

# Introduction

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*LEED Prep BD&C: What You Really Need to Know to Pass the LEED AP Building Design & Construction Exam* is designed to prepare you for the Leadership in Energy and Environmental Design (LEED) AP Building Design and Construction exam administered by the Green Building Certification Institute (GBCI). The LEED AP Building Design and Construction exam is a broad-based exam that assesses your knowledge of general green building principles and your ability to implement the most recent versions of the LEED Green Building Rating System™ created and maintained by the U.S. Green Building Council (USGBC).

This book is organized to help you understand the LEED rating systems and give you an overview of green building design that will help you prepare for the LEED AP Building Design and Construction exam.

- This *Introduction* contains information about the LEED Accredited Professional (AP) credentialing program, the relationship between USGBC and GBCI, how to register for the test, and how the test is administered, along with suggestions for exam preparation and materials. The references given in the Candidate Handbook that should be studied for the exam are introduced in this chapter. Also included is a short guide to the use of GBCI and USGBC logos and trademarks.
- *An Overview of LEED* describes the appropriate uses of the various rating systems, the changes introduced with LEED 2009, the nuts and bolts of the LEED registration and certification process, and the minimum requirements that all LEED-certified projects must meet.
- *LEED in Practice: Credit Synergies and the Cost of Building Green* discusses project cost analysis, a critical first step in deciding which credits are appropriate and economical to pursue.
- *LEED Project and Team Coordination: Pre-Design* suggests ways to organize a project team to facilitate interaction and cooperation and take advantage of the synergistic opportunities presented by LEED credits. This chapter also covers the steps that should be taken in the pre-design phase of a green building project.
- *Green Building Basics: Design* presents critical information about the design phase and provides information on common green building strategies.

- *Putting It All Together: Construction, Operations, and Maintenance* covers the construction phase and the operations and maintenance phase in a green building project.
- *LEED Credit Summaries* compiles all LEED BD&C credit and prerequisite information that is directly applicable to the LEED AP Building Design and Construction exam in a credit-by-credit format.
- *Referenced Standards* lists and summarizes the principal standards, external documents, and other information referenced in the rating systems. This collection of information makes up the “tool kit” for technical analysis of the strategies applied to a LEED project and provides a benchmark against which the project can be evaluated.
- *Terminology* contains a glossary of terms and a list of acronyms with which you should be familiar.
- *Resources* contains pointers to additional online resources and a list of 100 open-ended and short-answer review questions to help you study the material.

## USGBC and GBCI

The LEED Green Building Rating System is a product of the U.S. Green Building Council (USGBC), a nonprofit organization committed to encouraging sustainable building practices that lead to environmentally responsible, profitable, and healthy places to live and work. Since 1993, USGBC has encouraged such practices through the establishment, continued development, and promotion of the LEED Green Building Rating System and through education and training efforts. Members of USGBC include architects, engineers, developers, owners, contractors and subcontractors, product representatives and manufacturers, and public and private groups committed to sustainability.

In its document *Foundations of the Leadership in Energy and Environmental Design Environmental Rating System: A Tool for Market Transformation*, USGBC defines LEED as

- the most extensive, authoritative, and well-recognized certification standard that distinguishes green buildings by their design, construction, and operation
- a design guideline to move building construction and operation toward sustainability
- an integrated training program in green building design to encourage best practice and provide support to the entire real estate industry

Although other rating systems have been introduced into the marketplace to measure and evaluate green buildings, LEED is the most popular and well-established assessment tool in use in the United States, and is used by both public and private entities. In the U.S. government, LEED is used at the General Services Administration, the Environmental Protection Agency, and the Departments of State, Energy, Agriculture, Health and Human Services, and Interior to encourage and evaluate green building design and construction for all new and major renovation projects. LEED is also used in construction projects of the Navy, Army, and Air Force. Most states require new state-funded projects to achieve a minimum level of LEED certification, and increasing numbers of local governments, higher education institutions, and public schools are encouraging or requiring their new facilities and major renovations to be LEED certified. Many corporations are also choosing LEED certification for their facilities when construction of green buildings supports their corporate mission.

As LEED has grown in scope and popularity, the number of project applications and the number of people interested in attaining LEED professional credentials have increased tremendously.

