

Glorieta Cibeles Tower

Mexico City, Mexico





Rescuing a tower abandoned and damaged in the 1985 and 2017 earthquakes

The Glorieta Cibeles Tower is a complete up-cycle of a 1979 74m tall and slender 18 story office structure that was abandoned and deemed unsafe after the historic 1985 and 2017 earthquakes.

The project is located at the Cibeles fountain rotunda in the Roma neighborhood, one of the most emblematic, historic and full character areas of Mexico City. This part brims with a diverse set of typologies and an eclectic mix of architectures, dating back to the beginning of the past century.

Having such an emblematic location, its remodeling was key to harnessing the potential from the site, becoming a unique example of innovation and an icon of urban recovery and renewal.

Location: Mexico City

Year: 2017-2021

Built Area: 10,800 m²

Plot: 617 m²

Original Construction: 1979

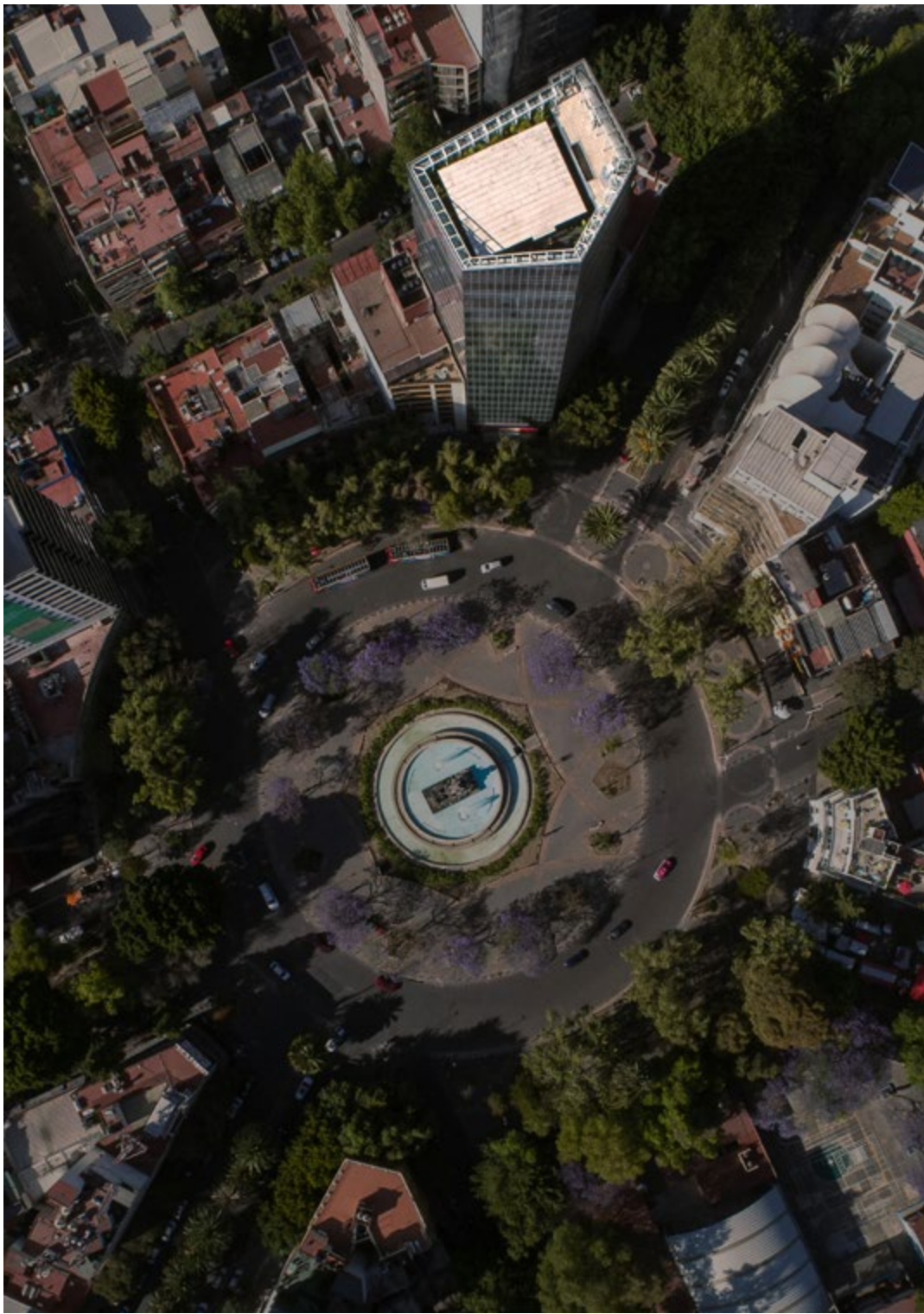
Maximum Height: 74m

Original Height: 64m

Floors: 18 + Roof Garden

Photography: Luis Gallardo and Jaime Navarro





One-of-a-kind dampers make the tower only the third structure with this seismic protective technology in Mexico City

The transformation of the old building comprised four fundamental axes: structure and resilience; comfort and functionality; aesthetic and tectonic design; and sustainability, considering both operational and embodied energy.

The structural issues were addressed by utilizing an array of strategies. First, the tower's 60 cm tilt towards the east was fixed with a very delicate maneuver that was done by excavating tunnels underneath to tamper the piles and ballast the tower; when the tower was vertical again, it was reattached to the existing foundation adding an additional 33 new pilings.

Above ground, the shape was regularized to avoid frame distortions during earthquakes. Afterwards, the existing structure was reinforced utilizing steel bracing and concrete rejuvenating epoxy injections. Finally, to complete the process, 4 viscous structural dampers were incorporated at each floor, reducing up to 60% of earthquake strength.



