LEED CERTIFICATION PROJECT REVIEW REPORT

How to Interpret this Report

Purpose

Leadership in Energy and Environmental Design (LEED) was designed by the US Green Building Council to encourage and facilitate the development of more sustainable buildings.

This report contains LEED certification review results for the specified project. The review was performed by the Certification Body through the Green Building Certification Institute.

Project Details

Project Title	UCSD Telemedicine and PRIME-Heq
Project ID	1000003532
Rating System & Version	LEED-NC v2009
Project Registration Date	12/29/2009
Certification Body	LEED Review Tea
Current Project Status	Construction Application Decision

Review Overview Details

Review Stage Name	Date Submitted	Date Returned	Credits Submitted	Points Anticipated/ Awarded	Points Pending	Points Denied
Design Preliminary Review	11/04/10	12/20/10	25	22	16	
Design Final Review	01/17/11	02/15/11	11	16		
Construction Preliminary Review	03/12/12	04/13/12	23	17	2	
Construction Final Review	06/12/12	07/02/12	9	22		
Current Totals	**n/a**	**n/a**	**68**	**77**	**18**	**0**

Certification Levels: Certified: 40-49, Silver: 50-59, Gold: 60-79, Platinum: 80+

Review Stage Details

Design Preliminary Review: **Submitted: 11/04/10** **Returned: 12/20/10**

Credit	Credit Status	Points Attempted	Points Awarded	Points Pending	Points Denied
PIf1: Minimum Program Requirements	Approved				
PIf2: Project Summary Details	Approved				
PIf3: Occupant and Usage Data	Approved				
PIf4: Schedule and Overview Documents	Approved				
SSc1: Site Selection	Anticipated	2	2		
SSc2: Development Density and Community Connectivity	Anticipated	5	5		
SSc3: Brownfield Redevelopment	Anticipated	1	1		

SSc4.1: Alternative Transportation-Public Transportation Access	Anticipated	7	7		
SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms	Anticipated	1	1		
SSc4.4: Alternative Transportation-Parking Capacity	Anticipated	2	2		
SSc5.2: Site Development-Maximize Open Space	Pending	1		1	
WEp1: Water Use Reduction, 20% Reduction	Pending				
WEc3: Water Use Reduction	Pending	2		2	
EAp2: Minimum Energy Performance	Pending				
EAc1: Optimize Energy Performance	Pending	10		10	
MRp1: Storage and Collection of Recyclables	Anticipated				
IEQp1: Minimum Indoor Air Quality Performance	Anticipated				
IEQp2: Environmental Tobacco Smoke (ETS) Control	Anticipated				
IEQc1: Outdoor Air Delivery Monitoring	Anticipated	1	1		
IEQc2: Increased Ventilation	Pending	1		1	
IEQc6.1: Controllability of Systems-Lighting	Anticipated	1	1		
IEQc6.2: Controllability of Systems-Thermal Comfort	Anticipated	1	1		
IEQc7.1: Thermal Comfort-Design	Pending	1		1	
IDc1.3: Innovation in Design SSc5.2	Pending	1		1	
IDc1.5: Innovation in Design - Double Transit Ridership	Anticipated	1	1		
Totals for Design Preliminary Review	**n/a**	**38**	**22**	**16**	**0**

Design Final Review:	**Submitted: 01/17/11**		**Returned: 02/15/11**		
Credit	**Credit Status**	**Points Attempted**	**Points Anticipated**	**Points Pending**	**Points Denied**
PIf1: Minimum Program Requirements	Approved				
PIf2: Project Summary Details	Approved				
PIf3: Occupant and Usage Data	Approved				
PIf4: Schedule and Overview Documents	Approved				
SSc5.2: Site Development-Maximize Open Space	Anticipated	1	1		
WEp1: Water Use Reduction, 20% Reduction	Anticipated				
EAp2: Minimum Energy Performance	Anticipated				
EAc1: Optimize Energy Performance	Anticipated	10	13		
IEQp1: Minimum Indoor Air Quality Performance	Anticipated				
IEQc2: Increased Ventilation	Anticipated	1	1		

IEQc7.1: Thermal Comfort-Design	Anticipated	1	1		
Totals for Design Final Review	**n/a**	**13**	**16**	**0**	**0**

