

Tahoe Center for Environmental Sciences
Sierra Nevada College

LEED Project 10001314
Final LEED v2 Review
LEED™ Certification
5/2/2007



Version 2

How to Interpret this Report

- Purpose** The Leadership in Energy and Environmental Design (LEED) Rating System was designed by the US Green Building Council to encourage and facilitate the development of more sustainable buildings. The Tahoe Center for Environmental Sciences project was evaluated according to this system and the Final Rating is totaled below.
- Environmental Categories** The report is organized into five environmental categories as defined by LEED including: Sustainable Sites, Water Efficiency, Energy and Atmosphere, Materials and Resources and Indoor Environmental Quality. The category of Innovation and Design Process is also included.
- LEED Prerequisites** Prerequisites must be achieved. Non-compliant prerequisites must be resolved before a certification can be awarded.
- LEED Credits** The environmental categories are subdivided into the established LEED credits, which are based on desired performance goals within each category. An assessment of whether the credit is earned, pending, or rejected is made and a narrative describes the basis for the assessment.
- Achieved** The applicant has provided the mandatory documentation which supports the achievement of the credit requirements, achieving the associated points. Currently the project has scored the adjacent points in this category.
56
- Denied** The applicant has applied for a point in a particular credit, but has misinterpreted the credit intent or cannot substantiate meeting the requirements. Currently the project has the adjacent points in this category.
2
- Rating** Final Rating is Platinum
Official LEED v2 Scores: Certified: 26 -32 Silver Rating: 33-38 Gold Rating: 39-51 Platinum Rating: 52 +

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A - Achieved
D - Denied

A		D			Possible Points
10		1		Sustainable Sites	14

0 Erosion & Sedimentation Control Prerequisite 1-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that the local Best Management Practices meet or exceed the EPA BMPs. Measures include erosion control fencing, storm drain inlet protection, mulching, an infiltration basin and pre-treatment controls for stormwater runoff, protection, parking barriers, and preservation of natural vegetation, re-vegetation, watering for dust control and slope stabilization measures. Supporting documentation includes an erosion and sedimentation BMP Plan and details, along with photographs of measures implemented during construction activities.

1 Site Selection Credit 1-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that the site does not meet any of the prohibited criteria.

Not Attempting Site Selection Credit 2-Version 2.1

Preliminary Review: No Comments.

Not Attempting Site Selection Credit 3-Version 2.1

Preliminary Review: No Comments.

1 Alternative Transportation, Public Transportation Access Credit 4.1-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that there are at least two public bus lines or campus shuttle buses usable by building occupants within a ¼ mile of the project site. A scaled site map has been provided, depicting the project location and three bus stops located within ¼ mile of the project site, along with a copy of a bus route served by the mass transit system (TART). Also, a narrative explains that a campus van/shuttle service is provided to students, faculty and staff.

1 Alternative Transportation, Bicycle Storage & Changing Rooms Credit 4.2-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that 7 bicycle stalls and one shower are provided within 200 yards of the project for 131 occupants. Supporting documentation includes a partial floor plan and a site drawing indicating the bicycle storage area (bicycle rack) and shower locations, along with a bicycle rack cut sheet and submittal approval/invoice.

1 Alternative Transportation, Alternative Fuel Refueling Stations Credit 4.3-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that four alternative fuel refueling stations are provided for 3.70% of the total on-site vehicle parking capacity of 108 spaces. Supporting documentation includes specifications, installation and operating instructions for a FMQ-10 FuelMaker CNG refueling station capable of serving four alternative fuel vehicles at the building, partial site drawings depicting the location of the refueling equipment, and details of the piping for this equipment. A parking plan of the adjacent lot is provided in the documentation submitted for SSc4.4.

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A - Achieved
D - Denied

A **D**
1 [] [] [] [] [] Alternative Transportation, Parking Capacity Credit 4.4-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that the parking capacity for the project does not exceed the minimum zoning requirements, and seven preferred carpool parking spaces are provided for 10.69% of building occupants. Supporting documentation includes a site plan drawing depicting the location of the carpool parking spaces with designation via pavement painting, a copy of the college carpooling program, a copy of the local zoning requirements, and supporting calculations.