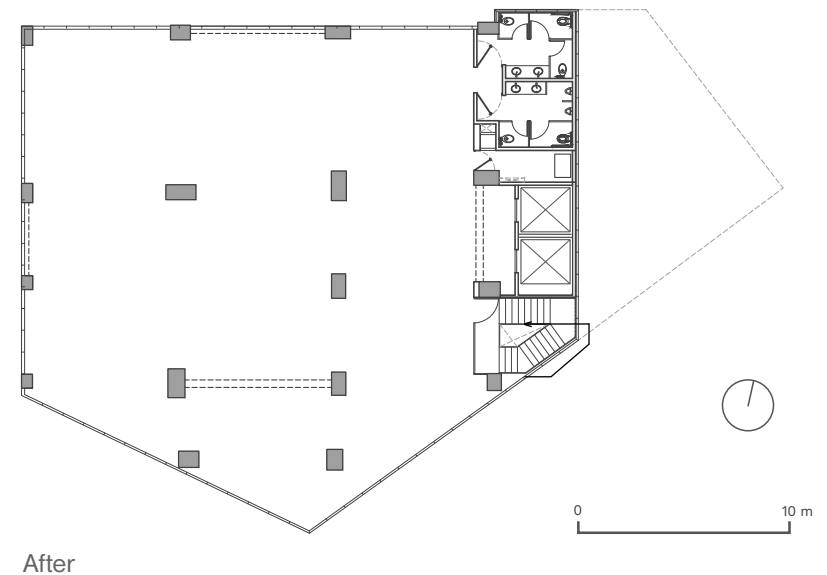
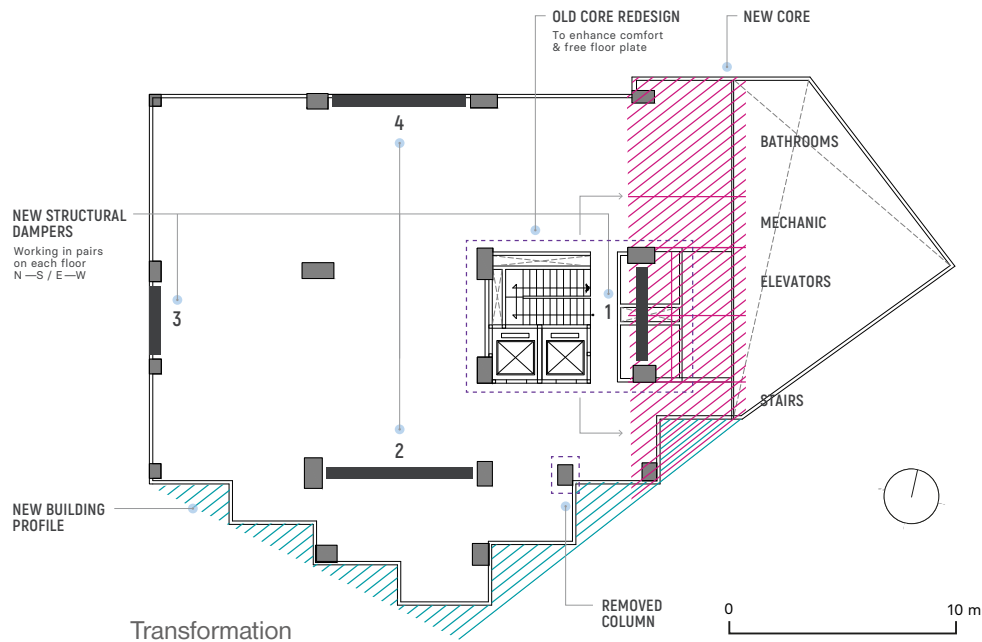
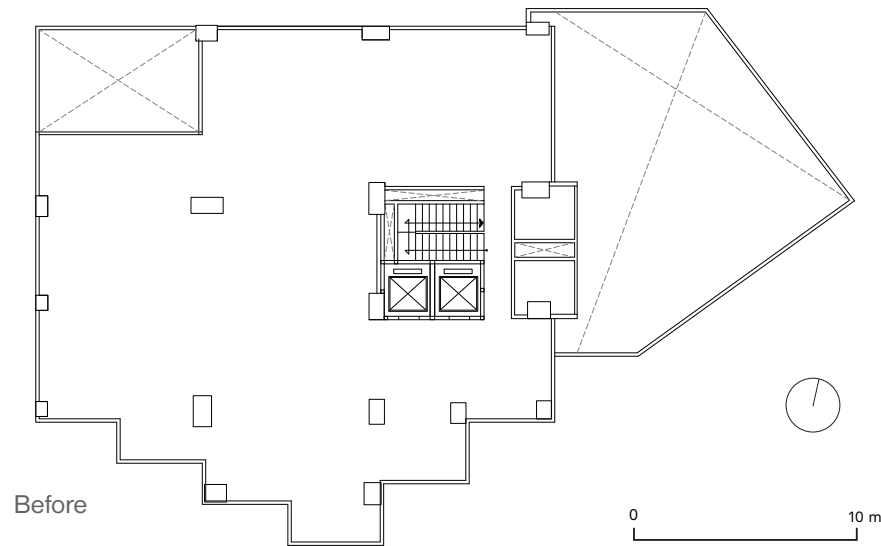


