# LEED Certification Review Report

This report contains the results of the technical review of an application for LEED® certification submitted for the specified project. LEED certification is an official recognition that a project complies with the requirements prescribed within the LEED rating systems as created and maintained by the U.S. Green Building Council® (USGBC®). The LEED certifcation program is administered by the Green Building Certification Institute (GBCI®).

## Fernow Hall

| | |
|---|---|
| Project ID | 1000000761 |
| Rating system & version | LEED-NC v2009 |
| Project registration date | 06/30/2009 |

CERTIFIED SILVER GOLD PLATINUM

**Construction Application Decision**

CERTIFIED: 40-49, SILVER: 50-59, GOLD: 60-79, PLATINUM: 80+

## LEED FOR NEW CONSTRUCTION & MAJOR RENOVATIONS (V2009)

**ATTEMPTED: 77, DENIED: 2, PENDING: 0, AWARDED: 66 OF 110 POINTS**

| SUSTAINABLE SITES | | 19 OF 26 |
|---|---|---|
| SSp1 | Construction Activity Pollution Prevention | Y |
| SSc1 | Site Selection | 1 / 1 |
| SSc2 | Development Density and Community Connectivity | 5 / 5 |
| SSc3 | Brownfield Redevelopment | 1 / 1 |
| SSc4.1 | Alternative Transportation-Public Transportation Access | 6 / 6 |
| SSc4.2 | Alternative Transportation-Bicycle Storage and Changing Rooms | 1 / 1 |
| SSc4.3 | Alternative Transportation-Low-Emitting and Fuel-Efficient Vehicles | 0 / 3 |
| SSc4.4 | Alternative Transportation-Parking Capacity | 2 / 2 |
| SSc5.1 | Site Development-Protect or Restore Habitat | 0 / 1 |
| SSc5.2 | Site Development-Maximize Open Space | 1 / 1 |
| SSc6.1 | Stormwater Design-Quantity Control | 0 / 1 |
| SSc6.2 | Stormwater Design-Quality Control | 0 / 1 |
| SSc7.1 | Heat Island Effect, Non-Roof | 1 / 1 |
| SSc7.2 | Heat Island Effect-Roof | 0 / 1 |
| SSc8 | Light Pollution Reduction | 1 / 1 |

| WATER EFFICIENCY | | 7 OF 10 |
|---|---|---|
| WEp1 | Water Use Reduction-20% Reduction | Y |
| WEc1 | Water Efficient Landscaping | 4 / 4 |
| WEc2 | Innovative Wastewater Technologies | 0 / 2 |
| WEc3 | Water Use Reduction | 3 / 4 |

| ENERGY AND ATMOSPHERE | | 16 OF 35 |
|---|---|---|
| EAp1 | Fundamental Commissioning of the Building Energy Systems | Y |
| EAp2 | Minimum Energy Performance | Y |
| EAp3 | Fundamental Refrigerant Mgmt | Y |
| EAc1 | Optimize Energy Performance | 8 / 19 |
| EAc2 | On-Site Renewable Energy | 1 / 7 |
| EAc3 | Enhanced Commissioning | 2 / 2 |
| EAc4 | Enhanced Refrigerant Mgmt | 2 / 2 |
| EAc5 | Measurement and Verification | 3 / 3 |
| EAc6 | Green Power | 0 / 2 |

| MATERIALS AND RESOURCES | | 7 OF 14 |
|---|---|---|
| MRp1 | Storage and Collection of Recyclables | Y |
| MRc1.1 | Building Reuse-Maintain Existing Walls, Floors and Roof | 2 / 3 |
| MRc1.2 | Building Reuse, Maintain 50% of Interior | 0 / 1 |
| MRc2 | Construction Waste Mgmt | 1 / 2 |
| MRc3 | Materials Reuse | 0 / 2 |
| MRc4 | Recycled Content | 1 / 2 |

| MATERIALS AND RESOURCES | | CONTINUED |
|---|---|---|
| MRc5 | Regional Materials | 2 / 2 |
| MRc6 | Rapidly Renewable Materials | 0 / 1 |
| MRc7 | Certified Wood | 1 / 1 |

| INDOOR ENVIRONMENTAL QUALITY | | 8 OF 15 |
|---|---|---|
| IEQp1 | Minimum IAQ Performance | Y |
| IEQp2 | Environmental Tobacco Smoke (ETS) Control | Y |
| IEQc1 | Outdoor Air Delivery Monitoring | 0 / 1 |
| IEQc2 | Increased Ventilation | 0 / 1 |
| IEQc3.1 | Construction IAQ Mgmt Plan-During Construction | 1 / 1 |
| IEQc3.2 | Construction IAQ Mgmt Plan-Before Occupancy | 1 / 1 |
| IEQc4.1 | Low-Emitting Materials-Adhesives and Sealants | 1 / 1 |
| IEQc4.2 | Low-Emitting Materials-Paints and Coatings | 0 / 1 |
| IEQc4.3 | Low-Emitting Materials-Flooring Systems | 0 / 1 |
| IEQc4.4 | Low-Emitting Materials-Composite Wood and Agrifiber Products | 1 / 1 |
| IEQc5 | Indoor Chemical and Pollutant Source Control | 1 / 1 |
| IEQc6.1 | Controllability of Systems-Lighting | 1 / 1 |
| IEQc6.2 | Controllability of Systems-Thermal Comfort | 1 / 1 |
| IEQc7.1 | Thermal Comfort-Design | 0 / 1 |
| IEQc7.2 | Thermal Comfort-Verification | 0 / 1 |
| IEQc8.1 | Daylight and Views-Daylight | 1 / 1 |
| IEQc8.2 | Daylight and Views-Views | 0 / 1 |

| INNOVATION IN DESIGN | | 5 OF 6 |
|---|---|---|
| IDc1.1 | Innovation in Design | 1 / 1 |
| IDc1.1 | Innovation in Design | 0 / 1 |
| IDc1.2 | Innovation in Design | 1 / 1 |
| IDc1.2 | Innovation in Design | 0 / 1 |
| IDc1.3 | Innovation in Design | 0 / 1 |
| IDc1.3 | Innovation in Design | 1 / 1 |
| IDc1.4 | Innovation in Design | 1 / 1 |
| IDc1.4 | Innovation in Design | 0 / 1 |
| IDc1.5 | Innovation in Design | 0 / 1 |
| IDc1.5 | Innovation in Design | 0 / 1 |
| IDc2 | LEED® Accredited Professional | 1 / 1 |

| REGIONAL PRIORITY CREDITS | | 4 OF 4 |
|---|---|---|
| SSc3 | Brownfield Redevelopment | 1 / 1 |
| SSc6.1 | Stormwater Design-Quantity Control | 0 / 1 |
| SSc7.1 | Heat Island Effect, Non-Roof | 1 / 1 |
| SSc7.2 | Heat Island Effect-Roof | 0 / 1 |
| EAc2 | On-Site Renewable Energy | 1 / 1 |
| MRc1.1 | Building Reuse-Maintain Existing Walls, Floors and Roof | 1 / 1 |

| TOTAL | 66 OF 110 |
|---|---|

## CREDIT DETAILS

| Credit | STATUS | POINTS: POSSIBLE | ATTEMPTED | DENIED | PENDING | AWARDED |
|---|---|---|---|---|---|---|
| Project Information Forms | | 0 | | | | |

**PIf1: Minimum Program Requirements** **Approved**

07/08/2014 CONSTRUCTION FINAL REVIEW

An updated LEED Form has been provided to include the required MPR 6 energy and water usage sharing information.

04/24/2014 CONSTRUCTION PRELIMINARY REVIEW

This LEED Project Information Form was previously approved during the Design Preliminary Review. No changes have been made.

Please note that an updated version of this form is available which includes the required MPR 6 energy and water usage sharing information/options. Project teams may request a form upgrade through the feedback button in LEED Online v3. In this case, include the specific project information form, project number, project name, and rating system when requesting an upgrade. Note that this upgraded form may assist in the compliance of credits (EAc5: Measurement and Verfication) that reference the MPR 6 energy and water data.

12/13/2013 DESIGN FINAL REVIEW

This LEED Project Information Form was previously approved during the Preliminary Review. No changes have been made.

12/17/2010 DESIGN PRELIMINARY REVIEW

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 Ithaca, NY.

**PIf2: Project Summary Details** **Approved**

07/02/2014 CONSTRUCTION FINAL REVIEW

.

04/24/2014 CONSTRUCTION PRELIMINARY REVIEW

This LEED Project Information Form was previously approved during the Design Preliminary Review. The revised form states that there is 1,701 square feet of new construction and 26,632 square feet of existing renovated space, as well as 26,632 square feet of existing unrenovated space.

It is noted that the sum of new construction and existing square footage numbers (54,965 square feet) is greater than the total gross square footage reported in the form (28,333 square feet). For future projects, please ensure that the sum of the new and existing gross square footage values are equal to the gross square footage reported in the form. In this case, this issue does not affect compliance with any of the attempted prerequisites or credits. Compliance is not affected.

12/13/2013 DESIGN FINAL REVIEW

This LEED Project Information Form was previously approved during the Preliminary Review. No changes have been made.

12/17/2010 DESIGN PRELIMINARY REVIEW

The LEED Project Information Form has been submitted including the following project summary details. There is one building in this LEED application with a total gross square footage of 28,333 in the suburban context. The building is 6% new construction with 1,701 square feet of new construction, 26,632 square feet of existing renovated, and 0 square feet of existing un-renovated. The total site area within the LEED project boundary is 24,733 square feet, and the site area to building area ratio is 115%. There are 4 floors above grade and 1 floor below grade (excluding parking levels). The site was previously developed and the building originally constructed in 1914. It uses energy from electricity, district/campus heating and cooling, and on-site renewables. It uses water from a municipal

potable water system and sewage is conveyed through the municipal system. The total project budget is $14,000,000. The project building is located on a campus and a historic registry.

