

# How to Interpret this Report

Purpose	The Leadership in Energy and Environmental Design (LEED) Rating System was designed by the US Green Building Council to encourage and facilitate the development of more sustainable buildings.
Environmental Categories	The report is organized into five environmental categories as defined by LEED including: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, Indoor Enviro
LEED Prerequisites	Prerequisites must be achieved. Non-compliant prerequisites must be resolved before a certification can be awarded.
LEED Credits	The environmental categories are subdivided into the established LEED credits, which are based on desired performance goals within each category. An assessment of whether the credit is earned or denied is made and a narrative describes the basis for the assessment.
Achieved	The applicant has provided the mandatory documentation which supports the achievements of the credit requirements, achieving the associated points. Currently the project has scored the adjacent points in this category.
Denied	The applicant has applied for a point in a particular credit, but has misinterpreted the credit intent or cannot substantiate meeting the requirements. Currently the project has the adjacent points in this category.
Rating	This Project has achieved enough points for Silver Rating.

Official Scores Official LEED v2 Scores: Certified: 26-32 Silver Rating: 33-38 Gold Rating: 39-51 Platinum Rating: 52+

Construction Application Review



11/19/2010

7/7/2009

**Construction Application Review** 

Credit 4.1-Version 2.2

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## **Alternative Transportation: Public Transportation Access**

#### **Design Application**

The LEED Submittal Template has been provided stating that the project is served by only 1 bus line within 0.25 miles of the project site; however the project must be located within 0.25 miles of TWO or more public or campus bus lines to meet the full intent of this credit. Also, a scaled drawing or map showing the location of the transit stops relative to the project site has not been provided.

TECHNICAL ADVICE: Please provide a scaled drawing or map showing the location of the transit stops relative to the project site. Please confirm if the project is within 0.25 miles of only one bus line. If the project is served by additional bus lines, please provide a scaled drawing or map showing the location of these transit stops, and a revised Submittal Template indicating the bus line designations.

#### **Design Application**

The project team has provided a revised LEED Submittal Template and supporting documentation, including bus stop maps that indicate the locations of the transit stops. The Template indicates the project is served by two bus lines within 0.25 miles of the project site as required. The documentation demonstrates credit compliance.

# Alternative Transportation: Bicycle Storage & amp; Changing RoomsCredit 4.2-Version 2.2

#### **Design Application**

The LEED Submittal Template has been provided stating that the project is non-residential. The Template states that bicycle storage facilities have been provided to serve 31% of FTE and Transient building occupants, measured at peak occupancy, and shower facilities for 0.05% of the FTE building occupants.

Plans have been provided showing the location of the shower/changing facilities and the bike storage facilities.

## Alternative Transportation: Low-Emitting & amp; Fuel Efficient Vehic@redit 4.3-Version 2.2

# Design Application 7/7/2009 The LEED Submittal Template and project drawings have been provided stating that 2 preferred parking spaces for low-emitting and fuel efficient vehicles have been provided on site which represents 9% of the total onsite parking. 0 Alternative Transportation: Parking Capacity Credit 4.4-Version 2.2 Site Development: Protect or Restore Habitat Credit 5.1-Version 2.2 Site Development: Maximize Open Space Credit 5.2-Version 2.2

9/23/2009

11/19/2010

7/7/2009

**Construction Application Review** 

# Stormwater Management: Quantity Control

Credit 6.1-Version 2.2

#### **Design Application**

The LEED Submittal Template has been provided stating that the project has implemented a stormwater management plan that results in no net increase (rate and quantity) in runoff from calculated pre-project conditions, for 1 and 2 year hour peak discharge. However, stormwater calculations have not been provided to demonstrate compliance with the requirements of this credit. Also, the post-development value for runoff rate stated in the Template is greater than the pre-development runoff rate, which does not meet the requirements of the credit. Additionally, the narrative states that "there is a restricter placed inside the storm sewer outfall pipe prior to the outfall into the public street storm sewer system to release the existing pre development site runoff." This, along with the description in SSc6.2, indicates that the runoff rate may be controlled to be equal to or less than predevelopment conditions, but it appears that the quantity is not reduced at all by this system.