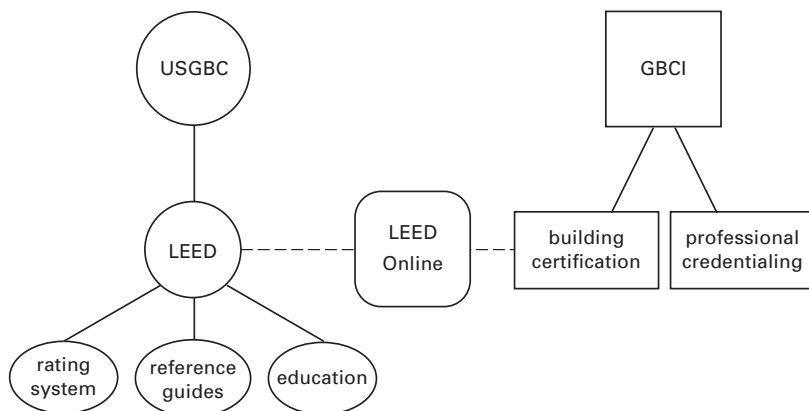
New ways of dealing with the demand have had to be found. Many project teams have experienced delays in review of their project applications, due in part to how much data was being submitted to substantiate compliance with credit requirements.

In addition, USGBC's system was not in accordance with International Organization for Standardization (ISO) recommendations for certification programs. ISO recommendations do not permit an accreditation or certification body to be subordinate to the organization that set the standards, which was the case at USGBC as long as the organization was both the author of the rating systems criteria and the arbiter for certification.

As part of the changes introduced with LEED 2009, USGBC addressed these issues by transferring accreditation and certification responsibilities to the Green Building Certification Institute (GBCI). GBCI is an independent, nonprofit organization now responsible for the administration of individuals' LEED credentials and the certification of LEED projects. To establish credibility in this new role, GBCI will be evaluated according to the American National Standards Institute (ANSI) accreditation process for personnel certification agencies complying with ISO Standard 17024.

This break between the two organizations allows USGBC to be responsible for developing and publishing the requirements for LEED certification, while GBCI evaluates projects based on the rating systems and criteria developed by USGBC. USGBC and GBCI also expect this new structure to shorten the review period and allow projects to be certified more quickly after the final application materials have been submitted.

**Figure 1** Relationship between USGBC and GBCI



GBCI has two roles.

1. *Administering the LEED credentials.* GBCI writes and evaluates examinations, evaluates applications for the exams, and manages exam registration. Prometric, a provider of testing services worldwide, is contracted by GBCI to administer the examinations. In addition, GBCI maintains records of those who have earned the LEED Green Associate, LEED AP with specialty, and LEED AP Fellow credentials, and keeps track of those professionals who earned the LEED AP designation before the new system was introduced. GBCI also administers the Credentialing Maintenance Program.

2. *Overseeing evaluation of project applications and determinations of LEED certification.* GBCI coordinates the efforts of a team of certification bodies who are responsible for evaluating applications for LEED certification. GBCI contracts with these independent testing and certification agencies to manage the review of the data submitted. These agencies include
  - ABS Quality Evaluations
  - BSI Management Systems America
  - Bureau Veritas North America
  - DNV Certification
  - DQS
  - Intertek
  - KEMA-Registered Quality
  - Lloyd's Register Quality Assurance
  - NSF–International Strategic Registrations
  - SRI Quality System Registrar
  - Underwriters Laboratories

Final project certification is awarded by GBCI, but the work of reviewing the applications and making recommendations to GBCI regarding compliance with requirements falls to the certification agencies.

USGBC retains responsibility for

- development of the LEED rating systems
- publication of the LEED reference guides
- educational programming

The educational programming developed and offered by USGBC plays a role in the Credentialing Maintenance Program. Before the 2009 changes to the LEED AP exams, no continuing education was required for maintaining the LEED AP credential. The rapid advances in green building technology and research make it essential to stay abreast of the newest developments; therefore, the LEED AP credentials now are linked to a credentialing maintenance program administered by GBCI.

## **LEED Credentialing Exams**

LEED Accredited Professional credentials are the standard for verifying an individual's expertise in the principles of green building design, construction, and operation. The Green Associate and LEED AP exams, along with the professional experience requirements, are designed to allow you to demonstrate that you have the knowledge and skills necessary to participate in the design process, to support and encourage integrated design, and to streamline a project's LEED application and certification process. Exam questions test your understanding of green building practices and principles, and your familiarity with LEED requirements, resources, and processes. Questions are based on the LEED rating systems and their accompanying reference guides, the LEED implementation process, the references and standards identified by GBCI, and other related materials.

