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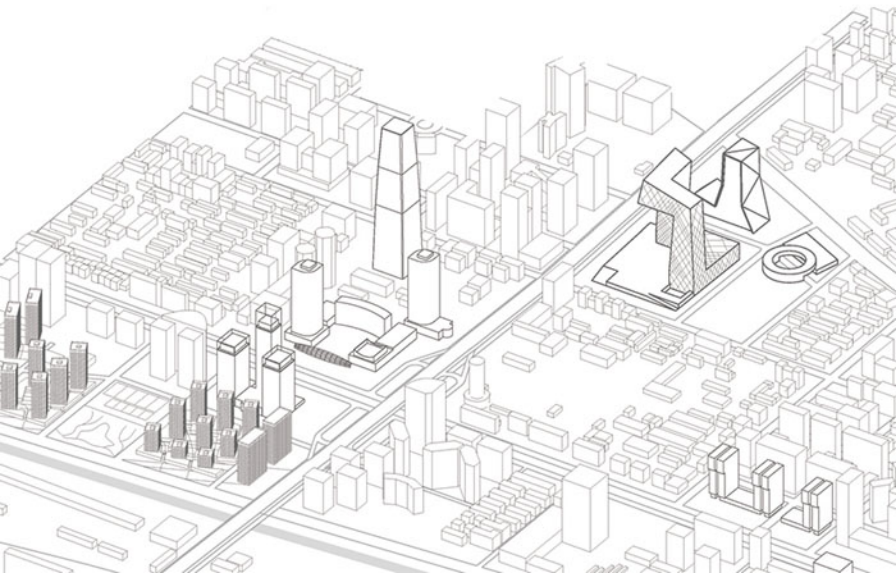
EMERGENT ARCHITECTURAL TERRITORIES IN EAST ASIAN CITIES

WRITTEN BY PETER G. ROWE
WITH DRAWINGS BY MICHAEL SYPKENS



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After World War II and the breakdown of colonial hegemonies, the drive towards wholesale modernization in East Asia assumed a conspicuous form of guidance, sometimes quickly although at other times more gradually, depending on the political circumstances on hand at the time. To varying degrees this guidance was largely top-down, autocratic, or in the case of Japan, oligarchic. It was also production-oriented, usually on a huge economic scale, with the role of the state very much in evidence. It had a strong emphasis on social control, calling for conformance in return for betterment, and it took place amid a milieu in which the usual distinctions between the public sector, the private sector and civil society were often scrambled and where civil society, in an urban activist sense, remained almost uniformly weak. Those in power, often with many followers, were quick to materialize their version of modernization on the urban landscape with international planning and urban development procedures largely of Western origin from the then First and Second Worlds, counting the early Soviet influence on China. Among the blueprints deployed were master planning exercises; rational allocations of land uses and productive resources; heavy investments, when affordable, in infrastructural armatures of one sort or another; forms of collective consumption and strong public provision; as well as broad-brush and inelastic, coarse-grained regulation. Nowhere was there a high emphasis on environmental amenity beyond basic services, nor on livability or lifestyle choice, again beyond basic provisions. Overall, this general recipe was relatively successful, at least across a relatively narrow band of qualitative dimensions. The region became economically vibrant to a greater than lesser extent, with closely-watched and strongly-emphasized Gross Domestic Product (GDP) on the rise. Much of it also became modern looking, at least on the surface, and major cities tended to be dense, large and reasonably well serviced.[1]

Beginning around the 1990s, this state of affairs continued in many places, although various concatenations of events led those in power, again along with many segments of society, to turn away from production-oriented and narrowly-defined pathways forward in modernization towards a much fuller embrace of broader lifestyle opportunities, improved environmental amenities, and higher standards of urban living. To be sure, those involved were egged-on by rising affluence and a broadening of aspirations and tastes, as had happened elsewhere in the West several decades earlier. They were also responding to the need for cities to remain or become competitive in increasingly global contexts by offering what was expected to otherwise foot-loose investors and participants in an increasingly more sophisticated labor force. As a consequence, a paradigm shift in attitudes and orientations towards urbanization began to occur in many places in East Asia, becoming materially obvious certainly during the first decade of the new millennium. In effect, what transpired were ‘turning’ or ‘tipping’ points in the dynamics of urban change. As several contemporary historians have variously described them, these are interruptions in the more usually well-described longer-term and smoother unfolding of history. They can be seen as somewhat gradual, as in Miriam Levin’s and others’ accounts of elites reframing the existence of vast numbers of people during the second industrial revolution, or more sudden, as in Niall Ferguson’s challenge to the conceptual framework of a slow and gradual decline of the U.S.’s standing in the world.[2] Referring to explanations from physical non-equilibrium and chaos theory, Ferguson alikens great powers “to complex systems made up of large numbers of interacting components that are asymmetrically organized…”, operating somewhat between order and disorder, “on the edge of chaos … such systems can appear to operate stably for some time but are in fact constantly adapting.” A tipping point comes about when a “phase transition” occurs and the entire system changes abruptly from one state into another.[3]

A somewhat less calamitous way of viewing the same or similar phenomena is to regard patterns of urbanization, in a Deleuzian manner, as the outcome of two simultaneously occurring activities of deterritorialization and reterritorialization, again acting away from long-lasting equilibrium.[4] In this construct, deterritorialization refers to a state transition when sufficient pressure is brought to bear, from a variety of sources, so as to eliminate existing distinctions, such that the predominance of a specific urban regime of operations collapses, or begins to collapse. Reterritorialization, by contrast,

CHAPTER ONE

TERRITORIES AND TURNING POINTS

involves the processes that take up with the destabilizing pressures resulting in a different regime and predominant pattern of urbanization, and so the general process of spatio-temporal unfolding moves along. Historically, among examples of deterritorializing influences, there are technological changes, like from horse-drawn to motorized vehicles, and changes in, for instance, the managerial means governing urban production and consumption. There have also been changes in power relations under conditions like land reform and among positions in cultural politics of which the Cultural Revolution in China, for instance, is an extreme example. By contrast, events like natural disasters may also solidify regimes as in the Kanto earthquake of 1923.

In the present context of East Asian urbanization and urban-architectural development, deterritorialization has been relatively sudden in most cases, although hardly instantaneous and not without reasonably ample precedent elsewhere, as alluded to earlier. In many cases, a change in political leadership has also been involved, although it is possible to imagine, of course, political regime change without there necessarily being fundamental shifts in urban formation. In some respects this happens rather routinely in places like the United States. Reterritorialization, on the other hand, is usually distinguished as a particular kind of discourse, in the sense of Michel Foucault, framing and even defining accepted language and related means for engaging in topics, in this case, associated with contemporary planning and urban-architectural practice. Clearly the shift from a narrow production-oriented perspective of urbanization to one that is more open and inclusive requires a change in discourse. To be effective, however, it must also go beyond mere rhetoric and become fully entrained with concomitant actions. Otherwise, palpably, little will happen. As they say, talk is cheap. Moreover, discourse means more than that in this context. Returning to the idea of turning or tipping points, they are instances of deterritorialization followed by reterritorialization resulting in regime change with regard to urbanization and urban-architectural production, even if circumstances remain much the same socio-politically or in other respects. Further, the turning or tipping points do not necessarily imply progress and uniform betterment of conditions. The bursting of Japan's and Tokyo's economic bubble has certainly had a deterritorializing influence on urban circumstances, although not altogether for the good.

As suggested earlier, turning moments in urbanization in East Asia began occurring materially in the 1990s, if not slightly before, and were more fully evident during the 2000s. They did not all happen at once, neither were they occasioned by the same factors and influences, nor were they otherwise aligned symmetrically. Having said this, however, in a generalized manner most places were making a transition from 'development states' into 'competition states,' during this period. Urbanistically many major cities in the region were also changing from modern into post-modern cities from a functional perspective, which in itself is part of the same 'turning point.' In the late 1980s, South Korea and Seoul, for instance, saw the rise of the democracy movement in the face of the lingering military dictatorship, followed by power sharing among the main political parties. The present democratic period was fully embraced in 1993 which then saw the subsequent orderly transition from one civilian government to another. Still a relatively poor country in 1990, with a GDP per capita of around USD 5,000, economic prosperity continued to accrue, rising to around USD 28,000 in recent times.[5] There was also a slowdown in Seoul's remarkable urban growth since the 1960s, at one of the highest sustained rates in the world for a city of any scale, providing breathing room for considerations beyond merely production and provision of shelter. Rising affluence was also matched by growing aspirations towards substantial improvements in the quality of life and in the physical environment. In many ways, the completion of the turn towards quality over production *per se* was marked by the mayoral election campaign in Seoul of 2002 and symbolized by the rapid construction of the Cheonggyecheon Restoration Project, converting a highway corridor into a linear park through central Seoul.

By contrast, Japan and Tokyo, which were already very modern and among the wealthiest places on earth, events went in the other direction. The economic and real-estate asset bubble that had been building up during the 1980s of

'Japan Inc.,' burst in the early 1990s, resulting in a significant downturn that continues to linger today. Tokyo, among other cities, experienced a sudden loss of competitiveness, with a stock market, for instance, which was on a par with New York in 1992, falling to around a third of the value of listings, and with 30 percent less international conferences, falling well behind Singapore in East Asia by almost half as much. Beginning around 2000, if not before, strenuous efforts were made to enable Tokyo to regain its competitiveness, starting with construction of more efficient commercial space with wider floor plates and surrounded by higher-level services and amenities. This was followed by such programs as the Urgent Improvement Zone legislation of 2002, aimed at making key parts of Tokyo's environment physically and functionally more attractive and economically competitive, subsequently leading to comprehensive code re-writing and introduction of landscape and preservation laws by 2004.[6] Prominent recent projects such as Roppongi Hills, and Midtown, among others, clearly embody this change in direction.

Somewhat like South Korea, recent turning points for urbanization in Hong Kong, Taiwan and Singapore were strongly dictated by internal events, as well as the general drift towards becoming competition states as mentioned earlier. In Hong Kong an obvious aspect of the turning point there was the handing back of the territory from the United Kingdom to China in 1997. This, together with the regional economic crisis around the same time, along with the rise of Shanghai, pushed those in the former crown colony into reconsideration of their trading position in East Asia. Certainly, the landmark project from this turning point was the Airport Core Programs and Chek Lap Kok, billed as one of the largest infrastructural upgrades in the world and an early part of Hong Kong's re-branding exercise in the name of improved and diversified environmental ambience and competitiveness. In Taiwan and Taipei, events got underway somewhat earlier following the end of martial law in 1987 and the quick transition into mayoral elections and greater municipal autonomy in the early 1990s. Confronted with a plethora of urban problems from the prior autocratic regimes, successive mayors and later Presidents – Chen Shui-bian and Ma Ying-jeou – set about to transform Taipei into a more efficient, vibrant and amenable city. Apart from the new subway system and the cultural environments that surrounded it, Taipei 101 in the new or revived Xinyi District of the city, not only held the notoriety of being the tallest building in the world for a time, but also became the palpable symbol of this turning moment.

Events in Singapore also gained early momentum, culminating in the more full-blown turn into a self-proclaimed 'vibrant and livable city' of today. In 1985, the island state fell into economic recession for the first time since 1960. Then the loss of votes by the paternalistic Peoples' Action Party in 1991 served as something of a wake-up call, ushering in a less straight-laced and more liberal set of attitudes to the island city-state, followed by a conspicuous expansion of recreational opportunities, additional urban amenities and diversified living environments in the so-called 'City of Tropical Excellence' and a 'Lively and Livable Singapore.' The rising and more sophisticated middle class began pressing – albeit politely – for greater variety and some slackening of such constant guidance from its life-long one-party government, leading urban development in the direction of environmental conservation, historic preservation, tourist attraction, and labor-force retention. Throughout this transition, Marina Bay North and South, close in to the city center, have served as harbingers of things to come.

Finally, China has made its way, at least partially, into a post-modern era with more urban opportunities and amenities, pulling away from its earlier 'one size fits all' regimentation accompanied by less of an economic emphasis on industry. Indeed, today there are at least two urban Chinas in several respects. In appearance, one is certainly contemporary and glitzy, whereas the other is still gritty, dingy and dilapidated. Physically, one is made up of large metropolitan areas, whereas the other consists of smaller-scale settlements and villages. Apart from central authority, one is now also ruled by the rise of municipal states whereas the other is comprised of vestiges of far more localized power relations. In this last regard, transition began occurring with the City Planning Act of 1989 which gave municipalities the right to prepare urban plans, issue land-use and building permits, and to enforce development contracts. Further impetus also came

in 1994 with the central government's fiscal reforms favoring municipalities, followed by widespread implementation.[7] As much as anywhere else, Shanghai serves as a leading example of the turn into conventional and contemporary urban developments that began occurring from the middle-to-late 1990s and well into the 2000s. Moreover, within Shanghai, the urban mobilization from Puxi into Pudong, across the Huangpu River, became emblematic of entry into a new era and freer rein being given to market forces.

Within the scope of these turning points in the urbanization of major East-Asian cities, new territories were charted and new forms of urban-architectural development and expression were engaged in. Indeed, this book, as its title suggests, is organized primarily around the conceptual framework of architectural territories and their geographies occasioned by these breaks with the past. Within this framework 'territory' refers to both a tract of land or parcel of property and to a sphere, or field, of architectural action. The Central Business District in Beijing, for instance, is a discriminable area, newly defined within a master plan to the east of the old city. As a field of action it is also a place with a growing concentration of business and related activity, primarily housed in high-rise buildings, some of which have architectural pretensions. Following on from this and in line with its common definition, 'geography' refers to differentiation within a territory, accomplished with respect to characteristics of and interrelationships among physical features. This differentiation, in turn, applies to a territory in both its sense as a tract of land and as a sphere of action. For instance, the Beijing Central Business District, again, has a geography that is well placed *vis-à-vis* infrastructure, connection to the airport, nearby support facilities and other relevant locations. It is also further qualified as a development tract through a district planning exercise, specifying block layouts, street hierarchies and types as well as volumes of building. The dominant sphere of action – high-rise building construction – brings along with it a particular geography (i.e. what was actually built) and an intrinsic geography in the sense of a landscape of different building forms or typologies comprising a known universe of a particular manner or kind of building (i.e. a range of possible construals of high-rise building and architectural accomplishment). Today, in fact, this intrinsic geography of the high-rise building is quite wide-ranging, including current preoccupations with shapeliness, environmental performance, self-regulation, material integrity, and programmatic inclusion. Finally, as noted earlier, framing these territories and their geographies are discursive references stemming from the idea of a 'discourse' or accepted manner of engaging in topics, in this case associated with contemporary design and urban-architectural practice, and often underlined by its preoccupations.[8] In short, the chaining together of 'turning points,' their 'discourses' or discursive references, the 'territories' so defined in two senses and their 'architectural geographies' – both actual and intrinsic – establishes a situational logic for discussing and assessing architectural production.

The chapters which follow are organized according to territorial considerations either involving specific tracts of relevance embracing several spheres of action, like Beijing's east-west and north-south axes, or various tracts and projects that coalesce around important spheres of action, like the Hong Kong Airport Core Programs and similar operations around arrival, departure and linkage to and from major metropolitan areas. Each chapter then concentrates on specific architectural projects within a particular territory, sorting through the actual projects in relationship to their architectural geographies and situational logics. In addition, other relevant or significant projects not yet constructed within a territory or built elsewhere, are briefly discussed where necessary, in order to round out the overall presentation. The Shanghai Tower, for instance, scheduled to be built in Lujiazui – as part of Shanghai's Pudong axis – is included as a side bar to the broader discussion of scenography, as is the planned Dongtan project in relation to various forms of environmental conservation. Throughout, however, an almost exclusive emphasis is placed on completed works. Further, although the plans and architectural projects under discussion are numerous and diverse, this exposition is not intended to be definitive or exhaustive in the territories it covers or their architectural geographies. Rather, it aims to point to more public architectural production that has been significant and influential in exemplifying and being emblematic

of East Asian urbanization turning into a new stage of 'late' or 'post'-modernization. In addition, throughout the book, East Asia, as a region, conforms to a standard scholarly and widely-held definition: China, Hong Kong, Japan, Korea, Taiwan and Singapore. The underlying logic for this definition lies in the shared Confucian base of culture among these nations, quite apart from more recent manifestations of other kinds of beliefs, intra-regional copying and socio-political orientations. Although, more strictly speaking, located in South East Asia, Singapore conforms to this logic and, therefore, is included.

With this overall organization and particular frameworks in mind, the remainder of the book begins, in chapter two, with a discussion of Beijing's two axes: the familiar traditional north-south axis through the old city and the more recent east-west axis, largely of Communist devising along Chang'an, also through the middle of town. The territories of concern are the newish Central Business District, the Tiananmen area and the Olympic Green. The architectural projects highlighted are the CCTV/TVCC complex, Jian Wai SOHO, the National Theatre, the Museum of History, the Olympic Stadium, the Aquatic Center and Digital Beijing. Remaining in China, the following chapter deals with Shanghai's master planning and the city's recent emergence across the Huangpu River from Puxi into Pudong, defining a virtual east-west axis, picking up on the territories of Lujiazui, Huamu and Century Park to the east and the Renmin Precinct and Yan'an Expressway to the west. The architectural and related projects of significance are The Grand Theater, the Museum of Planning, Yan'an Expressway Park, the Shanghai Museum, the Jin Mao Tower, the World Financial Center, Century Avenue, the Oriental Arts Center, the Museum of Science and Technology, the Pudong Museum and Archive, Century Park and the International Exhibition Center. Also included briefly in the discussion is the incipient north-south axis along the banks of the Huangpu River with the North Bund, the Bund Redevelopment, Riverside Park, Houtan Park and the Shanghai Expo of 2010.

The fourth chapter focuses on arrival, departure and linkage to and from major metropolitan areas, almost exclusively by way of airport facilities, essentially built around the new paradigm presented by Kansai Airport in Japan in the 1990s. This is followed by discussion of the massive Hong Kong Airport Core Programs, also in the 1990s, and Pudong International Airport in Shanghai. Architectural projects highlighted include the Chek Lap Kok air terminal, the Hong Kong central rail terminal and Kowloon Station, Kansai Airport, the Pudong Air Terminal. Side references are also made to Beijing Airport's new Terminal 3, the new terminal at Singapore's Changi Airport and the Yokohama Ferry Terminal. Linkages back into urban areas include discussion of Shanghai's Maglev connection, together with the four new bridge connections from Pudong back into Puxi, Hong Kong's airport rail, road and bridge connections, along with those associated with Kansai's infrastructure.

Chapter five is about district making in several modalities, primarily in order to secure better competitiveness. The territories under review are reclaimed parcels of landfill, as in Marina Bay, Singapore, with the architectural projects of Suntec City, the Esplanade - Theatres on The Bay, Marina Bay Sands, the Marina Bay South complex, and Gardens by The Bay, as well as the Formula One car-racing street event space. Also included are redevelopment territories in Tokyo, ranging from different small parcel assemblages, through requisitioning of former government sites, to re-use of brown field sites, with architectural projects like Roppongi Hills, Midtown, Shiodome and their mixed-use complements of commercial and other cultural uses. In addition, Taipei's Xinyi District is discussed from a similar perspective, including a review of Taipei 101 and the nearby World Trade Center.

Chapter six shifts ground towards conservation and re-use, with discussion of fields of action focused on various forms of historic and environmental conservation, as well as adaptive re-use. The specific territories involved, in the sense of areas or tracts, are the Cheonggyecheon Restoration Project in Seoul; Insa-dong and Bukchon in the same city; Chengdu's Funanhe and Shahe projects; Beijing's 798 Art District; and Shanghai's Xintiandi, as well as Dongtan. Architectural and other projects highlighted include: the Cheonggyecheon landscape, the Cheonggyecheon Cultural Museum, Ssamziegil, and the yet to be completed Dongdaemun Design Plaza and Park in Seoul; Living Water Park and various riverine reclamation areas in

Chengdu; adaptive re-use at Beijing 798 and Shanghai's Bridge 8, as well as at Xintiandi; and the Ningbo City Museum.

In chapter seven, the architecture of retail goods on display is taken up, especially with regard to fashion, a relatively recent internationally-oriented preoccupation in East Asia. Discussion focuses on four specific territories in the form of shopping streets. They are Omotesandō and Ginza in Tokyo, Orchard Road and its Improvement District in Singapore, and Nanjing Road in Shanghai. Other side references are also made to Wangfujing Road in Beijing and Jianghan Road in Wuhan, as a part of the street pedestrianization occurring in China, both co-terminously with and on the heels of Nanjing Road. Architectural projects highlighted include Prada, Louis Vuitton, Tod's, Omotesando Hills, Hermès, the Nicolas G. Hayek Center, and so on in Tokyo; Orchard Central, Wisma and the ION Orchard in Singapore, as well as assorted retail outlets along Nanjing Road. Chapter eight draws discussion to a conclusion, offering not so much a summary as some general observations about shaping of architectural territories and their geographies in major cities in East Asia.

1 Peter G. Rowe, *East Asia Modern: Shaping the Contemporary City* (London, 2005)

2 Miriam Levin, Sophie Forgan, Martina Hessler, Robert H. Kargon and Moris Low, *Urban Modernity: Cultural Innovation in the Second Industrial Revolution* (Cambridge, 2010) and Niall Ferguson, 'Complexity and Collapse: Empires on the Edge of Chaos', *Foreign Affairs* (March-April 2010), pp. 18-32

3 Niall Ferguson, Complexity and Collapse: Empires on the Edge of Chaos', *Foreign Affairs* (March-April 2010), p. 22

4 Based on terminology from Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (English edition London, 1987), pp. 508-510

5 Drawn from *Korean Statistical Yearbooks* and *The Economist* (17 July 2010), p. 74, in purchasing power parity terms.

6 Minoru Mori, *Urban New Deal Policy: Striving to Recover from the Longest Crisis of the Post-War Era* (Tokyo, 1999), pp. 1-2

7 Fulong Wu, 'China's Changing Urban Governance in the Transition Towards a More Market-Oriented Economy', *Urban Studies*, vol. 39, no. 7, pp. 1071-1093; Tingwei Zhang, 'Land Market Forces and Government's Role in Sprawl: The Case of China', *Cities*, vol. 17, no. 2, pp. 123-135

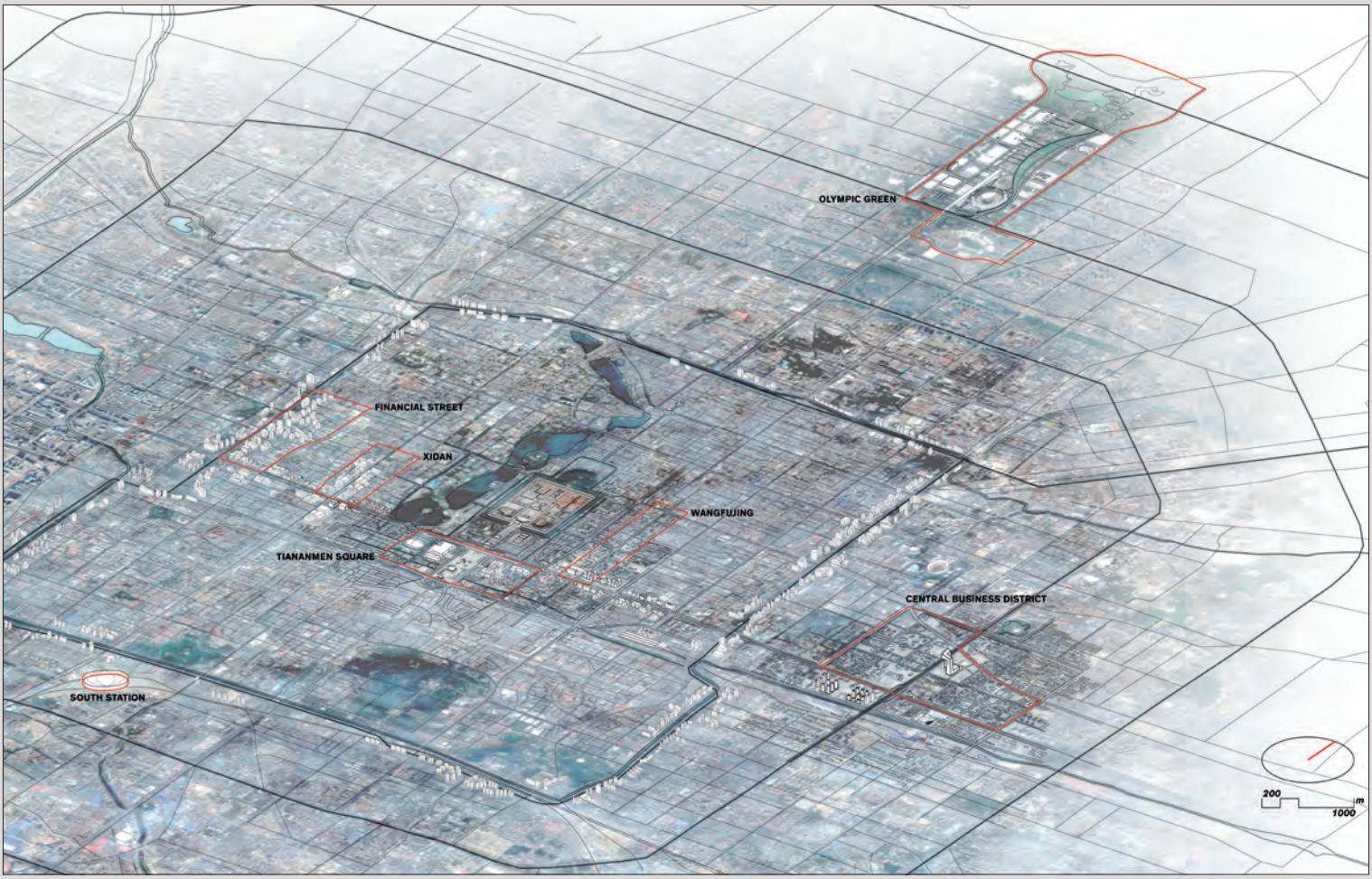
8 After Michel Foucault, *The Archaeology of Knowledge* (English edition London, 1972), pp. 116-117

The imperial city of Beijing originated around 1267 when Kublai Khan, the grandson of Genghis Khan and the first emperor of the Yuan Dynasty, set out to construct Da Du as his capital. Work began with the erection of city walls, spanning a rectilinear perimeter some 28 kilometers in length, penetrated by 11 gates. In 1271 an inner perimeter wall began construction, enclosing the palace complex and the imperial compound, again in a rectangular plan form of 3.5 kilometers in length, and by 1274 the new capital was almost completed. Not the only settlement in the northern plain beside the Yongding River running to the south, the city was built near the walls of Zhongdu, the all but destroyed capital of the defeated Jin Dynasty, founded in 1153. Planning of Da Du has been attributed to Liu Bingzhong, a protégé of Kublai Khan's, who incorporated and modified a system of artificial lakes, created by the Jin as a source of water supply into the confines of the walled city. The Mongols held sway until an army of the emerging Ming Dynasty successfully marched on Da Du in 1368. Two years later the city was assigned to the young Zhudi – the Prince of Yan – who lived there at least for a time in 1380, before becoming the Ming Yongle emperor in 1403 and relocated the capital back to what became Beijing, away from Nanjing in the south for strategic and related political reasons. By 1415, repairs to the Grand Canal, providing ready transportation to the south, were completed and by around 1419 a new system of city walls was also completed, larger in dimensions and fortifications, although moved somewhat to the south of the original walls and away from polluted areas in the north of Da Du, while maintaining a similar overall rectilinear footprint. Subsequently, relatively densely-occupied areas to the south were walled so that by 1553, the tripartite division of the Beijing into the 'inner city,' the 'outer city' and the imperial or 'Forbidden City' emerged. Then in 1644, the city became occupied by the conquering Manchus from the north-east, becoming the capital of the Qing Dynasty until 1911. Indeed, with some internal modifications and embellishments along the way, the basic profile of Ming-Qing Beijing remained largely intact until the 1950s.[1]

Behind this very contracted historical account, however, the layout of Beijing was clearly seen from the outset as an instrument, or artifice, for symbolizing a cosmic, social and moral order, as well as for organizing social and political space with the objective of achieving permanence, harmony and prosperity, both in the present and for the future. In this respect it took after other Chinese cities from earlier times like Western Han Chang'an (200 BC-24 AD), Eastern Han Luoyang (25-180AD) and Song Kaifeng (960-1126 AD). As variously described elsewhere, it embodied the bureaucratic political system of the centralized state, the feudal economic system of China, and its essential Confucian-Taoist cultural system. Cosmologically, it also manifested a style of thought and of being in the world that presupposed, as one author put it, "an intimate parallelism between external mathematically expressible regimes of the heavens and the biologically determined rhythms of life on earth," thus facilitating the "maintenance of harmony in the world through appropriate rituals and orientations accompanying the pushes and pulls of cosmic events."[2] More referentially, the classical ordering of Chinese capital plans has been ascribed to the *Kaogongji* (Record of Trades) of the ancient *Zhou Li* (Rites of Zhou); the *Wangcheng* or idealized city plan arising from these texts; the notion *Tianren heyi* (the union of man and nature); and time-honored practices of geomancy. Also in play was a ward system of social organization – the *Baojia* dating at least from the Song Dynasty (c. 1070 AD) – extending to issues of service management, education, tax collection, facilitation of military conscription and the like, at a community or neighborhood level. Spatial arrangement of wards was often based, in turn, on the much earlier quadrangular imprint of the 'well-field system,' usually with a nine-square configuration of plots, pathways and irrigation channels, dating before the Zhou back to the Shang Dynasty. This arrangement, combined with dictates about major streets, arising from the *Zhou Li* and the *Baojia* system, gave rise to the regular gridiron pattern of blocks, characteristic of imperial urban planning, and the later walled enclosure and gating of the wards within the overall fortifications of the city. Other pragmatic considerations focused on economic efficiency, such as urban-rural relations in terms of population density, carrying capacity and agricultural sustainability, were also introduced into the zoning and location of urban settlements