TECHNICAL ADVICE: Please provide supporting stormwater calculations demonstrating that the rate AND quantity of stormwater runoff generated from the post-development site does not exceed pre-development conditions for the site's 1 and 2 year, 24 hour peak discharge, and enter these values into the Template, as required.

NOTE: The Template does not provide space to enter both years 24-hour peak discharge calculations. Please provide the second year's calculations in the narrative box or provide the information separately.

# **Stormwater Management: Quality Control**

#### **Design Application**

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The LEED Submittal Template has been provided stating that the project has implemented a stormwater management plan that reduces impervious cover, promotes infiltration, and captures and treats the stormwater runoff from 90% of the average annual rainfall using acceptable BMPs. The Submittal Template indicates that the project's BMPs are capable of removing 80% of the total suspended solids (TSS) from the average annual post-development runoff.

NOTE: For future submittals, please make sure the Submittal Template is filled out correctly. The "Rain Tank 60 Double Module" is considered a structural control and should be entered in the Submittal Template under "Structural Controls".

# Heat Island Effect: Non-Roof

#### **Construction Application**

The LEED Submittal Template has been provided stating that 100% of the non-roof impervious surfaces on site have been paved with highly reflective materials. Calculations provided in the submittal claim that of the 22,040 square feet of total non-roof impervious surfaces, 22,040 square feet (100%) have been paved with non-colored concrete. A site plan has been provided showing the extents of the paved areas.

Credit 6.2-Version 2.2

7/7/2009

## Credit 7.1-Version 2.2

#### 4/22/2010

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11/19/2010

7/7/2009

**Construction Application Review** 

Credit 7.2-Version 2.2



## Heat Island Effect: Roof

#### **Design Application**

The LEED Submittal Template has been provided stating that the roofing materials used on the project have a minimum SRI value of 42 for 100% of the roof surface. A roof plan and a listing of installed roofing materials and their SRI values have also been provided.



Earned

3

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Denied

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# **Light Pollution Reduction**

Credit 8-Version 2.2

Possible Points 5

Credit 1.1-1.2-Version 2.2

Water Efficient Landscaping

## **Design Application**

The LEED Submittal Template has been provided stating that the installed irrigation systems reduce potable water consumption by 64.4% from a calculated baseline case; however the narrative provided does not describe the landscaping design strategies employed, or include specific information regarding the water use calculation methodology used to determine savings.

TECHNICAL ADVICE: Please provide a detailed narrative describing the landscaping design strategies employed by the project. Please include specific information regarding the water use calculation methodology used to determine savings, i.e. irrigation water use calculations following the methodology in the LEED-NC v2.2 Reference Guide (Third Edition).

#### **Design Application**

The project team has provided a revised LEED Submittal Template and water use calculations as supporting documentation. A narrative describing the landscaping design strategies has been provided as requested. The revised Template states the project has reduced potable water consumption by 55% from a calculated baseline case. The documentation demonstrates credit compliance.

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#### **Innovative Wastewater Technologies**

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# **Water Use Reduction**

#### **Design Application**

The LEED Submittal Template has been provided stating that the project has reduced potable water use by 30.1% from a calculated baseline design through the installation of dual flush water closets, low flow urinals, and low flow lavatories.

7/7/2009

9/23/2009

Credit 2-Version 2.2

Credit 3.1-3.2-Version 2.2

**Construction Application Review** 



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# Energy & amp; Atmosphere

# Fundamental Commissioning of the Building Energy Systems Prerequisite 1-Version 2.2

#### **Construction Application**

The LEED Submittal Template has been provided stating that the fundamental commissioning requirements have been completed. Supporting documentation includes a narrative describing the commissioned systems, and the Commissioning Report Executive Summary.

# 0 Minimum Energy Performance

#### **Design Application**

The LEED Submittal Template has been provided stating that the project complies with the mandatory provisions (Sections 5.4, 6.4, 7.4, 8.4, 9.4 and 10.4) of ASHRAE 90.1-2004. The Template denotes that the project is pursuing EA Credit 1 and has used a simulation model to confirm satisfaction of this prerequisite. However, this prerequisite cannot be satisfied unless two points or more have been achieved in EAc1.

