



# Precast Structure Provides Handsome, Economical Center

*All-precast design offers fast construction plus an economical and aesthetically pleasing solution for large distribution center in Mexico*

**Architect**

Springall + Lira S.A. de C.V.  
Mexico City

**Engineer**

Industrial Prefabricadora  
S.A. de C.V.  
Mexico City

**General Contractor**

Inmobiliaria Ardoma  
S.A. de C.V.  
Mexico City

**Owner**

Grupo Elektra S.A. de C.V.  
Mexico City

**Precaster**

Industrial Prefabricadora  
S.A. de C.V.  
Mexico City

The 400,000-square-foot Centro de Distribucion Elektra Guadalajara in Mexico required a building material that would expedite a tight schedule and provide economical construction. Officials at Elektra, retailers of household products, also requested an aesthetically pleasing appearance for its high-profile facility.

The architects considered a steel structure but decided precast concrete was by far the best solution. "Precast concrete offered the least expensive structure, the fastest production and erection, and the pleasing concrete appearance the client wanted," says Guillermo Springall, partner of Springall + Lira in Mexico City.

The architects faced challenging conditions in designing the large facility. The site had a 75-foot differential in grade from one side to the other, and the planned traffic pattern called for trucks to enter one side of the building and leave on the opposite side. Excavation to a depth of approximately 40 feet was needed to build one end of the structure into the slope. To level the main distribution area's floor, it proved less expensive to construct a lower secondary building, used for workshops and storage, than to use dirt fill.

The roof of the lower-level building is used as a maneuvering platform for vehicles, with a ramp leading up to one end of the building. The facility's precast concrete walls along the side built into the slope serve as retaining walls, supported by 60-foot-long precast double tees placed vertically. A precast foundation also was constructed, with footings descending 30 feet to bedrock in some cases.



*Precast columns and beams created a bright, open interior that facilitated layouts for distribution functions.*

Design Award  
International Architectural  
and Engineering Design



The 400,000-square-foot Elektra Guadalajara distribution center was constructed almost entirely of precast concrete.

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*—Guillermo Springall, partner, Springall + Lira*

## RAPID PRECAST PRODUCTION

The precast components were fabricated by Industrial Prefabricadora of Mexico City. In all, the company produced 1,400 precast pieces, with construction completed within six months.

The architects designed horizontal windows “to lighten the look of the precast façade and to bring light to the interior,” according to Springall. Additional daylight enters through the roof, which was built of saw-tooth galvanized steel with transparent polycarbonate instead of glass between the walls and roof. Precast columns and beams support the roof. The beams also function as channels for rain runoff.

“Filled with natural light, the interior is unusually bright during the day,” says Springall. It also is energy efficient, requiring no air conditioning, thanks in part to the dense precast wall panels. No ordinary distribution center, this building makes a strong sculptural statement arising from the creativity of its architects and their use of precast concrete. ■

— Anne Patterson



*A precast concrete structure offered the most economical building material and also sped construction.*



*Because of the sloping site, the building was constructed with several levels. The roof of the lower level building was used as a maneuvering platform for vehicles.*

## THE JUDGES SAID...

*“This project shows a unique use of precast in producing a gorgeous building. The slender columns are beautiful, and the use of the balcony over top is notable. The precast has a great sculptural quality that produces excitement in the curved, ribbed panels. The project is creative and very aesthetically pleasing.”*