



Dear Friends,

On behalf of the Green Advantage Board of Directors, Advisory Board, Certification Boards, staff, interns, and volunteers, it is my pleasure to introduce the **2021 Green Advantage Annual Report**.

This report showcases how Green Advantage continues to add value through credentialing to all those who are engaged in the construction process. Despite the many challenges of the COVID-19 pandemic, there were many accomplishments during 2021 - Green Advantage:



- **Maintained "ANSI Accreditation" for the Green Advantage Certified Practitioner® (GACP®) and the "ANSI Accreditation" for Green Advantage Certified Associate® (GACA®).** Considered the "gold standard" for personnel credentialing, the American National Standards Institute (ANSI) renewed its accreditation of the GACP credential under the requirements defined in ANSI/ISO/IEC 17024: 2012. This internationally recognized, third-party accreditation considers Green Advantage as an organization and all dimensions of a given, specific credential.
- **Maintained "ANSI accreditation" for the Pre-construction Risk Assessment/Infection Control Risk Assessment Certificate (PCRA/ICRA) Program.** After another, separate, rigorous assessment, the American National Standards Institute (ANSI) became accredited to issue the PCRA/ICRA Certificate Program targeted to healthcare facility construction personnel under ASTM E2659-09. *The 12 hours of training required for those pursuing this credential is available via online, live webinar.*
- **Sustained ANSI approval to administer Green Advantage credential exams through online, remote proctoring.** *Green Advantage worked collaboratively with a contractor to develop the necessary systems to provide exams more conveniently and in safer environments to all exam candidates.*
- **Sustained marketing relationships with 7 USGBC Chapters.** *These agreements will help participating USGBC Chapters and Green Advantage advance their respective missions and improve their training and credentialing offerings to construction personnel.*

I encourage you to read this *report*, so you understand in greater detail the impressive strides Green Advantage has accomplished in the past year. We are committed to ensuring that Green Advantage credentialed personnel are prepared to use state-of-the-art means, methods, and materials, and best practices in the construction of every project they undertake. With Green Advantage credentials, we will make significant contributions that help move the design, construction, and facilities industry another step closer to achieving higher performance, healthier buildings where we live, work and play.

Wishing you a better future,

A handwritten signature in black ink, appearing to read "Dean Rodeheaver".

Dean Rodeheaver, Ph.D.  
Chair of the Board  
Green Advantage, Inc.

**GREEN ADVANTAGE<sup>®</sup>, INC.**  
**ANNUAL REPORT 2021**

**Organizational Description**

Green Advantage<sup>®</sup>, Inc. is a non-profit organization. As an independent, third-party credentialing body that is non-industry affiliated, it develops and utilizes internationally recognized green building standards to provide personnel credentialing opportunities to the construction sector.

**Vision**

Our vision is that the buildings and communities throughout the world are designed, constructed and utilized in a manner that supports environmental, social and economic sustainability.

**Mission**

The Green Advantage mission is to be an exemplary credentialing organization to construction personnel, nationally and internationally.

**Statement of Deliverables**

Green Advantage produces credentialing standards and assessments that promote the use of sustainable and disaster recovery-related construction practices and excellence to produce healthy, high performing, regenerative buildings, and communities.

## Background & Attributes

Building personnel play a pivotal role in creating and shaping the emerging green economy for this and future generations. Given the continued growth of green building, it is essential that the construction industry workforce becomes knowledgeable regarding relevant principles, current techniques, best practices, and materials employed in green building design and construction.

Moreover, this goal includes identifying and mitigating risks related to green building, *fortifying* public protection, *and fostering* cost containment while still ensuring quality, team building, improved coordination, and overall attainment of environmental and health and safety goals. Targeted to empower construction personnel, Green Advantage Certification and its Certificate Program offer construction practitioners an affordable opportunity to differentiate themselves within the workforce and to enhance their skills in the field of green building and disaster recovery.

Established with grant funding from the United States Environmental Protection Agency and supported by *additional grants* from The Nature Conservancy, *and the Ford Foundation*, Green Advantage was developed in collaboration with Science Applications International Corporation (SAIC), and the University of Florida.