1 [] [] [] [] [] Reduced Site Disturbance, Protect or Restore Open Space Credit 5.1-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that site disturbance has been limited to the required thresholds. A site plan drawing depicting the limits of construction disturbance demonstrates achievement.

1 [] [] [] [] [] Reduced Site Disturbance, Development Footprint Credit 5.2-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that open space exceeds local zoning requirements by 25%. A copy of the local zoning requirements and supporting calculations have been provided. Additional supporting documentation includes a site plan depicting open space and a copy of a letter from the college declaring that the open space will be preserved for the life of the building. However, the submitted site plan and calculations exclude the parking lot.

TECHNICAL ADVICE: Please provide revised site plan drawings and calculations for this credit that utilize the same defined site area used for all other credits. In other words, the total site area defined for this credit must be utilized consistently across all other LEED credits.

Final Review Additional documentation consists of a revised site plan that includes the parking lot, thereby utilizing the same defined site area used for all other credits in the calculations of compliant open space.

1 [] [] [] [] [] Stormwater Management, Rate and Quantity Credit 6.1-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that the post-development 1.5 year, 24 hour peak discharge rate and quantity do not exceed pre-development conditions, based upon a declaration that the site's existing pre-development imperviousness was less than or equal to 50%. Supporting calculations and a narrative have been provided in the form of the project's "Drainage Report", demonstrating compliance via an infiltration pond that retains and infiltrates 100% of the runoff from a 1.5 year, 24-hour storm event.

1 [] [] [] [] [] Stormwater Management, Treatment Credit 6.2-Version 2.1

Preliminary Review: The signed LEED Letter Template has been submitted along with a narrative explanation that the local standard for stormwater treatment is more stringent than the EPA standard, and that the local standard has been followed. Supporting documentation in the form of the project's "Drainage Report", demonstrate compliance via pre-treatment devices (oil/water separators and sediment traps) and an infiltration pond that infiltrates and treats 100% of the runoff from a 1.5 year, 24-hour storm event.

1 [] [] [] [] [] Landscape & Exterior Design to Reduce Heat Islands, Non-Roof Surfaces Credit 7.1-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that a minimum of 30% of non-roof impervious surface areas will be shaded within five years, and/or constructed with light-colored/high albedo materials. Supporting documentation includes a site plan depicting paved areas and shaded areas, along with calculations utilizing a weighted average methodology, in accordance with SSC7.1 CIR Ruling dated 12/5/2001, to demonstrate compliance.

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A - Achieved
D - Denied

A D
Not Attempting

Landscape & Exterior Design by Refuse Heat Islands, Pool Surfaces

Credit 7.2-Version 2.1

Preliminary Review: No Comments.

1

Light Pollution Reduction

Credit 8-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that the project's exterior lighting has been designed according to the IESNA RP-33, as required by this credit. Supporting documentation includes a photometric site plan, lighting fixture cut sheets, and building sections. However, the photometric site plan appears to indicate light trespass beyond the campus property boundary to the south, but the site boundary is not clearly identified, and it could not be verified whether or not the fixture generating the light trespass was associated with the project's scope of work or construction contract. Also, compliance with the requirements for parking lots could not be verified.

TECHNICAL ADVICE: Please provide a revised photometric site plan (at a larger legible scale) that clearly depicts the project's site and campus boundaries. This photometric site plan should include point-by-point illuminance level calculations across the site (on a 10' grid) that extend 10 feet beyond the property line and/or site boundary lines and indicate the average footcandle (fc) value for the site. Please provide "line of sight illuminance" calculations (as described on pages 75-76 of the LEED-NC V2.1 Reference Guide) for all locations where horizontal fc values exceed zero at the site (campus) boundary and/or property line, demonstrating that calculated "line of sight illuminance" values comply with the limits indicated in Table 1 on page 70 of the LEED-NC V2.1 Reference Guide. Additionally, please provide the Environmental Zone designation for the site. Please note that it appears, from the submitted documentation, that the project likely is located in Zone E1 or E2, since Zone E4 (High Ambient Brightness Environmental Zone) is reserved exclusively for night-life entertainment districts in major city centers, and Zone E3 is defined as high density residential/commercial urban areas. Also, please provide another photometric plan for the project's parking lot, indicating average/minimum and maximum/minimum footcandle ratios in the parking lot area only in order to demonstrate compliance with the IESNA reference standard (IESNA RP-20 for parking lots, as referenced by IESNA RP-33).