TECHNICAL ADVICE: Please provide clarifications requested for EAc1.

NOTE: For additional information, please refer to the summary of the required two-point minimum under EAc1 for projects registered after June 26, 2007. The requirements can be accessed at the following link: http://www.usgbc.org/ShowFile.aspx?DocumentID=2303.

#### **Design Application**

The project team has provided the clarifications requested for EAc1. The documentation demonstrates Prerequisite compliance.

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# **Fundamental Refrigerant Management**

#### **Design Application**

The LEED Submittal Template has been provided stating that base building HVAC and R systems use no CFCbased refrigerants.

#### Prerequisite 2-Version 2.2

7/7/2009

4/22/2010

#### 9/23/2009

# Prerequisite 3-Version 2.2

11/19/2010

**Construction Application Review** 

Credit 1-Version 2.2



# **Optimize Energy Performance**

#### **Design Application**

The LEED Submittal Template and supporting documentation have been provided stating that the project has achieved an energy cost savings of 14.2% using the ASHRAE 90.1-2004 Appendix G methodology. Energy efficiency measures include an improved thermal envelope, high efficiency glazing, reduced lighting power density, occupancy sensors, and high efficiency HVAC system. However, several issues should be addressed for the final review.

#### TECHNICAL ADVICE:

1. Process energy must be the same for both the Proposed and Baseline cases. Please provide a revised LEED Submittal Template and energy model results supporting that the process energy loads are the same for both Proposed and Baseline cases.

2. The Baseline system type modeled does not seem consistent with the system mapping from Table G.3.1.1.A. Please confirm that the Baseline system was modeled correctly, or revise the system type to reflect ASHRAE modeling protocol (System #4 - Packaged Single Zone HP). Please recheck the unitary equipment heating and cooling efficiencies based on System #4 and that they are modeled in accordance with ASHRAE 90.1-2004 G3.1.2.1 and Tables in Section 6.8. Please verify and resubmit the Submittal Template as required.

3. The Baseline case fan design air flow rates are modeled identically to the Proposed case. It does not appear that the Baseline case fan air flow rates were sized based on a 20 deg. F supply-air-to-room-air temperature difference in accordance with Section G3.1.2.8. Please revise the Baseline model fan supply air volume per ASHRAE Appendix G requirements or provide explanation.

4. The Baseline and Proposed case fan power does not appear to be modeled in accordance with G3.1.2.9. Please revise the sum of the supply, return, exhaust and relief fans for each HVAC system to be equal to the power calculated in G3.1.2.9 (where CFM refers to supply air volume).

5. Windows for the Proposed Case were modeled with a U-value of 0.31, which does not appear to account for the impact of the window frames on the whole assembly as required by ASHRAE modeling protocol. Please provide additional information to confirm that the framed assembly U-value was used, or revise the model to reflect framed assembly U-values as shown in ASHRAE 90.1-2004 Table A-8.2. Enter Fenestration type "fixed" or "Operable".

6. It appears that the U-values for the wall and roof construction have been inadvertently reversed in Table 1.4 of the Submittal Template. Please verify the inputs and revise the Template as required.

7. The Baseline slab-on-grade inputs listed in Table 1.4 does not appear to conform to ASHRAE 90.1-2004 Table 5.5-2. Per ASHRAE 90.1-2004 Table 5.5-2, slab-on-grade F-factor value is equal to 0.73. Please provide a revised LEED Submittal Template and energy model results supporting that the Baseline slab-on grade inputs conform to ASHRAE 90.1-2004 Table 5.5-2.

8. Table 1.5 shows incorrect units of "Energy" and units of "Demand". For electric items, the "Units of Energy" should be in kWh and the "Units of Demand" should be in kW. Please revise the Submittal Template to indicate the correct units of energy throughout the Submittal Template.

9. Please provide a narrative addressing each of the comments above, and provide an updated Template, and all supporting documentation as required in the LEED Submittal Template document description Log. Please submit data regarding End Use description, Energy Type, Energy Use, Demand loads and data from the Trane Trace Simulation program with the final review.

