this project is attempting "exceptional performance above requirements" set by LEED. Therefore, this project should attempt an innovation credit based on exemplary performance.
					Requirements	All the documentation as stated in the inquiry must be provided with special emphasis on professional studies performed showing, 1) impacts of development on indigenous wildlife, and 2) environmental benefits to the indigenous wildlife of the proposed mitigation. A narrative is required that includes the intent, requirements, submittals and design approach used. For your project, supporting documents should include specs, drawings showing the glazing, and cut sheets for glazing that clearly indicate the mitigating features of danger to migrating birds.
ID	SS	NC	Wildlife Friendly Design	A	Intent	Mitigate hazardous wildlife/human contact on site.
					Requirements	· Develop and implement a comprehensive wildlife management program · Provide trash storage areas that are "animal proof" · Design landscape to minimize attraction of animals by utilizing recommended non·invasive/native plantings that do not attract large mammals · Design entry baffle systems to prevent animals from accessing on·site common areas
					Submittals	· Narrative describing wildlife, frequency of animal encounters on site and in surrounding areas, and measurable/quantifiable environmental benefits of the program · Detailed description of implemented measures including wildlife education, analysis of wildlife encounters, plant selection to discourage wildlife visitation, analysis of wildlife migration corridors
ID	SS	NC	Habitat for Urban Wildlife	D	Ruling	The intent of this credit is to provide a healthy and safe urban wildlife habitat on the project site. Although the project's efforts to accommodate urban wildlife should be commended, an innovation credit cannot be awarded. Since this project was originally a greenfield site, it is assumed that the pre·development conditions were more conducive to supporting wildlife habitat. Without any quantifiable data to contradict this assumption, this credit cannot be awarded.

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	SS	NC	Minimize Impact on Avian Migration	A	Intent	Minimize impact on avian migration.
					Requirements	Perform research on risks to riparian and migratory birds Take major avian migration routes into account when choosing non·reflective glazing.
					Submittals	Proven 'bird·friendly' glass used in building built in major migration route.
ID	SS	NC	Monitor Threatened & Endangered Species	A	Intent	Ensure proper protection of endangered species.
					Requirements	Provide baseline data and five years of post·construction monitoring of threatened/endangered communities vulnerable to impacts associated with project construction.
					Submittals	· Copy of endangered species survey, a post·construction 1·year monitoring report, baseline monitoring report, and rare plant survey
FLORA PROTECTION						
ID	SS	NC	Tree Relocation	A	Intent	
					Requirements	Rescue native and adapted plants prior to construction and relocate onsite.
					Submittals	· Photo inventory of existing trees · Detailed tree mitigation plan outlining issues and proposed solutions for relocation including inventory and siting and community·involvement · Arborist inspection report · Summary of process, costs and results
ID	SS	NC	Plant Rescue	A	Intent	Conserve native and adapted species, enhance community involvement.
					Requirements	Remove native and adapted plants prior to construction and relocate them on site. Utilize a community·based approach where volunteers collect, care for and replant vegetation. Note that this credit is approved on the condition that the project is not receiving credit for Plant Rescue activities under MRc2: Resource Reuse.
					Submittals	· Narrative describing plant rescue efforts · Photographs of rescue/relocation activities
ID	SS	NC	Vegetation Salvage	A	Intent	
					Requirements	Save, stockpile and replant the native trees and ground cover necessarily removed during construction. Mulch larger trees that cannot be saved and distribute over landscaped areas or use for trail maintenance barriers.
					Submittals	·Narrative describing measures
ID	SS	NC	Innovative Tree Preservation	D	Ruling	The project used a pipe bursting technique to install a new sewer line, in lieu of the less costly traditional excavation and lay·in technique. The benefit was saving 4 trees, including two mature ginkgo biloba trees and two mature elm trees. While the preservation of existing trees does have a positive impact on the environmental and local landscape, projects must demonstrate significant environmental achievement to earn a point for innovation and design. Retaining several mature trees on a campus during the course of a building renovation and addition does not represent an innovative design strategy or a comprehensive approach.
ID	SS	NC	Clearing of Invasive Species	A	Intent	Rehabilitate landscape previously dominated by invasive species, thereby supporting local fauna, improving the health of native trees and preventing the further spread of non·native vegetation.
					Requirements	Demonstrate a comprehensive plan to clear the surrounding environment of invasive exotic plant species.
					Submittals	· Narrative describing strategies to remove invasive plant species
ID	SS	NC	Restorative Use of Vegetative Waste	A	Intent	Implement a regenerative alternative to typical recycling as commercial compost.
					Requirements	Utilize the recycled site's vegetative construction waste for the restoration of disturbed sites and creating wildlife habitat off·site.
					Submittals	· Photographs · Narrative depicting how logs and root wads are used to create sheltered feeding pools by changing water patterns that increase oxygen content and habitat for insects and larvae that serve as principal food sources for young fry salmon.

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ALTERNATIVE FUEL						
CIR	SS	NC	Alternative Fuel Vehicles	—	Ruling	An innovation point will be awarded if both credit compliance options can be successfully implemented and documented independently of each other.
					Intent	Reduce pollution and land development impacts from automobile use.
					Requirements	Achieve both components of SSc4.3: Provide Alternative fuel vehicles for 3% of building occupants and provide preferred parking for these vehicles, AND installed alternative·fuel refueling stations for 3% of the total vehicle capacity of the site.
					Submittals	· LEED letter template and proof of ownership of, or 2 year lease agreement for, alternative fuel vehicles and calculations indicating the alternative fuel vehicles will serve 3% of building occupants · Site drawings of parking plan highlighting preferred parking for alternative fuel vehicles. · LEED letter Template with specifications and site drawings highlighting alternative·fuel refueling stations · Calculations demonstrating that these facilities accommodate 3% or more of the total vehicle parking capacity.
ID	SS	NC	Alternative Fuel Vehicle and Refueling Station	A	Intent	Reduce pollution and land development impacts from automobile use.
					Requirements	Achieve both components of SSc4.3: Provide Alternative fuel vehicles for 3% of building occupants and provide preferred parking for these vehicles, AND installed alternative·fuel refueling stations for 3% of the total vehicle capacity of the site.
					Submittals	· A photograph of the alternative·fuel refueling station · The title for an electric vehicle · Site plan showing preferred parking for the vehicle.
ID	SS	NC	Alternative Fuel Vehicles - Zipcar	A	Intent	Reduce pollution and land development impacts from automobile use.
					Requirements	· Make a hybrid Zipcar available to employees for work·related use · Designate preferred parking for Zipcar car·sharing use only
					Submittals	· Narrative describing program · Zipcar purchase order · Site plan indicating dedicated Zipcar parking space adjacent to site and dedicated parking space for Zipcar car·sharing use only
TRANSPORTATION MANAGEMENT						
ID	SS	NC	Alternative Transportation Online Tool (T-Rex Tamer)	D	Ruling	This tool was part of an innovation credit achieved by a previous project. The tool complemented achievement of other transportation goals and helped address transportation issues generated by construction of the rest of the campus. While development of the tool for this purpose was innovative, subsequent projects simply "plug·in" to the tool and do not necessarily contribute to its development. Furthermore, the tool is meant to contribute to additional trip reduction as part of an effective achievement strategy in SSc4 credits. If these strategies are not in place, the significance of the tool is reduced. The justification for achievement by the previous project depended in no small part on the fact that the tool went beyond the requirements of SSc4.1 In this case, the project has not met the basic requirements of SSc4.1 nor exceeded these guidelines.
ID	SS	NC	Sustainable Transportation Study	A	Intent	
					Requirements	Conduct a transportation study resulting in an extension of a residential street in the form of a three meter wide pedestrian and bicycle trail to the site, in lieu of a City requirement of widening another street, essentially preserving the neighborhood scale and adding a positive element to the neighborhood, rather than just making a bigger street. Design the extension to include extra bike racks, extended bus routes, community involvement, new mixed use zoning and recreational amenities on site.
					Submittals	

CIR / ID	CAT.	RS	CREDIT TITLE	A / D		CREDIT DESCRIPTION
CIR	SS	NC	Alternative Transportation Management Plan	—	Ruling (excerpt)	Use of the regional carpool database contributes toward exemplary performance, if personalized carpool match lists are provided for all current occupants, as well as for new occupants, and the "guaranteed ride home" program is implemented. The project is likely to be awarded the innovation point as long as: 1. SS Credits 4.1, 4.2, and 4.4 are achieved 2. The commitment requirements listed below are met 3. All commitments are adequately and officially documented. The transit subsidization program can count toward exemplary performance in relation to SS Credit 4.1, Public Transportation access, if a 5·year (or longer) agreement has been signed and a copy of the agreement is submitted with the LEED application. Transit trip planning also counts toward exemplary performance. State the number of employees that are initially provided personalized trip information and document the policies/procedures that ensure the same service for new employees. Bike purchase subsidies for bike commuters contribute toward exemplary performance if a commitment for at least 5 years or 50 bicycles (whichever comes first) is shown via LEED application submittals.
ID	SS	NC	Alternative Transportation Management Plan	A	Intent	
					Requirements	Develop a Transportation Management Plan providing building occupants with incentives to carpool and use alternative transportation.
					Submittals	· A company lifetime letter of commitment to the Transportation Management Plan · Documentation of the policies and procedures of a comprehensive plan · Calculation of number of employees participating in each part of the plan compared to the total employee base
CIR	SS	NC	Alternative Transportation Management Plan	—	Ruling	An applicant will be awarded an innovation point for exemplary performance in alternative transportation by instituting a comprehensive transportation management plan (or program as described above), provided the project achieves three out of the four SS Credit 4 subcredits, AND is able to demonstrate that the requirements are met and all commitments are adequately and officially documented.
ID	SS	NC	Alternative Transportation Management Plan	A	Intent	Encourage use of alternative transportation through reward incentives.
					Requirements	Document a comprehensive transportation plan along with achievement of a minimum of three SSc4 baseline credits.
					Submittals	· Detailed narrative describing the transportation management program
ID	SS	CI	Transportation management plan	A	Intent	
					Requirements	Document SS Credit 3.1, 3.2 and 3.3. Adequately and officially document commitment requirements as outlined in the CIR.
					Submittals	· Regional carpool database with personalized match lists; · Official documentation for at a least a five·year commitment to the programs; · Documentation for the number of employees that are initially provided personalized trip information · Documentation of the policies/procedures that ensure the same service for new employees.
ID	SS	NC	Employee Reduction of Greenhouse Gas Emissions	A	Intent	
					Requirements	· Analyze the CO2 emissions generated by employee automobile commuting: compare the actual employee/staff mileage traveled to a remodeled building on the existing site vs. several proposed sites for new construction. Convert mileage to CO2 emissions. · Use the results to determine the final project location.
					Submittals	·Calculations of CO2 emissions per location possibilities and comparison to existing site location

