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High-Density, Mixed-Use Developments and the Guiyang Riverside Theatre Project

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Guiyang Riverside Theatre project illustrates the strategies necessary to create responsible and profitable high-density, mixed-use developments that capture the full potential of a site, specifically in the Asian market. Some of the challenges faced in developing this project involve the question of the optimal site, land area utilization, and balancing private space with the public realm, as well as the role of the tower and the retail podium. Five principles could potentially inform the design process: the importance of anchors, high-density retail podium vertical structure, diverse food and beverage offerings, identity and presence, and creating a district.

We live in an era where the future of urban development is dependent on high-density, mixed-use development. This is particularly evident in Asia where the urban population is growing at increased rates and where the opportunity to pursue education, employment, and a better quality of life makes urban areas more attractive.

In Asia, land is quickly becoming a precious commodity with the balance of available

land being developed for city expansion to meet the needs of a growing population who demands a higher quality life and a more consumer-based economy. As urban designers and architects, we must recognize the great responsibility we have in shaping the built environment and take a humanist approach to creating livable and responsible high-density developments. However, we also recognize that we are challenged on multiple fronts by multiple entities to create iconic towers that reach higher heights while becoming high performance buildings in their own right. In Hong Kong, Shanghai, Beijing and other second- and third-tier cities, urbanization patterns are forcing developers and public officials to build to higher densities and floor area ratios (FARs) – a challenge much different from that of their Western counterparts in the United States and Canada.

Challenges: Optimal Site and Land Area Utilization

With developable land at a premium, high-density, mixed-use development is challenged with creating a livable human scale for citizens while giving the developer a reasonable return on investment. With most

mixed-use projects, how to create this value is of the utmost concern.

The evolution from single-use to mixed-use development unfolded as more people desired the convenience of fulfilling their daily needs – living, working, and shopping – within close proximity. This notion of urban mixed-use has become more palatable as developments such as these demonstrate proof of a higher quality of life and as an increased population of millennials and baby boomers seeks to move into cities. In order to achieve the all-important synergy of uses that creates a successful mixed-use development and shapes great destinations, land optimization is key.

In Asia specifically, the demand for mixed-use is being driven by a desire for a more compact lifestyle due to exponential population growth, which in turn renders this type of development a greater challenge. As mixed-use has been implemented in Tokyo, Hong Kong, and Singapore – cities with high quality metro and transportation systems, a more affluent society, and demand for high-quality living and working environments – the high-



Left: MixC Development site plan, Shenzhen, China. Source: RTKL

Opposite: MixC Development street view. Source: RTKL



density trend has spread across China thanks to maturation and urban development patterns in cities like Shanghai, Beijing and Guangzhou. World-class transit, highway infrastructure, newly acquired wealth, and witnessing development progress in sister cities have all played a significant role. Political leaders and developers in second- and third-tier cities, when looking out across the skylines of neighboring urban metropolises, see these as models to be replicated.

The Role of the Iconic Tower

The iconic nature of the tall tower has been at the heart of the creation of the skyscraper since the first tall building was built. It is not a new concept, particularly in China. Today, this development trend is still fueled by those who see the tall tower as an essential element for a compelling city skyline. For example, the skyline of Pudong, Shanghai located east of the Huangpu River across from the historic city center, is populated with three towers: the Supertower, the Shanghai World Finance Center, and the Jingmao Tower. Each of these towers tells a unique story about the evolution of tower design and is representative of various stages of tower development over the past two decades. Over the last several years, since the

tower's inception in the late 1990s, complexity and performance have evolved in innovative and notable ways.

These iconic towers are marvels of engineering and design in more ways than one. Among their impressive features are modern elevator systems, structural concepts that allow buildings to withstand wind and seismic loads, and complex wall systems that conserve energy and resist nature and gravity. Given that these high performance towers do not necessarily address the value creation of the ground plane and the urban contexts around them, the question we must ask ourselves is how we can create and capture the most value for the site in a responsible manner and facilitate the highest performance possible within a high-density, mixed-use development.

