



# 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 certification program is administered by the Green Building Certification Institute (GBCI®).

## Avenir Museum

Project ID: 1000034669  
Rating system & version: LEED-NC v2009  
Project registration date: 08/08/2013



**Certified (Silver)**

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

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

ATTEMPTED: 54, DENIED: 4, PENDING: 0, AWARDED: 50 OF 110 POINTS

leed-nc

### SUSTAINABLE SITES 20 OF 26

SSp1	Construction Activity Pollution Prevention	Y
SSc1	Site Selection	1 / 1
SSc2	Development Density and Community Connectivity	5 / 5
SSc3	Brownfield Redevelopment	0 / 1
SSc4.1	Alternative Transportation-Public Transportation Access	6 / 6
SSc4.2	Alternative Transportation-Bicycle Storage and Changing Room	1 / 1
SSc4.3	Alternative Transportation-Low-Emitting and Fuel-Efficient V	3 / 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	0 / 1
SSc7.2	Heat Island Effect-Roof	1 / 1
SSc8	Light Pollution Reduction	0 / 1

### WATER EFFICIENCY 2 OF 10

WEp1	Water Use Reduction-20% Reduction	Y
WEc1	Water Efficient Landscaping	0 / 4
WEc2	Innovative Wastewater Technologies	0 / 2
WEc3	Water Use Reduction	2 / 4

### ENERGY AND ATMOSPHERE 8 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	2 / 19
EAc2	On-Site Renewable Energy	0 / 7
EAc3	Enhanced Commissioning	2 / 2
EAc4	Enhanced Refrigerant Mgmt	2 / 2
EAc5	Measurement and Verification	0 / 3
EAc6	Green Power	2 / 2

### MATERIALS AND RESOURCES 7 OF 14

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

### MATERIALS AND RESOURCES CONTINUED

MRc5	Regional Materials	1 / 2
MRc6	Rapidly Renewable Materials	0 / 1
MRc7	Certified Wood	0 / 1

### INDOOR ENVIRONMENTAL QUALITY 9 OF 15

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

### INNOVATION IN DESIGN 3 OF 6

IDc1.1	Innovation in Design	0 / 1
IDc1.1	Innovation in Design: Buildings That Teach	1 / 1
IDc1.2	Exemplary Performance	1 / 1
IDc1.2	Innovation in Design	0 / 1
IDc1.3	Innovation in Design	0 / 1
IDc1.3	Innovation in Design	0 / 1
IDc1.4	Innovation in Design	0 / 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 1 OF 4

SSc2	Development Density and Community Connectivity	1 / 1
SSc6.1	Stormwater Design-Quantity Control	0 / 1
WEc1	Water Efficient Landscaping	0 / 1
WEc3	Water Use Reduction	0 / 1
EAc1	Optimize Energy Performance	0 / 1
EAc2	On-Site Renewable Energy	0 / 1

TOTAL

50 OF 110

# CREDIT DETAILS



## Project Information Forms

### Pf1: Minimum Program Requirements

Approved

12/02/2014 DESIGN FINAL REVIEW

08/25/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that the project complies with all Minimum Program Requirements except MPR 6: Must Commit to Sharing Whole-Building Energy and Water Usage Data. The project has claimed an exemption because the project has not installed whole-building energy and water meters. The project is located in Fort Collins, Colorado.

### Pf2: Project Summary Details

Approved

12/02/2014 DESIGN FINAL REVIEW

The additional documentation demonstrates compliance.

08/25/2014 DESIGN PRELIMINARY REVIEW

The LEED Form includes the required project summary details. There is one building in this LEED application with a total of one story and 19,080 gross square feet. However, to demonstrate compliance, the following must be addressed.

#### TECHNICAL ADVICE

1. It is unclear whether the total parking capacity reported in the form includes all parking spaces provided for all occupants of the building. It appears that the reported parking capacity (3 spaces) reflects only the parking provided on site, whereas the total parking provided for project occupants (may include reserved off-site parking) must be entered in the form. Provide a revised form, as necessary, to ensure that the total reported parking capacity includes all parking spaces provided for all occupants of the building. Ensure that the total parking capacity has been reported consistently throughout the submittal. Provide additional documentation, such as parking plans and/or supplemental calculations, as necessary.

2. The form has not been completed regarding how sewage will be conveyed from the site. Provide a clarification narrative and revise the form to indicate how sewage will be conveyed from the LEED project building.

### Pf3: Occupant and Usage Data

Approved

12/02/2014 DESIGN FINAL REVIEW

The additional documentation demonstrates compliance.

08/25/2014 DESIGN PRELIMINARY REVIEW

The LEED Form includes the required occupant and usage data. The project consists primarily of Core Learning Space: College/University spaces. The average users value is 33, the peak users value is 306, and the FTE value is 6. However, to demonstrate compliance, the following must be addressed.

#### TECHNICAL ADVICE

1. The occupancy numbers have not been reported consistently throughout this project. This form indicates that the daily average transient value (visitors) is 27, whereas WEp1: Water Use Reduction - 20% Reduction indicates a daily average transient (visitors) occupancy value of 370. Occupancy numbers must be reported consistently throughout all submittal documentation. Revise the form, as necessary, to ensure that the occupancy numbers are presented consistently throughout the project.

### Pf4: Schedule and Overview Documents

Approved

12/02/2014 DESIGN FINAL REVIEW

Additional documentation has been provided.

07/22/2014 DESIGN PRELIMINARY REVIEW

The LEED Form includes the design and construction schedule. The date of substantial completion is October 31, 2014 and the date of

occupancy is March 1, 2015. The required documents have been uploaded.



## Sustainable Sites

### SSp1: Construction Activity Pollution Prevention

**Awarded**

08/11/2015 **CONSTRUCTION FINAL REVIEW**

The additional documentation demonstrates compliance.

06/16/2015 **CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that the project has implemented an Erosion and Sedimentation Control (ESC) Plan that conforms to the 2003 EPA Construction General Permit (CGP). However, to demonstrate compliance, the following must be addressed.

TECHNICAL ADVICE

1. It is unclear if the ESC Plan includes the proper measures for the prevention of air pollution (dust and particulate matter). Provide a revised ESC Plan and supporting documentation that includes detailed information describing the measures taken for the prevention of polluting the air with dust and particulate matter.

### SSc1: Site Selection

**Awarded: 1**

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

07/22/2014 **DESIGN PRELIMINARY REVIEW**

The LEED Form states that the project site does not meet any of the prohibited criteria.