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	SS	NC	Alternative Transportation - Cargo	A	Intent	Reduce fuel consumption, truck traffic at the project, and Nox and particulate pollution.
					Requirements	Utilize a rail spur versus conventional truck transportation for moving freight. Provide documentation which demonstrates the environmental benefits of this strategy.
					Submittals	· Documentation of the percentage of rail trips versus similar truck trips generated by the facility. · Narrative describing how the site selection process addressed transportation issues and describe alternate sites considered. T · Site alternatives study, environmental impact of site selected, amount of avoided emissions, etc
ID	SS	NC	Alternative Transportation - Equestrian Facility	A	Intent	Reduce pollution and land development impacts from automobile use
					Requirements	Provide stable space for a significant number of employees saved by this facility.
					Submittals	· Description of facilities · Calculation of FTE served
ID	SS	NC	Work from Home Program	A	Intent	Reduce commuting and facilitate the disposal of obsolete IT technology.
					Requirements	· Implement a work from home policy
					Submittals	·Detailed calculations of number of building occupants working from home and resulting environmental impacts · Narrative describing technology employed to facilitate this program
LANDSCAPE / SITE MANAGEMENT						
ID	SS	NC	Vertical landscaping	A	Intent	
					Requirements	Design and install a vertical landscaping system whose area is at least 50% of the building floor area.
					Submittals	· Narrative describing native landscaping selections, and the benefits of the screen for migrating bird species and local insects
ID	SS	NC	Exterior Site Management	A	Intent	Reduce environmental impacts of landscape installation and maintenance.
					Requirements	Develop and implement an Exterior Site Management Plan In "Landscape Maintenance Specifications" demonstrate procedures and policies for implementing exterior IPM and xeriscaping including: 1. Application of pre·emergent herbicides 2. Primary efforts to treat specific pests with horticultural sprays to minimize insecticide use 3. Limited and target·specific herbicide application following IPM procedures 4. Application of slow·release fertilizer based on soil analysis 5. Installation of composted material and natural surfactant in planting beds 6. Application of mycorrhizal fungi and beneficial bacteria to help root growth 7. Organic fertilization 8. Pine straw mulch applications 9. Mulching and composting of landscape debris In "Snow Removal and Ice Control" describe snow and ice removal procedures utilizing river sand or potassium and magnesium chloride traction control products that are less damaging to plants than typical sodium and calcium chloride products
					Submittals	·Detailed narrative describing IPM program · Copy of "Snow Removal and Ice Control Agreement"
ID	SS / WE	NC	Eco-Roof Monitoring	A	Intent	Promote the development of vegetated roof systems.
					Requirements	· Install and continuously monitor stormwater runoff from an eco·roof system · Utilize data as part of faculty curriculum and use for ongoing education and research · Quantify both stormwater volume reductions and runoff water quality from an installed eco·roof and compare against data from traditional roofs
					Submittals	· Detailed description of the monitoring system configuration, monitoring output, procedures · Description of additional monitoring to measure energy and thermal performance benefits · Narrative describing the long·term quantifiable environmental benefits o the installed system

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	SS / EQ	NC	Organic Landscaping and IPM Program	A	Intent	
					Requirements	Develop a Organic Landscaping and Pest Management Program that utilizes pest control use/risk reduction strategies that are considered safer than synthetic chemical controls and eliminates or reduces the use of herbicides and fertilizers and implementing xeriscape principles. Include both interior and exterior IPM.
					Submittals	· Detailed description of program including strategies to reduce the use of pesticides, herbicides and fertilizers · Landscape plan showing xeriscape principles · Plant list · Specifications and warranty for a termite control system
ID	SS	NC	Organic landscape management	A	Intent	
					Requirements	Utilize organic landscape practices.
					Submittals	· List of appropriate organic methods and products that can be used in lieu of standard chemical applications including approved and banned landscape application materials · Copy of Landscape Maintenance contract requiring organic landscape practices with specific contractual requirements, specific list of approved products and organic strategies for typical maintenance of region·specific issues
ID	SS	NC	Organic landscape management	A	Intent	Reduce toxic chemical use, enhance soil health, reduce human exposure to chemical spraying.
					Requirements	Eliminate the use of all synthetic fertilizer, toxic chemical pesticides and herbicides. Only use natural organic fertilizers, soil amendments and treatments.
					Submittals	· Program description and contractor specifications citing use of organic products
ID	SS	NC	Sustainable Landscape Program	A	Intent	Promote positive landscaping methods and create a resource to the community.
					Requirements	Design and implement a comprehensive campus approach to sustainable landscaping and document the following benefits: · Provide the campus with its own renewable source of native & adaptive planting material to meet campus landscaping needs · Advocate and plan action related to the reduction of potable water use for irrigation · Reduce transportation impacts, environmental footprints and costs associated with acquiring plant material from external sources. · Provide value and environmental benefit to the community through tree plantings and native plant donations
					Submittals	·Narrative describing the sustainable landscaping plan
ID	SS	NC	Public Space Maintenance	A	Intent	
					Requirements	Irrigate and maintain a patch of public land using harvested rainwater. Describe total area of land maintained, added value to the neighboring community and demonstrate that the project owner has no formal agreement with the city but maintains the public land based on good faith.
					Submittals	· Calculation of total area of land being maintained · Narrative describing maintenance activities including regular mowing, regular watering, and graffiti removal and associated community and pedestrian benefits in a former drug activity zone · Photographs
ID	SS	NC	Snow Melting System	A	Intent	Eliminate the need for de·icing chemicals that would otherwise end up in the storm water system.
					Requirements	Design and incorporate a non·polluting, energy·efficient snow melting system that utilizes city·provided waste steam to melt snow and reduce the need for chemicals or other snow·melting procedures.
					Submittals	· Narrative describing the installed system and operation of the heat exchanger

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
TENANT GUIDELINES						
ID	SS	NC	Tenant Design and Construction Guidelines	D	Ruling	The project team has submitted an ID proposal for the development of Tenant Design, Construction and Occupancy Guidelines for spaces that are not fully fitted·out prior to certification. The guidelines provide tenants with criteria for compliance with LEED·NC credits that have been pursued by the base building and initial tenant improvement spaces. Projects with partial build·out of tenant spaces prior to submittal must provide tenant guidelines in order to comply with the base building and building credit submittals and maintain the integrity of the initial LEED status. As the tenant guidelines are required, a separate ID credit cannot be awarded.
WATER TREATMENT						
CIR	WE	NC	Non-Chemical Water Treatment: CIR	—	Ruling	An innovation point may be awarded for non·chemical water treatment.
					Intent	To reduce chemical and/or potentially hazardous discharges from the project site.
					Requirements	Use chemical·free water treatment technology in place of chemical treatment in site or building· related systems and clearly document that the strategy provides a significant environmental benefit.
					Submittals	Description of the water treatment system used and a diagram of how the system works including: 1. The environmental benefit of the alternative system over a conventional system. 2. The chemicals and their quantities eliminated through the use of this alternative process. 3. The amount of treated water discharged or disposed of and in what quantities versus non·treated water 4. The amount of waste water generated, the amount of treated versus non·treated water
ID	WE	NC	Non-Chemical Water Treatment - Pulsed power	A	Intent	To reduce chemical and/or potentially hazardous discharges from the project site.
					Requirements	Install a water treatment system that requires no chemical treatments to maintain 100% efficient operation, and clearly document the environmental benefits of the system, including amount of waste water generated, the amount of treated versus non·treated water, the quantity and impact of each avoided chemical.
					Submittals	· Narrative outlining performance and environmental benefits · Manufacturer information · Comparative spreadsheet detailing water and chemical use for the base system compared to the design system using absolute values
CIR	WE	NC	Non-Chemical Water Treatment - Pulsed power	A	Ruling	Pulsed power process water treatment in HVAC equipment, while a controversial technology, may qualify for an innovation credit.
					Intent	Reduce the impact of potentially hazardous chemical discharges to the environment by eliminating conventional means of process water treatment in HVAC equipment. Reduce amount of water consumption from conventional recirculating water systems such as cooling towers, hydronic HVAC systems, or process water systems by decreasing the need for make·up water caused by evaporation and system blow down (or bleed).
					Requirements	Provide an integral chemical·free water treatment technology in place of conventional water treatment which uses potentially toxic chemicals which may also produce potentially hazardous chemical byproducts.
					Submittals	· A letter from the project engineer describing the chemical·free water treatment system used and how the system works · Narrative specifically stating the environmental benefits of using the chemical·free process in place of the conventional chemical water treatment system, specific chemicals and their estimated quantities eliminated by substituting the chemical·free process, and the methods and quantities of process water discharge as an estimate of potential water savings. · Proof that the technology works: a copy of a third·party analysis, letters from at least two of the vendor's previous clients that confirm the successful operation of this equipment.

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	WE	NC	Non-Chemical Water Treatment - Ozone	A	Intent	
					Requirements	Install a chemical·free water treatment system for building process water.
					Submittals	· Detailed narrative describing the installed ozone treatment system · Description of the chemical reductions from a typical water treatment system and domestic water savings · Quantitative analysis
WATER REUSE / REDUCTION						
CIR	WE	NC	Process Water Savings: CIR	—	Ruling	It is possible to achieve an innovation credit for reducing process water on the project. In order to achieve this credit, a whole building approach to process water must be used (including washing machines, dish washers, drinking fountains, cooling towers, etc.) The project must demonstrate a process water savings that is equal to or greater than 10% of the regulated water usage as calculated in WEc3. The project should obtain information on the average amount of water use for each type of equipment to determine an appropriate baseline and demonstrate that the increased efficiency compared to the baseline exceeds the 10% WEc3 threshold.
					Submittals	1. Narrative explaining what strategies were used and how the baseline was developed. 2. Calculations demonstrating performance compared to the baseline. 3. Cut sheets showing water usage of equipment used.
ID	WE	NC	Process Water Savings	A	Intent	
					Requirements	Demonstrate process water savings equal to or greater than 10% of the regulated water use as calculated in WEc3.
					Submittals	
ID	WE	NC	Process Water Savings	A	Intent	Reduce the amount of water sent to the sewer system.
					Requirements	Divert process water to a heat exchanger for heating and cooling by passing process water through a double·walled heat exchanger for heating/cooling before returning to water treatment loop.
					Submittals	· Detailed description of condenser cooling water loop for heat pumps designed to utilize water from a water treatment process water supply · Calculation of reduction of water sent to the sewer system
ID	WE	NC	Process Water Savings	A	Intent	
					Requirements	Design and implement innovative systems and procedures for cleaning animal facilities.
					Submittals	· Detailed description of animal facility cleaning systems and procedures including a water efficient dish and clothes washers and a toilet fixture to flush animal waste · Calculation of process water savings compared to a baseline case
ID	WE	NC	Process water savings - Wash Water Clarifier	A	Intent	reduce the potable water consumption for process loads such as vehicle, golf cart and equipment washes.
					Requirements	Install a wash water clarifier. Provide information on the percentage and quantity of water reused in each wash cycle. Provide calculations to demonstrate that the water recycled by using this system results in water savings that are equivalent to at least 10% of the total annual building water usage identified in WEc3.
					Submittals	
ID	WE	NC	Reduce Kitchen Water Consumption	A	Intent	Reduce unregulated kitchen water usage and reduce amount of hot water utilized.
					Requirements	Install pre·rinse spray valves on all spray·rinse stations. Demonstrate a process water savings that is equal to or greater than 10% of the regulated water usage as calculated in WEc3.
					Submittals	· Narrative describing the valves · Product cut sheet · Floor plan locating valves · Calculations