Page 7 of 19 NOTE: A project must demonstrate a minimum cost savings of 14% to qualify for two points under EAc1. For additional information, please refer to the summary of the required two-point minimum under EAc1 for projects registered after June 26, 2007. The requirements can be accessed at the following link: http://www.usgbc.org/ ShowFile.aspx?DocumentID=2303.

11/19/2010

**Construction Application Review** 

Credit 2-Version 2.2

Credit 3-Version 2.2

Credit 4-Version 2.2

Credit 5-Version 2.2

7/7/2009



The LEED Submittal Template has been provided stating that the project selected refrigerants and HVAC and R equipment that minimize or eliminate the emission of compounds that contribute to ozone depletion and global warming. The completed Refrigerant Impact Calculation indicates that the project's total refrigerant impact is 94 per ton, which is less than the maximum allowable value of 100.



Measurement & amp; Verification

11/19/2010

4/22/2010

8/18/2010

**Construction Application Review** 

Credit 6-Version 2.2

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# **Green Power**

#### **Construction Application**

The LEED Submittal Template has been provided stating that Owner has purchased Green-e accredited Tradable Renewable Certificates (RECs) equal to 35% of the predicted annual electrical consumption over a 2-year period. The submitted documentation states that Reliant will provide RECs equal to 35% and 87,829kWh of the building's design energy cost from EAc1 total annual electric energy usage. However, clarification is requested on two issues:

1. The required Template narrative has not been completed, describing how the green power is purchased.

2. The provided letter from the City of Houston does not indicate how the RECs are allocated specifically for this project.

#### TECHNICAL ADVICE:

1. Please complete the LEED Submittal Template narrative describing how the green power or green tags are purchased.

2. Clarify how City purchased RECs are allocated for this project, in order to confirm that a commitment has been made for Renewable Certificates (RECs) equal to 35% of the project's predicted annual electrical consumption over a two year period.

#### **Construction Application**

The project team has provided a revised LEED Submittal Template and supporting documentation, including a letters from Reliant Energy, the City of Houston, EAc1 documentation, and an energy allocation table to address the issues outlined in the preliminary review comments.

However, as reported in the final EAc1 Template, the predicated Proposed case electrical energy consumption is equal to 250,940 kWh per year. In order to meet the 35% threshold, the project must provide 87,829 kWh of renewable energy per year. As documented, only 61,530 kWh of renewable energy have been allocated to the project building per year, which equates to only 24.5% of the predicated electrical energy consumption. The documentation does not demonstrate credit compliance.

Earned 0

Materials & amp; Resources

Possible Points 13

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11/19/2010

7/7/2009

Fire Station 37

**Construction Application Review** 

Prerequisite 1-Version 2.2



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2

# Storage & amp; Collection of Recyclables

# **Design Application**

The LEED Submittal Template has been provided stating that the project has provided appropriately sized dedicated areas for the collection and storage of recycling materials, including cardboard, paper, plastic, glass, and metals. However, none of the project drawings or documentation throughout the submittal or in the Documentation section show or reference the easily accessible area(s) for the collection and storage of recyclables.

TECHNICAL ADVICE: Please provide project drawings highlighting the recycling area(s).

# **Design Application**

**Building Reuse** 

The project team has provided a revised LEED Submittal Template and supporting documentation, including floor plan drawings that highlight the collection and storage areas for recyclables as required. The documentation demonstrates Prerequisite compliance.

Credit 1.1-1.2-Version 2.2

Credit 1.3-Version 2.2

# **Construction Waste Management**

**Building Reuse, Non-Structural** 

# **Construction Application**

The LEED Submittal Template has been provided stating that the project has diverted 696 cubic yards (92.063%) of on-site generated construction waste from landfill. Calculations have been provided to document the waste types and receiving agencies for recycled materials. However, a narrative describing the project's Construction Waste Management Plan has not been provided.

**TECHNICAL ADVICE:** Please provide a narrative that includes the project's Construction Waste Management Plan.

Construction Application	8/18/2010

No further documentation has been provided.