Before 2009, there was only one LEED credential: the LEED Accredited Professional, or LEED AP. Exam candidates could achieve this credential by one of three “tracks”—LEED for New Construction, LEED for Commercial Interiors, and LEED for Existing Buildings: Operations

and Maintenance—each of which focused on the corresponding LEED rating system. No particular education or experience with green building was required; anyone who studied one of the LEED rating systems, paid the fee, and passed the test could earn the credential. Some argued that the lack of prerequisites lessened the value of the credential.

The LEED AP program was completely overhauled in 2009 to align with LEED 2009. The program now includes three “tiers” of credentials. Each tier indicates the level of knowledge, experience, and proficiency in green building design held by the credentialed individual. These three tiers are

- LEED Green Associate
- LEED AP with specialty
- LEED AP Fellow

## LEED Green Associate

LEED Green Associate is the fundamental credential, and can be pursued by anyone who is employed in a field related to green building. There are no educational prerequisites for taking the LEED Green Associate exam, but you must either have professional experience related to green building or be a student enrolled in coursework related to sustainable design, in which case you may take the exam without professional work experience.

Knowledge of the LEED rating systems and other LEED resources is essential, and practical experience with the LEED documentation process and with multidisciplinary integrated design is beneficial. This credential is available not only to design professionals—such as architects or engineers—but also to marketing professionals, attorneys, developers, real estate agents, owners, maintenance staff, specialty consultants, product or manufacturers’ representatives, lenders, contractors, and any others involved in the design, construction, or operation of green buildings.

The LEED Green Associate exam is designed to test broad knowledge of sustainable design principles and basic understanding of the LEED rating systems. You don’t need in-depth knowledge of credits, specific requirements, or technologies. Rather, the exam will test your knowledge of what LEED is, the process through which a building becomes LEED certified, standard terminology, potential strategies for meeting sustainability goals, and how to be involved with and support other members of a LEED project team. Questions may be drawn from any of the rating systems, from USGBC’s website ([www.usgbc.org](http://www.usgbc.org)), and from the LEED reference guides, which are USGBC publications written to accompany and further explain the rating systems. The rating systems and the introductory chapters of recent versions of the reference guides are available online; current links to them can be found at [www.ppi2pass.com/LEEDreferences](http://www.ppi2pass.com/LEEDreferences).

To apply for this exam, you must pay the registration fee plus the examination fee. The application form requires verification of your employment in an appropriate field of work, your enrollment in a related educational program, or your involvement in support of LEED projects. You must agree to abide by GBCI’s disciplinary policy, and agree to the requirements for maintaining your credential. You must also consent to an audit of your application; GBCI states on its website that 5% to 7% of applications will be selected for auditing.

You will have two hours to complete the exam, which is computer based and made up of 100 multiple-choice questions. These will be randomly chosen from a large stock of questions. Each question has four or more options to choose from. In some cases, more than one of the options is correct, and you must choose all the correct answers to receive credit for the

question. The problem statement will give the number of correct options, and you will not be permitted to select more than that number.

When you have successfully completed the Green Associate exam, you will have earned your LEED Green Associate credential. To maintain the credential, every two years you will need to pay a maintenance fee of \$50 as well as complete 15 hours of coursework, three hours of which must be LEED specific. Maintenance of the credential (collecting fees, verifying continuing education, and so on) will be administered by GBCI.

### **LEED AP with Specialty**

LEED Accredited Professional (or LEED AP) is the second-level credential, and is described by GBCI as signifying “an extraordinary depth of knowledge in green building practices and specialization in a particular field.” Candidates for the LEED AP credential must have professional experience on a LEED project within the three years before they apply, and this experience must be verified through LEED Online or with a statement from the candidate’s employer. (If you are involved with a project registered with LEED Online, but your name is not included in the LEED Online documentation, verification from your employer may be required.) As with the Green Associate exam, you must also agree to abide by GBCI’s disciplinary policy, agree to the requirements for maintaining your credential, and consent to an audit of your application.

There are two parts to the LEED AP exam. The first part is the same as the Green Associate exam and assesses general knowledge of the rating systems, the LEED certification process, and the approaches that can be used in sustainable design. If you have already passed the Green Associate exam and have kept your credential active, you can skip this part of the exam.