Requirements Meet or provide lower light levels and uniformity ratios than those recommended by the Illuminating Engineering Society of North America (IESNA) Recommended Practice Manual: Lighting for Exterior Environments (RP-33-99). Design exterior lighting such that all exterior luminaires with more than 1000 initial lamp lumens are shielded and all luminaires with more than 3500 initial lamp lumens meet the Full Cutoff IESNA Classification. The maximum candela value of all interior lighting shall fall within the building (not out through windows) and the maximum candela value of all exterior lighting shall fall within the property. Any luminaire within a distance of 2.5 times its mounting height from the property boundary shall have shielding such that no light from that luminaire crosses the property boundary.

Submittals Provide the LEED Letter Template, signed by an appropriate party, declaring that the credit requirements have been met.

Final Review Additional documentation includes a revised photometric site plan that depicts point-by-point illuminance level calculations extending 10 feet beyond the germane property line along Country Club Drive. Horizontal fc values exceed zero only at the roadway entrance where safety issues exist, therefore the minimum illuminance levels indicated here are acceptable. The remaining LEED boundaries border on adjacent campus property, and thereby, in this case, can be exempted from potential light trespass, in accordance with SSc8 CIR Ruling dated 6/15/2004. However, a second submitted photometric plan for the project's parking lot indicates average/minimum and maximum/minimum footcandle ratios of 9.6:1 and 50:1, respectively, in the parking lot area. Both of these uniformity ratios significantly exceed (in one case by 2.5 times and the other by nearly double) the recommended illuminance values of the IESNA reference standard (table 1 of IESNA RP-20 for parking lots, as referenced by IESNA RP-33).

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A - Achieved
D - Denied

A	D		Possible Points
15	1	Energy & Atmosphere	15

0 Fundamental Building Systems Commissioning Prerequisite 1-Version 2.1
 Preliminary Review: The signed LEED Letter Template declares that the required commissioning (Cx) activities have been completed or are under contract. Supporting documentation includes copies of the project's mechanical systems basis of design narrative, commissioning specs, and commissioning plan.

0 Minimum Energy Performance Prerequisite 2-Version 2.1
 Preliminary Review: The signed LEED Letter Template declares that the project complies with ASHRAE 90.1-1999.

0 CFC Reduction in HVAC&R Equipment Prerequisite 3-Version 2.1
 Preliminary Review: The signed LEED Letter Template declares that the project's HVAC&R systems do not contain CFC-based refrigerants.

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A - Achieved
D - Denied

A	D
2	

Optimize Energy Performance, 20% New /10% Existing

Credit 1.1-Version 2.1

Preliminary Review: The signed LEED Letter Template, summary tables, and energy modeling output demonstrate a 58.3% savings between the design case and the budget case based on ASHRAE 90.1-1999. Energy efficiency measures include reduced lighting power density, occupancy sensors, daylighting controls, high efficiency glazing, displacement ventilation, evaporative cooling, a microturbine, demand controlled ventilation, thermal storage, waterside economizer, condensing boilers, chilled beams, variable volume lab hood exhaust, heat recovery and a photovoltaic array. The variety of energy efficiency measures applied to the project certainly pose modeling challenges. Additional details are needed to evaluate the modeling results.

