

# 100 Eleventh Avenue

New York, New York

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Structural Option

## The Building

Location: Manhattan's West Chelsea District  
Function: Residential  
Size: 170,000 sf  
No. of Stories: 23 (1 below grade)  
Dates of Construction: September 2007 through early 2010

## The Players

Owner: Cape Advisor Inc. in partnership with  
Alf Naman Real Estate Advisors  
Design Architect: Ateliers Jean Nouvel  
Executive Architect: Beyer Blinder Belle  
Construction Manager: Gotham Construction  
Structural Engineer: DeSimone Consulting Engineers  
MEP Engineer: AKF Engineers  
Geotech Engineer: Langan Engineering

## The Architecture

- Ultra-luxury condominium building with 55 units
- 6000 sf of street-level retail
- Curved facade composed of 1650 uniquely sized and oriented windows
- Second facade offset 16' towards street on lower 6 floors creating unique "hanging garden" space



## The Construction

- Curtain wall anchored to slab by Halfen channels
- Slab curve achieved through use of rubber transition piece embedded in formwork
- Curved slab edge detailed with straight rebar with one bend to save costs



## The Structure

- Cast-in-place concrete with two-way flat plate floor system
- Typical slab (6ksi) thickens from 9" to 18.5" on curved edge to support facade loads and 35' spans
- Cantilevered balconies supported by cantilevered columns and posttensioned Dywidag bars
- Columns transfer at 19th floor via 18" transfer slab and at 3rd floor by up to 5-feet deep transfer beams
- Lateral system comprised of concrete core shear walls and 7 "long" columns up to 25' in length
- Secant wall system used in lieu of foundation walls
- 36" pressure slab spans between piles and caissons

## The MEP System

- Conventional heat pump loop system with 800 GPM cooling tower on roof and 2000 MBtu/hr boiler in cellar
- Perimeter radiant floor panels at facade
- Units serviced by 120/208V 1-phase electric panels