The second part of the LEED AP exam is a specialty exam that requires you to demonstrate in-depth knowledge of one or more of the following areas.

- *Building Design and Construction (BD&C)*, which covers the LEED for New Construction and Major Renovations rating system, along with related commercial rating systems such as LEED for Healthcare, LEED for Schools, and LEED for Retail: New Construction
- *Interior Design and Construction (ID&C)*, which focuses on the LEED for Commercial Interiors and LEED for Retail: Commercial Interiors rating systems
- *Operations and Maintenance (O&M)*, which deals with the LEED for Existing Buildings: Operations and Maintenance rating system
- *Homes*, which tests knowledge of the LEED for Homes rating system
- *Neighborhood Development (ND)*, which covers the LEED for Neighborhood Development rating system

(Those who earned their LEED AP credentials before the LEED 2009 exam changes retain their credentials. There is more about this later in this Introduction.)

Like the Green Associate exam, the LEED AP exam is multiple choice and administered by computer. Each part contains 100 questions and the testing time is about two hours.

When you have passed the LEED AP exam, you must take part in the Credentialing Maintenance Program (CMP) to maintain your LEED AP credential. Every two years you must pay a \$50 maintenance fee and complete 30 hours of coursework, six hours of which must be LEED specific. Maintenance of the credential (collecting fees, verifying continuing education, and so on) will be administered by GBCI.

## LEED AP Fellow

The third and highest level of credential is the LEED AP Fellow. The LEED AP Fellow designation will be reserved for professionals who have demonstrated the highest level of accomplishment and proficiency in green building design. According to GBCI, LEED AP Fellows will be recognized for “major contributions to the standards of practice and body of knowledge for achieving continuous improvement in the green building field.” As of this printing, criteria for this credential are still under development, but are unlikely to include a new exam. It is expected that LEED AP Fellows will be nominated and approved through a peer review process.

## What If I Am Already a LEED AP?

So what does all this mean for those who were LEED APs before the 2009 changes?

If you have tested under the former system and have already earned the LEED AP credential, you will remain a LEED AP under the new system, and will not be required to retest.

GBCI encourages current LEED APs to opt into the new credentialing system during the transition period, from June 30, 2009, through June 30, 2011. Opting in means signing the GBCI disciplinary policy and agreeing to participate in the Credentialing Maintenance Program (CMP). Transitioning LEED APs do not have to pay the \$50 CMP fee for the first two years, but will be required to pay it after the transition period ends in June 2011.

If you are already a LEED AP before the transition, and you opt into the new tiered system, you may use the LEED AP title with one specialty designation as follows.

- If you passed the LEED for New Construction exam, you will automatically be designated a LEED AP in Building Design and Construction (BD&C). (If you passed the LEED AP exam before more than one track was offered, you took the LEED for New Construction exam, as that was the only exam offered then.)
- If you passed the LEED for Commercial Interiors exam, you will automatically be designated a LEED AP in Interior Design and Construction (ID&C).
- If you passed the LEED for Existing Buildings: Operations and Maintenance exam, you will automatically be designated a LEED AP in Operations and Maintenance (O&M).
- If the specialty designation you are automatically assigned is not the most appropriate to the types of projects with which you are involved, you may request a different designation (BD&C, ID&C, or O&M) from GBCI during the transition period.

To earn a LEED AP credential in a second specialty as well, you must take the corresponding specialty portion of the LEED AP exam. (If you are already a LEED Green Associate or AP, then you don't have to take the first part of the LEED AP exam.) For example, if you became a LEED AP under the former system by passing the LEED NC exam, then when you opted into the new system you would automatically be designated as a LEED AP BD&C. If you felt the ID&C credential was more appropriate, you could request it from GBCI during the transition period. But, if you wanted to hold the ID&C credential in addition to the BD&C credential, then you would need to take the specialty exam in that track.

A current LEED AP who chooses not to opt in will still be a LEED AP, but will not have a specialty designation.

It isn't possible for a current LEED AP to opt into one of the new designations, such as Homes or Neighborhood Development. LEED AP credentials in these areas can only be earned through testing.