## **Construction Application Appeal**

A narrative has been provided stating the project Construction Waste Management Plan. The documentation demonstrates credit compliance.

**Resource Reuse** 

Credit 2-Version 2.2

4/22/2010

10/13/2010

9/23/2009

Credit 3-Version 2.2

11/19/2010

4/22/2010

**Construction Application Review** 



# **Recycled Content**

#### **Construction Application**

The LEED Submittal Template has been provided stating that 22.23% of the total building materials content, by value, has been manufactured using recycled materials. However, clarification is requested on the following issues:

1. It appears that materials not in Divisions 2 thru 10 were included in the credit calculation, for example, pipe hangers which are a Division 15 item.

2. Concrete is considered an assembly, and the individual raw material components of the product are not separated by weight.

TECHNICAL ADVICE:

1. Revise the LEED Submittal Template to remove any materials outside of Divisions 2 thru 10 or else provide a narrative, referencing any relevant CIRs, explaining why additional materials were included. These additional materials must be included consistently in MR credits 3-7.

2. Provide calculations demonstrating how the raw materials were determined for concrete. See page 272 of the LEED-NC v2.2 Reference Guide for additional information.

#### **Construction Application**

A revised LEED Submittal Template has been provided to address the issues outlined in the preliminary review comments and states that 21.9% of the total building materials content, by value, has been manufactured using recycled materials. Concrete fly ash calculations have been provided. The documentation demonstrates credit compliance.

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# **Regional Materials**

#### **Construction Application**

The LEED Submittal Template has been provided stating that 28.373% of the total building materials value is comprised of building materials and/or products that have been extracted, harvested or recovered, as well as manufactured within 500 miles of the project site.

Credit 6-Version 2.2

Credit 5-Version 2.2

Credit 7-Version 2.2

4/22/2010

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# Certified Wood

#### **Construction Application**

**Rapidly Renewable Materials** 

The LEED Submittal Template has been provided stating that 59.734% of the total wood based building materials are harvested from FSC certified forests.

Earned Danied 13

Credit 4-Version 2.2

8/18/2010 y review

4/22/2010

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# 11/19/2010

Fire Station 37

**Construction Application Review** 

Prerequisite 1-Version 2.2

#### 7/7/2009

The LEED Submittal Template has been provided stating that the project complies with the minimum requirements of ASHRAE Standard 62.1-2004, Ventilation for Acceptable Indoor Air Quality, using the Ventilation Rate Procedure. A supplemental narrative and supporting documentation have been provided to describe the project's ventilation design. The narrative and supporting documentation also include specific information regarding fresh air intake volumes.

#### **Environmental Tobacco Smoke (ETS) Control** 0

#### **Design Application**

The LEED Submittal Template has been provided stating that smoking is prohibited inside buildings within the project, and that designated smoking areas have been located at least 25 feet away from building openings and air intakes.



# **Increased Ventilation**

#### **Design Application**

The LEED Submittal Template has been provided stating that the project has increased breathing zone outdoor air ventilation rates to all occupied spaces by 33% above the minimum rates required by ASHRAE Standards 62.1-2004 as determined by EQp1. A detailed narrative, supporting calculations, and mechanical schedules have been provided describing the project's ventilation system design. Specific information regarding the fresh air intake volumes for each occupied zone has been provided.

7/7/2009

Prerequisite 2-Version 2.2

Credit 2-Version 2.2

Credit 1-Version 2.2

7/7/2009







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# **Minimum IAQ Performance**

**Design Application** 

11/19/2010

4/22/2010

8/18/2010

**Construction Application Review** 

Credit 3.1-Version 2.2



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# **Construction IAQ Management Plan: During Construction**

#### **Construction Application**

The LEED Submittal Template has been provided stating that the project developed and implemented a construction IAQ Management Plan which followed referenced SMACNA Guidelines. The plan indicates that the air handling equipment was used during construction and that MERV 8 filters were installed in the air handling unit and at all return air grilles. Filtration media was replaced with new MERV 13 filters in the air handling units prior to occupancy. However, the photographs provided only document one IAQ measure (sealed ductwork). TECHNICAL ADVICE:

Please provide photographs showing all implemented IAQ measures, annotated to indicate the IAQ measure depicted and the general location of the photograph.