Green Advantage® attributes include:

- A. Internationally recognized.** Green Advantage Certifications are recognized by the US Green Building Council, the Green Business Certification, Inc., the Veterans Administration, National Association of Home Builders, Associated Builders and Contractors, Finishing Trades International and others.
- B. Construction field focused.** Green Advantage credentials are created specifically for construction personnel - contractors, subcontractors, project supervisors, trades people, project architects and engineers, facility managers, and code officials. The two certifications verify knowledge of best practices, techniques, approaches, and materials – the ‘how and what’ – needed to improve the green construction process and desired results as well as the rationale – the ‘why’ - of green building. *The PCRA/ICRA Certificate Program* assists construction personnel in meeting the intent and compliance requirements of *The Joint Commission* standard related to PCRA activity in health care facilities.
- C. Green Builder Certification options.** Green Advantage offers two foundational construction personnel certifications that have been developed for use in the United States and Canada.

- **Green Advantage Certified Associate® (GACA®):** The GACA Exam focuses on basic construction field principles, means, and methods that help ensure successful green building projects. Candidates for GACA certification are responsible for understanding the application of 300+ green building best practices. The exam emphasizes meeting and exceeding green project goals related to building performance, worker and occupant health and safety, crew collaboration, and costs.

The GACA designation is valuable for tradespeople who wish to demonstrate their capability in green construction. The target audience for the GACA Exam also includes apprentices, construction students, and entry-level construction workers.

- **Green Advantage Certified Practitioner® (GACP®):** The GACP Exam focuses on green building field principles, means, and methods that help ensure successful green building projects and reduce risks associated with green building. Candidates for GACP certification are responsible for understanding the application of 800+

green building best practices. The exam emphasizes meeting and exceeding green project goals related to building performance, worker and occupant health and safety, crew collaboration, and costs.

The GACP designation is valuable for construction supervisory personnel who wish to demonstrate their capability in green construction. The target audience for the GACP Exam also includes architects, engineers, code officials, and advanced students.

**Applicable to multiple green building systems.** Green Advantage Certification requires general understanding of green building rating systems, standards, and codes including LEED, Green Globes, NAHB Green Building Certification, Passive House, Living Building Challenge, IgCC and ASHRAE 189.1. A LEED Innovation Credit is awarded to eligible projects that utilize a sufficient percentage of Green Advantage certified personnel.

**Evidence-based.** The favorable environmental, health, and crew collaboration effects of the use of Green Advantage personnel on projects were confirmed in research piloted by the University of Florida.

- D. PCRA Certificate Program.** This credential is designed to ensure that personnel who demolish, deconstruct, renovate, or construct healthcare facilities are better prepared to comply with guidelines for pre-construction risk assessment that are issued by The Joint Commission. The Joint Commission accredits hospitals and other healthcare organizations throughout the United States.

In the Joint Commission's "Environment of Care News" publication for November and December 2019, 5 authors called for all construction personnel participating in pre-construction, maintenance, and construction activities on healthcare facilities to demonstrate their competence by possessing a PCRA/ICRA, ANSI/ASTM-accredited credential.

Green Advantage is pleased to offer the only PCRA/ICRA, ANSI/ASTM-accredited credential available.

- E. Sample Specifications.** Specification options are available to guide the effective use of Green Advantage Certified personnel. Both are LEED Innovation Credit compliant for eligible projects. Sample specification language is also available for the use of PCRA/ICRA credentialed construction personnel.
- F. Committed to empowerment of minorities.** Green Advantage strives to advance user accessibility and engagement with construction workers from ethnic and racial minority groups.
- G. Updated regularly; group or individual exam administration.** The Green Advantage Compendium (the standard upon which Green Advantage Certification Exams are based) is updated regularly in order to reflect the rapid changes in green building and curtainwall installation. Depending upon COVID-19 precautions, exams can be administered and proctored by Green Advantage in group settings or individually administered through remote, online proctoring throughout the US, Canada and other *select* countries.

## 2021 Governing Board

The Green Advantage Board of Directors defines the organization's strategic plan, budget, and certification activities. It appoints the Advisory Board, Certification Boards, and the Chief Executive

Officer. It ensures objectivity and impartiality and manages conflict of interest throughout the organization. Board members\* include:

Dean Rodeheaver, Chair  
James Mayer, Vice Chair  
Tina Dortch, Secretary  
Barbara Englehart, Treasurer  
Lorna Bravo  
Grady O'Rear, President/CEO

\*For biographical information see the [“People”](#) section of the Green Advantage website.

