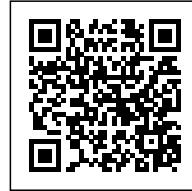




BAIZIWAN SOCIAL HOUSING

Posted on December 22, 2022 by xavigonzalez



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Baiziwan Social Housing is the first affordable housing project by MAD Architects, led by Ma Yansong. Situated near the CBD (central business district) in Beijing, the project covers the area of 93,900 square meters, with a total construction area of 473,300 square meters. The scheme is comprised of 12 residential buildings collectively providing 4,000 households. Since its completion, almost 3,000 families have moved in. The project offers dwellings for welfare dependents and young professionals.



The project is a culmination of Ma Yansong's extensive research into social housing, which began in 2014. Under the thematic topic "The Sociality of Social Housing," MAD's research focuses on the historical development and design of social housing across different countries. The research has been further developed by Ma Yansong's own engagements with this subject while teaching at Tsinghua University and the Beijing Architecture University.

Later, Beijing's Public Housing Center invited Ma Yansong to design the Baiziwan Social Housing project in 2014. MAD saw the commission as an opportunity to improve the living conditions of low-

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income communities and to introduce a fresh perspective to the current dull image of residential design in China.

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An Open Neighborhood

MAD's strategy strives to integrate the community into the urban fabric and connect the neighborhood with city. MAD divided the plot into six blocks, anchored by a main avenue cutting through the center of the site. The large site is fragmented into a much smaller human scale.

At street level, the scheme's central avenue is home to a range of commercial and convenience spaces, such as shops, cafes, restaurants, kindergartens, pharmacies, bookstores, and senior care facilities. The arterial route through the center of the scheme fosters connections between the neighborhood and city. With the human-scaled site planning and diversity of spaces, the design

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creates a vibrant and open urban life across the new neighborhood.

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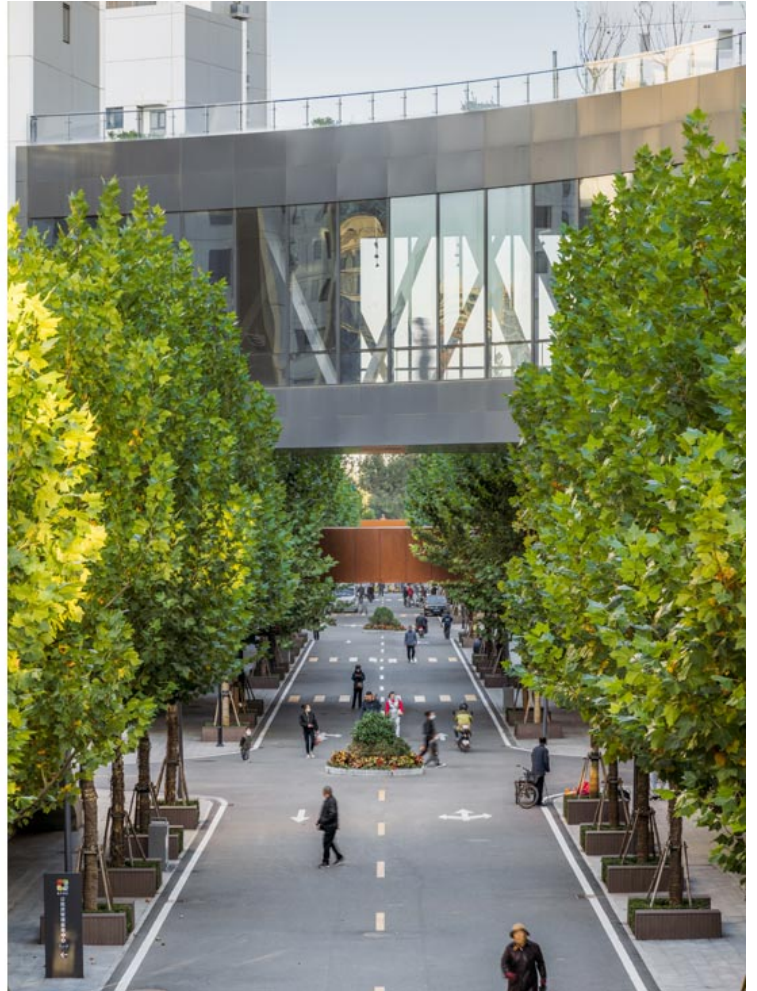
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Floating Garden

While the ground level opens the site to a wider urban user set, the second level, only accessible to the residents, offers a communal outdoor landscape. A pedestrian circuit weaves around all six blocks, forming a large above-ground park with a variety of communal functions including a gym, community gardens, badminton court, children's playground, ecological sanctuary, and support services.