Construction Preliminary Review:	**Submitted: 03/12/12**		**Returned: 04/13/12**		
Credit	**Credit Status**	**Points Attempted**	**Points Awarded**	**Points Pending**	**Points Denied**
PIf1: Minimum Program Requirements	Approved				
PIf2: Project Summary Details	Approved				
PIf3: Occupant and Usage Data	Approved				
PIf4: Schedule and Overview Documents	Approved				
SSp1: Construction Activity Pollution Prevention	Awarded				
SSc5.1: Site Development-Protect or Restore Habitat	Awarded	1	1		
SSc7.2: Heat Island Effect, Roof	Awarded	1	1		
WEc3: Water Use Reduction	Awarded	2	2		
EAp1: Fundamental Commissioning of the Building Energy Systems	Pending				
EAp3: Fundamental Refrigerant Management	Awarded				
EAc6: Green Power	Awarded	2	2		
MRc2: Construction Waste Management	Awarded	1	2		
MRc4: Recycled Content	Pending	1		1	
IEQc3.1: Construction IAQ Management Plan-During Construction	Awarded	1	1		
IEQc3.2: Construction IAQ Management Plan-Before Occupancy	Awarded	1	1		
IEQc4.1: Low-Emitting Materials-Adhesives and Sealants	Awarded	1	1		
IEQc4.2: Low-Emitting Materials-Paints and Coatings	Awarded	1	1		
IEQc4.4: Low-Emitting Materials-Composite Wood and Agrifiber Products	Awarded	1	1		
IEQc7.2: Thermal Comfort-Verification	Awarded	1	1		
IDc1.2: Innovation in Design: Double Green Power	Awarded	1	1		
IDc1.3: Innovation in Design SSc5.2	Awarded	1	1		
IDc2: LEED® Accredited Professional	Awarded	1	1		
Totals for Construction Preliminary Review	**n/a**	**17**	**17**	**1**	**0**

Construction Final Review:	**Submitted: 06/12/12**		**Returned: 07/02/12**		
Credit	**Credit Status**	**Points Attempted**	**Points Awarded**	**Points Pending**	**Points Denied**

PIf1: Minimum Program Requirements	Approved				
PIf2: Project Summary Details	Approved				
PIf3: Occupant and Usage Data	Approved				
PIf4: Schedule and Overview Documents	Approved				
EAp1: Fundamental Commissioning of the Building Energy Systems	Awarded				
EAp2: Minimum Energy Performance	Awarded				
EAc1: Optimize Energy Performance	Awarded	10	15		
EAc2: On-Site Renewable Energy	Awarded	2	5		
MRc4: Recycled Content	Awarded	1	2		
Totals for Construction Final Review	**n/a**	**13**	**22**	**0**	**0**

Credit Details

PIf1: Minimum Program Requirements

Credit Status	Approved		
Credit Type			

Construction Final Review and Construction Preliminary Review and Design Final Review and Design Preliminary Review Comments:

This LEED Project Information Form was previously approved during the Design Preliminary Review phase. No changes have been made. This LEED Project Information Form was previously approved during the Design Preliminary Review phase. No changes have been made. This LEED Project Information Form was previously approved during the Preliminary Review Phase. No changes have been made. The LEED Project Information Form has been submitted stating that the project complies with all Minimum Program Requirements. The project owner has signed the form, as required. The project is located in La Jolla, CA.

PIf2: Project Summary Details

Credit Status	Approved		
Credit Type			

Construction Final Review and Construction Preliminary Review and Design Final Review and Design Preliminary Review Comments:

This LEED Project Information Form was previously approved during the Design Preliminary Review phase. No changes have been made. This LEED Project Information Form was previously approved during the Design Preliminary Review phase. No changes have been made. This LEED Project Information Form was previously approved during the Preliminary Review Phase. No changes have been made. The LEED Project Information Form has been submitted including the following project summary details. There is one building inthis LEED application with a total gross square footage of 102,728 square feet in the urban context. The building was originally constructed in 2010 with 102,728 square feet of new construction. The total site area within the LEED project boundary is 119,540 square feet, and the building area to site area ratio is 85.94%. The project building is located on a campus. There are 3 floors above grade and 1 floor below grade (excluding parking levels). The site was previously developed. It uses energy from electricity, campus heating, and campus cooling. It uses water from a municipal potable water system. The sewage is conveyed to a municipal sewer system. The total project budget is $49,000,000.

PIf3: Occupant and Usage Data

Credit Status	Approved		
Credit Type			

Construction Final Review and Construction Preliminary Review and Design Final Review and Design Preliminary Review

Comments:

This LEED Project Information Form was previously approved during the Design Preliminary Review phase. No changes have been made. This LEED Project Information Form was previously approved during the Design Preliminary Review phase. No changes have been made. This LEED Project Information Form was previously approved during the Preliminary Review Phase. No changes have been made. The LEED Project Information Form has been submitted including the following occupant and usage data. The occupant is a state government and profit organization and has an occupant type that consists primarily of Core Learning Space: College / University. The average FTE value is 295, the average and peak transient occupancy is 982, the average project building users value is 882, and the building is occupied 365 days per year. The project owner manages and owns the project building.

Plf4: Schedule and Overview Documents

Credit Status	Approved		
Credit Type			

Construction Final Review and Construction Preliminary Review and Design Final Review and Design Preliminary Review Comments:

This LEED Project Information Form was previously approved during the Design Preliminary Review phase. No changes have been made. This LEED Project Information Form was previously approved during the Design Preliminary Review phase. No changes have been made. This LEED Project Information Form was previously approved during the Preliminary Review Phase. No changes have been made. The LEED Project Information Form has been submitted including the design and construction schedule, and the estimated date ofoccupancy is noted as November 1, 2011. The following required documents have been uploaded: representative exterior and interior renderings, interior photograph, floor plans, mechanical floor plans, wall sections, elevations, details, mechanical schedules, and individual site plans. Additionally, the online map and the HVAC and general project narratives have been provided.