## Preparing for the LEED AP Building Design and Construction Exam

To pass the LEED AP Building Design and Construction specialty exam, you must have a strong understanding of the integrated approach to green building design and construction, as well as a general knowledge of the principles of sustainable design. You will also need to memorize each prerequisite and credit's number, name, intent, requirements, strategies, exemplary performance possibilities, point value, submittal requirements, and decision makers. Furthermore in-depth knowledge of referenced standards or green technologies will be required of you. The LEED AP Building Design and Construction exam tests your understanding of the LEED certification process, familiarity with the terminology used in the ratings systems, and ability to contribute to a LEED project team.

As an example of the differences in the level of knowledge needed for the two parts of the exam, consider Water Efficiency Prerequisite 1: Water Use Reduction, which is common to the NC, CI, CS, and EBO&M rating systems. For part one of the exam, you would probably need to know that the overall goal of the Water Efficiency prerequisite and credits is to reduce building water consumption, that the baseline levels of water use are determined by the requirements of the Energy Policy Act and other plumbing codes and standards, and that the project building needs to use 20% less water than the baseline to fulfill the requirements of this prerequisite. For part two of the exam, it would be advisable to know the baseline flow or use rates for each type of fixture included in the calculations, which fixtures or appliances are excluded from the calculations, and potential strategies—such as the use of composting toilets, waterless urinals, and graywater capture systems for nonpotable uses such as irrigation or flushing toilets—that can be employed to meet the requirements of the credit. The first part of the exam tests familiarity; the second part tests implementation.

How much time you will need to prepare for the exam will depend on your experience with the rating systems and prior knowledge of how a LEED project works. Study schedules may range from two to twelve weeks or more depending on your previous roles in green building projects and how much time per day you have allotted for your review.

One way to assess your readiness and set an appropriate study schedule is to take a sample exam and use the results to determine what you need to study most. Estimate the time you would need to review the material until you can remember it without referring to your references, evaluate your commitments and available time, and set your study schedule accordingly. Only you can decide if it makes the most sense to schedule your exam and study until test day, or study until you are ready and then schedule your exam. In either case, it is useful to check your progress periodically by answering exam-like questions, such as the ones in PPI's print and online LEED sample exams. The one hundred questions provided at the end of this book and the fill-in-the blank credit summaries will help you get started.

This book should be studied along with the LEED rating systems and the USGBC website. The LEED reference guides published by USGBC are also valuable; these are available for purchase from PPI at [www.ppi2pass.com/LEED](http://www.ppi2pass.com/LEED) or from USGBC at [www.usgbc.org](http://www.usgbc.org).

It's also important to study the other references listed in GBCI's *LEED AP Building Design and Construction Candidate Handbook*, which are listed here. All these documents are available

online; a list of current links to them is in the Candidate Handbook. They can also be found, along with links to further resources, at PPI's website at [www.ppi2pass.com/LEEDreferences](http://www.ppi2pass.com/LEEDreferences).

### References for Both Parts of the Exam

- *LEED Reference Guide for Green Building Design and Construction* (U.S. Green Building Council, 2008)
- *Sustainable Building Technical Manual: "Part II: Pre-Design Issues"* by Anthony Bernheim and William Reed (Public Technology, Inc. & U.S. Green Building Council, 1996). Although the rest of this book is not included in GBCI's list of primary references, the book as a whole is an excellent primer on green building approaches and technologies.
- *Guidance on Innovation & Design (ID) Credits* (U.S. Green Building Council, 2004)
- *Cost of Green Revisited: Reexamining the Feasibility and Cost Impact of Sustainable Design in the Light of Increased Market Adoption* (Davis Langdon, 2007)

### References for Part One of the Exam Only

- *The Treatment by LEED of the Environmental Impact of HVAC Refrigerants* (U.S. Green Building Council, LEED Technical and Scientific Advisory Committee, 2004)

### References for Part Two of the Exam Only

- *LEED Online Sample Credit Templates* (U.S. Green Building Council, 2009)

## Applying for the LEED AP Building Design and Construction Exam

The Candidate Handbook available from the GBCI website ([www.gbci.org](http://www.gbci.org)) explains the most current testing policies and procedures. Refer to this document for up-to-date information on policies, scheduling, and fees. Candidate Handbooks are valid for only one month and new handbooks will be released on the first business day of each month, so visit the GBCI website often to make sure that you are referring to the most current information.