TECHNICAL ADVICE:

1. Please provide a detailed description of the modeling methodology for the following technologies: evaporative cooling, microturbines (check the modeling procedures for consistency with the CHP modeling Guidelines available on the USGBC website), displacement ventilation system, chilled beams, and any other technology which has not been modeled directly by the software that required a "workaround" or other software to determine savings.
2. The comparative table and narrative compare center of glass U-Value in the proposed building to the whole unit U-Value in the budget building. Please confirm that the whole unit values have been used in both models. If not, please revise the modeling results.
3. Demand controlled ventilation is mentioned for the office areas. This measure must be modeled separately under Section 11.5 Exceptional Calculation Methods. Please provide a separate modeling run, a narrative explanation of the modeling procedure, and subtract the savings from the DEC like renewable energy on the ECB Table.
4. According to 90.1 Section 11.4.3j, the proposed and budget building must be within 50 hours of unmet loads. The budget building shows 1.2% outside throttling range (105 hours) while the proposed building shows 2.8% (245 hours). These values must be within 50 hours. Please revise the models so that they are in compliance.

Final Review According to 90.1 Section 11.4.3j, "Unmet load hours for the proposed design shall not differ from unmet load hours for the budget building design by more than 50 hours." We interpret this to refer to the entire building not each system within it. In most cases, but not all, the percentage of hours outside throttling range can be translated to the total number of hours, assuming that the systems are attempting to maintain set conditions for every hour of the year (not that they are running for every hour of the year). The 1% contained on the sample documentation is not an acceptable value to use for your submission. The information contained in the sample is for illustrative purposes only and is not a source of official interpretation regarding the enforcement of the EAc1 requirements. Projects should be within 0.6% (~52 hours) for their model to qualify. However, since this model is very close (0.7%), deals with difficult to model systems, and the change would not likely affect the number of points awarded, credit achievement can be confirmed.

2	
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Optimize Energy Performance, 30% New /20% Existing

Credit 1.2-Version 2.1

Preliminary Review: See EAc1.1.

TECHNICAL ADVICE: See EAc1.1.

Final Review See EAc1.1.

2	
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Optimize Energy Performance, 40% New /30% Existing

Credit 1.3-Version 2.1

Preliminary Review: See EAc1.1.

TECHNICAL ADVICE: See EAc1.1.

Final Review See EAc1.1.

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A - Achieved
D - Denied

A **D**
2 Optimize Energy Performance, 50% New /40% Existing Credit 1.4-Version 2.1
Preliminary Review: See EAc1.1.
TECHNICAL ADVICE: See EAc1.1.

Final Review See EAc1.1.

2 Optimize Energy Performance, 60% New /50% Existing Credit 1.5-Version 2.1
Preliminary Review: See EAc1.1.
TECHNICAL ADVICE: See EAc1.1.

Final Review See EAc1.1.

1 Renewable Energy, 5% Contribution Credit 2.1-Version 2.1
Preliminary Review: The signed LEED Letter Template declares that 10.1% of the building's regulated energy cost is provided by on-site renewable energy. A narrative describing the project's photovoltaic array and calculations demonstrate achievement.

1 Renewable Energy, 10% Contribution Credit 2.2-Version 2.1
Preliminary Review: See EAc2.1.

Not Attempting Renewable Energy 20% Contribution Credit 2.3-Version 2.1
Preliminary Review: No Comments.

1 Additional Commissioning Credit 3-Version 2.1
Preliminary Review: The signed LEED Letter Template declares that the required commissioning (Cx) activities have been completed or are under contract. Supporting documentation includes copies of three sets of DD and CD reviews with substantive comments.

1 Ozone Protection Credit 4-Version 2.1
Preliminary Review: The signed LEED Letter Template declares that the project's HVAC&R systems do not contain HCFCs or Halons.

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A - Achieved
D - Denied

A	D
<input type="checkbox"/>	<input checked="" type="checkbox"/>

Measurement & Verification

Credit 5-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that metering equipment has been installed for all appropriate systems. An M&V Plan, following Option D, also has been provided, but the submitted Plan does not adequately address the verification of savings. The Plan thoroughly covers the gathering of data to be used to calibrate the model. However, the purpose of calibrating the model is to reconcile this with the building's utility bills. Accordingly, adjustments to modeling input, such as weather data and schedules, are absolutely necessary to the calibration effort. The Plan, as written, is essentially a modeling exercise and will not result in a verification of actual savings.