SSp1: Construction Activity Pollution Prevention

Credit Status	Awarded		
Credit Type	Construction		

Construction Preliminary Review Comments:

The LEED Prerequisite Form has been provided stating that the project has implemented an Erosion and Sedimentation Control (ESC) Plan that conforms to local standards and codes. The requirements of the local standards and codes are more stringent than the National Pollutant Discharge Elimination System (NPDES) program requirements. The narrative has been provided describing how the local erosion and sedimentation control standards are equal to or more stringent than the requirements of Phase I and Phase II of the NPDES program, as required. The ESC Plan addresses the necessary requirements to prevent soil loss, sedimentation, and pollution of the air, as required. The periodic inspection log has been provided to confirm that the ESC Plan was implemented appropriately. The periodic inspection log confirms that at least three inspections occurred at intervals spaced evenly throughout the site work period and includes sample dates, inspection frequency, and descriptions of any corrective actions taken. The ESC Plan drawing has also been provided.

SSc1: Site Selection

Credit Status	Awarded	**Points Attempted**	2
Credit Type	Design	**Points Awarded**	2

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that the project site does not meet any of the prohibited criteria.

SSc2: Development Density and Community Connectivity

Credit Status	Awarded	**Points Attempted**	5
Credit Type	Design	**Points Awarded**	5

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that the project site is located within one half mile of 10 community services and a residential district with a minimum density of 10 units per acre. Additionally, a listing of the neighborhood services hasbeen provided on the form. The required site map showing the one half mile radius and the locations of the community services and residential district has also been provided.

SSc3: Brownfield Redevelopment

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that the site has been documented as contaminated by a Phase II Environmental Site Assessment. A detailed narrative has been provided describing the environmental site analysis and remediation efforts undertaken prior to construction of the project. Additionally, the project’s Asbestos Survey Report and Asbestos Clearance Report have also been provided.

SSc4.1: Alternative Transportation-Public Transportation Access

Credit Status	Awarded	**Points Attempted**	7
Credit Type	Design	**Points Awarded**	7

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that the project is served by 5 bus lines within 0.25 miles of the project site.; A scaled drawing has been provided showing the location of the transit stop and walking paths. Bus route schedules and a siteplan have also been provided.

SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that the project includes commercial / institutional spaces. The form states that bicycle storage facilities have been provided to serve at least 5% of FTE and Transient building occupants, measured at peak occupancy, and shower facilities for at least 0.5% of the FTE building occupants. Plans have been provided showing the location of the shower/changing facilities and the bicycle storage facilities.

SSc4.4: Alternative Transportation-Parking Capacity

Credit Status	Awarded	**Points Attempted**	2
Credit Type	Design	**Points Awarded**	2

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that no new parking has been added to the site. The form has been signed by the project owner, as required.

SSc5.1: Site Development-Protect or Restore Habitat

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that, prior to development of this LEED-NC project, the site was previously developed; therefore, the project applies Case 2. The project has restored or protected 65,819,160 square feet using native or adapted vegetation, which is equal to 64.21% of the total project site area including the building footprint. As the total project site including the LEED-NC building footprint is greater, a minimum of 20% of the site must be restored or protected. Narrativeshave been provided indicating that the project is applying a campus approach for this credit. Plans, a plant list, and a Biological Resources Technical Report have been provided.

SSc5.2: Site Development-Maximize Open Space

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Design Final Review and Design Preliminary Review Comments:

The LEED Credit Form narrative, credit narratives for other projects in the campus, a copy of the SSc5.2 LEED Submittal Template for project #10297749 Muir College Apartments, the Review Summary for project #10297749 Muir College Apartments, and copies of the long range development

plan description and contracts have been provided to address the issues outlined in the Preliminary Review comments. The documentation demonstrates credit compliance. The LEED Credit Form has been provided stating that this credit has been attempted on a campus wide basis and has been previously approved during the review of the campus prototype project (UCSD Campus Services Complex, Project #10165695). Additionally, a narrative describing the credit approach for the UCSD Campus Services Complex, floor plans, a site plan and the UCSD Long Range Development Plan Update documentation have been provided. However, additional information is required when pursuing a prototype credit. TECHNICAL ADVICE: Please provide the following: 1. A copy of the Review Summary for the project in which the prototype credit was first awarded (#10165695). 2. A copy of the site plan for the project in which the prototype credit was first awarded (#10165695), demonstrating that the current LEED project(#1000003532) is within the scope of the prototype credit.

SSc7.2: Heat Island Effect, Roof

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that a weighted average of 126% of the base building roof surface has a Solar Reflectance Index of at least 78; therefore, the project complies with Option 1. A minimum of 75% of the roof must have a minimumSRI of 78. The table listing the compliant SRI roofing materials, a roof plan, and manufacturers` documentation for the installed roofing materials have been provided.

