40 Bond

Project Information

Location - New York, NY Noho District of Manattan Occupancy - Residential Total Size - 90,000 sf Stories - 10 stories + Penthouse Cellar below grade Construction Dates - December 2005 - Summer 2007 Project Delivery Method - Design-Bid-Build Contract Type - Guaranteed Maximum Price Project Cost - \$40 million

Project Team

Owner - Confidential Architect of Record - Handel Architects Design Architect - Herzog & de Meuron Structural - DeSimone Consulting Engineers Facade - Dewhurst MacFarlane & Partners Facade Consultant - Israel Berger & Assoc. MEP - Ambrosino DePinto & Schmieder Geotechnical - Langan Engineering & Environmental Services Vertical Transportation - Lerch Bates & Assoc. Lighting Designer - Johnson Schwinghammer Low Voltage - Electronic Security & Communications Corp.

Acoustic - Shen Milsom & Wilke, Inc. CM - Bovis Lend Lease, Inc. Construction Consultant - Ryder Construction





Architecture

- Five two-level townhouses with private entrances
- Twenty three condominium units
- 11'-0" ceiling heights and operable floor-to-ceiling windows
- 7th Floor landscaped roof garden at setback
- Penthouse structure with 14'-0" ceilings & 44'-0" clear span supported by two hidden columns & core shear wall
- Bell-shaped green glass mullions on south face with stainless steel plates installed by ornamental ironworkers
- Blackened copper mullions on north face
- Roof composed of structural slab, fluid applied membrane,
 4" rigid insulation, gravel ballast, cast iron drains and precast concrete pavers
- Cast-aluminum graffiti inspired gate

Structure

- Concrete structure to maximize floor-to ceiling height, serve as acoustical barrier, allow for thin transfer beams & overall accomplishment of penthouse
- 30" thick mat foundation
- 9" flat plate slab for floors
- Lateral resistance provided by 12" concrete shear walls
- 10" x 10" perimeter concrete columns spaced at 6'-3"
- Variation of square, rectangular and circular columns
- Transfer beams ranging in size from 20"x24" to 60"x16"
- Penthouse roof includes upturned beams & inclined piers

Mechanical/Electrical

- One 150-ton, 35, 265 cfm roof top cooling tower
- Two 2000 cfm heating & ventilating units
- 120V boiler, diapragm expansion tank, various heat pumps
- Low-voltage system for telecommunication, security system & access control
- 120/208V light and power distribution system including emergency system provided by Consolidated Edison
- Common residential distribution switchboard 120/208V 3 phase 4 wire with 2000A bus
- Combination of lighting including softwhite incandescent, clear halogen, flourescent & HID with dimming systems

Samantha D'Agostino Structural Option

http://www.engr.psu.edu/ae/thesis/portfolios/2009/sgd5002/