

# McDonogh School Campus Green Project

Owings Mills, MD



## Project Information:

**Delivery Method - Design-Bid-Build**

**Operational Date - September 2012**

**Occupancy - K-12 Boarding School**

**Size - 68,000 SF**

**Cost - \$16,000,000**

## Primary Project Team:

**Owner - McDonogh School**

**Architect - Bowie Gridley Architects**

**Civil Engineer - Matis Warfield**

**MEP Engineer - James Posey Associates, Inc**

**Structural Engineer - Linton Engineers, LLC**

## Lighting:

Each space will be tailored with its own unique lighting. Large “breath-taking” suspended fixtures combined with daylight will provide the perfect proportions of light to accommodate dining halls. Conference rooms will be well equipped with an array of lighting fixtures for different control configurations. Offices will receive recessed fixtures and the lecture hall will be furnished with dimmable house lights and regular stage lighting.

## Electrical Systems:

Both 480V-3 phase and 120V-1 phase services will be used to energize the building. An emergency generator will serve multiple buildings including the St. John Student Center in order to prevent power loss. Certain lighting fixtures and the smoke exhaust system will remain active should power loss occur.

## Mechanical System:

The St. Johns Student Center will have an HVAC system primarily comprised of multizone and single-zone Variable Air Volume (VAV) air handling units with chilled water cooling coils and hot water heating coils. There will be 5 single zone VAV air handling units, 2 multizone VAV units, and 1 Constant Volume air handling unit for a total of 8 units. These units will receive chilled and heating water from a new central plant. A tremendous amount of thought has gone into the location of the units due to architectural concerns.

## Structural System:

The overall structural system is an all concrete building with self supporting 2-way slabs. Concrete beams and columns are used in order to support the longer spans. In an effort to decrease the size of the concrete beams, supplemental steel was implemented. Custom made, prefabricated light gauge steel trusses top the building in order to support the roofs and attic spaces.

## Architecture:

The student center is to become the hub of McDonogh campus. It will be tailored with a 3 story lobby/atrium that will require smoke exhaust, chimneys will be used for building exhaust and the beautiful copula will allow for air intake thus hiding all mechanical equipment. The dining room interior is to be architecturally classic, having high ceilings and large windows, maximizing the amount of light being able to enter.



**Zachary M. Haupt**

**Mechanical**