

Montgomery Place, 5550 S. Shore Drive

Project Highlights and Results

- 14-Story building with independent Senior living on Floors 4-14, skilled nursing on Floors 2-3, and ground floor common areas and amenity spaces
- Completed the following projects to essentially replace all mechanical systems in the building:
 - Mechanical Systems Review and Schematic Design Report
 - Boiler replacement design and installation
 - VAV air handling unit design and replacement
 - Makeup air unit design and replacement
 - Domestic hot water boiler design and replacement
 - DDC BAS design and replacement
 - 2-pipe fan coil riser replacement with water source heat pump system
- MEPFP design for 1st floor renovations and a 1-story addition

Project Background

Owner:	Montgomery Place Engaged Living
Location:	Chicago, IL
Team/Team Lead:	Dustin Langille, Bob St. Mary, Bhupendra Tailor
Elara Role:	MEPFP Engineer
Type:	Energy Retrofit, Renovation, Addition
Construction Cost:	\$11,500,000

Project Overview

Building Type:	Residential, Senior Living Accommodations & Services
Building Attributes:	14-Story (225,000 SF)
Initial Construction:	Early 1990s
MEPFPIT Systems:	Heat Pumps, MAU, VAV AHU, Condensing Boilers, High-Efficiency DHW Heaters, DDC

Innovation

- Designed replacement of 2-pipe fan coil system with new water source heat pump system to provide greater flexibility and comfort control.
 - Approximately 343 fan coil units replaced with vertical water source heat pumps and new risers.
 - Reused horizontal piping mains and designed new pumps and modifications to penthouse mechanical room piping.
- Replaced 4 non-condensing domestic hot water heaters with new higher efficiency domestic hot water heaters and reused 3 existing storage tanks and the distribution system.
- Replaced the central makeup air unit and reused the existing ductwork distribution system.
- Replaced 2 non-condensing boilers with new high-efficiency condensing boilers and the reused existing piping distribution system and pumps.
- Installed new open protocol DDC system with a web/ based front end for control of the building's major mechanical equipment.
- Provided MEPFP schematic design, design development, permit/bid/construction documentation, bidding, and construction services for 13,600 SF ground floor renovation and addition.