CHAPTER TWO

THE TWO AXES OF BEIJING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FINANCIAL STREET
XIDAN
WANGFUJING
TIANANMEN SQUARE
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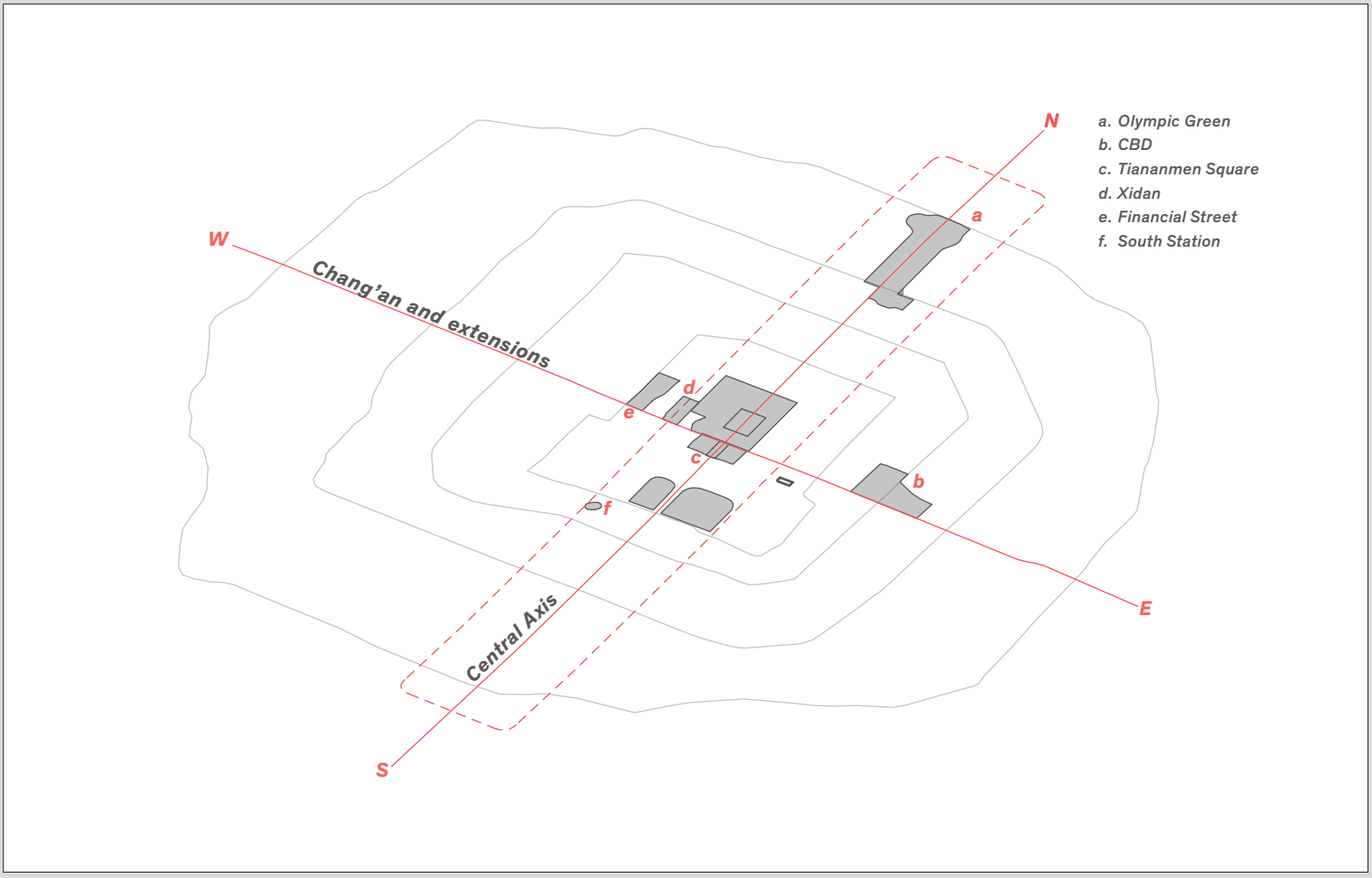
N
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Chang'an and extensions
Central Axis
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a. Olympic Green
b. CBD
c. Tiananmen Square
d. Xidan
e. Financial Street
f. South Station

through the *Guan Zi* attributed to the venerable Minister of State of the Qi Dynasty, Guan Zhong (b. 645 BC).[3]

All told, these and other instrumental and artifactual qualities of the Chinese city evolved into a complex and well-orchestrated arrangement, supporting both daily life and higher-order cosmological preoccupations of inhabitants. Small wonder that the invading Mongols and Manchus readily adopted and perpetuated such a construct and system of governance. In sum and canonical form, the Chinese imperial city was defined by a well-fortified and gated regular walled enclosure, square to rectangular in footprint, and oriented towards the cardinal axes, although favoring the southerly aspect and central north-south axial alignments. Where possible it was built on flat ground and had a pronounced and enclosed ceremonial and palatial center around the *axis mundi* of the imperial world – a "place where earth and sky met, where the four seasons merged and where the wind and rain were gathered in, and where the forces of *yin* and *yang* were in harmony."[4] Internally, it was generally organized by a gridiron layout of blocks and streets, often with a finer-grained lane structure – the *hutong* of Beijing – running primarily in an east-west direction and thus maximizing favored southerly exposure. Consistent use of courtyard and quadrangular buildings at various scales and the enclosure of precincts by successive walls within walls provided hierarchical yet self-similar substance to the overall ensemble, again in keeping with prevailing concepts of well-ordered and harmonious habitation.

Axial Arrangements, Plans and Territories

Returning to Beijing and as one might expect, one of the legacies of successive rounds of imperial planning was the strong virtual if not actual presence of a north-south axis. Indeed, it is often referred to as Beijing's 'central axis' and was formalized through the arrangement of embellishments to the walled city precinct during imperial times, centered on the Forbidden City, with Jingshan and the Bell and Drum towers aligned to the north and with the Tiananmen extension, Zhengyangmen, Qianmen and the flanking of Tian Tan (Temple of Heaven) and the Xiannong Tan (Temple of Agriculture) to the south. Beijing's east-west axis, by contrast, is a much later construct manifested in the Beijing Plan of the Japanese occupying regime during the Sino-Japanese war of 1937 to 1945, but essentially an artifact of the People's Republic of China. It emanates along Chang'an Avenue, flanked by the Forbidden City and Tiananmen Square in the center of the city. It stretches to the east via Jianguomen Wai Avenue and the Jingtong Expressway past the Fifth Ring Road, and to the west via Fuxingmen Wai Avenue, Fuxing Road and Shijingshan, also past the Fifth Ring Road – a total length of over 20 kilometers. It came into prominence, around the Beijing Master Plan of 1958-59 and completion of Tiananmen Square, with the widening of Chang'an to 120 meters over a length of some 7 kilometers, overseen by Chen Gan, a noted planner of the day.[5]

Intended to serve as a monumental avenue with sites for governmental and ministerial headquarters, the intersection with Beijing's north-south axis, running through the Forbidden City, Tiananmen and Qianmen, formed the *axis mundi* of the People's Republic of China, figuratively speaking. Together with both axes, this intersection also became a pivot point for subsequent planning efforts, largely respecting the figure, if not the form, of imperial Beijing, in itself something of an idealization of being in the world, as described earlier, within a political, administrative and cultural capital. However, while preserving the continuity of this role for Beijing, albeit in a different key, the 1958-59 Plan also called for the city to become one of the nation's largest industrial concentrations and a center for science and technology. In short, it was to become both the administrative capital and a leading socialist industrial city. Indeed, it was not until the 1982 Plan – the first after the historic opening up to the world in 1978 – that the thread of this awkward duality within the city's development discourse was broken, reverting back to Beijing as a political and cultural center, together with emphases on education and historic conservation within the old city. By the early 1990s, however, urban growth had overwhelmed the 1982 Plan. Outward expansion was on the order of twice what it had been earlier and there were mounting real-estate pressures on the inner city. A new round of planning activity began around 1991, culminating in the Beijing City Master Plan of 1991-2010, ratified by the State Council in 1993 and fully published in 1996. In yet another shift in the planning discourse about the city, according to this plan Beijing was to become an "international city operating in all respects with additional functionality and structure," including encouragement and

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Historical Evolution of Beijing

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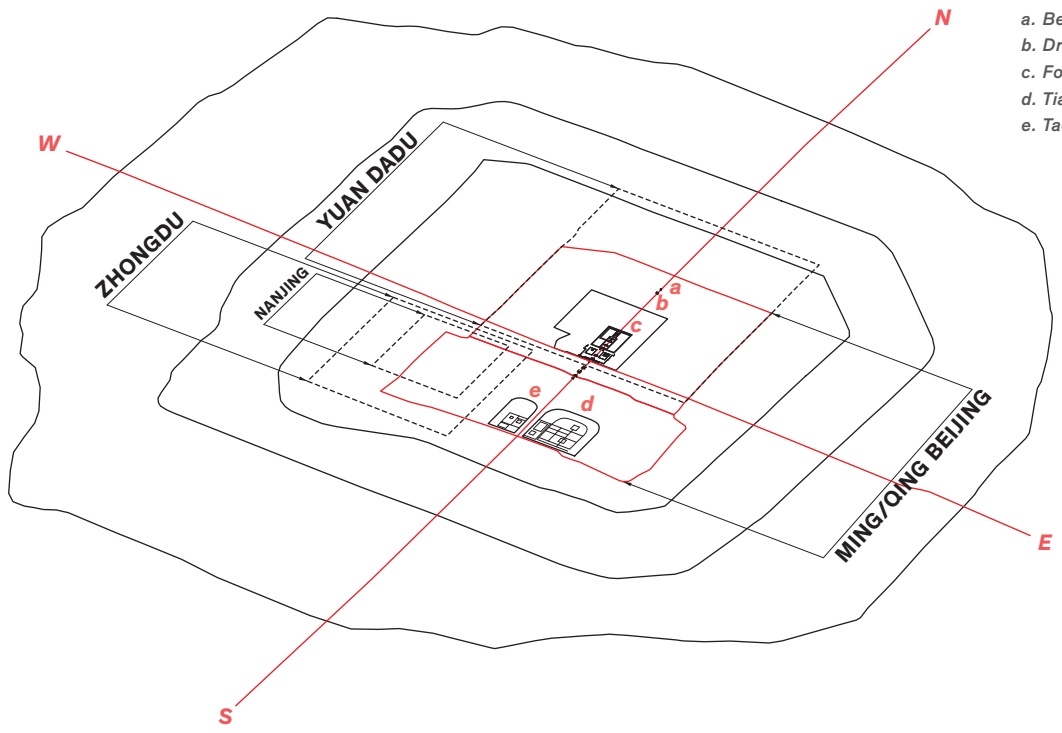
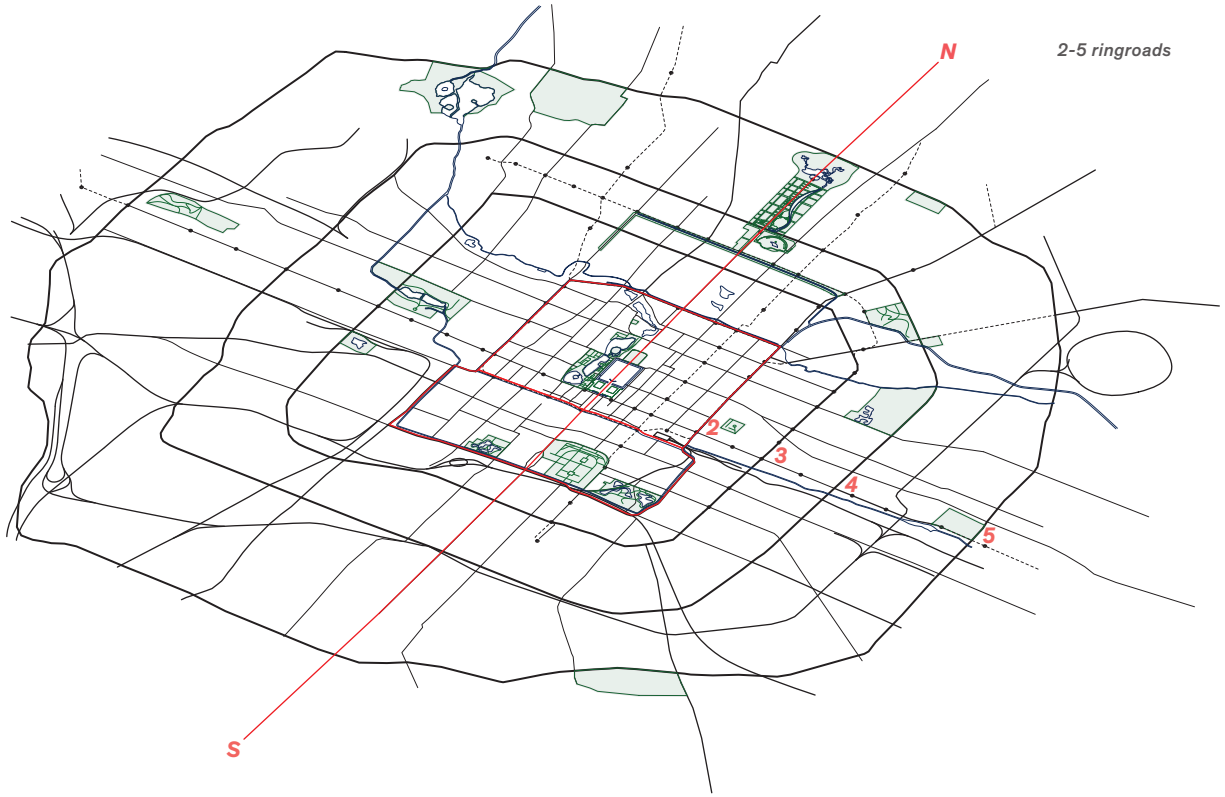
Road and Open Space Structure of Beijing



a. Bell Tower
b. Drum Tower
c. Forbidden City
d. Tian Tan
e. Taoranting



2-5 ringroads

accommodation of a further shift into the tertiary economic sector.[6] Continued emphasis was to be placed on historic preservation and conservation, as well as on a shift in building focus from the city center to adjacent outside districts, amounting to a "re-balancing of the older central area."[7] The subsequent 2004-2020 planning effort, while also tending to the needs of broad metropolitan development, especially towards the east, largely reaffirmed the directions of the 1996 Plan with respect to the city's inner districts.[8]

One notable consequence of these successive planning efforts and, indeed, many that went before, is the persistence of both organizational and material aspects of Beijing's physical layout, or rather, a persistence of continuity in its idealization. Despite shifts in planning discourse about the city, essential physical ideas about balance and symmetry, including annular extension and self-similarity according to location, have remained from the very beginning. Conceived largely as a geometrically-concise horizontal artifice, building height remains low at the center, increasing, if anything, towards the periphery. In addition, the presence of the north-south axis has remained important. Notably, in the 1993 Plan, this axis was notionally extended further to the north, with the later construction of the Olympic Green, beyond the site of the Asian Games of 1990, and to the south around what is to become a model mixed-use area, well served by public transportation including the nearby new southern rail terminus. In fact, the firm of Albert Speer & Partners, in collaboration with the Tsinghua Urban Planning and Design Institute, was engaged in 2002 to give specific substance to this north-south axial arrangement, conceptually dividing its 25-kilometer length into three components: the 'international axis' including the Olympic Green, the 'world heritage site' running through the old city, and the 'new south.'[9]

Also prominent in the 1993 Plan was further elaboration of the implicit bi-axial arrangement through the center of Beijing along Chang'an and its easterly and westerly extensions. There, rebalancing of the city's central area and relief of property-development pressures called for in the Plan, was accomplished by the designation of the Central Business District to the east, straddling the Third Ring Road, counterweighted by the designation of Financial Street to the west, alongside the Second Ring Road and the nominal boundary of the old city. The western extremity, next to the Fourth Ring Road was also to be the site of the planned Wukesong Olympic complex. The functional logic of the former commercial concentration, close to foreign embassies, world-class hotels, and with ready access to the airport, was presumably to serve multi-national corporations and international interests. The latter concentration, close to many Chinese Government offices was seen ostensibly as a precinct for domestic firms. The traditional shopping and market areas of Wangfujing and Xidan, adjacent to Chang'an proper and, again, almost symmetrically located to the east and west of the notional north-south axis, respectively, also received facelifts, as did the Qianmen area south of the center on several occasions, including the recent rejuvenation in 2007 led by SOHO China, a major private developer. To be sure, the Chang'an armature through the city is monumental, although not entirely in a Western manner. There is, for instance, considerably more spatial dispersion involved among episodic configurations of buildings and public spaces, as well as a rather constant sense of an almost infinite extension. Nor is the appreciative framework of axis entirely Western, involving as it does an unfolding of spatial events, rather than a more strictly perspectivally-composed entirety. In sum, again despite shifts in planning discourse about the city, its inner areas have maintained the overall figural integrity and broad original artifice quality of the original in significant ways. Moreover, this integrity and quality, in turn, can be readily seen to exert a conceptual, if not real, compositional authority over recent territories of architectural production, including the city's center, the eastern Central Business District, the western Financial Street, and the northern Olympic Green.

Beijing's Central Business District, or more precisely its first phase, is encompassed within a tract of some 4 square kilometers, roughly straddling the Third Ring Road, as described earlier, and more or less bordered by Chaoyang Road in the north and by the Tonghui River to the south. Transected by Subway Line 1 under the Chang'an extension, it is presently served by three transit stops and likely to soon receive further transit improvements in conjunction with the Third Ring Road. Like much of Beijing, the underlying geography of the territory is flat and sufficiently removed from the old city, as noted, to accommodate reasonably high-rise building without undue visual interference with the city's historical core. Ripe for redevelopment, as well as being well

placed with regard to infrastructure, connection to the airport and other relevant locations, the underlying geography of this territory was further qualified, through specification of block layouts, street hierarchies and patterns, as well as volumes and general types of building occupancy. A master plan was prepared for the district by Johnson Fain Partners in 2001, with follow-up landscape and urban design guidelines in 2003 by the Tsinghua Urban Planning and Design Institute. The plan called for some 400 to 500 new buildings totaling around 10.8 million square meters of floor space for office, residential and retail construction, of which about half will be commercial office space.[10] Oversight of development is provided by the Beijing Central Business District Administrative Authority, a combination of property development corporation and regulatory authority, modeled after precedents elsewhere, like the Urban Redevelopment Authority in Singapore and today a rising practice in China. Generally, the block configurations are large, with the combinations of office, residential and retail provision giving due emphasis to a 'work-live' environment. Within the broad block structure, the architectural geography varies from tall towers freestanding on sites, to high and moderate-rise infill projects, as well as mixed-use projects of similar rise aligned along street frontages. In fact, at least one skyscraper was scheduled to be on the order of 140 storeys high.[11] The prescribed aura of the district appears to be inclined towards Midtown Manhattan, transforming a by now ramshackle collection of lower-rise buildings and former 'work unit' or *danwei dayuan* complexes. Expressively, the architectural geography of the district is contemporary, energetic and experimental in many instances. Signature buildings are beginning to abound, with fashionable façade and volumetric characteristics. In addition, the overall official area of the district is being expanded to around 7 square kilometers, mainly to the east of the present delineation.

Financial Street, by contrast, is a much smaller operation, quite apart from its symbolic impact in Beijing's plan. It consists of a linear strip of mainly commercial office space adjacent, as noted earlier, to the Second Ring Road. It is also served by transit, with two stops along Subway Line 2. The subject of a competition, the commission for the master plan was eventually given to Skidmore Owings and Merrill, also in 2001. The architectural geography of this territory is relatively uniform and integrated. At present some 18 high-rise buildings are anchored by a central park and connected by gardens, courtyards and pathways into a pedestrian urban precinct.[12] Also by further contrast, the geography of the territory along Chang'an across from the Forbidden City and centered on Tiananmen Square is formed largely by a ladder-like structure of large blocks. Several are the sites of large and imposing government buildings, including the People's Grand Congress Hall, by Zhang Bo and Zhao Dongri, and the Chinese Museum of History and Revolution, by Zhang Kaiji, flanking the two sides of Tiananmen. Further to the east lies the Beijing Railway Station, by Yang Tingbao. All three buildings were part of the ensemble of Ten Great Projects commemorating the tenth anniversary of the founding of the People's Republic in 1959. Forming something of a southern backdrop to this collection of buildings and important sites is the moderate rise of the linear Three Gate (Qiansanmen) residential complex, built in 1976 and running parallel to Qianmen Road, on its southern side, for a length of several kilometers. As befits its location in central Beijing, the clear intention of the architectural geography of this territory is to be grand and imposing, if not monumental, as well as expansive and yet horizontal in overall configuration. Indeed, these qualities were cited early on during the 'planning' of Tiananmen Square and its environs by one of its principal architects, Zhao Dongri.[13]

The Olympic Green, the primary site of the XXIXth Olympiad hosted by Beijing in 2008, is a vast territory of some 1,135 hectares in area, straddling the Fourth and Fifth Ring Roads along the city's central north-south axis. In fact, from the Green's pedestrian causeway the Bell and Drum towers are visible, although well into the distance. Overall, the site is comprised of 680 hectares of public park, designated as the Forest Area; 405 hectares set aside for the Olympic Central Area, including space for multi-functional after-Games use; and 50 hectares for the China Ethnic and Culture Park. Prior to planning and construction its geography was relatively flat, like much of Beijing, populated by outlying urban and agricultural villages and the nearby relatively ad-hoc arrangement of the city's peripheral sprawl. Although mooted in the 1993 Plan for an even earlier development of sports facilities in the north along the central axis, the decision to create the Olympic Green as the termination of the axis is hardly surprising

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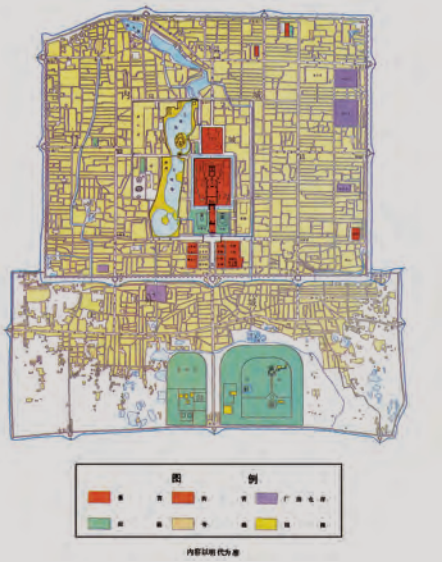

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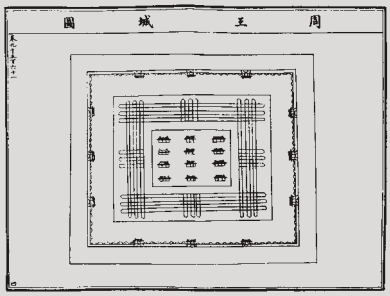

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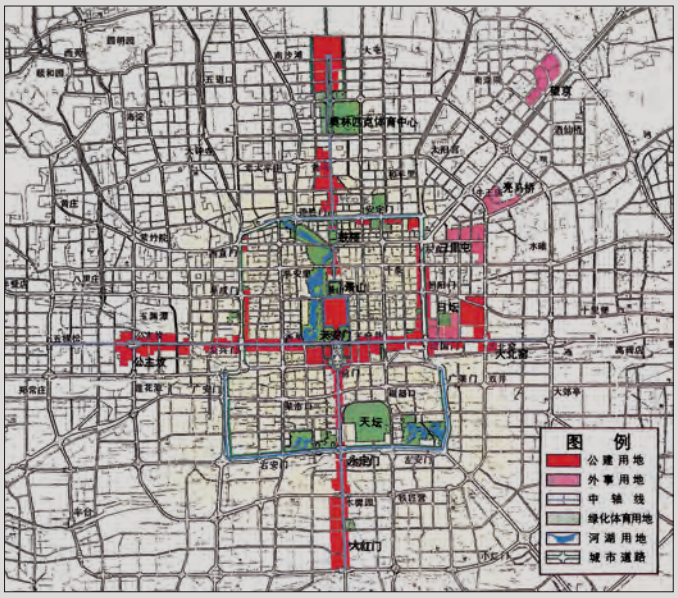

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Plan of Beijing in the Ming and Qing Dynasties (Beijing Municipal Institute of City Planning)

--- 2
The Idealised *Wangcheng* Plan According to the *Kaogongji* of the *Zhou Li* (*Henan zhi* as preserved in *Yongle dadian, juan 9561*)

--- 3
The 1958 Beijing City Master Plan (Beijing Municipal Institute of City Planning)

--- 4
Model of the 'Ladder Blocks' Along Chang'an in 1958 (Ministry of Construction and Institute of Architectural Research)

--- 5
View to the West Along Chang'an, 1959 (Ministry of Construction and Institute of Architectural Research)

--- 6
The Two Axes of the 1993 Beijing Plan (Beijing Municipal Institute of City Planning)

--- 7
Central Green Space Within the Financial Street Development (Har Ye Kan)

given the importance placed in securing the Olympiad by China. In 2002, an open, international conceptual planning and design competition was organized for the territory by the Beijing Municipal Government and the China Olympic Organizing Committee. Competition guidelines called for the accommodation of 400,000 square meters for stadiums, including an 80,000-seat National Stadium, an 18,000-seat gymnasium, and a 15,000-seat National Swimming Center. They also called for accommodation of a further 200,000 square meters of cultural facilities, 400,000 square meters for convention and exhibition space, 360,000 square meters for athlete's apartments to be used later for public housing provision, and 80,000 square meters for business and service facilities including hotels and entertainment venues.[14] In fact, there appears to have been an awareness on the part of the organizers, as well as many competitors, of the need to think beyond the immediacy of the Olympic event towards well-integrated and programmed post-Games use. Consequently the intrinsic architectural geography of the territory obviously acknowledged the necessary presence of outstanding sports facilities, but also of a variety of public open spaces, and a supporting urban fabric accommodating multiple functions and non-Games uses.

The competition was won by Sasaki and Associates in collaboration with the Tianjin Hui Design Institute. Their entry was cited for its overall layout and distribution of functions; its flexible relationship among green spaces, water bodies and architectural spaces; its response to ecological and environmental protection; and its organic linkage of existing topographic and site-specific features. Conceptually, the plan divided the territory into a forest park, replete with water bodies and a theme of water conservation, including a southward extension into the Olympic area; a cultural axis aligned along Beijing's north-south meridian for a distance of some 5 kilometers, incorporating commemorations of various dynasties along its length; and an Olympic axis set at an angle to the cultural axis, linking the Asian Games site south of the Fourth Ring Road, through the National Stadium site, intersecting with the Zhou Dynasty plaza along the cultural axis, presumably as something of a homage to ancient city building.[15] In a gesture not unlike Chang'an's sense of infinite extension, buildings along the cultural axis were located along its edge and a sinuous water body ran from the northern forest park, roughly parallel with the cultural axis on its eastern side. A separate competition for landscape design of the forest park was also won by Sasaki and Associates, although detailed realization was entrusted to Hu Jie's direction with the Tsinghua University Urban Planning and Design Institute.[16]

Along Chang'an

Returning to the earlier discussion about the authoritative compositional exigencies imposed on these territories by the sheer artifice aspect of Beijing, at least four projects stand out along the east-west Chang'an axis in a potentially exceptional manner. They are also among Beijing's most provocative, if not controversial, recent works of architecture. The first is the CCTV and TVCC complex, by Rem Koolhaas and Ole Scheeren of the Office of Metropolitan Architecture (OMA), at the corner of Chaoyang and the Third Ring Road in the Central Business District. The second is the Jian Wai SOHO complex, by Riken Yamamoto and Field Shop, south of the Chang'an extension and roughly adjacent to the Tonghui River. The third is the National Grand Theater, by Paul Andreu and ADP, directly to the west of the People's Congress Hall on Chang'an Avenue. The fourth is the National Museum of China, by von Gerkan, Marg und Partner, refurbishing the Chinese Museum of History and Revolution beside Tiananmen Square, mentioned earlier. All four projects appear to respond to the situational logics and underlying principles of Beijing's persistence's of place, although in different manners. This is particularly apparent by the ways in which the city's large block configurations and essential horizontality and even monumentality of composition in the first three projects are handled. It is also apparent, to lesser and greater extents, in moments of a certain self-similarity in formal logic within and around each of the three sites. The first three projects are also novel in expressive form and, one might say, architectural ambition, although by no means alarmingly exotic, out-of-place, or out of cultural context in the time and space of contemporary Beijing. Indeed, cases can be made that all three projects are well fitted to their territories within the city both as tracts and as spheres of action, including being architectural examples of China's recent rise to international prominence.

As a renovation, the fourth project inherently adheres to its original site, but also respectfully recasts the museum complex

in a manner that is part preservation and part reinvention. Further, within the inherent constants of a preferable or ideal architectural geography pertinent to the territories under discussion in Beijing, each project can be seen as distinctive rather than exemplary or capable of replication. They are, in short, works of architecture that rise to their occasions, as it were, and in the fuller sense of an absence of generic or obviously referential quality.

The China Central Television Headquarters complex (CCTV) was the subject of an international competition in 2001. By then CCTV had become the largest media unit in the world and the project was programmed to consolidate the accommodation of administrative and production facilities otherwise spread out inefficiently in Beijing and elsewhere. The project occupies a site of 10 hectares, subdivided into four blocks, within the territory of the Central Business District, with a total floor area of 599,000 square meters. As mentioned, the competition was won in 2002 by Rem Koolhaas and OMA, from a group of other short-listed firms including Dominique Perrault; Kohn, Pedersen and Fox (KPF); Skidmore, Owings and Merrill (SOM); and the East China Design Architectural Institute of Shanghai (ECADI). OMA's proposal divided the overall program into three buildings, each following its own functional logic and with different levels of security and public access. The largest building – the CCTV Headquarters at 473,000 square meters – was located adjacent to the south-western corner of the overall site, with the Television Cultural Center (TVCC) directly to the north, at 95,000 square meters, separated from CCTV across Ceremonial Plaza. The remainder of the program, at around 30,000 square meters, was located in an annular, low-rise service building in the north-east sector of the site, with a sizeable Media Park occupying the propitious south-eastern site segment.[17] Indeed, the landscape design for the project, by Inside/Outside of Amsterdam, promises to provide both a sense of individuation to parts of the complex as well as an overall coherence. In spite of its size, the building aspect of the project can also be viewed as residing in a park-like setting.