### SSc2: Development Density and Community Connectivity

**Awarded: 5**

POSSIBLE POINTS: 5

ATTEMPTED: 5, DENIED: 0, PENDING: 0, AWARDED: 5

08/25/2014 **DESIGN PRELIMINARY REVIEW**

The LEED Form states that the project complies with Option 2: Community Connectivity.

It is noted that the list of basic services in the form counts the Place of Worship service three times (First United Methodist Church, Trinity Lutheran Church, and St. John's Lutheran Church), whereas the provided map lists one Place of Worship (St. John's Lutheran Church). For future projects, note that ten unique, qualifying basic services must be provided to achieve this credit (restaurants may be counted twice). In this case, the map confirms that there are ten unique, qualifying basic services within a half-mile radius of the project building. Compliance is not affected.

### SSc3: Brownfield Redevelopment

**Not Attempted**

POSSIBLE POINTS: 1

### SSc4.1: Alternative Transportation-Public Transportation Access

**Awarded: 6**

POSSIBLE POINTS: 6

ATTEMPTED: 6, DENIED: 0, PENDING: 0, AWARDED: 6

08/25/2014 **DESIGN PRELIMINARY REVIEW**

The LEED Form states that the project complies with Option 2: Bus Station Proximity and is located within a one-quarter-mile walking distance of one or more stops for two or more public, campus, or private bus lines usable by building occupants.

It is noted that the provided site plan does not show the pedestrian route from the main entrance of the project building to the bus stops. Additionally, the map does not confirm that pedestrian access exists between the project site and bus stops. In this case, independent research has confirmed that the pedestrian route from the project building main entrance to the bus stops is less than a one-quarter-mile walking distance, and pedestrian access is available. Compliance is not affected.

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

**Awarded: 1**

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

12/04/2014 **DESIGN FINAL REVIEW**

The additional documentation indicates that bicycle storage facilities have been provided to serve 8.36% of the LEED project FTE and

transient occupants, measured at peak occupancy, and shower facilities have been provided for 3.42% of the LEED project FTE occupants.

It is noted that the plans indicate that the project has provided 2 shower/changing facilities for male occupants and 3 shower/changing facilities for female occupants. Note that, according to LEED Interpretation 5231, for projects that have an odd number of minimum required shower/changing facilities, the project must either meet the minimum requirement for each gender (in this case, 1 shower per gender), or provide unisex showers that would be usable by either gender. In this case, 4 shower/changing facilities can count towards this credit, demonstrating that shower/changing facilities have been provided for 2.73% of the project FTE occupants. The documentation demonstrates compliance.

#### 08/25/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that the project complies with Case 1: Commercial or Institutional Projects. Bicycle storage facilities have been provided to serve 7.84% of the LEED project FTE and transient occupants, measured at peak occupancy, and shower facilities have been provided for 83.33% of the LEED project FTE occupants. However, to demonstrate compliance, the following must be addressed.

##### TECHNICAL ADVICE

1. Provide a narrative to confirm that all LEED project FTE occupants will have full access to the shower facilities, and that the building containing the shower facilities is open at least during the same hours as the LEED project. Provide supplemental calculations confirming that sufficient shower facilities have been provided to serve all FTE occupants with access to the amenities, including individuals who are not part of this LEED project.

#### **SSc4.3: Alternative Transportation-Low-Emitting and Fuel-Efficient Vehicles**

**Awarded: 3**

POSSIBLE POINTS: 3

ATTEMPTED: 3, DENIED: 0, PENDING: 0, AWARDED: 3

#### 12/02/2014 DESIGN FINAL REVIEW

The additional documentation confirms that the project complies with Option 1: Preferred Parking and provides preferred parking spaces for low-emitting and fuel-efficient vehicles for 7.69% of the total parking capacity.

#### 08/25/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that the project complies with Option 1 and provides preferred parking spaces for low-emitting and fuel-efficient vehicles for 33.33% of the total parking capacity. However, to demonstrate compliance, the following must be addressed.

##### TECHNICAL ADVICE

1. Plf2: Project Summary Details has not been approved due to issues with the overall parking capacity available to LEED project occupants. Refer to the comments within Plf2, and revise this form and supporting documentation to ensure that the total parking capacity is listed consistently among all submittal documentation.

2. Provide photographs or signage details that confirm that the low-emitting and fuel-efficient parking spaces are reserved.

#### **SSc4.4: Alternative Transportation-Parking Capacity**

**Awarded: 2**

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

#### 07/22/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that no new parking has been created within the LEED project scope of work.

#### **SSc5.1: Site Development-Protect or Restore Habitat**

**Not Attempted**

POSSIBLE POINTS: 1

#### **SSc5.2: Site Development-Maximize Open Space**

**Awarded: 1**

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

#### 02/27/2015 REVISED REVIEW COMMENT

Further clarification has been provided via customer service. The documentation demonstrates compliance.

#### 01/19/2015 DESIGN FINAL REVIEW

The LEED Form has been updated. However, the open space provided (17,285 square feet) is not equal to or greater than the footprint

of the LEED project building (19,080 square feet), as required. The documentation does not demonstrate compliance.

#### 07/22/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that the project complies with Case 2: Sites with No Local Zoning Requirements. The open space provided is equal to or greater than the footprint of the LEED project building.

**SSc6.1: Stormwater Design-Quantity Control**      **Not Attempted**  
POSSIBLE POINTS: 1

**SSc6.2: Stormwater Design-Quality Control**      **Not Attempted**  
POSSIBLE POINTS: 1

**SSc7.1: Heat Island Effect, Non-Roof**      **Not Attempted**  
POSSIBLE POINTS: 1

**SSc7.2: Heat Island Effect-Roof**      **Awarded: 1**  
POSSIBLE POINTS: 1  
ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

#### 08/26/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that the project complies with Option 1 and 146.32% of the building roof surface has a Solar Reflectance Index (SRI) meeting the credit requirements. The project has selected the Licensed Professional Exemption (LPE).

It is noted that the form narrative indicates that the area of roof overhang has been included in the calculations for this credit as roof area. Note that only roofs over conditioned spaces may be counted towards this credit. LEED Interpretation 1942 states that a roof "covering unconditioned outdoor space, not a building . . . is acting as a shade structure." Therefore, portions of the roof structure which overlap other roofing structures and are serving as a canopy or overhang are not applicable to this credit. When recalculated to exclude the overhang, 141.67% of the building roof surface has a SRI meeting the credit requirements. Compliance is not affected.

**SSc8: Light Pollution Reduction**      **Not Attempted**  
POSSIBLE POINTS: 1



## Water Efficiency

### WEp1: Water Use Reduction-20%Reduction

**Awarded**

#### 12/04/2014 DESIGN FINAL REVIEW

The additional documentation indicates that the project has reduced potable water use by 33.37%.

