

Charles E. Smith Center Renovation

Washington, DC

Project Team

Owner:

The George Washington University

Architect: Gensler

Structural:

Spiegel Zamecnick & Shah Inc

MEP:

Summer Consultants, Inc

Fire Protection:

The Protection Engineering Group

Civil:

Christopher Consultants

Building Information

Size: 104,280 SF

Stories:

3 Stories with a Basement

Total Cost: \$43 M

Schedule: Fall 2008 to Fall 2010

Project Delivery:

Design, Bid, Build

Paul Hallowell

Architectural

This newly renovated arena was designed to maximize efficiency as well as space for improved aesthetics and circulation. There is also a brand new facade being placed on the street facing portion of the building which will be covered in a glass paneling system so that they can project profiles of images to the passerby's of the street.

Mechanical

The facility is equipped with 2 cooling towers and 12 AHU's in order to satisfy the requirements of containing an arena, natatorium, fitness center, and offices. Hot water is used for the heating aspect of the arena. Some of the more intensive rooms such as the fitness rooms and arena have also incorporated desiccant wheel systems in order to dehumidify these spaces.

Structural

The arena is supported with a 5" thick reinforced concrete slab foundation and floors 1 through 3 mostly supported with 8" posttensioned concrete slabs and 3 1/2" concrete on metal decking supported by structural steel framing. The roof of the arena is supported by precast concrete tees that run into concrete girders and columns.

Lighting

Throughout the building in most of the spaces excluding the gymnasium and natatorium, they have incorporated the use of fluorescent lights and LEDs to keep energy costs down while maximizing efficiency. In the main spaces of the gymnasium and the natatorium they used metal halide lamps to illuminate the large spaces.

Mechanical Option