Veer Towers East

Click an image to view larger version.

Figures

Height: Architectural	137 m / 449 ft
Height: Occupied	129.1 m / 424 ft
Height: To Tip	140.2 m / 460 ft
Floors Above Ground	36
Floors Below Ground	2
# of Elevators	4

Facts

Official Name	Veer Towers East
Name of Complex	CityCenter
Structure Type	Building
Status	Completed
Country	United States
City	Las Vegas
Street Address & Map	3722 Las Vegas Boulevard South
Postal Code	89109
Building Function	residential
Structural Material	concrete
Energy Label	LEED Gold
Proposed	2006
Construction Start	2006
Completion	2010
Official Website	City Center Las Vegas

Companies Involved

Owner	MGM Mirage
Developer	MGM Mirage Design Group
Architect	
• Design	Murphy/Jahn Architects
• Architect of Record	Adamson Associates
Structural Engineer	
• Design	Halcrow Yolles
MEP Engineer	
• Design	WSP Flack + Kurtz
Main Contractor	Perini Corporation; Tishman Construction
Other Consultant	
• Façade	Vidaris, Inc.; Far East Aluminum Works Co., Ltd.

About Veer Towers East

Part of the new CityCenter complex in Las Vegas, Veer Towers attempts to blur the boundaries between the public and private realm while finding the right balance between becoming an integral part of the city while also giving the buildings and spaces a unique and iconic character. In approaching the design of the towers, the context was not a historical background to build upon, but the framework to establish a new order and create a new image. The Veer Towers lean at five degrees in opposite directions creating an architecture that is at once robust and delicate.

Thereâ€™s no reflective glass used on the project, making Veer the first truly transparent building in Las Vegas. Extensive use of high performance low-E coating glazing maximizes the introduction of day lighting and views to the outside, which in conjunction with the use of exterior shades and a 57% ceramic frit in 50% of the buildingâ€™s envelope, provide all the shading to control and reduce the solar loads. Staggered panels of clear and fritted yellow glass animate the faÃ§ades and give the complex a welcome shot of color while horizontal louvers add a depth and texture to the exterior as well as provide shade from the intense desert sun.

The load-bearing structure is a simple and repetitive system with a Z-shaped central core. The cores of both towers are strategically positioned on the buildingâ€™s footprint in order to minimize gravity overturning effects, and they continue vertically up the entire building height. While all interior columns rise straight vertically, the tower columns on the north and south building elevations are inclined to follow the lean of the towers.

The south faÃ§ade of the main building lobbies are expressed with slender concrete columns free standing at over 24m (80ft) high and inclined to articulate the lean of the towers. Due to space constraints and the requirement to maximize usable lobby space, composite column construction was introduced. The architectural design of the main lobby required a unique solution to the heating, cooling and ventilation due to the distinctive nature of these spaces. Each lobby is a multi-level space with a large expanse of glass on the south faÃ§ade which runs the

full height of the space. It provides large quantities of natural light to the lobby and large solar heat gains in summer and heat losses in winter. After studying the space loads and using computational fluid dynamics (CFD) analysis it was determined that the best solution for conditioning the space efficiently was a radiant floor system using chilled and heated water with displacement ventilation providing the required outside air ventilation and supplemental cooling/heating. A radiant cooling surface allows the space temperature to be higher than traditional all-air design solutions reducing energy consumption while maintaining occupant comfort.

Heating and cooling of the apartments is provided by vertical fan coil units. The horizontal sun screen blades provide shading on the east, south and west faÃ§ades and reduce the energy consumption while minimizing the technical equipment requirements and maximizing occupant comfort.

Responsible uses of appropriate technologies provide an expressive means to realize this project in a sustainable way. The use of construction waste management techniques including diverting 50 to 75% of construction waste from landfills, the use of materials locally or regionally produced and manufactured, recycled materials and wood certified products, result in a significant reduction in environmental impact. Storm water filtration systems controlled flow drainage, use of storm water for irrigation and grey water systems all contribute to water conservation and the reduction in the use of potable municipal water resulting in saved utility charges and reduced impact on natural resources.

Veer Towers East

CTBUH Initiatives

Veer Towers Chosen as Featured Building
Apr 2011 – Featured Tall Building

Helmut Jahn Discusses His Lifetime's Work
18 Oct 2012 – Awards Symposium Video

Videos

City-Scapes: Transformations + Interventions
11 Jun 2013 – Helmut Jahn, JAHN

Lynn S. Beedle Lifetime Achievement Award: Archi-neering Tall
18 Oct 2012 – Helmut Jahn, Murphy/Jahn

Research Papers

Lightness
Oct 2011 – CTBUH 2011 Seoul Conference

CTBUH Awards

Best Tall Building Americas 2010 Award of Excellence
CTBUH Awards 2010

To submit more information or donate images for this project, please use our submission portal.