TECHNICAL ADVICE: Please provide a revised M&V Plan which calibrates the model to the actual utility bills. In order to comply with credit requirements of Option D, the M&V Plan must contain a detailed description of the following: the prediction of savings through the energy model and water calculations, the gathering of data to verify the inputs into the models (this includes sub-metering, surveys, etc), the modeling calibration procedures, the procedure to reconcile the modeling results with utility bills, the creation of an adjusted baseline, and an action plan if the savings are not achieved.

Requirements Install continuous metering equipment for the following end-uses: Lighting systems and controls; Constant and variable motor loads; Variable frequency drive (VFD) operation; Chiller efficiency at variable loads (kW/ton); Cooling load; Air and water economizer and heat recovery cycles; Air distribution static pressures and ventilation air volumes; Boiler efficiencies Building-related process energy systems and equipment; Indoor water risers and outdoor irrigation systems; Develop a Measurement and Verification plan that incorporates the monitoring information from the above end-uses and is consistent with Option B, C or D of the 2001 International Performance Measurement & Verification Protocol (IPMVP) Volume I: Concepts and Options for Determining Energy and Water Savings.

Submittals Provide the LEED Letter Template, signed by the licensed engineer or other responsible party, indicating that metering equipment has been installed for each end-use and declaring the option to be followed under IPMVP version 2001. Provide a copy of the M&V plan following IPMVP, 2001 version, including an executive summary.

Final Review A narrative has been provided to address the preliminary review comments. The M&V Plan has not been modified, as requested.

The primary purpose of an M&V effort is to verify actual energy savings. Option D requires that the energy model "must be 'calibrated' so that it predicts an energy use and demand pattern that reasonably matches actual utility consumption and demand data from either a base year or a post-retrofit year." This language is taken directly from the IPMVP: Volume 1, January 2001 on page 31.

Further, Option D can be used to assess the performance of individual systems if they can be isolated. This facility has numerous, interactive EEMs that would not possibly enable their isolation.

The item in Table 1, quoted from the v2.1 Reference Guide, needs to be considered within the full explanation of Option D in the IPMVP. Calibration to end use metering is appropriate if the EEMs can be isolated. Regarding the point raised in the second paragraph of the project team's response, while the IPMVP was originally written for retrofits, it routinely is applied to new construction and the savings based on 12 months of actual utility billing data. Once the energy model has been calibrated and reconciled with the utility bills (to within an acceptable tolerance), a new budget model is created from the calibrated model. The difference between the two models is the verified savings. The budget building is not calibrated; rather, the original budget model is discarded, and the new budget model is used for the calculation of actual savings based on post-retrofit data.

The IPMVP further states that actual weather data should be used where it varies from the average year weather data used in the original simulation, and the Plan explicitly states that weather data will not be modified in the calibration.

The M&V Plan, as outlined, will really result only in a more accurate predictor of savings than the original model, but it will not serve to determine actual energy savings according to the IPMVP, thereby not meeting the intent of the credit to provide "ongoing accountability and optimization of building energy and water consumption performance over time."

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A - Achieved
U - Unmet

A D
1 0

Green Power

Credit 6-Version 2.1

Preliminary Review. The signed LEED Letter Template declares that 50% of the building's regulated electric usage is supplied by renewable power that meets the definition of Green-e. A copy of the project's two-year electricity purchase contract from Sterling Planet has been provided. The total quantity of this purchase is 642,000 kWh. It is unclear from the modeling results submitted for EA c1, though, what has been included in the regulated electrical usage. This usage should include the electrical consumption by the building (including the electricity generated by the microturbine) minus the non-regulated electrical loads.

TECHNICAL ADVICE: Please provide a narrative explanation of what has been included in the regulated electric usage and utilized as the basis for this purchase. Keep in mind that a change in the modeling results could change the quantity required for this purchase.

Final Review A narrative has been provided which addressed the basis for the green power purchase. Calculations demonstrate a purchase in excess of 100% of the regulated electrical use.