The CCTV component of the complex rises to a height of 234 meters and is shaped in a continuous loop of more or less horizontal and vertical sections, otherwise appearing as interlocking Z-shaped building volumes with one sloping upright – Tower I – slightly taller than the other – Tower II – but with both rising from a raised plinth. Unusual, to be sure, and perhaps complex in appearance, this loop-like form skillfully accommodates a combination of administrative, news broadcasting, production and auxiliary service functions into a sequence of interconnected activities, with inherent flexibility, overlap and collaborative potential. Another loop is also integrated into the building allowing public access for visitors and providing them with vantage points for visually surveying television production and for viewing the city beyond. It, however, is not a skyscraper. In fact, the architects have even described it as an 'anti-skyscraper' and a complete rethink of conventional ways of housing administrative and production facilities.[18] As something of a *tour de force* in structural and construction technique, engineers of the Arup Group developed the interlocking tower form as a braced perimeter tube structure, so as to provide more than adequate stiffness for the leaning towers in the temporary condition before they were joined, and also to facilitate construction by allowing them to be erected unimpeded in place.[19] An irregular glazed grid on the building façades expresses structural forces at work through the steel frame behind, and also serves to homogenize the outward appearance of the building. The adjacent TVCC building is comprised of a Mandarin Hotel, a visitor center, a large public theater, recording studios, a digital cinema, and a venue for news releases. The folding form of the exterior cloaks much of the programmatic variety inside, as does the strong overall form and cladding of the CCTV building.[20] A soaring side-lit atrium, rising some 25 storeys, forms the hotel interior, with restaurants on top. From certain external vantage points, TVCC is visible through the undercroft or 'window,' made by CCTV next door and, although both buildings are different in form and architectural detailing, there remains a strong sense of self-similarity and identity in the ensemble. The nearby annular service building is two storeys high and is comprised of a central energy plant, a guard's dormitory, and parking for broadcasting vehicles. Overall, the entire complex will accommodate around 10,000 employees and, with requisite staff and other service facilities, it has been described as a 'media city.'[21]

Due for completion in 2009, the project broke ground in 2004 after some delay and was recently devastated by fire to the TVCC building apparently caused by an indiscriminate

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Axonometric View of the CBD with the CCTV/ TVCC and Jian Wai SOHO Projects

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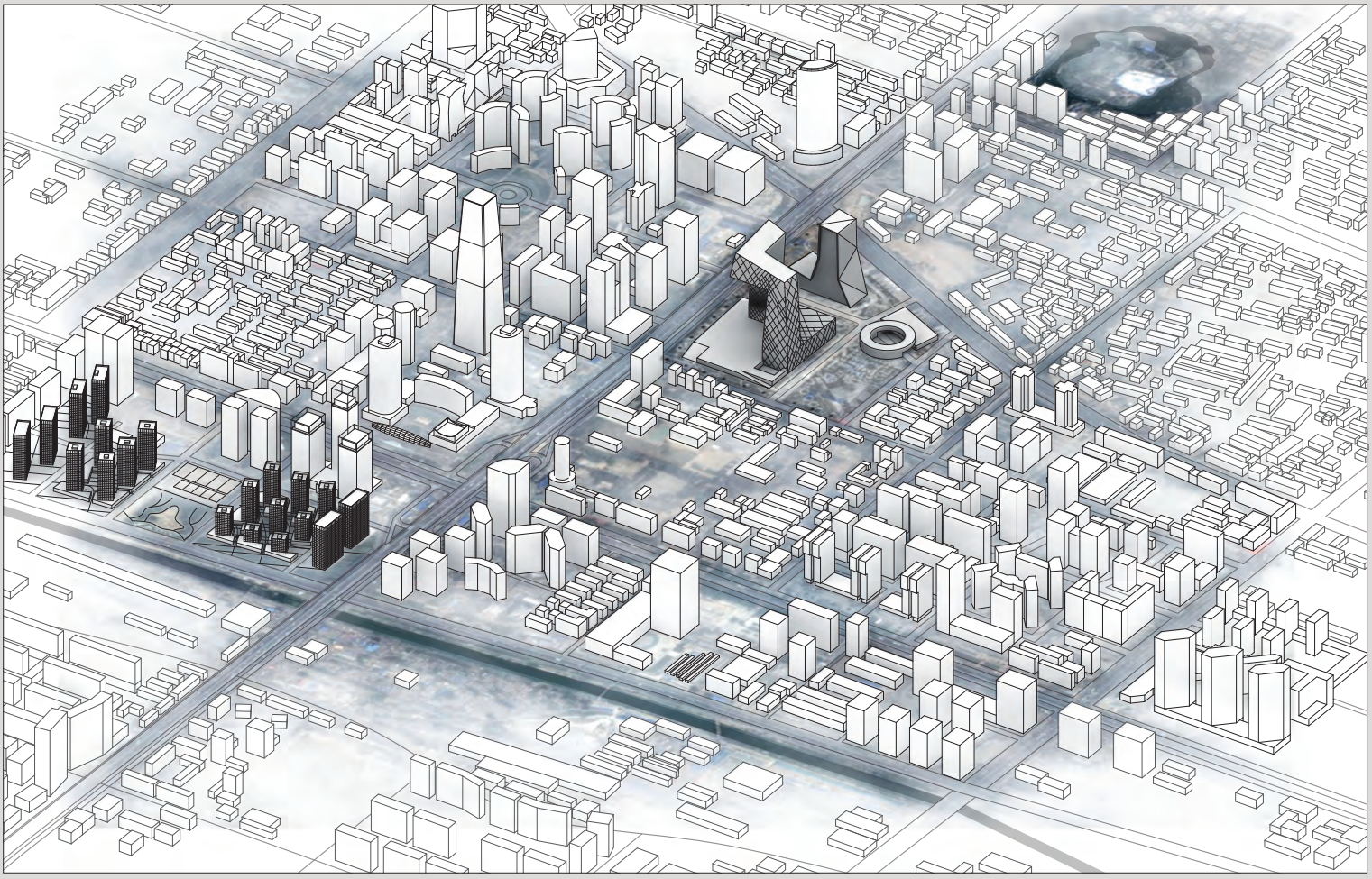
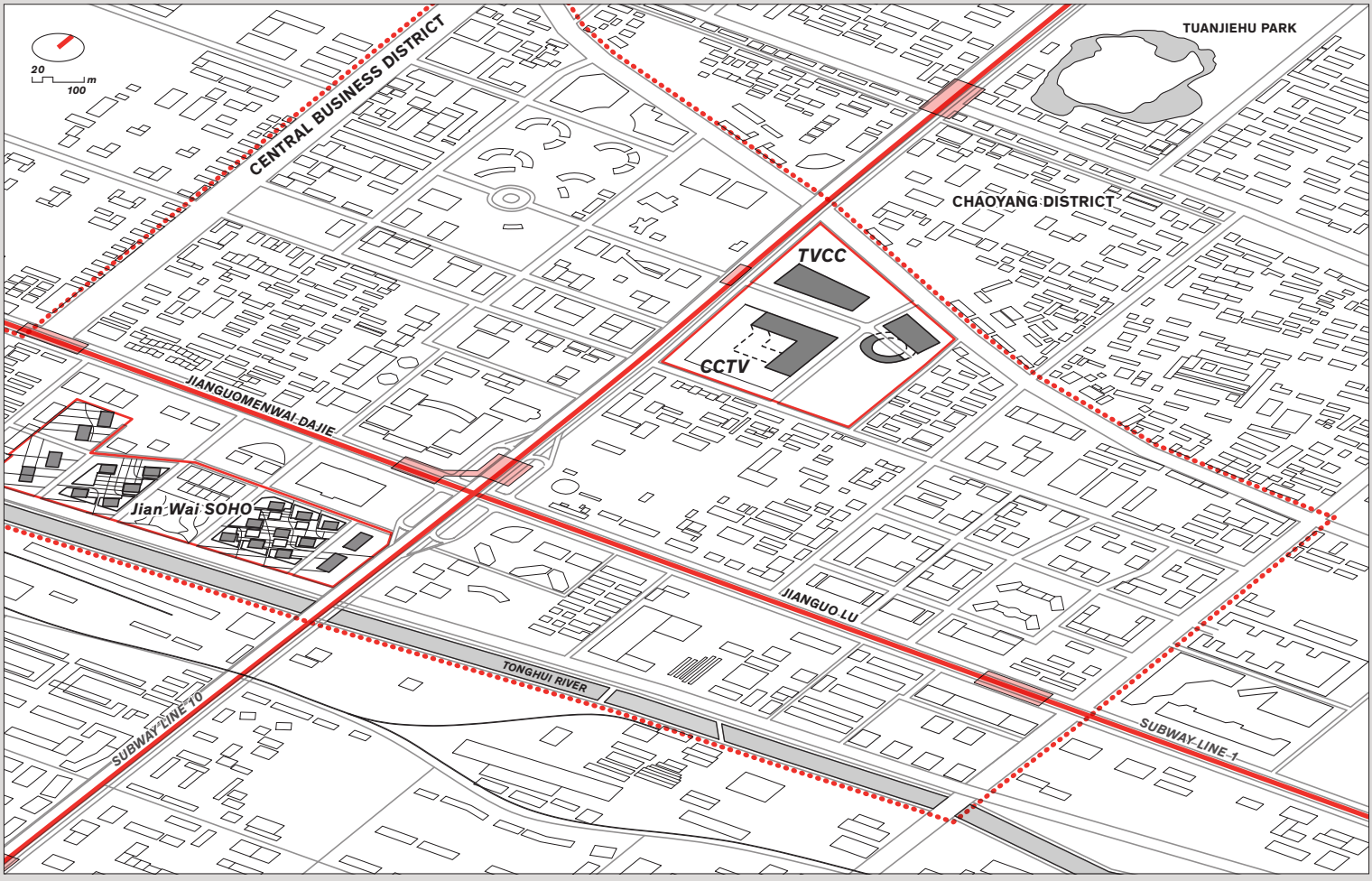
CCTV/TVCC and Jian Wai SOHO in Context

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m
CENTRAL BUSINESS DISTRICT
TUANJIEHU PARK
CHAOYANG DISTRICT
TVCC
CCTV
JIANGUOMENWAI DAJIE
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JIANGUO LU
TONGHUI RIVER
SUBWAY LINE 10
SUBWAY LINE 1

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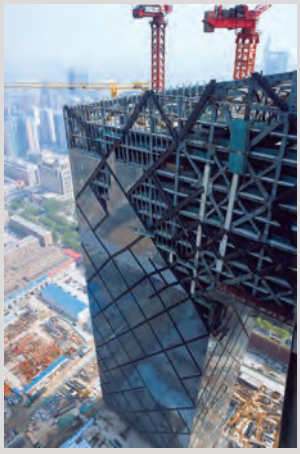

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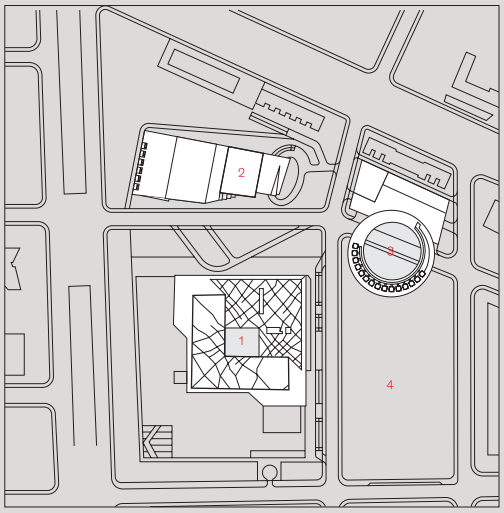

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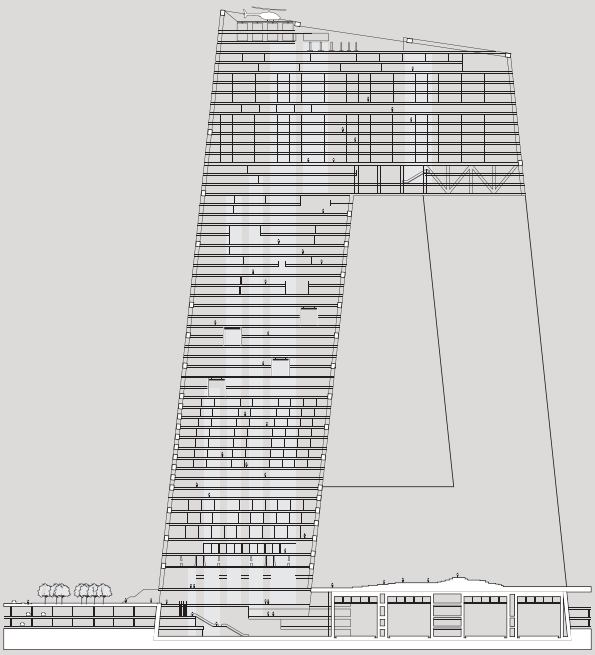

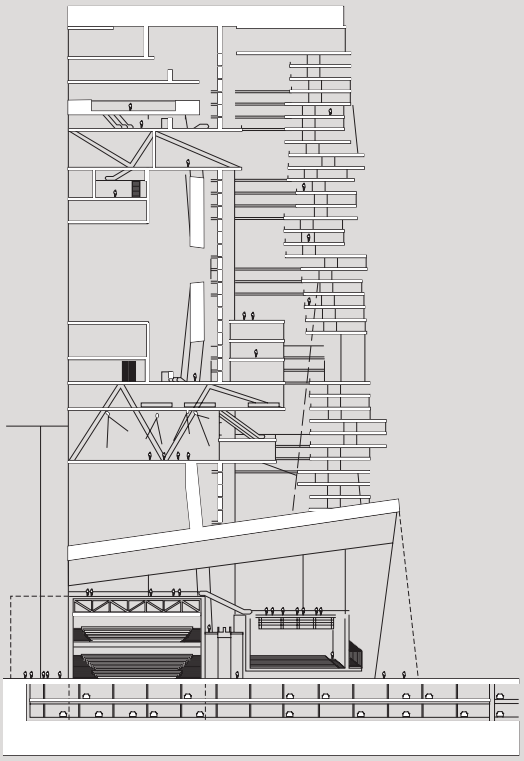

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CCTV and TVCC Under Construction and in Context (Shinkenchiku-Sha)

--- 2
Structure and Cladding at CCTV (Shinkenchiku-Sha)

--- 3
CCTV Within the CBD Urban Environment (Ted Lin)

--- 4
Plan Showing 1. CCTV, 2. TVCC, 3. Services and 4. Media Park (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 5
Section Through CCTV (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 6
Section Through TVCC (Drawn by Jong-Hyun Baek & Pilsoo Maing)

fireworks display celebrating the 2009 Chinese New Year. During the intervening years, the project has been controversial. It has been variously challenged as being overly sculptural, monumental, disengaged from the surrounding city and even referred to by nicknames such as the "donut," the "intoxicated chicken," the "kneeling man," and the "big boxers". There were fears in some quarters about its structural integrity and that, largely coming from foreign hands, it smacked of architectural colonialism. Viewed from the underlying situational logic expressed here though, an alternative perspective can be offered that counters much of this negative criticism.

First, it is certainly an iconic building, becoming so even before it materialized. This quality, however, does not seem misplaced. CCTV is, after all, the media organ of the State and an increasingly important institution as China continues to modernize and to take its place in the world more publicly. Indeed, allusions can and have been made linking the loop configuration of the CCTV building and its lack of particularized iconography with the continuous serial manner and processes of media production. Moreover, the otherwise relatively unqualified character of this kind of image leaves open its specific and, one might say, personal interpretation. Media and no doubt CCTV are constantly evolving. As noted earlier, it is an architecture about such processes in no small measure, with public display, if not transparency, as a thematic quality. If nothing else, this is apparent perhaps prosaically, with the visitor loop embedded in the building and more generally and significantly, through the complexes' sheer prominence and shape, which invites public scrutiny. Koolhaas has hardly been one to eschew 'bigness,' introducing and embracing the feature as a part of his own architectural discourse on today's expansive enterprises and institutions.[22] Nor has he shied away from unusual and striking architectural form, sculptural or not, when other dictates of site conditions, program or structure, lead in that direction. Overall, the complex is also 'hyper-modern' in expressive aspect, but at a time when the discourse on 'national form' in State Chinese architecture at least, appeared able to compellingly argue that such a point had been reached, evoking or even symbolizing the 'New China' of the 21st century.

In future historical retrospect, it is a style of architecture that may well be closely associated with China, given its recent proliferation there, in much the same way as one refers to the 'Georgian' of London, the 'modernity' of corporate America, or the 'neo-Classicism' of Paris.

Second, returning to the concepts of territories and their implied architectural geographies, certainly the Beijing Central Business District as a sphere of action, territorially, embraces the CCTV complex, especially if one recalls the no less iconic CBS Building, Times Square and Rockefeller Center media complexes in central New York. As to an implied architectural geography, within the artifice aspect of Beijing, the territory of the Central Business District can well accommodate and even invites monumentality, per force of its block-structure, broad avenues and strong visible armatures of circulation, not to mention its overt *raison d'être* as a place of global business and lifestyle at this moment in China's history. As such, it is a place that seems to call for either singular building ensembles across its broad blocks, or for an imposing aggregation of infill buildings. Also, consistent with its location in an inner district and underlying principles of urban composition best associated with Beijing, the architecture implied for the territory should recognize height limits, regulatory or not, and the undeniable horizontality of the city as a whole, as well as the absence of any need for skyline scenography. On these scores – accommodation of monumentality, moderate height but with an overall horizontal aspect, and an absence of skyline scenography – the CCTV complex performs admirably. The folding operations of architectural composition reach out and seemingly embrace the sizeable site, implying a virtual volumetric realm that 'completes,' or 'fills in,' so to speak, the broad block structure. Volumes are also not unduly tall. It is, after all, not a skyscraper, and the coherence of both the form and its materialization seems to avoid easy scenographic associations, given the wide range of popular epithets describing it.

Third, the project makes considerable sense out of a large complex program and the need for both continuity and a degree of flexibility. Further, it is not just any media facility but one that, in the end, is singularly peculiar to China and to Beijing as a headquartering operation. Generic though programmatic requirements might appear to be, this is not the case, particularly on closer inspection of scale, mode of operation, degrees of collaborative interface, staff utility, association with the world outside, and so on. This may be an

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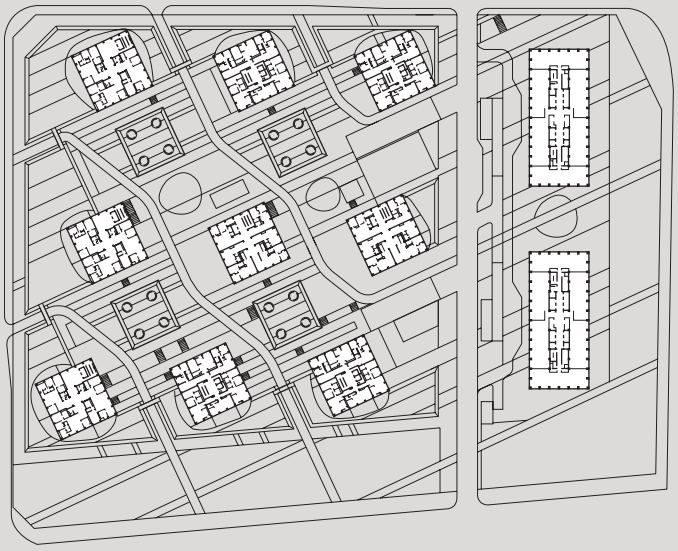

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Courtyard Crossing at Jian Wai SOHO (Shinkenchiku-Sha)

--- 2
Elements of the 'Field Operation' at Jian Wai SOHO (Shinkenchiku-Sha)

--- 3
Courtyards and Towers at Jian Wai SOHO (© Andy Ryan)

--- 4
Partial Section Through Jian Wai SOHO (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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General Plan of Jian Wai SOHO (Drawn by Jong-Hyun Baek & Pilsoo Maing)

architecture about media processes to a considerable degree, but one tailored to the vast scale and enterprise of CCTV. In addition and as alluded to earlier, the relatively abundant provision of semi-public and public open space within the scheme provides needed and no doubt welcomed amenity to what will become an otherwise densely built territory. Additionally, even in a more conventional construal of public building in Beijing, this kind of contribution has often been an expected incorporation or adjacency. Finally, the project was and continues to be a broad collaboration, involving groups and expertise from many parts of the world, including China, most notably in the agency of ECADI as associate architects and engineers. Moreover, it has been driven forward strongly by CCTV itself, with input also from relevant local governmental institutions. For a project of this scope and ambition, especially in today's practice with its variety of managerial and technical aspects, there should be no surprise about this broad-based collaboration and hardly a strong case for architectural colonialism.

Less in the public eye, Jian Wai SOHO is a private venture from the property development firm of SOHO China, launched in 1995 by two relatively young entrepreneurs – Pan Shiyi and Zhang Xin – where SOHO stands for Small Office Home Office. To date there are more than half a dozen SOHO China projects in Beijing, four of them in Central Business District, including the Jian Wai SOHO project. In 2002, Riken Yamamoto and Field Shop were engaged to design a fast-tracked, mixed-use complex along part of the southern edge of the Business District. Scheduled to eventually occupy two large blocks, the overall project site was split by a public open space. The program called primarily for residential use, but with accommodation of home office functions including a certain amount of convertibility among the two programs, as well as accommodation for public and community-oriented functions, restaurants, shopping and parking. Originally, residences were priced to be middle income but soon the popularity and location of the complex, close to larger commercial areas of the district, pushed prices well up. In fact, today Jian Wai SOHO has become a sought-after and somewhat trendy place to live, as well as to work. The first phase of the project, on the site of a former machine-tool factory, consists of a network of nine slender and elegant towers, each square and symmetrical in plan, plus two blocks strictly for office functions. Rising between 13 and 31 storeys above a paved and lightly-landscaped plinth, which serves as the primarily public *datum* for the complex, lower portions of the towers also partially enframe sunken courtyards serving non-residential functions and parking below the plinth. In places, three-storey horizontal structures align with lower levels of towers, providing links among them and open pedestrian arcades. The external structure of each tower is expressed architecturally in the form of a square checkerboard pattern, fenestrated with a delicate infill of transparent and opaque panels. The overall effect is at once homogenous and autonomous looking although visually lively at the same time. In due course, some 50,000 residents and workers may inhabit the completed project, not far from public transit and the work place of many, giving substantial credence to the Central Business District's aim of being a 'work-live' environment.[23]

Apart from programmatic appropriateness in its territory, as well as clarity and quality in its architectural execution, the merit of this project within the framework of this discussion, derives from its urbanistic contribution on several levels. First, there is the manner in which the architects responded innovatively and coherently to the persistence of the large block structure within the Central Business District, while exerting a distinctive identity on the project precinct. They did so through what might be called a 'field operation,' or series of such operations. To begin with there is the off-set grid layout of the more or less identical towers themselves, shifted slightly at an angle to the overall geometry of the site, affording better views and good solar orientation. Then there is the surface of the plinth and the lower-level arcaded structures. This ensemble, with the plinth surface articulated by landscaped and paved elements in keeping with local exigencies of each tower and pedestrian access throughout the complex, remains relatively open and seemingly non-exclusionary. Finally, there is the rhythm of the sunken courtyards accompanying the towers, which also provide a thickened three-dimensional character to the more public realm of the project. Alignment of the courtyards with façades of the towers also seems to be more inviting to levels below. In sum, all three components of the 'field operation' cohere spatially in a manner that provides a human scale at the broad pedestrian level, as well as to the project as a whole, and a surprising perceptual diversity and

unfolding through various site transects, despite the relative uniformity of the architectural elements involved. Second, there is the architectural 'tone' of the project, for want of a better word. It is not at all monumental, again with largeness of scale well modulated through its parts. Nor is it particularly tall or imposing in its height or overall form, as befits overriding parameters of an appropriate architectural geography for the territory mentioned earlier. The complex does come across as possessing a residential identity, on the one hand, and yet one that is also infused with the possibility of a mixture of smaller-scale workplace community and a more public life, on the other. A distinctive precinct-like orientation to the complex is also not at all out of keeping with much else in Beijing, apart from its contemporary modern style, when one recalls other and earlier enclave-like living conditions.[24] In short, Jian Wai SOHO offers another way of dealing effectively and appropriately in urban-architectural terms with underlying and implied geographical stipulations of the city and its territory within the city, apart from singular building forms astride sites or infill arrangements.

An international competition for design of the National Grand Theater of China began in 1998. The site was 11.8 hectares of property with a 166-meter long frontage along Chang'an, close to the intersection of Beijing's principal axes and next to the People's Grand Congress Hall, as noted earlier, in the 'official' center of the city. Previously the site had allegedly been earmarked for such a project by Zhou Enlai, during deliberations about the reconfiguration of the Tiananmen area in the late 1950s.[25] By 1999 some 69 schemes were received and a jury was established for adjudication of the entries. Also by this time, guidelines for design competitions and tendering in many parts of China had been established by the Ministry of Construction as well as by local authorities.[26] The jury was comprised of two groups: an architectural jury with international representation, and a client or proprietors committee including officials from the municipal government, the Ministry of Construction and the Ministry of Culture.[27] Five entries were short-listed for a second round of competition: Paul Andreu and ADP, Terry Farrell, Arata Isozaki, HPP, and the Design Institute of the Construction Ministry. Another four firms were invited to compete: the Beijing Institute of Architectural Design, Wong and Ouyang, the Tsinghua University Design Institute and the Shenzen University Design Institute. During subsequent adjudication in 2001, however, the jury failed to reach a consensus on the three finalists to be presented to the national leadership. According to some accounts, the client committee – the National Grand Theater Committee – favored Andreu's proposal, whereas the architectural jury and a public straw poll leaned towards Isozaki's submission.[28] This apparent deadlock was then broken by the Government, and Andreu with ADP was declared the winner. The basic program for the theater complex called for an opera house, a performance theater and a concert hall, all with a total audience capacity of around 5,500 seats.

Paul Andreu's final project, which had evolved considerably over the course of the competition from a more conventional presentation, took the shape of a super ellipsoidal shell, engineered by Setec, spanning 212.4 meters in the east-west direction, parallel to Chang'an, and 143.8 meters in the other direction, and rising to a height of 46 meters. The exterior of the shell was then clad in titanium panels, as well as by a refined tracery of glazing, arching up across the front of the building and lighting the lobby inside. The public interior was finished in wooden strips in a pattern of panels conforming to the shell's undercroft geometry. Inside the shell, the three theaters were aligned along the east-west axis of the ellipsoid, with the larger opera house at the center flanked by the other two venues. Ample room was provided between the theaters and in the lobby across the front for gathering and for circulation. Situated on a wide yet externally-shallow plinth extending almost to the edges of the site, the area around the ellipsoidal shell was filled with water creating a shallow lake. Public entry to the complex was accomplished through a broad top-lit underpass, about 60 meters in length, rising slightly above the adjacent water level of the lake. This entry sequence also allowed the surface integrity of the shell to remain intact, without penetrations. The southern rear segment of the complex, symmetrically disposed in plan with the frontal northern entry sequence, was landscaped with two passages aligned diagonally with the outside corners of the site. A double row of trees extended the planted landscape element of the project, enframing the outer extremities of the complex, except across its frontage with Chang'an Avenue. The theaters were all well appointed and technically sophisticated, accommodating as necessary, fly lofts, stage machinery and other ancillary facilities within the profile of the

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View of Tiananmen Complex from the South

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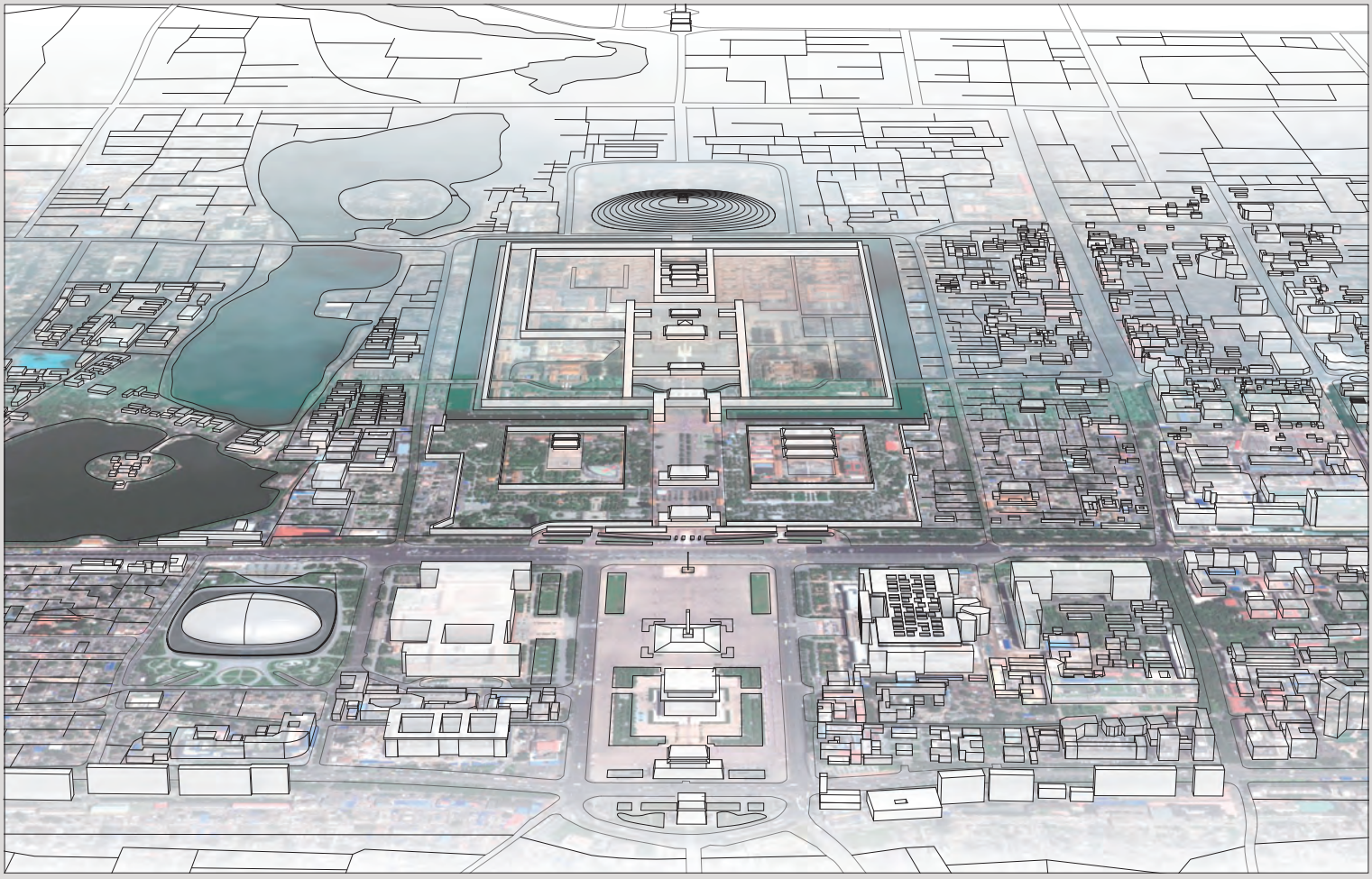
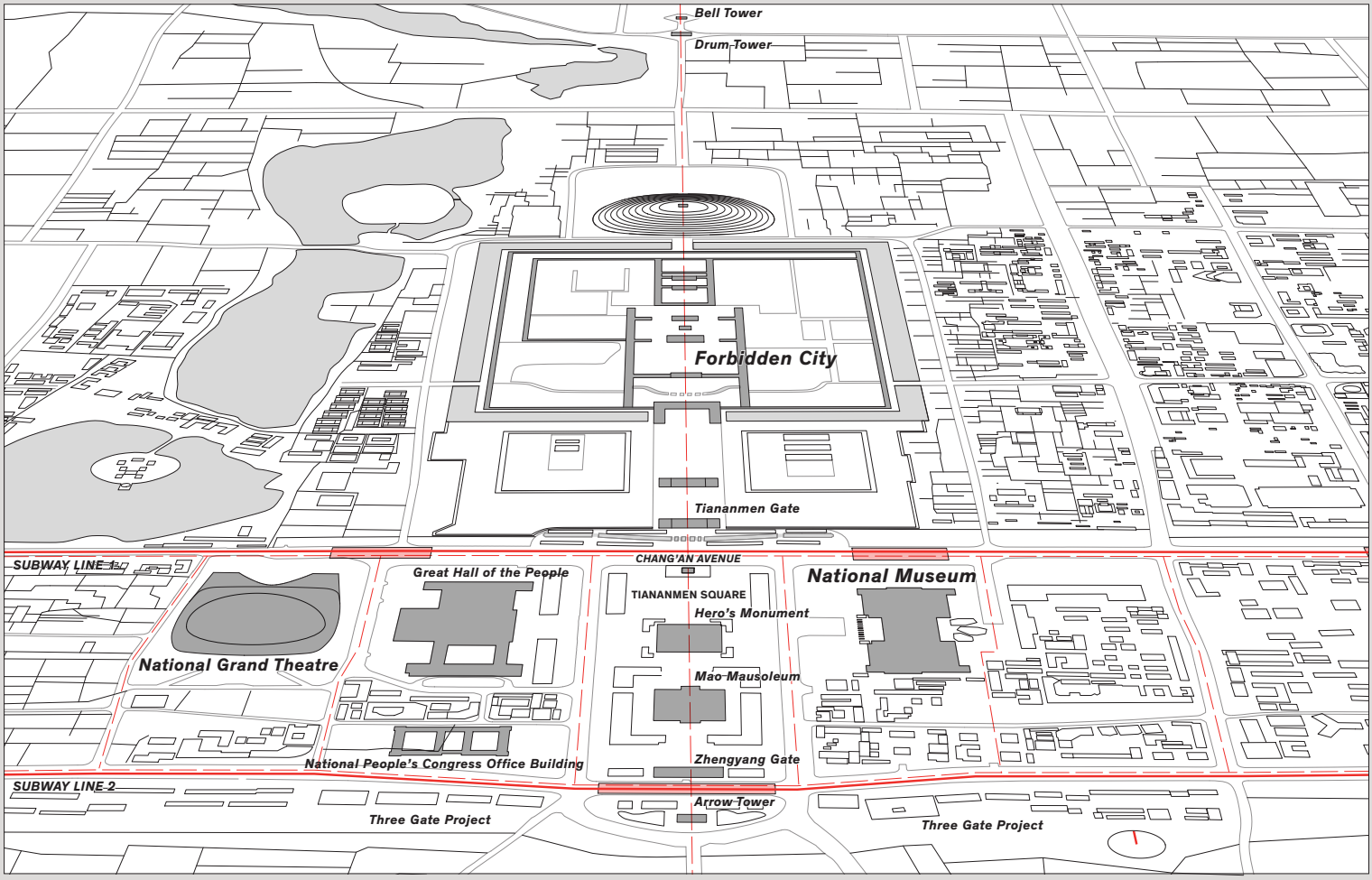
Context In and Around Tiananmen