The following issues are noted:

1. The provided manufacturer's documentation does not include a flow rate for the L-Existing fixture, as required. For future projects, ensure that the plumbing fixture schedule and/or manufacturer's documentation includes the flush and flow rates for all fixtures and that the flush and flow rates for all plumbing fixtures have been reported consistently throughout the submittal.
2. The calculations indicate total daily use values for each fixture group that differ from the standard calculation methodology, as usage has been double-counted for the FTE occupants. For example, based on the project occupancy and the standard calculation methodology outlined within the LEED BD+C v2009 Reference Guide, a total of 70 water closet uses are anticipated, whereas 80 lavatory uses have been included in the calculations. Note that, when the calculations include a fixture group with multiple fixtures, the total daily uses, which have been calculated using the standard calculation methodology, must be divided between the fixtures based upon usage. Alternatively, multiple fixtures from the same fixture group that have the same water usage rate may be grouped in the calculations. For future projects, ensure that the total daily use values for each fixture group represent the standard calculation methodology.
3. The manufacturer's documentation indicates that the L-1 lavatories (0.5 GPM) are auto-control faucets, but flow rates have not been converted from gallons per minute (GPM) to gallons per cycle (GPC), and the fixture type has not been listed as Metering in Table WEp1-4: Flow Fixture Data. Additionally, as the L-1 lavatories do not appear to qualify as private lavatory faucets, the 0.5 GPM baseline should be used in the calculations. For future projects, ensure that the auto-control lavatory faucets are converted from GPM to GPC and listed in the form as Metering. Ensure that the design case calculations use the default 12-second duration when converting to GPC, as outlined in Table 2 within the WEp1 section of the LEED BD+C v2009 Reference Guide. The duration column is not applicable in this case, and therefore, should not be modified. Refer to the Water Use Reduction Additional Guidance found on the USGBC website for additional information regarding auto-control/metered lavatory faucets.

When the percentage reduction of water use in all fixtures is recalculated addressing the above issues, the project has reduced potable water use by 38.82%. The documentation demonstrates compliance.

#### 09/09/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that the project has reduced potable water use by 33.61%. However, to demonstrate compliance, the following must be addressed.

#### TECHNICAL ADVICE

1. The occupancy used in the calculations for this prerequisite (6 FTE and 370 transients) is inconsistent with the occupancy listed in Pf3: Occupant and Usage Data (6 FTE and 27 transients). Occupancy values must be documented consistently among all credits unless justification can be provided. Revise this prerequisite to ensure that all occupants (daily average) have been included in the water use calculations.
2. The plumbing fixture schedule does not confirm flow rates for the kitchen sink fixture and the lavatory fixture. Note that the documentation must be provided for all fixtures to verify the flush and flow rates used in the form calculations. Revise the fixture schedule, and/or provide manufacturer's documentation, as required, to demonstrate that the flow rates in the form have been accurately reported. If necessary, ensure that the auto-control lavatory faucets are converted from GPM to GPC and listed in the form as Metering. Ensure that the design case calculations use the default 12-second duration when converting to GPC, as outlined in Table 2 within the WEp1: Water Use Reduction - 20% Reduction section of the LEED BD+C v2009 Reference Guide. The duration column is not applicable in this case, and therefore, should not be modified.
3. The form indicates that the installed water closets are IPC/UPC (Conventional) fixtures with a flush rate of 1.27 GPF, whereas the fixture schedule indicates that the water closets are dual-flush fixtures (1.6 GPF full-flush rate and 1.1 GPF low-flush rate). Note that if the dual-flush fixtures are installed, the weighted average flush rate must be used in the calculations. Provide a narrative and/or any necessary documentation confirming whether dual-flush water closets have been installed in the project. If so, ensure that the revised form uses the correct weighted average flush rate for a dual-flush fixture with a full-flush rate of 1.6 GPF and a low-flush rate of 1.1 GPF. Provide supporting calculations demonstrating how the flush rate has been determined.
4. The documentation within Pf4: Schedule and Overview Documents indicates that existing restrooms Women 134 and Men 136 are within the LEED project boundary, whereas the fixtures for these restrooms have not been correctly included in the calculations. Note that, per LEED Interpretation 754, the flush and flow rates for these existing fixtures must be included in the design case calculations. Revise the form to include all applicable fixtures that are installed within the project, including all existing, unmodified fixtures. Provide the documentation, such as testing reports, to confirm the fixture model and flush or flow rate.

Refer to the Reference Guide and the Water Use Reduction Additional Guidance found on the USGBC website for additional information regarding how to document this prerequisite.

**WEc2: Innovative Wastewater Technologies**  
POSSIBLE POINTS: 2

**Not Attempted**

**WEc3: Water Use Reduction**

**Awarded: 2**

POSSIBLE POINTS: 4

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 2

**12/04/2014 DESIGN FINAL REVIEW**

The requested clarifications for WEp1: Water Use Reduction - 20% Reduction indicate that the project has reduced potable water use by 33%. When recalculated based upon the issues noted in WEp1, the project has reduced potable water use by 38.82%. The documentation demonstrates compliance.

**07/23/2014 DESIGN PRELIMINARY REVIEW**

The LEED Form states that the project has reduced potable water use by 34%. However, to demonstrate compliance, the following must be addressed.

**TECHNICAL ADVICE**

1. WEp1: Water Use Reduction - 20% Reduction has been denied pending clarifications. Refer to the comments within WEp1 and resubmit this credit.



### EAp1: Fundamental Commissioning of the Building Energy Systems

Awarded

#### 06/16/2015 CONSTRUCTION PRELIMINARY REVIEW

The LEED Form states that the fundamental commissioning is complete.

### EAp2: Minimum Energy Performance

Awarded

#### 04/07/2015 DESIGN APPEAL REVIEW

The additional documentation demonstrates compliance and states that the project has achieved an energy cost savings of 12.41%. The total predicted annual energy consumption for the project is 141,524 kWh of electricity and 131,306 kWh of natural gas.

#### 01/19/2015 DESIGN FINAL REVIEW

The additional documentation states that the project has achieved an energy cost savings of 0.22%. However, a minimum energy cost savings of 7.86% is required to achieve this prerequisite (based on the project being 57.11% new construction). The documentation does not demonstrate compliance.

All prerequisites must be earned prior to achieving LEED certification. Since this prerequisite has been denied after receiving two full rounds of review, an appeal will be necessary if the project team wishes to obtain LEED certification for the building.

#### 09/09/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that the project complies with Option 1: Whole Building Energy Simulation and has achieved an energy cost savings of 21.57%. However, to demonstrate compliance, the following comments requiring a project response (marked as Mandatory) must be addressed for the Final Review.