**PIf3: Occupant and Usage Data** **Approved**

07/02/2014 **CONSTRUCTION FINAL REVIEW**

.

04/21/2014 **CONSTRUCTION PRELIMINARY REVIEW**

This LEED Project Information Form was previously approved during the Design Final Review. No changes have been made.

12/13/2013 **DESIGN FINAL REVIEW**

The requested clarifications for SSc4.2: Alternative Transportation, Bicycle Storage and Changing Rooms; WEp1: Water Use Reduction, 20% Reduction; and IEQc8.1: Daylight and Views, Daylight, have been provided to address the issues outlined in the Preliminary Review. The daily average FTE occupancy value (109), daily average transient occupancy value (19), peak transient occupancy value (59), and regularly occupied area (15,334 square feet) have been reported consistently across all submittal documentation. The documentation demonstrates compliance.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Project Information Form has been submitted including the following occupant and usage data. The occupant is non-profit organization and an occupant type that consists primarily of Core Learning Space: College/University. The total FTE value is 109, the peak building user value is 168 (59 students/transients), and the average building user value is 128 (19 students). The building is operated 365 days per year. The LEED project is intended to be owner-occupied and owner-managed after project completion.

However, the occupancy numbers stated on this form are not consistent with SSc4.2: Alternative Transportation, Bicycle Storage and Changing Rooms (128 FTE and 40 peak period transients) and WEp1: Water Use Reduction, 20% (168 FTE and 59 daily average transients). Additionally, the regularly occupied space (15,334 square feet) is inconsistent with IEQc8.1: Daylight and Views, Daylight (17,651 square feet).

TECHNICAL ADVICE:
Please provide a revised form that states occupancy numbers that are calculated consistently for all credits.

**PIf4: Schedule and Overview Documents** **Approved**

07/02/2014 **CONSTRUCTION FINAL REVIEW**

The LEED Form has been revised to confirm the occupancy date.

04/22/2014 **CONSTRUCTION PRELIMINARY REVIEW**

This LEED Project Information Form was previously approved during the Design Preliminary Review. No changes have been made.

However, the occupancy date reported in this form (March 1, 2013) is not consistent with the information reported in IEQc3.2: Construction IAQ Management Plan, Before Occupancy (June 20, 2013).

TECHNICAL ADVICE:

Please revise the form, as necessary, to consistently report the occupancy date across all submittal documentation.

12/13/2013 **DESIGN FINAL REVIEW**

This LEED Project Information Form was previously approved during the Preliminary Review. No changes have been made.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Project Information Form has been submitted including the design and construction schedule, and the estimated date of occupancy is noted as March, 1, 2013. The following required documents have been uploaded: daylight and views plans, floor plans, mechanical schedules, a site plan that identifies the LEED project boundary, building sections, exterior elevations, exterior photographs, an exterior rendering, and interior renderings. Additionally, the URL to the online map and the HVAC and general project narratives have been provided.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Sustainable Sites** | | 26 | 19 | 0 | 0 | 19 |

**SSp1: Construction Activity Pollution Prevention** — **Awarded**

04/24/2014 **CONSTRUCTION PRELIMINARY REVIEW**

The LEED Prerequisite Form has been provided stating that the project has implemented an Erosion and Sedimentation Control (ESC) Plan which 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 describing how the local erosion and sedimentation control standards are equal or more stringent than the requirements of Phase I and Phase II of the NPDES program has been provided, as required. The ESC Plan addresses the necessary requirements to prevent soil loss, sedimentation, and pollution of the air, as required. The narrative has been provided to confirm that the ESC Plan was implemented appropriately. The narrative describes the actions taken to effectively implement and maintain the ESC Plan. The narrative includes information regarding any corrective actions taken. The ESC Plan has also been provided.

| | | | | | | |
|---|---|---|---|---|---|---|
| **SSc1: Site Selection** | **Awarded** | 1 | 1 | 0 | 0 | 1 |

12/17/2010 **DESIGN PRELIMINARY REVIEW**

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** | **Awarded** | 5 | 5 | 0 | 0 | 5 |

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that the project site is located within 0.5 miles of at least 10 community services and a residential district with a minimum density of 10 units per acre. A listing of the neighborhood services has been provided on the form. The required site map has also been provided showing the 0.5 mile radius and the locations of the community services and residential district. A site plan has also been provided.

| | | | | | | |
|---|---|---|---|---|---|---|
| **SSc3: Brownfield Redevelopment** | **Awarded** | 1 | 1 | 0 | 0 | 1 |

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that the site has been documented as contaminated by a Phase II Environmental Site Assessment. A narrative has been provided describing the site contamination and the plan for remediation. Specifications for the remediation have also been provided.

| | | | | | | |
|---|---|---|---|---|---|---|
| **SSc4.1: Alternative Transportation-Public Transportation Access** | **Awarded** | 6 | 6 | 0 | 0 | 6 |

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that the project is served by at least 2 bus lines having stops located within 0.25 miles of the project site. A scaled drawing has been provided showing the location of the transit stops. A site plan has also been provided.

| | | | | | | |
|---|---|---|---|---|---|---|
| **SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms** | **Awarded** | 1 | 1 | 0 | 0 | 1 |

12/13/2013 **DESIGN FINAL REVIEW**

The requested clarifications for Plf3: Occupant and Usage Data and the revised LEED Credit Form have been provided to address the issues outlined in the Preliminary Review. The FTE occupancy value (109) and the peak transient occupancy value (59) have been reported consistently across all submittal documentation. The form states that bicycle storage facilities have been provided to serve 9.52% of FTE and transient occupants, measured at peak occupancy, and shower facilities have been provided for 1.83% of the FTE occupants. The documentation demonstrates credit compliance.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that the project is non-residential. The form states that bicycle storage facilities have been provided to serve 9.52% of FTE and transient building occupants, measured at peak occupancy, and shower facilities for 1.56% of the FTE building occupants. Plans have been provided showing the location of the shower/changing facilities and the bicycle storage facilities. A narrative has been provided outlining the intent to pursue an Innovation in Design credit for a Comprehensive Transportation Management Plan under SSc4: Alternative Transportation Management, Parking Capacity.

However, the FTE occupancy number (128) is inconsistent with the FTE occupancy provided for PIf3: Occupant and Usage Data (109) and the FTE occupancy provided for WEp1: Water Use Reduction, 20% (168). Additionally, the peak transient occupancy (40) is not consistent with that stated for PIf3 (59).

TECHNICAL ADVICE:
Please provide a revised form with occupancy numbers that have been calculated consistently for all credits. Provide updated drawings accordingly.

| | | | | | | |
|---|---|---|---|---|---|---|
| SSc4.3: Alternative Transportation-Low-Emitting and Fuel-Efficient Vehicles | Not Attempted | 3 | | | | |
| **SSc4.4: Alternative Transportation-Parking Capacity** | **Awarded** | **2** | **2** | **0** | **0** | **2** |

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided that no new parking is added as part of the project scope. The owner has signed the form, as required. The project reserves one point in the Innovation in Design credit category for exemplary performance in this credit, and a narrative has been provided outlining the Comprehensive Transportation Management Plan.

| | | | | | | |
|---|---|---|---|---|---|---|
| SSc5.1: Site Development-Protect or Restore Habitat | Not Attempted | 1 | | | | |
| **SSc5.2: Site Development-Maximize Open Space** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that no local open space zoning requirement exists and that the project has provided open space within the project boundary greater in area than the building footprint. The owner has signed the form, as required. The project is including vegetative roof surface in the open space calculations and has demonstrated compliance with SSc2: Development Density and Community Connectivity. Site plans have been provided to identify the open space.

| | | | | | | |
|---|---|---|---|---|---|---|
| SSc6.1: Stormwater Design-Quantity Control | Not Attempted | 1 | | | | |
| SSc6.2: Stormwater Design-Quality Control | Not Attempted | 1 | | | | |
| **SSc7.1: Heat Island Effect, Non-Roof** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

07/02/2014 **CONSTRUCTION FINAL REVIEW**

The additional documentation has been provided and confirms that 51.9% of nonroof base building hardscape surfaces will be mitigated through the use of materials with an SRI of at least 29 or will be shaded by landscaping or trees within five years.

04/21/2014 **CONSTRUCTION PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that 55.3% of nonroof base building hardscape surfaces will be mitigated through the use of open-grid paving systems, materials with an SRI of at least 29, or will be shaded by landscaping or trees within five years; therefore, the project complies with Option 1. A minimum of 50% is required. The table listing materials with an SRI of at least 29 has been provided, as required. The site plan including information regarding paving materials and landscaping materials, as applicable, has been provided.

However, it is not clear that the open-grid paving system is at least 50% pervious, as required.

TECHNICAL ADVICE:

Please provide supporting documentation demonstrating that the reported open-grid paving area is at least 50% pervious.

| | | | | | | |
|---|---|---|---|---|---|---|
| SSc7.2: Heat Island Effect-Roof | Not Attempted | 1 | | | | |
| **SSc8: Light Pollution Reduction** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

12/13/2013 **DESIGN FINAL REVIEW**

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review, indicating that the Licensed Professional Exemption (LPE) has been claimed by John Dredger. The Team Administration Tab indicates that this individual holds a valid professional license and is eligible to claim the LPE. The documentation demonstrates credit compliance.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that the interior and exterior lighting has been designed in accordance with the requirements of this credit. A Licensed Professional Exemption has been claimed in lieu of providing calculations and supporting documentation.

However, it does not appear that the licensed professional has completed the corresponding Exemption Signature on the Licensed Professional Exemptions tab in LEED Online.