Bell Tower
Drum Tower
Forbidden City
Tiananmen Gate
SUBWAY LINE 1
CHANG'AN AVENUE
Great Hall of the People
TIANANMEN SQUARE
National Museum
Hero's Monument
National Grand Theatre
Mao Mausoleum
National People's Congress Office Building
Zhengyang Gate
SUBWAY LINE 2
Arrow Tower
Three Gate Project
Three Gate Project

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National Grand Theater of China in Beijing (Christian Richters)

--- 2
View of Opera House Within the National Grand Theater (Christian Richters)

--- 3
Glazing Emphasizing the Ellipsoidal Structure on the Interior of the National Grand Theater (Christian Richters)

--- 4
Opera House Interior, National Grand Theater (Courtesy of Paul Andreu)

--- 5
Performance Theater Interior, National Grand Theater (Courtesy of Paul Andreu)

--- 6
Plan of the National Grand Theater Showing 1. the Opera House Flanked by 2. the Performance Theater and 3. the Concert Hall (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 7
Section Through the National Grand Theater from North to South (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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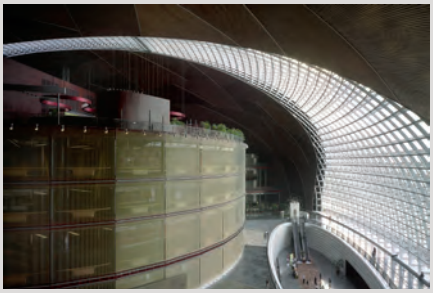

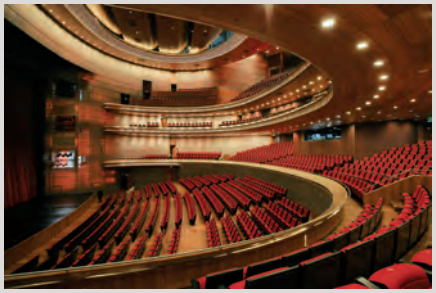

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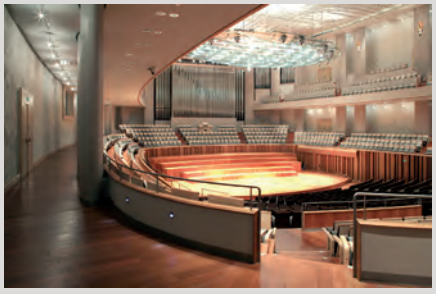

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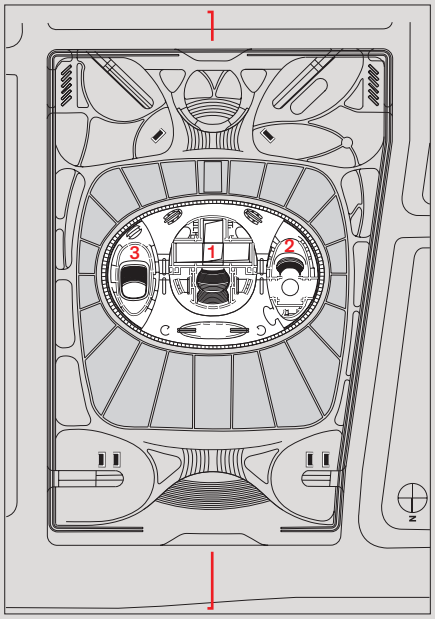

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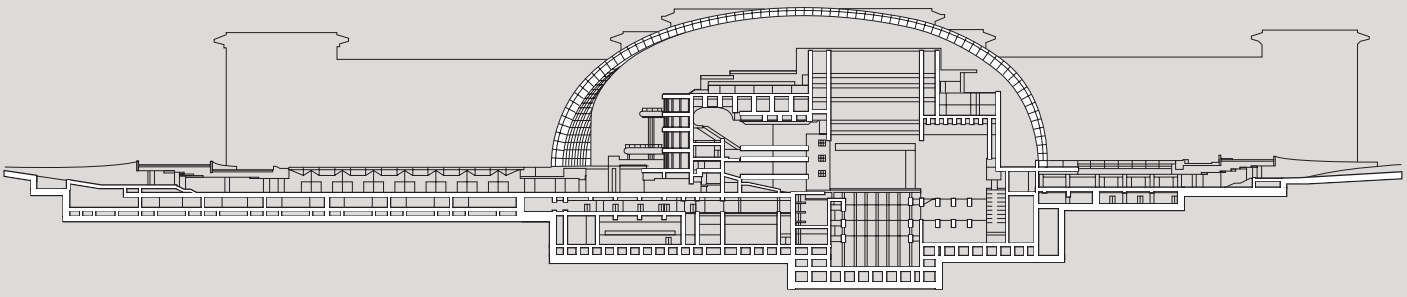

shell and through below-grade construction. The outer elliptical ring of the opera house within the shell, was covered with a gilt mesh which, when back lit, calls luminous attention to the venue beyond. In fact, throughout the project a constant interplay among conditions of transparency, partial transparency, void space and volumetric modulation, as well as somberness and light, gradually welcomes audiences and provides an almost magical interlude to the productions beyond.[29]

Before the theater complex finally opened in 2007, there were several delays and the project came under close scrutiny after the structural failure at Paris Charles de Gaulle airport in May of 2004, another building by Andreu.[30] Fierce debate also ensued almost from the onset of the project. Hundreds of commentaries were published, mainly in China, and Fellows of the Chinese Academy of Sciences and the Academy of Engineers, plus 114 influential architects, engineers and scholars signed several letters to the Central Government criticizing the building. It was variously described as being "irrational," "not in harmony with its surroundings," and "alien in the historic city of Beijing."[31] Popular references were also made to the building's superstructure as appearing as an "egg," "a wooden boat," and an "alien space craft," among others. Cost also became an issue, with concerns about the price of tickets seen from the probably unrealistic perspective of recouping the value of the investment. On the other hand, positive endorsements were also received, often along the lines of "symbolizing the hopes of the time," "forward-looking into the 21st century," being "poetic," and "best embodying Chinese philosophy." In fact, according to at least one account, the number of favorable commentaries that were published outnumbered opposing views.[32]

Returning again to the critical framework of this book, at least four related lines of situational logic can be observed in favor of the architecture of the National Grand Theater. First, in modern times, if not before, a conspicuous terrain of architectural geography intrinsically associated with theater complexes of this scope has been and continues to be at the forefront of expressive architectural experimentation and exploration. This is especially the case on prominent sites. Certainly the Sydney Opera House, the Paris Opera House, the Esplanade - Theaters on the Bay in Singapore, and the San Sebastian complex, fit into this category, to name but a few examples. Nowadays, often at issue is giving a coherent architectural appearance, beyond simply conformation of programmatic elements with different volumetric and relational requirements; cladding and even ornamenting large volumes; furnishing both a sense and a reality of material permanence; dealing with structural and other technical complexities beyond normal parameters; and providing a public presence that is celebratory of the theatrical arts. Second, the implied architectural geography of the central territory in Beijing is a place for architectural scale and monumentality. More particularly, it is not so much about style. Indeed, it might already be regarded as somewhat eclectic in this regard. It is instead more about relatively low-rise, horizontal-appearing, unified and singular enclosures. To be sure, iconography and ornamentation are certainly admitted as surface characteristics of buildings, but they take a 'backseat,' as it were, to integrated organization of relatively simple overall forms and building volumes. At the most general perceptual level, an abstract grandeur can be appreciated to be at work, beyond specific historical and contemporary associations with the territory. The vast, open and largely unencumbered space of Tiananmen Square also qualifies in all these respects. In fact, as the design competition for the theater wore on, with continuing input from the client committee, many projects, including Andreu's, seem to have been prodded in these directions, willingly or not.[33] Third, the temporal or epochal dimension of the implied architectural geography at the moment of the National Grand Theater's design and construction strongly appears to have been oriented towards conceptions of both the present and the future rather than to the past, at least in the mind's eye of the national leadership. Returning to the prior point about 'national form,' these conceptions certainly have been about emphasizing arrival on the modern world stage, representation of a 'New China,' the ambition if not presence of contemporaneous technical sophistication, and a forward-looking distinctive expression. Any nostalgia about historical conditions of central Beijing has long since passed, as noted earlier in its planning, although not without respect and mounting attempts at material preservation and conservation.[34] The broad 'ladder-block' structure of Chang'an also arguably lies outside of this conservation territory and has always been the precinct and invention of the People's Republic of China. Fourth, the affective

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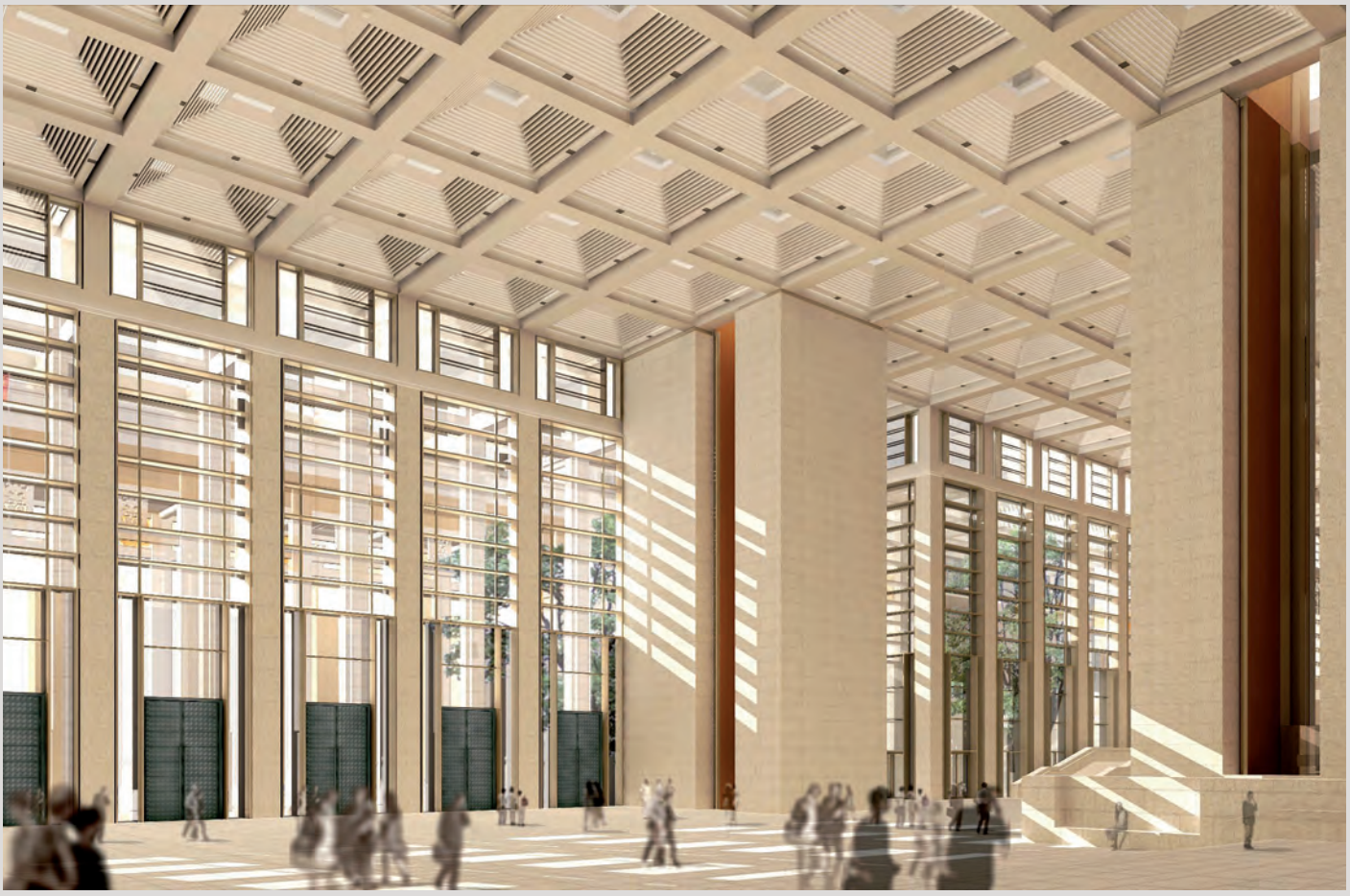

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Entrance Hall of the Beijing Museum of History

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Interior of the Beijing Museum of History

--- 3
Northern Courtyard of the Beijing Museum of History

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Western Courtyard of the Beijing Museum of History

All images courtesy of von Gerkan, Marg und Partner.

aspects of theatrical performance and of theaters are long-standing and to be expected by many. After all, they are realms of a certain amount of fantasy making, illusion, the unexpected, ephemerality and transport to another place, quite apart from didactic, moral and ideological bents that might also be observed. Of course, engagement of theater architecture in this kind of adventure is necessary to materialize requisite performances. But it can also be regarded as motivation for an architecture with its own corresponding affects.

Criss-crossing through this situational logic, Paul Andreu's National Grand Theater can rightly lay claim to be expressively contemporary, if not novel, across many of the issues involved in its intrinsic architectural geography. The design complies well with the implied architectural geography of its territory in Beijing, certainly with regard to singularity and simplicity in expansive enclosure, abstract quality and grandeur. Although not alone nor the only way of going about it, the National Grand Theater's architecture does help to substantiate the national regime's forward-looking and even futuristic representational agenda at a time of strong urban bias and modernization. The building is also replete with well-mannered architectural theatricality, especially in facilitation and delight of audience members' experience of the interlude between the world outside and the one awaiting them on the inside noted earlier. In addition, there is much about Andreu's project that reflects traditional Chinese characteristics of theaters and theatrical performances. For instance, there is a centrality and axiality in the deployment of multiple venues or pavilions, each with a somewhat different identity, as in times gone by. There is the water element, often integral to the enframement of stages and entry sequences during imperial times. There is the presence of a ceremonial threshold, also often present in earlier versions, albeit in a different manner. Finally, there is the presence of a prominent roof structure and, without putting too fine a point on it, the implication of theater structures within a larger enclosure, often to be found in venues for traditional Beijing Opera.

The new National Museum of China, as alluded to earlier, is located in the central territory of Beijing, and departs from the preceding three projects in several respects. First, while certainly a new building it is being constructed within the 'shell' so to speak, of the original Museum of Chinese History and Revolution dating from 1959. Second, as a sphere of action it is essentially programmatically similar to the accommodation of the original complex designed, as mentioned, by Zhang Kaiji as one of the Ten Great Projects in celebration of the tenth anniversary of the founding of the People's Republic of China. Third, at the time of this writing, it is still a nascent project, only beginning to undergo necessary demolition and reconstruction. The original building was large, covering a floor area of 69,000 square meters with a 313-meter long façade facing Tiananmen Square on its eastern side, balancing out the mass of the companion Great Hall of the People across the square, and running in a rectangular footprint 143 meters in the other direction.[35] Indeed, the overall singular massing of the complex seems to have been a major consideration in bringing a sense of balance and harmony to Tiananmen Square. Consequently, deployment of the building's two programs – the Museum of History to the south and the Museum of Revolution to the north – were symmetrically positioned around a four-storied central entry and administration area, with room left internally for a splendid entrance courtyard and open quadrangles. The most prominent architectural feature of the building was the largely free-standing, monumental colonnade facing Tiananmen, flanked by thick 30-meter high columnar structures and punctuated by 11 openings to the entry plaza beyond by 10 elegantly proportioned pillars. Under some soviet influence at the time, the design idiom was 'socialist realist,' albeit with Chinese characteristics and, at least in this author's estimation, it was among the very best of the Ten Great Projects.

An international competition to refurbish the museum and to combine its two programmatic components into one was announced in mid-2000, and was won by von Gerkan, Marg und Partner. Their proposal and part of the competition brief was to maintain much of the existing building envelope and especially the colonnade facing Tiananmen Square, while doing away with the central entry component and extending new accommodations across most, if not all, of the building footprint. The general spatial organization of the proposal envisaged a spacious Grand Forum at the center of the complex, essentially extending the monumentality of the adjacent colonnade into the interior. This Grand Forum, in turn, was to be largely defined

by 11 bold communication and service cores, supporting a general display area and roof structure above. The Forum was then to be flanked on the northern and southern sides by renovations and additions to existing wings of the original building to house an 'international exchange exhibition space' to the north and a 'donation exhibition space' to the south. Special display areas, administration, relic storage, delivery and parking were to be located at lower levels and the relatively small auditoria were added on the eastern side to house a digital cinema facility, a ceremonial hall and a hall for academic reporting activities. The roof structure, contained within the overall building envelope was to be flat and penetrated by a patchwork of courtyard-like skylights, illuminating areas below.

Despite a massive overhaul of the museum's interior von Gerkan and Marg's proposal clearly respects the main façade and general envelope profile of the original building, which, after all, has already attained a certain iconic status in China. The roof structure which barely stands out, is to have a sharp profile in section clad in bronze, recalling artifacts in the museum, with a shiny underside visible from the Square, but with a dark and matte outer face so as to avoid any reference to the golden roofs of the nearby Forbidden City. The roof is also to be entirely flat, even if the intrinsic geography of many contemporary museum buildings and the sky-lighting circumstances of this complex might suggest otherwise. This consideration and the distancing of the proposal from the architecture of the Imperial City echoes Zhao Dongri's much earlier reasoning as one of the principal architects of the Tiananmen area, when he said of its final reference design that "… the new buildings are far apart, and they won't be contradictory with the traditional buildings. The symmetrical layout also helps preserve the role of old buildings on the square" – no doubt referring to the immediately adjacent Gate of Heavenly Peace on the north and the Zhengyang gate to the south. "Together with flat roofs which have been used (commonly) in new buildings, this is the development of Chinese traditional architectural art and, hence, the new buildings can communicate with the old, and achieve perfect harmony. Furthermore, the sheer scale and abstraction of the square and the large building volumes can be seen and were viewed as being progressive and open to the future" [36] – an appropriate symbol of the newly emerging China.

Within the Olympic Green

Within the Olympic Green, three projects stand out in the minds' eyes of most observers. They are among the most memorable of the recent Olympic Games and, like those discussed along Chang'an, they are among Beijing's most creative recent works of architecture. The first is the National Stadium of Beijing, by Jacques Herzog and Pierre de Meuron, with the Arup Group and the local China Architectural Design Group. The second is the National Swimming Center by PTW (formerly Peddle, Thorp Walker) in collaboration also with the Arup Group and with the China State Construction Engineering Corporation. The third is the Digital Beijing complex by Studio Pei-Zhu and Urbanus. All three projects were initiated after the award of the Olympic Games to Beijing in 2001, with sites determined within the master planning exercise for the primary Olympic territory described earlier. They were also the subjects of international design competitions, run over a period between 2003 and 2004, and were all built in their initial configurations to meet International Olympic Committee specifications, although consideration was also given to after-Games use.

The National Stadium rises directly out of a plinth which creates sufficient elevation near the entrance to provide a view of the entire Olympic complex. It is located on the edge of the Fourth Ring Road, towards the south of the Olympic Green and the inclined plinth is criss-crossed with a lattice of slate-covered walkways extending outwards from stadium entrances. Along the walkways, spaces in between provide varied landscapes for visitors, consisting of sunken gardens, stone squares and bamboo groves, as well as openings to the plinth itself, sloping down to a level of several storeys below the athletic field above. Because of this elevation the stadium is not sunken, as has become common practice elsewhere, in order to avoid risky contention with subsurface groundwater conditions. Spectator seating is provided in six levels across three tiers, in a compact reinforced-concrete bowl configuration that allows for an efficient perimeter envelope with minimal surface area and with seating located so as to provide uninterrupted vistas, as well as minimal distances to event areas on the athletic field. This inner bowl is

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View of the Olympic Green from the South

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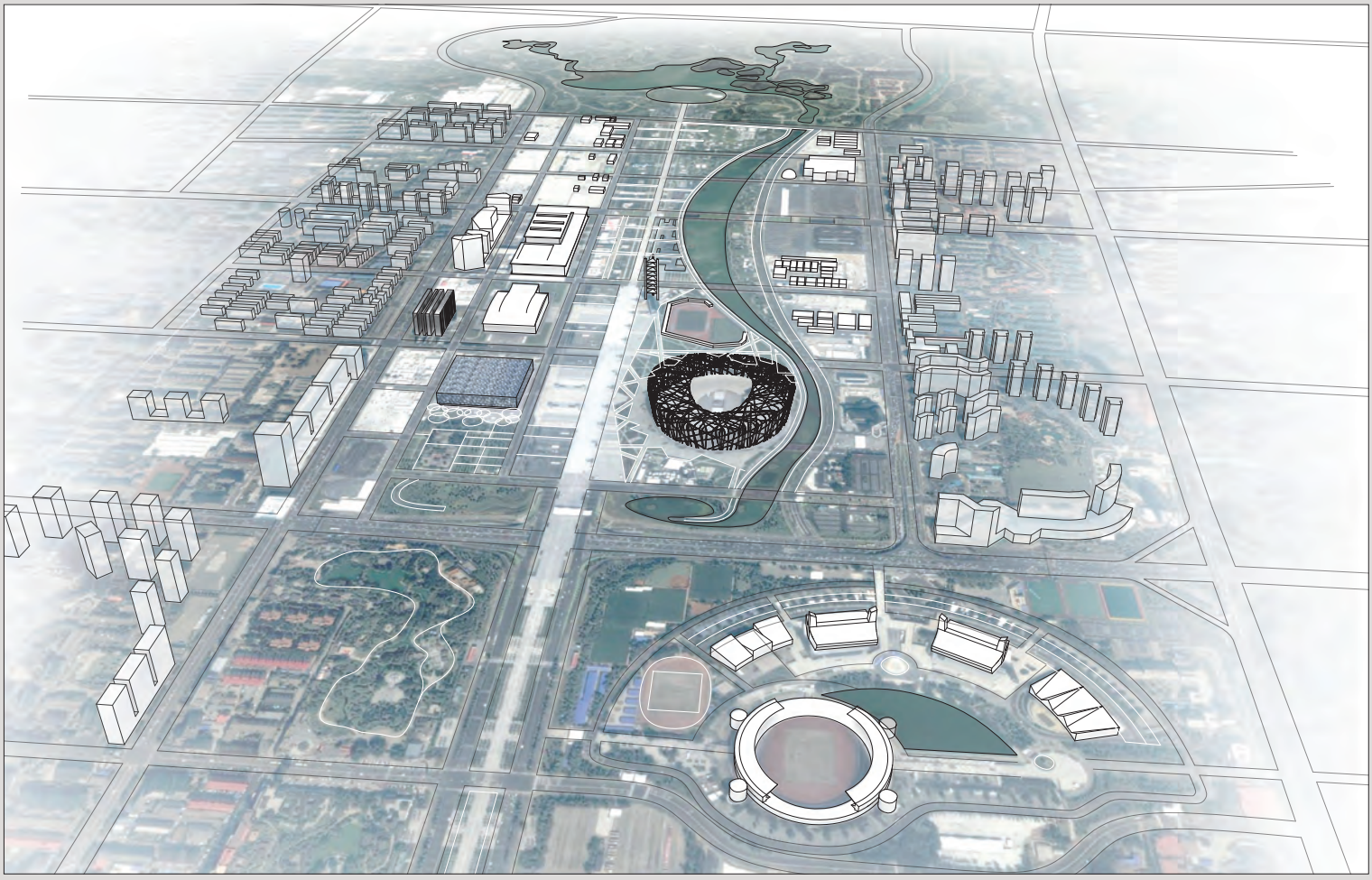
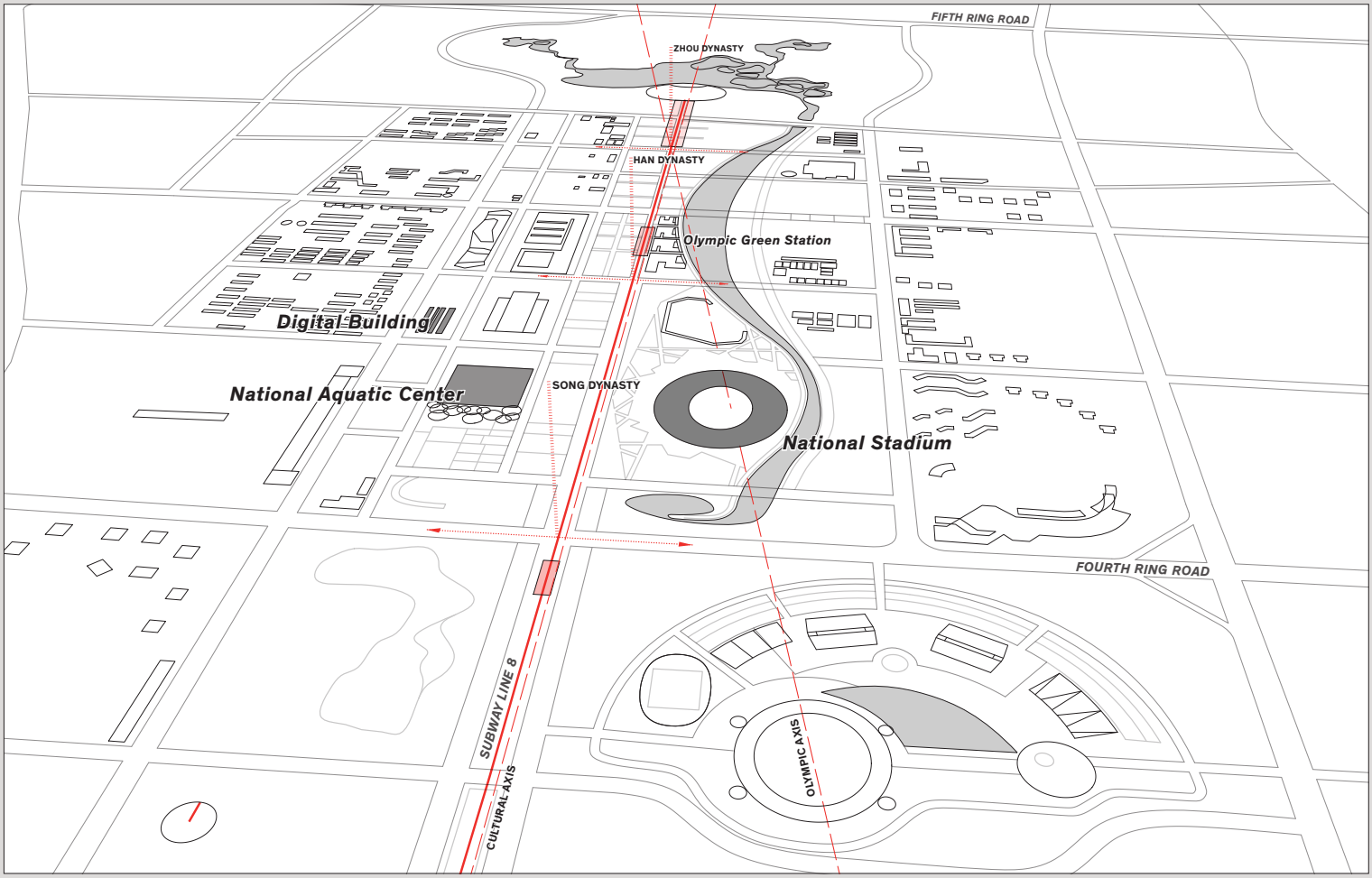
Context of the Olympic Green




FIFTH RING ROAD
ZHOU DYNASTY
HAN DYNASTY
Olympic Green Station
Digital Building
National Aquatic Center
SONG DYNASTY
National Stadium
FOURTH RING ROAD
SUBWAY LINE 8
CULTURAL AXIS
OLYMPIC AXIS

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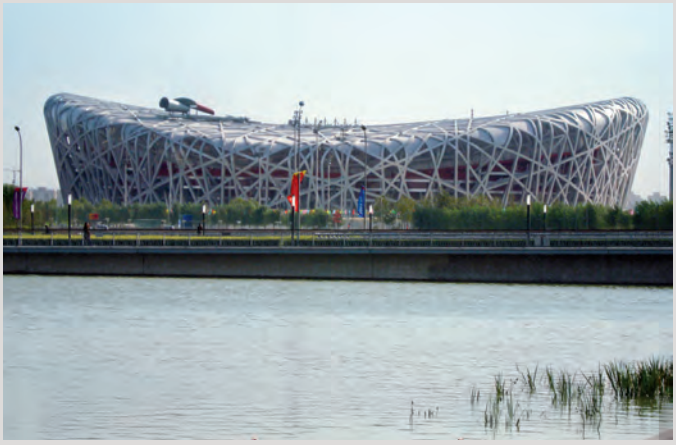

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---1
Entrance to the Beijing National Stadium (Shinkenchiku-Sha)

--- 2
Beijing National Stadium at Night (Shinkenchiku-Sha)

--- 3
Beijing National Stadium in the Nearby Lake Context (Peter Rowe)

--- 4
'Basket Weave' of Structural Elements at the Beijing National Stadium (Shinkenchiku-Sha)

--- 5
Spectating and Circulating at the Beijing National Stadium (Ted Lin)

--- 6
Spectator Levels and Interior of the Beijing National Stadium (Shinkenchiku-Sha)

then surrounded at a distance by an enclosing lattice work of trussed-steel portal frames, supported at 24 regularly spaced points and crossing each other with a depth of 12 meters. Secondary steel members were added both to disguise the uniformity of the portal frame and to facilitate a random-like interwoven pattern of appearance. This external structure and the stadium façade are thus one and the same, covered at the top by a partial lightweight translucent roof of ethylene tetrafluoroethylene (ETFE) forming an oculus around the sports arena. The interstitial space between the bowl and the external steel lattice of columns and cross members provides a spacious ambulatory area with stairways and walkways for spectator circulation and for location of self-contained ancillary facilities like restaurants, stalls, restrooms and special suites. The open character of the lattice also provides natural ventilation for the stadium area inside. The stadium is large, with an overall site area of some 203,000 square meters of which the plinth occupies 120,000 square meters and the stadium some 70,000 square meters. It has a permanent seating capacity of 80,000 spectators and had an additional 11,000 seats in temporary seating for the Olympic events.[37] In profile, the outer structure is asymmetrically disposed, forming a dipping saddle-like shape in the east-west direction and a slightly raised and curved line in the north-south direction. Dimensionally, the maximum span width in the north-south direction is around 320 meters, with a span width in the other direction of around 298 meters. The maximum height is 69 meters above the athletic field and the gross floor area is on the order of 258,000 square meters. Clearly at work, as in the CCTV/TVCC complex, is a considerable amount of engineering and other technical wizardry from the hands of Arup and others, including the stadium's unprecedented exterior shell, sight-line positioning and maximizing, as well as sophisticated three-dimensional computer modeling derived, apparently, from aeronautical and automobile engineering.