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A - Achieved
D - Denied

A	D	Possible Points
<input checked="" type="checkbox"/>	<input type="checkbox"/>	7

Points	Material	Description	Prerequisite
0	<input type="checkbox"/>	Storage & Collection of Recyclables Preliminary Review: The signed LEED Letter Template indicates that appropriate facilities for recycling have been provided. Recycling areas are indicated on a submitted partial floor plan, and a narrative explaining the College's recycling program also is included.	Prerequisite 1-Version 2.1
Not Attempting	<input type="checkbox"/>	Storage Review: Meet or Exceed 75% of Existing Floor Preliminary Review: No Comments.	Credit 1.1-Version 2.1
Not Attempting	<input type="checkbox"/>	Building Woods: Meet or Exceed 100% of 2.1.1 Preliminary Review: No Comments.	Credit 1.2-Version 2.1
Not Attempting	<input type="checkbox"/>	Building Woods: Meet or Exceed 100% of 2.1.1 and 2.1.2 Preliminary Review: No Comments.	Credit 1.3-Version 2.1
1	<input type="checkbox"/>	Construction Waste Management, Divert 50% Preliminary Review: The signed LEED Letter Template declares that 86.52% of project construction waste was diverted from landfill disposal. Supporting documentation includes a copy of the project's Construction Waste Management Plan, the project's waste disposal summary log, waste hauling invoices, and recycling facility receipts.	Credit 2.1-Version 2.1
1	<input type="checkbox"/>	Construction Waste Management, Divert 75% Preliminary Review: See MRc2.1.	Credit 2.2-Version 2.1
Not Attempting	<input type="checkbox"/>	Reclaimed Water: Specify 5% Preliminary Review: No Comments.	Credit 3.1-Version 2.1
Not Attempting	<input type="checkbox"/>	Reclaimed Water: Specify 10% Preliminary Review: No Comments.	Credit 3.2-Version 2.1
1	<input type="checkbox"/>	Recycled Content, Specify 5% Preliminary Review: The signed LEED Letter Template and supporting calculations declare that the project has achieved a combined recycled content value of 25.83% of the total materials by cost. Supporting documentation includes an expanded spreadsheet listing of the project's materials and their recycled content, along with product data indicating post-consumer and/or post-industrial recycled content and invoices documenting product costs for the materials listed in the spreadsheet.	Credit 4.1-Version 2.1
1	<input type="checkbox"/>	Recycled Content, Specify 10% Preliminary Review: See MRc4.1.	Credit 4.2-Version 2.1

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A - Achieved
B - Denied

A		D			Possible Points / 3
14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Indoor Environmental Quality	

0 Minimum IAQ Performance Prerequisite 1-Version 2.1
Preliminary Review: The signed LEED Letter Template has been provided declaring that the requirements of ASHRAE 62-1999 have been met. Documentation describing the ventilation rate procedure calculations has been provided.

0 Environmental Tobacco Smoke (ETS) Control Prerequisite 2-Version 2.1
Preliminary Review: The signed LEED Letter Template has been provided declaring that no smoking is allowed in the building and outdoor smoking areas are located away from operable windows and entryways. Supporting documentation includes a site plan depicting the location of the designated smoking area and a copy of the college's smoking policy.

1 Carbon Dioxide (CO2) Monitoring Credit 1-Version 2.1
Preliminary Review: The signed LEED Letter Template declares that a CO2 monitoring system has been installed. A narrative and calculations are provided indicating that the sensors are placed in each zone with differential set points ranging from 500 to 650 ppm above ambient, which was calculated based on 20 to 30 cfm/person, depending upon type of use. Supporting documentation includes cut sheets of the CO2 sensors and HVAC floor plans depicting sensor locations.

1 Increase Ventilation Effectiveness Credit 2-Version 2.1
Preliminary Review: The signed LEED Letter Template with the completed Ventilation Effectiveness Table declares that the design achieves an air-change effectiveness of 0.9 or greater in each mechanically ventilated zone, as determined by ASHRAE 129-1997. A submitted narrative describes the project's displacement ventilation system via floor diffusers in offices/classrooms and via low wall-mounted diffusers for the mixing system in laboratories. Supporting documentation includes ventilation effectiveness tables, ADPI calculations, floor plan and section drawings depicting air flow patterns in typical spaces, specifications for diffusers and grilles, and air diffuser cut sheets, and diffuser performance data.