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	WE	NC	Domestic Hot Water Reduction	A	Intent	
					Requirements	· Design a domestic hot water system to provide hot water only to areas within the building that require it for operational purposes · In areas that require water, but not hot water, provide piping for non·heated water · Demonstrate a comprehensive approach to the design of a domestic hot water system that shows quantifiable materials reduction and environmental benefits
					Submittals	· Calculations of material savings and estimated energy savings from reduced hot water circulation and heating demand · Narrative with detailed description of hot water system design
ENERGY CONSERVATION						
CIR	EA	NC	Plug-load Energy Savings	—	Ruling	Plug·loads are specifically excluded from EAc1, but it is likely that a comprehensive strategy to address plug·load energy savings will warrant an innovation credit IF energy savings equate to at least 5% of the total building energy load (the same increment allotted to each point in EA Credit 1).
ID	EA	NC	Process Energy Savings	A	Intent	
					Requirements	Demonstrate savings equal to at least 5% of the regulated building energy budget used in EAc1 with a non·regulated load as defined in ASHRAE 90.1·1999.
					Submittals	
					Additional Info	Examples of previous submittals: laboratory load, refrigeration heat recovery system, LCD monitors
ID	EA	NC	100% Energy Cost budget Reduction	A	Intent	
					Requirements	Significantly exceed credit requirements of EAc1: Optimize Energy Performance.
					Submittals	
ID	EA	NC	Integrated Central Plant	D	Ruling	The project team seeks credit for connecting non·regulated loads to the central plant rather than using "incremental packaged equipment". The documentation does not establish this equipment as a reasonable design alternative. Further, because the central plant is the modeled baseline case, it seems doubtful that measured and verifiable documentation could be provide to support this assertion. Although central plant selection has an impact on overall energy performance, this category of energy savings is not recognized by the LEED system. It is impossible for the USGBC to evaluate the appropriateness or applicability of the many theoretical baselines to which a project might be compared. Instead, the USGBC has adopted ASHRAE 90.1 and Title 214 which make specific assumptions about energy performance compared to appropriate baselines in a formalized way.
ID	EA	NC	Process Energy Savings: LCD Monitors	A	Intent	Reduce energy use and life·cycle costs; improve productivity.
					Requirements	Use flat screen monitors, a non·regulated load in ASHRAE 90.1·1999 not covered in EAc1.
					Submittals	· Product information · Information and calculations of energy savings compared to total building energy, reduced HVAC loads associated with office·wide implementation of LCD monitors, productivity improvements and life·cycle benefits
ID	EA	NC	Non-regulated Energy Savings: CO monitors and Variable Speed	A	Intent	Reduce energy use.
					Requirements	Install carbon monoxide sensors and variable speed controls in garage to offset continuous fan energy, a non·regulated load in ASHRAE 90.1·1999 not covered in EAc2
					Submittals	
ID	EA	NC	Process energy savings: Refrigeration	A	Intent	
					Requirements	Implement refrigeration power monitoring, refrigeration systems improvements and hot water reclamation from refrigeration compressor racks to heat domestic hot water, refrigerant leak detection, and fiber optic lighting in the walk·in cooler. Include air·cooled condensers with variable speed control, efficient close approach condenser, floating suction pressure to maintain fixture temperature and high·efficiency fan motors for display cases. Demonstrate savings equal to at least 5% of the regulated building energy budget used in EAc1.
					Submittals	· ECB table showing energy savings associated with each measure as well as the total energy savings amount as a percentage of regulated load

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	EA	NC	Process Energy Savings: Elevator	A	Intent	
					Requirements	Install building elevators with innovative technology that does not use hydraulic fluid, eliminating the need for a machine room and reducing the energy required. Demonstrate the associated reduction of energy use.
					Submittals	· Calculation of energy savings associated with elevator choice · Copy of product information from the manufacturer including environmental benefits
ID	EA	NC	Variable Speed Drive Tech	D	Ruling	The project team seeks an ID credit for utilizing variable frequency drives (VFDs) to reduce energy usage. Submitted documentation includes a narrative, a memorandum from the project's HVAC engineer describing energy reductions achieved in general via VFDs, and a copy of the project's specifications for Variable Frequency Controllers. The concept of employing VFDs is a good example of an energy saving strategy, although it represents a fairly common approach. Further, this strategy contributes to credits earned by the overall building under EA c1. Since the proposed concept is already covered under an existing LEED credit, an ID credit will not be awarded.
ID	EA	NC	Process Energy Savings: Energy Star	A	Intent	
					Requirements	Require tenants to install Energy·Star rating appliances.
					Submittals	Calculations demonstrating energy savings as a percentage of the total building energy use, both regulated and unregulated
ID	EA	NC	Cogeneration Plant	A	Intent	Provide significant savings in heating and chilled water and reduce CO2 emissions.
					Requirements	· Provide 100% of project needs with a central cogeneration facility · Use heat from the cogen system for an absorption chiller that is the primary source for chilled water
					Submittals	
ID	EA	NC	Process Energy Savings: Lighting Control	A	Intent	
					Requirements	Design and install an extensive lighting control system. Demonstrate savings equal to at least 5% of the regulated building energy budget used in EAc1.
					Submittals	· Calculation of energy savings associated with lighting design
ID	EA	NC	HVAC Chiller System	D	Ruling	Connect to a central chiller and high temperature water system in lieu of individual systems dedicated to this building. Though the use of a centralized cooling/heating system is a noteworthy accomplishment, it does not constitute an innovation credit.
ID	EA	NC	Process Systems Resource Conservation	A	Intent	
					Requirements	Implement water and energy savings technology with a two·fold process·related utility system. Treat product water using nanofiltration technology in place of filtering municipal water using a reverse osmosis filtration process. Install a methane gas·fueled boiler and an anaerobic bioreactor to treat the wastewater. Use the methane bi·product from the anaerobic bioreactor to fuel the boiler.
					Submittals	· Narrative describing the process·related utility system
APPLIANCES						
ID	EA	NC	Energy Star Appliances	A	Intent	
					Requirements	Purchase Energy Star compliant office equipment and calculate the associated % energy savings and resulting cooling systems downsizing according to the anticipated heat load savings.
					Submittals	·Narrative describing purchasing decisions · Calculation of energy savings · Copies of purchase orders and payment invoices
ID	EA	NC	Energy Star Appliances	A	Intent	
					Requirements	Demonstrate a 5% energy savings from Energy Star compliant appliances based on the following calculation: Compare: Design Case building energy use (regulated loads) + energy use from a standard appliance package To: Design Case building energy use (regulated loads) + energy use from the installed appliance package (including Energy Star and non·Energy Star appliances)
					Submittals	

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	EQ	NC	Halogen Free Electrical Equipment	A	Intent	
					Requirements	Utilize electrical materials that are halogen free with no toxicity, flammability, CFCs, pollutants, or cadmium
					Submittals	
ID	WE	NC	Waterless Urinal Demonstration Process	A	Intent	Spur interest in the local design and building community for waterless technology.
					Descriptions	Early in the design process, the project team found that waterless urinals were not allowed for installation in buildings due to prohibitions in the State Health Code. Through meetings with applicable regulatory officials, the project team received approval to conduct a 12·month test of waterless urinals in an existing library facility. As a result of this test program, the project team was able to effect changes in the health code to allow widespread use of waterless urinals in the new library project.
					Submittals	
ID	MR	NC	Low Mercury Lighting	A	Intent	
					Requirements	
					Submittals	· Manufacturer confirmation of mercury content · Calculations of mercury content
COMMISSIONING						
ID	EA	NC	Commissioning - Building Shell	A	Intent	
					Requirements	Commission the building envelope in addition to a "fair amount of attention paid to the shell design during the design review process".
					Submittals	· Narrative describing commissioning process and issues found · Building shell construction checklist
ID	EA	NC	Building Envelope Commissioning	D	Ruling	Including the envelope in the systems to be commissioned on the project does not warrant the award of an innovation credit as this is already covered in EAp1. For some building owners and commissioning providers, building envelope commissioning is considered standard practice.
ID	EA	NC	Commissioning - Fume Hood	A	Intent	To improve indoor air quality for enhanced occupant safety and comfort.
					Requiremetns	Demonstrate that commissioning and full ANSI/ASHRAE 110·1995 testing performed on all fume hoods in the project and the implementation of procedures above and beyond conventional practice.
					Submittals	· Letter from fume hood Cx agent stating that commissioning has been performed per ASHRAE 100 standards · A list of all fume hoods in the project
CIR	EA	NC	Commissioning - Fume Hood	—	Ruling	The following proposal is acceptable. While fume hood commissioning is not an innovative practice (fume hoods routinely receive some form of testing during T&B such as face velocity and smoke visualization), ASHRAE 110 includes a tracer gas containment test and is reason to award an innovation credit.
					Intent	Ensure health and safety of employees.
					Requirements	Design laboratories to ensure contaminants are contained and workers are protected. Conduct fume hood commissioning that includes ASHRAE·110 Method of Testing Performance of Laboratory Fume Hoods (1995) on ALL installed fume hoods. This is to include ratings for As Manufactured (AM) and As Installed (AI) as defined below. Scope of testing to include 6.1 Flow Visualization, 6.2 Face Velocity Measurements and 7.0 Tracer Gas Test Procedures. The hood performance rating for the Tracer Gas Test procedure shall be at least 4.0 AI 0.1 as specified in ASHRAE·110. In addition to the above, the fume hood commissioning will include ratings for As Manufactured (AM) and As Installed (AI) as defined below. "As Manufactured" (AM): conducted at the hood manufacturer's location, test only the design of the hood independent of the laboratory environment. "As Installed" (AI): conducted after installation, testing and balancing, but before occupation by the user.
					Submittals	Provide LEED Letter Template, signed by the Owner or Independent Commissioning Agent as appropriate, confirming that the required commissioning tasks have been successfully executed or will be provided under existing contract. Identify where the fume hood commissioning work is specified by including the commissioning document name and relevant section number. Supplemental Submittals: Provide a report that describes the fume hood commissioning work.

