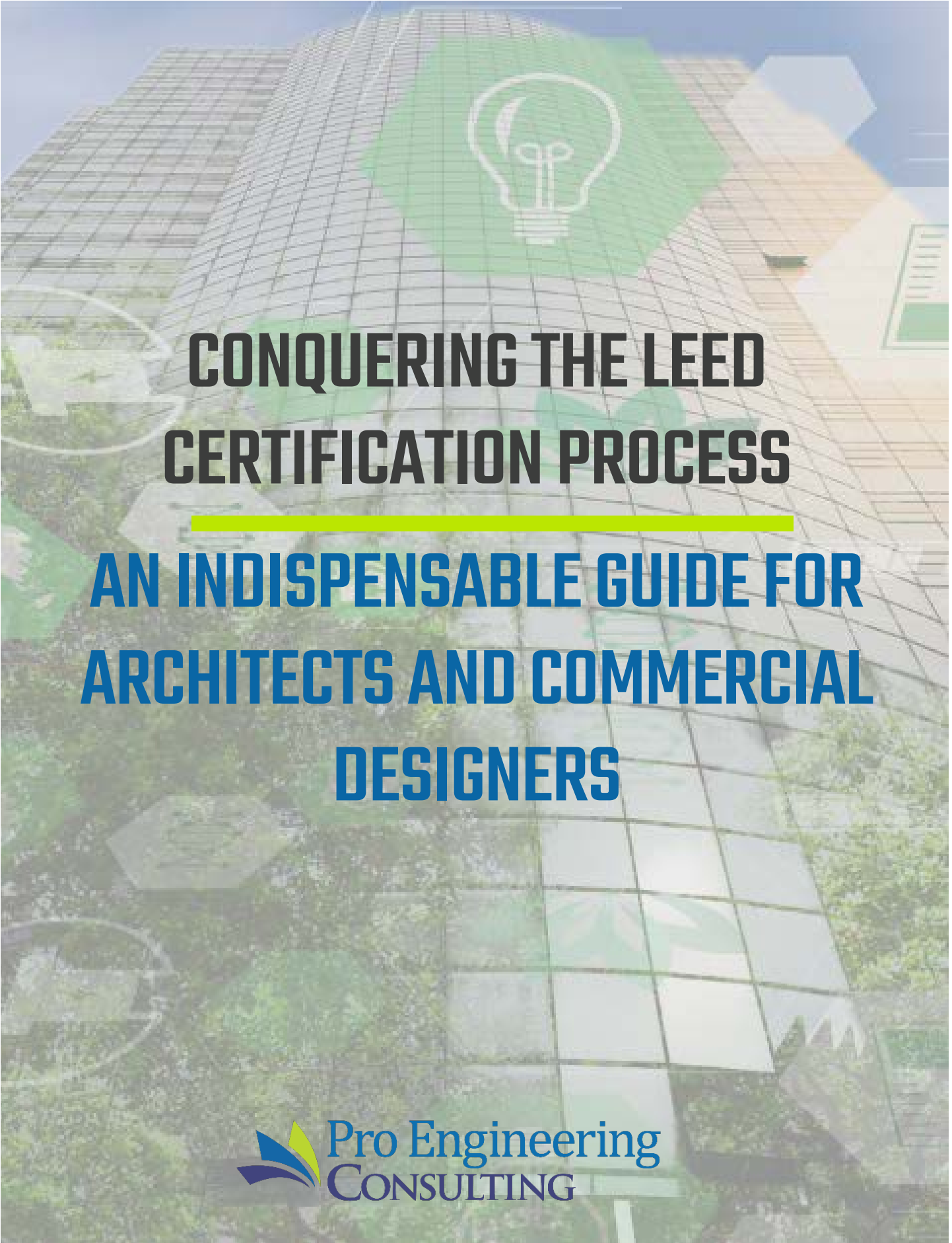




CONQUERING THE LEED CERTIFICATION PROCESS

AN INDISPENSABLE GUIDE FOR ARCHITECTS AND COMMERCIAL DESIGNERS



**Pro Engineering
CONSULTING**



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INTRODUCTION

As an architect or commercial designer, you may have been involved in countless discussions about the Leadership in Energy and Environmental Design (LEED) certification. Perhaps you have also wondered, "Is it worth it?" or "How do I go about the process?" This is your ultimate guide to understanding and navigating the LEED certification process.