Beyond this rather straightforward technical description, however, there arise several other more symbolic and emotive outcomes which befit both the occasion of the stadium's construction and its prominent location around Beijing's north-south axis. First, it came to symbolize Beijing, rather immediately, and China's advancement on the world stage. Moreover, it did so in at least three senses. First, it marked an important event coinciding with what was generally regarded as China's 'coming out party,' despite surrounding controversy around political and environmental issues. Second, it expressed a high degree of modern progress in technical commitment and wherewithal, especially since the dark days of only some 30 years ago. Third, it was quickly embraced by many if not most Chinese, becoming dubbed with the nickname of the 'Bird's Nest' because of its apparent likeness but also, presumably, in a mood of nurturing domestication. This marking was also clearly about spectacle, for spectacles are, expectedly not without nationalistic overtones of the kind, "what others can do we can do and, perhaps better." No matter that the stadium's design was largely in foreign hands for it was a project planned for, mounted and moulded locally, with the ambition of attracting and using the best available talent. This ambition also coincides with a higher degree of openness, especially in conservative Beijing, and with China becoming a more conspicuous international player. As the events of the Games turned out, China also received a lion's share of the Olympic medals on offer. Ironically, the 'Bird's Nest' soubriquet was not originally envisaged. Rather, the intention behind the stadium's latticework was apparently inspired by an image of antique Chinese vases with cracked patterns on the surface.

A second outcome is the public-spirited and human scalar quality of the project for those both inside and outside of Beijing. Despite the size of the stadium, there is an unusual intimacy to the spatial experience of spectators and performers. The well-considered bowl-like interior layout, together with the ocular partial roof enclosure, gives a certain immediacy to being in the same space and at the same time, that is both sympathetic to the unifying spirit of the Olympic event, first and foremost, as well as, presumably, to other performances. Returning again to post-Games use, the longer-term aim of the venue is to be more than simply a sports facility, being used in turn, for a variety of functions. If nothing else, the extraordinary and theatrical opening ceremony to the Games lent considerable credibility to this aim. It is clearly an arena that can be both transformed and transforming in its appreciative impact or affect. Then there is the obviously intended double reading of the exterior elements of the stadium both from near and from afar. From a distance the stadium appears as a singular volume of interwoven parts – a vessel, as it were. In close proximity,

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A 'Cube' of EFTE Pillows at the Beijing National Aquatics Center (Ted Lin)

--- 2
Stadium and Pool Set-up Within the Beijing National Aquatics Center (Ted Lin)

--- 3
Diffused Light and Pattern in the Interior of the Beijing National Aquatics Center (Shinkenchiku-Sha)

however, the parts – elements of the steel latticework – come predominantly into focus, lending a different, well-articulated, appreciable and inviting scale to the structure. Indeed, such a bi-scalar contrivance has been an aspect of Herzog & de Meuron's prior work, on display, for instance, in their exhibition hall as part of Barcelona's recent Cultural Forum. In other respects, the largely unprecedented and radical solution to the intrinsic architectural geography of stadia proffered in Beijing is reminiscent of the firm's stunning Allianz Arena in Munich, built for the 2006 World Cup competition, although, externally at least, largely in reverse. There the singular balloon-like form was sheathed in translucent plastic, as a large illuminated beacon approached largely via vehicular transportation. Nonetheless, once inside, the intimacy of spectator participation was also pronounced. Finally, read inside-out, as it were, the Beijing stadium offers considerable opportunity, if made available, for lesser-scale and more mundane events and public use. The ambulatory space between the outside frame and the stadium proper, for instance, can and already does contain a variety of restaurants, kiosks and semi-private suites capable of more minor use and support of activities external to the stadium as such. The Piranesian aspect of this interstitial space, for want of another analogy, is truly remarkable, when seen as a public arcade or colonnade. Then there is the surrounding plinth of gardens, plazas and walkways, which is entirely capable of responding to Beijingers' love of the outdoors, group recreation and being in public on a variety of occasions.

The National Aquatics Center is located in the Olympic Green across the north-south axis from the stadium and the contrast of its square base with the nearby circular footprint of the stadium makes reference, if somewhat obviously, to traditional Chinese correspondences between sky and earth, fire and water and the dialectical harmony of *yin* and *yang*. The outline of the Swimming Center is 177 meters by 177 meters, enclosing a useable area in excess of 85,000 square meters and rising to a height of 31 meters above the ground. Planned with three halls – the Olympic Pool hall for swimming and diving, a Water Polo Hall and a Leisure Pool Hall, with water slides and another pool – the interior layout is straightforward, incorporating raked seating along the sides of the competition pools and generous ambulatory and foyer spaces between the principal venues. Removal of some of the 17,000-spectator seating capacity will allow further modification for post-Games use, as the facility takes up the role of being a multi-purpose aquatics center and leisure and fitness venue open to the public.[38]

By far the most striking feature of the Aquatics Center is its external envelope integrated with a supporting space frame. Here, the formative idea was clearly one of associating water bubbles with aquatics activity, although materialization of this rather prosaic idea required considerable technical and design innovation. What arose was essentially a box made out of a theoretically perfect and repetitious array of bubble-like components made from perpetually pressurized pillows of ethylene tetrafluoroethylene (ETFE) contained by a space frame with some 22,000 beams and 12,000 nodal conjunctions. As documented, the overall structure was based on a problem posed by the Irish physicist Lord Kelvin, towards the end of the 19th century, concerning the most efficient way of subdividing a three-dimensional space. Around this time, in 1878 according to historical commentators, Plateau observed, that when soap bubbles meet their edges coincide at a tetrahedric angle of 109.47°. Then in 1887, Lord Kelvin came up with a response to his own question based on a 14-sided structure, composed of eight regular hexagons and six squares constructed by cutting the corners off a regular octahedron, but failed to satisfy Plateau's observation about the efficiency of soap bubbles. It was then only in 1993 that two Irish investigators – Professor Weaire and Dr. Phelan – constructed solids with 14 regular faces – two hexagonal and 12 pentagonal – which, combined with dodecahedrons, created a combination of many-sided 'bubbles' whose faces fit together perfectly to answer Kelvin's original question. It was this so-called 'Weaire-Phelan foam' that became the basis for devising the Aquatics Center's envelope and structure.[39]

Further innovation then went into the constructive process by assembling strips of the envelope outside of the building, which were then moved into place while allowing continuity in the supporting space-frame construction. This allowed the completion of the walls and roofs at once, as well as removing the need for scaffolding and cranes, along with the potential for damage from within the pool areas themselves. Also, the structural steel is protected from the usual corrosive effects of indoor pools by lying inside the hot but dry zone between the inner and outer ETFE pillow layers. The appeal of the ETFE

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---1
Chip as Building and
Building as Chip
at Digital Beijing
(Peter Rowe)

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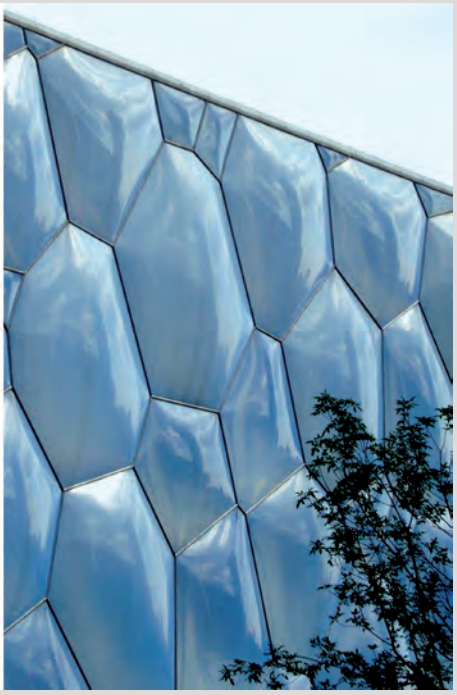
Three Surfaces at the
Olympic Green
(Peter Rowe)

--- 3
Sunken Plaza of the
Entry to the Olympic
Green Subway Station
(Peter Rowe)

3 ---

--- 2



material was considerable. It is lightweight, at around 1 percent the weight of glass, important for structural sizing and seismic considerations obtaining in Beijing. The double protective barrier was estimated to save 30 percent of the required heating energy and 55 percent of artificial lighting. It provided excellent internal acoustic qualities, being largely transparent to sound, with a result close to an open-air venue. Then, the pale blue pillows were covered with small silver dots that tailored the amount of heat and light to meet requirements of orientation and the needs of adjacent internal spaces. Finally, and probably the most memorable visual aspect of the Aquatics Center from the Olympics was the delightful internal ambience provided and the changing of coloration according to the weather and to night lighting from within, when it glowed blue in gorgeous contrast to the red of the neighboring stadium – the *yin-yang* theme again. Further, without taking the water bubble analogy too far, the envelope came alive, so to speak, exhibiting a moodiness commonly associated with natural water bodies. Small wonder that the overall effect of this manifestation and the expression of bubbles quickly earned the affectionate nickname of the 'Water Cube.'

The Digital Beijing complex is located further north alongside the central north-south axis close by the main Olympic stadia. Award of the project design to the local firm of Studio Pei-Zhu came from a competition among seven invited international firms in 2004. The building was intended to be the control and data center for the Olympic event and to be used later to contain a virtual museum and archive, as well as an exhibition center for manufacturers of digital products. It is a large building, at around 100,000 square meters in area, rising 14 levels above grade, with two below. Composed of four closely spaced and tall thin bars, more or less of similar volume, running overall in a north-south direction with little external fenestration, the complex has a strongly monolithic aspect, broken somewhat by sinuous vertical stripes and well-patterned slate grey tiling. The two central bars are conjoined, at least at lower levels, to accommodate an internal zig-zag of circulation, display and work space. The ground floor entry sequence, across an external water body that extends to three sides of the complex, was similarly contrived by paths and circulation space, slanted and intersecting in plan. According to Zhu Pei and his partner Wu Tong, the complex has the "appearance of a digital bar code and an integrated circuit board" … with the intent of … "trying to reveal an enlarged microworld suggestive of the abundant microchips ignored in our daily life" … and as "an impressive symbol of the Digital Olympics and of the information era."[40] Indeed, this rather literal interpretation was a clear expression of the Beijing Municipal Government's and the Olympic organizer's intention of having a very high involvement of digital media in and around the Games and of touting this achievement as further evidence of Beijing and China arriving towards the forefront of the world stage. Although hardly the fault of architecture under such a presumption, this sort of symbol may seem somewhat at odds with the otherwise dispersed and ubiquitous character of today's digital media. Nevertheless, by calling such direct attention to this era in what will undoubtedly be a continuing information age, Studio Pei-Zhu have perhaps marked the awkwardness, or uncertainty, many have about rapidly evolving technology today, and in a manner that might otherwise have gone unrecognized. Despite its literalness, the complex can also be seen as socially critical in this regard.

To be sure the three projects within the Olympic Green are each distinctive and spectacular as objects in their territory. Indeed, this follows a well-established pattern for architecture from prior Olympics. Seen, however, from the vantage point of the upcoming London Olympics' anticipated emphasis away from signature buildings, this ensemble may also be regarded as both the last gasp and perhaps epitome of iconic Olympic buildings. Nevertheless, there also seems to have been something else in play here, arising from an inherent and publicly expected trait of architectural production in China towards a semiotic condition of analogizing between a building and something else. In this case, all three buildings verge closely, to a lesser or greater extent judging from their local reception, to easily recognizable analogies: a bird's nest or vessel as a gathering space, a microchip as a media center, and a water cube as an aquatics center. Moreover, this 'standing for' aspect, beyond architecture *qua* architecture, should not be seen as trite, as it might be when viewed from the outside. It may also have been more to do with project selection and nurturing in the hands of local authorities than with original architectural intentions, although clearly they also came into play sympathetically. Rather, this trait can be viewed as being requisite to assimilation into a complex cultural web of allusions

and associations of very long standing in what tends to be, in China, a unifying, wide-ranging, organic and relational conception of the world.

One nagging doubt about the entire Olympic complex is its almost overwhelming spaciousness and the struggle that seems to be going on to more fully use the facilities and populate the public open spaces now that the Games have ended. Despite early consideration of post-Olympic use, broad expanses of the site, while perhaps nominally programmed, lie practically vacant. In other places, like the otherwise well-appointed, sunken-courtyard entry to the subway station, more explicit post-Games development seems to be in order and perhaps oriented towards entertainment, restaurant and other service-related activities that are now few and far between. One also suspects that even the more memorable architectural venues described here are best appreciated from relatively up close rather than at longer distances. In short, the Olympic Green appears to offer significant opportunities for further development or more radical redevelopment than was considered earlier. This is particularly obvious when seen in conjunction with the relatively dense urbanization that is occurring to either side, a short distance from the central axis. Again, Beijing is not alone in this post-event circumstance. What to do with Olympic and Expo sites in normal, day-to-day urban conditions has often remained a less than satisfactorily resolved question for host cities.

Shifting Context

In sum, the architectural projects presented here have largely been construed as responding to and being defined by the situational logics presented by their place and time in Beijing. These situational logics, in turn, have arisen out of the shifting planning discourse about the city, successive recent deliberations about which have opened it up to new territories of urban production locationally and as fields of architectural action, as well as to new architectural geographies expressive of the leadership's, and one suspects, more collectively held conceptions of the 'New China.' Nevertheless, the plans and related agendas that have flowed from these deliberations have also had a conservative character, principally with regard to the respect, embellishment and extension of earlier urban compositional principles and persistent features of Beijing as an artifice. Further, the present era seems to have provided Beijing with the opportunity and means of achieving, more substantially, aims set out in the 1950s, especially along Chang'an Avenue. To be sure, it has not been entirely or even primarily a case of revering what was in place, nor of acknowledging tradition with a backward-looking glance. Tradition, after all, is rooted in *traditio,* which essentially means to 'bring across,' respectfully valuing what is useful and even prescient in the here and now and into the future. As such, broader intrinsic architectural geographies when placed into today's Beijing, can also be seen to be constrained, as well as offering design opportunities. In short, there is present an implied architectural geography, limited or well fitted to its territories. These circumstances can also be viewed as being conservative, although in a less directly referential and a more abstract manner. Beyond acting subliminally, however, venerable terms like 'genius loci' or the 'spirit of the city' might even appear to come more substantially into play. Context is and probably should be regarded as a moving phenomenon. A result, for the projects discussed here, is that their situational logics and the degree to which the projects measure up to them, are not what they might have been before. They are, however, no less legitimate or less capable of further enhancing the already distinctive character of Beijing. Judging from these and other instances of much urban development in China, there appears to be a widely held, if not strong, belief in master plans and their guidance of architectural consequences, something not necessarily held elsewhere. There has also been a boldness and experimental contemporaneity to the representational possibilities of infrastructure and large-scale public and entrepreneurial building ventures. In most of the projects discussed here, there has been a further emphasis on technical prowess and its display. All of these also appear to coincide with a prevalent technological temperament about making things and managing circumstances when it comes to decision making. Without making too much out of past and present arrangements, many in the political elite have come from engineering or similar technical backgrounds. More relevant here, what comes through in city making is the persistence of a modernism that continues to place importance on the rationality of approaches and on technological aspects of forward progress.

1 Nancy S. Steinhardt, *Chinese Imperial City Planning* (Hawaii, 1990), pp. 154-160, 171-179

2 Paul Wheatley, *Pivot of the Four Quarters: A Preliminary Enquiry into the Origins and Character of the Ancient Chinese City* (Illinois, 1971), p. 414

3 Har Ye, Kan and Peter G. Rowe, 'Revisiting the Kaogongji: Principles and Philosophy of Chinese Imperial Planning' (2009), unpublished paper submitted for consideration

4 Paul Wheatley, *Pivot of the Four Quarters: A Preliminary Enquiry into the Origins and Character of the Ancient Chinese City*, pp. 419-476

5 *Architectural Journal* (*Jian Zhu Xue Bao*), no. 9 & 10, Special Edition for Ten Great Projects (1959) (in Chinese)

6 Charlie Q. L. Xue, *Building a Revolution: Chinese Architecture Since 1980* (Hong Kong, 2006), pp. 54-55; Master Plan of Beijing (1996)

7 Beijing Municipal Institute of City Planning & Design, *Beijing: Striding Forward to the 21st Century* (Beijing, 1992), p. 20

8 Liangyong Wu (ed.), *The Second Report on the Rural and Urban Spatial Development Planning Study for the Capital Region* (Beijing, 2006) (in Chinese)

9 Albert Speer & Partners, 'Urban Design of the Central Axis in Beijing', *A+U*, 399 (2002), pp. 18-23; and Tsinghua Urban Planning and Design Institute, *Selected Works* (Beijing, 2006), pp. 96-99

10 Thomas J. Campanella, *The Concrete Dragon: China's Urban Revolution and What It Means for the World* (New York, 2008), p. 137; and Tsinghua Urban Planning and Design Institute, *Selected Works*, pp. 198-201

11 D. King, 'Plans for Huge China Tower Undeterred', *Los Angeles Business Journal* (5 November 2001)

12 Skidmore, Owings & Merrill, 'Beijing Financial Street', *A+U*, 454 (2008), p. 47

13 Dongri Zhao, 'Tiananmen Square', *Architectural Journal* (*Jian Zhu Xue Bao*), no. 9 & 10, Special Edition for Ten Great Projects, pp. 18-22

14 Aaron Britt, 'Going for the Green', *Dwell* (June 2007), pp. 101-106; Campanella, *The Concrete Dragon*, pp. 131-134

15 Alan Ward and Carol P. Ward, 'Olympic Winner', *Landscape Design*, 314 (October 2002), pp. 33-36; and Beijing Municipal City Planning Commission, *Beijing Olympic Games: International Competition for Conceptual Planning and Design of the Beijing Olympic Green and the Wukesong Cultural and Sports Center* (Beijing, 2003)

16 Frederick R. Steiner, 'Olympic Hopeful', *Landscape Architecture* (Mar 2008), pp. 90-97

17 Rem Koolhaas/OMA, 'New Headquarters for China Central Television (CCTV)', *A+U*, 399 (2002), pp. 42-47

18 Rem Koolhaas, Lecture on Monumentality (Cambridge, 2003), Harvard University Graduate School of Design

19 R. McGowan, 'China Central Television (CCTV) Headquarters: Construction', *A+U*, 454 (2008), p. 108

20 Sarah Amelar, 'CCTV Headquarters', *Architectural Record* (March 2004), pp. 108-109; Rem Koolhaas/OMA, 'CCTV Headquarters, Beijing', *AV Monografías*, 109-110 (2004), pp. 86-91

21 Rem Koolhaas & Ole Scheeren, 'CCTV by OMA', *A+U*, July Special Issue (2005), pp. 4-5, 10-18, 20

22 J. Yu, 'Defense for Andreu and Discussion with Mr Peng Pei-gen', *Architecture Journal (Jian Zhu Xue Bao)*, 3 (2001), pp. 31-33

23 Naomi Pollock, 'Jian Wai SOHO: Riken Yamamoto creates a posh new address for Beijing', *Architectural Record* (March 2004), pp. 91-93; Riken Yamamoto, 'Making an Urban Environment', *A+U*, 399 (November 2003), pp. 74-75; Asuka Minami, 'Construire dense et flexible hors des standards', *Architecture d'aujourd'hui,* 358 (May-June 2005), pp. 56-65; 'Beijing Jian Wai SOHO', *Japan Architect*, 55 (2004), pp. 30-35; 'SOHO New Town Beijing', Internet Website: www.sohochina.com/en/xiandai/project.asp

24 For instance, the *Baojia* practices during imperial times of what were essentially gating communities, the Bannermen areas of Qing Beijing, and the *danwei* of the earlier Communist era.

25 Campanella, *The Concrete Dragon*, p. 141

26 Xue, *Building a Revolution*, p. 41

27 China Architecture & Building Press, *A Collection of Schemes for the International Architectural Competition of the National Grand Theatre P. R. China* (Beijing, 1999), pp. 5-7

28 Campanella, *The Concrete Dragon*, p. 142

29 Paul Andreu, 'Grand National Theater, Beijing', *AV Monografías*, 109-110 (2004), pp. 34-39; Claire Downey, 'National Grand Theater: Paul Andreu's futuristic eggshell points Beijing in a new direction', *Architectural Record* (March 2004), pp. 80-85; Paul Andreu, 'National Grand Theatre', *A+U*, 399 (November 2003), pp. 54-59

30 Andreu, 'National Grand Theatre', pp. 54-59

31 Xue, *Building a Revolution*, p. 41

32 Yu, 'Defense for Andreu and Discussion with Mr Peng Pei-gen', pp. 31-33

33 Clearly shown by proposals at various stages of the competition in China Architecture & Building Press, *A Collection of Schemes for the International Architectural Competition of the National Grand Theatre P. R. China* (Beijing, 1999)

34 For instance, through height and construction controls in 1990 and the conservation planning of 25 or more historic areas in Beijing's old city in 2002, by the Beijing Municipal City Planning

35 *Architectural Journal* (*Jian Zhu Xue Bao*), no. 9 & 10, Special Edition for Ten Great Projects

36 Zhao, 'Tiananmen Square', pp. 18-22

37 Campanella, *The Concrete Dragon*, p. 134; Sara Hart, '2008 Beijing Olympics', *Architectural Record,* (March 2004), pp. 100-105

38 Ruggero Lenci, 'The Water Cube', *l'Arca*, 187 (December 2003), pp. 35-43

39 Lenci, 'The Water Cube', pp. 35-43

40 Andrew Yang, 'Studio Pei-Zhu commits to an energetic urbanism in modern China', *Architectural Record,* (December 2007), p. 68

Early on, settlement in and around Shanghai was concentrated on the western Puxi side of the broad expanse of the Huangpu River. From the 11th century onwards, Shanghai gradually grew and developed into a shipping, trading and administrative town of medium significance. By the 13th century, imperial hegemony over much of the lower portions of the Changjiang delta was centered there. It was by no means merely a fishing village, as commonly depicted, although it was also not a large and important city, like Suzhou, relatively nearby on the Grand Canal. Its strategic relevance to the Ming dynasty changed in the 16th century, with the construction of a circular walled enclosure – *bao* – around what quickly became a dense town housing the *yamen* of imperial officials. This walled town was apparently constructed at the behest of Shanghainese fearing repeated attacks from seaward pirates, but it also conformed to a more general scheme of the Ming to fortify the immediate interior of its eastern and southern coastline. With the arrival of foreigners, on the heels of their success in the Opium War and the signing of the Treaty of Nanjing in 1842, several Concessions were established, by the British, French and Americans. Within these areas, treaty rights were in effect, giving the foreigners relatively free reign over commerce, legal status, administration and, of course, settlement and public works. The result was a division of territory into three parts – the International Settlement for the British and Americans, the French Concession, and the Chinese City. By the mid-to-late 1850s, Shanghai had become two separate places, with the Chinese in the walled town nestled near the outward bend from Puxi in the Huangpu River, as well as to the south and west, and with the foreigners located in the Concessions to the north, including along parts of Suzhou Creek. Modern industrial and commercial development during the latter part of the 19th century, along with substantial immigration, further expanded Shanghai's urbanization, northward along the Huangpu River, along Suzhou Creek and to the west of the walled city in the case of the French Concession, as well as further southward on the Chinese side, and to the north of Suzhou Creek with commerce and manufacturing. After 1898, the Japanese also began to establish a foothold in conjunction with this latter area. In fact, the foreign enclaves increased in area from 0.56 square kilometers in the 1850s to about 33 square kilometers by the beginning of the 20th century. In 1912, the walls around the Chinese town were demolished and the dualism of the prior form of the city became polycentric across a unified built area sprinkled with residential districts, and dotted by commercial and manufacturing sectors. The once-walled town remained the heart of the Chinese city, however, and the center of the foreign settlements remained in Zhongqu – the central district – and along the Bund, adjacent to the Huangpu River.[1]

Then, after the 1911 Revolution and the demise of the Qing Dynasty, capitalism began to flourish. Indeed, the period of the 1920s and 30s is often described as the 'Golden Era' of Shanghai. Taking advantage of a lull in foreign competition during the First World War followed by the lack of much outside Chinese development policy during the Warlord Period of 1917 to 1927, local entrepreneurs thrived along with others. Private sector activity in light manufacturing, chemical production, shipbuilding and finance expanded dramatically, making Shanghai the most important economic center in China in the mid-1920s. By 1925 the urban population had expanded beyond 2 million, also making the city one of the largest in China for the first time. Along with Chinese entrepreneurs also came industrial workers, intellectuals, shopkeepers and other petty urbanites, as well as students and even a considerable criminal element.[2] At once, Shanghai was the place of business, movie making, modern life, cosmopolitan character and intrigue in China. Full-fledged emergence of the Guomindang, formation of the Nationalist Government and the beginning of the 'Nanjing Decade' in 1927 saw erosion of the authority and autonomy of the foreign settlements, not the least of which resulted in suspension of the 'mixed-courts' system and higher Chinese representation on the Shanghai Municipal Council. By the end of the 1930s the population had grown to around 4 million and the Chinese urban area, outside of the Concessions, spread to some 33 square kilometers, roughly on par with the extent of foreign settlement. Shortly before, in 1937, the Japanese invaded, occupying Chinese portions of the city and then the entire city in 1941.[3] One lasting symbol of the 'Golden Era' was development along the Bund. Together with the remnants of *godowns* and docking facilities, an architecturally eclectic array of major buildings for finance and commerce developed, like the domed, neo-classical Hong Kong and Shanghai Banking Corporation