The Role of the Retail Podium

While the tower soars tall, the mixed-use podium forms the foundation for the development and establishes its urban context. While the tower is an architectural and engineering phenomenon, the podium is a marriage of various disciplines, including urban design, architecture, environmental

graphic design, and landscape design. It is the intent of the podium designers to facilitate a seamless transition from the city to the building by creating a sense of place and identity for the development that syncs up with the city's existing culture and context. Not only must the design team address the scale and design aspects of the street edges and urban environment, but they must also satisfy the need to maximize retail value for the development by creating a shopping experience that is easily navigable, and enjoyable, for the consumer, as well as accommodating the resident and office workers who will also occupy the space.

A development consultant active in the Asian market recently quoted an impressive statistic that underscores the importance of retail in numbers: a successful retail podium can generate eight times more value per square foot for the developer when compared with the office tower associated with the same development. Certainly, commercial office space is a valuable revenue generator in its own right; but retail, when successful, leverages the combination of quality, vibrancy, and return on investment that enables the entire



development to become iconic—not just the tower. The importance of this cannot be overstated: if the design team fails to create a high performance mixed-use podium, the development is at risk of becoming a constant underperformer and a financial drain. Unfortunately, even as the country makes great strides toward progress, Chinese cities are full of examples of unsuccessful mixed-use retail podiums. However, there remain many success stories from which we can learn valuable lessons.

Balancing Private Space with the Public Realm

In general, office, residential, and hospitality programs provide private space for the end user and have bracketed timeframes for occupancy. However, a retail environment opens up the public realm and the timeframe for access through the creation of social spaces like landscaped decks and terraces. By providing an around-the-clock venue for a plethora of activities on-site and creating a balance of full-time occupants and occasional visitors, these high performance mixed-use podiums can change the living, working and social experience on an urban scale and will add both financial and experiential value over time. In this way, successful retail is the foundation of high-density, mixed-use development.

As affluence rises and the demand for high-performance, mixed-use centers increases in second-, third-, and fourth-tier Asian cities, expectations for architects and designers are high and the challenges in meeting the needs of both local politicians



Opposite Top: MixC Development within the Shenzhen skyline. Source: RTKL
Opposite Bottom: Riverside Theatre Aerial View. Source: RTKL
Bottom: Riverside Theatre Project Master Plan. Source: RTKL

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and developers become greater. It seems that every city wants its own Pudong District with a mixed-use development, grounded by towers that dominate the skyline and draw attention from a wider development community. Yet successful design depends on much more than simple replication; it depends on the creation of innovative solutions tailored to local context.

Case Study: Riverside Theatre Project, Guiyang, China

Guiyang is a third-tier city in the Guizhou province with ambitious goals and aspirations. Located in a mountainous area, where developable land is scarce, the government is seeking ways to improve residents' quality of life via modern urban development. The strategy is to attract older manufacturing and business players from the economies of Shanghai and Guangzhou to this area in order to uplift the poor rural population, improving basic services, and overall quality of life along the way.

As part of this effort, the Riverside Theatre is being designed at the center of the old city as a new cultural destination and business hub. The development will provide 940,000 square meters of civic, hospitality, office, retail, and residential offerings within a 130,000-square-meter parcel.

Riverside Theatre Project Site Plan

In recent years, rapid growth has challenged Guiyang's infrastructure. The old city core can no longer accommodate Guiyang's development needs. Outdated building stock in the downtown area has made regeneration



Bottom: 325-meter tall SOHO towers and central retail.
Source: RTKL

Opposite Top: Retail zoning diagram. Source: RTKL

Opposite Bottom: Site typology as part of the design strategy.
Source: RTKL

of the city center and its sub-centers difficult and has presented obstacles to modernizing the city, rendering it incapable of keeping pace with cities in southwest China, where redevelopment is rapidly transforming city cores. However, its favorable climate has encouraged investors to give it a second look, resulting in property purchases and a large amount of new residential developments, particularly in the suburbs.