DEBUNKING FEARS AND DOUBTS: THE IMPORTANCE AND BENEFITS OF LEED CERTIFICATION

Many architects harbor an apprehension towards LEED, often due to misconceptions about the process and the benefits.

The certification provides an international recognition of your commitment to sustainability but also results in operational cost savings in the long run through energy efficiency. It improves occupants' health and well-being and is often a requirement for certain government businesses.

In addition, LEED-certified buildings often command higher lease rates – a distinct advantage for building owners and commercial real estate professionals.

- **International Recognition of Commitment to Sustainability:** Achieving LEED certification is an internationally recognized symbol of sustainability achievement and leadership. LEED is known globally and used in over 160 countries. It signals to clients, investors, and the public that the building is environmentally responsible, resource-efficient, and a healthy place to live and work.
- **Operational Cost Savings:** LEED-certified buildings are designed to have lower operating costs and increased asset value. This is because they are more energy and water-efficient than non-certified buildings, which reduces utility bills over the building's lifecycle. For example, they might use less electricity due to energy-efficient lighting and appliances, or less water due to low-flow plumbing fixtures.
- **Environmental Benefits:** LEED-certified buildings are, by definition, designed to have a lower impact on the environment. They use less water and energy, reduce waste during construction and operation, and often incorporate renewable energy sources, among other sustainable practices. This contributes to the conservation of natural resources and reduction of greenhouse gas emissions.

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- **Improvement in Occupant Health and Well-being:** Buildings designed and maintained with LEED guidelines in mind can contribute to the improved health and productivity of their occupants. This can be achieved through better indoor air quality, more natural light, and the use of non-toxic materials. A healthier indoor environment can lead to lower healthcare costs, improved employee productivity and satisfaction, and lower absenteeism.
- **Higher Lease Rates:** Because LEED-certified buildings are more energy-efficient and offer a healthier living and working environment, they are often more attractive to potential tenants. This can allow the owners of these buildings to charge higher lease rates, particularly in the commercial real estate market. Furthermore, these buildings often have higher occupancy rates, which contributes to increased revenue for building owners.
- **Productivity Benefits:** [Studies](#) have shown that employees in LEED-certified buildings tend to be more productive and have lower absenteeism. This is likely due to the healthier indoor environment, as well as improved lighting and climate control.
- **Public Image:** LEED certification can enhance a building or company's image by demonstrating a commitment to environmental sustainability and social responsibility. This can help attract customers or clients who prioritize these values.
- **Risk Management:** By implementing sustainable practices, LEED-certified buildings can help mitigate potential risks associated with resource scarcity, energy costs, or future environmental regulations.
- **Government Requirements:** Many federal, state, and local governments in various countries encourage or mandate green building practices, sometimes specifying LEED certification for their own buildings and for public projects. Some provide incentives for private sector projects that achieve LEED certification. For instance, they might offer tax credits or expedited permitting for projects that meet certain LEED criteria. In the United States, for instance, the General Services Administration (GSA) requires that all new federal buildings and major renovations meet LEED Gold standards. Some states and cities have similar requirements for public buildings and may also offer incentives for private sector projects that achieve LEED certification.
 - Examples:

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- **Washington D.C.:** This city has mandated that all public buildings and publicly funded projects must meet LEED standards. Additionally, private projects that are 50,000 square feet or larger must also meet LEED certification requirements.
- **San Francisco, California:** The city requires that all municipal construction and major renovation projects over 5,000 square feet must achieve LEED Gold certification.
- **State of New York:** The Green Building Tax Credit encourages the incorporation of energy efficiency and environmental design into residential and commercial buildings by providing a tax credit for LEED-certified buildings.

Internationally, many countries, such as Canada, India, and China, have also recognized and adopted LEED certification, with their own public-sector green building requirements.

It's important to check local and state building codes, laws, and regulations for the most accurate and up-to-date information, as these policies continue to evolve and can vary greatly by jurisdiction.

Remember, the exact benefits will vary depending on the specific circumstances of each project and its stakeholders. Nonetheless, LEED certification can provide valuable advantages for many different types of buildings and projects.