WEp1: Water Use Reduction, 20% Reduction

Credit Status	Awarded		
Credit Type	Design		

Design Final Review and Design Preliminary Review Comments:

The LEED Prerequisite Form has been revised to address the issues outlined in the Preliminary Review comments, demonstrating that the project has reduced potable water usage by 30% from a calculated baseline case. In addition, the fixture family for SK-2has been revised to be for a kitchen sink. The documentation demonstrates prerequisite compliance. The LEED Prerequisite Form has been provided stating that the project has reduced potable water use by 34.25% from a calculated baseline design through theinstallation of low-flow water closets, low-flow urinals, low-flow lavatories, low-flow kitchen sinks, and low-flow showers. Product specifications and a fixture schedule have been provided highlighting flush and flow rates for all applicable plumbing fixtures and fittings within the project building. However, the form indicates that 100% of male restrooms contain urinals (412.4 Uses). Based on the floor plans provided in the general submittal documentation, there appear to be unisex restrooms / shower restrooms on Level 1 that does not contain urinals. Furthermore, the fixture family indicated for SK-2 is a private lavatory faucet. The narrative states that this fixture SK-2 is a kitchen sink fixture. TECHNICAL ADVICE: Please confirm the percentage of male/unisex restrooms with urinals and revise the form as necessary. Additionally, revise the fixture family on the form for SK-2 to kitchen sink. Note that the Private Lavatory category may only be used in residential applications.

WEc3: Water Use Reduction

Credit Status	Awarded	**Points Attempted**	2
Credit Type	Design	**Points Awarded**	2
Threshold Attempted			

30% Reduction 2 points

Construction Preliminary Review and Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that the project has reduced potable water use by 30% from the calculated baseline design fixture performance. A minimum reduction of 30% is required. The documentation demonstrates credit compliance for onepoint. The LEED Credit Form has been provided stating that the project has reduced potable water use by 34.25% from a calculated baseline design through the installation of low-flow water closets, low-flow urinals, low-flow lavatories, low-flow kitchen sinks, and low-flow showers. However, WEp1: Water Use Reduction 20% is pending clarifications. TECHNICAL ADVICE: Please provide the requested clarifications for WEp1 and resubmit this credit.

EAp1: Fundamental Commissioning of the Building Energy Systems

Credit Status	Awarded		
Credit Type	Construction		

Construction Final Review and Construction Preliminary Review Comments:

The revised LEED Prerequisite Form has been provided to address the issues outlined in the Preliminary Review comments and the required signatories for the Commissioning Agent have been signed by the Commissioning Agent, as required. The documentation demonstrates prerequisite compliance. The LEED Prerequisite Form has been provided stating that the Fundamental Commissioning Report for the project energy-related systems has been completed. The required commissioning authority experience of the Commissioning Agent has been provided, and the documentation confirms that the Owner`s Project Requirements (OPR) and Basis of Design (BOD) are consistent with the final construction documentation and completed project. The Owner has signed the form. The Executive Summary of the Commissioning Report has been provided including a list of the commissioned systems and a summary of corrected issues. Test reports, a pre-functional inspection log, and the Commissioning Plan have also been provided. However, the required signatories for the Commissioning Agent within the form have been signed by the Owner. TECHNICAL ADVICE: Please provide a revised form with the required signatory. Note that the team member must be designated the proper role in the Team Administration tabin LEED Online and must be logged in with his or her own account when signing the form. If circumstances preclude the appropriate, technically-qualified team member from completing the required signatory, the Project Owner, Project Team Administrator, orProject Manager may instead complete the Non-Owner signatory. In this case, submit a clear narrative explaining the reasoning behind the signatory substitution, including how the prerequisite or credit information was verified, as well as any other supporting documentation that may be relevant.

EAp2: Minimum Energy Performance

Credit Status	Awarded		
Credit Type	Design		

Construction Final Review and Design Final Review and Design Preliminary Review Comments:

The revised LEED Prerequisite Form has been provided to address the addition of a photovoltaic system in the actual design, stating that the project has achieved an energy cost savings of 41.79% using the ASHRAE Standard 90.1-2007, Appendix G methodology. The energy consumption for the Proposed case has been revised to 1,036,776 kWh (electricity) and 15,092 therms (natural gas). The documentation demonstrates prerequisite compliance. The LEED Prerequisite Form has been revised to address the issues outlined in the Preliminary Review comments and states a 37.0% energy cost savings using the ASHRAE 90.1-2007 Appendix G methodology. Additional documentation that consists of a narrative response to the preliminary review comments, updated simulation output summary files, input summaries, and revised modeling results have been provided. ;The documentation demonstrates compliance with the requirements of this prerequisite.; The energy consumption in the proposed case is 1,136,776 kWh per year electricity and 15,092 therms per year natural gas. The LEED Prerequisite form and supporting documentation have been provided stating that the project has achieved an energy cost savings of 36.98% using the Title-24 2005 methodology. In addition, the project team has provided the Section 1.4 Table, the Process Load narrative, simulation output summary files and input summaries. Energy efficiency measures include an improved thermal envelope, high efficiency glazing, reduced interior lighting power density, reduced exterior lighting power, demand control ventilation, high efficiency service water heaters and VAV air handling units. However, several issues must be addressed for the final review. Please see the following 6 comments. TECHNICAL ADVICE: Please provide revised energy models, prerequisite form, and supporting documentation in the form of compliance reports and/or input and output summaries, including at minimum, the ECON-1, PERF-1, and UTIL-1 reports from the simulation program demonstrating that the following issues have been corrected. In addition, please provide a response narrative to each of the review comments and a narrative to describe any changes made in addition to the review comments. Additionally, please leave the original documentation uploaded in azip file titled EAc1 Preliminary Review Submittal.zip in LEED Online for comparison in the next review phase. 1.;The project team did not provide the PERF-1, UTIL-1, and ECON-1 Title-24 2005 reports as required by the Title-24 equivalence document (http://www.usgbc.org/ShowFile.aspx?DocumentID=2255) if using EnergyPro. In addition, it is unclear if the energy models were simulated in compliance mode as required by the Title-24 equivalence document. The UTIL-1 and ECON-1 reports which indicate that the energy models were simulated in Compliance mode were not provided. If using the Title-24 Standard as the energy code, the energy models must be simulated in compliance mode to ensure that the HVAC systems and parameters, schedules, and internal gains are modeled according to the Standard. Provide the PERF-1, UTIL-1, and ECON-1 Title 24 report. In addition, ensure that the energy models are simulated in compliance mode. If the energy models are not simulated in compliance mode, provide sufficient supporting documentation and a detailed narrative describing why this path was used. The Title 24 Standard requires that all input parameters are modeled according to the standard including but not limited to the schedules, HVAC systems, and internal gains. Provide the UTIL-1 report indicating that the energy models were simulated in Compliance mode. 2.;Table 1.4.1B indicates that the Baseline and Proposed models vertical fenestration area have not been modeled identically in both models; however, the actual vertical fenestration area in both models must reflect actual building conditions up to 40% of the gross above-grade wall area. Revise the Baseline and/or the Proposed model so that the actual vertical fenestration area is reflected in both models. In addition, revise Table 1.4.1B reflecting the required changes. 3.;It does not appear that the equipment capacities (e.g. total supply air volume, total supply air fan power, number of hot-water pumps, etc) and efficiencies of the HVAC equipment in the Proposed model reflect the actual design when comparing the information provided in Tables 1.4.2 and 1.4.3 to the mechanical schedules provided for IEQc1: Outdoor Air Delivery Monitoring. The Proposed model must reflect all HVAC systems at actual equipment capacities and efficiencies. The HVAC equipment capacities cannot be autosized in the Proposed model. Revise the Proposed model as needed to reflect all HVAC systems at actual equipment capacities and efficiencies. In addition, update Tables 1.4.2 and 1.4.3 reflecting any necessary changes and provide simulation output and input reports reflecting the changes. 4.;Many of the Proposed model interior lighting power densities (LPDs) provided in the Modeled Lighting Power Density by Space Type spreadsheet reflect the same LPD. It is unclear whether the Proposed model interior LPDs reflect the actual building conditions. Provide additional information verifying that the Proposed case lighting

is based on actual lighting power density calculations. In addition, revise the Proposed model, Table 1.4.5 and the prerequisite form as needed reflecting any necessary changes. 5.;The Baseline and Proposed models BEPS reports and Table 1.4.5 indicate that exterior lighting has been included in the Baseline and Proposed models; however, the OLTG-2-C Title-24 forms have not been provided showing the exterior lighting breakdown. Provide the OLTG-2-C Title-24 compliance forms verifying the exterior lighting were modeled in compliance mode. In addition, revise the Proposed and Baseline models, Table 1.4.5 and the prerequisite form as necessary reflecting any required changes. 6.;The energy savings associated with space heating, pumps and fans-interior as indicated in Section 1.8 of the prerequisite form when comparing the Proposed model to the Baseline model are unexpected given the inputs information provided in Tables 1.4.2 and 1.4.3. Revisit all inputs and ensure that the Baseline inputs are consistent with Appendix G and the Proposed inputs reflect the actual conditions of the building. If after all inputs are verified as correct and the savings remain high, provide a supplemental narrative describing how the savings were realized with reference to applicable energy efficiency measures.

EAp3: Fundamental Refrigerant Management

Credit Status	Awarded		
Credit Type	Design		

Construction Preliminary Review Comments:

The LEED Prerequisite Form has been provided stating that an audit conducted by a third party shows that CFC phase-out (replacement or conversion) is economically infeasible for some or all mechanical cooling equipment using CFC-based refrigerants. Cost analysis reports and a letter from the Owner have been provided.