#### **Construction Application**

The project team has provided additional photographs to address the issues outlined in the preliminary review comments.

However, only one other IAQ measure (installing filtration media) has been provided. Source control, housekeeping, pathway interruption, and scheduling has not been sufficiently documented as requested and required. The documentation does not demonstrate credit compliance.

#### **Construction IAQ Management Plan: Before Occupancy**

#### **Construction Application**

The LEED Submittal Template has been provided stating that the project is performing a flush-out prior to occupancy by supplying a total air volume of 14,000 cubic feet of outdoor air per square feet of floor area while maintaining an internal temperature of 72 degrees F and relative humidity of 58%. A narrative describing the project's pre-occupancy flush-out process has been provided as required, including data regarding temperature, air flow, and duration of the flush-out.

#### Low-Emitting Materials: Adhesives & amp; Sealants

#### **Construction Application**

The LEED Submittal Template has been provided stating that all indoor adhesive and sealant products comply with the VOC limits of the referenced standards for this credit. The Template includes a list of the required product details. Supporting product information has been provided to substantiate the data on the List of Indoor Adhesives, Sealant and Sealant Primer Products.

Credit 3.2-Version 2.2

#### 4/22/2010

## Credit 4.1-Version 2.2

4/22/2010

11/19/2010

4/22/2010

**Construction Application Review** 

Credit 4.2-Version 2.2

# Low-Emitting Materials: Paints & amp; Coatings

#### **Construction Application**

The LEED Submittal Template has been provided. The project team has provided a list of all indoor paint and coating products and the required product details. However, the Template states that all indoor paint and coating products do not comply with the VOC limits of the Referenced Green Seal and SCAQMD standards.

TECHNICAL ADVICE: If the project is utilizing the VOC budget alternative compliance path to meet the requirements of this credit, full calculations will need to be provided. See page 356 of the LEED-NC v2.2 Reference Guide, Third Edition, for more details on this alternative compliance path method. The VOC budget calculation must indicate that the project's total installed VOC level is equal to, or less than, the total allowable VOC level.

#### **Construction Application**

The project team has provided a revised LEED Submittal Template and response narrative to address the issues outlined in the preliminary review comments.

However, due to the fact that the Sherwin Williams Galvite HS B50WZ30 primer was used, a VOC budget calculation must be provided. The documentation does not demonstrate credit compliance.

For future applications, please provide a VOC budget listing all installed indoor paints and coatings. The budget should include the quantity of the product (in liters), actual VOC content (g/L) and allowable VOC (g/L) content for each product. See the Supplemental Information section of the credit in the Reference Guide for additional information and guidance.

#### **Construction Application Appeal**

The project is utilizing the VOC budget alternative compliance path to meet the requirements of this credit. The project team has provided a list of all indoor paint and coating products and the required product details, indicating that one or more of the installed products exceeds the reference VOC limits. The provided VOC budget calculation indicates that the project's total installed VOC level is equal to, or less than, the total allowable VOC level. The documentation demonstrates credit compliance.

For future projects, please ensure the LEED submittal template is complete and includes a narrative describing the alternative compliance path taken.

# **Low-Emitting Materials: Carpet Systems**

#### **Construction Application**

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The LEED Submittal Template has been provided stating that the installed carpet complies with the testing and product requirements of the CRI Green Label Plus Program, installed carpet cushions comply with the testing and product requirements of the CRI Green Label Program and all carpet adhesives comply with the requirements of EQc4.1. The Template includes a list of the required product details. Supporting product information has been provided to substantiate the data on the List for each installed Indoor Carpet System.

0/10/2010

#### 10/13/2010

#### 4/22/2010

Credit 4.3-Version 2.2

#### 4/22/2010

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8/18/2010

7/7/2009

# Fire Station 37

Credit 4.4-Version 2.2

11/19/2010

**Construction Application Review** 



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Fire Station 37

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Low-Emitting Materials: Composite Wood & amp; Agrifiber

#### **Construction Application**

The LEED Submittal Template has been provided stating that all indoor composite wood and agrifiber materials used on the project contain no added urea-formaldehyde. However, the required product details for all indoor composite wood and agrifiber products have not been provided.

