



# *2020 BIA Courses*

**March 11, 2019**

Brick Industry Association  
12007 Sunrise Valley Dr., Suite 430  
Reston, Virginia 20191

## **Pre-approved Programs**

The following presentations are pre-registered and approved with AIA/CES and provide one Learning Unit of credit each. All meet the health, safety, welfare (HSW) requirements of AIA/CES with one exception.

For more information about these BIA programs, please contact Lisa Cyphers at (703)674-1541 or [lcyphers@bia.org](mailto:lcyphers@bia.org). The program title and program number (alpha/numeric number in parentheses) are given below along with a brief description of the contents of the program.

**Boosting Energy Performance in Brick Walls (MNREEBA)** – We start with a look at the basics of heat gain/loss, thermal bridging and condensation. Using these concepts we examine the various methods for boosting energy efficiency in brick walls with an eye to different types of insulation, air barriers, passive solar, and thermal mass. Finally, we review the building codes and standards and touch on energy modeling.

**\* 1 LU | HSW Credit**

Basic

Intermediate

Advanced

**Brick Masonry for School Construction (MNRSCLB)** – You design schools all the time. What benefits do brick bring to a school project? The presentation includes information about why the building envelope is a key characteristic of how the school is accepted by the community. Various brick masonry wall systems are described and what works best for schools. Common wall selection materials are covered and how brick fits within those project requirements. High performance school requirements are covered as well.

**\* 1 LU | HSW Credit**

Basic

Intermediate

Advanced

**Brick Masonry Rain Screen Walls (MNRRSWB)** – Rain screen walls are a more sophisticated wall system that deals with moisture intrusion better than other types of wall systems. This talk covers the basics of rain screen walls and when they are used. Details of the system including the all-important air barrier are included. Other recommendations on vent spacing and compartmentation are given.

**\* 1 LU | HSW Credit**

Basic

Intermediate

Advanced

**Brick Paving Systems (BIA012B)** – Various brick paving systems are more appropriate to certain applications—patios, sidewalks, and other pedestrian venues are very different from requirements for vehicular routes. You’ll learn basic information about ASTM paver standards, base design, setting beds, edge restraints, bond patterns, and installation.

**\* 1 LU | HSW Credit**

Basic

Intermediate

Advanced

**Brick Veneer / Steel Stud Walls (BIA024B)** – These cost-effective wall systems have come a long way since they first appeared in the 1960s. You’ll learn to properly design and detail brick veneer/steel stud walls, including material specifications, wall ties, and insulation. You’ll also learn more about typical brick detailing issues, such as flashing and expansion joints.

**\* 1 LU | HSW Credit**

Basic

Intermediate

Advanced

**Brickwork Aesthetics (BIA090B)** – Arches, corbelling, quoins, bands—how do you achieve all these details with brick? We'll show you how and also tell you ways to accomplish many design features using interesting brick shapes. We end with a special look at brick sculpture and some award-winning buildings that incorporate interesting, new ideas using brick. \* 1 LU | HSW Credit

Basic

Intermediate

Advanced

**Causes and Prevention of Efflorescence (MNREFFC)** – Efflorescence, that white powdery substance that often appears on brick walls, can be controlled and eliminated. Specific areas included in this presentation are: identifying materials that are likely and less than likely to contribute to efflorescence; assessing the impact of details and construction methods on efflorescence potential during project design; assessing the contribution of non-construction conditions affecting efflorescence development; and suggested procedures for removing and preventing the recurrence of efflorescence. \* 1 LU | HSW Credit

Basic

Intermediate

Advanced

**Cavity Wall Design and Construction (MNRCV)** – We cover the proper design of these long-lasting brick-and-block assemblies, with emphasis on water resistance and crack control. This talk also covers a short history of cavity walls and properties of cavity walls including fire resistance, thermal design, and wall tie requirements. Since workmanship issues have such an impact on performance we discuss materials and installation procedures that promote proper performance. \* 1 LU | HSW Credit

Basic

Intermediate

Advanced

**Combinations of Materials (BIA095B)** – These days, most buildings include multiple exterior materials – brick, steel, glass, stone – and systems, such as curtain walls and EIFS. Participants will learn how brick performs with other building materials and how to combine them without creating problems. Brick and mortar, steel, block and stone combinations will be discussed. \* 1 LU | HSW Credit

Basic

Intermediate

Advanced

**Inspection of Brickwork: New Construction (MNRIBCA)** – You probably don't get out in the field as often as you'd like. This program helps you streamline field visits, telling you what to look for when inspecting new brickwork. Highlights include building codes, material and structural requirements, workmanship, and proper installation. \* 1 LU | HSW Credit

Basic

Intermediate

Advanced

**Loadbearing Brick Masonry (MNRLBMA)** – Brick is one of the strongest of the masonry materials, but is used more for veneers than for loadbearing applications. This seminar covers how brick masonry can be used as a loadbearing element including a discussion of hollow brick units which make this type of construction viable. Various applications of loadbearing masonry are shown. Code requirements and design resources are provided that will help you incorporate loadbearing brick construction on your next project. \* 1 LU | HSW Credit

Basic

Intermediate

Advanced

**Understanding Masonry Materials (MNRMATA)** – A brick wall is the sum of its many parts. This talk covers the properties of brick, mortar, grout, ties, flashing and other components. You’ll learn about manufacturing, ASTM standards, and, most important, how to properly specify masonry materials.

\* 1 LU | HSW Credit

- Basic                                       Intermediate                                       Advanced

**Mortar: Materials, Specifying, and Quality Assurance (BIA105B)** – ASTM C 270 is where it’s at when it comes to mortar. You’ll learn how to properly specify mortar and how C 270 helps you achieve good results in the field. An in-depth review of materials used in mortar and how these affect performance is provided. We’ll also cover quality assurance, quality control for mortar, and what ASTM C 780 is really for.

\* 1 LU | HSW Credit

- Basic                                       Intermediate                                       Advanced

**Movement Joints (MNRMJ1)** – We identify various types of cracks that occur in masonry and how to avoid them. Material properties that affect movement are explained and how and why movement joints used to accommodate these movements. Optimal sizing and spacing of expansion joints are explained. This is good, basic information that every designer should know. The participant will be able to successfully design movement joints into buildings after this seminar.

\* 1 LU | HSW Credit

- Basic                                       Intermediate                                       Advanced

**Proper Brick Masonry Detailing (BIA107B)** – Methods for keeping water out of the wall assembly is top priority in this talk. We’ll also discuss movement (expansion joints), how to add accent materials to a masonry wall, and special details such as corbelling and curved brick walls.

\* 1 LU | HSW Credit

- Basic                                       Intermediate                                       Advanced

**Brick Masonry Restoration (MNRRESB)** – Brick buildings are known for their longevity, but poor maintenance, weathering, and neglect can lead to problems. This seminar covers the various types of construction and materials used in older brick buildings and the most practical methods for restoration, including repointing, replacing brick, and repairing moisture damage. Learn how to properly take care of old buildings by specifying the proper techniques.

\* 1 LU | HSW Credit

- Basic                                       Intermediate                                       Advanced

**Thin Brick Veneer: Design and Construction (MNRTBVA)** – Thin brick wall systems are evolving and may or may not be appropriate for various project types. Hear the pros and cons of this wall system along with recommended applications. If this system is deemed appropriate, basic design and construction requirements are covered including building code requirements, ASTM standards, and typical installation methods. Case studies of various projects are shown which use this wall system.

\* 1 LU | HSW Credit

- Basic                                       Intermediate                                       Advanced