EAc1: Optimize Energy Performance

Credit Status	Awarded	**Points Attempted**	10
Credit Type	Design	**Points Awarded**	15
Threshold Attempted			

Option 1-30% new/26% existing 10 points

Construction Final Review and Design Final Review and Design Preliminary Review Comments:

Clarifications for EAp2: Minimum Energy Performance have been provided to address the addition of a photovoltaic system in the actual design, stating that the project has achieved an energy cost savings of 41.79% using the ASHRAE Standard 90.1-2007, Appendix G methodology. The documentation demonstrates credit compliance for 15 points. The LEED Credit Form has been revised to address the issues outlined in the Preliminary Review comments and states a 37.0% energy cost savings using the ASHRAE 90.1-2007 Appendix G methodology. Additionally, the requested revisions have been provided for EAp2. The documentation demonstrates compliance with the requirements of this credit.; 13 points have been marked as anticipated. The LEED Credit Form has been provided stating that the project has achieved an energy cost savings of 36.98% using the ASHRAE 90.1-2007 Appendix G methodology as demonstrated in EAp2, Minimum Energy Performance. In addition, the project team has provided architectural plans. However, EAp2: Minimum Energy Performance has been denied pending clarifications. TECHNICAL ADVICE: Please provide the requested clarifications to EAp2 to confirm compliance with this credit. ;

EAc2: On-Site Renewable Energy

Credit Status	Awarded	**Points Attempted**	2
Credit Type	Design	**Points Awarded**	5
Threshold Attempted			

1% Renewable Energy 1 points

Construction Final Review Comments:

This credit was submitted for initial review during the Final Review. The LEED Credit Form has been provided, stating that 7.7% of the total annual energy cost of the project is being offset by renewable site-generated energy. Additional documentation, consisting of an allocation letter and purchase agreement, has been provided.

EAc6: Green Power

Credit Status	Awarded	**Points Attempted**	2
Credit Type	Construction	**Points Awarded**	2

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that the project has a 2-year purchase agreement to procure 70% (1,592,000 kWh) of the electricity for this LEED-NC project that meets the Green-e definition for renewable power; therefore, the project applies Option 1. A minimum of 35% of the required electricity must be provided by green power. The project has utilized the whole building energy simulation method in EAp2: Minimum Energy Performance, as outlined in ASHRAE/IESNA Standard 90.1-2007. The contract to purchase off-site renewable energy has been provided. The form indicates that the project is pursuing the exemplary performance option for this credit and that the project reserves one point within the Innovation in Design credit category for this strategy.

MRp1: Storage and Collection of Recyclables

Credit Status	Awarded		
Credit Type	Design		

Design Preliminary Review Comments:

The LEED Prerequisite Form has been provided stating that the project has provided appropriately sized dedicated areas for the collection and storage of recycling materials, including cardboard, paper, plastic, glass, and metals. A narrative has been provided describing the recycling storage areas and expected volume. In addition, floor plans have been provided that indicate the locations of the recycling containers in the building.

MRc2: Construction Waste Management

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	2
Threshold Attempted			

Recycle/Salvaged 50% 1 points

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that the project has diverted 80.97% of the on-site generated construction waste from landfill. A minimum of 50% diverted is required. The Contractor has signed the form, as required. Calculations and a Construction Waste Management Plan have been provided to document the waste types and receiving agencies for the diverted materials. Documentation has been provided for all commingled waste, as required.

MRc4: Recycled Content

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	2
Threshold Attempted			

Recycled: 10% 1 points

Construction Final Review and Construction Preliminary Review Comments:

A revised LEED Credit Form narrative has been provided to address the issues outlined in the Preliminary Review comments and confirms that manufacturers` documentation has been provided for at least 20% of the compliant materials. The documentation demonstrates credit compliance for two points. The LEED Credit Form and the LEED Materials and Resource Calculator have been provided stating that 18.51% of the total building materials content, by cost, has been manufactured using recycled materials. A minimum of 10% is required. The recycled material meets the ISO 14021 definitions of post- and pre-consumer material. Manufacturers` documentation has been provided. Supplemental calculations have also been provided. However, the supplemental calculations indicate that the line item shown as `` various`` in the LEED Materials and Resource Calculator consists of 72 materials; therefore, manufacturers` documentation has only been provided for 4% of the compliant materials. Manufacturers` documentation must be provided for at least 20% of the compliant materials. TECHNICAL ADVICE: Please provide manufacturers` documentation for at least 20% of the compliant materials. Alternatively, provide a revised LEED Materials and Resource Calculator excluding the ``various``materials from the calculations.

IEQp1: Minimum Indoor Air Quality Performance

Credit Status	Awarded		
Credit Type	Design		

Design Final Review and Design Preliminary Review Comments:

This LEED Prerequisite was awarded in the Preliminary Review Phase. No changes have been made. The LEED Prerequisite Form has been provided stating that the mechanical ventilation systems are designed using local code, which is more stringent than the ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality, Ventilation Rate Procedure. The local code requirements, comparison of the local code vs. ASHRAE Standard 62.1-2007 Ventilation Rate Procedure, and ventilation rate calculations including the design outdoor ventilation rate have been provided. Floor plans and partial 62MZcalc spreadsheets have also been provided. The full 62MZcalc spreadsheets in IEQc1: Outdoor Air Delivery Monitoring includes all of the zones in the project. The project complies with the minimum requirements of ASHRAE Standard 62.1-2004, Ventilation for Acceptable Indoor Air Quality, using the Ventilation Rate Procedure. The form has been signed by the MEP Engineer.