TECHNICAL ADVICE:
Please have the relevant licensed professional complete the corresponding Exemption Signature on the Licensed Professional Exemptions tab in LEED Online.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Water Efficiency** | | 10 | 7 | 0 | 0 | 7 |

**WEp1: Water Use Reduction-20% Reduction** — **Awarded**

01/31/2014 **DESIGN FINAL REVIEW**

The requested clarifications for PIf3: Occupant and Usage Data, the revised LEED Prerequisite Form, the plumbing fixture schedule, and manufacturers' documentation have been provided to address the issues outlined in the Preliminary Review. The daily average FTE and transient occupancy values (109 and 19, respectively) have been reported consistently across all submittal documentation. The form indicates that kitchen sink and shower fixtures have been included in the calculations. The plumbing fixture schedule and the manufacturers' documentation confirm the flush or flow rate for all applicable fixtures installed in this LEED-NC project. The form states that the project has reduced potable water use by 38.16% from a calculated baseline design. The documentation demonstrates prerequisite compliance.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Prerequisite Form has been provided stating that the project has reduced potable water use by 37.29% from a calculated baseline design through the installation of low-flow water closets, low-flow urinals, and low-flow lavatory faucets. Fixture cut sheets have also been provided.

However, the following issues require clarification:
1. The FTE occupancy stated for this credit (168) is inconsistent with PIf3: Occupant and Usage Data (109) and SSc4.2: Alternative Transportation, Bicycle Storage and Changing Rooms (128). Additionally, the daily average transient occupancy (59) is not consistent with that stated for PIf3 (19).

2. The plumbing design brief indicates the project contains kitchen/break room sink faucets that must be included in the calculation.

3. The project drawings indicate showers are installed in;the project that must be included in the calculation.

4. The plumbing design brief does not clearly state the flow and flush rates for the fixtures.

TECHNICAL ADVICE:
1. Revise the form to include occupancy numbers that have been calculated consistently across all credits.

2. Include the kitchen/break room sink faucets in the form.

3. Include the showers in the form.

4. Provide a plumbing fixture or cut sheets that clearly state the flow and flush rates for all fixtures listed on the form.

| | | | | | | |
|---|---|---|---|---|---|---|
| **WEc1: Water Efficient Landscaping** | **Awarded** | 4 | 4 | 0 | 0 | 4 |

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that no permanent irrigation system has been installed. A narrative has been provided describing how the landscape has been designed for no irrigation. The architect has signed the form, as required. A site plan, planting plan, utility plan, and a planting schedule have been provided.

| | | | | | | |
|---|---|---|---|---|---|---|
| WEc2: Innovative Wastewater Technologies | Not Attempted | 2 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **WEc3: Water Use Reduction** | **Awarded** | 4 | 3 | 0 | 0 | 3 |

01/31/2014 **DESIGN FINAL REVIEW**

The requested clarifications for WEp1: Water Use Reduction, 20% Reduction, and a revised LEED Credit Form have been provided to address the issues outlined in the Preliminary Review, indicating that the project has reduced potable water use by 38.16% from a calculated baseline design. The documentation demonstrates credit compliance for three points.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that the project has reduced potable water use by 37.29% from a calculated baseline design through the installation of low-flow water closets, low-flow urinals, and low-flow lavatory faucets. A narrative has been provided outlining the intent to pursue an Innovation in Design credit for Lake Source Cooling/Process Water Use Reduction.

However, WEp1: Water Use Reduction, 20% Reduction, has been denied pending clarifications.

TECHNICAL ADVICE:
Please provide the requested clarifications for WEp1 and resubmit this credit.

| Energy and Atmosphere | 35 | 25 | 0 | 0 | 16 |
|---|---|---|---|---|---|

**EAp1: Fundamental Commissioning of the Building Energy Systems** **Awarded**

04/21/2014 CONSTRUCTION PRELIMINARY REVIEW

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 project 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 Commissioning Agent has signed the form. The Commissioning Report has been provided and includes a list of the systems commissioned, a summary of issues corrected, and a list of any major outstanding/unresolved issues.

**EAp2: Minimum Energy Performance** **Awarded**

12/16/2013 DESIGN FINAL REVIEW

The revised LEED Prerequisite Form has been provided to address the issues outlined in the Preliminary Review, stating that the project has achieved an energy cost savings of 22.54% using the ASHRAE Standard 90.1-2007, Appendix G methodology. Additional documentation, consisting of a narrative response to the Preliminary Review, energy modeling guidelines, architectural floor plans, a revised Section 1.4 Tables spreadsheet, updated simulation output summary files, input summaries, and revised modeling results, has been provided. Further, the Section 1.4 Tables indicate that the project is following Option 2 of the Treatment of District or Campus Thermal Energy in LEED V2 and LEED 2009-Design and Construction guidelines. Sufficient information has been provided to address all issues raised in the Preliminary Review. The total predicted annual energy consumption for the project is 227,893 kWh of electricity and 9,828 of natural gas.

The following two issues are noted:

1. The Entered Values Room by Room report indicates that the new exterior wall constructions were modeled with an assembly U-value of 0.051 in the Baseline model; however, Table G3.1.5(b) in the Baseline building column and Table 5.5-6 requires that the exterior wall constructions are modeled as steel-framed walls with an assembly U-value of 0.064. For future projects ensure that the Baseline model reflects steel-framed walls with an assembly U-value for the appropriate climate zone.

2. The System Entered Values reports and the Entered Values Plants reports for the Baseline models indicate that the heating equipment is oversized twice (once at the system side and again at the plant side); however, Section G3.1.2.2 requires that the heating equipment can only be oversized at the system level. For future projects ensure that the equipment capacities are only oversized at the system level and the oversizing factors are not double counted in the Baseline model.

In this case, these issues are not deemed sufficient enough to affect the energy cost savings. The documentation demonstrates prerequisite compliance.

12/16/2010 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form and supporting documentation have been provided stating that the project has achieved an energy cost savings of 32.16% using the ASHRAE 90.1-2007 Appendix G methodology. In addition, the project team has provided a Section 1.4 Table, simulation output summary files, input summaries, daylighting simulation plans, Target Energy Performance Results screenshot, architectural floor plans, mechanical plans, and Energy Modeling Analysis report. Energy efficiency measures include an improved thermal envelope, reduced interior lighting power density, occupancy sensors, demand control ventilation, energy recovery high efficiency chillers, and high efficiency boilers.

However, several issues must be addressed for the final review. Please see the following 25 comments.

TECHNICAL ADVICE:
Provide revised energy models, prerequisite form, and supporting documentation in the form of input and output summaries including, at a minimum, Energy Cost Budget/PRM Summary, Energy Consumption Summary, and Performance Rating Details reports from the simulation program demonstrating that the following issues have been addressed. In addition, post the original documentation for this prerequisite, including the original EAp2 prerequisite form, to LEED online in a zip file (e.g. Preliminary EAp2 Submittal.zip) for comparison in the next review phase. In addition, provide a response narrative to each of the review comments and a narrative to describe any changes made in addition to the review comments.

1. It is unclear if the energy models were simulated for the full year (8,760 hours) as required by Section G2.2.1(a). Provide the Entered Values - Project Information report. If the simulation was performed for the reduced year, provide revised energy models and results with the simulation performed for the full year;and provide a revised Entered Values - Project Information report indicating that the simulation was performed for the full year.

2. The prerequisite form does not provide the CO2 emissions target and reduction values. Visit the Energy Star website listed on the prerequisite form and provide a target finder CO2 values.

3. The Building Areas reports and the Building U-factors reports indicate that the Proposed and Baseline models includes skylights however, the percentage of roof area that is made up of skylights, skylight type, skylight assembly U-factor, and skylight assembly SHGC value have not been provided for each model in Table 1.4.1B. Table G3.1.5(d) in the Baseline building column requires that the skylight area in the Baseline model is equal to that of the Proposed model or 5% of the gross roof area, whichever is smaller (unless skylights are existing). In addition, the skylight fenestration properties in the Baseline model must be modeled according to Table 5.5 -5 for the skylight type and glazing percentage or reflect the existing thermal values. For additional guidance regarding how to model skylights in the Baseline model, see Table G3.1.5(d) in the Baseline building column. Provide the percentage of roof area made up of skylights, skylight type, skylight assembly U-factor, and skylight assembly SHGC value for each model in Table 1.4.1B. In addition, revise the Proposed and/or Baseline model as needed reflecting the changes.

4. Table 1.4.1A and Table 1.4.1B indicate that the Baseline model reflects the envelope constructions and assembly U-values for the existing building however, the architectural plans provided for Project Information Form 4: Schedule and Overview Documents indicate that there is a classroom addition to this project. The Baseline model must reflect the envelope constructions and assembly U-values for the new portions of the building envelope from Table 5.5-6 (exterior wall, roof, and fenestration properties). Revise the Baseline model as needed so the new portion of the building reflects the envelope constructions and assembly U-values for the wall, roof, and fenestration properties from Table 5.5-6. In addition, update Table 1.4.1A and Table 1.4.1B reflecting the changes and provide revised input summaries reflecting the changes.

5. The Building Areas report for each model indicates that the vertical fenestration area was modeled at 24% in the Baseline models and 23.4% in the Proposed models however, Table G3.1.5(c) in the Baseline building column requires that the Baseline model reflect the same fenestration area as the Proposed model up to 40%, whichever is smaller. Revise the Proposed and/or Baseline models as needed and provide a revised Building Areas report for each building so the fenestration area in the Baseline model is modeled equal to the Proposed model up to 40%, whichever is smaller. In addition, update Table 1.4.1B reflecting the changes.

6. The prerequisite form indicates that the District Thermal Energy Treatment Guidelines was followed however, a separate prerequisite form was not provided for the Step 2 Proposed and Baseline models. In addition, a separate Section 1.4 Tables spreadsheet was not provided for the Step 2 model. Provide a separate perquisite form and Section 1.4 Tables spreadsheet for the Step 2 Proposed and Baseline models.

7. The equipment capacities (fan volume, fan power, cooling capacity, heating capacity, boiler capacity, etc.) and efficiencies for each HVAC equipment in the Proposed model are not consistent with the equipment capacities in the actual design when comparing the Equipment Energy Consumption report for the Proposed model to the mechanical schedules provided for Project Information Form 4: Schedule and Overview Documents. Table G3.1.10(a) in the Proposed building column requires that the Proposed model 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 Table 1.4.2 and Table 1.4.3 reflecting the changes and provide a revised Equipment Energy Consumption report for each Proposed model reflecting the changes.