In addition to the main residents' park on the second floor, MAD's scheme incorporates staggered half-floors and semi-open gray spaces of various scales throughout the design. Despite the rigid

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green coverage ratio of residential design specifications and the high density required for city center living, the scheme strives to provide green coverage on the ground level, the second-level park, and the rooftop, ensuring residents enjoy a holistic setting with strong connections to nature and the outdoors and achieving a green coverage of 47%. The standardized green coverage of commercial residential compounds is 30%.

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General Topography

These Y-shaped footprints combine with gradual stepping forms and staggered heights, generating an overall "mountain" topography across the site. The interface between buildings form semi-enclosed spaces, promoting a sense of intimacy and community across the site on a human scale. From afar, the scheme's simple white façade and undulating mountain form create an enriching addition to the city skyline.

The project's 4,000 residential units are comprised of six general typologies and three ultra-low energy consumption typologies, spanning areas of 40 square meters, 50 square meters, and 60

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square meters. Light-coated board is used as the partitions between the rooms, enabling ease of maintenance and flexibility for decoration by residents.

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Right to Daylight

With the plot ratio of 3.5 and the height limit of 80 meters, the high density has caused many restrictions on the general layout for each unit's daylight calculation. Throughout the design process, MAD sought to ensure that every tenantable room across the project would get sufficient sunlight. The resulting scheme therefore adopts a Y-branch building form, with communal corridors located along the north face of each building to enhance sunlight exposure in the residential units.

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Prefabrication and Sustainability

Considering a more environmentally friendly construction process, the client required that over 80% of the building components should be prefabricated off-site. This prefabricated method allows for a higher quality of housing production in a controlled, systematized way.

The scheme contains two ultra-low energy consumption buildings, also known as “passive housing,” with low heating and cooling loads, allowing the buildings to reduce energy consumption by 90%.

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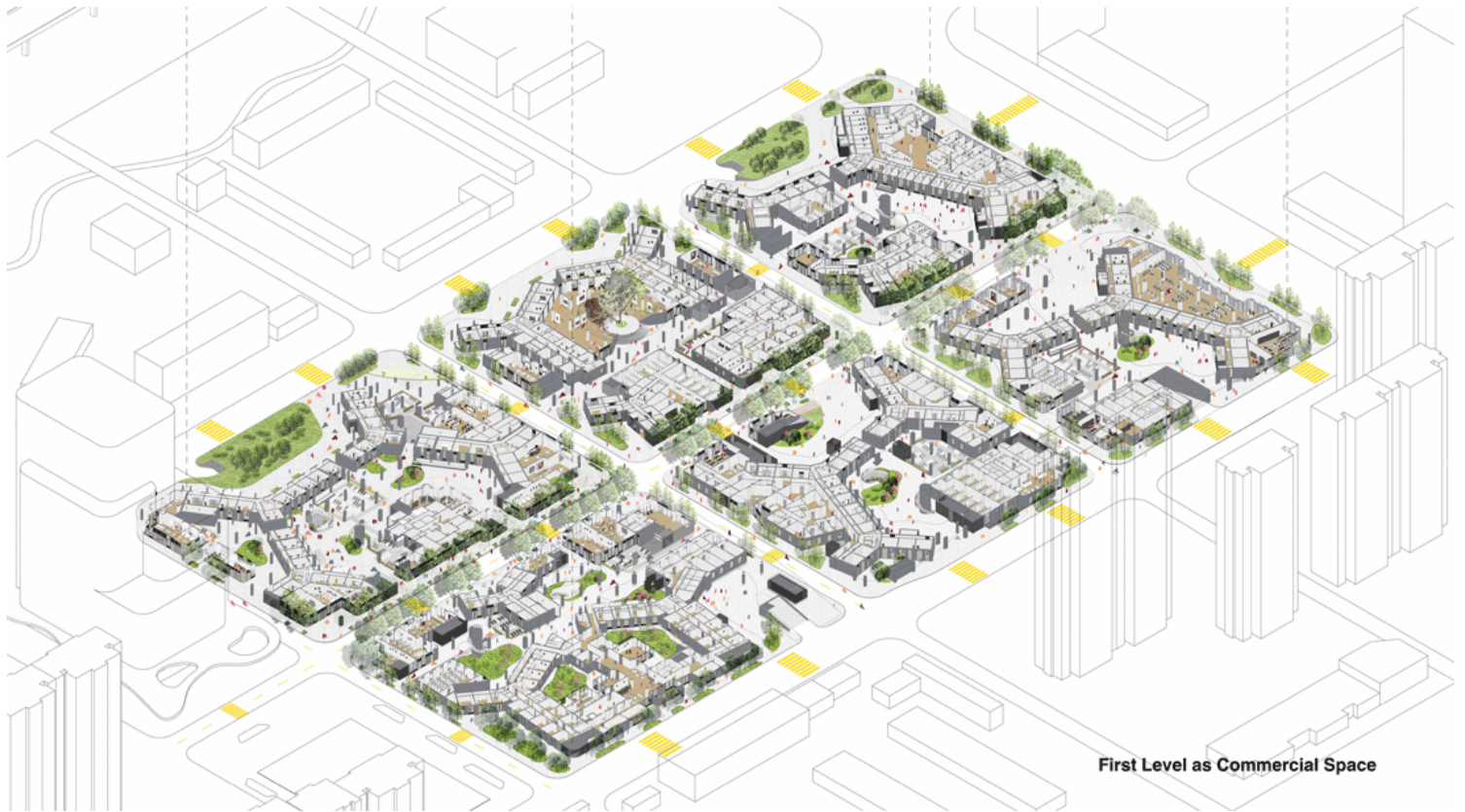
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Towards New Residential Design