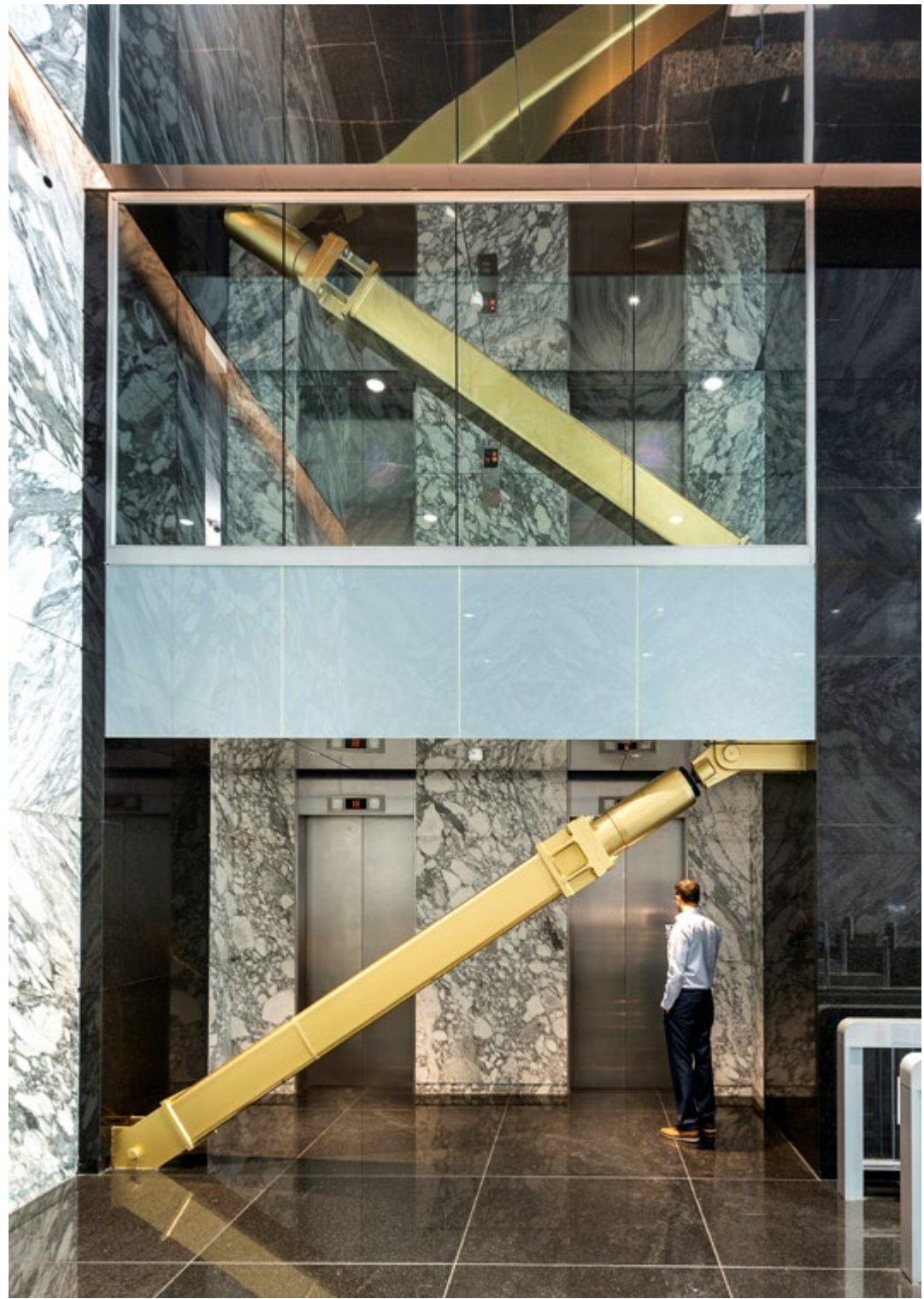
A bold engineering and core relocation strategy results in an unprecedented achievement

The structural changes shown on the plan allowed to remove a column that hindered interior spaces, deriving in a radical change from its foundation upward, something totally unseen in a seismic location like Mexico City.

The core was redesigned and relocated cantilevered to its eastern side resulting in greater open floors with expansive panoramic views and natural light in all directions, larger spacious elevators, a sculptural staircase, and a more comfortable and greatly improved interior mobility and quality.

The new lobby became a double height, light-filled welcoming space with a reflective ceiling and beautiful bookcase marble finish that contrasts with its gilded ever-present sculptural counterparts.







