## **Agenda**

#### Presented by Daniel A. Huard

#### The High-Performance Building Envelope as Part of a Whole-Building System

Defining the building envelope and identifying its functions Functions of the high-performing building envelope

Setting performance goals

Metrics for measuring performance

#### Relationship between Envelope Performance, **Building Codes and Energy Efficiency**

Building code requirements

Energy code requirements

Energy efficiency and carbon reduction goals

Materials and operation

Energy modeling

#### **Foundations and Floors**

Designing the foundation

Below-grade habitable space

Waterproofing and water management

Air barriers and insulation

#### Walls Systems

Framing and insulation

Exterior cladding

Vapor and moisture control

Thermal bridging

Connections and penetrations

#### **Roofing Systems**

Evaluating roof styles

Insulation

Vapor and moisture control

Roofing materials

Cool roofs

#### **Doors and Windows**

Entry doors

Overhead doors

Windows

Skylights

**Commissioning and Case Studies** 

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**Construction** mber 4, 2023 December Commercial and

HalfMoon Education Inc. PO Box 278 Altoona, WI 54720-0278

# **High-Performance C Building Envelope D**Live, Interactive Webinar -Ď

## **Learning Objectives**

#### You'll be able to:

**Set** performance goals and define metrics for measuring building envelope performance.

**Review** energy-efficiency requirements in the International Building Code and the International Energy Conservation Code.

**Discuss** strategies for improving the energy efficiency of foundations and floors.

**Explore** energy-efficient framing, insulation options and vapor and moisture control.

**Review** high-performance options for doors, windows and skylights.

**Examine** the commissioning process and review case studies.



#### **HalfMoon Education Live Webinars**

# **High-Performance Commercial Building Envelope Design and** Construction

Live, Interactive Webinar - Monday, December 4, 2023



**Define** high-performance building envelopes

**Comply** with building code and energy code requirements

**Discuss** high-performance options for foundations and floors

**Design** and construct efficient wall and roofing systems

**Explore** energy-efficient doors and windows

**Discuss** the commissioning process and review case studies

#### **Continuing Education Credits**

**Professional Engineers** 6.5 PDHs

**Architects** 

6.5 HSW CE Hours 6.5 AIA LU|HSW

International Code Council .65 CEUs (Building)







## **Webinar Information**

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**Break** 

8:30 - 9:00 am CST 11:00 - 11:30 am CST 1:30 - 2:00 pm CST

**First Session** 

**Afternoon Session** 9:00 - 11:00 am CST 11:30 - 1:30 pm CST **Afternoon Session** 

2:00 - 4:30 pm CST

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#### **Daniel A. Huard**

Co-Founder and Principal of Humann Building Solutions, LLC in Las Vegas, NV Mr. Huard received a Mechanical Engineering degree from Niagara College and Bachelor and Master of Architecture and Master of Urban Planning degrees from SUNY at Buffalo. He holds multiple professional accreditations including LEED AP O+M as well as LEED AP BD+C from Green Business Certification Inc. He was elevated to LEED Fellow in 2017 and is a WELL Faculty member. Mr. Huard's professional expertise has contributed to numerous domestic and international high performance building, sustainable and restorative development projects. He has participated in international events including Greenbuild, WaterBuild, Global Health & Wellness Summit, Living Future unConference, WaterSmart Innovations, Advanced Energy Conference, Energy Management Congress, CAPAC and G2E to name a few. Humann Building Solutions focuses on all aspects of green building and development globally including professional program and project management, construction management, and green building consulting, ASHRAE-ANSI accredited commissioning provision, WELL health-safety rating in addition to building certifications, operational optimization, project validation, investmentgrade auditing, net zero and net positive systems designs and implementations.

## **Credit Information**

This webinar is open to the public and is designed to qualify for 6.5 PDHs for professional engineers and 6.5 HSW continuing education hours for licensed architects in all states that allow this learning method. Please refer to specific state rules to determine eligibility.

HalfMoon Education is an approved continuing education sponsor for engineers in Florida (Provider No. 0004647), Indiana (License No. CE21700059), Maryland, New Jersey (Approval No. 24GP00000700) and North Carolina (S-0130). HalfMoon Education is deemed an approved continuing education sponsor for New York engineers and architects via its registration with the American Institute of Architects Continuing Education System (Regulations of the Commissioner §68.14(i)(2) and §69.6(i)(2)). Other states do not preapprove continuing education providers or courses.

The American Institute of Architects Continuing Education System has approved this course for 6.5 HSW LUs (Sponsor No. 1885). Only full participation is reportable to the AIA/CES.

The International Code Council has approved this event for .65 CEUs in the specialty area of Building (Preferred Provider No. 1232).

Attendance will be monitored, and attendance certificates will be available after the webinar for those who attend the entire course and score a minimum 80% on the guiz that follows the course (multiple attempts allowed).

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- Monday, October 30, 2023 | 9:00 am - 4:00 pm CDT

Fireplaces, Stoves, Flues and Chimneys

- Friday, October 27, 2023 | 8:30 am - 4:00 pm CDT

**Understanding NSPE Engineering Code of Ethics** 

- Friday, October 27, 2023 | 11:00 am - 12:00 pm CDT

**Complying with Residential Provisions of the** 

**International Energy Conservation Code 2021** 

- Monday, October 30, 2023 | 8:30 am - 4:30 pm CDT

**Additional Learning** 

#### **Energy Modeling for Multi-Family and Commercial Buildings**

**Whole Building Commissioning to Achieve Performance Goals** 

- Tuesday, October 31, 2023 | 9:00 am - 4:00 pm CDT

#### **Residential Provisions of the International** Swimming Pool and Spa Code 2021

- Thursday, November 2, 2023 | 9:00 am - 4:30 pm CDT

#### **Construction and Demolition Waste Management**

- Friday, November 3, 2023 | 10:00 am - 12:00 pm CDT

#### **Commercial and High-End Residential Deck Design and Construction**

- Tuesday, November 7, 2023 | 9:00 am - 4:00 pm CST

#### **Horticulture and Green Space Design for Construction Sites**

- Wednesday, November 8, 2023 | 9:00 am - 4:00 pm CST

#### **Masonry Veneer Design and Construction**

- Thursday, November 9, 2023 | 8:30 am - 4:00 pm CST

#### Air-Source Heat Pumps for **Residential and Small Commercial Buildings**

- Tuesday, November 14, 2023 | 9:00 am - 4:50 pm CST

#### **Managing Engineering Liability and Risk**

- Wednesday, November 15, 2023 | 8:30 am - 4:30 pm CST

#### **Solar Site Assessments**

- Tuesday, November 28, 2023 | 1:00 - 3:00 pm CST

#### **Handling Ethical Issues in Construction**

- Thursday, November 30, 2023 | 2:00 - 4:00 pm CST

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