8. Table 1.4.3 and the Entered Values Plants reports for the Step 2 Proposed model indicates that the chiller COP is 25 however, this number is unusual, since the highest available chiller efficiency on the market is less than 8 COP. It is unclear how the Chiller COP was determined. Further, it is unclear if the Step 2 Proposed model reflects all the heating and cooling equipment in the plant (hot water pumps, water boilers, chillers, chilled water pumps, condenser water loop, cooling towers, etc). When reflecting the Step 2 Proposed model, the plant equipment capacities, and efficiencies must be modeled to reflect the actual plant equipment as required by Table G3.1.10(a) in the Proposed building column.Provide equipment submittal sheets demonstrating that the chiller COP is 25 in the actual design. In addition, update Table 1.4.3 and provide the revised Entered Values Plants reports for the Step 2 Proposed model reflecting the changes.

9. It is unclear if the thermal distribution losses have been accounted for the chilled water district cooling loop and hot water district heating loop in the Step 2 Proposed model as required by the District Thermal Energy Treatment Guidelines, Revise the Step 2 Proposed model and update Table 1.4.3 as needed so that thermal distribution losses have been accounted for the chilled water district cooling loop and hot water district heating loop. If this information is unknown, then the thermal destruction losses must reflect default losses (chilled water district cooling 5% and hot water district heating 10%).

10. Demand control ventilation was modeled for credit in the Proposed case as indicated in Table 1.4.2 however, the total outdoor air design minimum ventilation airflow was higher in the Baseline models (3,776 cfm) then that Proposed models (2,880 cfm) as indicated in the System Checksums reports for each model. Appendix G allows schedule changes for demand control ventilation as approved by the rating authority (Table G3.1.4(Baseline)). As the rating authority, GBCI requires that the outside air ventilation rates for the Baseline Case be modeled using minimum ASHRAE 62.1-2007 rates wherever credit is taken for demand control ventilation in the Proposed Case. The Proposed case minimum rates at design conditions must be modeled as designed. Verify that the Baseline Case model reflects ASHRAE 62.1-2007 minimum rates for any spaces where credit is taken for demand control ventilation, or revise the model accordingly. For all other spaces, confirm that the minimum outside airflow (in units of cfm) was modeled identically in the Baseline and Proposed cases. Additionally, verify that all systems in both the Baseline and Proposed cases are modeled with zero outside air flow when fans are cycled on to meet unoccupied setback temperatures unless health or safety regulations mandate an alternate minimum flow during unoccupied periods (in which case, the unoccupied outside air rates must be modeled identically in

the Baseline and Proposed Case). In addition, provide the total outdoor air volume for each model in Table 1.4.2. Note that the total outdoor air volume in the Baseline model must never be greater than that of the Proposed model.

11. Table 1.4.2 indicates that exhaust air energy recovery units are included in the Proposed model however, the outside air supply and exhaust volume passing through the energy recovery units are not listed in Table 1.4.2. In addition, the energy recovery unit fan power (supply and exhaust) is not appropriately accounted for as indicated in the Equipment Energy Consumption reports for the Proposed model. Furthermore, it is unclear whether the outside air volume is modeled identically in the Proposed and Baseline Cases as required by Appendix G Section G3.1.2.5 (unless credit is taken for demand control ventilation). Verify that the Proposed Case model reflects the as-designed energy recovery parameters and indicate the outside air supply and exhaust volume passing through the energy recovery units in Table 1.4.2. List the outside air volume modeled for the Baseline Case, and verify that it is identical to the value modeled for the Proposed Cases (unless credit is taken for demand control ventilation).

12. The Equipment Energy Consumption report for the Baseline models indicate that one VAV air-handling unit is not modeled per floor as required by Section G3.1.1. In this case, there must be four air-handling units reflected in the Baseline model. Revise the Baseline models so one VAV air-handling unit is modeled per floor. In addition, provide a revised Equipment Energy Consumption report for each Baseline model reflecting the changes.

13. The Equipment Energy Consumption Report for the Baseline models provide the fan supply volume and total fan power for each HVAC system however, Table 1.4.2 does not provide the fan supply volume (annual energy consumption is provided) and fan power for each HVAC system in the Baseline models. The Equipment Energy Consumption Report for the Baseline models indicates that the fan power for the supply fan and return fan in each HVAC system was determined by using the supply fan volume and return fan volume, respectively however, the supply fan volume for each HVAC system must be used to determine the total system fan power for that HVAC system and distributed between the supply and return fan. Section G3.1.2.8 requires that the supply-air-to-room-air cooling temperature difference is modeled at 20-degrees for each HVAC system and Section G3.1.2.9 requires that the fan power for each individual HVAC system be determined using the fan supply volume for that specific HVAC system as determined from Section G3.1.2.8 and that fan power must then be broken up into supply, return, exhaust, and relief. Provide a sample fan power calculation, include any pressure credits taken, showing how the fan power was calculated for each HVAC system in the Baseline model. In addition, list the fan supply volume in cfm and fan power in kW for each HVAC system in the Baseline model in Table 1.4.2 or a spreadsheet. Further, provide a revised Equipment Energy Consumption report for each Baseline model as needed reflecting the changes.

14. It is unclear how the VAV reheat boxes were modeled in the Step 1 and Step 2 Baseline models based on the input parameters in Table 1.4.2 and the provided simulation input reports. The VAV reheat boxes must be modeled according to Section G3.1.3.13, which requires that the minimum volume setpoints is modeled at 0.4 cfm/sq. ft. of floor area served. Provide additional information in Table 1.4.2 regarding how the VAV reheat boxes were modeled in the Baseline models. In addition, revise the Baseline models as needed so the VAV reheat boxes are modeled according to Section G3.1.3.13.

15. It is unclear if the control for supply air temperature reset has been modeled in the Step 1 Baseline case as required by Section G3.1.3.12. In addition, it is unclear if the controls for hot water temperature reset and supply air temperature reset have been modeled in the Step 2 Baseline case as required by G3.1.3.4 and G3.1.3.12. Revise the Step 1 and Step 2 Baseline models as needed to reflect the specified temperature reset controls and include these controls in the input parameters described in Table 1.4.2 and Table 1.4.3. In addition, include any reset controls for the HVAC equipment in the Proposed model if included in the actual design and indicate the input parameters for the reset controls in Table 1.4.2 and Table 1.4.3.

16. The System Entered Values reports and the Entered Values Plants reports for the Baseline models indicate that the cooling and heating equipment is oversized twice (once at the system side and again at the plant side) however, Section G3.1.2.2 requires that the cooling equipment and heating equipment is oversized at 115% and 125%, respectively. Revise the Baseline model so the cooling equipment and heating equipment are only oversized at the system side or plant side. In addition, provide revised System Entered Values reports and the Entered Values Plants reports for the Baseline models reflecting the changes.

17. Table 1.4.3 and the Entered Values Plants reports for the Step 2 Baseline model indicate that the cooling type is modeled as an air-cooled chiller however, Table G3.1.1B requires that the cooling type is modeled as direct expansion for each packaged VAV air-handling unit if reflecting system type 5. The cooling efficiency of each packaged VAV air-handling unit must be modeled at 13.0 SEER, 11.0 EER, 10.8 EER, 9.8 EER, or 9.5 EER based on the autosized cooling capacity of each HVAC system using Table 6.8.1A. Revise the Step 2 Baseline model and provide revised Entered Values Plants reports for the Step 2 Baseline model so that each VAV air-handling unit is modeled with direct expansion cooling coils In addition, update Table 1.4.2 indicating the cooling capacity and cooling efficiency of each HVAC system in the Baseline model.Note that Section G3.1.2.1 requires that "where efficiency ratings, such as EER and COP, include fan energy, the descriptor shall be broken down into its components so that supply fan energy can be modeled separately." Since the efficiency ratings are calculated at ARI-rated conditions, the fans must also be broken out at ARI-rated conditions. When the cooling efficiency is separated from the fan energy, the cooling efficiency must be more efficient (higher cooling efficiency) than the cooling efficiency with the fan energy and cooling component.

18. Table 1.4.3 indicates that the chilled water supply and chilled water return temperatures are modeled at 45 degrees-F and 10 degrees-F in the Step 1 Baseline model, respectively however, Section G3.1.3.8 requires that the chilled water supply and chilled water return temperatures are modeled at 44 degrees-F and 56 degrees-F, respectively. Revise the Step 1 Baseline model and update Table 1.4.3 so the chilled water supply and chilled water return temperatures are modeled according to Section G3.1.3.8.

19. Table 1.4.3 and the Entered Values Plants reports for the Step 2 Baseline model indicate that the Step 2 Baseline model only

reflects one hot water boiler however, Section G3.1.3.2 requires that the Baseline model reflect two hot water boilers equally sized. Revise the Step 2 Baseline model so two equally sized hot water boilers are reflected in the Baseline model. In addition, Provide revised Entered Values Plants reports for the Step 2 Baseline reflecting the changes. Further, update Table 1.4.3 reflecting the changes.

20. The interior lighting power calculation spreadsheet indicates that additional credit is taken for occupancy sensors in classrooms, conference rooms, and break rooms in the Proposed models however, occupancy sensors are mandatory in these spaces per Section 9.4.1.2. Revise the Proposed model by removing any credit taken for lighting fixtures connected to occupancy sensors in the mandatory spaces in the Proposed model. In addition, provide revised interior lighting power calculations reflecting the changes.

