

Location: India

Punit Das

Structural Option | 2012-2013



The Optimus

GENERAL INFORMATION

• Function	Offices + Retail + Parking
• Total Area	430,000 sq. ft
• Height	230 ft
• Floors	Ground + 17 floors
• Construction	January 2012 - October 2013
• Project Delivery	Design - Bid - Build

PROJECT TEAM

• Owner + Project Manager	Lodha Group
+ General Contractor	
• Lead Architect	Pei Cobb Freed and Partners Architects
• Local Architect	Edifice Consultants Pvt. Ltd.
• Structural Engineer	Leslie E. Robertson Associates RLLP
• MEP + Fire Protection Consultant	Spectral Consultants Pvt. Ltd.
• Lighting Designer	George Sexton Associates
Vertical Transportation	Barker Mohandas

ARCHITECTURE

- 2 basements + 4 floors of parking space
- Ground floor retail
- Office spaces from 5th to 16th floor
- Roof: Gymnasium, Cafeteria and Garden
- 3 typical floor plans for different office requirements
- South façade windows for daylighting and panoramic views
- Utility areas located at north façade
- Parking spaces pushed to the rear of the building to show a unified front façade
- Maximum use of building footprint by integrating functional spaces inside the building mass

STRUCTURE

- Quality interior and exterior spaces due to Architecture and Structure integration
- Reinforced concrete frame with concrete core wall and flat slab system
- Column cross sections chosen to fit the functionality of spaces
- Rectangular columns ranging from 18 x 18 inches to 18 x 80 inches in parking spaces to provide maximum parking space
- Circular columns with about 20 inch diameter in office spaces to provide open floor plan and improve aesthetic quality
- Lateral system consists of elevator core and stairwell core with 12 - 20 inches thick reinforced concrete shear walls
- 8 in flat slabs with 16 in drop panels as required
- 50 to 80 inches thick Mat Foundation with pressure slab to resist hydrostatic pressure

FACADE

- Different façade systems used to highlight building mass
- Locally available decorative stone envelopes utility areas
- Architectural green wall wraps around parking spaces facing residential apartments
- Green wall acts as a sound and air barrier between parking areas and surrounding areas
- Metal and Glass curtain wall envelopes the south and west façade
- Windows on south façade pushed 2ft inwards to provide solar shading
- Windows on west façade extrude outwards to maximize daylighting

MEP and LIGHTING SYSTEMS

- Dedicated mechanical and electrical room at each floor eliminating roof top centralized mechanical spaces
- Tenant specific HVAC system selected after floors are rented out
- Main MEP rooms located on the ground floor to provide ease of access
- Energy efficient lighting provided with collaboration of architect and lighting consultant
- LED fixtures and Compact fluorescents used in office spaces and lobby areas
- Metal halides used in public spaces

Roof Garden



Facade



Entrance