A new facade offers panoramic views and adds height for a new secret space

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The tower is designed as a sculptural inhabitable obelisk. By taking advantage of the site's pentagonal shape, the main edge facing the rotunda was raised 10m above its previous total height, dropping towards its back edge to create a new exiting profile that engages in dialogue with the city's skyline, reinforcing the project's importance within the city.

The facade is timeless, incorporating highly efficient double glazing. Its reflectiveness gives the tower an illusory quality; it stands out revitalizing, simultaneously blending in with its surrounding, thoughtful and respectful of the site.





Roof gardens brimming with endemic vegetation crown a 19-story renovation

The tower is crowned by lush green roof gardens of endemic vegetation and pleasant microclimate that serve as unique relaxing spaces, representing over a third of the total plot space. Several palm and fern species create an oasis within a corporate environment.







A 40 year-old abandoned building is transformed into **Leed Platinum certified**

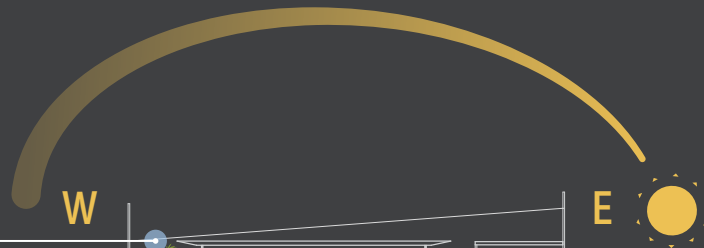
The project strived to achieve the outmost possible sustainability. The tower is Leed Platinum certified achieving 36.5% in total energy, 56% in artificial lighting, 67% in HVAC and 41% in water savings; additionally, by recycling the structure a 50% reduction in embodied carbon was accomplished.

This paradigmatic intervention demonstrates that old and deteriorated structures can be revitalized while exceeding all the current requirements of comfort, efficiency, sustainability, resiliency and flexibility expected from a new building, becoming an example of responsible and innovative architecture and development.

The result is a icon of urban recovery and renewal not seen in such scale before in Mexico, which reflects on the thorough efforts made for the rebirth of the tower.



LEED PLATINUM CERTIFICATION



NEW BUILDING CROWNING

NEW BUILDING CORE - CANTILEVERED

- Redesigned & relocated to be more spacious & efficient
- Panoramic Staircase with natural light & views to stimulate vertical movement
- Bigger & better bathrooms
- Increased comfort



12 LEVELS OFFICES

STRUCTURAL REINFORCEMENT 40-50% EMBODIED CARBON CONSERVATION

- NO demolition = pollution reduction



UP TO 70% EARTHQUAKE REDUCTION

- 72 Structural dampers
- 4 on Each Floor



4 PARKING LEVELS



DOUBLE HEIGHT LOBBY

- Easier fluidity

33 NEW PILINGS

- Increased Foundation Capacity



PH

OFFICES 18 - PH

OFFICES 17

OFFICES 16

OFFICES 15

OFFICES 14

OFFICES 13

OFFICES 12

OFFICES 11

OFFICES 10

OFFICES 9

OFFICES 8

OFFICES 7

PARKING 6

PARKING 5

PARKING 4

PARKING 3

MEZZANINE

GROUND FLOOR

LOBBY



36.5% TOTAL ENERGY SAVINGS



-67% HVAC

VRF individual floor system



DOUBLE GLAZED TRIPLE LAYER LOW-E CURTAIN WALL 360° VIEWS

+ light gain
- heat



-56% ARTIFICIAL LIGHTING



33% OCCUPIED BY ROOF GARDENS

- 210 m² occupied by green areas
- Green areas with vegetation
- Oxygen Production
- Heat Island Effect Reduction



BUILDING MANAGEMENT SYSTEM

- Controls
- Automation
- Monitoring
- Metering
- Reporting



-41% WATER CONSUMPTION

- Water saving Faucets & toilets
- Rainwater harvesting
- Rainwater Treatment
- 98% Water pump energy consumption