21. Exterior lighting was not included in the Proposed design or Baseline design energy models as indicated in Table 1.4.5 and the end use is not included in Section 1.8 of the prerequisite form. Provide a narrative confirming that this project does not have any exterior lighting. If the project does have exterior lighting, revise the exterior lighting power for the Proposed design and Baseline design models and update Table 1.4.5 so the exterior lighting power is included as required by Table G3.1.1(a) in the Proposed building column. Ensure that the Baseline exterior lighting power in Table 1.4.5 is equal to the ASHRAE allowable and that no credit is taken in the Proposed design case for lighting reductions on non-tradable surfaces. Note that additional lighting power allowance cannot be claimed in the Baseline model for surfaces that are not provided with lighting in the actual design and lighting fixtures cannot be double counted for different exterior surfaces. Finally, provide supplemental calculations including each distinct surface type, the ASHRAE allowable power per square foot or linear foot, the total ASHRAE exterior lighting power for each surface, and the actual (Proposed) exterior lighting power for each surface.

22. Section 1.8 of the prerequisite form indicates that service hot water heating is a process load however, because this end use is regulated by Appendix G it should not be counted as a process load. Revise Section 1.8 by excluding service hot water heating as a process load.

23. Section 1.8 of the prerequisite form includes the simulation results for the 90-degree, 180-degree, and 270-degree Baseline rotations however, since this project is a renovation and an addition to an existing project, the Baseline model must not be rotated for the different rotations. Revise Section 1.8 by excluding the results for the 90-degree, 180-degree, and 270-degree Baseline rotations.

24. It is unclear why the energy consumption for interior lighting is different between the Step 1 Proposed model and Step 2 Proposed model as indicated in the Energy Cost Budget/ PRM Summary report. In addition, it is unclear why the energy consumption and peak demand energy for fans-conditioned is different between the Step 1 Baseline model and Step 2 Baseline model as indicated in the Energy Cost Budget/ PRM Summary report. Further, it is unclear why the energy consumption for fans-conditioned is different between the Step 1 Proposed model and Step 2 Proposed model as indicated in the Energy Cost Budget/ PRM Summary report. These end uses should not be affected by the change in the cooling and heating equipment from Step 1 to Step 2. Revise the Step 1 models or the Step 2 models so the energy consumption and peak demand energy does not change for interior lighting and fans-conditioned.

25. The Energy Cost Budget/ PRM Summary report indicates that the Proposed and Baseline models reflect the energy consumption for service water heating as electricity not district steam for the Step 1 models and natural gas for the Step 2 models as indicated in Table 1.4.5. Revise the Step 1 and Step 2 models as needed so the appropriate energy type is reflected for service water heating.

**EAp3: Fundamental Refrigerant Management** **Awarded**

01/31/2014 **DESIGN FINAL REVIEW**

A response narrative, a memorandum, and documentation describing the lake source chilled water systems have been provided to address the issues outlined in the Preliminary Review, confirming that all applicable upstream equipment associated with the existing chilled water system is CFC-free. The documentation demonstrates prerequisite compliance.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Prerequisite Form has been provided stating that base building HVAC systems use no CFC-based refrigerants. A list of mechanical cooling equipment has been provided on the form.

However, the documentation does not address the campus chiller. Projects connected to an existing chilled water system must demonstrate that all applicable upstream equipment is CFC-free, or demonstrate a commitment to phasing out CFC-based refrigerants no later than 5 years after the project is completed, or demonstrate that system replacement or conversion is not economically feasible. All applicable downstream equipment must meet the prerequisite requirements.

TECHNICAL ADVICE:
Please demonstrate that all applicable upstream equipment associated with the existing chilled water system is CFC-free, or demonstrate a commitment to phasing out CFC-based refrigerants no later than 5 years after the project is completed, or demonstrate that system replacement or conversion is not economically feasible. Demonstrate that all applicable downstream equipment meets the prerequisite requirements. See the LEED Reference Guide for Building Design and Construction, 2009 Edition,

and the Treatment of District or Campus Thermal Energy in LEED v2 and LEED 2009 Design and Construction document (http://www.usgbc.org/ShowFile.aspx?DocumentID=7671) for more information regarding these requirements.

| | | | | | | |
|---|---|---|---|---|---|---|
| **EAc1: Optimize Energy Performance** | **Awarded** | **19** | **17** | **0** | **0** | **8** |

12/17/2013 DESIGN FINAL REVIEW

Clarifications have been provided for EAp2: Minimum Energy Performance to address the issues outlined in the Preliminary Review, claiming an energy cost savings of 22.54% using the ASHRAE Standard 90.1-2007, Appendix G methodology. The clarifications provided are sufficient to verify the savings claimed. The documentation demonstrates credit compliance for eight points.

12/16/2010 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has achieved an energy cost savings of 43.4% using the ASHRAE 90.1-2007 Appendix G methodology as demonstrated in EAp2, Minimum Energy Performance. In addition, the project team has provided daylighting simulation plans, architectural floor plans and Energy Modeling Analysis report.

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.

Note that the credit form inaccurately indicates that the project is attempting exemplary performance for this credit.

| | | | | | | |
|---|---|---|---|---|---|---|
| **EAc2: On-Site Renewable Energy** | **Awarded** | **7** | **1** | **0** | **0** | **1** |

12/16/2013 DESIGN FINAL REVIEW

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review, stating that 1.36% of the total annual energy cost of the project is being offset by renewable site-generated energy. It is noted that the total annual energy cost from EAp2: Minimum Energy Performance has not been updated based on the energy model results from the Final Review. The percentage of the total annual energy cost of the project offset by on-site renewable energy is 2.7% Further, clarifications for EAp2: Minimum Energy Performance have been provided. The documentation demonstrates credit compliance for one point.

12/17/2010 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that 1.36% of the project energy cost is being offset by renewable site-generated energy. A narrative has been provided to confirm this claim.

However, further clarification is needed for EAp2: Minimum Energy Performance to confirm that the total energy cost is correctly reported before credit can be awarded for renewable energy. Additionally, the owner has not initialed and submitted the form, as required.

TECHNICAL ADVICE:
Please provide the requested clarifications to EAp2, and ensurethat the total energy and cost in the EAc2 form match the numbers reported in the final

| | | | | | | |
|---|---|---|---|---|---|---|
| **EAc3: Enhanced Commissioning** | **Awarded** | **2** | **2** | **0** | **0** | **2** |

07/02/2014 CONSTRUCTION FINAL REVIEW

The additional documentation demonstrates compliance.

04/24/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that enhanced commissioning has been implemented. The project Commissioning Agent has signed the form. The form includes the completion dates for the comprehensive commissioning review tasks. The Systems Manual covering the commissioned systems and future operating information and the contract between the Owner and the Commissioning Agent ensuring post-construction commissioning activities have been provided.

However, the Systems Manual has not included system operating instructions for each of the building systems, as required.

TECHNICAL ADVICE:

Please provide a revised Systems Manual, which includes system operating instructions for each of the installed building systems.

| | | | | | | |
|---|---|---|---|---|---|---|
| **EAc4: Enhanced Refrigerant Management** | **Awarded** | **2** | **2** | **0** | **0** | **2** |

01/31/2014 DESIGN FINAL REVIEW

The requested clarifications for EAp3: Fundamental Refrigerant Management and a response narrative have been provided to address the issues outlined in the Preliminary Review, confirming that all applicable downstream and upstream equipment meet the credit requirements. Mechanical schedules have also been provided. The documentation demonstrates credit compliance.

12/17/2010 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the base building does not use refrigerants.

However, the existing chilled water system has not been addressed.

TECHNICAL ADVICE:
Please provide calculations and a letter from the existing chilled water supplier to demonstrate compliance with the credit requirements for all applicable downstream and upstream equipment. See the LEED Reference Guide for Building Design and Construction, 2009 Edition, and the Treatment of District or Campus Thermal Energy in LEED v2 and LEED 2009 Design and Construction document (http://www.usgbc.org/ShowFile.aspx?DocumentID=7671) for more information regarding these requirements.

| | | | | | | |
|---|---|---|---|---|---|---|
| **EAc5: Measurement and Verification** | **Awarded** | **3** | **3** | **0** | **0** | **3** |

07/08/2014 CONSTRUCTION FINAL REVIEW

The requested clarifications for Plf1: Minimum Program Requirements have been provided to demonstrate compliance.

04/24/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project complies with Option 3 and has committed to sharing whole-building energy and water data through ENERGY STAR Portfolio Manager.

However, the documentation within Plf1: Minimum Program Requirements does not confirm credit compliance. Note that the current version of the Plf1 form that has been provided does not include the ENERGY STAR compliance path documentation. An updated version of the Plf1 form is available which may assist in documenting credit compliance.

TECHNICAL ADVICE:

Please provide a revised Plf1 form, which includes the ENERGY STAR compliance path documentation. Revise this form and supporting documentation, as necessary, to confirm compliance.

| | | | | | | |
|---|---|---|---|---|---|---|
| **EAc6: Green Power** | **Not Attempted** | **2** | | | | |

| Materials and Resources | | 14 | 8 | 1 | 0 | 7 |
|---|---|---|---|---|---|---|

**MRp1: Storage and Collection of Recyclables** — **Awarded**

12/17/2010 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the project has provided appropriately sized dedicated areas for the collection and storage of materials for recycling, including cardboard, paper, plastic, glass, and metals. The narrative describing the size, accessibility and dedication of recycling storage areas in the project building has been provided. The area is adequately sized and located, and the narrative confirms the expected volume and pick up frequencies. Floor plans and a site plan have been provided highlighting the location of recycling collection areas within the project. A university recycling narrative has also been provided.

**MRc1.1: Building Reuse-Maintain Existing Walls, Floors and Roof** — **Awarded** — 3 — 2 — 0 — 0 — 2

07/02/2014 CONSTRUCTION FINAL REVIEW

The additional documentation demonstrates that 79.67% of the existing structural elements have been reused.

04/21/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the LEED-NC project includes an existing building with additions and that 1.95% of the existing structural elements (walls, floors, and roofs) have been reused. The addition is equal to 6.39% of the total existing building area, which is less than twice the total area of the existing building, as required. The calculation has been provided.

However, a minimum of 55% all structural elements must be reused to demonstrate credit compliance.

TECHNICAL ADVICE:

Please provide a revised form and supporting documentation demonstrating that at least 55% of all structural elements have been reused.