### **2021 Advisory Board**

The Advisory Board\* provides expert organizational guidance to Green Advantage. Four Advisory Board members served in this capacity in 2021.

Denis Hayes  
Amory Lovins  
Susan Maxman  
Mona Sahlin

\*For biographical information see the [“People”](#) section of the Green Advantage website.

### **2021 International Green Builder Certification Board**

The International Green Builder Certification Board is responsible for ensuring the integrity, impartiality, and fairness of the standards documented in the Compendium, from which green builder certification exams are drawn. This Board also approves certification requisites and exam specifications appropriate for the Green Advantage Certified Associate (GACA) and the Green Advantage Certified Practitioner (GACP). Board members\* during 2021 include:

James Scott Brew  
Daniel Castro-Lacouture  
Alicia Cuervo  
Lance Davis  
Richard Dooley  
David Eisenberg  
Ray Felix  
Shannan Garretson  
Bruce Hammond  
Alexander (Alec) H. Hay  
Rob Holsten  
Werner Jager (ex-officio)  
Scott Kelting  
Jim Kerr  
Ed Lewis  
David Matiella  
Dave Metzger  
Chuck Miccolis

Marshall Mulloy  
Svetlana Olbina  
Georg Reichard  
Keith Robinson  
Chris Rotenberry  
Kevin Stack  
James Sullivan  
Maruja Torres-Antonini  
Jim Touey (ex-officio)  
Darryl Williford

\*For biographical information see the "People" section of the Green Advantage website.

### 2021 Pre-Construction Risk Assessment/Infection Control Risk Assessment (PCRA/ICRA) Subject Matter Experts

Pre-Construction Risk Assessment Subject Matter Experts oversee the quality of certificate standards that form the basis for Green Advantage Pre-construction Risk Assessment/Infection Control Risk Assessment (PCRA/ICRA) Certificate Program for healthcare construction personnel. The purpose of the Certificate Program is to familiarize construction personnel across trades, regardless of whether serving in a supervisory or non-supervisory capacity, with foundational principles and best practices that promote understanding about successful delivery of PCRA/ICRA related activity. Subject Matter Expert participation helps ensure the relevance, integrity, impartiality, and fairness of the Certificate Program. Members\* of this body include:

James A. Antonnuci  
Cathryn Balestrieri  
Daniel Castro-Lacouture  
Michael Compton  
Sam Figuero  
Mike Gonzalez  
Kenneth Haber  
Andrew Joca  
Ed Lewis  
Joe MacInness  
Svetlana Olbina  
Tyler White

\*For biographical information see the "People" section of the Green Advantage website.

### 2021 Accomplishments

Below are some of the highlights of the many achievements made possible through the efforts of the Green Advantage Governing Board, Advisory Board, Certification Board, Subject Matter Experts, and other volunteers, staff, and, of course, Green Advantage credentialed personnel:

**Maintained ANSI Accreditation for Green Advantage Certified Practitioner (GACP) and Green Advantage Certified Associate (GACA)**

In 2021 the American National Standards Institute Personnel Certification Accreditation Committee granted Green Advantage continued accreditation under ISO/IEC 17024:2012 for the Green Advantage Certified Practitioner (GACP) and the Green Advantage Certified Associate (GACA). Both Certifications are designed for relevance in the US and Canada.

Considered the “gold standard” for personnel certifications in the industry, ANSI Accreditation requires Green Advantage management, financial, and certification processes to be thoroughly reviewed and approved against rigorous ANSI standards by ANSI auditors.

ANSI is the U.S. representative of the International Organization for Standardization (ISO). The ISO is a worldwide federation of national standards bodies from more than 145 countries, one from each country. Its mission is to promote the development of standardization and related activities in the world with a view to facilitating the international exchange of goods and services, and to developing cooperation in the spheres of intellectual, scientific, technological, and economic activity. ISO's work results in international agreements that are published as International Standards and other types of ISO documents.