To apply for the test, you must register at [www.gbci.org](http://www.gbci.org). The log-in screen on this website requests a USGBC user name and password, so visit [www.usgbc.org](http://www.usgbc.org) first to establish an account. Be sure to register with the exact name that appears on your identification (driver's license, passport, etc.). A non-refundable \$50 application fee must be paid with a credit or debit card. If your employer is a member of USGBC, you may be eligible for a discount; you will need your firm's Corporate Access ID number when you register to request the reduced rate. Students are eligible for special pricing as well, and must submit current transcripts to verify their enrollment status.

The application form requires documentation of eligibility and agreement by electronic signature to the disciplinary policy and credential maintenance requirements. Exam eligibility is documented with a letter from a supervisor, client, project manager, or teacher qualified to speak to your experience and involvement. This letter must be uploaded with the application.

Candidates requiring special provisions due to a documented disability, health impairment, or learning disability may make arrangements through GBCI for special accommodations, such as a reader, a scribe, or extended testing time. Plan to apply more than one month in advance of your desired test date if you need special accommodations. Check the appropriate box on the online exam application form and a GBCI representative will be in contact with you to assist you. Medical documentation is required; see the Candidate Handbook for a list of the required information and forms. All special arrangements must be confirmed with GBCI before scheduling the test with Prometric. (If the exam is scheduled first, alternative arrangements may be prohibited.)

You'll receive notice within seven days on whether your application is approved or not, or if more information is required. If it is denied, you must wait 90 days before reapplying. An approved application remains valid for one year; in that year, you have three chances to pass the test. If you allow your registration to expire, or do not pass the test in three attempts, you must wait 90 days to reapply.

If you are notified that your application is approved, you may then register for an exam through the GBCI website. You will receive an ID number that you can then use to schedule an exam appointment.

The exam is administered by computer at Prometric test sites. Prometric is a third-party testing agency with over 250 testing locations in the United States. Schedule your exam appointment, using your ID number, through the Prometric website at [www.prometric.com/GBCI](http://www.prometric.com/GBCI). You will need to provide payment information at this time, but if you take the exam within the United States you will not be charged until your exam appointment. (Outside the United States you will be charged when you schedule.) Take note of your confirmation number; you will need this information to make any changes to the exam date or time and to confirm your appointment.

All cancellations and rescheduling must be arranged directly with Prometric. See the Candidate Handbook for more information about rescheduling and cancellation policies, deadlines, and fees, for information on testing center hours of operation, test-day emergencies and other last-minute cancellations, and all other GBCI and Prometric policies.

## **Tips for Taking the LEED AP Building Design and Construction Exam**

Dress comfortably and allow plenty of time to get to the exam site to avoid transportation problems and delays. Candidates should plan to arrive at least 30 minutes before the exam is scheduled to begin to allow adequate time to find the testing center, check in with the proctors, and prepare to take the test. If you arrive after your appointment time, you will be considered absent and will forfeit the test fee.

Prior to entering the testing center, spend some time reviewing the information that was most difficult for you to remember. You will not be permitted to take anything into the testing room, so leave notes and books in the car. Small lockers are generally provided for personal belongings like keys or a cell phone. Use the restroom, get a drink of water, take a walk around the building—whatever will help you to relax and be comfortable—before you check in.

When you are ready to begin, register with the attendant. Remember to bring along multiple forms of photo ID and any paperwork you may have received from GBCI or Prometric. See the Candidate Handbook for a list of acceptable forms of identification; ID must include a photograph and a signature. You will be given scratch paper and pencils to use during the exam; you must surrender these when you exit the testing room. Calculators are not permitted.

After you are shown to your computer testing station and before the exam begins, a short tutorial will introduce you to the exam format and software. Completing the tutorial is a good way to warm up, and it may answer any questions you have about administrative procedures. If you have a moment before starting the tutorial, use it to take a sheet of scratch paper and write down some of the information you want to remember during the exam, while it is fresh in your mind.

You will have two hours to complete the 100 multiple-choice questions on the first part of the exam and an additional two hours to complete the 100 multiple-choice questions on the

second part of the exam. The two parts are separated by a short break (if you take both parts the same day). Questions and answer choices are shown on the computer screen, and the computer keeps track of which answers you choose. You can freely skip or revisit questions, mark questions for later review, and change your answers until the time limit is up. Problem statements will identify when you must select more than one option to correctly answer the question, and you will not be allowed to select more options than are required.

There are many possible strategies for taking timed multiple-choice exams, but the following approach proves successful for many examinees.