Misconceptions about the process and benefits of LEED certification can come from various sources. Some people might believe that the process is too time-consuming or expensive, but when the longer-term benefits are considered, it often becomes clear that the investment can provide significant returns over the life of the building. The process also offers opportunities for innovation in design and construction, which can lead to even more substantial benefits in some cases.

All in all, LEED certification isn't just about being "green" - it's about creating healthier, more productive places for people to live, work, and play, while also being mindful of our environmental impact.

UNDERSTANDING THE LEED CERTIFICATION PROCESS

The LEED certification process is a rigorous, multi-step procedure designed to validate the sustainability and environmental performance of a building project. The steps can be summarized as follows:

Step 1: Choose the Appropriate Rating System

LEED has different rating systems to cater to the diverse nature of projects, including Building Design and Construction, Interior Design and Construction, and more. Choosing the appropriate LEED rating system depends on the project's type, location, and specific characteristics. Here's an overview of the different LEED rating systems and the types of projects for which they're typically used:

- **Building Design and Construction (BD+C):** This rating system is used for new buildings and major renovations. It has several subcategories for different types of buildings, including New Construction, Core & Shell, Schools, Retail, Healthcare, and others.
- **Interior Design and Construction (ID+C):** This is used for projects that are interior fit-outs only, where the base building is not being significantly renovated. It also includes subcategories for different types of interior spaces, such as Commercial Interiors, Retail, and Hospitality.
- **Building Operations and Maintenance (O+M):** This system is for existing buildings that are undergoing improvement work or little to no construction. It can be used to demonstrate that the ongoing operations and maintenance of a building meet LEED standards for sustainability.
- **Neighborhood Development (ND):** ND is used for new land development projects or redevelopment projects containing residential uses, non-residential uses, or a mix. Projects can be at any stage of the development process, from conceptual planning to construction.

- **Homes and Multifamily Low-rise:** This rating system is designed for single-family homes or low-rise multi-family (one to three stories)
- **Multifamily Mid-rise:** This system is used for mid-rise multi-family residential buildings of between four and six stories.

To select the appropriate rating system, you'll need to determine which category your project fits into. If your project could fit into multiple categories, you'll need to consider which system aligns best with your project's sustainability goals and is most practical to pursue.

Sometimes, your location can also influence which rating system is most appropriate. For example, if you're in a region where water scarcity is a major issue, you might choose a rating system that emphasizes water efficiency.

Working with a LEED Accredited Professional (LEED AP) can help you navigate this selection process. They have the training and expertise to provide guidance on which rating system is the best fit for your project and how to maximize your project's sustainability and efficiency according to LEED's criteria.

Step 2: Prepare and Submit Documentation

This stage involves gathering and submitting necessary information to demonstrate your project's compliance with the selected credits.

Submitting documentation for LEED certification is a key part of the certification process and is generally done through the [online LEED platform](#). Here are the general steps:

- **Register Your Project:** This first step is done through the LEED online portal (LEED Online) managed by Green Business Certification Inc. (GBCI). When you register, you will select the appropriate LEED rating system for your project. After consulting with a LEED Accredited Professional (AP) if you realized you would like to change your rating you can discuss the proper rating with them further.

- **Compile Documentation:** Once your project is registered, you'll need to gather documentation that demonstrates your project's compliance with the various LEED credits you are pursuing. This might include architectural plans, specifications, contracts, invoices, commissioning reports, photographs, calculations, and other types of documentation. The specific requirements vary depending on the credit. LEED Online provides detailed forms and templates for each credit to guide you in compiling the necessary documentation.
- **Submit Documentation:** You'll submit your documentation through LEED Online. Each credit requires a separate submission. You have the option to submit all credits at once, or you can submit them in phases (split review) as they are completed. The choice depends on the project's schedule and the team's preference.

Step 3: Undergo a Certification Review

Undergoing a LEED certification review can be a meticulous process, but with proper preparation and organization, it can go smoothly. The GBCI performs the LEED certification review, which involves a detailed assessment of all the documentation you've submitted to verify your project's compliance with the LEED rating system requirements.