MRc1.2: Building Reuse, Maintain 50% of Interior — Not Attempted — 1

**MRc2: Construction Waste Management** — **Awarded** — 2 — 2 — 1 — 0 — 1

07/08/2014 CONSTRUCTION FINAL REVIEW

The additional documentation states that the project has diverted 77.92% of the on-site generated construction waste from landfill.

It is noted that the provided documentation does not list materials separately, by type, and project specific diversion rates have not been provided. When recalculated to identify the commingled materials as 100% landfill waste, the project has diverted 73.78% of the on-site generated construction waste. The documentation demonstrates compliance.

04/24/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that the project has diverted 77.92% of the on-site generated construction waste from landfill. A minimum of 50% diverted is required. Calculations and a Construction Waste Management Plan have been provided to document the waste types and receiving agencies for the diverted materials. Waste reports have also been provided.

However, there are materials (Co-mingled - Commingled) in the calculation indicated as commingled waste, but the supporting documentation has not been provided, as required. Materials must be listed separately, by type, or project specific diversion rates of commingled debris must be provided.

TECHNICAL ADVICE:

Please provide a narrative and supporting documentation to confirm the breakdown of recycled materials or a project specific diversion rate. If the materials were weighed off-site, include the weigh tickets or a narrative from the hauler or recycler. If the value of waste was calculated using the average annual recycling rate for a specific sorting facility, it is acceptable as long as the method of recording and calculating the recycling rate for the facility is regulated by a local or state government authority, per LEED Interpretation 3000. See the entire LEED Interpretation for details. In this case, provide either documentation from the sorting facility

with the project specific diversion rates or a letter from the recycling facility which confirms the name of the state or local authority, the average recycling rate that has been determined, and that the sorting facility is state regulated. Ensure that the documentation confirms that the sorting facility is state regulated, as required.

| | | | | | | |
|---|---|---|---|---|---|---|
| MRc3: Materials Reuse | Not Attempted | 2 | | | | |
| **MRc4: Recycled Content** | **Awarded** | **2** | **1** | **0** | **0** | **1** |

04/22/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form and the LEED Materials and Resource Calculator have been provided stating that 11.49% of the total building materials content, by value, 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 for at least 20% of the compliant materials, as required.

| | | | | | | |
|---|---|---|---|---|---|---|
| **MRc5: Regional Materials** | **Awarded** | **2** | **2** | **0** | **0** | **2** |

04/22/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form and the LEED Materials and Resource Calculator have been provided stating that 29.46% of the total building materials value includes building materials and products that have been manufactured and extracted within 500 miles of the project site. A minimum of 10% must be extracted and manufactured within 500 miles of the project site. Manufacturers' documentation has been provided for at least 20% of the compliant materials, as required.

| | | | | | | |
|---|---|---|---|---|---|---|
| MRc6: Rapidly Renewable Materials | Not Attempted | 1 | | | | |
| **MRc7: Certified Wood** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

04/22/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form and the LEED Materials and Resources Calculator have been provided stating that 67.94% of the total wood-based building materials are certified in accordance with the principles and criteria of the Forest Stewardship Council (FSC). A minimum of 50% is required. Vendor invoices have been provided for 100% of all FSC certified wood products.

It is noted that the percentage of FSC certified wood reported in the LEED Materials and Resources Calculator (97.23%) is not consistent with the information reported in the form (67.94%). For future projects, please ensure that all information is reported consistently across all submittal documentation. In this case, both values exceed the minimum credit requirement. Therefore, credit compliance is not affected.

| | | | | | | |
|---|---|---|---|---|---|---|
| **Indoor Environmental Quality** | | 15 | 8 | 0 | 0 | 8 |

**IEQp1: Minimum Indoor Air Quality Performance** — **Awarded**

12/17/2010 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that the project complies with the minimum requirements of ASHRAE Standard 62.1-2007, Ventilation for Acceptable Indoor Air Quality, using the Ventilation Rate Procedure. Natural ventilation calculations have been provided in the form demonstrating compliance with Paragraph 5.1 of ASHRAE Standard 62.1-2007. The mechanical schedule for ERU-1, the corresponding ASHRAE 62MZ Calculation sheet, and air handling unit specifications have been provided.

**IEQp2: Environmental Tobacco Smoke (ETS) Control** — **Awarded**

12/13/2013 DESIGN FINAL REVIEW

Photographs of the non-smoking signage have been provided to address the issues outlined in the Preliminary Review. The note on the photographs indicates that signage communicating the exterior smoking policy will be installed at the LEED-NC project building. The documentation demonstrates prerequisite compliance.

12/17/2010 DESIGN PRELIMINARY REVIEW

The LEED Prerequisite Form has been provided stating that smoking is prohibited within 25 feet of entries, outdoor air intakes, and operable windows. Site plans have been provided identifying the location of the non smoking areas. Floor plans and the university smoking policy have also been provided.

However, evidence of signage communicating the exterior smoking policy has not been provided.

TECHNICAL ADVICE:
Please provide evidence of signage communicating the exterior smoking policy. Drawings with signage details or photographs are acceptable.

| | | | | | | |
|---|---|---|---|---|---|---|
| IEQc1: Outdoor Air Delivery Monitoring | Not Attempted | 1 | | | | |
| IEQc2: Increased Ventilation | Not Attempted | 1 | | | | |
| **IEQc3.1: Construction IAQ Management Plan-During Construction** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

04/21/2014 CONSTRUCTION PRELIMINARY REVIEW

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. The form narrative describes how absorptive materials were protected from moisture damage during the construction and preoccupancy phases. The Commissioning Agent has signed the form. Permanently installed air handling units were not operated during construction. A copy of the Construction IAQ Management Plan has been provided.

| | | | | | | |
|---|---|---|---|---|---|---|
| **IEQc3.2: Construction IAQ Management Plan-Before Occupancy** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

07/02/2014 CONSTRUCTION FINAL REVIEW

The revised LEED Form demonstrates compliance.

04/24/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been provided stating that an IAQ Management Plan including post-construction measures was implemented for this project, and therefore, the project applies Option 2. Prior to initial occupancy, baseline IAQ testing was conducted using the US EPA Compendium of Methods for the Determination of Air Pollutants in Indoor Air to confirm that all areas are compliant. Test results showed that some of the sampling points exceeded the allowable concentration limits, and these non-compliant areas have been flushed with outside air and retested to confirm compliance. A copy of the Construction IAQ Management Plan, an IAQ testing report highlighting the dates and concentrations, and a narrative describing the pre-occupancy testing process have been provided. Carpet manufacturer's documentation has also been provided.

However, the documentation indicates that the testing was done on March 20, 2013 and April 4, 2013, whereas the project occupancy date is noted as March 1, 2013 within PIf4: Schedule and Overview Documents. Note that this credit requires that the testing is complete and compliant prior to occupancy.

TECHNICAL ADVICE:

Please confirm the date of occupancy and the dates of the testing process.

| | | | | | | |
|---|---|---|---|---|---|---|
| **IEQc4.1: Low-Emitting Materials-Adhesives and Sealants** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

04/21/2014 **CONSTRUCTION PRELIMINARY REVIEW**

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 Owner has signed the form. Manufacturers' documentation has been provided for at least 20% of the products, as required.

| | | | | | | |
|---|---|---|---|---|---|---|
| IEQc4.2: Low-Emitting Materials-Paints and Coatings | Not Attempted | 1 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| IEQc4.3: Low-Emitting Materials-Flooring Systems | Not Attempted | 1 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **IEQc4.4: Low-Emitting Materials-Composite Wood and Agrifiber Products** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

04/21/2014 **CONSTRUCTION PRELIMINARY REVIEW**

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 Owner has signed the form. Manufacturers' documentation has been provided for at least 20% of the materials, as required.

| | | | | | | |
|---|---|---|---|---|---|---|
| **IEQc5: Indoor Chemical and Pollutant Source Control** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

12/13/2013 **DESIGN FINAL REVIEW**

The mechanical drawings have been provided to address the issues outlined in the Preliminary Review, highlighting the location of the chemical/hazardous gas usage areas, room separations, and associated exhaust systems. The documentation demonstrates credit compliance.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that the project has installed the required indoor chemical and pollutant source control measures required by this credit. Confirmation of the required contracted maintenance has been provided for the roll-out mats. Copies of the construction drawings have been provided to show the installed entryway systems and room separations. The form also confirms that MERV 13 filtration media has been installed in all HVAC systems prior to occupancy. Air handling unit specifications have been provided confirming MERV 13 filtration to be installed.

However, the provided floor plans do not identify the exhaust systems installed for the chemical use areas.

TECHNICAL ADVICE:
Please provide mechanical drawings identifying the exhaust systems installed for the chemical use areas.

It is noted that the contractor has not signed the form however, a later version of the form removes this requirement.

| | | | | | | |
|---|---|---|---|---|---|---|
| **IEQc6.1: Controllability of Systems-Lighting** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

12/13/2013 **DESIGN FINAL REVIEW**

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review. The form states that the required lighting controls have been provided for 100% of the individual workstations and 100% of the shared occupant spaces.

It is noted that the shared office spaces have been incorrectly classified as shared multi-occupant spaces in the form. Note that in individual occupant spaces, workers use standard workstations to conduct individual tasks. Examples are private offices and open office areas with multiple workers. Shared multi-occupant spaces include conference rooms, classrooms, and other indoor spaces used as places of congregation. In this case, it appears that the number of the individual workstations in the shared office spaces (65) has been reported correctly and consistently with IEQc6.2: Controllability of Systems, Thermal Comfort. Additionally, the form indicates that furniture-mounted tasking lighting has been provided for all of these individual workstations. The documentation demonstrates credit compliance.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that a sufficient quantity of lighting controls is provided for individual workstations and shared multi-occupant spaces. Lighting plans and electrical details and schedules have been provided.

However, individual workstations/cubicles within the shared offices must be categorized as individual occupants in the quantity column on the form. Additionally, the number of individual workstations and shared multi-occupant spaces is inconsistent with IEQc6.2: Controllability of Systems, Thermal Comfort.

