**Course Name:** Morningside Crossings Case Study: Passive House in a Large-Scale Retrofit

**Provided By:** AIA Pittsburgh

**Course Date:** 04/12/2018

**About:**

This class will be a case study of Morningside Crossings, a project that was born from the needs and interests of the neighborhood and one that pushes the envelope for sustainability in a low-income housing tax credit (LIHTC) project. The case study looks at a broad spectrum of issues, including wellness, integration into the community, innovative stormwater management, air quality monitoring, and energy efficiency. Morningside Crossings is a 46-unit affordable senior housing project that is the adaptive reuse of a school, as well as a new addition that is located over on-site parking. A Neighborhood Community Center will be located on the commercial end of the site in an addition from the 1940s and includes a plaza that will be used by the Center, the residents of the building, and the neighbors as well.

Morningside Crossings is the second large-scale multi-family retrofit in the country built to Passive House standards and is a unique demonstration of three approaches to Passive House detailing and construction. The project utilizes three different wall sections in the Community Center, the new construction addition, and the retrofit of the school. It also will capture 100% of its stormwater on site and monitor the indoor air-quality in contrast to the outdoor air.

The case study will begin with a five-minute refresher of the fundamentals of Passive House standards and will include a discussion on construction detailing in three different wall sections, the challenges of blower-door testing, and the construction schedule. Presenters also will address the influence of Passive House standards on the budget and its effect on indoor air quality, in addition to some of the particular challenges of the project.

An intermediate to advanced level of information will be presented; therefore, a preliminary understanding of Passive House is advised.

**Learning Objectives:**

1. Explain Passive House standards in a retrofit from the 1890s and recognize the challenges during construction from the view of both the contractor and the architectural team.
2. Recognize the financial costs of Passive House.
3. Identify the performance targets for meeting Passive House.
4. Understand the construction detailing required in order to achieve Passive House standards in a retrofit.

**URL:** <http://aiapgh.org/aia-programs-events/build-pittsburgh/presenters-programming-2018/>

**LEED Specific:** No

**GBCI CEUs:** 1.5

**AIA LU/HSW Hours:** 1.5