#### TECHNICAL ADVICE

#### REVIEW COMMENTS REQUIRING A PROJECT RESPONSE (Mandatory)

##### 1. Provide the following:

a. A narrative response to each Preliminary Review comment below.

b. A narrative describing any additional changes made to the energy models between the Preliminary and Final Review phases not addressed by the responses to the review comments. The mandatory comments are perceived to reduce the projected savings for the Proposed design. If the projected savings increase substantially in the Final submission, without implementing any optional comments that may improve performance, a narrative explanation for these results must be provided.

2. Table 1.4.1 does not provide the construction assembly description for the exterior wall constructions in the Proposed model. The exterior wall constructions in the Proposed model must reflect actual construction assemblies and assembly U-values. Revise Table 1.4.1 by providing the construction assembly description for the exterior wall constructions in the Proposed model. In addition, revise the Proposed model, as needed, reflecting the changes. Ensure that all components of the assembly construction are taken into account when calculating the overall U-factor for each construction assembly, including thermal breaks. If the project includes steel-framed walls, Table A3.3 in ASHRAE Standard 90.1-2007 may be referenced for additional guidance regarding how to de-rate the R-value for insulation located between steel framing assemblies.

3. Table 1.4.3A indicates that a lighting floor area of only 10,500 square feet has been considered for the Proposed and Baseline model; however, this value is inconsistent with the total project area of 19,080 square feet and the modeled area of 15,733 square feet indicated in Section 1.1A of the form. Revise the Proposed and Baseline models, Table 1.4.3A, and Section 1.1A/Section 1.2 of the form, as needed, to reflect the total building area reflected in the actual design, and/or provide a supplemental narrative explaining the discrepancy. Note the energy consumption associated with unconditioned spaces (interior lighting, process loads, etc.) must be included in the Proposed and Baseline models. Further provide the Entered Values-Room by Room report for each model reflecting the changes.

4. The parking lot and drives surface area indicated in Table 1.4.3B (8,196 square feet) is inconsistent with the square footage of the square footage of all parking areas indicated in Pf2: Project Summary Details (528 square feet); however, the area or length of each exterior lighting surface in the actual design must be used to determine the exterior lighting power using Table 9.4.5 as the guidelines. Revise the total area for the parking lot and drives surfaces used to calculate the exterior lighting power in the Proposed and Baseline models, as needed, to reflect the actual design. In addition, verify that the exterior lighting power reflected in the Proposed and Baseline models has been determined using Section 9.4.5 as the guidelines and update the exterior lighting power provided in Table 1.4.3B reflecting the changes. Ensure that only the area or length of illuminated surfaces in the design is used to determine the exterior lighting power density. In addition, note that lighting fixtures cannot be double counted for different exterior surfaces. Finally, ensure that credit is only taken for lighted spaces and surfaces located within the LEED project boundary.

5. It appears that some of the equipment capacities and efficiencies for each HVAC system in the Proposed model are inconsistent with the equipment capacities in the actual design when comparing the simulation input summary reports to the mechanical schedules provided for Pf4: Schedule and Overview Documents. For example, it appears that the cooling capacities have been autosized in the

Proposed model, since user-defined values have not been included at the system level or plant level. Table G3.1.10 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 to reflect all HVAC systems at actual equipment capacities and efficiencies. In addition, update Table 1.4.7B and Table 1.4.8, and provide a revised simulation input summary reports for the Proposed model reflecting the changes. Further, if the equipment capacities and efficiencies are based on updated mechanical schedules and/or HVAC submittal sheets, provide the updated mechanical schedules and/or HVAC submittal sheets.

6. Table 1.4.7A and the Entered Values-Plants report indicate that the cooling efficiency and heating efficiency is modeled at 9.8 EER and 78%, respectively, for each HVAC system in the Baseline model; however, it is unclear if the cooling efficiency is based on the autosized cooling capacity of each HVAC system using Table 6.8.1A and Table 6.8.1E. The cooling efficiency must be modeled at 13.0 SEER, 11.0 EER, 10.8 EER, 9.8 EER, or 9.5 EER and the heating efficiency must be modeled at 78% AFUE, 80% thermal efficiency, or 80% combustion efficiency based on the autosized cooling and heating capacity of each HVAC system in the Baseline model using Tables 6.8.1A and 6.8.1E. Typically, each space served by VAV terminal unit or single-zone HVAC system is considered a thermal zone for modeling purposes, and thermal zones may only be combined if all the exceptions of Table G3.1.7 are met. Revise the Baseline model, as needed, so one packaged rooftop air conditioner is modeled per thermal zone, and ensure that the cooling efficiency and heating efficiency for each system is determined based on the autosized cooling capacity and heating capacity using the appropriate table for Section 6.8. In addition, update Table 1.4.7A and provide a revised Entered Values-Plants report reflecting the changes. Note that Section G3.1.2.1 requires that where efficiency ratings, such as EER and COP, include fan energy, the descriptor must 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 (the cooling/heating efficiency without the fan power is typically rated higher than when the fan power is included as a component in the rated efficiency).

7. Table 1.4.7A and Table 1.4.7B indicate that the outdoor air volume has not been modeled identically in each model; however, Section G3.1.2.5 requires that the minimum outdoor air ventilation rates are modeled the same between the Proposed and Baseline models using the actual, as-designed, ventilation rates. Revise the Proposed and Baseline models, as needed, to reflect the actual, as-designed, ventilation rates. In addition, update Table 1.4.7A and Table 1.4.7B, and provide the System Checksums report for each model reflecting the changes.

8. Section 1.5 of the form indicates that the energy cost utility rate reflected in each model is approximately \$0.037 per kWh for electricity and \$0.021 per kWh for natural gas in each model; however, these values appear low for the project location when compared to the EIA rates for this location. Provide additional documentation to demonstrate how the utility rates have been determined for the actual design. In addition, update Section 1.5 and update the Proposed and Baseline models, as needed, reflecting the changes.

9. The energy consumption values indicated in Section 1.6 of the form and the Energy Cost Budget/PRM Summary indicate that the natural gas space heating and service hot water heating account for 53% and 71% of the total energy consumption in the Proposed and Baseline model, respectively; however, these values appear high for this building type. Specifically, the Entered Values-Plants report indicates that the service hot water heating load has been reflected at 13 gpm in each model; however, this value appears high when compared to the fixture flow calculations reflected in WEp1: Water Use Reduction - 20% Reduction. Revisit all inputs and ensure that the Baseline inputs are consistent with Appendix G and the Proposed inputs reflect the actual design parameters of the building. If after all inputs are verified as correct and the energy consumption associated with natural gas space heating and service hot water heating remain high in each model, provide a supplemental narrative describing how the energy savings were realized with reference to applicable energy efficiency measures. Finally, revise Table EAp2-4 and Table EAp2-5 so the energy consumption for service hot water heating and natural gas space heating are separated into separate end uses for each model.

