

Tribune Tower Adaptive Reuse

Project Highlights and Results

- MEPFP design supported adaptive reuse of 1925, neo-gothic Tribune Tower (a Chicago Landmark Building) from commercial office space to residential condominiums with supporting amenities and retail space.
- Designed to exceed the City of Chicago sustainability ordinance.
- Project included installation of new major MEPFP equipment and infrastructure throughout existing building and newly constructed north wing addition.

Project Background

Owner:	CIM/Golub
Location:	Chicago, IL
Team/Team Lead:	Matt Swanson, Cem Diniz, Bhupendra Tailor, Chris Frauens, Sean Hidaka, Katelyn Beck, Trevor Goselin
Elara Role:	MEPFP Engineer of Record
Type:	Adaptive Reuse and Addition
Construction Cost:	Approximately \$252,000,000

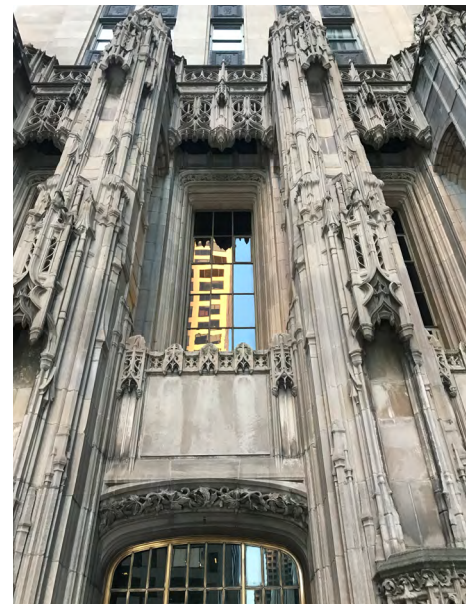
Project Overview

Building Type:	Conversion from Office to Condominiums, Retail, Amenities
Building Attributes:	34-Story Tower plus 7 and 12-Story Condo Wings including 4-Story Addition on the northeast side totaling 950,000 SF; Preserved original Entry and Tower Lobby; Pool and Outdoor Terraces; 1st Floor Retail; 3-Story Parking Garage Below Grade; Luxury Amenity Program throughout the building; Reimagined Pioneer Court and Plaza

Initial Construction:	1925
Renovation Complete:	2021
MEPFPIT Systems:	4-Pipe fan coils with dedicated outdoor air, makeup air units with runaround heat recovery, condensing boilers and water heaters, VFD Chillers, waterside economizer, river water condensing system

Innovation

- Existing Building: Tribune Tower originally constructed in 1925 with additions in 1935 (Radio Building) and 1950 (TV Building). Site vacated in 2018 by the Chicago Tribune with planning initiated to convert the 34-story office tower and surrounding buildings to 162 luxury condominium units, while respecting its Chicago landmark status and adapting to existing structure.
- New Construction: Four additional floors added to the northeast side above the TV Building. The addition includes a new elevated courtyard to provide a shared greenspace for residents and a full luxury amenity program that will be dispersed throughout the building, including several unique spaces.
- Identified opportunity and confirmed reuse of the building's existing emergency generator, ComEd vaults, diesel fire pumps, existing chilled water plant including river water condensing system.



Innovation (continued)

- New infrastructure includes a condensing hot water boiler plant and water heaters located in the mechanical penthouse of the north wing.
- Condominium units have smart thermostats with remote sensors and are served by pipe fan coil units installed in enclosures with ducted return and variable ventilation systems (including makeup air and toilet, kitchen and dryer exhaust system implemented throughout the building).
- New direct digital control (DDC) system designed to serve all major mechanical systems.
- Indoor Air Quality:
 - Dedicated outdoor air systems use superior MERV 13 filtration.
 - Humidified outdoor air throughout property.
 - Residential ventilation provided directly to each unit to minimize mixing of air.
 - Self regulating exhaust systems.
- Lighting Control:
 - Interior common area lighting controlled by the state of the art multi-zone dimming system with code required occupancy and daylight sensors.
 - Exterior and facade lighting controlled by building lighting multi-zone dimming system.
- Power:
 - Entire building powered by (3) existing utility vaults which distribute power to building common and residential power through multiple bus duct systems.
 - Each condominium unit load center is powered by an individual utility meter powered by bus duct system.
 - Car charging infrastructure designed to support entire garage.
- Fire Alarm:
 - (2) Chicago high-rise fire alarm systems; one for each address (Michigan Avenue and Illinois Street) which are interconnected for communication and control lower-levels to 3rd floor fire alarm devices and each tower's fire alarm devices.
 - Detailed coordination with the City of Chicago Fire Department was required.
- Domestic Water:
 - Domestic hot water for multiple pressure zones is separated by dedicated pressure reducing valves for supply, plate and frame heat exchangers for return, and includes a dedicated pressure zone return pump to alleviate problematic condition of mixing several different pressure zones for return to the hot water heaters.
 - Main domestic hot water plant consists of high-efficiency water heaters located at mechanical penthouse of the north tower while the hot water return heat exchangers are in the 2nd floor mechanical room. A dedicated sub-water heater plant is located at the base of the highest zone for zone isolation.
 - On-demand instantaneous water heaters serve the parking garage car wash which reduces energy consumption by eliminating storage tanks which would sit idle for a majority of the time.
- \$114,805 in ComEd Incentives procured.