- Take the time to read each question carefully, making sure you understand it.
- Answer every question, because an unanswered question is counted as a wrong answer. If you are unsure of an answer, take a guess anyway and then mark the question so that you can review your answer if you have time later.
- You can mark any question—that is, flag it so you can find it again quickly—and this will not affect the question or exam in any other way. A summary screen will allow you to review which questions you have completed, which questions are unanswered, and which questions you have marked.
- Some questions may give insight into the answers of others, so you may be able to identify a few more correct answers once you have read through all the questions.
- As long as time permits, you can look at any question again by double-clicking on it, and you may change your answer if you choose to. Spend the last minute or two confirming that no question has been left unanswered. Once you have reviewed and answered each question to your satisfaction, click “Finish” on the summary screen (or allow time to run out). Do not click “Finish” until you are sure you are ready to end the test; it cannot be restarted.

There is a short (10 minute) exit survey that completes the exam experience. Remember to turn in any materials or scratch paper you may have used while taking the exam. Your exam results will be emailed to you.

If you pass only the first part of the exam, a LEED Green Associate certificate will be sent in the mail from GBCI in two to three months, along with information on Credentialing Maintenance Program fees and requirements and additional information about using your newly acquired LEED Green Associate credential on business cards and professional communications. If you take and pass both parts of the exam, a LEED AP certificate will be sent to you in the mail. If you pass only the second part of the exam, you will need to reregister, retake, and pass the first part (the LEED Green Associate exam) before you receive any LEED credential.

Examinees receiving failing scores may retake the exam. Candidates have three chances to pass within one year from the time that their application is approved, but the full examination fee must be paid each time. Candidates who do not pass will receive a score report that will identify performance on each section. If you do not pass, write down all the information that you can remember about the exam questions; this will be an excellent resource when you study for your next attempt. (Remember, however, that it is in violation of the GBCI disciplinary policy to share information about examination material with others.) It is best to retake the exam within two to four weeks, which will give you enough time for further review, but not so much that you are likely to forget what you have learned.

## Using GBCI and USGBC Logos and Trademarks

In order to present a consistent image and identity, GBCI and USGBC have created guidelines for the use of their logos and trademarks. The documents *GBCI Logo Guidelines* and *USGBC Logo Guidelines* contain detailed instructions, which should be followed by USGBC members and holders of LEED credentials. Current links to both of these documents can be found at [www.ppi2pass.com/LEEDreferences](http://www.ppi2pass.com/LEEDreferences). The following is a summary of the most important points.

### Logos

The GBCI logos include

- the GBCI logo
- the LEED AP logo
- the LEED Green Associate logo
- the LEED AP specialty logos

The USGBC logos include

- the USGBC logo
- the USGBC member logo
- the LEED logo
- the LEED for Homes logo
- LEED certification marks (Certified, Silver, Gold, and Platinum)
- the USGBC chapter logo
- the USGBC Education Provider Program (EPP) logo
- the Greenbuild logo

### Colors

With a few exceptions, a GBCI or USGBC logo may be printed in any of three ways.

- in its official color or combination of colors
  - gray: LEED AP, USGBC, USGBC chapter, USGBC member, LEED
  - gray and green: GBCI, LEED Green Associate, LEED for Homes
  - other: LEED AP specialty (color varies with specialty), EPP (two official colors: gray on a light background, or green on a dark background), Greenbuild (teal, green, and blue), LEED certification mark (any solid color)
- in black on a white or light background
- in white on a dark background

No other colors or combinations of colors may be used. The following cases are the exceptions.

- The LEED AP specialty logos may not be used in white on a dark background.
- The logo for LEED for Homes may be used in all gray but not in all black.
- The LEED certification mark may appear in any solid color and may be printed with certain effects to add the appearance of depth.

## Acceptable Uses

The *GBCI logo* and the *USGBC logo* should be used to refer to GBCI or USGBC, respectively, or its products. Each logo may be used to indicate GBCI or USGBC sponsorship, or to accompany text about the corresponding organization. Each logo may be used on a webpage as a link to the home page of GBCI or USGBC, respectively.

The *LEED AP logo*, the *LEED Green Associate logo*, and the *LEED AP specialty logos* should be used to indicate that an individual has achieved the corresponding LEED credential. The appropriate logo may be used on the individual's business and marketing materials. The logo may also be used to accompany text about the corresponding credential.