As more people have begun working in the city center, the need for rejuvenation and development in this area has risen in importance. Compared to the rapid change happening in the suburbs, the old city center has made slow progress. The reasons for this are many, but often come down to challenges and limitations imposed by the need to relocate current residential offerings, the topological site level difference, and the city's riverfront context.

The physical site location, coupled with the high land price and relocation costs, mandates a very high FAR in order to meet the government's objectives for a modern, high-density city core and create a viable return on investment for the developer. Our proposed

design for the Riverside Theatre development includes one office tower at 450 meters tall, two SOHO towers at 325 meters tall, and three 200-meter tall residential towers.

Mixed-Use Retail Challenges

Site Configuration

With a small site area and high-density requirements for the office, residential, and hospitality components, the organization of the site area must accommodate the need to create a distinct identity of each function while allowing flexibility for the retail podium to achieve an optimum layout. Given the site's importance in the city center and potential to create a vibrant urban core, government leaders wish to create three zones linked by a central place and public open space. These three areas will accommodate civic and cultural space, an innovation district for new office and business functions, and a fashion retail district to serve commercial needs.

With regard to the latter, our design will create a diverse collection of retail environments with distinct architectural character and offerings. Creating seamless connections between a modern urban lifestyle and nature is the defining driver for our design concept.

Site Typology

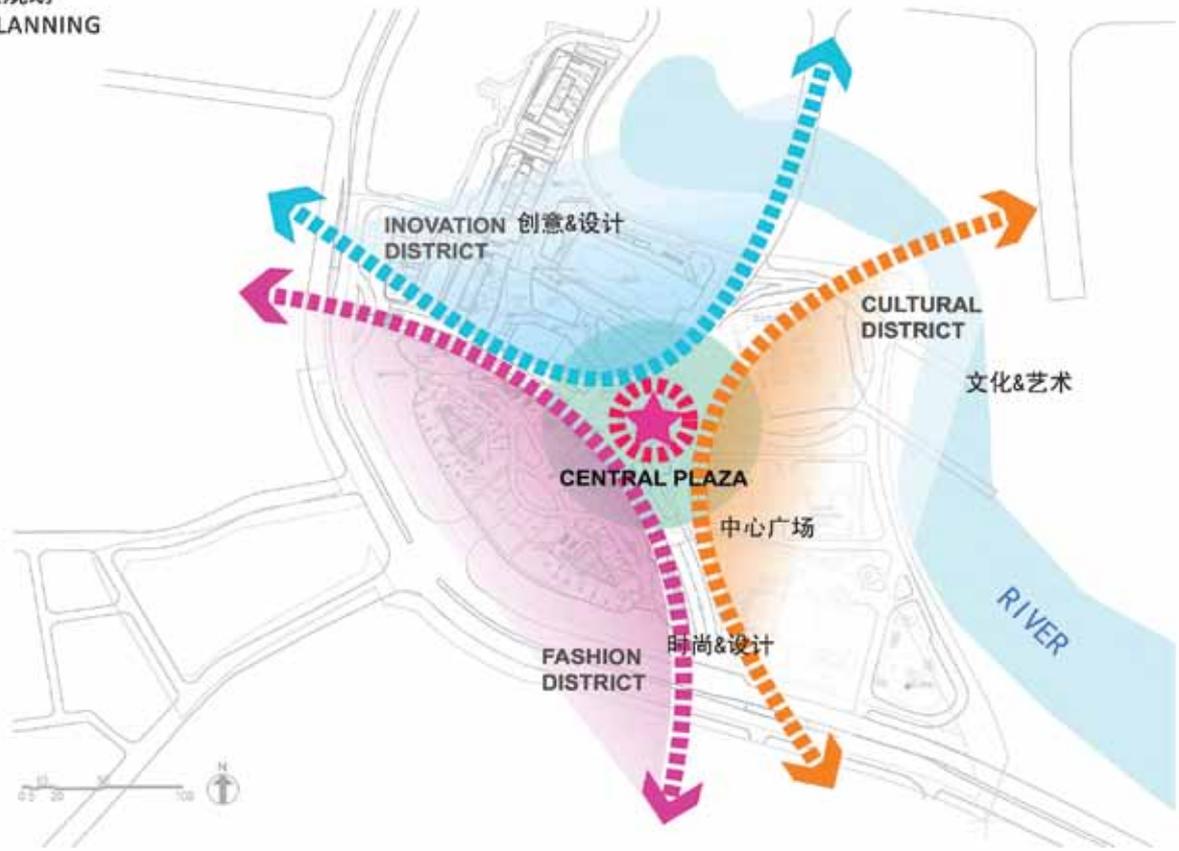
The second challenge is the site typology. Instead of reducing level change, the idea is to covert this site character into a new opportunity. With rapid developments at all levels in Guiyang as it transitions from a rural to an urban society, care must be given to create a sense of community vertically. In order to tackle this particular challenge, the design team conceived of five guiding principles intended to inform all aspects of the design process, imbuing the project with not just poetic gestures but also practical moves to aid community building.

