

NoHo III

North Hollywood, CA



Team

Owner:

J.H. Snyder Co., Los Angeles, CA

Architect:

Abadjis Systems (formerly Jerde Partnership)

Structural Engineer:

Cary Kopczynski & Company, Bellevue, WA

General Contractor:

Bomel Construction, Anaheim Hills, CA

Reinforcing Bar Fabricator:

Pacific Coast Steel, San Diego, CA

Total Project Cost:

\$45 million

Total Project Size:

215,000 sq ft

Floor System:

One-way beams and slabs

Framing System:

Cast-in-place Reinforced concrete; shear wall core

Award:

2013 CRSI Award Winner –
Commercial Facilities Category

Photography:

Bomel Construction, Anaheim Hills, CA

Abadjis Systems (formerly Jerde Partnership)

Large urban office buildings are generally constructed of structural steel, especially on the West Coast where seismic requirements can complicate the use of reinforced concrete. The conventional wisdom for office building construction is that structural steel is faster and cheaper to build, and that it facilitates the use of long spans which are critical to the layout of a (Class-A) office space. While most similar developments would have chosen structural steel, it was decided early to build NoHo III in concrete for its design flexibility, construction economy, and local availability.

NoHo III Broke the Mold

NoHo III is a 215,000 sf, 9-story development designed as an extension of the arts and community oriented NoHo Commons district located in North Hollywood, California. It is a high performance (Class-A) office building with floor-to-ceiling glass that both maximizes natural light and reduces heat gain to increase energy efficiency. Accent fins on the exterior provide functional shading that enhanced the district's overall art theme.

Working closely with both the project's architect and contractor, the structural engineer developed a long-span framing system in reinforced concrete that proved more economical to build than structural steel. The layout incorporated clear spans of up to 50' with only three interior columns, in floor plates of over 20,000 sf. Further, by standardizing beam sizes, column sizes and bay spacing, the contractor was able to use a high production forming system. This resulted in not only lower construction cost, but also a shorter schedule for concrete than structural steel.

NoHo III is an excellent example of how the thoughtful use of reinforced concrete, with the design developed to meet needs of the owner, builder, and user, can create a long-span, open and elegant (Class-A) office space. The sustainability advantages of cast-in-place concrete also helped NoHo III to achieve LEED certification. NoHo III was a success for all involved and is a handsome addition to the urban fabric of North Hollywood, California.

STRUCTURAL FRAMING SYSTEM

The structural framing system required only three interior columns. Through a combination of regularly spaced beams and one-way slabs, floor area efficiency was maximized, which eliminated many of the interior columns that would have otherwise been required. This also allowed the use of standardized formwork throughout to improve construction speed and reduce cost.

- With few interior columns, gravity load on the core was maximized. Under lateral load, both the net flexural tension in the core walls and foundation overturning forces were reduced, with the benefit of minimizing flexural reinforcing requirements.
- Coupling beams were sized to preclude the need for diagonal reinforcing, simplifying reinforcement detailing and improving reinforcing steel (rebar) installation and overall construction speed.
- Concrete floor framing stiffened the slabs and beams, and eliminated the potential for perceptible floor vibration.