

## The Hayden – 1109 Washington

### Project Highlights and Results

- MEPFP design of newly constructed 9-story, 28-unit (24 flats, 4 duplex penthouse units), high-end condominium building with heated parking garages.
- Building “Designed to Earn the Energy Star”.
- Design incorporates various high-efficiency measures to maximize building energy performance including a water-source VRF heat recovery heating and cooling system and high efficiency condensing heating hot water boilers and domestic hot water heaters.

### Project Background

<b>Owner:</b>	Sulo Development
<b>Location:</b>	Chicago, IL
<b>Team/Team Lead:</b>	Matt Swanson, Nathan Kinsey, Bhupendra Tailor, Nick Capretta
<b>Elara Role:</b>	MEPFP Engineer
<b>Type:</b>	New Construction
<b>Construction Cost:</b>	\$41,000,000

### Project Overview

<b>Building Type:</b>	Residential, High-End Condominiums
<b>Building Attributes:</b>	9 Stories; 132,181 SF
<b>Initial Construction:</b>	2017
<b>MEPFPIT Systems:</b>	Water-Source VRF System Gas-Fired/DX Rooftop MAU DCW Booster Pump System, Condensing Boilers, Condensing DHW Heaters, Fully Sprinkled Building

### Innovation

- Completed computerized energy model for baseline energy use and a performance model for newly constructed building.
- Parking garages are equipped with electric vehicle charging stations.
- Heating and cooling for the residences and ground floor common areas is provided by water-source variable refrigerant flow (VRF) heat recovery systems.
- Mechanical ventilation is directly ducted into each residence, residential elevator lobby, and a VRF indoor unit serving the ground floor BOH area and is provided by a direct-expansion (DX) cooling / gas-fired heating rooftop make-up air unit.
- Mechanical ventilation for the common areas and basement level is provided by a fixed plate style energy recovery ventilator (ERV) with an enthalpy core.
- Residential balconies provided with natural gas hook-ups for grills, heating lamps.
- Building and parking garage are protected by an automatic wet pipe fire suppression system consisting of standpipes located in stairwells with a fire hose valve and a supervised automatic control valve assembly at each floor.
- The parking garages are heated via hot water suspended unit heater and are equipped with carbon monoxide (CO) monitoring and exhaust systems for ventilation.