CHAPTER THREE

FROM PUXI TO PUDONG IN SHANGHAI

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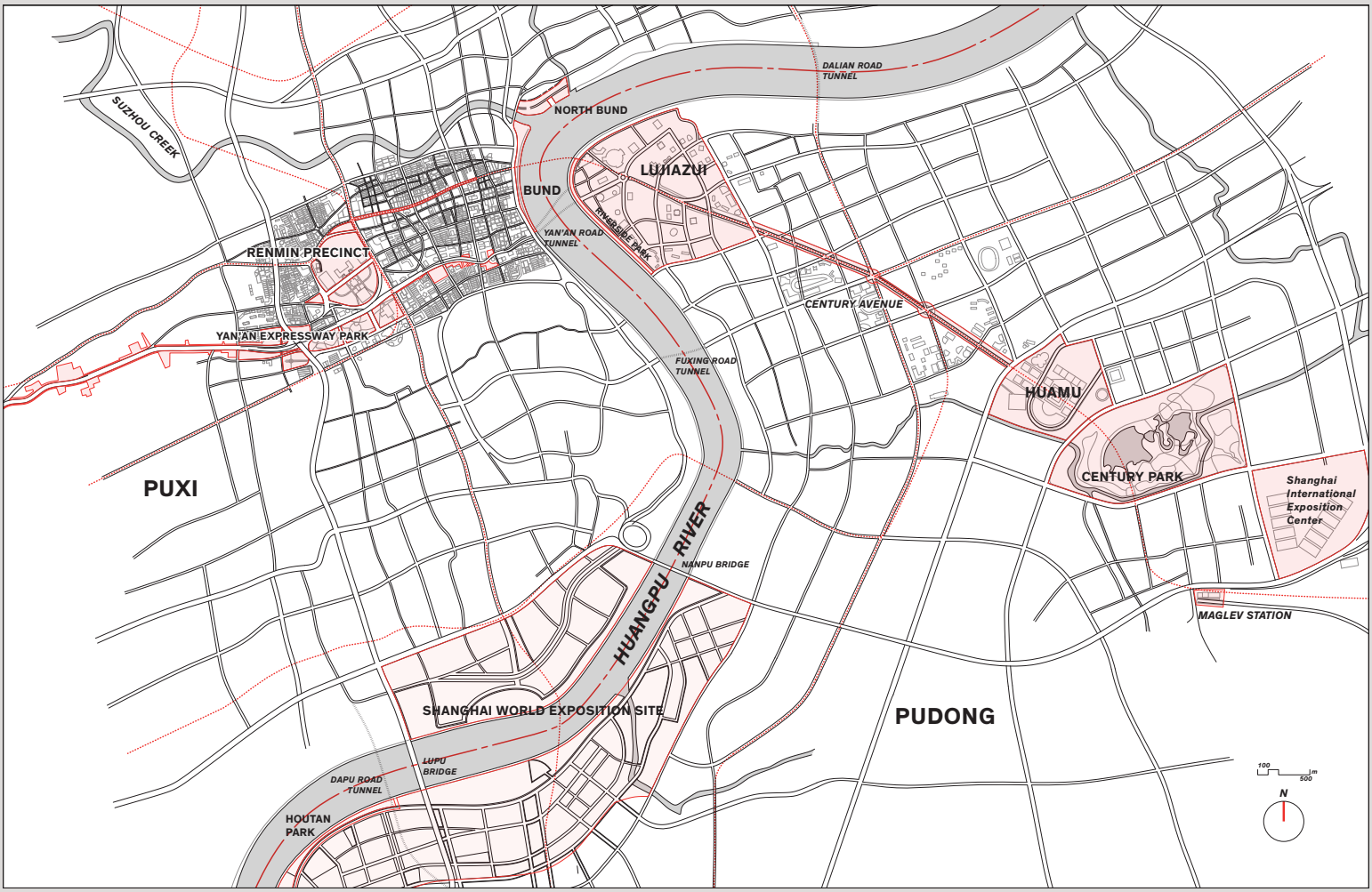
Territories and Projects in Puxi and Pudong


SUZHOU CREEK
DALIAN ROAD TUNNEL
NORTH BUND
LUJIAZUI
BUND
RENMIN PRECINCT
YAN'AN ROAD TUNNEL
RIVERSIDE PARK
CENTURY AVENUE
YAN'AN EXPRESSWAY PARK
FUXING ROAD TUNNEL
HUAMU
PUXI
CENTURY PARK
Shanghai International Exposition Center
HUANGPU RIVER
NANPU BRIDGE
MAGLEV STATION
SHANGHAI WORLD EXPOSITION SITE
PUDONG
LUPU BRIDGE
DAPU ROAD TUNNEL
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of 1921-1923, by Palmer and Tumer; the Shanghai Customs House of 1925, by the same architects, with its prominent clock tower; Sassoon House of 1929, by Palmer and Tumer yet again, with its pyramidal *art déco* splendor; and the towering Bank of China of 1937, in collaboration with Lu Qianshou. In sum, these and several other buildings formed a majestic frontispiece to Shanghai's central district, presenting a distinctive built profile from vantage points along the Huangpu River.[4]

By contrast, in the late 1970s and with China's opening to the outside world, if not before, Shanghai was in a pitiable condition. Long gone was its glamour, entrepreneurial spirit and uniqueness as the center of modernity in China. It had become a dingy, overcrowded, demoralized and squalid place by all accounts, especially in relationship to the 1930s when it earned the soubriquet of being the 'New York of the Orient.' Between 1937 and 1949, Shanghai suffered from conflict, first against the Japanese and then as a consequence of the civil war between the Nationalists and Communists, plunging the city into a downward spiral of diminishing economic activity, a lack of municipal progress and inexorable dilapidation of services, infrastructure and building. Under the subsequent Communist doctrine of industrialization and simultaneous relegation of housing, municipal services and urbanization into the category of unproductive consumption, these circumstances did not improve appreciably. Residential work-unit districts – *danwei* – were constructed, although with many located out on Shanghai's periphery without much urban-architectural distinction and often effectively segregating daily life, in contrast to the city's earlier cosmopolitan atmosphere.[5] At a broader administrative level, 'income extraction,' that began with the Nationalists, continued and intensified. Long regarded as the 'cash cow' of China, Shanghai saw 87 percent of its local revenues sent to the Central Government in Beijing to pay for other regional programs of industrialization and development between 1949 and 1987.[6] Not surprisingly, this practice took a critical toll on the city's productivity and morale. In spite of this, however, Shanghai, although slipping badly in its overall economic output from prior times, still remained prodigious in relative national terms, producing on the order of 3 USD for every dollar of fixed assets, against a national average of between 1 and 2 USD. In addition, the Cultural Revolution had a particularly severe effect on Shanghai's population. Statistically, there were around 4.5 million inhabitants in 1949, rising to about 6.4 million in 1960, often living in overcrowded conditions, before declining to 5.5 million people in 1970 and not returning to the level of 1960 until well into the 1980s. Worse yet, this net loss also represented a brain drain, as many highly qualified or better-off Shanghainese went to work elsewhere.[7]

Although Shanghai remained tied to the western Puxi side of the Huangpu River throughout the period of this narrative, the ambition to cross over into Pudong on the east was also visible in a succession of planning efforts. As early as 1919, Sun Yat Sen's vision for a 'Great Port of the Orient' proposed a venue to rival the foreign Concessions, including a canal through Pudong to the ocean beyond and construction of a 'Bund' on the eastern side, along with circumvention of water supply to the Huangpu upstream.[8] Quite apart from the direct threat to the foreign settlements, the scheme proved to be impractical. Certainly early Republican China could not have muscled it through. Then in 1927, under Chiang Kai Shek's Nationalists, Shanghai's government with Mayor Huang Fu as its head, embarked upon the 'Greater Shanghai Plan,' in an effort to leave their mark on the city and to deliver it for China from under foreign dominance. At much the same time, in 1928, the city was made a Special Municipality under direct control of the Central Government in Nanjing, further underlining the importance of this effort.[9] The location of the Greater Shanghai Plan was to be more or less halfway between the International Settlement and a planned deepwater port at Wusong by the Changjiang, all to the north of the existing city and spilling over, in part, into Pudong on the east. This location made a certain amount of sense, *vis-à-vis* proposed rail links, the potential of deeper port facilities and an abundance of un-urbanized land area. There was also a clear intention to surpass the foreign settlements in both location and amenities. In fact, the newly arrived Nationalists were highly critical of the inadequacies of the foreign settlements, in these and other regards, for holding back the city's development.

The City Planning Commission, charged with planning of Greater Shanghai, included Shen Yi, who chaired the Commission, Dong Dayou, as the Commission's architectural advisor, along with several foreign experts, notably the American

engineer C. E. Grunsky, the American planner Asa Phillips, and the German planner of the modern Turkish capital in Ankara, Herman Jansen.[10] The centerpiece of the Plan was the Civic Center. Although the subject of an open design competition, the entries were deemed to lack the necessary "monumentality" and "realization of the full possibilities of Chinese architecture in adapting to modern city planning and construction, without sacrifice of essential aesthetic qualities."[11] The American-trained Dong Dayou was then charged with preparing final plans, proposing a clear, Beaux-Arts arrangement of intersecting axes, radiating boulevards and an annular street layout in plan. Construction on the flat site began in 1931 with the Mayor's Building, followed by the Municipal Library and Municipal Museum in 1936, plus several other public buildings shortly thereafter. Work was halted in 1937 following the Japanese invasion, although the ambitious project was hampered all the way along by budgetary crises and a lack of local support for moving to what many saw as a risky location.[12]

Urban ambition in the direction of Pudong continued after World War II under the Nationalists. In 1946, the Shanghai City Planning board was created and embarked upon a Master Plan for Shanghai. This time planning discourse took on a regional cast, coincident with rationalist regional planning elsewhere. Under the leadership of Mayor Wu Guozhen, planning also took into account the pros and cons of the earlier Greater Shanghai Plan. What resulted, again largely in keeping with international trends, was the dispersal of pent-up pressures for development to satellite towns around the broad core area of the city, along with functional zoning and co-ordinated infrastructure rights-of-way. Conspicuous in the plan, though, was the development of Pudong via cross-river connections of bridges and a tunnel, as well as the concept of balancing overall urbanization between Puxi and Pudong. Also part of the plan was the creation of a Free Trade Zone – a harbinger of things to come in China – modeled after similar pre-war experiences in Hamburg and in San Francisco.[13] However, little materialized from this planning effort, again due primarily to the lack of funds available to the city and mounting crises for the Nationalist regime. Subsequently, in 1949 Zhao Zukang acted as mayor of Shanghai during transition to the Communist government following the Civil War. Later in 1954 Zhao was reconfirmed in his original position as a Commissioner of Public Works and was invited to head up the new Planning and Construction Bureau of the People's Government of Shanghai.[14] Another master plan, authored primarily by Mu Xing, was prepared under his leadership and with evident Soviet inspiration. This plan also proposed urban incursions into Pudong, through a radiating pattern of roadway plus a greenbelt and park system. A further master plan in 1959, also proposed urbanization in Pudong, especially around the bend in the Huangpu River near the confluence with Suzhou Creek and in today's Lujiazui district. Both this and the earlier plan included industrial activities – ship building – along the eastern side of the Huangpu and modest commercial zones within Pudong near bridge crossings. Overall, the 1959 Plan was typical of many in China at the time, emphasizing industry and yet incorporating an articulate arrangement of the central core of the city – bounded by a ring road – and satellite developments radiating outward on the periphery, with green belts in between. Nevertheless, in spite of all these ambitions, little urban development of real substance occurred within Pudong. The old adage that "it was better to have a hovel in Puxi than a mansion in Pudong" still applied.[15]

Reterritorialization and Reclamation of Prominence

Following China's historic opening up in 1978 and the onset of Deng Xiaoping's reforms, progress in the direction of Pudong began to be made around 1984. At this time the Scheme of the Urban Master Plan for Shanghai Municipality was submitted to central authorities to be approved by the oversight body – the State Council – in October of 1986.[16] Part of this plan was the inclusion of Pudong in the overall development strategy. In fact, the Shanghai Urban Planning and Design Institute (SUPDI), led by Huang Fuxiang, had prepared initial sketches for this inclusion in the early 1980s.[17] Prior to this, the Third Plenary of the Eleventh Party Committee substantially altered the overriding state policy from class struggle to socialist modernization, resulting in a shift to a 'planned commodity economy' by 1984 and then to a 'socialist market economy' certainly by 1992. The Third Plenary also effectively reversed policies of disinvestment or under-investment in large cities pursued since the late 1950s in favor of an agenda that would take advantage of their economies of scale, with Shanghai assuming

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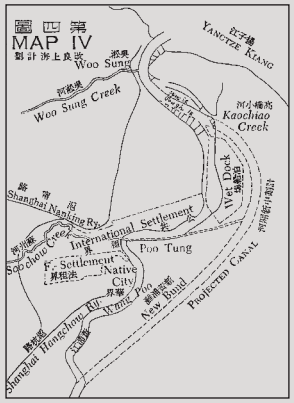

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1898 Plan of Shanghai Showing the Chinese City and the Concessions (*Lao Shanghai Ditu*)

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1931 Plan of Shanghai (*Lao Shanghai Ditu*)

--- 3
The 1959 Plan of Shanghai (*Shanghai Chengshi Guihua Zhi)*

--- 4
Lujiazui Financial Center Final Scheme (Seng Kuan)

--- 5
The Bund in the 1930s (Peter Rowe personal collection)

--- 6
1986 Plan of Shanghai (*Shanghai Chengshi Guihua Zhi)*

--- 7
Sun Yat Sen's Proposal of an Alternative Channel and Port (*International Development of China*)

--- 8
Greater Shanghai Civic Center by Dong Dayou, 1929 (public domain)

--- 9
Skyline of Lujiazui from the Bund (Peter Rowe)

--- 10
Toyo Ito's Proposal for the Lujiazui International Consultation (Naoki Hata Keyama)

an important role as a primary 'key-point city,' or the 'head of the dragon.' Moving ahead, the 1986 Plan was revised in 1995 followed by a further phase of metropolitan planning, along many of the same lines, ending with the Comprehensive Plan of Shanghai Metropolitan Region (1999-2010) with its nine satellite developments, gaining acceptance in 2001. Essentially, this elongated process became the backbone of municipal efforts to revitalize Shanghai, rationally accommodate future growth and, befitting its national role, regain the city's former prominence.[18]

In the discourse that accompanied the 1986 plan and its revisions, there were several explicit guiding principles of importance to this discussion. The first was to build a socialist modern city with openness to the world, incorporating multiple functions and advanced science and technology. Second, particular advantage was to be taken of the creation of special economic zones. Third, Pudong was to be developed as an export-oriented, multi-functional new zone and in keeping with international standards. At the time it was also the largest area opened for development and designated as the Pudong New Area. Fourth, future development of Shanghai was to have the dual purpose of becoming a display case for domestic products and services, as well as an attraction for international economic resources. Finally, the past and the future of the city were to be integrated, or in the words of the framers of the plan, "[to] respect history but build for the future." As noted by others, the 1986 Plan, although groundbreaking in its impact, was very similar in many of its physical features as well as some of its interests with both pre- and particularly post-war plans. Further, this likeness was possibly less than coincidental, given Zhao Zukang's presence – the leader of post-war planning – among Consultative Small Groups, involved in the later effort.[19] It also makes a certain sense given underlying similarities in developmental and related contextual parameters. Schematically, the plan conformed to a ring-radial, centralized though polynucleated, urban satellite form of metropolitan development, with green belts in between. A new international airport was planned for Pudong and an ambitious set of bridge and tunnel connections was proposed to finally and substantially link Puxi and Pudong across the Huangpu River.

The economic and political wherewithal behind the plan came from several sources and this time it was sustained. Between 1985 and 1987, Jiang Zemin – China's future leader – served the city as mayor and, although there was not much change in the relationship with the Central Government in Beijing, Shanghai did prepare itself for the future. The cumbersome policy of 'income extraction' began to relax. The local auctioning of land-use rights for development was under consideration and eventually implemented, as elsewhere in China, and strong efforts were made to court direct foreign investment. In 1987, Zhu Rongji – another prominent leader in China – became mayor, making further progress with the Central Government on Shanghai's behalf. He also helped to convince them, among other things, to push further the focus on traditional, economically viable areas implicit in the Third Plenary discussions as a mechanism for attracting and stimulating economic activity, particularly in concert with foreign investment, and then diffusing it inland to less well-serviced areas. Zhu's replacement in 1991 was Huang Ju, a local figure who advocated strongly for an altered attitude towards the city from Beijing and a shift towards greater local autonomy, as well as a stronger transition to private and collective enterprises. Income extractions declined further and many more private enterprises appeared. Before 1949, for instance, Shanghai had about 200,000 private industrial establishments and around 120,000 stores, which all but disappeared during the 1950s, with the formation of State-owned Enterprises. In 1991, there were some 2,280 private enterprises, rising to 12,647 in number by 1994, largely under Huang's encouragement. Conversely, 86 percent of Shanghai's gross domestic product was derived from State-owned Enterprises in 1980, falling to 62 percent in 1992, the remainder being comprised of output from non-State, collective, private and overseas joint ventures.[20]

Coincident with Shanghai's reinvigorated planning effort, a version of the Pudong New Area Planning Principles was drafted in 1987. This became elaborated through the Pudong New Area Master Plan Initial Scheme in 1989, including the designation of six functional zones to which particular importance was attached, again in concert with the 1986 Shanghai Plan. They were: free-trade, export processing, and high-tech industrial zones, a new container shipping port, the new airport mentioned earlier, with links back into the

city, and a new financial district at Lujiazui across the river from the Bund. In April of 1990, Li Peng officially sanctioned the opening of the Pudong New Area and by 1992 a more definitive Pudong New Area Master Plan prescribed the spatial and institutional parameters for what was to become a vast urban undertaking, covering some 522 square kilometers.[21]Then, in 1993, administration of the New Area became more fully formed as the Shanghai-Pudong New Administration, granting special vice-mayoral leadership within the metropolitan government and considerable leniency in financial, developmental, planning and regulatory matters. Several international consultations, local planning efforts and construction undertakings preceded the full roll-out of the Pudong plan and its administration. In 1985, for instance, a partnership was entered into by Shanghai city officials and the Institut d'Aménagement et d'Urbanisme de la Région Île-de-France (IAURIF), or the Development and Town Planning Institute of the Paris Region. No doubt there was considerable admiration for Mitterrand's Paris projects, an affinity with France's statist role in urban development, and wide recognition of the quality of the French Concession from earlier days in Shanghai. From this partnership local plans began to emerge in 1990, beginning to describe the Lujiazui district as a place for skyscrapers and as the signifier of the 'New Shanghai.' Indeed, from then on considerable designer attention began to be directed towards Lujiazui's 1.9 square kilometers of relatively underdeveloped land. A communications and observation tower – the Pearl of the Orient by the Shanghai East China Institute of Architectural Design – broke ground in 1991, to be completed in 1995. At some 490 meters in height, it became the first marker, so to speak, in Lujiazui's skyward-reaching ambition.[22]

Before leaving office, Zhu Rongji paid a visit to Paris in April of 1991 seeking further technical assistance, where he visited the IAURIF and l'Établissement Public pour l'Aménagement de La Défense (EPAD), leading to the later formation of the Groupe Français d'Appui au Développement de Shanghai-Pudong, or the French Back-up Group for the Development of Shanghai-Pudong, under the leadership of Joseph Belmont – a key figure behind the Parisian Grand Projets. Two significant findings emerged subsequently from this Chinese-French joint committee of experts. One was the emergence of the east-west axis, along and adjacent to the Yan'an roadway in Puxi, and into Pudong through Lujiazui, already sketched out earlier by Huang Fuxiang and his colleagues at SUPDI. The other was confirmation of the high visibility of the Lujiazui site as the place for a striking downtown skyline. To this end, some 4 million square meters of floor space was proposed with about 67 percent in office accommodations and the remainder in complementary programs such as hotels, conference centers, commercial outlets, cultural facilities and luxury housing.[23] Construction of Shanghai's inner ring road – part of an extensive system of expressways – got underway in 1992, linked to the Nanpu Bridge, in the south, spanning about 885 meters across the Huangpu. Opened in 1991, and designed by the Shanghai Municipal Engineering Design Institute as a cable-stayed structure, this crossing was modeled after the Alex Fraser Bridge in Vancouver. The Yangpu Bridge, with an even larger span, was opened in the north shortly thereafter, further connecting Pudong into the ring road. Both bridges were financed in part by loans from the Asian Development Bank and, together with a tunnel crossing at Yan'an Donglu directly into Lujiazui, finally ended Pudong's relative isolation from Puxi.[24] Apparently, feasibility studies demonstrated tunnel crossings as the cheaper of the two alternatives. However, they lacked the visibility and symbolic impetus of the bridge crossings, which were later repeated as will be discussed in chapter four.

What emerged from these and other related planning deliberations was an axis or relatively continuous and distinctive infrastructure armature, crossing Shanghai from west to east. Depending upon one's interpretation, it can be seen to run from around Hongqiao Airport through a succession of large and smaller parks nearby and adjacent to Yan'an Road, including new development in and around Renmin Park and Plaza on the old racecourse in the center of town, across the Huangpu and through Lujiazui, terminating around the newly constructed Century Park in Pudong that was modeled loosely after New York's Central Park. The total length of this axis is around 20 kilometers, stretching at least 5 kilometers or more, into Pudong. In the center of the city, taking into account the Pudong New Area, four territories were opened up for development and architectural production during the 1990s and onwards. They were: the Renmin precinct and Yan'an

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Overview of Pudong Precincts

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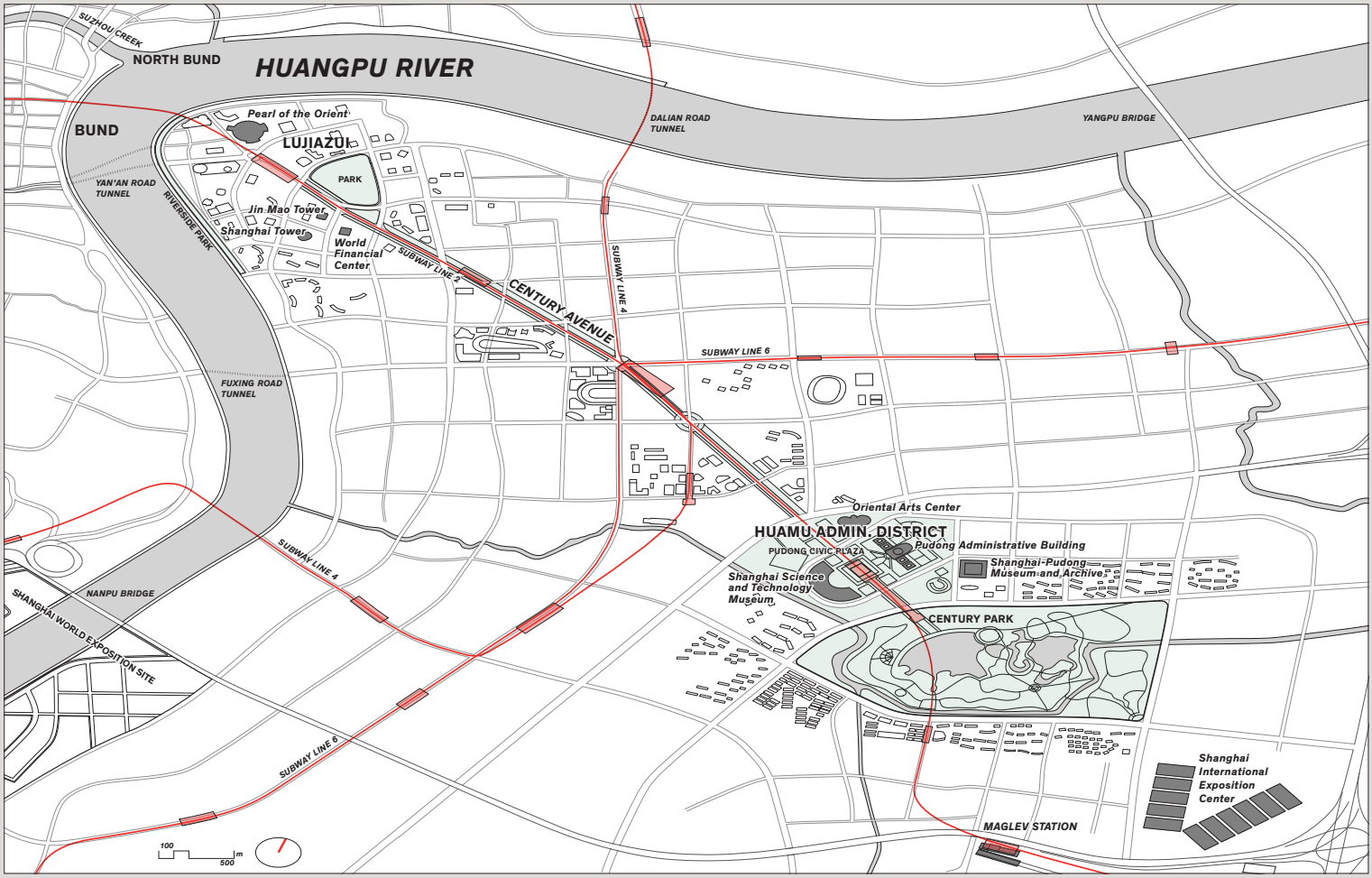
Pudong Precincts and Projects in Context


SUZHOU CREEK
NORTH BUND
HUANGPU RIVER
BUND
Pearl of the Orient
LUJIAZUI
PARK
DALIAN ROAD TUNNEL
YANGPU BRIDGE
YAN'AN ROAD TUNNEL
RIVERSIDE PARK
Jin Mao Tower
Shanghai Tower
World Financial Center
SUBWAY LINE 2
CENTURY AVENUE
SUBWAY LINE 4
SUBWAY LINE 6
FUXING ROAD TUNNEL
Oriental Arts Center
HUAMU ADMIN. DISTRICT
PUDONG CIVIC PLAZA
Pudong Administrative Building
Shanghai-Pudong Museum and Archive
Shanghai Science and Technology Museum
CENTURY PARK
NANPU BRIDGE
SHANGHAI WORLD EXPOSITION SITE
Shanghai International Exposition Center
MAGLEV STATION
100
500
m

Expressway Park area; Lujiazui, with Century Avenue running through its center; the Huamu administrative and cultural district at the eastern end of Century Avenue; and the adjacent Century Park environs further to the east.

As a tract of land the Renmin precinct is a remnant from Shanghai's earlier days of foreign settlement. As noted, it was a racecourse and center of outdoor entertainment and gambling. During the 1860s it was also used as a gunnery position, as volunteers from the foreign settlements joined forces with the Qing Imperial Army to quell incursions from the Taiping Rebellion. Flanked along the north by Nanjing Road, as might be expected, the tract is roughly oval in shape and around 40 hectares in area. Almost since the birth of the People's Republic, it became the administrative center of Shanghai with a large municipal headquarters built at its core along a wide avenue, extending Fuzhou Road to the west and bisecting the tract into Renmin Park on the north and Renmin Plaza to the south. Like Tiananmen and Central Beijing, the administrative and symbolic centricity of the territory is also combined with cultural venues. Again, like much of Shanghai, its topography is flat. The southern edge is flanked by Yan'an Road, now also an elevated expressway. During the recent phase of redevelopment, several adjacent large tracts of highly dilapidated residential development were then requisitioned by the city, to make way for 28 hectares of park – the Yan'an Road Central Green space, or Yan'an Expressway Park. The logic behind this taking was an extension of the Renmin precinct under the expressway and the provision of more extensive publicly accessible open space in the center of the city, serving very dense mixed-use and residential districts like Luwan to the south, which still have on the order of 35,000 people per square kilometer living together.[25]

As noted, the territory immediately to the east on the Huangpu, opposite the Bund in Lujiazui was designated largely as a financial, office and commercial center of the 'New Shanghai.' With appropriate connections across the river, this program makes sense, given the territory's location at the center of Shanghai's probable geographic expanse. Urban design for the territory got underway when in 1992, Belmont invited a group of architects and planners to participate in the Chinese-French consultancy and provide design ideas for the new district. They included: Renzo Piano, Massimiliano Fuksas, Richard Rogers, Norman Foster, Toyo Ito, Kazuko Shinohara, Dominique Perrault and Jean Nouvel. From this group four participants were selected, or agreed to participate. They were: Fuksas, Ito, Perrault and Rogers, all working alongside a team from SUPDI. Among the proposals, the scheme prepared by SUPDI was selected as the basis for further development, although aspects of other schemes were incorporated, like the central green spaces in Perrault's and Rogers' proposals. A unique feature of the SUPDI scheme was a prominent east-west axis, stretching from near the tip of the Lujiazui peninsular into Pudong, clearly taking up the idea from earlier proposals, perhaps not surprisingly going all the way back to Huang Fuxiang's original sketches. This axis later became developed as Century Avenue – an eight-lane carriageway running for close to 5 kilometers into the Huamu district to the east and clearly referencing the Champs-Élysées in Paris, not to mention the broad axis stretching into La Défense. Together with this axial alignment, the final reference design also included a tri-tower landmark near the core of Lujiazui, composed of three closely spaced skyscrapers, of around 400 meters and above in height, making them potentially the tallest in China. In part this was a response to the already sited Jin Mao Tower, at around 421 meters in height. But it also clearly took up the earlier recommendation, prompted by the French consultancy, for a conspicuous and memorable skyline. In fact, a roughly annular progression of building height radiating out from this central core of 400 meters plus, followed by 300 meters and then 200 meters was thought to be appropriate. The exception was provision of a 10-hectare public open space, to the north across Century Avenue from the high-rise core, programmatically in plan forming a *yin-yang* arrangement.[26]

Further execution of the plan ran into tension between developers' insistence on flexibility – especially in the untested market of the time – and the authority's desire for a well-ordered and coherent vision. Resolution took the form of large urban blocks, ranging from 3 to 12 hectares in area and with each subdivided into large parcels. Detailed Control Plans for each block and parcel – a type of 'form zoning' customary in China – further designated Floor Area Ratios of 5 to 10 and land coverage stipulations of around 40 percent, as well as

substantial setback requirements. Unfortunately, one result of this specification were relatively solitary though highly imageable towers seemingly detached from adjacent streets and neighboring buildings, rendering a quasi-suburban feel to the district in contrast to the denser urbanity one might have expected, and which was present in most of the earlier proposals. After all, 4 million square meters of building across a 1.7- to 1.9-square kilometer area yields an overall Floor Area Ratio of around 2.5 – not very dense by many large central-city standards. In the end, implementation of the district plan seems to have become swayed towards delivering convenient packages for property developers and provision of not so clearly useful green space. As one commentator put it, "an expediency of diagram and a concern for image determined Lujiazui."[27]

Further to the east, around the termination of Century Avenue, the Huamu administrative and cultural district emerged, also offering direct pedestrian access into Century Park, with its adjacent environs. Symbolically centered on a wide and open square plaza, flanked by a *parterre* garden landscape, the programmatic scope of Huamu was conceived to emphasize governmental functions, including the Pudong Administrative Building, as well as venues for a variety of cultural uses. Commissioned in 1996 to Arte Charpentier and their associates, the plaza area – known as the Pudong Civic Plaza, or Century Plaza – was envisaged as a political and cultural counterweight to Lujiazui.[28] The paved and sunken plaza itself is extensive, at 200 meters by 200 meters in dimension, beneath which is a subway station entered via a curvilinear, metal and glass head house, as well as underground shopping and parking areas. An additional scenography of ponds, dancing water, gardens, terraces, pergolas and awnings was also incorporated to embellish the plaza and the adjacent *parterre* landscape. Those themes were then extended further up and over a broad motorway to provide continuous pedestrian access to Century Park and beyond as a continuation of the Century Avenue axis. Overall, the urban-architectural geography of Huamu administrative and cultural center was intended to respond to a somewhat *tabula rasa* condition, through ample plots occupied by relatively low-rise yet prominent buildings, each with its own particular character. To this extent, it is a similar recipe to Lujiazui, although with abundant surrounding landscape perhaps more suited to its programmatic function. The logic seems to be one of a park-like landscape, centered on the strong presence of a plaza with a strong axial alignment connecting with Century Avenue, within which various cultural and other buildings can take up positions that are neighborly without being overly close by. Again, outside of the immediate plaza area, there is a quasi-suburban feeling to the area.