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	EA	NC	Decommissioning - Fume Hood	A	Intent	Reduce overall building energy consumption
					Requirements	Implement an aggressive schedule that shows monthly decommissioning. Provide a revised energy model that accounts for an altered fume hood operation schedule demonstrating that savings from the heat recovery system are reduced as a result of fewer operating hours and airflow and savings associated with cooling, heating and fans increased.
					Submittals	·Decommissioning schedule · Calculation of Estimated annual energy savings from decommissioning
CO2 EMISSIONS REDUCTION						
ID	EA	NC	Carbon Offset	A	Intent	Demonstrate a comprehensive greenhouse emission reduction strategy that represents significant environmental and occupant benefit.
					Requirements	Purchase renewable certificates to offset automobile CO2 emissions, including all combustion type equipment.
					Submittals	
ID	EA	NC	Climate Neutral Carpeting	D	Ruling	The project has specified and installed a climate neutral carpet for more than 75% of the floor area of the new building. Documentation certifies that 100% of the eCO2 associated with the production of this carpet has been offset by the purchase of carbon offsets. The purchase has resulted in a CO2 offset of 35 tons. In order to be applicable for an ID point, a project must set an appropriate threshold an provide documentation showing comprehensive, whole·building approach for emissions offsets. Selection of one product does not in and itself qualify for an ID point.
ID	EA	NC	Climate Neutral Facility	D	Ruling	The project team proposes an ID credit for a climate neutral building. At this time, USGBC is unable to develop a consensus on whether it is appropriate to use state average CO2 emissions numbers versus interstate/grid average emissions numbers when calculating baseline COs emissions. Due to the uncertainty surrounding the issue, the EA TAG cannot support award of this ID credit. Several issues need to be addressed to further this discussion: 1. The public building and CO2 reductions/renewables elements should disaggregated 2. The TRC contract only gives two years of CO2 reduction. The associated environmental benefits should be spread over a longer, relevant period (e.g. 20 years) if no binding commitment to long term purchase of green power exists. 3. Some of the environmental attributes associated with this ID credit may be double·counted in the award of the green power credit.
ID	EA	CI	Carbon Neutral Office	A	Intent	
					Requirements	Track office electricity, natural gas, refrigerant leakage, employee commuting and business travel, and off·set with Renewable energy Credits (RECs) for Green·e certified renewable power.
					Submittals	· EPA Climate Leader Form · Narrative describing methodology for Greenhouse Gas Inventory Process
CIR	EA	NC	Carbon Offset: CIR	A	Ruling	The following submittal may warrant an ID credit
					Intent	Encourage the development and use of energy technologies on a net zero pollution basis.
					Requirements	Engage in a two·year contract to purchase carbon offsets for natural gas use, fuel oil, or on·site coal burning systems. Calculate the amount of greenhouse offset that would be achieved by your project if you followed the green power credit requirements, and demonstrate that your green·tag strategy achieves the same result with respect to greenhouse impacts.
					Submittals	· A copy of the Green·e certified two·year offset purchase contract.. · Calculation showing anticipated greenhouse offset

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	EA	NC	Carbon Sequestration	D	Ruling	The owner has set aside 41 acres of forest land to offset 1% of CO2 emissions from energy used at the conference center. The forest area selected was sized based on annual energy consumption. The mass of carbon estimated to be sequestered is 36,278 lb/yr, based on annual absorption rate of 100 g/m2/yr. The capacity of the forest would allow it to sequester that amount annually for 200 years. The threshold of sequestering 1% of carbon emissions was based upon the cost of achieving EAc6. Cost comparisons between credits are not typically suitable criteria for ID credit thresholds. However, restoring degraded forests to increase regional and global carbon sinks is an environmentally positive strategy and the extent of land is significant. While any effort undertaken to offset emissions associated with building operations is laudable, a 1% offset does not represent a significant threshold. Past precedent has determined that an offset of greater than 15% may earn a LEED ID credit.
RENEWABLE/ALTERNATIVE ENERGY						
ID	SS / EA	NC	Industrial Ecology Approach	A	Intent	Reduce CO2 emissions associated with energy use; utilize industrial by·products for source energy; reduce life cycle impact associated with shorter transmission distances for utilities.
					Requirements	Select a project site for its proximity to the nearby CMS electricity·generating facility that uses a combination of waste gases from an on·site blast furnace and natural gas, using cleaner energy and reducing dependence on long·distance transmission lines. Link needs and wastes within an industrial zone and outline the associated environmental benefits.
					Submittals	
ID	EA	NC	Glass-Integrated Photovoltaics	D	Ruling	The project team seeks an innovation credit for installing building integrated photovoltaic technology in the south·facing atrium curtain wall. Since this system's provisions for shading, views, daylighting, and renewable energy generation contribute to earning points under EAc1, EAc2, and EQc8, an innovation point will not be awarded. As stated by the ID guidance published on the USGBC website, "Innovation credits are not awarded for the use of a particular product or design strategy if the technology aids in the achievement of an existing LEED credit."
ID	EA	NC	BIPV and Cavity Wall System	D	Ruling	Building Integrated Photovoltaic system that was installed as a component of the glass curtain wall. The project should be commended for utilizing opportunities for incorporating renewable energy technologies into the project. However, BIPV systems are already recognized and contribute towards points under EAc1 and EAc2.
ID	EA	NC	Emergency Backup Generator with Bio Diesel	D	Ruling	The project has installed an emergency back·up generator on·site and states that it will operate using bio·diesel fuel. The project team has provided additional information regarding the frequency of generator testing as well as a plan to phase in the use of bio·diesel for two additional generators at the Honda campus. However, no documentation is provided regarding a two·year purchase agreement as requested in the preliminary review. The provided documentation does not demonstrate a commitment, or ensure that bio·diesel will be used at this installation for at least two years as required by precedent.
HISTORIC PRESERVATION/ADAPTIVE REUSE						
ID	MR	NC	Historic Preservation	D	Ruling	Although the project may provide an excellent example of the integration of building reuse and contemporary green building standards, the measures do not in themselves or combined contribute to significant environmental benefits nor extraordinary savings not already recognized in other LEED categories (MRc1).
ID	MR	NC	Adaptive Re-use	D	Ruling	The developer worked with the City and State Historic Preservation Commissions to re·establish window glazing standards that meet energy efficiency minimums while also maintaining historic relevance to the structure. The developer was able to establish a low·E glass suitable for historic projects. The USGBC recognizes that the process of working with local and state historical review boards can be challenging and there is often tension between retaining windows that are historically accurate and the need to provide a better, more energy efficient window. However, having low·E windows approved for this specific project will not necessarily make it easier for other projects to get similar approvals. Credit denied.

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	MR/ SS	NC	Building Relocation	A	Intent	Extend the useful life of an existing building and reduce construction waste.
					Requirements	Move an existing building from the site rather than demolish it in the course of this project.
					Submittals	
ID	MR/ SS	NC	Building Relocation · Historic	A	Intent	Extend the useful life and maintain the historic value of an existing building and reduce construction waste.
					Requirements	Relocate a historic building even if not required by code.
					Submittals	· A letter from the construction manager stating that the building relocation was not performed due to code requirement · Narrative, photographs and a map documenting the relocation
WASTE MANAGEMENT · RECYCLE / REUSE / SALVAGE						
ID	MR	NC	Occupant Recycling	A	Intent	
					Requirements	Implement a recycling program that allows building occupants to recycle compost, cassette tapes, computer disks, eyeglasses, batteries, license plates, Styrofoam packing and other times not included in the MR prerequisite. Provide all employees with a guidebook on waste reduction, reuse, recycling and composting. Clearly mark recycling bins.
					Submittals	·Contract or letter of agreement with the recycling company / letter outlining the recycling program and company's commitment to it · Calculation of percent of material cost or weight, not including items from the MR prerequisite
CIR		NC	Exemplary Waste Reduction Program	—	Ruling	The intent of instituting an exemplary waste reduction program is good, but the proposed requirement is not sufficient to measure performance. In order to achieve an Innovation Credit, the project needs to show substantial and measurable environmental benefit. The project will need to present a comprehensive approach and benchmark performance against a relevant standard or institutionalized program. Previously, projects have achieved an innovation credit by calculating the amount of material recycling achieved by MRp1 and then calculating the percent improvement over that recycling rate they achieved by recycling/reusing additional materials.
ID	MR	NC	Materials minimization / recyclability	A	Intent	
					Requirements	Implement three strategies to limit the amount of construction, decrease the amount of materials used, and to ensure that materials could be easily deconstructed for reuse and/or recyling at the end of life: 1. Reduce building square footage by addressing programmatic requirements with exterior spaces instead of interior rooms. Quantify energy and materials conservation to show the environmental benefit of decreasing the amount of conditioned space. 2. Reduce materials by leaving structural systems exposed, eliminating flooring over concrete slabs and eliminating ceiling tiles from much of the building. 3. Select recyclable materials for building construction; leave joints exposed in order to facilitate future deconstruction, reuse and recycling.
					Submittals	· Calculation of energy savings and materials conservations as a result of decreasing the amount of conditioned space
ID	MR	NC	Local Disposal of Excavated Soil and Rock	D	Ruling	An innovation credit has been submitted for the local disposal of excavation waste. A narrative with calculations of vehicle miles reduced as a result of local disposal was included. While it is commendable to reduce the amount of transportation associated with disposal of materials, soil and bedrock are excluded from MRc2 since standard earthwork and excavation practices typically reuse the material on site or transport to other sites. Due to the weight and volume of soil and bedrock, it is rarely disposed of in landfills. An innovation credit cannot be awarded since this is not allowed under existing LEED credit MRc2.1 and MRc2.2

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
CIR	MR	NC	Comprehensive Recycling Program	—	Ruling	In addition to the doubling of the Prerequisite 1 minimum materials benchmark (by weight, volume or recycling rate), an overall campus·wide recycling rate of 40% must be achieved in order to qualify for the point (40% is taken from LEED·EB MRc5). Landscape waste must not be factored into the volume of waste collected, as it is standard practice (and often regulated) to compost landscaping waste instead of sending it to landfill. All regulated wastes must also be excluded. The project must demonstrate that a comprehensive recycling program is in place at the campus. Documentation might include copies of the waste stream audits, as well as the waste reduction policy implemented on campus to reduce waste stream through source reduction purchasing strategies, collection equipment, and recycling education for students and staff.
ID	MR	NC	Waste Reduction	A	Intent	
					Requirements	Provide each employee with 2 insulated, washable mugs for use in the office. Replace soft drink machines that dispense canned beverages with a fountain drink dispenser.
					Submittals	Calculation based on FTE occupants of the lbs of waste/person diverted annually
ID	MR	NC	Waste Reduction, Operations	A	Intent	
					Requirements	Develop a baseline for operational waste reduction based on the materials included in the requirements for MRp1 and calculate the additional amount of reuse/recycling based on additional materials included in the campus recycling program.
					Submittals	
ID	MR	NC	On-site Material Mining and Production	D	Ruling	The narrative describes the on·site aggregate base rock production which was created from the existing river stone located in the site's water quality pond. While it is good building practice to reuse materials on site, reprocessed rock is not considered an innovative technology. This is consistent with the MRc2 3/4/2004 CIR. However, this material can be included under MRc5 calculations, counting it as aggregate that is both locally harvested and manufactured.
ID	MR	NC	Waste Management Master Plan	A	Intent	Reduce waste stream.
					Requirements	Implement a Waste Management Master Plan and comprehensive recycling program. Double the MRp1 minimum materials benchmark by weight, volume or recycling rate AND achieve a campus·wide recycling rate of 40%. Do not include landscape or regulated waste in waste volume calculations.
					Submittals	· Narrative describing the Waste Management Master Plan and recycling efforts on the campus · Copy of waste stream audit · Copy of the waste reduction policy addressing source reduction purchasing strategies, collection equipment, staff and student recycling education efforts
ID	MR	NC	Resource Reuse Program	A	Intent	
					Requirements	Develop a program where surplus items from various construction projects that the owner builds are collected and put to use in future projects. Materials salvaged and reused to include caulk and sealants, adhesives, miscellaneous plywood and lumber, paints and lacquers, roofing materials and fasteners.
					Submittals	· Narrative describing program · Representative Inventory list
ID	MR	CI	Office Space Material and Equipment Recycling Program	A	Intent	Reduce the amount of material from the former location going to landfill.
					Requirements	Implement a waste management plan for existing office space material and office equipment recycling program. Demonstrate the "quantifiable environmental benefits.
					Submittals	