#### TECHNICAL ADVICE:

Please provide documentation that the particleboard core doors were specified and supplied with no added urea-formaldehyde.

## **Construction Application**

The project team has provided a response narrative to address the issues outlined in the preliminary review comments. The documentation demonstrates credit compliance.

# Indoor Chemical & amp; Pollutant Source Control

#### **Design Application**

The LEED Submittal Template has been provided stating that the project has installed the required indoor chemical and pollutant source control measures required by this credit. A listing of each entryway product installed for the building has been provided and in cases where roll out/carpeted systems have been used, confirmation of required contracted maintenance has been provided. Copies of the project's construction drawings have been provided to show the installed entryway systems, room separations and required ventilation systems. However, a list of installed filters and their MERV ratings of 13 or better was not provided in the Submittal Template, nor was confirmation provided that the filters were replaced prior to building occupancy.

TECHINCAL ADVICE: Please provide a list of the installed filters and their associated MERV ratings. This list should include the Filter Manufacturer, the Filter Identification (Model #), the Filter MERV Rating, the Location of the Installed Filter, and confirmation that the filters were replaced prior to building occupancy.

## **Design Application**

The project team has provided a revised LEED Submittal Template and the requested clarification for the installed filters. The clarification includes a list of the installed filters and their associated MERV ratings, filter manufacturer and identification, the location of the installed filter, and confirmation that the filters were replaced prior to building occupancy. The documentation demonstrates credit compliance.

# **Controllability of Systems: Lighting**

#### **Design Application**

The LEED Submittal Template has been provided stating that a sufficient quantity of lighting controls are provided for individual workstations, and states appropriate lighting controls are available for shared multioccupant spaces. A narrative and electrical floor plan have also been provided describing the project's lighting control strategy with a description of the type and location of the lighting controls.

#### 7/7/2009

#### 9/23/2009

Credit 6.1-Version 2.2

# 4/22/2010

# 8/18/2010

# Credit 5-Version 2.2

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11/19/2010

**Construction Application Review** 



# **Controllability of Systems: Thermal Comfort**

#### **Design Application**

The LEED Submittal Template has been provided stating that a sufficient quantity of thermal controls are provided for individual workstations, and states appropriate thermal controls are available for all shared multioccupant spaces. A narrative and mechanical and electrical floor plans have also been provided describing the project's thermal control strategy with a description of the type and location of the thermal controls.

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## **Thermal Comfort: Design**

#### **Design Application**

The LEED Submittal Template has been provided stating that the HVAC systems and building envelope have been designed to meet the requirements of the ASHRAE Standard 55-2004. The project team has included data regarding the specific seasonal temperature and humidity design criteria. However, the project team has not provided a narrative describing the method used to establish thermal comfort criteria for the project. The narrative provided only addresses how the systems address the design criteria.

TECHNICAL ADVICE: Please provide a detailed narrative or resubmit the LEED Submittal Template to include a narrative describing the method used to establish the thermal comfort conditions for the project. Please include specific information regarding compliance with the referenced ASHRAE standard.

#### **Design Application**

The project team has provided a revised LEED Submittal Template and a comfort zone chart as supporting documentation. The narrative describes the method used to establish the thermal comfort conditions of the project as required. The documentation demonstrates credit compliance.

# **Thermal Comfort: Verification**

#### **Construction Application**

The LEED Submittal Template has been provided explaining that a thermal comfort survey will be distributed to building occupants within the first 6 to 18 months of occupancy. A narrative describing the survey and how the survey will address thermal comfort issues in individual spaces and common areas has been provided. However, additional information is requested regarding the corrective action plan to be implemented if the survey results indicate that 20% of building occupants are dissatisfied with thermal comfort based on the environmental variables outlined in ASHRAE 55-2004.

#### **TECHNICAL ADVICE:**

Please provide a more detailed narrative that includes specific information regarding the proposed corrective action plan developed for the project.