In programmatic and certain formal respects, the Huamu center also closely parallels the Renmin precinct in Puxi, with the inclusion of an expansive urban park. Although not touted as such, this resemblance appears to be more than coincidental, further underlining the importance of recent plans and incursions into Pudong, and an eventual twinning of the two sides of the city across the Huangpu as a strategy for "knitting it together," so to speak. In this interpretation across the Puxi-Pudong axis, a clear relationship is more than tacitly established between the Old Bund and the new Lujiazui financial district, and between the Renmin and Yan'an Expressway Park precinct with the new Huamu district core and adjacent Century Park. Without pressing this concept too much further, extension of this east-west alignment further to the east, via the new International Convention Center on a corner of Century Park and the nearby high-speed Maglev station all the way out to the Pudong International Airport also parallels park and other embellishments along Yan'an to the west as far out as the older Hongqiao domestic airport. In land area the core of Huamu covers some 60 hectares, close to that of the Renmin precinct, whereas Century Park – covers 140 hectares, much larger than the more distinctly urban Yan'an Expressway Park. Public transit service to all four broad territories – Renmin, Lujiazui, Huamu and Century Park – is provided primarily via subway lines and well-placed stops. In fact, Shanghai has been a leader in new large-city subway construction in China, completing its first line in 1995 and with some nine lines completed to date. By 2020, some 17 lines will have been installed, with somewhere between 200 and 540 miles of service, depending upon the rate of construction. Designed as a highly interconnected network, the system, somewhat in the manner of Tokyo's, will incorporate about 32 multiple-line stations and center on the area of current and expanding service need, essentially covering the core metro area, including substantial parts of Pudong.[29]

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Renmin Square in 1959
(*Shanghai 1949–1959)*

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The Shanghai Heritage
Museum (Peter Rowe)

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The Shanghai Museum
of Planning (Peter Rowe)

--- 4
The Shanghai Grand
Theater (Peter Rowe)

--- 5
Section Through The
Shanghai Grand Theater
(Drawn by Jong-Hyun
Baek & Pilsoo Maing)

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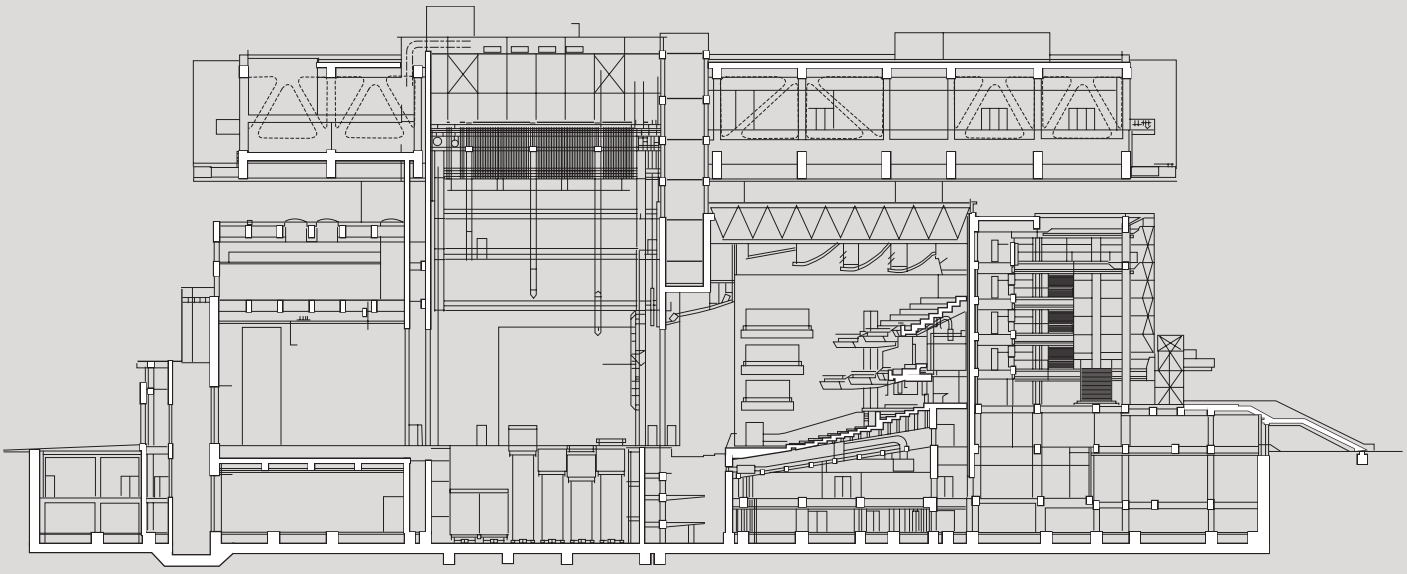

Beads on a String

Fuller-scale development of the Renmin precinct on the former racecourse dates from the 1990s, even if the area was occupied earlier on by public functions and local government. The large and bulky Shanghai Municipal Government Building was located at its center, facing on to the broad expanse of People's Avenue. With a symmetrical disposition of two wings extending from the raised central structure, its architecture hints at the early 1950s practice of incorporating elements of a socialist realist style, although it is otherwise a predominantly masonry and blandly modern building. Imposing in sheer size, it is monumental. Along the western and northerly edge of the old racecourse stood several other noteworthy buildings from the precinct's earlier era. Most were demolished to make way for later reconfiguration of the territory, including for the Shanghai Grand Theater, although the tall and rather elegant neo-Classical former Shanghai Race Club remains. Designed by Spence Robinson and Partners and built between 1926 and 1933, with the arrival of the People's Republic it was used variously as a museum and then as a public library, before assuming its current function, with a contemporary extension dating from 2000, as the Shanghai Contemporary Art Museum.[30] Subsequent planning and construction within the territory, seen as a sphere of action, has followed a recipe that has become almost *de rigueur* in Communist China for administrative city centers, taking many cues from the capital in Beijing discussed earlier. Apart from the presence of an imposing municipal government building, this recipe includes cultural venues and, like elsewhere, especially those relevant to the presentation and projection of historical accomplishments and artistic performance with nationalistic overtones. Although in some other parts of the world, culture, largely under the auspices of civil society may be at arms length from government, in China, the relationship is practically seamless. Other important programmatic ingredients include an extensive plaza and public open space. Overall, the ensemble is unequivocally a representative space of the State. It is invariably monumental in scale and usually symmetrical or somehow bi-axially balanced in layout, as seen in Beijing. There is also an open, extensive and even abstract quality involved, suggestive of further progress and possibility for the State, as elaborated earlier by Zhao Dongri in connection with Beijing.

Following this course of action in Shanghai's Renmin precinct posed several interesting urban design problems. The first was to gain sufficient purchase on what is, after all, a large tract, in order to secure it in a manner that could readily be appreciated as the public center of the city. Fundamentally, this involved both the placement and scale effects of buildings and other constructed portions of the territory's landscape. The second was to achieve a symmetrical and well-composed arrangement of the various component parts. This was done by spaciously aligning buildings along the northern edge of People's Avenue, propitiously facing south and thus creating an east-west axis, including the location of the Shanghai Grand Theater and the Shanghai Urban Planning Exhibition Hall on either side of the pre-existing Municipal Government Building. A virtual north-south axis was also created through the alignment of the Shanghai Heritage Museum on the south with the Municipal Government Building and the landmark of the Park Hotel on Nanjing Road to the north. Further balancing of the composition was accomplished by roughly bifurcating the territory into Renmin or People's Park to the north and Renmin or People's Plaza to the south, the latter creating an expansive forecourt to both the Municipal Building and to the Heritage Museum. The Park Hotel was designed by Ladislau Eduard Hudec in 1934 and, at 84 meters in height, was the tallest building in China for half a century.[31] The Shanghai Heritage Museum was designed by Xing Tonghe early on in the proceedings and completed in 1995. It has a willfully sculptural form, with a prominent cylindrical top, supposedly based on a tripod and bronze mirror from the Han dynasty – a rather literal interpretation for the display place of traditional Chinese artifacts.[32] While the east-west axis remains prominent, subsequent high-rise development around the edges of Renmin Park have diluted the clarity of the other arrangements. Nevertheless, the resulting spatial containment also gives prominence to the precinct.

Within this ensemble of buildings and public spaces, as well as the situational logic that is implied, the two most prominent structures are the Shanghai Grand Theater of 1998, by Jean-Marie Charpentier and Arte Charpentier et Associés, in conjunction with the East China Architectural Design Institute (ECADI) under the direction of Zhu Xiurong, Wu Zhixian and

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Water Bodies at Yan'an Expressway Park (Courtesy of Williams, Asselin, Ackaoui et associés Inc.)

--- 2
Intersection of Yan'an Road and Chengdu Road Above the Park (Courtesy of Williams, Asselin, Ackaoui et associés Inc.)

--- 3
Island in a Pond at the Yan'an Expressway Park (Courtesy of Williams, Asselin, Ackaoui et associés Inc.)

--- 4
Green Path Under the Expressway (Peter Rowe)

--- 5
Plan of Yan'an Expressway Park, Showing
1. Passive Green,
2. Garden of the Senses,
3. Rockery,
4. Dry River,
5. The Meadows,
6. The Water Garden, and 7. The Garden of Dreams
(Drawn by Jong-Hyun Baek & Pilsoo Maing)

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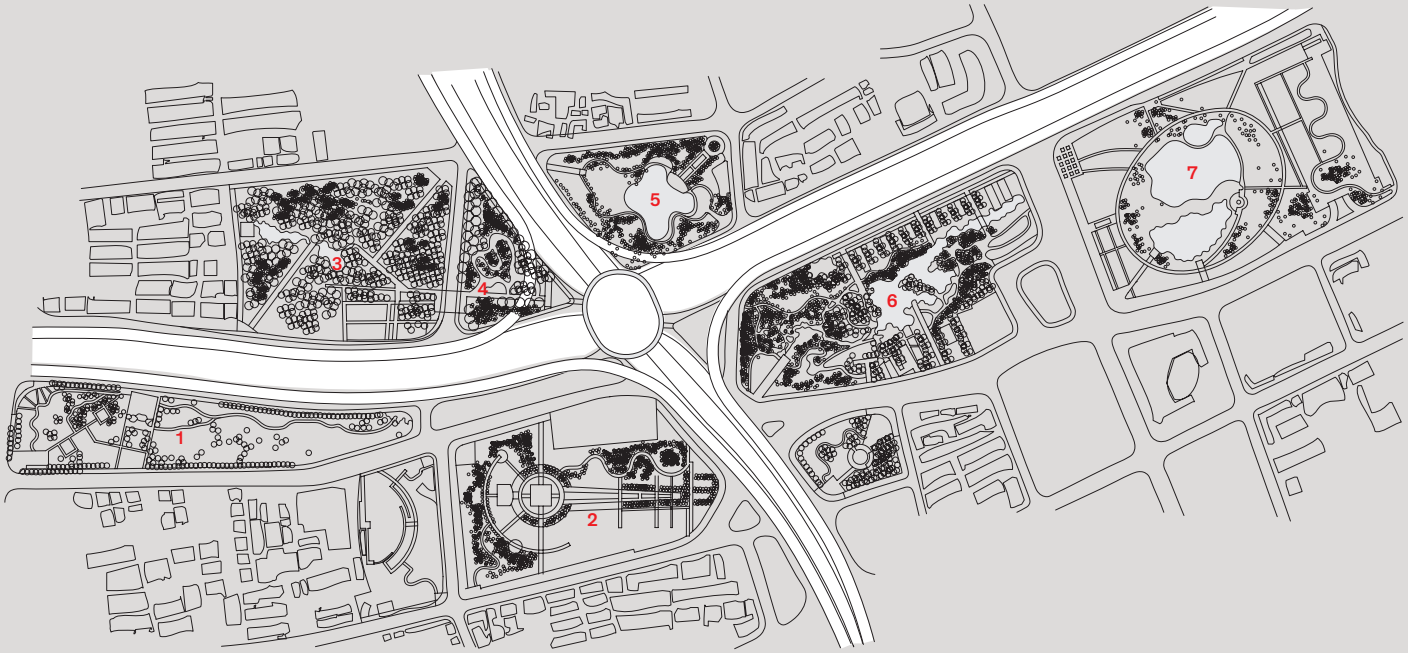

Chen Ying, and the Shanghai Urban Planning Exhibition Hall, or Shanghai Museum of Planning, of 1999 by ECADI. The Shanghai Grand Theater was the subject of an international competition, involving some 18 entries, that took place around 1994.[33] The choice of program for a theater complex and an opera house was made to take advantage of a burgeoning tourist industry and because the city only had a small concert hall. The client for the project was the Municipality of Shanghai under the direction of the vice mayor. Charpentier's proposal was selected, primarily, according to a member of the client group, for its "modern large open façade and transparent volume," together with its material characteristics."[34] Apparently the competition program was brief, leaving a significant margin for interpretation by competitors. Functionally, Charpentier and his associates, elected to deploy a cruciform plan – in the manner of German opera houses – comprised of a main stage flanked by two side stages, with a backstage area behind the main stage and the main auditorium in front. A smaller auditorium was also tucked into a corner of the overall plan. This cruciform arrangement had the advantage of enabling smaller, light repertory performances to take place, as well as large-scale international productions. Sophisticated stage machinery was incorporated throughout, along with some movable partitioning systems to further facilitate flexibility in mounting various productions. The total area of construction was around 62,800 square meters, occupying a square footprint area of 21,000 square meters, and rising to a height of 40 meters. The complex accommodates a 1,800-seat opera auditorium with two smaller theaters at 600 seats and 250 seats for chamber music, contemporary dance and modern drama performances. Also incorporated are restaurants, administrative offices, workshops under the stage, rehearsal rooms and an instrument museum. One of the spatial ideas behind the scheme was the "conception of a jewel box encasing the auditorium" and then, "a crystal palace enclosing the jewel box."[35]

Architecturally this concept was accomplished on the exterior by a lightweight metal and fritted-glass curtain wall, offering the transparency that the client group admired, especially at night. Together with exposed scissor stairways towards the perimeter on the front and along part of the sides, this wall also helps to render interior parts of the building more legible. By contrast, the rear elevation is relatively enclosed, as befits the situation of a public building facing onto People's Avenue. The foyer area is expansive, perhaps exaggeratingly so by Western standards, although this is also deliberate, appealing as it does to Chinese audiences expecting a certain grandeur in opera houses' entry ritual, also apparent earlier in Beijing's National Theater. This ritual is likewise extended externally by ascending a broad stairway. In fact, the entire building is mounted on a raised plinth, that both facilitates the accommodation of backstage functions, while avoiding undue below-grade construction into Shanghai's high water table. However, perhaps the most prominent feature of the theater complex is its large upturned roof, following the arc of a circle, extending well over the accommodations below and seeming to almost float over the building. The roof was fabricated on site from large steel truss sections and lifted into place. Its curvature was originally conceived to contain another outdoor auditorium, but the client insisted, instead, on enclosure and accommodation of a restaurant with a splendid view of the Renmin precinct.

One of Charpentier's and his group's evident preoccupations in the design of the Grand Theater was striking an appropriate balance between the traditional architectural expression of the Chinese hall and a contemporary architectural expression befitting the times of the 'New Shanghai,' probably with the latter more in the appreciative foreground. The upturned roof structure clearly nods in the direction of the theater in the nearby Yu Yuan Garden, part of the Old Chinese area of Shanghai, as well as to a number of traditional theaters elsewhere. More directly though, the volumetric disposition of the complex and its basic articulation is closer to the gestalt of the traditional 'hall' type, used in the past for a variety of imperial purposes, even if the proportions are different. There is a clear base, middle and top to the composition, as in the past. Moreover, here this also gives the building a more imposing presence facing south on People's Avenue, as required by the underlying urban design concept for the precinct. There is similarly the suggestion of a more transparent middle to the composition, as in the past, along with the suggestion of upward support. The gridwork of the fritted-glass enclosure and masonry work also suggests the paneling between columns on traditional hall examples. References have also been made to the square plan as being congruent with the Chinese symbol for 'earth' and the arc of the circle symbolizing

the 'sky.' Maybe so, although the Grand Theater seems to fare better when grounded in an architectural discourse. Here, given the architectural geography on display during various revivalist periods in China in the 'big roof' era and its controversy of the 1950s and, later, in the 1980s as a strain of China's short-lived cultural liberation, the Grand Theater does stand up well. Allusions to the past and to a particular building type are there but not the literalness. Highly contemporary structural and material qualities are very present and not as facsimiles of what went on in the past, but in their own right, as were the elaborate columnar and modern bracketing systems of traditional practice. Of course, one might ask why attempt to 'ply between East and West' in the contemporary era? Here again, the situational logic of the place can be seen to come into play. It is located in the Renmin area of Shanghai and, by extension, must perform as something of a potential nationalistic signifier. It is also in a city where the figural qualities of buildings, or their scenography, are long standing and important; therefore, why not? What about the National Theater in Beijing one might also ask? There, as was argued, the situational logic had its own particular qualities. It was also a much larger complex, well out of scale with the possibility of effective modeling after a traditional building type. Further, the National Theater also contained its own set of local cultural references. They were, however, both more specific to the Tiananmen area and more ephemeral, or cosmologically inclined.

The Shanghai Urban Planning Exhibition Hall by ECADI is located on the eastern side of the Municipal Government Building in roughly an analogous position to the Grand Theater. It is also about 40 meters tall and with an outward technological expression of metal and glass, crowned by four giant steel structures, swooping upward to a flat top. It is, however, not as refined nor as referentially thoughtful as the Grand Theater, although in its contemporary arresting presence, it still does fulfill its function in Renmin's urban design composition. More or less symmetrical composition on all sides of the square plan lends further visual authority and desired object quality to the complex. The building is comparable in height to the Grand Theater, at 42.3 meters, with five storeys above grade and two below. The total floor area is relatively modest at around 18,400 square meters, housing a double height Master Plan Hall containing a 1:500 scale model of Shanghai, with the remaining floors devoted to further displays, administration and public amenities.[36] The purpose of the museum is to inform the general public about the urban development of Shanghai, including aspects of its historical evolution, in a manner that allows them to more fully comprehend the changes that have occurred and are occurring. Future plans and proposals are also conspicuously on view. In fact, the entire exhibition is presented under the rubric of 'Yesterday, Today and Tomorrow,' along with the optimistic slogan of 'Better City, Better Life.'[37] Such displays are not uncommon in China and some have received particular architectural attention.

Criticized by some observers as little more than a "trading floor for real-estate," the Shanghai Urban Planning Exhibition Hall is certainly used by the municipal government to impress visitors and attract interested developers.[38] Nonetheless, the vast majority of visitors appear to be presumably curious members of a general public. The prominent location of the hall in the Renmin precinct has also been called into question, also with concerns about the current selling of Shanghai as a commodity. However, its location can also be seen as a functional annex to the Municipal Government Building next door, hardly an inappropriate transgression. Moreover, as one commentator put it, "China's appropriation of Western-based models (*vis-à-vis* urban development) maintains a collective ambition," and "Shanghai's planning program serves," to "up the ante on national identity to secure an advantage in the global game," referring to competition among cities in which up-to-date and attractive urban circumstances are seen to play an increasing role.[39] This all being the case, a prominently located and particular display facility does not seem to be so unwarranted.

As described earlier, the dominant sphere of action in Lujiazui across the river in Pudong continues to be high-rise building construction and its architecture. Moreover, as argued in the introduction, this sphere, in turn, brings along with it an intrinsic geography involving a range of possible construals of high-rise building and architectural accomplishment. Today, for example, this intrinsic geography has several potential architectural orientations and precedents, as alluded to earlier. Among them, architectural arrangements might purport to become iconic through sheer height and scale, or through

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The Renmin Precinct and Yan'an Expressway Park

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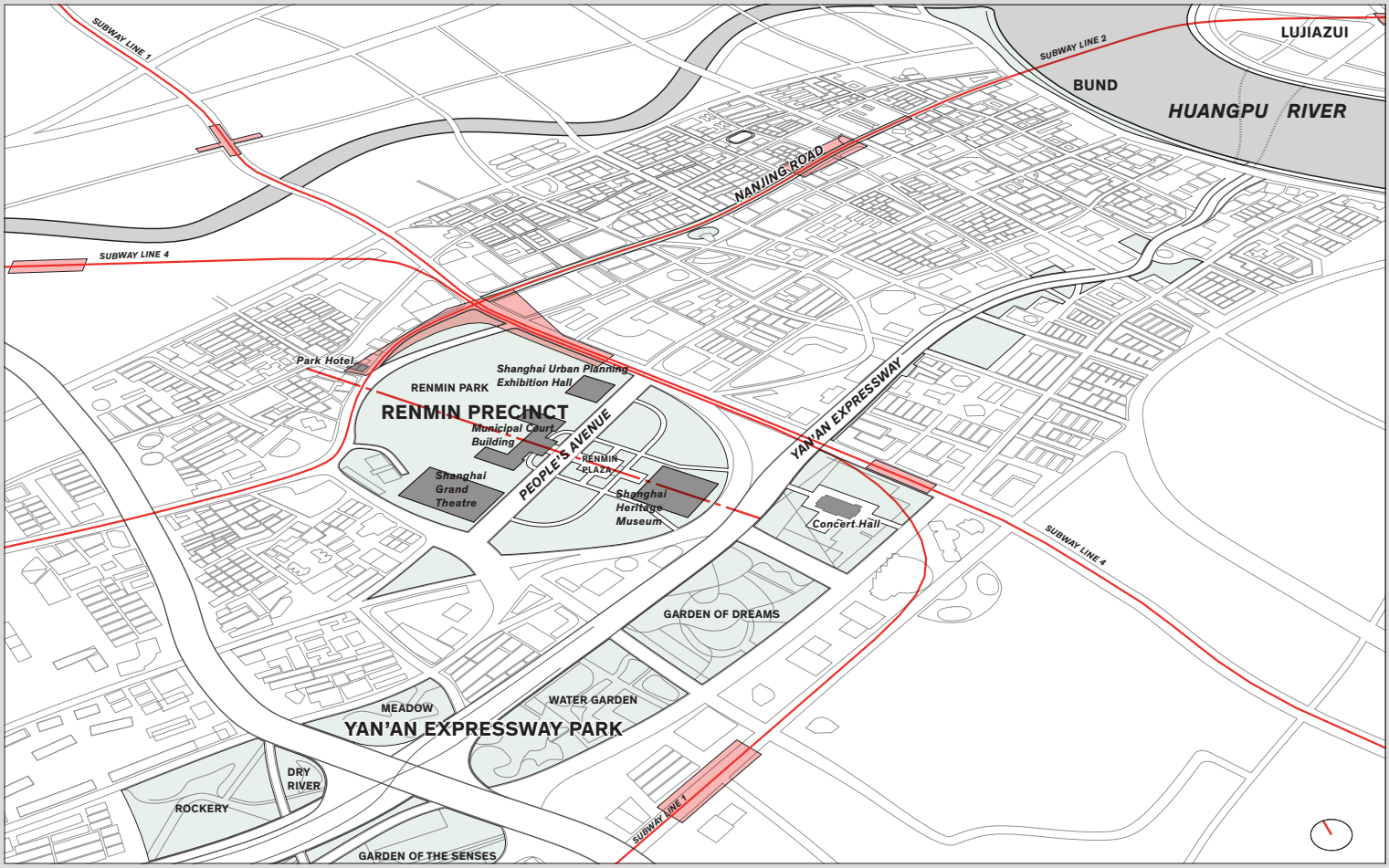
The Renmin Precinct and Yan'an Expressway Park in the Context of Puxi


SUBWAY LINE 1
SUBWAY LINE 2
LUJIAZUI
BUND
HUANGPU RIVER
NANJING ROAD
SUBWAY LINE 4
Park Hotel
Shanghai Urban Planning Exhibition Hall
RENMIN PARK
RENMIN PRECINCT
Municipal Court Building
PEOPLE'S AVENUE
RENMIN PLAZA
Shanghai Grand Theatre
Shanghai Heritage Museum
YAN'AN EXPRESSWAY
Concert Hall
SUBWAY LINE 4
GARDEN OF DREAMS
WATER GARDEN
MEADOW
YAN'AN EXPRESSWAY PARK
DRY RIVER
ROCKERY
SUBWAY LINE 1
GARDEN OF THE SENSES

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--- 1
The Jin Mao in Context from the River (Shinkenchiku-Sha)

--- 2
Facetted Interwoven Façade Elements of Jin Mao (Peter Rowe)

--- 3
The Hyatt Hotel Atrium at Jin Mao (Courtesy of Skidmore, Owings & Merrill LLP)

--- 4
Section Through Jin Mao (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 5
Typical Floor Plan (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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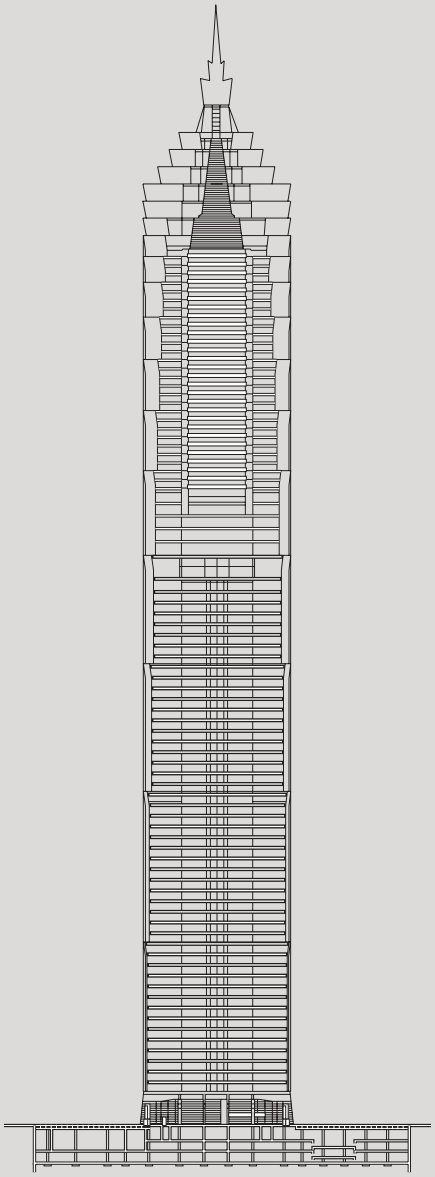

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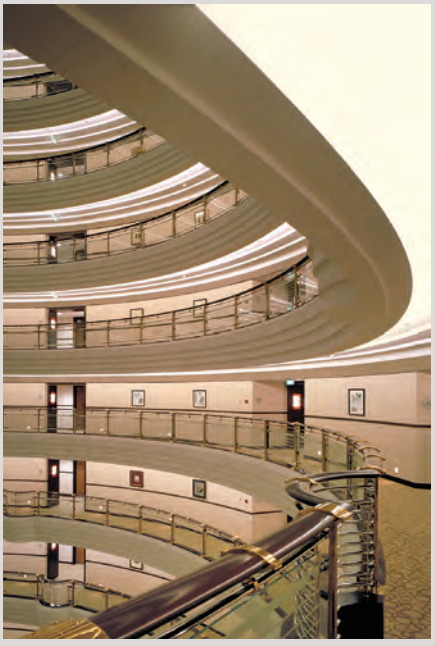

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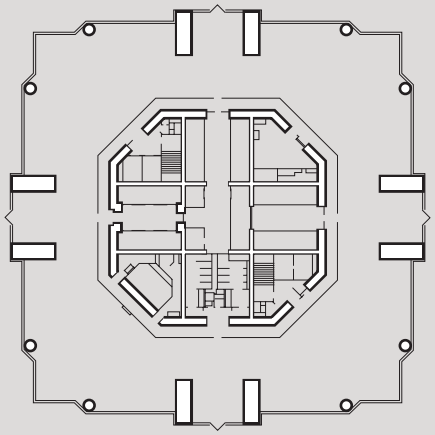

a certain sculptural quality and shapeliness. Others might tend towards novelty through use of exotic materials or expressed fabrication. Still others might embody and conform to systems and intelligent operations for achieving higher degrees of sustainability, while additional approaches might embrace novel programmatic accommodations, as well as involving regional or local symbolic references. In short, this intrinsic geography contains a repertoire of conceivable architectural outcomes within the field of high-rise building. It is more than simply a typological categorization, although certainly admitting to this kind of specification, for it also admits variation within and across themes, as well as authorial architectural preoccupations. Returning to the proposed centerpiece of the Lujiazui financial district – the tall, tri-tower arrangement suggested by the Chinese-French collaboration – two skyscrapers and another in the making, take up with important aspects of this intrinsic geography from different perspectives. First, there is the Jin Mao Tower, sited in 1992 and completed in 1999, by Adrian D. Smith and Skidmore, Owings & Merrill, in collaboration with ECADI. Second, there is the Shanghai World Financial Center, started in 1997 and, with some interruption due to the Asian financial downturn, completed in 2008, by Kohn Pedersen Fox Associates in collaboration with ECADI and the Mori Building Company that also served as the client. The third is the recently awarded Shanghai Tower, won in 2008 by Gensler in collaboration with Thornton Tomasetti, Cosentini Associates and the Architectural Design and Research Institute of Tongji University. This building is scheduled to be completed by 2014.[40]

Set back from Century Avenue, the Jin Mao Tower occupies a 2.3-hectare block, with a constructed floor area of some 278,000 square meters, rising to a height of 420.5 meters which was, until recently, the tallest building in China.[41] Programmatically, it is a multi-use development incorporating some 50 floors of office space with a further 38 storeys mainly of hotel space above, and all on top of a six-storey podium of hotel functions, a conference and exhibition center, a cinema auditorium and a 21,000-square meter retail galleria. Below grade there are three levels, incorporating 57,000 square meters of parking for both cars and bicycles, hotel service facilities and a range of building system and mechanical areas. From the exterior the tower, on a square base, gradually tapers upwards at an accelerating rate, continuing to a point above an observation area. With an aspect ratio of 8:1, the tapered setbacks occur in some 13 segments. The square plan profile is inflected towards the center of each side and at the corners to accommodate structural and curtain-wall considerations, but also adds to the sculptural quality of the building. Office floor plates range in area from about 2,500 square meters to a little over 3,000 square meters and are all column-free. The international planning module of 1.5 meters is deployed in plan, as well as on the external façade to facilitate internal subdivision. In total, the gross floor area of office space is a hefty 133,000 square meters, and the Grand Hyatt Hotel above, with the trademark high-rise atrium, accommodates 555 rooms. Structurally, the tower is primarily supported by a relatively novel arrangement comprised of an inner, octagonally shaped reinforced-concrete core, within which there are also bracing diaphragm walls containing elevator and service shafts, in conjunction with eight pillars constructed in pairs on the exterior near the center point of each side. Further outrigger trusses, several storeys in height, occurring at intervals up the tower, connect the pillars to the core, adding stiffness to the structure. A major consideration in buildings of this height is acceleration control under wind loading and especially in Shanghai's typhoon-prone environment. Foundations in Shanghai's water-logged and murky substrate conditions, another local environmental issue, were provided via a 4-meter deep slab supported on 429 hollow-steel piles, extending down to a depth of 65 meters. Intelligent building systems are also employed throughout to boost energy efficiency, along with life safety and communications. A dense interweaving of metal components across the tower's façade lends a delicacy, strength and degree of ornamentation to the external aspect of the building, also adding to its sculptural quality.[42]