10. Table EAp2-4 of the form includes the simulation results for the 90-degree, 180-degree, and 270-degree Baseline model rotations; however, since this project is mostly existing construction, the Baseline model must not be simulated for the different rotations. Revise Table EAp2-4 by excluding the results from the 90-degree, 180-degree, and 270-degree Baseline model rotations.

### **EAp3: Fundamental Refrigerant Management**

**Awarded**

12/02/2014 **DESIGN FINAL REVIEW**

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07/22/2014 **DESIGN PRELIMINARY REVIEW**

The LEED Form states that there are no CFC-based refrigerants serving the project building.

### **EAc1: Optimize Energy Performance**

**Awarded: 2**

POSSIBLE POINTS: 19

ATTEMPTED: 4, DENIED: 3, PENDING: 0, AWARDED: 2

04/07/2015 **DESIGN APPEAL REVIEW**

Additional documentation has been provided for EAp2: Minimum Energy Performance, claiming an energy cost savings of 12.41%.

08/26/2014 **DESIGN PRELIMINARY REVIEW**

The LEED Form states that the project has achieved an energy cost savings of 21.57%. However, to demonstrate compliance, the following must be addressed.

TECHNICAL ADVICE

1. Refer to the comments within EAp2: Minimum Energy Performance and resubmit this credit.

**EAc2: On-Site Renewable Energy**  
POSSIBLE POINTS: 7

**Not Attempted**

**EAc3: Enhanced Commissioning**  
POSSIBLE POINTS: 2  
ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

**Awarded: 2**

**06/16/2015 CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that the enhanced commissioning has been implemented.

**EAc4: Enhanced Refrigerant Management**  
POSSIBLE POINTS: 2  
ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

**Awarded: 2**

**07/22/2014 DESIGN PRELIMINARY REVIEW**

The LEED Form states that there are refrigerants in the HVAC systems that serve the LEED project. Additionally, all fire suppression systems in the LEED project do not use ozone-depleting substances including CFCs, HCFCs, or halons. The refrigerant impact calculation indicates that the total refrigerant impact of the LEED project is 29 per ton, which is less than the maximum allowable value of 100.

**EAc5: Measurement and Verification**  
POSSIBLE POINTS: 3

**Not Attempted**

**EAc6: Green Power**  
POSSIBLE POINTS: 2  
ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

**Awarded: 2**

**06/16/2015 CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that the project has a two-year purchase agreement to procure 70.66% of electricity for this LEED project that meets the Green-e definition for renewable power using Option 1: Whole Building Energy Simulation.



## Materials and Resources

### MRp1: Storage and Collection of Recyclables

**Awarded**

12/02/2014 **DESIGN FINAL REVIEW**

The additional documentation demonstrates compliance.

07/30/2014 **DESIGN PRELIMINARY REVIEW**

The LEED Form states that the project has provided appropriately sized dedicated areas for the collection and storage of materials for recycling. However, to demonstrate compliance, the following must be addressed.

TECHNICAL ADVICE

1. It appears that the recycling areas are shared with the existing building. Provide a revised narrative addressing the volume of recyclable material expected to be generated by any other spaces/buildings that may share the recycling area, such as the existing museum areas, to confirm that the area is adequately sized.

### MRC1.1: Building Reuse-Maintain Existing Walls, Floors and Roof

**Awarded: 3**

POSSIBLE POINTS: 3

ATTEMPTED: 3, DENIED: 0, PENDING: 0, AWARDED: 3

06/16/2015 **CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that the project is undergoing a major renovation and includes additions equal to 133.17% of the existing gross floor area. The form indicates that 99.05% of the existing structural elements are being reused.

### MRC1.2: Building Reuse, Maintain 50% of Interior

**Not Attempted**

POSSIBLE POINTS: 1

### MRC2: Construction Waste Management

**Awarded: 2**

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 0, PENDING: 0, AWARDED: 2

06/16/2015 **CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that the project has diverted 80.32% of the on-site generated construction waste from landfill.

### MRC3: Materials Reuse

**Not Attempted**

POSSIBLE POINTS: 2

### MRC4: Recycled Content

**Awarded: 1**

POSSIBLE POINTS: 2

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

06/17/2015 **CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that 14.21% of the total building materials content, by value, has been manufactured using recycled materials.

The following issues are noted:

1. Summit Brick (Brick) has been reported with a recycled content of 10% post-consumer and 10% pre-consumer. The provided manufacturer's documentation indicates that this material is composed of 0% post-consumer and 10% pre-consumer (post-industrial) material. For future projects, ensure that the values for pre-consumer or post-consumer recycled content have been reported accurately between the manufacturer's documentation and the LEED Materials and Resource Calculator for all products.
2. The manufacturer's documentation provided for Quickrete Grout and Type S Mortar does not verify the recycled content reported in the Calculator (10% pre-consumer content). For future projects, ensure that all provided manufacturer's documentation verifies the pre- and post-consumer recycled contents reported in the Calculator.
3. The provided manufacturer's documentation indicates that the recycled content reported for Cemco Light Gauge Steel Framing and Heavy Gauge Steel Framing is based on a company average, whereas the calculations for this credit require actual, product-specific recycled content values. For future projects, ensure that the manufacturer's documentation clearly specifies the product-specific recycled content. Alternatively, if the recycled content is unknown for steel products, then the LEED default recycled content value (25% post-consumer) must be used.

When recalculated utilizing the correct recycled content values for Summit Brick (Brick), excluding the Quickrete Grout and Type S Mortar,

and utilizing the 25% post-consumer default recycled content for the Cemco products, 13.48% of the total building materials content, by value, has been manufactured using recycled materials. Compliance is not affected.

## **MRC5: Regional Materials**

POSSIBLE POINTS: 2

ATTEMPTED: 2, DENIED: 1, PENDING: 0, AWARDED: 1

**Awarded: 1**

### **08/11/2015 CONSTRUCTION FINAL REVIEW**

The additional documentation indicates that 19.09% of the total building materials value includes materials and products that have been manufactured and extracted within 500 miles of the project site.

It is noted that the Nucor Rebar product has the same manufacture and harvest distance, and manufacturer's documentation has not been provided to verify the manufacture and harvest points. When recalculated to exclude the Nucor Rebar product, 18.63% of the total building materials value includes materials and products that have been manufactured and extracted within 500 miles of the project site. The documentation demonstrates compliance.