#### **Construction Application**

The project team has provided a revised LEED Submittal Template to address the issues outlined in the preliminary review comments. The documentation demonstrates credit compliance.

Credit 7.1-Version 2.2

7/7/2009

9/23/2009

Credit 7.2-Version 2.2

#### 4/22/2010

#### 8/18/2010

Credit 6.2-Version 2.2

7/7/2009

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11/19/2010

**Construction Application Review** 

Credit 8.1-Version 2.2

Credit 8.2-Version 2.2

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Denied

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Earned

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# Daylighting & amp; Views: Daylight 75% of Spaces

#### **Design Application**

The LEED Submittal Template has been provided stating that the project has achieved a minimum 2% glazing factor in 86.6% of all regularly occupied spaces. A detailed narrative describing any excluded areas has been provided. However, calculations to support this claim have not been provided.

TECHNICAL ADVICE: Please complete and submit the LEED NC 2.2 EQ Credit 8 Calculator Template to support this daylighting claim.

#### **Design Application**

The project team has provided a revised LEED Submittal Template and EQc8 Calculator as supporting documentation. The calculations indicate the project has achieved a minimum 2% glazing factor in 77.15% of all regularly occupied spaces. The documentation demonstrates credit compliance.

# Daylighting & amp; Views: Views for 90% of Spaces

#### **Design Application**

The LEED Submittal Template has been provided stating that the project has provided direct line of sight views for 95.35% of all regularly occupied areas. Copies of applicable project drawings highlighting the direct line of sight through exterior windows have been provided as required. The project team has also provided a narrative describing special occupancy areas that have been excluded from compliance. The narrative confirms that these spaces have been appropriately excluded.

7/7/2009

9/23/2009

9/23/2009

11/19/2010

**Construction Application Review** 



## **Innovation in Design**

Credit 1.1-Version 2.2

#### **Design Application**

The LEED Submittal Template has been provided stating that an education program has been developed to present the project's sustainable design practices to occupants and visitors to the facility. The submitted documentation provides information of only one educational component. Per IDc1.1 CIR ruling dated 9/24/2001, "To take advantage of the educational value of the green building features of a project and to earn a LEED point, any approach should be ACTIVELY instructional. Two of the following three elements must be included in the educational program:

1) A comprehensive signage program built into the building's spaces to educate the occupants and visitors of the benefits of green buildings.

2) The development of a manual, guideline or case study to inform the design of other buildings based on the successes of this project. This manual will be made available to the USGBC for sharing with other projects. 3) An educational outreach program or guided tour could be developed to focus on sustainable living, using the project as an example."

TECHNICAL ADVICE: Please provide a detailed narrative describing the components of the implemented educational program. A minimum of two distinct components must be documented. Additionally, please provide examples of the individual elements (i.e. photos/drawings of installed signage, published case study, website screen shots, etc.)

#### **Design Application**

The project team has provided a revised LEED Submittal Template and supporting documentation, including a copy of the self guided tour pamphlet and building signage that will be incorporated throughout the site and building. The educational program includes at least two educational components, including an educational display (building signage throughout the facility) highlighting the building's sustainable design features, and a self guided tour pamphlet that will be available to the public. The documentation demonstrates credit compliance.

		-

**Innovation in Design** 

**Innovation in Design** 



**Innovation in Design** 

Credit 1.4-Version 2.2

Credit 1.2-Version 2.2

Credit 1.3-Version 2.2

7/7/2009

9/23/2009

11/19/2010

4/22/2010

8/18/2010

**Construction Application Review** 

Credit 2-Version 2.2



# **LEED Accredited Professional**

#### **Construction Application**

The project team has completed the LEED Submittal Template stating that a LEED AP has been a participant on the project development team. However, a copy of the LEED AP award certification for Maria Carolina Weitzman has not been included as required.

TECHNICAL ADVICE:

Please provide the certificate (scanned image) for the LEED Accredited Professional on the project team.

#### **Construction Application**

The project team has provided a revised LEED Submittal Template and a copy of the LEED AP certificate to address the issues outlined in the preliminary review comments. The documentation demonstrates credit compliance.