Here's what you can generally expect:

- **Preliminary Review:** After you submit your documentation via LEED Online, the GBCI will conduct a preliminary review. During this phase, the LEED Review Team examines all the materials you've provided for each credit and ranking you are attempting to achieve. They may accept the documentation, or they may ask for additional information or clarification.
- **Review Comments:** After the preliminary review, you will receive feedback on your submission. The review team will identify any credits that are marked as "anticipated" (where it appears you've met the requirements), "pending" (where additional information is required to make a determination), or "denied" (where it appears you haven't met the requirements). Each comment will contain an explanation about what's needed for clarity or why a credit was denied.

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- **Revise and Respond:** You will have a chance to revise and respond to the review team's comments during the clarification phase. This typically involves providing additional information, clarification, or revisions based on the feedback received. For credits that were denied, you may either provide additional evidence to support compliance or decide not to pursue that credit.
- **Final Review and Certification:** Once all the review comments have been addressed and the reviewer has accepted your documentation, your project will be awarded a certification level based on the number of credits it has achieved: Certified, Silver, Gold, or Platinum.
- **Certification Decision:** After the final review, the GBCI makes a certification decision based on the number of credits you've successfully achieved. You will be notified of your project's official LEED rating (Certified, Silver, Gold, or Platinum) and provided with a final review report and certificate.

The review process can take several weeks to months, depending on the complexity of the project and the number of review phases. It's important to respond promptly to any requests for additional information and to thoroughly check your documentation before submitting it to avoid delays.

Working with a LEED Accredited Professional (AP) can be very helpful during this process. They are experienced in LEED requirements and documentation and can help ensure that your submission accurately represents your project's sustainability features. They can also help interpret review comments and guide your responses.

Remember, this is a general overview, and the process can be more complex depending on the project. Also, keep in mind that the entire process can take several months, and you'll need to budget for certification fees based on the size and type of your project.

THREE ROUTES TO LEED CERTIFICATION

There are essentially three ways you can become LEED certified:

New Construction (NC)

This LEED certification is aimed at architects, designers, and builders involved in the construction of new buildings or major renovations. The goal is to encourage energy efficiency, water conservation, and the use of sustainable or recycled materials in construction. The design and construction processes are evaluated for energy usage, indoor environmental quality, material selection, sustainable site development, and water savings. For instance, a building could earn points for incorporating energy-efficient heating and cooling systems, using locally sourced building materials, or installing low-flow plumbing fixtures.

Existing Buildings

This rating system is designed for the owners and managers of existing buildings. It emphasizes the operations and maintenance activities of the buildings and the behavior of occupants, as these are the key factors affecting the environmental performance of a building over its lifecycle. The Engineering Bill of Materials (EBOM) certification process evaluates energy efficiency, water usage, waste management, and indoor air quality. A building could gain points, for example, by implementing a robust recycling program, utilizing energy-efficient appliances and lighting, or by conducting regular maintenance to ensure HVAC systems are operating at peak efficiency.

LEED For Homes

This category targets residential structures, from single-family homes to low-rise and mid-rise multi-family buildings. The aim is to encourage homeowners and developers to incorporate sustainable and energy-efficient practices into the design, construction, and operation of homes. This might involve using energy-efficient appliances and fixtures, incorporating renewable energy sources like

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solar panels, utilizing sustainable or recycled materials in construction, and optimizing the home for water efficiency. For multi-family buildings, shared resources like communal laundry facilities or shared transportation might also contribute to a higher score.

It's important to note that for all these certifications, achieving a certain number of points out of a possible 100 (plus additional points for innovations or regional priorities) will result in one of four levels of certification: Certified, Silver, Gold, or Platinum. The exact number of points required for each level may vary depending on the specifics of the certification category.

Additionally, it's worth mentioning that LEED is not a one-time certification. To maintain a building's status, the owners must continually implement sustainable practices and periodically reapply for certification (every 3 years or 5 (if v2, v2009, v4) years).

NAVIGATING THE DIFFERENT LEVELS OF LEED CERTIFICATION

LEED certification comes in four levels: Certified, Silver, Gold, and Platinum. Each level corresponds to a range of points a project has earned. While the Silver certification might be relatively easy to achieve, each progressive level requires a more intensive commitment to sustainability and green building practices.