1 Construction IAQ Management Plan, During Construction Credit 3.1-Version 2.1
Preliminary Review: The signed LEED Letter Template declares that a construction IAQ plan was followed and implemented, that filters with a MERV 13 rating were installed during construction, and that filters with a MERV 13 rating were installed after construction. Supporting documentation includes a copy of the project's Construction IAQ Management Plan, photographs and descriptions of the SMACNA approaches followed, a sample copy of an IAQ Management tracking Log, and product data for the filtration media.

1 Construction IAQ Management Plan, Before Occupancy Credit 3.2-Version 2.1
Preliminary Review: The signed LEED Letter Template declares that a two week building flush out was conducted with 100% outside air from 8/12/2006 - 9/11/2006. A brief narrative is provided, describing the use of MERV 13 filters and compliance with the air change requirements described in EQc3.2 CIR dated 9/8/2004.

1 Low-Emitting Materials, Adhesives & Sealants Credit 4.1-Version 2.1
Preliminary Review: The signed LEED Letter Template declares the use of compliant adhesives and sealants. A list of all interior field-applied adhesives and sealants utilized for the project has been provided, along with manufacturer's product data indicating compliant VOC levels for each listed product.

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A - Achieved
D - Denied

- | A | D | | Credit |
|---|---|--|-----------------|
| 1 | 0 | <p>Low-Emitting Materials, Paints</p> <p>Preliminary Review: The signed LEED Letter Template declares that all paints, including topcoats and primers, meet the VOC requirements of Green Seal. A list of all interior field-applied paints and coatings, including primers, utilized for the project has been provided, along with manufacturer's product data indicating compliant VOC levels for each listed product.</p> | 4.2-Version 2.1 |
| 1 | 0 | <p>Low-Emitting Materials, Carpet</p> <p>Preliminary Review: The signed LEED Letter Template declares that the project uses carpeting that complies with the CRI Green Label Program. A list of all carpet systems used in the project has been provided, along with manufacturer's product data indicating that all carpet products meet the CRI Green Label IAQ Test Program requirements.</p> | 4.3-Version 2.1 |
| 1 | 0 | <p>Low-Emitting Materials, Composite Wood</p> <p>Preliminary Review: The signed LEED Letter Template declares that all composite wood and agrifiber products used in the project do not contain added urea-formaldehyde. A list of composite wood products has been provided, along with manufacturer's product data indicating that all listed products contain no added urea formaldehyde resins.</p> | 4.4-Version 2.1 |
| 1 | 0 | <p>Indoor Chemical and Pollutant Source Control</p> <p>Preliminary Review: The signed LEED Letter Template declares that the requirements of the credit have been met. Supporting documentation includes a narrative that describes compliant copy rooms, along with a permanent entryway system cut sheet, a floor plan indicating the location of these walk-off systems, floor plans depicting chemical use spaces, drawings indicating compliant partition types, and a copy of an email describing plumbing disposal capabilities in lab spaces.</p> | 5-Version 2.1 |
| 1 | 0 | <p>Controllability of Systems, Perimeter</p> <p>Preliminary Review: The signed LEED Letter Template and calculations have been provided declaring that all regularly occupied perimeter spaces have been provided with operable windows and lighting controls as required by this credit. Supporting documentation includes a narrative, Lighting floor plans depicting controls, floor plans indicating the 15' offset line, and a summary spreadsheet of all spaces that tabulates their perimeter/non-perimeter status, their area, operable windows, and the number of controls provided.</p> | 6.1-Version 2.1 |
| 1 | 0 | <p>Controllability of Systems, Non-perimeter</p> <p>Preliminary Review: The signed LEED Letter Template and calculations have been provided declaring that all regularly occupied non-perimeter spaces have been provided with airflow, ventilation, and lighting controls as required by this credit. Supporting documentation includes a narrative, HVAC and Lighting floor plans depicting controls, floor plans indicating the 15' offset line, and a summary spreadsheet of all spaces that tabulates their perimeter/non-perimeter status, their area, and the number of controls provided.</p> | 6.2-Version 2.1 |
| 1 | 0 | <p>Thermal Comfort, Compliance with ASHRAE 55-1992</p> <p>Preliminary Review: No signed LEED Letter Template has been provided. However, the information on temperature and humidity control ranges required by the letter template has been provided for all thermally controlled zones in a submitted Thermal Comfort Table spreadsheet, demonstrating compliance.</p> | 7.1-Version 2.1 |

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A - Achieved
D - Denied

A D

1

Thermal Comfort, Permanent Monitoring System

Credit 7.2-Version 2.1

Preliminary Review: No signed LEED Letter Template has been provided. Submitted HVAC floor plans indicate the locations of thermostats.

