Applying LEED to museum projects

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What are the advantages of using LEED for museum facilities?

Museums have a significant opportunity to reduce the environmental impacts of exhibit spaces, event rooms, and overall facility operations through measures such as improving energy and water efficiency, reducing and managing waste, prioritizing sustainable and local purchasing, and promoting alternative transportation. They can also advance human health by providing healthy, comfortable, and productive indoor environments with improved air quality, access to daylight and views, and greater occupant control over lighting and thermal conditions.

The U.S. Green Building Council (USGBC) promotes cost-effective, resource-efficient building design, construction, and operations to protect the environment and human health. Its LEED certification program provides a framework for designing and operating museums sustainably. On average, green buildings use 26% less energy, emit 33% less carbon dioxide, use 30% less indoor water, and divert 50%–75% more solid waste from landfills and incinerators. LEED is helping museums meet ambitious sustainability goals while delivering significant operating cost savings at the project level.

LEED-certified museums offer a powerful platform to educate the public on integrating sustainability into the built environment. Around the world, museum facilities are using LEED standards as a benchmark to advance a more efficient, equitable, and sustainable future.

How can museum facilities earn LEED certification?

Museums can earn certification under different LEED rating systems at various stages of a building's lifecycle.

- LEED for Building Design and Construction (BD+C): New Construction and Major Renovation is typically the most appropriate rating system for new builds or major renovations. At least 60% of the project's gross floor area must be complete at the time of certification, and the certification must cover the building's entire gross floor area. For museum projects, this can include areas dedicated to both administrative and support functions.
- LEED for Operations and Maintenance (O+M): Existing Buildings or Interiors applies to facilities or spaces that have been fully operational and occupied for at least one year. Projects may be undergoing improvements or little to no construction, but must include the building's entire gross floor area. Unless otherwise noted in credit-specific requirements, this coverage includes process-related operations and performance metrics.

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What issues are unique to museum projects?

Museums require stringent control of interior climate, ventilation, and lighting—needs that can conflict with performance standards originally conceived for typical commercial buildings. These projects often have distinct energy and water demands, higher visitor volumes, unique ventilation and humidity requirements, elevated equipment loads, and programmatic ties to other facilities, all of which make strong efficiency measures more challenging to implement. Recognizing these unique conditions, USGBC and GBCI regularly support project teams. Contact us with questions about applying LEED to your museum project.

How does LEED address the unique challenges of museum projects?

LEED v5 is the most current version of the rating system and is available for all commercial projects pursuing certification under New Construction, Core and Shell, Commercial Interiors and Existing Buildings. Many of the strategies developed for the museums under previous versions of LEED, have been adapted for LEED v5 or can be found in the new Project Priorities and Innovation credit category. Credits in this category offer greater flexibility to address unique project contexts and priorities, including typology, culture, location, areas of innovation and individual performance objectives. Sector specific Project Priority credits are continuously being developed and will be released in the Project Priority Library for use.

When developing LEED v4 and LEED v4.1, certain prerequisites and credits were adapted to support the unique needs of museums and other high energy utilization projects. Incorporating feedback from industry stakeholders, LEED has published industry-specific guidance through LEED Interpretations, Alternative Compliance Paths (ACPs), and pilot credits. The following may be of interest to museum projects. Many of them are designed to help projects with high process loads or high occupancy to meet the intent of the credits.

- LEED Addenda 100002553 addresses how to treat museum exhibits and other collection space for the BD+C Credits for Interior Lighting, Daylight, and Quality Views.
- The Energy Jumpstart Pilot Credit is available for O+M projects with process loads of at least 60% that are unable to meet the Minimum Energy Performance prerequisite in the LEED v4 O+M rating system.
- LEED Interpretation 10493 allows LEED v4 and v4.1 BD+C projects using whole building energy simulation that can document more than 50% unregulated process load to use BD+C: Core & Shell energy performance improvement thresholds in lieu of the New Construction thresholds.
- The Whole Project Water Use Reduction Pilot Credit allows LEED v4 BD+C projects to quantify water use through whole-building water balance modeling, similar to the whole-building energy modeling compliance path. It also enables projects to capture significant water savings that previously went unrecognized, such as process water.
- The LEED v4 Energy Update is available for projects with a high percentage of unregulated or process loads can continue using C&S threshold and are also encouraged to consider LEED v4.1 credit substitution.

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Additional LEED Interpretations for museums can be found in the Addenda Database by entering “museum” in the main search bar.

How does the Arc platform relate to museums?

The LEED v4.1 O+M rating system offers a unique, performance-based pathway to certify existing buildings and interior spaces. It leverages legacy Arc, a state-of-the-art platform for collecting, managing, and benchmarking performance across five categories: energy, water, waste, transportation, and human experience.

And what does this mean for museums? LEED v4.1 enables museum projects to benchmark against similar high-performance facilities worldwide. Facility managers and owners can continuously monitor data and make informed decisions to optimize building performance using real-time analytics. This performance pathway can be used to certify and recertify projects every three years. Learn more.

LEED v5 BD+C, ID+C and O+M rating systems allow all space types to certify utilizing the new Arc experience, offering greater fluidity and flexibility for users. Performance tracking, certification, and reporting are all delivered in one place.

How can multiple buildings and structures in a campus setting earn LEED certification?

Museums often operate at a large scale, with multiple buildings spread across a single site. These buildings, people, and processes are interconnected. To address this, LEED Campus Guidance was introduced for projects on a shared site under the control of a single entity. Its application to LEED projects in museum settings reflects both the complexity and commonality of buildings and infrastructure on a single site.

LEED Campus Guidance is a useful tool for museums with multiple buildings, shared utilities, and site-wide management policies. By using this approach, museum operators and project teams can benefit from a streamlined review process and reduced certification fees under the Master Site, supporting successful implementation of LEED projects.

What resources are available for museum projects pursuing LEED?

There are various resources available for museums pursuing LEED certification.

Industry Articles:

- Responsibility of Museum to Preserve the Planet
- UN Climate Week and the Green Museums Community
- Cultural Heritage and Museums – Mind the Gap
- MoMA museum in New York leverages LEED certification
- How Much Energy Does It Take to Run a Museum?
- Green Trends in Museum Retail
- Elevating Sustainability Efforts in Museum Dining Operations
- LEED helps Glenstone Museum sustain its unique visitor experience

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Where can I find owner profiles and case studies on museums?

- California, UC Davis Manetti Shrem Museum of ART
- China, HBS Art Museum
- Colorado, Denver Art Museum Expansion
- Italy, MITA Brescia
- Missouri, St. Louis Art Museum Expansion
- Montana, Museum of Art and Culture
- New York, Museum of Modern Art
- Ohio, Cleveland Museum Projects
- San Franciso, Museum of Modern Art

View non-confidential LEED-registered and certified projects in the Project Directory by entering keywords like “museum” in the search bar. This will display projects with those terms in their titles. You can also filter by region and rating system to refine results.

Does USGBC offer any education for project teams wanting to learn more about museum facilities pursuing green building measures?

Yes! Check out the following session in the USGBC online course catalog:

- 2026 USGBC ADAPT: Denver Regional Conference is coming to the Denver Art Museum
- Case Study: National Museum of African American History & Culture

Who can I contact for more information about applying LEED at a museum?

For more information, contact us.