IEQp2: Environmental Tobacco Smoke (ETS) Control

Credit Status	Awarded		
Credit Type	Design		

Design Preliminary Review Comments:

The LEED Prerequisite Form has been provided stating that smoking is prohibited in the building and within 25 feet of entries, outdoor air intakes, and operable windows. Floor plans and site plans have been provided showing evidence of no smoking signage. The form has been signed by the project owner, as required.

IEQc1: Outdoor Air Delivery Monitoring

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that carbon dioxide concentrations are monitored within all densely occupied spaces and that direct airflow measurement devices have been provided for each mechanical ventilation system serving non-densely occupied spaces. The form further states that monitoring equipment is capable of measuring the minimum outdoor airflow intake flow with an accuracy of plus or minus 15% and has been configured to generate an alarm when conditions vary by 10% or more from the setpoint. A narrative has been provided describing the projects ventilation design and CO2 monitoring system. The 62MZcalc spreadsheets, floor plans, mechanical drawings, and mechanical schedules have been provided documenting the CO2 sensor locations,type of installed sensors, and the outdoor airflow monitoring station. The mechanical schedule provided in PI Form 4: Schedule and Overview Documents indicates which rooms have received CO2 sensors. The form has been signed by the MEP Engineer.

IEQc2: Increased Ventilation

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Design Final Review and Design Preliminary Review Comments:

A response narrative and 62MZCalc spreadsheets have been provided to address the issues outlined in the Preliminary Review comments, demonstrating that the project has increased breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by the ASHRAE Standard 62.1-2004. The documentation demonstrates credit compliance. The LEED Credit Form has been provided stating that the project has increased breathing zone outdoor air ventilation rates to all occupied spaces by at least 30% above the minimum rates required by the ASHRAE 62.1-2004 Standard Ventilation Rate Procedure as determined in IEQp1: Minimum IAQ Performance.; A detailed narrative has been provided describing the project`;s ventilation system design.; Specific information regarding the fresh air intake volumes for each occupied zone has also been provided. The project team chose an alternate compliance path and provided the 62MZcalc spreadsheets for each air handling unit. Additionally, the mechanical schedules have also been provided. However, the 62MZCalc spreadsheets indicate that for AHU4-1 the minimum outdoor air required is 14,678 CFM. The value which is 30% above the minimum rates would be 19,081 CFM. The total outdoor provided by AHU 4-1 is 16,600 CFM. Additionally, for AHU 4-2 the minimum outdoor air required is 12,301 CFM and the value which is 30% above the minimum rate, is 15,966 CFM. The total outdoor air provided by AHU 4-2 is 12,600 CFM. The documentation does not demonstrate credit compliance.

IEQc3.1: Construction IAQ Management Plan-During Construction

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that the project developed and implemented a Construction IAQ Management Plan that followed the

referenced SMACNA Guidelines. Permanently installed air handling units were not operated during construction. The form narrative describes how absorptive materials were protected from moisture damage during the construction and pre-occupancy phases. Photographs from at least two different time periods have been provided highlighting the implemented IAQ measures. Acopy of the Construction IAQ Management Plan has also been provided.

IEQc3.2: Construction IAQ Management Plan-Before Occupancy

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that an IAQ Management Plan was implemented for this project which includes post-construction measures, and therefore, the project applies Option 1, Path 1. The project conducted a flush-out prior to occupancy by supplying a total air volume of 14,000 cubic feet of outdoor air per square foot of floor area while maintaining an internal temperature of at least 60 degrees F and relative humidity no higher than 60%. A narrative has been provided describing the flush-out procedure, including flush-out dates, an occupancy date consistent with PIf4: Schedule and Overview Documents, outdoor delivery rates, internal temperature, and relative humidity. A copy of the IAQ Management Plan has been provided for IEQc3.1: Construction Indoor Air Quality Management Plan, During Construction. It is noted that the occupancy date reported in the form (September 1, 2011) is inconsistent with the occupancy date reported in PIf4: Project Summary Details (November 1, 2011). In this case, the flush-out has been completed prior to both dates. Therefore, credit compliance is not affected.

IEQc4.1: Low-Emitting Materials-Adhesives and Sealants

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that all adhesive and sealant products comply with the VOC limits of the referenced standards for this credit. A summary of all interior adhesive and sealant products has been provided, along with VOC data for each product, confirming that they comply with the referenced VOC limits. The Contractor has signed the form, as required. Manufacturers` documentation has been provided for at least 20% of the products, as required.

IEQc4.2: Low-Emitting Materials-Paints and Coatings

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that all interior paints and coatings applied on site comply with the VOC limits of the referenced standards for this credit. A summary of all interior paints and coatings has been provided, along with VOC data for each product, confirming that they comply with the referenced VOC limits. The Contractor has signed the form, as required. Manufacturers` documentation has been provided for at least 20% of the products, as required.