TECHNICAL ADVICE:
Please provide a revised form confirming the number of individual workstations/cubicles within the shared offices. Ensure that the number of individual workstations and shared multi-occupant spaces is consistent with IEQc6.2.

| | | | | | | |
|---|---|---|---|---|---|---|
| **IEQc6.2: Controllability of Systems-Thermal Comfort** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

12/13/2013 **DESIGN FINAL REVIEW**

The revised LEED Credit Form has been provided to address the issues outlined in the Preliminary Review, indicating that the occupancy type in the shared office spaces have been correctly classified as individual workstations. The form indicates that the number of individual workstations (106) and the number of shared multi-occupant spaces (6) have been reported consistently with IEQc6.1: Controllability of Systems, Lighting, and that appropriate thermal controls have been provided for 100% of the individual workstations and 100% of the shared multi-occupant spaces. The documentation demonstrates credit compliance.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that a sufficient quantity of lighting controls is provided for individual workstations and shared multi-occupant spaces. HVAC control diagrams and plans have been provided.

However, individual workstations/cubicles within the shared offices must be categorized as individual occupants in the quantity column on the form. Additionally, the number of individual workstations and shared multi-occupant spaces is inconsistent with IEQc6.1: Controllability of Systems, Lighting.

TECHNICAL ADVICE:
Please provide a revised form confirming the number of individual workstations/cubicles within the shared offices. Ensure that the number of individual workstations and shared multi-occupant spaces is consistent with IEQc6.1.

| | | | | | | |
|---|---|---|---|---|---|---|
| IEQc7.1: Thermal Comfort-Design | Not Attempted | 1 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| IEQc7.2: Thermal Comfort-Verification | Not Attempted | 1 | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **IEQc8.1: Daylight and Views-Daylight** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

12/13/2013 **DESIGN FINAL REVIEW**

This credit was previously approved during the Preliminary Review. A revised LEED Credit Form has been provided, indicating that the regularly occupied space (15,334 square feet) has been reported consistently across all submittal documentation. The form indicates that the project has achieved the daylighting requirements in 88.01% of all regularly occupied spaces. Credit compliance is not affected.

12/17/2010 **DESIGN PRELIMINARY REVIEW**

The LEED Credit Form has been provided stating that a daylight simulation model has been prepared for the project to demonstrate that a minimum daylight illumination level of 25 footcandles has been achieved in 90.57% of all regularly occupied areas. A copy of the simulation model output and project drawings have also been provided, as required. Supporting calculations have also been provided.

For future projects, please note that the regularly occupied area must be consistent across all credits. The regularly occupied space reported for this credit (17,651 square feet) is inconsistent with Plf3: Occupant and Usage Data (15,344 square feet). Credit compliance is not affected in this case.

| | | |
|---|---|---|
| IEQc8.2: Daylight and Views-Views | Not Attempted | 1 |

| Innovation in Design | | 6 | 6 | 1 | 0 | 5 |
|---|---|---|---|---|---|---|
| IDc1.1: Innovation in Design | Awarded | 1 | 1 | 0 | 0 | 1 |

12/17/2010 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been submitted stating that the project achieves exemplary performance for SSc4.4: Alternative Transportation, Parking Capacity, as specified in the LEED Reference Guide for Green Building Design and Construction, 2009 Edition. The project has instituted a comprehensive transportation management plan that demonstrates a quantifiable reduction in personal automobile use through multiple alternative options. The strategies used by the project are individual parking permits, Omni Ride, RideShare, occasional parker permits, and emergency personnel reduced parking rates. The plan has been provided for SSc4.4.

| IDc1.1: Innovation in Design | Not Attempted | 1 |
|---|---|---|

| IDc1.2: Innovation in Design | Awarded | 1 | 1 | 0 | 0 | 1 |
|---|---|---|---|---|---|---|

12/13/2013 DESIGN FINAL REVIEW

The LEED-EBOM v2009 IEQp3: Green Cleaning Policy Credit Form, a response narrative, and a Green Cleaning Policy have been provided to address the issues outlined in the Preliminary Review. The Green Cleaning Policy includes all required elements. The documentation demonstrates credit compliance.

12/17/2010 DESIGN PRELIMINARY REVIEW

The LEED Credit Form has been submitted stating that the project team has developed and implemented a comprehensive green housekeeping program. The program outline has been provided.

However, to receive an innovation point, the project team must demonstrate compliance with LEED-EBOM 2009 IEQp3: Green Cleaning Policy. The LEED-EBOM Credit Form for IEQp3 must be provided to document that the project will purchase sustainable cleaning, hard floor, and carpet care products that meet the sustainability criteria outlined in LEED-EBOM IEQ Credit 3.3, purchases cleaning equipment meeting the sustainability criteria outlined in LEED-EBOM IEQ Credit 3.4, and has established standard operating procedures (SOPs) addressing how an effective cleaning, hard floor, and carpet maintenance system will be consistently utilized, managed, and audited specifically addressing cleaning to protect vulnerable building occupants. Additionally, the form must confirm the development of strategies for promoting and improving hand hygiene and guidelines addressing the safe handling and storage of cleaning chemicals used in the building (including a plan for managing hazardous spills or mishandling incidents) and requirements for staffing and training of maintenance personnel appropriate to the needs of the building. There must also be a provision for collecting occupant feedback and continuous improvement to evaluate new technologies, procedures and processes.

TECHNICAL ADVICE:
Please provide the LEED-EBOM Credit Form for IEQp3. Request the LEED Credit Form for IEQp3 through the feedback button in LEED Online v3. Please include the specific credit form, project number, project name, and rating system when requesting a form. Additionally, provide the completed IEQp3 form and the required documentation as listed above to demonstrate credit compliance. Alternatively, the project may apply for a different Innovation in Design credit for the Final Review.

| IDc1.2: Innovation in Design | Not Attempted | 1 |
|---|---|---|

| IDc1.3: Innovation in Design | Not Attempted | 1 |
|---|---|---|

| IDc1.3: Innovation in Design | Awarded | 1 | 1 | 0 | 0 | 1 |
|---|---|---|---|---|---|---|

04/22/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been submitted stating that the project team has developed and implemented a Public Education program. This strategy is detailed in LEED Reference Guide for Green Building Design and Construction, 2009 Edition. To take advantage of the educational value of the green building features of a project and to earn an Innovation in Design point, any approach should be actively instructional. At least two ongoing instructional initiatives must be documented, such as a comprehensive signage program, a case-study highlighting the successes of the LEED project, guided tours using the project as an

example, an educational outreach program that engages occupants or the public through periodic events covering green building topics, and / or a website or electronic newsletter. The documentation provided for the development of a case-study and guided tour program comply with the Reference Guide requirements.

| | | | | | | |
|---|---|---|---|---|---|---|
| **IDc1.4: Innovation in Design** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

04/24/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been submitted stating that the project has developed and implemented an Innovation in Design credit proposal in compliance with LEED-EBOM v2009 IEQc3.6: Green Cleaning, Indoor Integrated Pest Management. A copy of the Integrated Pest Management Plan has been provided to document the project's best management practices.

| | | |
|---|---|---|
| IDc1.4: Innovation in Design | Not Attempted | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **IDc1.5: Innovation in Design** | **Denied** | **1** | **1** | **1** | **0** | **0** |

07/14/2014 CONSTRUCTION FINAL REVIEW

The former proposal for Green Cleaning - Indoor Integrated Pest Management, has been replaced with a new strategy. The LEED Form states that the project team has developed and implemented a Take Back the Tap! strategy. The intent of the strategy is to highlight a successful campus-wide bottled water reduction effort which is supported by infrastructure installed in the project building. The goal is to reduce bottled water consumption and associated costs, energy use, and green house gas emissions through education and behavior change. Water bottle filling stations have been installed within the project building at all drinking fountain locations. Signage educating occupants about the initiative have been installed. A narrative describing the accomplishments and goals of the strategy, as well as links to supporting websites, have been provided. However, the provided strategy is part of a campus strategy and the provided savings calculations have been based on the total campus strategy. Note that general corporate, or campus, strategies are not applicable as Innovation in Design credits. For future projects, note that the savings may be calculated on an individual building level to demonstrate compliance with the LEED Interpretation 2551 guidelines.

04/24/2014 CONSTRUCTION PRELIMINARY REVIEW

The LEED Credit Form has been submitted stating that the project has developed and implemented an Innovation in Design credit proposal in compliance with LEED-EBOM v2009 IEQc3.6: Green Cleaning, Indoor Integrated Pest Management. A copy of the Integrated Pest Management Plan has been provided to document the project's best management practices.

However, this strategy has already been awarded for IDc1.4: Innovation in Design. Note that no strategy can achieve more than one Innovation in Design point.