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ORGANIC WASTE						
ID	MR	NC	Food Composting Facility	A	Intent	
					Requirements	Clearly define and demonstrate scope, quantifiable environmental benefits, and comprehensive programming and requirements for ongoing application.
					Submittals	· Narrative describing pre·consumer food waste composting process, associated signage, facility construction and operation, and economic and educational opportunities · Calculations of specific tonnage of material diverted from landfill as a result of the composting facility · Copy of project application for Outstanding School Program Award for recycling program, including food waste. · Photographs of compost facility construction and operation
ID	MR	NC	Food Waste Reduction	A	Intent	Reduce the amount of organic waste and discarded food.
					Requirements	Implement a Food Waste Reduction Program.
					Submittals	· Narrative describing food waste reduction program and quantifiable food waste reductions
ID	MR	CI	Recycling and Composting Program	A	Intent	
					Requirements	Implement an in·house green program featuring composting, leftover food donations and customer recycling areas. Demonstrate recycling rates of 25% of total materials beyond NC·MRp1.
					Submittals	
MATERIAL SELECTION						
CIR	MR	NC	Climate Neutral Materials / Products		Ruling	In order to achieve an innovation credit, the project must adopt a comprehensive approach to Green House Gas reduction. Additionally, an appropriate performance threshold should be proposed to measure the success of the credit. A possible approach would be to: 1. Determine the Green House Gas (GHG) impact of the building or firm, AND 2. Use Climate Neutral products for a minimum of 1% of the total building materials based on cost.
ID	EQ	NC	Low-VOC Materials - Maintenance Coatings	A	Intent	Reduce installer and occupant exposure to odorous, potentially irritating and/or harmful air contaminants from industrial maintenance coatings.
					Requirements	Use low·VOC industrial maintenance coatings that meet or exceed the South Coast Air Management District Rule 113. Demonstrate extensive use of these products.
					Submittals	· Letter signed by the architect stating that all interior industrial maintenance coatings addressed by the SCAMDC Rule 113 meet the VOC limits of this standard · Copy of the SCAMDC VOC limits · Product information stating VOC content · Verification that the use of these products is not a code requirement and not industry·standard practice · Calculations showing that these interior coatings were applied to a significant % of the interior surfaces compared to their coatings · List of all exterior coatings showing their VOC performance and the relative % of surfaces covered by these low·VOC products
MATERIAL USE REDUCTION						
ID		NC	Open Plan Office Design	D	Ruling	Open planning, shared filing and modular furniture are common in the current marketplace a do not constitute an innovation. Raised access floors do not include under floor air distribution which would reduce the amount of construction involved with rearranging ductwork during space reconfiguration. Raised access floors which provide flexibility for cabling needs only do not qualify.
ID	MR	NC	Building Downsizing	A	Intent	Reduce the impact of the building.
					Requirements	Identify opportunities to reduce the need for built space including shared facilities and better location.
					Submittals	· Narrative describing specific measures that lead to a reduction in built area and specific environmental advantages of the reduction

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	EQ	NC	Underfloor Air Distribution System	D	Ruling	As the project indicates, underfloor air distribution systems contribute to environmental performance in a number of categories, including energy efficiency, increased ventilation effectiveness, and improved individual control and comfort. All of these advantages are recognized within the LEED credit structure. To achieve an innovation credit for a measure already recognized by LEED, it is necessary to demonstrate that the project achieved environmental performance significantly beyond the achievement already addressed by the existing credit structure. In the case of LEED Version 2.0, underfloor ventilation systems factor into at least three existing credit categories, including the energy performance category representing 10 points. The project has not demonstrated an achievement substantially beyond those already recognized by LEED for underfloor distribution systems. Also, these systems are becoming more and more common. Although the project clearly went to some length to carefully evaluate this system before adopting it, the use of an underfloor system does not in itself represent an innovation.
CIR	MR	NC	Wood-Use Reduction	—	Ruling	The 20% benchmark for wood·use reduction is appropriate for the building type. It is important to establish a baseline against which the reduction is measured.
					Intent	Minimize the total quantity of new wood used in wood·framed buildings.
					Requirements	Implement wood·efficient design, detailing, specification, construction practices and verification
ID	MR	NC	Program Reduction	D	Ruling	Developing a smaller, more efficient building does not merit a LEED innovation credit. This is a standard goal in the architectural programming stage. Credit denied.
ID	MR	NC	Less Materials in Lab	D	Ruling	Reducing the use of some finish materials is not a design innovation in and of itself. Such a strategy must be part of a comprehensive, building·wide design effort to minimize material use, and must demonstrate that the results of this effort were significant relative to overall materials use. For a LEED innovation credit, it is necessary to clearly identify measurable goals and achievement requirements with respect to materials use, then provide documentation that these goals have been achieved.
ID	MR	NC	Adaptability	D	Ruling	Based on the documentation provided, the applicant has not addressed the environmental benefits that result from this design solution. The letter briefly discusses how this spiral reduces the need for relocation and renovation, but does not quantify or clearly demonstrate that significant environmental benefits are achieved.
ID	MR	NC	Interior Finish Material Reduction	D	Ruling	Eliminate interior elements through reduction of flooring, ceiling and wall material. Use structure as finish and leave masonry and concrete surfaces exposed. Establish a building baseline and compare to the design case. The baseline used does not take into consideration all materials incorporated in the building but rather focuses on specific architectural elements.
ID	MR	NC	Exposed Structure	D	Ruling	The intent of this credit is to design a structural framing system that minimizes the use of materials, decreases the overall material and exposes structural components. Reducing the amount of material used is an important strategy in green building. However, the practice of tying the steel and concrete together into a composite system to reduce the amount of steel required is just good structural design practice. A 5% decrease in total steel use does not constitute an innovation. To qualify for an ID credit for reducing building material usage, previous projects have demonstrated significantly larger reductions in total building materials, implementing comprehensive, innovative strategies such as tensile structures that reduced total building volume as well as total building materials compared to conventional structural systems.
CIR		CI	Strategic space planning	—	Ruling	The applicant is proposing an innovation and design process credit for strategic architectural and furniture product choices and future scenarios planning which will maximize adaptability over time and minimize waste caused by heavy churn rates; an interior infrastructure that will remain constant over 23 floors, among various lines of business, and over time for the project. This infrastructure consists of a zoned space plan, modularity of all products, systems and materials, moveable walls, limited hard construction, and a systems and loose furniture "kit of parts". While this strategic space planning has clear advantages, it is simply good facilities management practice for a tenant such as this where “churn” is inevitable. The proposed strategy does not warrant the award of an innovation credit.

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	MR	NC	Advanced Framing Systems	A	Intent	
					Requirements	Demonstrate quantifiable savings associated with advanced framing systems including center framing of 24" and open wood trusses.
					Submittals	·Narrative outlining base case compared to design case · Lumbar purchase invoices
ID	MR	NC	Flexible Interior Design	D	Ruling	The project utilized a SMED demountable wall system in lieu of painted drywall and metal partitions. The calculations doe not take into account the embodied energy or any of the other environmental impact indicators of a full LCA of the demountable partitions' manufacture, use or disposal. In other words, no benchmark case has been established . Typically, such a "one product" approach does not constitute innovation
ID	MR	NC	Efficient Use of Structural Material	A	Intent	Reduce environmental impacts associated with structural material manufacturing and transportation.
					Requirements	Implement a comprehensive design approach to develop a "diagrid" diagonal structural system and reduce required raw materials while maintaining structural integrity.
					Submittals	· Detailed narrative describing structural system and the design approach Calculations of materials use reductions by weight compared to conventional steel moment frame structure of the same size and configuration
BLENDED CEMENT						
ID	MR	NC	Blended Cement - Fly-ash	A	Intent	Reduce the use of a very high embodied energy material.
					Requirements	Use a waste product, fly ash, to replace Portland cement. Provide cylinder testing demonstrating the effectiveness of the substitution.
CIR	MR	NC	Blended Cement - Fly-ash:	—	Ruling	Fly·ash must REPLACE cement content, not just be added as a filler. The Credit Ruling Committee has suggested that a threshold of 40% REPLACEMENT of cement with fly·ash. Regardless of the percent used, fly·ash content would count toward MR Credit 4; Recycled Content Materials.
					Intent	Diminish the life cycle CO2 emissions associated with site·cast concrete by replacing large quantities Portland cement with fly·ash.
CIR	MR	NC	Blended Cement - Fly-ash	—	Ruling	An innovation point will be awarded for reducing total Portland cement content of cast·in·place concrete.
					Intent	· A minimum of 40% reduction of CO2 by weight for all cast·in·place concrete must be demonstrated against standard baseline mixes. · Demonstrate that cast·in·place concrete makes up a significant portion of the work on the project · a point will not be awarded for negligible quantities in relation to the total work. For purposes of this credit, the following must be applied: · One pound of Portland cement is equivalent to one pound of CO2. · Baseline mixes shall be standard, 28·day strength regional mix designs. · Temperature range shall be accounted for and documented. Documentation for cold weather mix designs shall include temperature on day of pour. · Pozzolans allowed for displacement of Portland cement are fly ash, ground granulated blast furnace slag (ggbfs), silica fume, and rice hull ash.
					Requirements	· Total cubic yards of cast·in·place concrete for project. · Standard 28·day strength concrete mix designs from the concrete producer, in accordance with ACI 301, for each concrete mix required for project (2500 psi, 3000 psi, 5000 psi, etc.) and quantity of Portland cement for each mix in pounds per cubic yard. · Quantity of Portland cement reduced and/or replaced for each mix in pounds per cubic yard. · Temperature on day of pour if cold weather mix is used. · Calculation demonstrating that a minimum 40% average reduction has been achieved over standard concrete mix designs for the total of all cast·in·place concrete.
					Submittals	