Importance of Retail Anchor Tenants

The success of retail centers depends largely on the location and positioning of anchor tenants. In the past, these anchor tenants were most frequently department stores, which are not as prevalent in Asia as they are in the Western hemisphere. The rise of "mini-anchors" such as Apple, high-end designer brands like Gucci and Chanel, food and beverage, cinemas, and other entertainment, civic and cultural uses has forged a new path in drawing people through the retail environment and maximizing the commercial value of the development.



整体商业规划
RETAIL PLANNING



打造贵州大道为景观步行道
Guizhou Boulevard as landscaped avenue



沿贵州大道两侧的高端商业(一层)
High-end retail along Guizhou Boulevard (L1)



沿贵州大道两侧的高端商业(二层)
High-end retail along Guizhou Boulevard (L2)

Bottom: Section diagram focusing on the podium. Source: RTKL
 Opposite: High-end retail area enhances users' experience. Source: RTKL

Creating a Vertical Structure for a High-Density Retail Podium

The ideal vertical structure of the urban retail center is four stories of retail with one level below grade. Our primary challenge lies in achieving the high-density requirements of this development in a third-tier city market like Guiyang. To meet the developer's revenue goals, eight floors of commercial development are required to accommodate the required retail program, which is envisioned as the premier fashion district where the people of Guiyang will flock to shop, dine, and be entertained.

The major anchor tenant will be placed adjacent to a main pedestrian boulevard, enlivening the public realm and providing easy access, and smaller retail spaces will be

arranged underneath the residential podium for the convenience of apartment dwellers.