### **06/18/2015 CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that 26.83% of the total building materials value includes materials and products that have been manufactured and extracted within 500 miles of the project site. However, to demonstrate compliance, the following must be addressed.

#### TECHNICAL ADVICE

1. The documentation indicates that several products have the same manufacture and harvest distance (the Nucor products (Rebar, Steel Joist Framing, and Steel Decking), R&S Steel Misc. Structural Steel, the Martin Marietta Asphalt MD components, and the Cemco products (Light Gauge Steel Framing and Heavy Gauge Steel Framing)). It is not clear that the materials/products would be manufactured and extracted from the same location. Note that, although manufacturer's documentation has been provided for the Cemco products, it does not verify the extraction distance of the materials. The point of extraction for a recycled item could include a recycling facility, scrap yard, depository, stockpile, or any other location where the material was collected and packaged for market purchase before manufacturing. Therefore, the extraction location for a recycled material may or may not be the same as the manufacturing location. In most cases, the extraction location for a recycled material will be a recycling facility or scrap yard. Provide documentation, such as manufacturer's letters or cut sheets, specifying that the materials listed above were manufactured and extracted within a 500 mile radius of the project. Ensure that the extraction location for the recycled content and the raw material content has been accounted for. Ensure that only the portion of the material where the extraction location is known is used toward compliance. Revise the form and LEED Materials and Resource Calculator, as necessary.

It is noted that qualifying manufacturer's documentation has not been provided for the Bestway Concrete Company concrete mix components. Note that product declaration documentation or tables are only acceptable when signed by the manufacturer's representative. For future projects, ensure that the Calculator checkboxes are accurate, and that any claimed documentation has been provided by the manufacturer. In this case, manufacturers' documentation has been provided for at least 20% of the listed materials. Compliance is not affected by this issue.

## **MRC6: Rapidly Renewable Materials**

POSSIBLE POINTS: 1

**Not Attempted**

## **MRC7: Certified Wood**

POSSIBLE POINTS: 1

**Not Attempted**



## Indoor Environmental Quality

### IEQp1: Minimum Indoor Air Quality Performance

**Awarded**

12/04/2014 **DESIGN FINAL REVIEW**

The additional documentation demonstrates compliance and states that the breathing zone outdoor air intake ventilation rates for all occupied spaces meet the minimum established in ASHRAE Standard 62.1-2007.

09/09/2014 **DESIGN PRELIMINARY REVIEW**

The LEED Form states that the project is mechanically ventilated and that the ventilation systems have met the minimum requirements of ASHRAE Standard 62.1-2007. However, to demonstrate compliance, the following must be addressed.

#### TECHNICAL ADVICE

1. The ventilation calculations indicate a peak occupancy of 282 people; however, Plf3: Occupant and Usage Data indicates that the total building users is 306 people. The peak occupancy must be reported consistently across all forms, prerequisites, and credits. Confirm the appropriate peak occupancy for the building and update the peak occupancy and/or the diversity, as needed, so that the peak occupancy is consistent across all forms, prerequisites, and credits. Provide a detailed narrative, as necessary, describing any difference in occupant values. Note that the ASHRAE default occupancy values should not be used when the expected occupancy is known or can be estimated (i.e., furniture plans).
2. The design primary supply airflow rate (Vpsd) indicated for each system in the ventilation calculations appears inconsistent with the design supply air volume for each ventilation system in the actual design. For example, the calculations for RTU-2 indicate a Vpsd value of 11,975 cfm; however, the mechanical schedules provided for Plf4: Schedule and Overview Documents indicate that the Vpsd for this system must be 12,535 cfm. Revise the Vpsd for each system to be consistent with the actual design. Note that if all of the ventilation zones associated with a ventilation system are included in the calculations, and it is determined that the sum of the design total supply volume to each zone (Vdzd) is greater than the Vpsd reflected in the actual design, the diversity factor may be used to adjust the Vpsd to be consistent with the actual design.
3. The design outdoor air volume indicated in the form for AHU-2 is 3,500 cfm; however, the mechanical schedules indicate that the outdoor air volume is 3,300 cfm. Provide the outdoor air volume for each ventilation system in the actual design. If the outdoor air volumes are based on updated mechanical schedules, provide the updated mechanical schedules.

### IEQp2: Environmental Tobacco Smoke (ETS) Control

**Awarded**

09/09/2014 **DESIGN PRELIMINARY REVIEW**

The LEED Form states that smoking is prohibited within 25 feet of entries, outdoor air intakes, and operable windows. Additionally, smoking is prohibited within the building.

### IEQc1: Outdoor Air Delivery Monitoring

**Awarded: 1**

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

07/23/2014 **DESIGN PRELIMINARY REVIEW**

The LEED Form states that the project is mechanically ventilated, that a CO2 sensor has been installed within each densely occupied space, that an outdoor airflow measurement device has been installed for all systems where 20% or more of the design supply airflow services non-densely occupied spaces, and these devices are programmed to generate an alarm when the conditions vary by 10% or more from the design value.

### IEQc2: Increased Ventilation

**Not Attempted**

POSSIBLE POINTS: 1

### IEQc3.1: Construction IAQ Management Plan-During Construction

**Awarded: 1**

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

06/16/2015 **CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that the project reduces air quality problems resulting from construction to promote the comfort and well-being of construction workers and building occupants.

**IEQc3.2: Construction IAQ Management Plan- Before Occupancy** **Not Attempted**

POSSIBLE POINTS: 1

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

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

**06/17/2015 CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that all adhesive and sealant products used on the inside of the weatherproofing system and applied on site have been included in the tables and comply with the VOC limits of the referenced standards for this credit.

**IEQc4.2: Low-Emitting Materials-Paints and Coatings** **Awarded: 1**

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

**08/11/2015 CONSTRUCTION FINAL REVIEW**

The additional documentation demonstrates compliance.

**06/17/2015 CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that all paint and coating products used on the inside of the weatherproofing system and applied on site have been included in the tables and comply with the VOC limits of the referenced standards for this credit. However, to demonstrate compliance, the following must be addressed.

TECHNICAL ADVICE

1. The LEED Materials and Resource Calculator provided for MRC4: Recycled Content includes Sherwin Williams Sher-Wood Polyurethane Finish, and it is unclear if this product has been used on the inside of the weatherproofing system. Provide a revised form, which includes the Sher-Wood Polyurethane Finish. If this product has not been included in the revised form, provide a narrative to confirm that it has not been utilized inside of the weatherproofing system. Note that, if one or more of the installed materials exceeds the allowable VOC limits for that product category, a VOC Budget must be provided to confirm that the overall installed VOC level is equal to or below allowable VOC limits. The Budget must include the quantity (in liters), the actual VOC (g/L), and the allowable VOC (g/L) for each product.

