ASHA National Office

Rockville, MD

Ryan Dalrymple

Structures Option







Architecture

The ASHA National Office building was designed with the employees in mind. There is a generous amount of workspace for the workers and the meeting rooms are very flexible. The meeting rooms have adjustable partitions and movable furniture so that they can be altered to accommodate any type of meeting or event that is held. On the first floor of the office building there is a kitchen, café and gym for the employees to use throughout the work day.

Structural System

Two floors of parking make up the substructure of the ASHA National Office. The parking structure is composed of a two way flat slab concrete system that is comprised of a 9" thick slab and 5 1/2" thick drop panels. The steel framing for the five story office tower consists of steel columns and beams with a composite concrete floor slab on metal deck. The composite slab consists of 3 1/2" normal weight concrete on top of 2" deep metal deck.

Mechanical System

The mechanical system is powered by two 200 ton chillers with variable frequency drives. These are located in the chiller room on level B2. There is a variable air volume air handler on each floor of the building. Series fan-powered variable air volume terminal units provide air to all occupied spaces. The terminal units on the perimeter of the building have heating coils to provide heat to those spaces.

Lighting/Electrical System

The electrical system used to power the AHA National Office Building is a 277/480 Volt 3-Phase 4-Wire conduit system. A 300 kW diesel-fueled emergency generator is located outside. Interior lighting is mostly fluorescent type lighting fixtures. The lighting in the parking garage is provided by HID fixtures.

http://www.engr.psu.edu/ae/thesis/portfolios/2011/rkd5002