

Residence Inn by Marriott

2345 Mill Rd., Alexandria, VA 22314



Project Overview

- Owner: Miller Global Properties
- Occupant: Marriott Hotels
- CM: Balfour Beatty Construction
- Civil: Christopher Consultants
- Function Type: 181 room Hotel
- Size: 169,206 sf, w/ underground parking
125,548 sf, residential hotel rooms
- Total Levels: 15 stories above grade, with 3 below grade of underground parking
- Project Delivery Method: Design-Bid-Build for Architecture / Structural, Civil
Design-Build for MEP systems.
- Project Cost: \$33.5 Million

Architecture – Davis, Carter, Scott Design

- Exercise room and spa on the second floor.
- The exterior of the building was designed to emphasize horizontal lines with an off-set top edge with “punch-out” windows.
- The curtain wall system spans the total height on the southeast corner over the lobby.
- Entrance is designed to add aesthetic appeal while mimicking the building across the street to create a “column of light” when the afternoon sun hits both buildings.
- 20 LEED points required by City of Alexandria, and emphasizing the top, middle, and bottom of the façade.

Structural – SKA & Associates

- 3ft. reinforced Mat slab with a “false slab” underneath to aid in water proofing.
- 7.5 inch Post-tensioned Concrete floors
- Façade is brick panels with precast concrete panels and CMU back-up
- Typical Column Size: Cast in place concrete 18x30 moving to 14x30, spaced at 19ft N-S and approx. 15ft E-W with 12x18 concrete beams.
- 9” thick window with STC of 59 due to Metro noise.

Lighting / Electrical – Dynalectric

- 3000 a. at 480/277 v. 3ø. 4W. switchboard
- A typical guest room with all equipment on draws 58 amps.
- Transformers: 1 - 750 kva feeds the bus-duct riser, which provides 120/208 v power to all of the guest room panels.
- 7 other transformers provide step down voltage from 480 to 120/208 volt power for various areas such as the back of house outlets, low voltage kitchen equipment, corridor lighting and power, and miscellaneous garage power.
- 400 kw, 480 v back-up generator would provide power to all emergency lighting, fire alarm, stair pressure fans, smoke removal fans, fire pump, emergency for elevators, selected circuits for security.

Mechanical – Southland Industries

- 1 Air cooled chiller located on the roof with nominal capacity of 155 tons.
- 2 natural gas fired boilers with a capacity of 1,800,000 btu input and 1,530,000 btu output, used for domestic and air handling unit needs.
- Chilled water fan coil unit system with electric heating coils in the fan coil units for heat for each guestroom.
- Variable Air Volume units with electric heat coils for the lobby, offices, and other spaces on the first and second floor.
- Two shell and tube heat exchanges used to generate the domestic hot water with a capacity of 1,424,000 btu each.



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<http://www.engr.psu.edu/ae/thesis/portfolios/2008/jep249/>