TECHNICAL ADVICE: Please provide the required signed LEED Letter Template declaring that a permanent temperature and humidity monitoring system that operates during all seasons has been installed in accordance with credit requirements. Please provide drawings, specifications and cut sheets highlighting the installed permanent temperature and humidity monitoring system. Include a narrative describing measurement points (trending or logging data) and operator interface. Also, please provide an excerpt from the commissioning specifications indicating that these controls are covered in the scope of work for EAp1.

Final Review

A signed LEED Letter Template has been provided, declaring a permanent temperature and humidity monitoring system that operates during all seasons has been installed in accordance with credit requirements. Additional documentation includes HVAC floor plan drawings and cut sheets highlighting the installed permanent temperature and humidity monitoring system components, along with excerpts from the commissioning specifications indicating that these controls are covered in the scope of work for EAp1. Operator interface information is provided in the documentation submitted for EAc5. It should be noted that contrary to the submitted narrative, documentation of operator interface is required to earn this credit; otherwise, it cannot be demonstrated that the monitoring system is "configured to provide operators control over thermal comfort performance" and system effectiveness, as described in the credit requirements.

1

Daylight and Views, Daylight 75% of Spaces

Credit 8.1-Version 2.1

Preliminary Review: The signed LEED Letter Template, drawings, and calculations declare that 91.9% of critical visual task areas have direct access to views of the outdoors.

Not Applicable

Daylight and Views, Views for 75% of Spaces

Credit 8.2-Version 2.1

Preliminary Review: No Comments.

Tahoe Center for Environmental Sciences
Sierra Nevada College

LEED Project 10001314
Final LEED v2 Review
LEED™ Certification
5/2/2007

A - Achieved
D - Denied

A		D			Possible Points
5	<input type="checkbox"/>	<input type="checkbox"/>		Innovation & Design Process	

1 Exemplary Performance for MRc4 Credit 1.1-Version 2.1

Preliminary Review: The signed LEED Letter Template and supporting calculations submitted for MRc4 indicate that the project has achieved a combined recycled content value of 25.83% of the total materials by cost, which demonstrates that more than the next incremental threshold of 15% was achieved.

1 Exemplary Performance for MRc5.1 Credit 1.2-Version 2.1

Preliminary Review: The signed LEED Letter Template and supporting calculations submitted for MRc5.1 indicate that at least 46.29% of the total project's materials were manufactured within 500 miles of the project site, which demonstrates that more than double the credit threshold was achieved.

1 Exemplary Performance for EA c6 Credit 1.3-Version 2.1

Preliminary Review: The project team seeks an innovation credit for exemplary performance relative to EA c6, by providing green power for 100% of the building's regulated electric usage. Achievement is pending the submission of supplemental documentation requested in the comments for EA c6.

TECHNICAL ADVICE: See EA c6.

Final Review The project team seeks an innovation credit for exemplary performance relative to EA c6, by providing green power for 100% of the building's regulated electric usage, which is demonstrated by the documentation submitted for EA c6.

1 Exemplary Performance for WEc3 Credit 1.4-Version 2.1

Preliminary Review: The Letter Template calculations and supporting documentation submitted for WEc3 demonstrate a 65.23% potable water use reduction, thereby earning exemplary performance by achieving the next incremental threshold of at least 40% water use reduction.

1 LEED™ Accredited Professional Credit 2-Version 2.1

Preliminary Review: The signed LEED Letter Template declares that the project's LEED Consultant, Sally (Sarah) Blair, served as the project's LEED Accredited Professional and as a principal participant of the project team. A copy of her LEED Accredited Professional Certificate has been provided.