IEQc4.4: Low-Emitting Materials-Composite Wood and Agrifiber Products

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that all composite wood, agrifiber products, and laminate adhesives used in the building contain no added urea-formaldehyde resins. A product summary of all products has been provided indicating that the products do not contain added urea-formaldehyde. The Contractor has signed the form, as required. Manufacturers` documentation has been provided for at least 20% of the materials, as required. It is noted that the Sierrra Pine Reclaimed Teak material reported in MRc4: Recycled Content has not been reported in the form, as required. In this case, the product specification sheet provided for this product for MRc4 states that the product contains no added urea-formaldehyde resins. Therefore, credit compliance is not affected.

IEQc6.1: Controllability of Systems-Lighting

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that a sufficient quantity of lighting controls are provided for individual workstations, and states that appropriate lighting controls are available for shared multi-occupant spaces. Floor plans, electricalfloor plans, and fixture schedule have been provided identifying the lighting controls.

IEQc6.2: Controllability of Systems-Thermal Comfort

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that a sufficient quantity of thermal controls are provided for individual workstations, and states that appropriate thermal controls are available for all shared multi-occupant spaces. A narrative has also been provided describing the project’s thermal control strategy with a description of the type and location of the thermal controls. Floor plans have been provided to indicate the location of the thermal comfort controls. The form has been signed bythe Mechanical Designer. ;

IEQc7.1: Thermal Comfort-Design

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Design Final Review and Design Preliminary Review Comments:

The LEED Credit Form has been revised to address the issues outlined in the Preliminary Review comments, and includes the shared multi-occupant group spaces. The documentation demonstrates credit compliance. The LEED Credit Form has been provided statingthat the HVAC systems and building envelope have been designed to meet the requirements of the ASHRAE Standard 55-2004. Data has also been provided regarding the specific seasonal temperature and humidity design criteria.; PMV / PPD calculations have been provided. A narrative has been provided detailing the information that was included in the O&M Manual that the owner received. However, the shared multi-occupant groups including, but not limited to the auditorium, classrooms, and meeting spaces have not been included in the form. The clothing level, cooling mode, and heating mode must be provided for each different type of group space. TECHNICAL ADVICE: Please provide a revised LEED Credit Form that includes the shared multi-occupant group spaces. Furthermore, provide revised PMV / PPD calculations that include the shared mutli-occupant group spaces.

IEQc7.2: Thermal Comfort-Verification

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been provided stating that a permanent monitoring system and process for corrective action are in place to ensure performance to the desired comfort criteria, as determined by the credit requirements. IEQc7.1: Thermal Comfort, Design, has been earned, as required. The Owner has signed the form, as required. A sample questionnaire has been provided, as well as a narrative describing the administration of the survey.

IDc1.2: Innovation in Design: Double Green Power

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been submitted stating that the project achieves exemplary performance for EAc6: Green Power, as specified in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition (updated June 2010). The guideline for exemplary performance in EAc6 is to demonstrate that the project has purchased RECs equal to 70% of the building`s annual electricity consumption. The documentation demonstrates that the project has purchased RECs equal to 70% of the building`s annual electricity consumption, which meets the exemplary performance requirements.

IDc1.3: Innovation in Design SSc5.2

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Construction Preliminary Review and Design Preliminary Review Comments:

The requested clarifications for SSc5.2: Site Development, Maximize Open Space, have been provided in the Design Final Review phase to address the issues outlined in the Design Preliminary Review comments. The documentation demonstrates that open space has been provided equal to more than twice the building footprint, which meets the exemplary performance requirements. The documentation demonstrates credit compliance. The LEED Submittal Template has been provided stating that the project achieves exemplary performance for SSc5.2: Site Development: Maximize Open Space, as specified in the LEED Reference Guide for Green Building and Construction, 2009 Edition. The guideline for exemplary performance in SSc5.2: Site Development: Maximize Open Space credit is to provide two times the building footprint or greater. However, SSc5.2: Site Development, Maximize Open Space has been denied pending clarifications. TECHNICAL ADVICE: Please provide the requested clarifications for SSc5.2 and resubmit this credit. Alternatively, the project may submit a different Innovation in Design strategy for the Final Review.

IDc1.5: Innovation in Design - Double Transit Ridership

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Design	**Points Awarded**	1

Design Preliminary Review Comments:

The LEED Credit Form has been provided stating that the project achieves exemplary performance for SSc4.1: Alternative Transportation, Public Transportation Access as specified in the LEED Reference Guide for Green Building and Construction, 2009 Edition. The guideline for exemplary performance in SS4.1 can be demonstrated by doubling the transit ridership. The project team has provided documentation demonstrating quadruple the transit service requirements of the credit in order to achieve double transitridership, which meets the exemplary performance requirement. The bus service tables, route map, and site plan have been provided to support this credit.

IDc2: LEED® Accredited Professional

Credit Status	Awarded	**Points Attempted**	1
Credit Type	Construction	**Points Awarded**	1

Construction Preliminary Review Comments:

The LEED Credit Form has been submitted stating that a LEED AP has been a participant on the project. A copy of the LEED AP award certification for Andrew George has been included, as required.