CONNECTION BETWEEN NEW AND OLD CITY
新旧城市之间的连接
ALIGNING THE TOWERS FOR ACCESS & VIEWS
塔楼对齐布置方便通行和
提高景观质量

Twin towers anchor the Jiangxi Nanchang Greenland Central Plaza, Parcel A project. At ground level, the towers are square in plan in order to provide optimal site access, while at their crowns, the square has been rotated 45 degrees so as to align the buildings with prime views of the Ganjiang River.
Jiangxi Nanchang Greenland Central Plaza Parcel A
Nanchang, China
江西南昌绿地中央广场A地块
南昌，中国

Total Floor Area
总建筑面积
217,600 Square Meters
217,600平方米

Height
建筑高度
303 meters; 59 stories
303米：59层

Completed
已建成
January 2015
2015年1月

Primary Use
主要功能
Class A office and retail
甲级办公及商业
Twin towers anchor the Jiangxi Nanchang Greenland Central Plaza, Parcel A project. The identical towers, which stand 303m tall and 100m apart, anchor an emerging business, civic, and residential zone in Nanchang’s booming new city.

The twins’ shapes morph from base to top: at ground level, the towers are square in plan in order to provide optimal site access, while at their crowns, the square has been rotated 45 degrees so as to align the buildings with prime views of the Ganjiang River.

The towers’ curved forms resulted from using cold bent glass, a strategy that produces the most fluid three-dimensional shapes as possible. Each glass panel that composes the facades has been warped up to 1.5% out of plane to achieve a consistent reflective, luminous appearance. The design team conducted extensive research to determine how far to push each panel out of plane in order to ensure long-term durability and architectural soundness of the panels and their sealants.
A VIVID URBAN PLAZA

充满活力的城市广场
At each level, the geometry of the structural cores mimics the footprint of the floorplate to ensure that lease depths remain constant on all sides. This remains true even as each tower changes shape over the course of its height.
JIANGXI NANCHANG GREENLAND CENTRAL PLAZA PARCEL A
江西省南昌绿地中央广场A地块
SKIDMORE, OWINGS & MERRILL LLP
TWIN CORE AND FLOORPLATE GEOMETRIES
双核心筒及楼板几何形体
LATERAL SYSTEM FOR THE TOWER
塔楼侧向力系统
TYPICAL OFFICE
LOW-RISE FRAMING PLAN
典型办公楼下部楼层框架平面布置

Horizontal Element Concrete Grade
水平构件混凝土等级C40

Typical Floor Beam 典型楼面梁:
750Dx550W

Typical R/C floor slab 典型钢筋混凝土楼板: 130mm
TYPICAL OFFICE
MID-RISE FRAMING PLAN
典型办公楼中部楼层框架平面布置

Horizontal Element Concrete
Grade 水平构件混凝土等级C40

Typical Floor Beam 典型楼面梁:
750Dx550W

Typical R/C floor slab 典型钢筋混凝土楼板: 130mm
TYPICAL OFFICE
HIGH-RISE FRAMING
PLAN
典型办公楼层框
架平面布置

Horizontal Element Concrete
Grade 水平构件混凝土等级C40

Typical Floor Beam 典型楼面梁:
750Dx550W

Typical R/C floor slab 典型钢筋混凝
凝土楼板: 130mm

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and Urban Habitat
A POROUS CROWN

The towers’ crowns are composed of angled glass panels that minimize porosity in the dominant visual direction, making the towers’ distinct shapes appear as if they’re dissolving into the horizon and creating a strong statement on Nanchang’s developing skyline. The crowns also make the towers’ distinct shapes appear as if they are dissolving into the horizon.
A VENTILATED CROWN

After construction had begun on the tower, the design team received a request to increase its height from 289m to 303m. As additional wind load at the top of a tower has a significant impact on the forces at the base, this seemingly small increase had a large impact on the structure that was already constructed.

The design team teamed with RWDI, a wind engineering specialty firm, in order to aerodynamically modify the tower so that wind loads on the taller tower would be reduced. The final porous crown solution reduces the total wind load on tower by 12% compared to a non-porous solution, achieving the projected wind load levels of the original 289m design.
AN ELEGANT ENTRANCE
大气庄重的入口

Visitors and occupants enter each tower through an elegant freestanding canopy that barely touches the ground due to a complex cable net support system.
Inside, both towers offer 59 stories of leasable office space anchored by a transparent groundfloor lobby. Visitors and occupants enter each tower through an elegant freestanding canopy that barely touches the ground due to a complex cable net support system. The expression of the cable geometry is carried inside both lobbies, where a separate, anticlastic cable net system supports the glass panels that enclose each space. At each level, the geometry of the structural cores mimics the footprint of the floorplate to ensure that lease depths remain constant on all sides. This remains true even as each tower changes shape over the course of its height. The clear lease depths also allow for optimal views.
Inside, both towers offer 59 stories of leasable office space anchored by a transparent groundfloor lobby. Visitors and occupants enter each tower through an elegant freestanding canopy that barely touches the ground due to a complex cable net support system. The expression of the cable geometry is carried inside both lobbies, where a separate, anticlastic cable net system supports the glass panels that enclose each space.

CABLE WALL
拉索墙
The towers’ curved forms resulted from using cold bent glass, a strategy that produces fluid three-dimensional shapes. Each glass panel that composes the facades has been warped up to 1.5% out of plane to achieve a consistent reflective, luminous appearance.

The design team conducted extensive research to determine how far to push each panel out of plane in order to ensure long-term durability and architectural soundness of the panels and their sealants.
WARPED PANEL: GLASS APPROACHES HYPERBOLIC PARABOLOID
翘曲面板：玻璃形成双曲抛物面
OPTION 1: EXTRUDED FLOOR PLATE/VERTICAL GLASS UNITS
方案1：突出的楼板/竖向玻璃单元
OPTION 2: TRIANGULATED GLASS UNITS
方案2：三角玻璃单元
OPTION 3: TILTED/SHINGLED GLASS UNITS

方案3：倾斜/层叠的玻璃单元
OPTION 4: COLD BENDING
方案4：冷弯
CURTAINWALL STUDY
COLD-BENDED PANELS

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COLD BENDING RESEARCH

SOM Research Project Partners:

Dow Corning
Viracon
Permasteelisa Group

Photo: 1.5M by 3M IGU, breakage happens at 15” (380mm) deflection
SOM COLD BENDING PROJECTS

SOM项目中运用冷弯形式的项目

Tianjin World Financial Center
Tianjin, China
天津环球金融中心
天津，中国

Pearl River Tower
Guangzhou, China
珠江城大厦
广州，中国
WINDOW WASH SYSTEM
擦窗系统