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	MR	NC	Blended Cement: Slag	A	Intent	
					Requirements	Establish a 41% reduction in CO2 by weight by displacing Portland cement through the use of ground granulated blast furnace slag (GGBFS).
					Submittals	· Narrative describing displacement of Portland cement through the use of ground granulated blast furnace slag compared to a baseline · Calculation of CIP concrete as a percentage of project's total materials value · Table outlining different mixes
ID	MR	NC	Blended Cement: Fly-ash and Slag	A	Intent	
					Requirements	Establish a 41% reduction in CO2 emissions by reducing Portland cement over baseline concrete mix designs through the use of fly ash and ground granulated blast furnace slag (GGBFS).
					Submittals	
ID	MR	NC	Blended Cement: Fly-ash	A	Intent	
					Requirements	Establish a 40% reduction in CO2 emissions by reducing Portland cement for all site·cast concrete.
					Submittals	Narrative, calculations, purchase order, and concrete mix designs
FURNITURE: LOW EMITTING						
CIR	MR / EQ	NC	Furniture: CIR	—	Ruling	Non·permanent furniture may be included in LEED for New Construction v2.0 and v2.1 calculations, ONLY if furniture is included in the project scope. Furniture must then be included in all relevant credit calculations or none at all. The relevant credit are Materials & Resources credits 3 through 7. A common sense approach must be taken when deciding what to include as furniture. Office systems and furniture are expected to be the more common and applicable products in the marketplace. Because of inherent complexities addressing furniture within the Indoor Environmental Quality category (particularly credits 3.2, 4.4, 8.1 and 8.2), the issue of furniture is not addressed in any IEQ credits. However, projects that include furniture in the scope of work are eligible to apply for an innovation credit based on LEED for Commercial Interiors (LEED·CI) IEQ credit 4.5, Low·Emitting Materials & Furniture.
CIR	EQ	NC	Furniture: CIR	—	Ruling	Manufacturer claims are not sufficient to demonstrate compliance for LEED·CI IEQ Credit 4.5. If the furniture is not GreenGuard certified, it must undergo air chamber testing and comply with specific limits on emissions levels for TVOCs, formaldehyde, total aldehydes and 4·PC as listed in the LEED·CI credit. Chamber test data or GreenGuard certification must be provided for all four parameters in order for an Innovation credit to be achieved.
ID	EQ	NC	Furniture - Low Emitting	A	Intent	Reduce indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and wellbeing of installers and occupants.
					Requirements	Demonstrate a comprehensive approach to reducing VOC levels in the building by selecting low·VOC furniture AND achieving EQc4.1·4.3.
					Submittals	·Complete list of all furniture in the building ·Documentation of furniture manufacturer testing and verification of compliance with the standards
ID	EQ	NC	Furniture - Low-Emitting	A	Intent	Reduce indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and wellbeing of installers and occupants.
					Requirements	
					Submittals	·Detailed spreadsheet listing each furniture product and compliance information ·Narrative outlining the procedure for incorporating nonpermanent furniture
ID	EQ	NC	Furniture - GreenGuard Certified	A	Intent	Reduce indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and wellbeing of installers and occupants.
					Requirements	Demonstrate procurement of GreenGuard Indoor Air Quality Certified low·emitting systems furniture and seating in accordance with the requirements of LEED·CI EQ Credit 4.5 template.
					Submittals	· LEED·CI EQ Credit 4.5 template · Signed letter declaring that all systems furniture and seating for the project are GreenGuard Certified · Documentation of compliance from product manufacturer for the products utilized · Copy of the product certification from GreenGuard.

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	EQ	NC	Furniture - GreenGuard certified and Environmentally Friendly	A	Intent	Reduce indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and wellbeing of installers and occupants.
					Requirements	In the absence of any GreenGuard certified laboratory·grade furniture, specify environmentally·friendly laboratory furniture.
					Submittals	List of laboratory systems furniture and associated low·emitting attributes including: 1. Low formaldehyde in the MDF wood products for the wood casework 2. No VOC powder coat paint finish on the steel casework 3. No VOC Expanded Polystyrene insulation in the steel casework 4. No VOC powder coat finish on the casework fixtures 5. No VOC content in the epoxy adhesive used to secure the countertops and tabletops
CIR	EQ	NC	Furniture: CIR	—	Ruling	Projects that include furniture in the scope of work are eligible to apply for an innovation credit based on LEED for Commercial Interiors (LEED·CI) IEQ credit 4.5, Low·Emitting Materials Furniture. Achievement of this credit is independent of LEED·NC EQ credit 4, Low·Emitting Materials.
ID	EQ	NC	Furniture - Green Guard and FSC Certified	A	Intent	Reduce indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and wellbeing of installers and occupants and reduce resource impacts associated with furnishings.
					Requirements	
					Submittals	· List of systems furniture · Documentation of GreenGuard certification, FSC Chain of Custody
ID	EQ	NC	Furniture - Greenguard certified	A	Intent	Reduce indoor air contaminants that are odorous, potentially irritating and/or harmful to the comfort and wellbeing of installers and occupants.
					Requirements	Demonstrate procurement of Greenguard Indoor Air Quality Certified low·emitting systems furniture and seating in accordance with the requirements of LEED·CI EQ Credit 4.5 template. Items designated as occasional seating (e.g. conference tables and café chairs) are exempt from this requirement.
					Submittals	· Narrative confirming that all systems furniture and seating used on the project are Greenguard certified · Documentation of GreenGuard certification for systems furniture and seating
FURNITURE: OTHER						
ID	MR / EQ	NC	Furniture: Sustainably-Manufactured	A	Intent	Reduce resource impacts associated with furnishings.
					Requirements	Establish a furniture selection plan that is comprehensive in scope and has measurable environmental impacts as per EQc4, MRc4.
					Submittals	· Narrative establishing specific minimum standards for VOC content, recycled content, reclaimed wood, and minimized / reusable packaging · Documentation outlining furniture procurement procedure · Documentation of significance of the environmentally preferable furniture with respect to the total furniture budget and overall project budget.
CIR	MR	NC	Furniture: CIR	—	Ruling	The LEED Materials and Resources (MR) credits look at materials used in the construction of the base building prior to the installation of fixtures, furniture and equipment (FF&E). Furniture designed as movable that is bolted down for operational purposes, such as the classroom desks noted in your inquiry, can be omitted from the materials calculations. Typically, casework that is constructed for the project and permanently installed by the general construction contractor is considered as a part of the building rather than the FF&E for the project, and should be included in the calculations.
ID	MR	NC	Furniture - Reuse	A	Intent	
					Requirements	Use salvaged, refurbished or reused furniture and furnishings for 30% of the total furniture and furnishings material value.
					Submittals	· LEED·CI MRc3.3 Letter Template · Copy of the invoice for refurbished furniture

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	MR / EQ	NC	Furniture - Green furniture program	A	Intent	Improve indoor air quality and reduce negative life cycle impacts from the building's furniture manufacture, transportation, and disposal.
					Requirements	· Implement a Green Furniture program that demonstrates health and environmental benefit and market transformation · Establish furniture specifications including environmental chamber testing for IAQ, durability requirements, energy·efficient task lighting, flexibility and reduced need for chemical cleaning agents · Require manufacturer proposals to address corporate sustainability commitments, take·back programs, use of recycled materials, toxics reduction programs, energy and water efficiency and packing/shipping waste · Implement third·party workstation assembly and testing for compliance with EPA limits for formaldehyde, TVOC, aldehydes, and 4PC
					Submittals	Documentation of significant process improvements by several manufacturers.
ID	MR	NC	Furniture - Milled from Trees On-Site	A	Intent	Reduce resource impacts associated with furnishings.
					Requirements	Provide documentation demonstrating the dollar value of the materials relative to the total materials cost of the project.
					Submittals	· Narrative of the process, species and amount of wood harvested · Documentation of total cost of materials
CIR	MR	NC	Furniture - Definitions: CIR	—	Ruling	Systems furniture is defined as either a panel·based workstation comprised of modular interconnecting panels, hang·on components and drawer/filing components or a free·standing grouping of furniture items and their components that have been designed to work in concert. Seating is defined as task as desk chairs used with systems furniture.
PEST MANAGEMENT						
ID	SS / EQ	NC	Non-chemical Termite Control	A	Intent	Eliminate the need for chemical·based termite control systems and reduce the use of pesticides.
					Requirements	Utilize non·chemical termite control.
					Submittals	· Narrative describing typical methods for termite prevention involving chemical pesticide treatments · Description alternative control system
CIR	SS / EQ	NC	Non-chemical Termite Control: CIR	—	Ruling	Chemical·free physical termite barrier systems may warrant an innovation credit if: 1. The project team can demonstrate a significant and measurable environmental effect and actual reduction in chemical use 2. The project team outlines a commitment to eliminating future chemical use 3. The project team describes the advantages of one treatment system over another
ID	SS / EQ	NC	Integrated Pest Management	A	Intent	
					Requirements	Implement an Integrated Pest Management (IPM) program that demonstrates a comprehensive approach that utilizes environmentally·friendly control methods such as regular inspection, pest exclusion, structural control measures, mechanical removal, biological control and pesticide application rather than simple reliance on pesticides and insecticides.
					Submittals	· Narrative detailing program proposal including procedures: inspection, monitoring, pesticide use and storage, building occupant notification when pesticides are necessary, and preference for non·toxic or least·toxic options.
ID	SS / EQ	NC	Integrated Pest Management	A	Intent	
					Requirements	Develop and implement a comprehensive integrated pest management control program providing specific guidance for low·impact environmental pest control that includes both interior and exterior measures.
					Submittals	·Detailed narrative outlining a permanent IPM program that specifies the use of non·toxic pest control in the event of pest outbreak and provides a plan of implementation · Cut sheets for non·toxic chemicals or programs · Letter of commitment to this program

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID	SS / EQ	NC	Natural Predator Pest Management	A	Intent	
					Requirements	Implement a natural predator strategy of pest control
					Submittals	· Narrative describing natural predator strategy, organisms and chemicals that would otherwise be used · Description of the pesticide·free policy · Calculation of reduction of pesticides and associated benefits · Brief description of the applicable site plan
MAINTENANCE: PROGRAMS & TESTING						
ID	EQ	NC	Preventative Maintenance Program	A	Intent	Ensure contractor accountability and encourage long term efficiency in energy and systems operations.
					Requirements	Provide a signed 7· year contract that addresses utility costs monitoring and matching against operational settings for continuous improvement of the system. The scope includes PM, monitoring and on·call serviced and repair or replacement as replacement as required for HVAC, automatic temperature control systems, electrical system (power and control only), fire alarm, plumbing and domestic hot water systems. Describe repair/rebalancing/testing requirements when operational deficiencies are identified and how inconsistencies between projected an actual operation with be addressed and remedied after the 10·12 month post·occupancy commissioning that is performed as part of EAc3.
					Submittals	· Copy of signed contract · List of equipment and PM tasks covered by the contract, plus task schedule · Description of how PM plan exceeds standard industry practice
ID	EQ / WE	NC	Ongoing Air & Water Quality Testing	A	Intent	
					Requirements	Implement a program to monitor air and water quality through specific testing completed by a third party: 1. Test air for continuous compliance with ASHRAE 62·1989, and monitor for organic vapors, formaldehyde and airborne fungi and bacteria 2. Test water to insure that levels of residual chlorine, total coliform, fecal coliform, volatile organic chemicals, lead, copper, and zinc are in compliance with EPA Water Standard 502.2
					Submittals	·Statement of intent and signed work order · Proposed strategy and terms & conditions · Scope of work and fee proposals · Sample of Water and IAQ Audit report for an existing building that is similar to the product they expect to produce
ID	EA	NC	Preventative Maintenance Program	A	Intent	Improve equipment performance and maintenance productivity.
					Requirements	Provide owner with a customized, comprehensive Preventative Maintenance Program that compiles equipment data, preventative maintenance tasks and schedules, and estimated budget for implementation. Provide guidance on operating metrics and testing frequency related to functional systems along with identification of specific tasks on a set frequency. Add additional recommended practices from contractors beyond mere manufacturers' recommendations, organized into a schedule implementation program.
					Submittals	· Copy of PMP
ID	EA	EB	Thermal Scanning Program	A	Intent	
					Requirements	Implement an ongoing program to maintain the CSC building envelope by performing an infrared scan of the buildings envelope every two years to perform and IR scan of the building envelope. Identify who will address issues identified by scan and ensure that the time for performing the scan is carefully selected so that there is a large difference between the indoor and outdoor temperatures and there is no impact from direct sunlight into the building.
					Submittals	