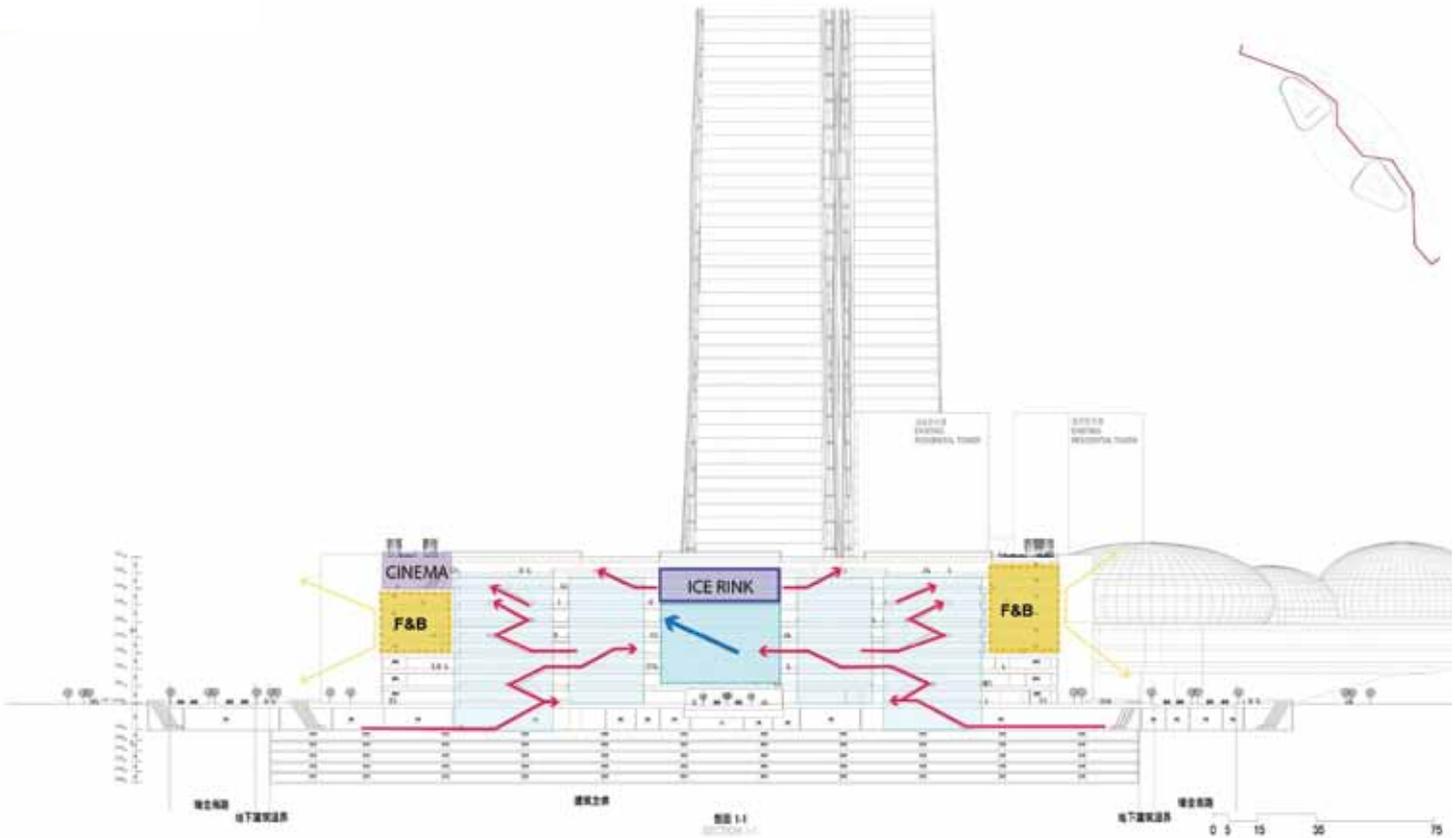
Diverse F&B Offering

Food and beverage is becoming an increasingly important element in mixed-use development. In the United States and Canada, F&B can make up as much as 50% of the program; in China, approximately 30-35%. Thanks to an increase in disposable income and frequency of travel, people are generally more receptive to expansive and unique food offerings. F&B is also associated with markets, cinemas, and cultural facilities in a greater capacity, particularly over the last five years, which is a testament to the power F&B wields in boosting the all-important "dwell time" (the concept understood by retailers to mean that more

time spent in a commercial space equates to more money spent).

Identity and Presence

With every mixed-use development, it is essential to establish a unique presence and identity for each use. Without this variety, mixed-use quickly becomes a mega-scale development likened to a fortress or bunker in the city. In addition to a unique architectural identity, the design should establish separate drop-off, entrance, lobby, and back-of-house areas that address the unique needs of each use. Some of these functions can be shared, but it is important to provide a personable, human-scaled experience with ease of access that is clear in its relationship to the building function, even if it is located on an elevated podium above the street.