LEED certification is based on a points system, where a project earns points for meeting specific green building criteria. The number of points the project earns determines its level of LEED certification.

Certified: 40-49 points

To achieve LEED-Certified status, a project must earn between 40-49 points. This is the most basic level of certification and requires meeting certain prerequisites and standards in categories like water efficiency, energy use, and indoor environmental quality.

Silver: 50-59 points

LEED Silver certification is achieved by earning between 50-59 points. To reach this level, a project will have to meet more stringent criteria or implement additional sustainability measures beyond the basic level. This could involve further improving energy efficiency, incorporating renewable energy sources, or implementing more comprehensive waste management and recycling programs.

Gold: 60-79 points

LEED Gold certification requires earning 60-79 points. This level signifies a strong commitment to environmental responsibility and requires a more comprehensive and holistic approach to green

building. This might involve a high degree of energy and water efficiency, extensive use of sustainable or recycled materials in construction, and exceptional indoor environmental quality.

Platinum: 80+ points

The highest level of LEED certification, Platinum, is achieved by earning 80 points or more. A Platinum-certified building represents the utmost commitment to sustainability and typically incorporates advanced strategies in all areas, such as renewable energy generation, gray water recycling systems, or innovative strategies for improving indoor air quality and occupant well-being.

For all levels of certification, a project must also meet the prerequisites defined in the LEED rating systems. These are the basic requirements all projects must meet before they can earn points. For example, a prerequisite in the Water Efficiency category is to reduce potable water use for irrigation by 50%.

It's also worth mentioning that there are bonus points available for addressing regional environmental issues identified by local LEED councils, as well as for innovative green building strategies that go beyond the existing criteria in the rating system.

The specific requirements and point thresholds for each level can vary slightly depending on the version of the LEED rating system being used, and the type of project (such as new construction vs. existing building renovation). A LEED Accredited Professional (AP) can be a valuable resource in guiding a project through the certification process.

To reach the Silver, Gold, or Platinum levels, you'll need a well-planned, sustainability-focused design, and stringent implementation during the construction phase.

IS LEED CERTIFICATION WORTH IT?

As architects and commercial designers, your work has the potential to influence the built environment significantly. Incorporating sustainable practices through LEED certification makes a powerful statement about your dedication to environmental stewardship and sustainability.

Deciding to embark on the LEED certification journey may depend on a number of factors, such as client requirements, project type, and budget. However, the value of LEED certification is not just a badge of honor - it's a commitment to a sustainable future. Here are a few key instances where LEED certification is likely to be especially beneficial:

Long-term Investment: If you are planning to hold the property for a long time, the initial investment in LEED certification can pay off in operational savings over time.

New Construction: If you're starting from scratch with a new construction project, pursuing LEED certification from the outset can be easier and more cost-effective than retrofitting an existing building to meet LEED standards.

Incentives: There are various incentives provided by local, state, and federal governments, such as tax credits, grants, and expedited permitting processes for LEED-certified buildings.

Resale Value: LEED-certified buildings can have a higher resale value compared to similar non-certified buildings. The certification signifies that the building is well-constructed and will be more efficient to operate, making it more attractive to potential buyers.

Remember, however, that every project is unique, and the value of LEED certification will depend on the specific circumstances of the project and its stakeholders.

For in-depth information about the LEED certification process, you can also visit the official U.S. Green Building Council ([USGBC](https://www.usgbc.org)) [website](https://www.usgbc.org).

The journey towards a sustainable future begins with a single step. And that step might just be your decision to become LEED certified. Embrace the challenge.

LEED Certification Might Not Be the Most Beneficial or Practical Choice

There can indeed be scenarios where pursuing LEED certification might not be the most beneficial or practical choice. Here are a few situations when LEED certification may not be worth it:

- **Lack of Expertise or Resources:** If the project team does not have the necessary expertise or resources to navigate the LEED certification process, it might be more challenging and costly. In that situation, if you can't hire a LEED AP, it may be more beneficial to simply incorporate as many sustainable practices as possible without formally seeking certification.
- **Budget Constraints:** Achieving LEED certification can involve additional costs, both for the application and certification process itself, and for the changes required to meet LEED standards. These might include costs for sustainable materials, energy-efficient equipment, professional fees, and more. If a project has a very tight budget with no room for these additional expenses, LEED certification may not be feasible.
- **Short-term Ownership:** If the building owner plans to sell the property shortly after construction or renovation, they might not benefit from the long-term operational savings that LEED certification can provide. However, it's worth noting that LEED certification can increase property value and marketability, so it might still be beneficial in some cases.
- **Small or Minor Projects:** If the project involves minor renovations or a small structure, it might not be worth pursuing LEED certification. The cost and complexity of the process may outweigh the benefits, especially if the potential for energy and water savings is limited due to the small scale of the project.
- **Low Market Demand:** In markets where tenants, buyers, or users do not value or recognize LEED certification, the investment might not provide a significant return. For example, if local

customers or clients do not prioritize sustainability, they may not be willing to pay higher lease rates or purchase prices for LEED-certified buildings.

- **Alternative Certifications:** In some cases, a different green building certification might be more applicable or beneficial, depending on the specifics of the project and the region. For instance, certifications like [BREEAM](#), [Green Star](#), or local green building certifications might provide more value.

These are general considerations, and the decision will depend on the specific circumstances of each project. Even if pursuing LEED certification isn't practical, it's still beneficial to incorporate as many sustainable practices as possible into any building project.

When Is It a Good Idea to Get LEED Certified?

Choosing to pursue LEED certification is often a strategic decision that depends on a variety of factors, including the specific project, budget, market conditions, and long-term goals. When you're building it's a great opportunity to incorporate sustainable design elements from the beginning, making it easier and often more cost-effective to meet LEED standards. If you're looking for ways to attract new tenants getting LEED certified can be a significant differentiator for those who value sustainability.

If you are looking for operational savings, LEED-certified buildings are designed to be more energy and water-efficient, leading to lower operating costs over the long term. Additionally, if environmental responsibility is a core value for your business or organization, pursuing LEED certification can be an important part of your commitment to sustainability.

Some LEED credits relate to climate resilience, which can make your building better prepared for the impacts of climate change. This can be especially relevant if your building is located in an area prone to issues like heatwaves, floods, or storms.

As previously mentioned, some government entities either encourage or require LEED certification for their own buildings and for certain types of public projects. Some jurisdictions offer financial

incentives, like tax credits or expedited permitting, for projects that achieve LEED certification. If this is the case for your project, you will need LEED certification.

While LEED certification can offer significant benefits, it's also important to remember that achieving certification involves an upfront investment in terms of time and money. The costs and benefits should be carefully weighed for each project.

Below Are Some Additional Resources for Further Reading and Exploration:

[5 Sustainability Practices to Include in Your Next Commercial Construction Project](#): This article explores five key points to consider when it comes to sustainable design and how a Mechanical, Electrical, and Plumbing (MEP) Engineering Designer can support your sustainable construction goals.

[LEED Online](#): Official portal where you can register and manage your LEED projects.

[LEED Credit Library](#): A complete list of all the credits that can be earned in various rating systems.

[U.S. Green Building Council \(USGBC\)](#): USGBC is the organization that developed the LEED rating system. The website provides comprehensive details about the LEED certification process, rating systems, benefits of LEED certification, and more.

[Green Business Certification Inc. \(GBCI\)](#): GBCI is the organization responsible for independently recognizing excellence in green business industry performance and practice globally, which includes administering the LEED certification process.

Taking the first step towards LEED certification might seem daunting, but armed with the right resources and support, it becomes an achievable and rewarding process. Your dedication to sustainability reflects your commitment to a greener, more sustainable future—a goal we share at Pro Engineering. If you're still on the fence about whether LEED certification is right for your next project, we are just a phone call away.

About Pro Engineering

Pro Engineering has provided mechanical, electrical, and plumbing engineering design services since 1995. Our MEP engineering design team can help you prepare the required construction documents for city or state permitting. Even after plans are finalized, we continue to make adjustments and revisions per owner request, city plan check requirements, or to meet engineering goals. We have worked on many clients' LEED projects, designing to LEED standards. We design to energy code requirements and provide the most efficient systems in all of our designs. Projects can move fast, and so can we.

For more information on how we can assist you with your next commercial construction project, [contact us today](#).