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
INDOOR AIR QUALITY						
ID	EQ	NC	IAQ Testing	A	Intent	
					Requirements	Design and implement an IAQ testing program that goes beyond LEED requirements for IAQ and demonstrate that temperature, CO2, CO, VOCs, etc were within ranges or below maximum limits.
					Submittals	· Copy of green cleaning practices and use of low·impact cleaners and HEPA vacuums · Table of work plans for periodic inspection and cleaning of exhaust fans and A/C units
ID	EQ	NC	Indoor VOC Monitoring	A	Intent	
					Requirements	Install a VOC sensing system to continuously monitor VOCs including Alcohol, Acetone, Ammonia, Chlorides, Carbon Monoxide, and Formaldehyde exceed preset levels. Include an alarm to identify cautionary levels and polluted levels and signal modulation of air handlers to provide additional outside air to flush the building. Provide trending data.
					Submittals	· Narrative including: 1. Description of the installed system including information regarding location and quantity of installed sensors 2. Discussion of the measured contaminants / compounds 3. Equipment schedules and operational setpoints and a discussion of how these setpoints were determined 4. Sequence of operation for the system, including measures to be taken by building operators in the event VOC levels exceed setpoints 5. Description of the quantifiable environmental benefits of the system. · Cut sheets
ID	EQ	NC	Additional IAQ Testing	A	Intent	
					Requirements	Implement additional, regular testing along with supplementary measures to improve IAQ.
					Submittals	· Documentation of IAQ testing for particulates, fungi and bacteria · Documentation of a UV system installed to kill airborne pathogens
ID	EQ	NC	VOC Monitoring and Reduction	A	Intent	
					Requirements	Install IAQ sensors configured to monitor CO2, VOCs and CO and modulate air systems to assist in flushing the building when VOCs are detected to maintain indoor air quality.
					Submittals	· Narrative describing sensors, monitor setpoints, and source of VOCs and CO2 · Sensor cut sheets
ID	EQ	NC	Enhanced IAQ	A	Intent	
					Requirements	· Modify industry technologies to create a composite filter that is not only capable of removing common particulate matter but also provides removal of gases that are commonly associated with military warfare or terrorism · Provide an extremely high level of indoor air filtration by Installing a four·stage air filtration system composed of 85% efficient prefilter, 99.95% efficient HEPA filter, and a carbon filter, and address associated pressure drops for the installation · Demonstrate a comprehensive design approach with quantifiable environmental benefits including calculation of airborne contaminants that this system removes vs. traditional systems
					Submittals	· Detailed narrative describing the ventilation system design process that included the building design team, owner and filter manufacturers
ID	EQ	NC	Minimize Effluents	A	Intent	
					Requirements	Minimize building's exhaust system effluents.
					Submittals	· Results of exhaust effluent modeling study · Narrative describing exhaust system design, intents, requirements, and design approach · Calculations of system's cost
ID	EQ	CI	Duct Remediation	A	Intent	Ensure appropriate indoor air quality.
					Requirements	· Implement program to remediate and clean all existing supply and return ducts from the air inlets on the roof to air outlets on each floor, cleaning internal duct lining insulation and repairing any damage, and cleaning all new air conditioning units and providing anti·fungal treatment · Demonstrate compliance with EQc3.1&2 · Conduct a baseline indoor air quality test consistent with the requirements of EQc3.2
					Submittals	

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
POST OCCUPANCY EVALUATION						
ID	EQ	NC	LEED Post-Occupancy Performance Evaluation	A	Intent	
					Requirements	Develop a plan to evaluate and receive valuable feedback from multiple public facilities that have incorporated LEED; provide detailed cost·benefit analysis of LEED and sustainable design elements, using multiple indicators. Conduct a post·occupancy survey of building occupants focusing on building comfort and IAQ. Utilize the analysis to set sustainable design goals and evaluate future project budgets.
					Submittals	· Narrative describing LEED Post·Occupancy Performance Evaluation
ID	EQ	NC	Post-Occupancy Survey	A	Intent	
					Requirements	Measure relevant environmental variables in accordance with ASHRAE Standard 55·2004 and plan corrective action if more than 20% of occupants are dissatisfied with thermal, lighting or security conditions.
					Submittals	· Copy of post·activation design questionnaire, ASHRAE Hot/Cold Complaints checklist · Narrative committing to review 18·monts after full·occupancy
ID	EQ	NC	Post-Occupancy Survey	A	Intent	Gauge occupant comfort over time.
					Requirements	Assess overall building user satisfaction over time by addressing: thermal comfort, general satisfaction, layout, furnishings, air quality, lighting, acoustic quality and cleanliness.
					Submittals	· Copy of survey
ID	EQ	NC	Employee Wellness	A	Intent	
					Requirements	Provide employee amenities including: 1. Fitness center with gym equipment and shower/changing facilities 2. Private areas for lactating mothers 3. Wellness center with two examination rooms 4. Game room with video games for employee relaxation Demonstrate quantifiable improvements in worker satisfaction, employee health, etc when compared to a similar facility with no amenities.
					Submittals	· Detailed narrative describing benefits of workplace exercise, analysis of workplace productivity, decrease in sick days, etc
ERGONOMICS						
ID	EQ	NC	Ergonomic Conveyer System	A	Intent	Improve health and productivity of employees.
					Requirements	Implement a new ergonomic conveyer system and quantify the associated health, safety, morale and cost efficiency savings.
					Submittals	· Copy of a study listing health and safety issues associated with old system and how these issues are addressed by the new system · Documentation of improved productivity and occupant satisfaction
ID	EQ	NC	Operations floor ergonomic assessment	A	Intent	
					Requirements	Demonstrate a comprehensive approach to ergonomics in the workspace by performing ergonomic assessment and design and creating mockups to determine the best workstation configuration for different workers sharing the same space.
					Submittals	· Narrative describing approach used in ergonomic assessment and design for the operations floor · Description of strategies implemented including adjustable computer displays, height adjustable tables and adjustable chairs
QUALITY OF LIFE						
ID	EQ	NC	Patient Quality of Life	A	Intent	Improve patient quality of life.
					Requirements	Per the pilot version of the Green Guide for Healthcare: 1. Establish 5% of the net usable program area as specifically programmed places of respite with direct connection to the natural environment, conveniently located and easily accessible and identifiable to patients, visitors, and staff. Provide at least one place of respite dedicated to staff and separate from patients and visitors. 2. Provide at least one outdoor place of respite conveniently located and easily accessible and identifiable to patients and visitors. Additionally, provide at least one outdoor place of respite dedicated to staff that is easily accessible and is designated non·smoking.
					Submittals	· Floor plans highlighting places of respite · Calculations demonstrating that the 5% credit goal has been met · Narrative

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
CIR	EQ	NC	Patient Quality of Life	—	Ruling	Improving the health of patients, family and staff in the hospital environment is relevant to LEED goals identified in the Indoor Environmental Quality category. Comply with the Green Guide for Health Care's credit SS9: "Connection to the Natural World, Places of Respite. Establish 5% of the net usable program area as specifically programmed places of respite with direct connection to the natural environment for patients, visitors and staff. Provide at least one place of respite dedicated to staff and separate from patients and visitors. Provide at least one outdoor place of respite conveniently located and easily accessible and identifiable to patients and visitors and at least one outdoor place of respite dedicated to staff designated as non·smoking" (see www.gghc.org). In addition, the garden must be designed with plantings and features appropriate to its intended purpose (a boilerplate garden design will not be sufficient).
ID	EQ	NC	Areas of Respite	A	Intent	Improve clinical outcomes and promote staff well·being.
					Requirements	
					Submittals	· Narrative describing common spaces · Calculation of percentage of area of respite over total project area
GREEN CLEANING						
ID	EQ	NC	Environmentally Preferable Services	A	Intent	
					Requirements	Develop a comprehensive plan for the procurement of environmentally preferable services and products for operations and maintenance in three categories. 1. In food service, outline strategies to reduce waste, promote recycling and encourage sustainable food production practices 2. In janitorial services, identify criteria for environmentally friendly cleaners and chemicals 3. In landscaping and pest control, establish and implement environmental guidelines, and identify chemical handling strategies
					Submittals	· Narrative identifying strategies and associated environmental benefits as well as documentation of measurable and significant environmental achievements
ID	EQ	NC	Green Cleaning	A	Intent	Reduce exposure of building occupants to contaminants that adversely impact the indoor environment.
					Requirements	Implement three strategies after construction completion and prior to building occupancy: 1. Implementation of a Construction IAQ Management Plan 2. Two·week flush·out and replacement of filters with MERV 13 filtration media 3. Final clean·up by independent green cleaning service using cleaning products that meet the Green Seal GS·37 standard, floor cleaners complying with CA Code of Regulations maximum VOC content, and disposable paper products, supplies and trash bags meeting the minimum requirements of US EPA's Comprehensive Procurement Guidelines Demonstrate that the products used in the project are non·hazardous, have a low environmental impact and are environmentally preferable.
					Submittals	· Statement of purpose describing health and environmental goals, focusing on cleaning chemicals and custodial training · Description of contractual and procedural requirements for operations staff including training and implementation · A clear set of acceptable performance level standards by which to measure progress or achievement · Documentation of the program's housekeeping policies and environmental cleaning solution specifications, including a list of approved and prohibited chemicals and practices. Concentrated cleaning products should be utilized when available. · Description of post·occupancy green cleaning strategies