**IEQc4.3: Low-Emitting Materials-Flooring Systems** **Awarded: 1**

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

**06/17/2015 CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that all interior flooring materials meet or exceed applicable criteria for the Carpet and Rug Institute, South Coast Air Quality Management District, the California Department of Health Standard, or FloorScore; the carpet adhesives used have a VOC level of less than 50 g/L; all floor finishes meet the requirements of SCAQMD Rule 1113; and all tile setting adhesives and grout meet SCAQMD Rule 1168.

It is noted that the LEED Materials and Resource Calculator provided for MRC4: Recycled Content includes Daltile Tile, and this product has not been listed in the form for this credit. For future projects, ensure that all interior flooring materials and adhesives have been listed in the form for this credit. In this case, independent research confirms that this product is compliant with the requirements of LEED Interpretation 10267 and the April 14, 2010 addenda regarding exemptions for products that do not contain any organic based coatings. Compliance is not affected.

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

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

**08/11/2015 CONSTRUCTION FINAL REVIEW**

The additional documentation demonstrates compliance.

**06/17/2015 CONSTRUCTION PRELIMINARY REVIEW**

The LEED Form states that all composite wood and agrifiber products used on the interior of the building and all laminating adhesives used to fabricate on-site and shop-applied composite wood and agrifiber assemblies contain no added urea-formaldehyde resins. However, to demonstrate compliance, the following must be addressed.

## TECHNICAL ADVICE

1. The documentation within MRc4: Recycled Content indicates that Premier Eurocase Arreis NAF MDF Panels were used in the project, but have not been included in the list for this credit. Confirm whether all composite wood, agrifiber, and laminating adhesives used on the project contain no added urea-formaldehyde. Provide additional manufacturer's documentation and a narrative, if necessary.

### IEQc5: Indoor Chemical and Pollutant Source Control

Not Attempted

POSSIBLE POINTS: 1

### IEQc6.1: Controllability of Systems-Lighting

Awarded: 1

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

#### 06/17/2015 CONSTRUCTION PRELIMINARY REVIEW

The additional documentation confirms that lighting controls are provided for 100% of building occupants and 100% of shared multi-occupant spaces to enable adjustments that meet needs and preferences.

#### 08/26/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that lighting controls are provided for 100% of building occupants and 100% of shared multi-occupant spaces to enable adjustments that meet needs and preferences. However, to demonstrate compliance, the following must be addressed.

## TECHNICAL ADVICE

1. It is unclear whether all individual workstations have been listed in the form and provided with lighting controls, as required. The lighting plan shows an area labeled as Office 131B, and it is unclear whether this space contains an individual workstation. Additionally, it appears that there are two individual workstations located in Work/Reception 152, whereas only one has been listed in the form. The EQ space type matrix (<http://www.usgbc.org/resources/eq-space-type-matrix>) provides information regarding the classification of individual occupant and shared multi-occupant for most space types encountered within buildings. Provide a revised form that accurately reports the quantity of individual workstations (include private offices and open office areas with multiple workers), the quantity of individual workstations with lighting controls, and the percentage of workstations provided with controls. Provide a narrative, as necessary, including the type and location of the individual controls. Ensure that the narrative specifically indicates how the lighting can be adjusted by the individual workstation occupant to suit specific task needs.

It is noted that there are several spaces within the existing portion of the building (Collections Holdings 130, Collections 131, Conservation Lab 132, Staging/Research/Storage 138, Artifact Storage 139, and Artifact Storage 140) which have not been included in the form calculations, and it is unclear whether they are classified as shared multi-occupant spaces. Additionally, the workroom part of Work/Reception 152 has not been included in the form as a shared multi-occupant spaces. For future projects, ensure that all spaces have been correctly classified and included in the form. In all cases, the lighting plans confirm that sufficient lighting controls have been provided for these spaces. Compliance is not affected by these issues.

### IEQc6.2: Controllability of Systems-Thermal Comfort

Not Attempted

POSSIBLE POINTS: 1

### IEQc7.1: Thermal Comfort-Design

Awarded: 1

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

#### 07/23/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that the mechanically ventilated and mechanically conditioned project space is in compliance with ASHRAE Standard 55-2004.

### IEQc7.2: Thermal Comfort-Verification

Awarded: 1

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

#### 12/02/2014 DESIGN FINAL REVIEW

The additional documentation demonstrates compliance.

#### 08/25/2014 DESIGN PRELIMINARY REVIEW

The LEED Form states that a permanent monitoring system will be installed and a thermal comfort survey of building occupants will be conducted between 6 and 18 months after occupancy. However, to demonstrate compliance, the following must be addressed.

## TECHNICAL ADVICE

1. Based on the survey contents and schedule within the Thermal Comfort Implementation Plan, it appears that the survey will only be administered to FTE occupants and not visitors to the building. Provide a revised narrative confirming that the survey will be offered to all building occupants. Provide a revised sample thermal comfort survey, as necessary.

**IEQc8.1: Daylight and Views-Daylight**  
POSSIBLE POINTS: 1

**Not Attempted**

**IEQc8.2: Daylight and Views-Views**  
POSSIBLE POINTS: 1

**Not Attempted**



## Innovation in Design

### IDc1.1: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

### IDc1.1: Innovation in Design

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

**Awarded: 1**

#### 06/17/2015 CONSTRUCTION PRELIMINARY REVIEW

The LEED Form states that the project team has developed and implemented a Public Education program. This strategy is detailed in the LEED BD+C v2009 Reference Guide. The documentation provided for the development of a case study and guided tours complies with the Reference Guide requirements.

### IDc1.2: Exemplary Performance

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

**Awarded: 1**

#### 06/16/2015 CONSTRUCTION PRELIMINARY REVIEW

The LEED Form states that the project achieves exemplary performance for EAc6: Green Power. The requirement for exemplary performance is 70%, and the project has documented 70.66%.

### IDc1.2: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

### IDc1.3: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

### IDc1.3: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

### IDc1.4: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

### IDc1.4: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

### IDc1.5: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

### IDc1.5: Innovation in Design

POSSIBLE POINTS: 1

Not Attempted

### IDc2: LEED® Accredited Professional

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: 0, PENDING: 0, AWARDED: 1

**Awarded: 1**

#### 06/16/2015 CONSTRUCTION PRELIMINARY REVIEW

The LEED Form states that a LEED AP has been a participant on the project development team.