The *USGBC member logo* may be used by any USGBC member in good standing. It may be used on the member's stationery, business cards, brochures, and other business materials. It may be used on the member's website, and may be used as a link to the USGBC home page. It may be used on product packaging, as long as the terms and conditions described in *USGBC Logo Guidelines* are followed.

The *LEED logo* may be used to accompany text about the LEED program. On a webpage, it may be used as a link to the LEED home page.

The *LEED for Homes logo* may be used by a project seeking LEED for Homes certification. The project must have already received a preliminary rating by a LEED for Homes provider. The logo may be used in the project's on-site signage and its marketing and other materials. On a webpage, the logo may be used as a link to the LEED for Homes webpage.

*LEED certification marks* may be used to promote LEED-certified projects.

The *USGBC chapter logo* should always be used with the name of a USGBC chapter.

The *EPP logo* may be used by chapters and USGBC member organizations participating in the Education Provider Program. If used on a webpage, it may link to the EPP home page.

The *Greenbuild logo* may be used to promote the Greenbuild International Conference and Expo. If used on a webpage, it may link to the Greenbuild home page.

## Unacceptable Uses

Logos should only be taken directly from graphic files prepared by GBCI and USGBC, not copied from websites or publications. The entire logo must be used, not just part of it. The registration symbol ® or TM is part of each logo and should not be left off.

The appearance of the logos should be preserved. Logos should not

- be distorted, animated, or morphed
- be changed in color (other than the logo's authorized colors)
- be used as a watermark behind text
- have additional text wrapped around them
- be resized to less than 20% or more than 380% of their original print size
- be resized to less than 50 pixels high or more than 200 pixels high for web use (for the LEED AP logo, no less than 40 pixels or more than 100 pixels)

GBCI and USGBC logos and trademarks should only be used to refer to USGBC, GBCI, and their products. None should be used as a logo or as a part of a logo for a different organization or its products, or used on another organization's official documents except as described earlier under Acceptable Uses. Logos and trademarks should not be used to imply an endorsement

of any product or service. USGBC members and LEED Accredited Professionals should not use any GBCI or USGBC logo or trademark with anything that disparages either organization or presents either organization negatively.

The *LEED logo* should not be used on product packaging or in advertising. It should not be used to accompany a claim about a product's suitability for use in a LEED project, or to imply an endorsement.

The *LEED for Homes logo* is not a symbol that a person or organization is officially certified or authorized to work on LEED for Homes projects, and it should not be used in a way that could imply that this is its meaning. Once a LEED for Homes project is certified, it should no longer use the logo; the appropriate certification mark should be used instead.

No logo should be used on a website as a link to any page or website other than those described earlier under Acceptable Uses.

### **Authorization**

The use of all GBCI and USGBC logos must be authorized by the appropriate department, as indicated in *GBCI Logo Guidelines* and *USGBC Logo Guidelines*.

A notice of GBCI or USGBC ownership should appear with the logo. The text to be used depends on the particular logo and is given in the corresponding set of guidelines. For example, if the USGBC logo is used in a document, the notice should read "USGBC® and related logo is a trademark owned by the U.S. Green Building Council and is used by permission." This notice should appear at the bottom of a webpage or on the copyright page or at the end of a printed document.

### **Trademarks**

Refer to "the Green Building Certification Institute" the first time you refer to it in a piece of writing, and to "GBCI" on later references. Similarly, refer to "the U.S. Green Building Council" the first time you use it in a piece of writing, and to "USGBC" on later references. Don't use "the" before either abbreviation (except when using the abbreviation as an adjective, as in "the GBCI logo" or "the USGBC website").

You don't need to refer to LEED by its full name, "Leadership in Energy and Environmental Design," when you use it in a piece of writing for the first time. But you should follow it with the registered trademark symbol—"LEED®"—the first time you use it. In a long document with several sections, you should use the ® symbol after the first use of "LEED" within each section.

On passing the LEED Green Associate exam, you may use the phrase "LEED Green Associate" (not "LEED GA") on your business cards and signatures. On passing both parts of the LEED AP Building Design and Construction exam, you may use the phrase "LEED AP" or "LEED AP BD+C" on your business cards and signatures. You need not use the ® symbol after "LEED" in this context. In all other contexts, follow the guidelines in the previous paragraph.

See *GBCI Logo Guidelines* and *USGBC Logo Guidelines* for more detailed examples of acceptable and unacceptable usage of trademarks.