181 Fremont

San Francisco, California

General Information

Dates of Construction | Nov 2013 - 2016
Project Delivery Method | Design-Bid-Build
Occupancy| Mixed-use Office and Residential
Cost | $375 Million
Number of Stories | 54 Stories
Height | 700 ft.
Size | 411,000 sq. ft.

Project Team

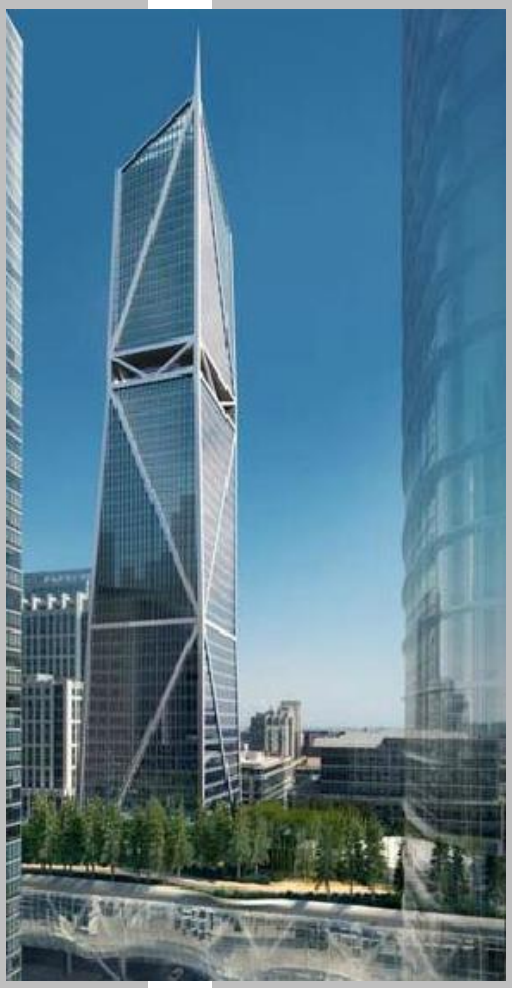
General Contractor | Level 10 Construction
Construction Manager | Jay Paul Company
Owner | Jay Paul Company
Architect | Heller Manus
Structural Engineer | Arup
MEP Engineer | Arup

Structural Systems

The structure rests atop a mat foundation, below which roughly 60 piles extend 150 feet down to reach bedrock. Various systems such as viscous dampers and steel moment frames provide lateral force resistance, but the primary lateral force resisting system is an exterior steel mega-frame.

Sustainability

In pursuit for LEED Platinum, multiple steps toward sustainability including a curtain wall system that favors natural lighting, a green roof, grey water system, and use of recycled materials are featured.



Architecture

The architectural design features transparency in the structural system by exposing the exterior steel mega-frame, which extends beyond the roofline. A curtain wall system with angular glass units and walls that taper in as the building rises also add to the building's exterior aesthetic expression.

Various amenities are provided for residents, including a two-story open air terrace that wraps around the 36th floor. Also features is a pedestrian bridge on the 5th floor that allows residents to access the Transit Tower's rooftop City Park, as shown in the photos at left and below.

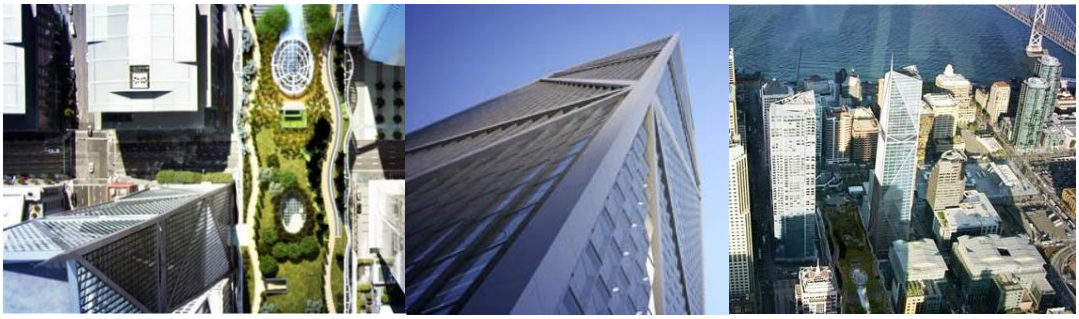
Mechanical Systems

181 Fremont's mechanical system is comprised of a forced-air ventilation system, with air intake and filtration occurring on the mechanical floor on level 37. Air is then transferred to each individual residential unit, where it is again filtered and either heated or cooled by a fan coil unit.

CAROLINE KLATMAN

STRUCTURAL OPTION

ADVISOR | DR. THOMAS BOOTHBY



http://www.engr.psu.edu/ae/thesis/portfolios/2015/cjk5258/index.html