TECHNICAL ADVICE:

The project may apply for a different Innovation in Design strategy for the Final Review.

| | | |
|---|---|---|
| IDc1.5: Innovation in Design | Not Attempted | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **IDc2: LEED® Accredited Professional** | **Awarded** | **1** | **1** | **0** | **0** | **1** |

04/21/2014 CONSTRUCTION PRELIMINARY REVIEW

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

| | | | |
|---|---|---|---|
| **Regional priority** | **4** | **4** | **4** |
| SSc3: Brownfield Redevelopment | 1 | 1 | 1 |
| SSc7.1: Heat Island Effect, Non-Roof | 1 | 1 | 1 |
| EAc2: On-Site Renewable Energy | 1 | 1 | 1 |
| MRc1.1: Building Reuse-Maintain Existing Walls, Floors and Roof | 1 | 1 | 1 |

| | | | | | |
|---|---|---|---|---|---|
| TOTAL | 110 | 77 | 2 | 0 | 66 |

## REVIEW SUMMARY

| Review | SUBMITTED | RETURNED | POINTS: SUBMITTED | DENIED | PENDING | AWARDED |
|---|---|---|---|---|---|---|
| Design Preliminary | 11/22/2010 | 01/06/2011 | 56 | 0 | 33 | 23 |

| Credit | STATUS | TYPE | POINTS: ATTEMPTED | DENIED | PENDING | AWARDED |
|---|---|---|---|---|---|---|
| PIf1: Minimum Program Requirements | Approved | | 0 | 0 | 0 | 0 |
| PIf2: Project Summary Details | Approved | | 0 | 0 | 0 | 0 |
| PIf3: Occupant and Usage Data | Not Approved | | 0 | 0 | 0 | 0 |
| PIf4: Schedule and Overview Documents | Approved | | 0 | 0 | 0 | 0 |
| SSc1: Site Selection | Anticipated | Design | 1 | 0 | 0 | 1 |
| SSc2: Development Density and Community Connectivity | Anticipated | Design | 5 | 0 | 0 | 5 |
| SSc3: Brownfield Redevelopment | Anticipated | Design | 2 | 0 | 0 | 2 |
| SSc4.1: Alternative Transportation-Public Transportation Access | Anticipated | Design | 6 | 0 | 0 | 6 |
| SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms | Pending | Design | 1 | 0 | 1 | 0 |
| SSc4.4: Alternative Transportation-Parking Capacity | Anticipated | Design | 2 | 0 | 0 | 2 |
| SSc5.2: Site Development-Maximize Open Space | Anticipated | Design | 1 | 0 | 0 | 1 |
| SSc8: Light Pollution Reduction | Pending | Design | 1 | 0 | 1 | 0 |
| WEp1: Water Use Reduction, 20% Reduction | Pending | Design | 0 | 0 | 0 | 0 |
| WEc1: Water Efficient Landscaping | Anticipated | Design | 4 | 0 | 0 | 4 |
| WEc3: Water Use Reduction | Pending | Design | 3 | 0 | 3 | 0 |
| EAp2: Minimum Energy Performance | Pending | Design | 0 | 0 | 0 | 0 |
| EAp3: Fundamental Refrigerant Management | Pending | Design | 0 | 0 | 0 | 0 |
| EAc1: Optimize Energy Performance | Pending | Design | 17 | 0 | 17 | 0 |
| EAc2: On-Site Renewable Energy | Pending | Design | 2 | 0 | 2 | 0 |
| EAc4: Enhanced Refrigerant Management | Pending | Design | 2 | 0 | 2 | 0 |
| MRp1: Storage and Collection of Recyclables | Anticipated | Design | 0 | 0 | 0 | 0 |
| IEQp1: Minimum Indoor Air Quality Performance | Anticipated | Design | 0 | 0 | 0 | 0 |
| IEQp2: Environmental Tobacco Smoke (ETS) Control | Pending | Design | 0 | 0 | 0 | 0 |
| IEQc5: Indoor Chemical and Pollutant Source Control | Pending | Design | 1 | 0 | 1 | 0 |
| IEQc6.1: Controllability of Systems-Lighting | Pending | Design | 1 | 0 | 1 | 0 |
| IEQc6.2: Controllability of Systems-Thermal Comfort | Pending | Design | 1 | 0 | 1 | 0 |
| IEQc8.1: Daylight and Views-Daylight | Anticipated | Design | 1 | 0 | 0 | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| IDc1.1: Transportation Demand Management Program | **Anticipated** | Design | **1** | **0** | **0** | **1** |
| IDc1.2: Green Cleaning Program | **Pending** | Design | **1** | **0** | **1** | **0** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Design Final** | **11/26/2013** | **02/07/2014** | **34** | **3** | **0** | **22** |

| Credit | STATUS | TYPE | POINTS: ATTEMPTED | DENIED | PENDING | AWARDED |
|---|---|---|---|---|---|---|
| PIf1: Minimum Program Requirements | Approved | | 0 | 0 | 0 | 0 |
| PIf2: Project Summary Details | Approved | | 0 | 0 | 0 | 0 |
| PIf3: Occupant and Usage Data | Approved | | 0 | 0 | 0 | 0 |
| PIf4: Schedule and Overview Documents | Approved | | 0 | 0 | 0 | 0 |
| SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms | Anticipated | Design | 1 | 0 | 0 | 1 |
| SSc8: Light Pollution Reduction | Anticipated | Design | 1 | 0 | 0 | 1 |
| WEp1: Water Use Reduction, 20% Reduction | Anticipated | Design | 0 | 0 | 0 | 0 |
| WEc3: Water Use Reduction | Anticipated | Design | 3 | 0 | 0 | 3 |
| EAp2: Minimum Energy Performance | Anticipated | Design | 0 | 0 | 0 | 0 |
| EAp3: Fundamental Refrigerant Management | Anticipated | Design | 0 | 0 | 0 | 0 |
| EAc1: Optimize Energy Performance | Anticipated | Design | 17 | 0 | 0 | 8 |
| EAc2: On-Site Renewable Energy | Anticipated | Design | 2 | 0 | 0 | 2 |
| EAc4: Enhanced Refrigerant Management | Anticipated | Design | 2 | 0 | 0 | 2 |
| IEQp2: Environmental Tobacco Smoke (ETS) Control | Anticipated | Design | 0 | 0 | 0 | 0 |
| IEQc5: Indoor Chemical and Pollutant Source Control | Anticipated | Design | 1 | 0 | 0 | 1 |
| IEQc6.1: Controllability of Systems-Lighting | Anticipated | Design | 1 | 0 | 0 | 1 |
| IEQc6.2: Controllability of Systems-Thermal Comfort | Anticipated | Design | 1 | 0 | 0 | 1 |
| IEQc8.1: Daylight and Views-Daylight | Anticipated | Design | 1 | 0 | 0 | 1 |
| IDc1.2: Green Cleaning Program | Anticipated | Design | 1 | 0 | 0 | 1 |

| Construction Preliminary | 04/09/2014 | 04/30/2014 | 24 | 0 | 12 | 10 |
|---|---|---|---|---|---|---|

| Credit | STATUS | TYPE | POINTS: ATTEMPTED | DENIED | PENDING | AWARDED |
|---|---|---|---|---|---|---|
| PIf1: Minimum Program Requirements | Approved | | 0 | 0 | 0 | 0 |
| PIf2: Project Summary Details | Approved | | 0 | 0 | 0 | 0 |
| PIf3: Occupant and Usage Data | Approved | | 0 | 0 | 0 | 0 |
| PIf4: Schedule and Overview Documents | Not Approved | | 0 | 0 | 0 | 0 |
| SSp1: Construction Activity Pollution Prevention | Awarded | Construction | 0 | 0 | 0 | 0 |
| SSc7.1: Heat Island Effect-Non-Roof | Pending | Construction | 2 | 0 | 2 | 0 |
| EAp1: Fundamental Commissioning of the Building Energy Systems | Awarded | Construction | 0 | 0 | 0 | 0 |
| EAc3: Enhanced Commissioning | Pending | Construction | 2 | 0 | 2 | 0 |
| EAc5: Measurement and Verification | Pending | Construction | 3 | 0 | 3 | 0 |
| MRc1.1: Building Reuse-Maintain Existing Walls, Floors and Roof | Pending | Construction | 3 | 0 | 1 | 0 |
| MRc2: Construction Waste Management | Pending | Construction | 2 | 0 | 2 | 0 |
| MRc4: Recycled Content | Awarded | Construction | 1 | 0 | 0 | 1 |
| MRc5: Regional Materials | Awarded | Construction | 2 | 0 | 0 | 2 |
| MRc7: Certified Wood | Awarded | Construction | 1 | 0 | 0 | 1 |
| IEQc3.1: Construction IAQ Management Plan-During Construction | Awarded | Construction | 1 | 0 | 0 | 1 |
| IEQc3.2: Construction IAQ Management Plan-Before Occupancy | Pending | Construction | 1 | 0 | 1 | 0 |
| IEQc4.1: Low-Emitting Materials-Adhesives and Sealants | Awarded | Construction | 1 | 0 | 0 | 1 |
| IEQc4.4: Low-Emitting Materials-Composite Wood and Agrifiber Products | Awarded | Construction | 1 | 0 | 0 | 1 |
| IDc1.3: Green Building Education | Awarded | Construction | 1 | 0 | 0 | 1 |
| IDc1.4: Integrated Pest Management | Awarded | Design | 1 | 0 | 0 | 1 |
| IDc1.5: Take Back the Tap! | Pending | Design | 1 | 0 | 1 | 0 |
| IDc2: LEED® Accredited Professional | Awarded | Construction | 1 | 0 | 0 | 1 |

| Construction Final | 06/23/2014 | 07/15/2014 | 14 | 2 | 0 | 12 |
|---|---|---|---|---|---|---|

| Credit | STATUS | TYPE | POINTS: ATTEMPTED | DENIED | PENDING | AWARDED |
|---|---|---|---|---|---|---|
| PIf1: Minimum Program Requirements | Approved | | 0 | 0 | 0 | 0 |
| PIf2: Project Summary Details | Approved | | 0 | 0 | 0 | 0 |
| PIf3: Occupant and Usage Data | Approved | | 0 | 0 | 0 | 0 |
| PIf4: Schedule and Overview Documents | Approved | | 0 | 0 | 0 | 0 |
| SSc7.1: Heat Island Effect-Non-Roof | Awarded | Construction | 2 | 0 | 0 | 2 |
| EAc3: Enhanced Commissioning | Awarded | Construction | 2 | 0 | 0 | 2 |
| EAc5: Measurement and Verification | Awarded | Construction | 3 | 0 | 0 | 3 |
| MRc1.1: Building Reuse-Maintain Existing Walls, Floors and Roof | Awarded | Construction | 3 | 0 | 0 | 3 |
| MRc2: Construction Waste Management | Awarded | Construction | 2 | 1 | 0 | 1 |
| IEQc3.2: Construction IAQ Management Plan-Before Occupancy | Awarded | Construction | 1 | 0 | 0 | 1 |
| IDc1.5: Take Back the Tap! | Denied | Design | 1 | 1 | 0 | 0 |