ANSI accreditation is recognized nationally and internationally and has become the hallmark of a quality certification program.

### **Maintained ANSI Accreditation for the Pre-construction Risk Assessment/Infection Control Risk Assessment Certificate (PCRA/ICRA) Program**

After another, separate, rigorous assessment, by the American National Standards Institute (ANSI) Green Advantage maintained authority to issue the PCRA/ICRA Certificate under ASTM E2659-09 in 2021.

This credential is designed to ensure that personnel who demolish, deconstruct, renovate, construct, or maintain healthcare facilities are better prepared to comply with guidelines for pre-construction risk assessment and infection control risk assessment that are issued by The Joint Commission. The Joint Commission accredits hospitals and other healthcare organizations throughout the United States.

The PCRA/ICRA Certificate Program was developed to help construction workers become familiar with the means, methods, materials, and best practices associated with health care facility risk assessment and basic infection control. To mitigate Healthcare Associated Infections (HAIs) and other potential risks, for licensing purposes, healthcare facilities are required to have a Pre-construction Risk Assessment (PCRA) process established. The PCRA is used for any planned or unplanned demolition, construction or renovation. It is a formal protocol used to identify these potential risks and create mitigation strategies to reduce or eliminate them. PCRA is the umbrella term that includes ICRA as well as mitigation of noise, odors, vibration, waste, and other risks in the healthcare environment.

The training and assessment are based on learning objectives, assessments and protocols developed and approved by a distinguished panel of subject matter experts from health care environmental health and safety, academia, construction education and training, and experienced PCRA/ICRA construction supervisory personnel. The 12-hour training is followed by an exam. Those attending the training and passing the exam are awarded the PCRA/ICRA Certificate.

## ***Sustained ANSI approval to administer Green Advantage credential exams through online, remote proctoring.***

Green Advantage worked collaboratively with a contractor to develop the necessary systems to provide exams more conveniently and in safer environments to all exam candidates. The online proctoring system permits examinees to take the exam as long as they have adequate WiFi connectivity and access to a quiet space. Proctoring is one-to-one, proctor-to-examinee, with Artificial Intelligence features that help ensure exam security and prevent cheating.

## ***Sustained marketing relationships with 7 USGBC Chapters.***

These agreements will help participating USGBC Chapters and Green Advantage advance their respective missions and improve their training and credentialing offerings to construction personnel. Participating Chapters are: Green Building United, Illinois Green Alliance, Long Island, Los Angeles, New Hampshire, San Diego, and Texas.

## **Administered Over 14,000 Exams**

During 2021 the cumulative number of Green Advantage exams administered since the organization's inception exceeded 14,000.

## **Commitment to the Triple Bottom Line**

### **Achievements in reducing Environmental, Social, & Economic Impacts of Green Advantage as an Organization 2021**

- Reduced vehicular & air miles
  - Meetings of all Boards and management occurred via teleconference
  - *Internal meetings and communications via phone or teleconference*
  - *Customer relations via phone or teleconference*
  - *All training via live webinars, rather than in-person training*
  - *All presentations via webinar*
- 2021 use of electronic communications, striving for "paperless" offices
  - Established electronic dashboard for those interested in or currently credentialed
  - Created online registration and payment system
  - Reduced "hard" mailings through electronic mailings of Study Guide and credential awards
  - When printing needed, used double sided copying
- Products/services purchases from companies that are local and/or independently certified by Green Seal, FSC, Fair Trade, Equal Exchange, B Corporation, USDA Organic Certification, Oregon Tilth Certified Organic, or other high-quality certifications
  - Purchased and used high recycled content paper (50%-100% recycled)
  - When applicable, prioritized purchasing organic plant food; used recyclable plates and utensils; provided organic food for reception
- Emphasis on diversity in hiring, board appointments, volunteer placements, outreach to exam candidate sectors;
  - Governing Board, 29% female, 29% racial/ethnic minority



- International Green Builder Certification Board, 15% female, 19% racial/ethnic minority
- PCRA/ICRA Subject Matter Experts, 23% female, 23% racial/ethnic minority
- Creation of corporate environment that is highly flexible; supportive of family and community life
  - Virtual office permits much of the work to be done at home
  - Flexible hours