CIR / ID	CAT.	RS	CREDIT TITLE	A / D		CREDIT DESCRIPTION
NATURAL VENTILATION						
ID	EQ	NC	Passive Natural Ventilation	D	Ruling	The project team seeks credit for utilizing a thermal chimney to eliminate the need for mechanical ventilation systems. Unfortunately, due to the challenge and uncertainty associated with establishing "acceptable comfort parameters in both baselines (mechanically ventilated) and design (naturally ventilated) cases." In order to be awarded an innovation point, the project team must provide detailed occupant comfort information and demonstrate, quantitatively, the benefits against a benchmark, an extremely challenging task. The EA TAG "feels that effective natural ventilation of an otherwise mechanically controlled space deserves recognition within the framework of LEED, but not until generally accepted guidelines on building performance against which performance of a proposed system can be judged."
CIR	EQ	NC	Passive Natural Ventilation		Ruling	While the design and construction of naturally ventilated buildings is a subject that the Energy and Atmosphere TAG is tracking with a great deal of interest, the uncertainties pertaining to fundamental design and performance parameters make their adjudication, within the framework of LEED, extremely challenging. Assignment of an appropriate baseline condition off of which Energy Optimization (EAc1) can be granted depends a great deal on establishment of acceptable comfort parameters in both the baseline (mechanically ventilated) and design (naturally ventilated) cases. These uncertainties make consideration of natural ventilation strategies for award of a LEED ID Credit equally challenging. The project team has indicated that they have eliminated mechanical air conditioning in a "major portion" of their building by naturally ventilating the space. While this is indeed a laudable achievement, insufficient information has been submitted on the activities this space supports and no evidence that, absent mechanical space conditioning, the building will be able to support reasonable levels of comfort for the building occupants has been submitted. Absent detailed occupant comfort information, favorable guidance of the possibility for award of an Innovation in Design Credit in this instance cannot be given. In general, the TAG feels that effective natural ventilation of an otherwise mechanically controlled space deserves recognition within the framework of LEED, but not until generally accepted guidelines on building performance against which performance of a proposed system can be judged.
COMMON AREA						
ID	SS	NC	Common Area Services	A	Intent	Enhance quality of life for campus occupants and reduce vehicle traffic.
					Requirements	Incorporate a comprehensive design for a centralized occupant service facility within the campus to house a cafeteria, gym, travel agency, credit union, printing/publishing services as well as laundry services.
					Submittals	· Calculations of environmental benefits and the reduction of impacts in comparison to a conventional campus complex including how many people visit each facility/day and the subsequent reduction in CO2
GREEN BUILDING EDUCATION						
CIR		NC	Educational Program	A	Intent	Provide public education focusing on green building strategies and solutions.
					Requirements	Establish an educational program that is actively instructional. Two of the following three elements must be included in the educational program: 1. A comprehensive signage program built into the building's spaces to educate the occupants and visitors of the benefits of green buildings. This program may include windows to view energy·saving mechanical equipment or signs to call attention to water·conserving landscape features. 2. The development of a manual, guideline or case study to inform the design of other buildings based on the successes of this project. This manual will be made available to the USGBC for sharing with other projects. 3. An educational outreach program or guided tour could be developed to focus on sustainable living, using the project as an example.
					Submittals	

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
ID		NC	Educational Program	A	Intent	
					Requirements	· Offer a full·semester university course covering sustainable building and LEED · Utilize a well·developed case study
					Submittals	·Narrative describing course content, class availability · Course syllabus
ID		NC	Student Report	A	Intent	Facilitate student and team member education on green building, sustainability and LEED and provide an educational experience beyond what could be learned from a case study or site visits
					Requirements	Student participation in research, analysis and documentation of the LEED requirements for a project and presentation of findings through written documentation, project narratives, and presentation boards. Establish an interactive relationship that allowed members of the project team to facilitate student learning and vice versa.
					Submittals	·Narrative describing semester·long course in conjunction with LEED project · Binder containing student research, analysis, documentation and reports for each credit
ID		NC	Educational Program	A	Intent	
					Requirements	Two of the following three elements must be included in the educational program: 1. A comprehensive signage program built into the building's spaces to educate the occupants and visitors of the benefits of green buildings. This program may include windows to view energy·saving mechanical equipment or signs to call attention to water·conserving landscape features 2. The development of a manual, guideline or case study to inform the design of other buildings based on the successes of this project. This manual will be made available to the USGBC for sharing with other projects 3. An educational outreach program or guided tour could be developed to focus on sustainable living, using the project as an example.
					Submittals	
DESIGN TOOLS						
ID		NC	Full-scale mock-up	A	Intent	Optimize materials usage and reduce overall construction waste Improve efficiently during construction and fit out of the final spaces and compress building schedule.
					Requirements	· Build a full·scale mock up of the residential unit that will account for the majority of building spaces. · Use this mock up to prepare an accurate take·off of materials to be installed in each of the final units and allow the builders to reduce the amount of surplus materials brought to the site to cover "contingencies." · Allow construction trades to become familiar with the nuances associated with their individual installations. · Disassemble and reuse majority of mock·up materials in the construction of the final building
					Submittals	
ID		NC	Design for the Environment	D	Ruling	The project has followed Design for the Environment (DfE) procedures. This program may have promise as a way to organize decisions to reduce environmental impacts, and implementing this program may have helped achieve goals addressed by LEED. However, most of the environmental goals targeted by this program are already recognized in the existing LEED credit structure and most of the achievements listed can be applied to existing LEED credits. To achieve a credit for a tools such as this, it would be necessary to demonstrate that the process has led to achievements above and beyond existing LEED goals.
LABS 21						
ID		NC	Labs 21 Environmental Performance Criteria	A	Intent	
					Requirements	Apply Labs 21 Environmental Performance Criteria by meeting all five additional prerequisites and at least two credits from Labs 21.
					Submittals	

CIR / ID	CAT.	RS	CREDIT TITLE	A / D		CREDIT DESCRIPTION
ID		NC	Labs 21 Environmental Performance Criteria	D	Ruling	Project team has provided a proposed intent, requirements, submittals and technologies for improved management of chemical use. It is noted that the criteria as been adapted from EPA Labs 21 EPC Credit 8.0. A copy of the chemical resource management plan has been provided. The Labs 21 EPC provides useful guidance on the design and construction of lab buildings in a sustainable fashion While the LEED committee responsible for development of the LEED·NC application guide for labs is drawing on EPC in some instances, the existence of a credit in the EPC does not necessarily ensure that it will exist in the application guide. EPC MRc8 has not been sufficiently developed to warrant an ID credit at this time. furthermore, it appears that this strategy represents best practice design and does not warrant a credit in innovation.
ISO 14001 CERTIFICATION						
CIR		NC	ISO 14001 Certification	—	Ruling	ISO 14001 certification may qualify as an innovation credit if the environmental merits are appropriately documented and shown to be above and beyond the current scope of LEED credits. The project should, at a minimum, address the following issues in the application submittal: 1. Describe the ISO 14001 Standards. 2. Describe the implementation process for requiring and ISO 14001 certified firm to oversee the construction of the project. (Was ISO 14001 certification an initial requirement for the award of the project, a significant selection criterion, or was it an unexpected bonus for the project?) 3. Quantify the environmental benefits achieved by the project through the use of and ISO 14001 certified firm as opposed to utilizing a standard non·certified firm. Provide executive summaries of the audit reports mentioned in your proposal. 4. Demonstrate practices that were implemented during the construction of the project that can set a level of achievement for future projects wishing to pursue this credit. 5. Describe environmental benefits that are not already addressed by existing LEED credits such as Erosion and Sedimentation Control, Construction Waste Management, Construction IAQ Management, Building Commissioning, and others.
PROJECT COSTS						
ID		NC	Performance Based Compensation Contract	D	Ruling	The project participated in a program to model the building's anticipated performance and to set goals for minimum post-occupancy performance The design team and owner signed a contract to tie additional fee incentives to cover anticipated additional design and equipment expenses to the actual measured performance of the project. As a part of this agreement, specific monitoring and verification equipment was installed on the project that would otherwise have not been included. Although the approach described in the documentation is innovative, the benefits documented in this submittal are accounted for in other LEED project credits. The testing and verification of systems performance is a requirement under the commissioning prerequisite and EAc5 requires that a plan be developed for the "ongoing accountability and optimization of building energy and water consumption over time"
ID		NC	LEED Costs	D	Ruling	Innovation credits are not the appropriate venue for evaluating cost data. While the LEED assessment provides useful and valuable information to both the project and the USGBC, it does not provide extraordinary savings or significant environmental benefits. Therefore it does not qualify for an innovation point.
CIR		NC	Time and Cost Data	—	Ruling	The USGBC has determined for previous projects that the collection of cost data does not represent an innovation in design that qualifies for an ID credit point. However, project teams are highly encouraged to submit such data to USGBC, as it is very useful for LEED research purposes.

CIR / ID	CAT.	RS	CREDIT TITLE	A / D	CREDIT DESCRIPTION	
MISCELLANEOUS						
ID	EA / WE	NC	Manage Water and Air Effluent	A	Intent	Improve air quality for project and surrounding buildings through the mitigation of air pollutants informed by a better understanding of project air effluent AND ensure the safe discharge of laboratory water in to the municipal treatment system.
					Requirements	1. Conduct a state-of-the-art wind-tunnel analysis not commonly used for laboratories to model the air effluent stream from the building's exhaust system (1 point in Labs 21) 2. Use this information to inform the design of exhaust sources and velocities. 3. Utilize a laboratory waste water neutralization system that includes acid-resistant piping, exterior catch basins and a neutralization chamber 4. Demonstrate that these measures exceed local code requirements
					Submittals	· Excerpts from air quality assessment study
ID		NC	Green MEP Coordination	D	Ruling	The applicant proposes an ID credit for a paper-efficient design and construction process. Based upon precedent and several CIRs, MEP coordination practices described in the narrative follow good design practice but do not qualify for an ID credit.
ID		NC	Station Alerting System	A	Intent	Ensure that building occupants are informed of a station alarm in all areas of the building, minimize unnecessary stress of firefighters and enable them to better perform their tasks.
					Requirements	Install an "Intelligent Station Alerting System" that utilized lights and less strident alarm methods to alert firefighters of a call versus traditional klaxon type alarm. Demonstrate that this system minimizes stresses on the firefighters when compared to more traditional types of systems.
					Submittals	· Narrative describing integrated system which controls sleeping area lighting when dorm spaces are occupied, provides alert information on televisions and panels throughout the facility, monitors and controls carbon monoxide exhaust in apparatus bays and turns off kitchen equipment if personnel are called away when cooking.
ID	EQ	NC	Glazed Thermal Buffer	D	Ruling	The design and application of the described glazed thermal buffer is unique to this country and has significant benefits with regards to energy use and interior comfort. However, these issues are individually addressed in LEED EAc1 and EQc8. LEED was developed as a market transformation tool, therefore promoting new technologies is inherent in the system.
ID	SS	NC	Heat Recovery from Stormwater Storage	D	Ruling	The Intent of this new Innovation Credit proposal is to measure performance of the rainwater retention of the project's green roof system relative to conventional roof systems. However, the documentation provided is inadequate. These submittals provide neither cut sheets of the actual monitoring equipment, gauges, and sensors utilized nor verification that this technology was installed and commissioned. Further, the methodology proposed for measuring performance, especially with regard to establishing the benchmark for comparison, remains vague, thereby potentially obviating or diminishing the value of the study in terms of both comparative performance and the stated goal of creating standards for optimizing soil depth and composition for various climatic regions, particularly since only one soil depth appears to have been installed on this project's roof. Credit achievement is denied.
CIR	EA	NC	Full Spectrum Lighting	—	Ruling	Until scientific evidence is presented that supports the positive effects that full-spectrum fluorescent lighting (FSFL) may have on human health and performance, the USGBC will not award an Innovation credit for the use of FSFL. A wide array of performance claims pertaining to FSFL have been made. However, reports published by the National Research Council of Canada's Institute for Research in Construction (IRC) from 1995 to 2001 present widely researched studies that conclude that "for most people, and most tasks, there is no evidence that any particular lamp type is better than any other in its effects on people. Thus...there is no reason to recommend a full-spectrum lamp over any other fluorescent lamp type. Dramatic claims to the contrary, presented in print and broadcast media in recent years, do not withstand close scrutiny and assessment against the standards of science" and "widespread adoption of these more expensive, less energy-efficient light sources is unwarranted." Also, the commonly agreed-upon light level that needs to be reached in order to treat SAD is 250 footcandles. Accordingly, neither FSFL nor standard T8/T5 lighting in normal office lighting installations (where light levels typically range from 25-80 footcandles) would provide significant enough light levels to treat SAD.