## Regional priority

SSc2: Development Density and Community  
Connectivity

POSSIBLE POINTS: 1

ATTEMPTED: 1, DENIED: , PENDING: , AWARDED: 1

TOTAL

110

54

4

0

50

# REVIEW SUMMARY

Review			POINTS:			
	SUBMITTED	RETURNED	SUBMITTED	DENIED	PENDING	AWARDED
<b>Design Preliminary</b>	<b>06/30/2014</b>	<b>09/09/2014</b>	<b>35</b>	<b>0</b>	<b>14</b>	<b>21</b>

Credit	STATUS	TYPE	POINTS: ATTEMPTED	DENIED	PENDING	AWARDED
Plf1: Minimum Program Requirements	Approved		0	0	0	0
Plf2: Project Summary Details	Not Approved		0	0	0	0
Plf3: Occupant and Usage Data	Not Approved		0	0	0	0
Plf4: 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	6	0	0	6
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
SSc4.3: Alternative Transportation-Low -Emitting and Fuel-Efficient Vehicles	Pending	Design	3	0	3	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
SSc7.2: Heat Island Effect-Roof	Anticipated	Design	1	0	0	1
WEp1: Water Use Reduction-20% Reduction	Pending	Design	0	0	0	0
WEc3: Water Use Reduction	Pending	Design	2	0	2	0
EAp2: Minimum Energy Performance	Pending	Design	0	0	0	0
EAp3: Fundamental Refrigerant Management	Anticipated	Design	0	0	0	0
EAc1: Optimize Energy Performance	Pending	Design	5	0	5	0
EAc4: Enhanced Refrigerant Management	Anticipated	Design	2	0	0	2
MRp1: Storage and Collection of Recyclables	Pending	Design	0	0	0	0
IEQp1: Minimum Indoor Air Quality Performance	Pending	Design	0	0	0	0
IEQp2: Environmental Tobacco Smoke (ETS) Control	Anticipated	Design	0	0	0	0
IEQc1: Outdoor Air Delivery Monitoring	Anticipated	Design	1	0	0	1
IEQc6.1: Controllability of Systems-Lighting	Pending	Design	1	0	1	0
IEQc7.1: Thermal Comfort-Design	Anticipated	Design	1	0	0	1
IEQc7.2: Thermal Comfort-Verification	Pending	Design	1	0	1	0

**Design Final****11/20/2014 01/28/2015****9****2****0****7****Credit**

	STATUS	TYPE	POINTS: ATTEMPTED	DENIED	PENDING	AWARDED
Pf1: Minimum Program Requirements	<b>Approved</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Pf2: Project Summary Details	<b>Approved</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Pf3: Occupant and Usage Data	<b>Approved</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Pf4: Schedule and Overview Documents	<b>Approved</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
SSc4.2: Alternative Transportation-Bicycle Storage and Changing Rooms	<b>Anticipated</b>	Design	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
SSc4.3: Alternative Transportation-Low-Emitting and Fuel-Efficient Vehicles	<b>Anticipated</b>	Design	<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>
SSc5.2: Site Development-Maximize Open Space	<b>Denied</b>	Design	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>
WEp1: Water Use Reduction-20% Reduction	<b>Anticipated</b>	Design	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
WEc3: Water Use Reduction	<b>Anticipated</b>	Design	<b>2</b>	<b>0</b>	<b>0</b>	<b>2</b>
EAp2: Minimum Energy Performance	<b>Denied</b>	Design	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
EAp3: Fundamental Refrigerant Management	<b>Anticipated</b>	Design	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
MRp1: Storage and Collection of Recyclables	<b>Anticipated</b>	Design	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IEQp1: Minimum Indoor Air Quality Performance	<b>Anticipated</b>	Design	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
IEQc7.2: Thermal Comfort-Verification	<b>Anticipated</b>	Design	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>

<b>Design Appeal</b>	<b>03/12/2015</b>	<b>04/08/2015</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>2</b>
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**Credit**

	STATUS	TYPE	POINTS: ATTEMPTED	DENIED	PENDING	AWARDED
EAp2: Minimum Energy Performance	Anticipated	Design	0	0	0	0
EAc1: Optimize Energy Performance	Anticipated	Design	5	3	0	2

**Construction Preliminary**

06/04/2015

07/06/2015

21

0

4

17

<b>Credit</b>	<b>STATUS</b>	<b>TYPE</b>	<b>POINTS: ATTEMPTED</b>	<b>DENIED</b>	<b>PENDING</b>	<b>AWARDED</b>
SSp1: Construction Activity Pollution Prevention	Pending	Construction	0	0	0	0
EAp1: Fundamental Commissioning of the Building Energy Systems	Awarded	Construction	0	0	0	0
EAc3: Enhanced Commissioning	Awarded	Construction	2	0	0	2
EAc6: Green Power	Awarded	Construction	2	0	0	2
MRc1.1: Building Reuse-Maintain Existing Walls, Floors and Roof	Awarded	Construction	3	0	0	3
MRc2: Construction Waste Management	Awarded	Construction	2	0	0	2
MRc4: Recycled Content	Awarded	Construction	1	0	0	1
MRc5: Regional Materials	Pending	Construction	2	0	2	0
IEQc3.1: Construction IAQ Management Plan-During Construction	Awarded	Construction	1	0	0	1
IEQc4.1: Low -Emitting Materials-Adhesives and Sealants	Awarded	Construction	1	0	0	1
IEQc4.2: Low -Emitting Materials-Paints and Coatings	Pending	Construction	1	0	1	0
IEQc4.3: Low -Emitting Materials-Flooring Systems	Awarded	Construction	1	0	0	1
IEQc4.4: Low -Emitting Materials-Composite Wood and Agrifiber Products	Pending	Construction	1	0	1	0
IEQc6.1: Controllability of Systems-Lighting	Awarded	Design	1	0	0	1
IDc1.1: Innovation in Design: Buildings That Teach	Awarded	Construction	1	0	0	1
IDc1.2: Exemplary Performance	Awarded	Design	1	0	0	1
IDc2: LEED® Accredited Professional	Awarded	Construction	1	0	0	1

<b>Construction Final</b>	<b>08/06/2015</b>	<b>08/17/2015</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>3</b>
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**Credit**

	STATUS	TYPE	POINTS: ATTEMPTED	DENIED	PENDING	AWARDED
SSp1: Construction Activity Pollution Prevention	<b>Awarded</b>	Construction	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
MRC5: Regional Materials	<b>Awarded</b>	Construction	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>
IEQc4.2: Low -Emitting Materials-Paints and Coatings	<b>Awarded</b>	Construction	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>
IEQc4.4: Low -Emitting Materials-Composite Wood and Agrifiber Products	<b>Awarded</b>	Construction	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>