Over the past decades, China's residential design and market have shifted dramatically. Rapid real estate development has led to the homogenization of residential design. Welfare-oriented housing development has not been considered as a priority during the housing privatization period. Entering the new era as China advances its investment in social housing for existing low-income urban dwellers and the influx of migrants, MAD aspires to offer a design solution for a more humane, equal, and vibrant living environment.

Human welfare is the goal of the habitat. The notion encompasses dignity and social equity. The design concept for Baiziwan Social Housing integrates affordable housing communities with a universal ideal for dignified living. It is achieved by a simple aesthetic. Baiziwan Social Housing is an important step towards ideal living in China.

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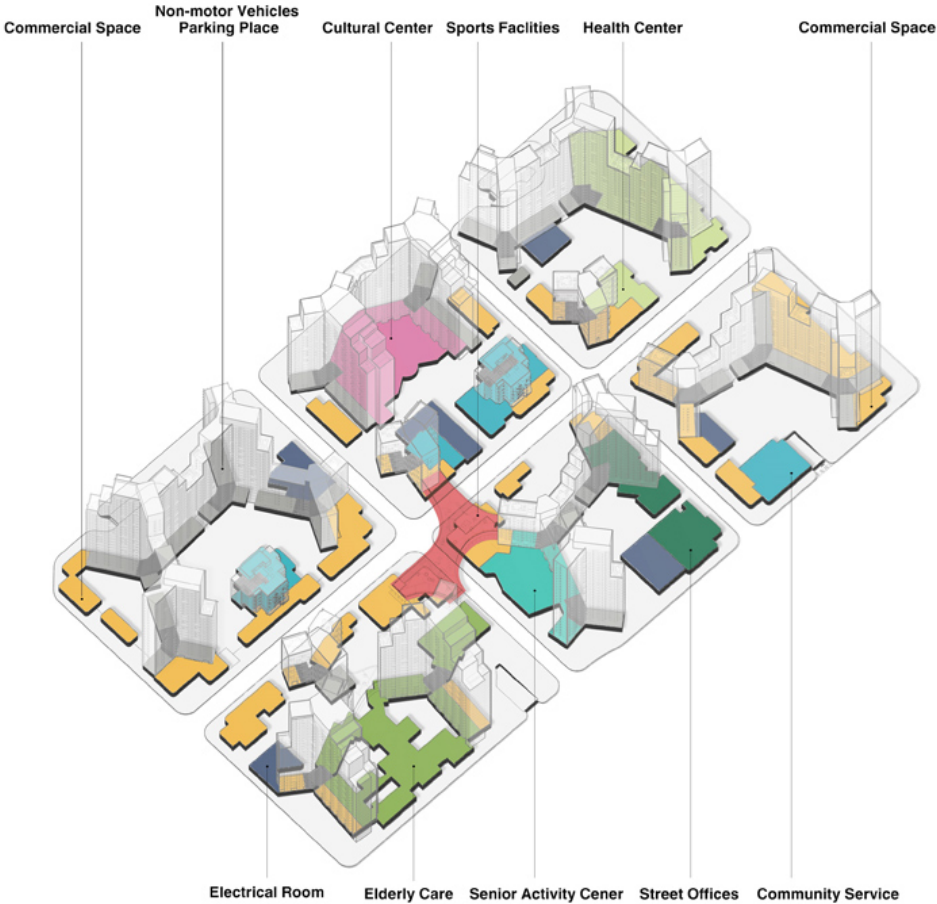
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