“The rise of ‘mini-anchors’ such as Apple, high-end designer brands like Gucci and Chanel, food and beverage, cinemas, and other entertainment, civic, and cultural uses, has forged a new path in drawing people through the retail environment and maximizing the commercial value of the development.”



A main pedestrian boulevard and a central plaza serve to connect the different programs and provide event space. Additionally, creating an enjoyable outdoor experience with attractive landscaping and access to waterfront views helps to draw larger crowds and gives them a reason to stay, encouraging people to shop, dine out, and meander around the site, thereby activating the entire area.

Community of Buildings: Creating a District

While the iconic high-rise tower may inevitably be the star of the development, drawing eyes skyward to marvel at its sheer height, success is hugely dependent on creating a variety of experiences that accommodate live, work and play functions

closer to the ground. In practice, this amounts to combining convenient amenities with a hospitable workplace and a vibrant retail, entertainment and cultural district in a manner that maximizes value.

Currently, the trend in Asia is to assemble a large parcel of land and create one retail podium experience with towers. The complexity this entails – accommodating all potential user behavior and encouraging interaction in a particular space or environment – is similar to that of a small-scale urban planning effort while achieving a high-density core. In many ways, the Riverside Theatre project mandates developing a high-density, mixed-use district instead of simply a mixed-use project, thereby addressing the needs of both the government and the developer.

Summary of Findings

High-density, mixed-use development requires a unique design approach. With the density required to meet urban development needs and market demand, it is essential to capture the full potential value of any site. To do so, the design team must consider the following:

1. Recognize the merger of iconic high-rise development architecture and engineering disciplines with the place making aspects of urban design, planning, retail design, interiors, graphics, and landscape architecture disciplines.
2. Understand and address the unique needs of the project. Study and incorporate the following:



Opposite: Retail podium along the riverfront. Source: RTKL

Right: Lifestyle environment rendering. Source: RTKL

- Urban and city context
 - Balancing market and development goals, as well as aspirations of city leaders and the developers (this will often require skillful consensus-building)
 - Multidimensional traffic and transit solutions: metro, taxi, bus, car and bicycles must be considered in the strategy
 - Climate and weather impacts on the site (in the case of the Guiyang project, a riverfront resiliency strategy for flooding)
3. Capture the total value opportunity of the retail podium.
- Develop a horizontal and vertical anchoring strategy
 - Create an urban fabric of open and closed spaces
 - Create a dynamic urban district, rather than just a shopping mall in the city
 - Take a hospitality approach to design, particularly with the interiors, in order to create a lifestyle-oriented environment that allows users to enjoy and dwell in the space
 - Design a variety of food offerings with multiple price points to accommodate everyone from foodies to families, from fast food to markets to specialty dining
 - Provide 2D and 3D cinemas and other entertainment offerings
 - Provide a vertical circulation strategy which addresses the unique movement of shoppers (including escalators, express escalators, elevators and express elevators)
4. Address the unique needs of all functions of the district:
- Dedicated address for residential, office, and cultural uses



- Rooftop or public green spaces associated with each use, including parks and open space, pools, sports amenities, and health clubs
 - Dedicated car and bicycle parking for each use
5. Address climate and regulatory needs for sunlight and climate:
- Sun angle and shadow casting (this is of particular significance in China)
 - Wind and natural ventilation studies
 - Wind and climate on structural loading and curtain wall design
6. Address the code and regulatory requirements of the municipality, including, but not limited to:
- Fire codes and fire access
 - Building face requirements
 - Land-use planning (especially with multiple uses)
 - FAR
 - Land coverage and green space
 - Parking
 - Civil protection requirements

The RTKL architecture and urban design team worked in conjunction with SOM, Architects of the Iconic Tower, Capol of Shenzhen, China, the Local Architect and LDI. RTKL appreciates the cooperation and efforts of the entire team and looks forward to future collaboration.