Like Charpentier's Grand Theater, underlying Jin Mao's design was an inflection towards China's regional culture and building tradition. The reference to the pagoda type is clear. In fact the pagoda at Kaifeng has often been cited and the architect has spoken of the use of the pagoda reference to "evoke the culture and memory of China."[43] Apparently the jury for the design competition held in 1993 by the publicly owned China

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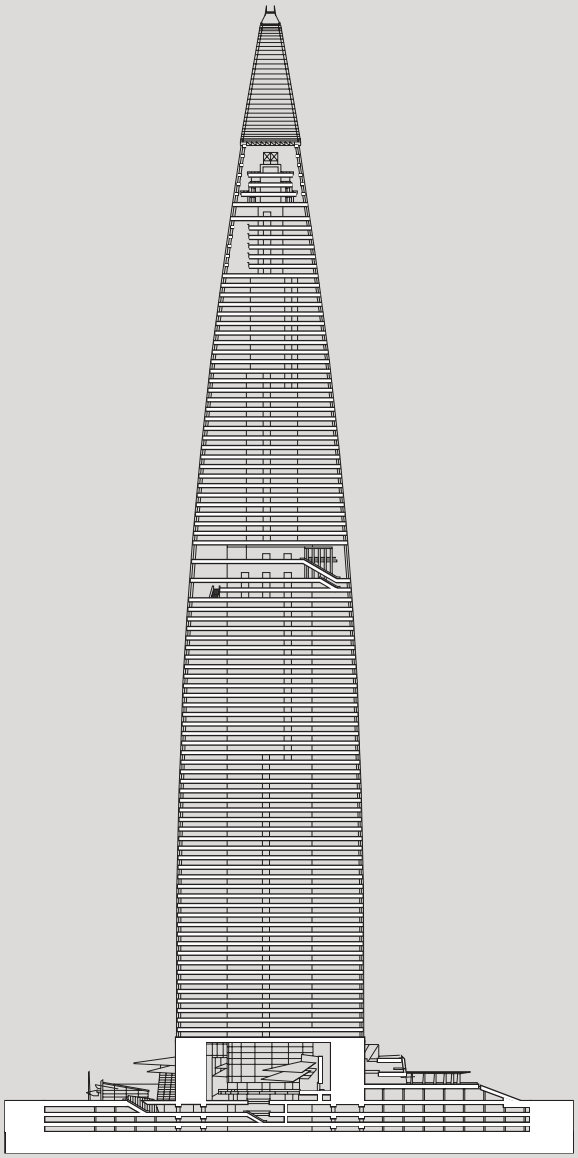

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The Shanghai World Financial Center and Jin Mao in Lujiazui (Shinkenchiku-Sha)

--- 2
The Elegant Shapeliness and Open Top of the Shanghai World Financial Center (Shinkenchiku-Sha)

--- 3
The Three Towers at Lujiazui (Courtesy of Gensler)

--- 4
Section Through the Shanghai World Financial Center (Drawn by Jong-Hyun Baek & Pilsoo Maing)

Shanghai Foreign Trade Center Company also concurred with this reference. Certainly with regard to tall structures it is an image that lies deep in the collective consciousness of the country and often in relationship to urban circumstances. Objections on the grounds of religious association with Buddhism can also be discounted these days, given the relatively common practice by the Ming Dynasty of constructing pagodas for secular and *feng-shui* reasons. Yet while the reference is clear, its materialization is far from literal. References of a numerological kind are also present. The number 8 – associated with prosperity – occurs, for instance, in the 8:1 aspect ratio of the tower, the octagonal core, and even more so with the 88 storeys within the building giving it double emphasis. More prosaically the number 88 also coincides with the age of Deng Xiaoping when he stood on the site and declared it would be the new financial center of China and that "to be rich was glorious." Then, more abstractly, the square plan with the octagonal core approximating a circle inside, could be seen to symbolize 'earth' and 'sky' and, in this context, upward extension into the heavens above. Finally, the constant modular aspect of the building together with the exterior interweaving and three-dimensional quality of its metal façade, resonates with the equally modular and interweaving of the bracketing and related building components prescribed in the traditional construction manual – the *Yingzao fashi* – of the Song Dynasty. In deployment of all these references – real or imagined – there is, however, nothing that is heavy-handed nor detracting from a regionally specific yet highly contemporary high-rise tower. Little wonder it has earned the popular moniker of *dong fang ming zu* or 'shining pearl of the east.'[44]

Across the street on another sizable city block from Jin Mao, stands the Shanghai World Financial Center, rising even taller to 101 storeys and a height of around 500 meters. Built primarily to house financial institutions in its lower floors, the Center also incorporates 300 luxury hotel suites in the floors above, along with other accommodations serving such a mixed-use function, like conference facilities and restaurants.[45] With over 358,000 square meters of floor area, including a multi-floor podium, the complex is somewhat larger than Jin Mao, but not dissimilar in overall layout. The tower footprint also has a square base. Beyond these aspects, however, similarities begin to end as the conception of the World Financial Center moves along different tracks in the geography of high-rise buildings by way of structure, spatial envelope and regional references. Writing about the project in the context of choices that might be made, William Pedersen of Kohn Pedersen Fox, observed that, amid the cacophony of tall buildings in Lujiazui, "only a piece of heightened simplicity can achieve the presence required by this building" leading to what he termed "a response of visual nobility" expressed through a monolithic form.[46] Consequently, in plan the tall tower moves in shape from a square base into elongated hexagonal configurations as it rises, terminating with a chamfered rectangular form at its top. In this regard, references were made to the square symbol of the earth – being crossed by 'cosmic arcs' emphasizing vertical thrusts, although they are far more abstruse than at Jin Mao. The resulting chisel-like shape was then clad in a sheer outer skin of glass, steel and eloxy aluminum, with a dark coloration, further emphasizing, if anything, its monolithic quality. A trapezoidal cutout at the top reduces wind loadings, while allowing for welcome inclusion of public occupation and points of panoramic observation. Originally, the cutout was to be circular, after the traditional moongate. However, given the consortium of Japanese investors leading the project, too close a resemblance to the rising sun and the Japanese flag on the heels of conflict during the Sino-Japanese War of 1937 to 1945 caused too much controversy. A pragmatic result of the tapering form and a serious consideration in its development was maximization of both floor plate area and material efficiency. Leslie E. Robertson – the engineer working on the project – found that building volume could be increased by 20 percent, while retaining its original weight.[47] This, of course, had significant implications for the foundations, minimization of total embodied energy, and the range of differently sized floor plates that could be offered to negotiate different programmatic necessities and desires. Another departure from Jin Mao came in the Arup Group's adoption of a perimeter tube system for the primary structure. This was initially comprised of concrete enclosed steel columns for resisting lateral loads and internal steel columns for carrying gravity loads. The perimeter columns were spaced at 3.6 meters and connected at each floor by concrete-enclosed steel spandrel panels. Real efficiency is gained in such an approach by effectively using

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--- 1
Century Avenue as Imagined (Courtesy of Arte Charpentier)

--- 2
Century Avenue Looking East (Courtesy of Arte Charpentier)

--- 3
Century Avenue Looking to Lujiazui (*Shanghaishi Yingxiang Ditu*)

--- 4
Pedestrian Extension of Century Avenue (Peter Rowe)

--- 5
Enclosed Garden Along Century Avenue (Peter Rowe)

the entire building width to resist lateral loads. With input from the Shimizu Corporation, this system evolved into a hybrid double-tube structure, consisting of a second concrete tube around the central core tied to the rest of the structure at every 15 levels or so. In short, once the monolithic form of the tower was decided upon, sophisticated engineering and considerations of material efficiency took over.[48]

The yet to be realized Shanghai Tower is sited across the street, south of Jin Mao and close by to the World Financial Center. It is scheduled to be 128 storeys and some 580 meters in height, making it the tallest building in China and among the tallest in the world. The client for the project is the Shanghai Construction and Development Corporation, a state-owned entity heavily involved in infrastructure, and apparently ambivalent towards the present global economic turndown. Competition for the complex began in 2006 and included Kohn Pedersen Fox; Skidmore, Owings & Merrill and Foster and Partners, along with Gensler among the participants. Preliminary images depict a double-skinned building that torques and tapers as it rises, while maintaining a cylindrically shaped monolithic form, relieved on the outer surface by eight solid horizontal strips between segments of sheer curtain wall. The tower is to be topped with windmills for power generation and will be served by rainwater collection facilities, also present in the other two buildings. Common services are to be located at every dozen or so floors in order to save on the lengths of trips by occupants.

Looking across the three towers, several observations can be made. First, all three buildings are, in their own way, tall and elegant, with at least the makings of something of an iconic presence on Shanghai's skyline, although Jin Mao is the only one to have approached that status so far. All three also take up with matters of sustainability and technical sophistication and all three embody mixed-use programs, although without much novelty. Second, and as a corollary to the issue of iconic presence, one might wonder about the ensemble quality of these rather differently appearing towers built in such close proximity to each other, elegant though they might be in isolation, and the impact they might have on each other, as well as on the surrounding areas below. Third, the passage of time seems to have played a role in each tower's design conception, probably paralleling preferred trends in the intrinsic geography of high-rise buildings. Jin Mao dates from the early '90s when interpretation of regional context played a significant role, at least in China, with regard to traditional architectural references. By the later 1990s and design of the World Trade Center, this trend had shifted in China and elsewhere towards more self-conscious pursuit of sleek containment of continuous structures, culminating some 15 years later in a third tower with torqued and twisted versions that seem to be fashionable these days, driven by increasing technical prowess and a desire for contemporaneity. Whether this prowess and desire, however, translates into lasting and affectionately received architectural distinction in Lujiazui, remains to be seen.

The strong thread running through Lujiazui and tying it, so to speak, to the Huamu administrative and cultural district is Century Avenue, a project in itself of some design significance. Originally laid out by SUPDI as a part of the Pudong planning process described earlier, the right-of-way is relatively long – at 5.5 kilometers – about three times the length of its referent the Champs-Elysées. It is also very wide at around 100 meters, again compared to the Champs-Élysées at 70 meters. In 1998 Arte Charpentier was commissioned, together with EPAD and landscape architect Philippe Thébaud, via a competition process, to advise on further development of the avenue, with the project getting under way in 2000.[49] According to Pierre Clément, several principles guided the designs: the first was unification of the Avenue along its length; the second was recognition of asymmetry along its length, with additional width provided on the sunny northern side for wider sidewalks, terraces and gardens; the third was conception of the right-of-way as a boulevard and not as a motorway.[50] What resulted was a tree-lined avenue, punctuated at nine major street crossings with open plazas and lined on the northern side with a serial array of open and closed gardens emphasizing the wealth of Chinese flora. Footbridges – common in China – were also excluded, in favor of the nine intersection crossings at grade. Clearly, one of the issues involved was to re-scale and diminish the perceived width of the broad right-of-way. In fact, in Arte Charpentier's renderings for the project, both the intended unity and scale of the project was further reinforced with the introduction of additional building along the edges of the avenue, as liner blocks and podia,

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Shanghai Science and Technology Museum and Huamu Civic Plaza (Courtesy of RTKL)

--- 2
Curvilinear Roof and Other Profiles at the Shanghai Science and Technology Museum (Courtesy of RTKL)

--- 1

--- 1
Entrance, Hall and Arcade at the Shanghai International Exhibition Center (Seng Kuan)

--- 2
Curvilinear Canopied Arcade at the Shanghai International Exhibition Center (Doug Snower)

2 ---

taking advantage of the capacious setbacks, mentioned earlier, along neighboring properties. Unfortunately, this aspect of the scheme does not seem to have been implemented, except very recently by several *ad hoc* installations. More successful are the rectangular enclosed gardens – each behind a 3-meter or so high wall and generally entered from the narrower eastern side. Local references again come into play by way of small private gardens in Chinese urban areas, moon gates, floral arrangements, uses of furniture and of water features. Once again, any over-literalness in interpretation has been subordinated to an otherwise modern design.

Three architectural projects of note in the Huamu administrative and cultural district are: the Shanghai Science and Technology Museum of 2001, by RTKL in collaboration with the Shanghai Institute of Architectural Design and Research; the Oriental Arts Center of 2004, by Paul Andreu and ADP in collaboration with ECADI; and the Shanghai-Pudong Museum and Archive of 2004, by von Gerkan, Marg und Partner. The Science and Technology Museum is located across the Pudong Civic Plaza directly opposite the Pudong Administration Building and was constructed to meet the schedule for Shanghai's hosting of the ASEAN conference in 2001 as one of its principle venues. The longer-term aim of the museum was to serve as an educational facility for the presentation and advancement of its theme. Covering a land area of 68,000 square meters and with a floor area of some 90,000 square meters, the museum is divided around a spherical chamber for celestial displays, at its center and on axis with the Pudong Civic Plaza, into a contemporary steel and glass structure housing exhibition galleries and a space for temporary exhibits. The galleries sequentially embrace themes of 'universe,' 'living,' 'intelligence,' innovation' and 'the future.'[51] The dynamic spiral form of the overall structure, with its prominent roofline, is intended to suggest the revolving universe and Shanghai's contribution to the advancement of science and technology. Also housed within the facility is a large theater, a research library, laboratories and residences for visiting scholars. The northern façade of the building opens on to a curved sunken court, adjacent to the civic plaza. Another obvious purpose of the wide sweeping form is to anchor, or appropriately define, the semi-bounded space of the civic plaza, while maintaining an overall horizontality and spacious sensibility for the urban ensemble. Probably the most jarring aspect of an otherwise well-mannered, if pseudo corporate, backdrop of a building is the prominent appearance of the spherical chamber at its center. No doubt such a facility is necessary. Nevertheless, its bulging presence and rather hackneyed iconography seem to be out of place.

The nearby Oriental Arts Center, next door to the Pudong Administration Building, houses a 2,000-seat concert hall, a 1,054-seat drama theater, and a small-scale 330-seat musical performance hall, largely dedicated to experimental concerts.[52] In layout, the concert hall was designed with a central stage area, surrounded by the audience, whereas the drama theater has a more conventional frontal orientation between the audience and performers. By further contrast, the small concert hall is intimate in scale and intended for a few performers in close contact with their audience. In addition, there are two other semi-enclosed components – an exhibition area and a multi-media center – plus restaurants, shops, a bookstore and rehearsal facilities below the base level of the complex. Overall, the floor area is around 40,000 square meters on a site area of 23,000 square meters. As in Beijing National Theater, Andreu and his colleagues arranged the five principle programmatic components of the Center as linked, yet relatively freestanding curvilinear elements in plan, although this time radiating outwards from the central foyer as five lobes. Again, unity was brought to the composition by way of an upward-curving and continuous outer skin of metal and glass. On this occasion, however, the outer façade follows the basic profile of the programmatic elements. A light cantilevered roof is then linked to the base of the building through curved glass and metal walls which are supported, in turn, by the metallic tubes of its frame and by further tubular struts transmitting stresses back inside to the volumes of the auditoria. These volumes, which help to shape the interior circulation space, were clad in dimpled, colored enamel sections, gently modulating the light coming into the space and lending solidity to the inner volumes in contrast to the dynamic interaction of steel and glass beyond. A further translucent quality was conferred on the outer façade by

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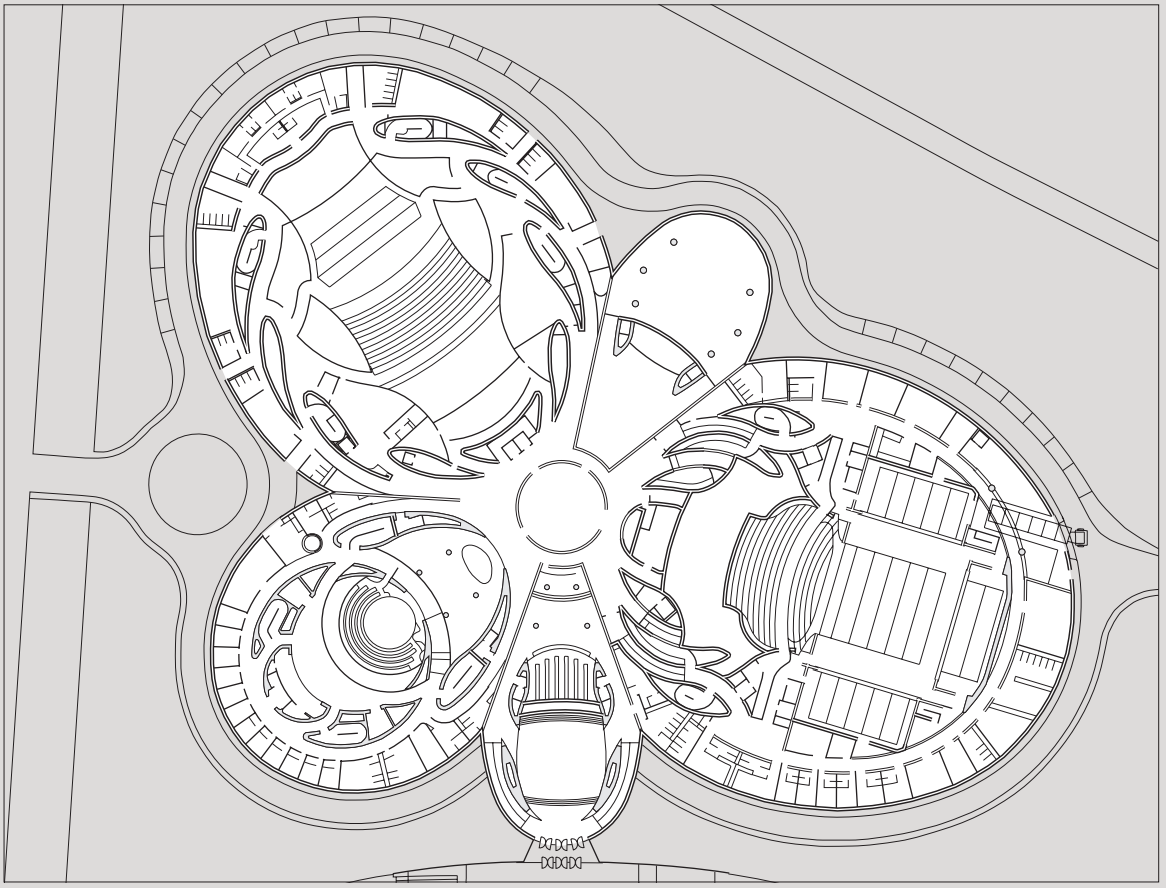

--- 1
The Oriental Arts Center at Huamu (Peter Rowe)

--- 2
Revelation of Interior Volumes at Dusk (Peter Rowe)

--- 3
Moving Between the Layers at the Oriental Arts Center (Courtesy of Paul Andreu)

--- 4
Plan of the Oriental Arts Center (Drawn by Jong-Hyun Baek & Pilsoo Maing)

incorporating perforated metal sheeting into the fenestration of variable density.

The overall effect presents an energetic and inviting display of light and spatial modulation. As one commentator puts it with regard to the diurnal perceptual emergence of the interior volumes, "they reveal themselves little by little and, at dusk, metaphorically evoke the moment in which the sound of music slowly emerges from silence."[53] Indeed, within the broader situational logic of the Huamu site, it was the affective aspects of theatrical performance, audience participation and of theaters themselves, that appears to have been uppermost in Andreu's conception for the Arts Center. One might even say that the interdependence of the inner and outer cladding of the complex was more successful in these regards than the separated structures of the National Theater. It brought a higher intensity, interest and coherence to the experience, no doubt also helped by the smaller-scale and spatial compression of the Center. With regard to other lines of situational logic on offer in Huamu, an expressive exploration was almost certainly called for within the terrain of architectural geography intrinsically associated with theater complexes, although once again there seems to be a reference at work standing outside of architecture *per se* in the form of a magnolia bloom – the city flower of Shanghai. Be that as it may, a freestanding complex was required within the lush environs of the site and one that was not inappropriately celebratory of the theatrical arts housed inside. None of the difficult issues of locational prominence, monumentality and abstraction were present as in Beijing. Also, in the new center of Huamu, full measure could be given to contemporaneity in architectural expression, with nothing around to be backward looking or nostalgic about.

The Shanghai-Pudong Museum and Archive – the third building in the Huamu administrative and cultural district – is also located near the Pudong Administration Building.[54] Its purpose is to provide open exhibition spaces to inform the general public about the Pudong area's history and development much like the urban planning museum in the Renmin precinct, and to provide for documentation on the same themes. Commissioned through a competition in 2002, construction was essentially completed in 2004. Von Gerkan and Marg's winning proposal consisted of three elements. The first and most conspicuous was a main building, with its glazed upper level raised and cantilevered out on four vertical communication cores. The second was a plinth, rising 4 meters above surrounding streets and surrounded by stairs, housing the archives. The third was a 10-storey bar-shaped building, on the eastern side of the complex, for administration. Below the raised level of the square main building is a circular rotunda housing a lecture hall, admissions and other user functions – 'earth' and 'sky' again – as well as stairways and other elements of circulation. The upper level is supported by a large truss system, providing for free-flowing and flexible exhibition areas. The outer layer of this level is glazed in a particular manner with the intention of displaying small patterned pictures, forming a larger image when viewed from a distance, with a capacity for movies or text to be projected on to translucent glass panels. This active approach to the façade is extended further by an inner layer of room-high panels which can rotate longitudinally, offering yet more flexibility for mounting exhibitions and for obtaining views from both outside and inside. The space between these two perimeter layers also serves for circulation. Overall, the Museum and Archive bears a rather direct resemblance to Ludwig Mies van der Rohe's much earlier New National Gallery of Berlin. Seen from its regional context, clear references are also made to traditional Chinese architecture by way of the wide raised podium and the broad overhanging upper level of the main building.

As mentioned earlier, the two park landscapes of significance, in this more or less serial alignment of buildings and constructed environments, running from Puxi into Pudong are: the Yan'an Road Central Green Space, or the Yan'an Expressway Park, by Williams, Asselin, Ackaoui et associés (WAA) constructed in 2001; and Century Park, by Land Use Consultants (LUC), of about the same time. Both make significant open-space improvements and both offer a variety of more particularized environments within them. Under their respective circumstances, each is also large, as noted earlier. A rather clear intention behind the Yan'an park was to provide a green lung in the older central city in Puxi.[55] Straddling three administrative districts of Shanghai, the park also helps to

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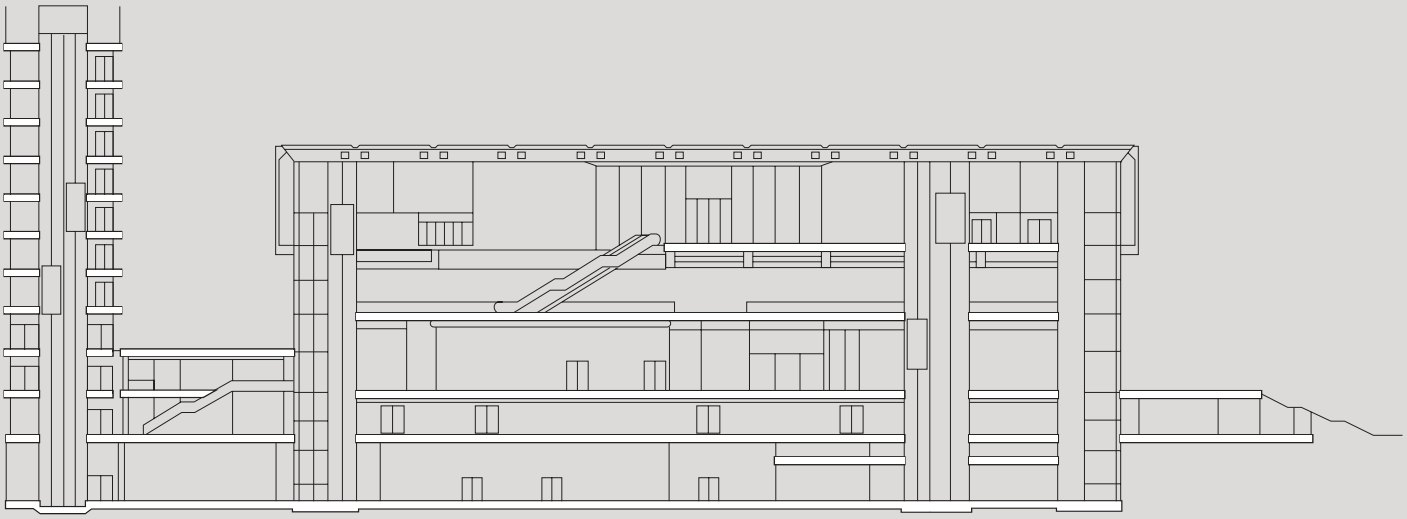

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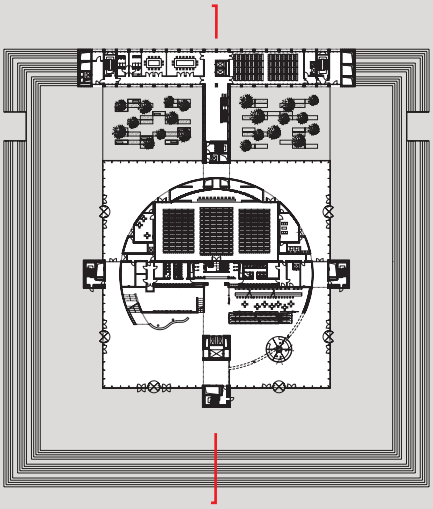


3 ---

--- 1
Section Through the Shanghai-Pudong Museum and Archive (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 2
Plan of the Shanghai-Pudong Museum and Archive (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 3
Illuminated Open Levels at the Shanghai-Pudong Museum and Archive (Courtesy of von Gerkan und Marg, © Christian Gahl, Berlin)

--- 4
The Shanghai-Pudong Museum and Archive at Huamu (Courtesy of Gerkan, Marg und Partner, © Christian Gahl, Berlin)

4 ---

connect the commercial centers of Nanjing Road and Huaihai Road and Renmin or People's Square. A roughly oblong site, running parallel to the raised Yan'an Expressway and divided by an intersecting expressway that forms the central crossing of this network in Shanghai, the park occupies seven city blocks. Each was designed with a specific theme and identity, ranging in formal qualities from strong axial, paved and planted configurations, through undulating meadow-like landscapes, to the use of exaggerated topographies. More specifically, the seven gardens include: the 'passive garden,' the 'garden of the senses,' the 'rockery,' the 'dry river,' the 'meadow,' the 'water garden' and the 'garden of dreams.' Also at work is a clear juxtaposition of the 'green' network of planting and a 'blue' network of water bodies, extending from west to east, along the historic riverbed of Yangjingbang – one of the separations among the early settlements of Shanghai described earlier. Located throughout the park, following tradition, are built structures, platforms and specific viewing and furnished areas, together with sculptural accoutrements. The park also offers relatively easy passage under the otherwise difficult to negotiate expressways. While located in an extremely dense urban setting, as noted earlier, appropriately scaled design elements allow for a feeling of enclosure and respite from the commotion of urban life beyond. Widely used and well maintained, the park landscape also includes parking facilities and entry into the subway system.

At Century Park, the intention was to create a major urban public space in the manner of large urban parks elsewhere, such as New York's Central Park, as noted earlier, and London's Hyde Park.[56] In fact, the perimeters of the park are already beginning to be encircled by high-rise apartment buildings, much as in New York. The park itself is divided into several relatively distinct environments, including a large man-made lake at the center, catering to various kinds of active and passive recreational use. Conceptually, the park merges streams of European and especially Anglo-American traditions of park-making with Chinese sensibilities towards landscape construction. This is evident on the western side of the ledger, with the creation of varied areas of landscape interest, reminiscent in scale and free-flowing integration of much earlier work by the likes of Joseph Paxton and Frederick Law Olmsted. In these regards, the immense upward-sloping lawn, the lakefront area, the sinuous treatment of pathways and vegetated areas, as well as the use of terraces, immediately come to mind. On the Chinese side, there is the use of rock outcroppings, intricate interweaving of islands and water bodies, as well as the choice of numerous indigenous landscape materials and plant species. The overall effect, however, is less obviously separated than this brief description might convey, resulting in a comfortable accomodation between occidental and oriental garden arts. More broadly, this park and other public space improvements to Shanghai have resulted in about 8,000 hectares of accessible green space by 2003, well up from 983 hectares in 1990 and almost a doubling in area since 1999.[57]

Neighboring Century Park on the south-east corner and extending the by now nominal axis of Century Avenue further into Pudong stands the Shanghai International Exhibition Center by Murphy/Jahn, dating from 2001.[58] The subject of an international competition, the center, when finished, will have 17 exhibition halls occupying a more or less triangular site of around 850,000 square meters in area. Conveniently located at the intersection of two major roadways, the complex will also incorporate a 400-room hotel and office supporting the exhibition function and be marked by a circular tower on its north-west corner. The Center is also located close to the terminus of the high-speed Maglev train, arriving from the Pudong International Airport, adding further to its convenient access. Organized loosely after the concept of a town, the halls form a triangle, in plan, at the center of the site, with entries in between, creating an open 'town center' which will also host exhibits. The exhibition halls measure 68 meters by 164 meters, with core and service zones at each end. They have a column-free clear height of 11 meters and a maximum height, within the curvature of the roof, of 17 meters. When completed, there will be 200,000 square meters of exhibition space and 50,000 square meters of open exhibition area. To date, over half the scheduled number of exhibition halls have been installed. Architecturally, the repetitive alignment of the halls forms a soft wave of spatial enclosure, most pronounced in the continuous arcade around the building's internal perimeter.

--- 1

2 ---

3 ---

--- 1
Lakeside Respite
at Century Park
(Peter Rowe)

--- 2
High Rises and
Century Park in
Pudong (Peter Rowe)

--- 3
Tree-lined Terrace
at Century Park
(Peter Rowe)

--- 4
Plan of Century Park
1. Century Avenue
2. Huamu Civic Plaza
3. the Lake
4. International Garden Area
5. Gingko Thoroughfare
6. Pastoral Area
7. Lawn Area
8. Scenic Area
(Drawn by Jong-Hyun Baek
& Pilsoo Maing)

--- 4

The three-dimensionally trussed beams that span the halls and arcade make up an open and light lattice that appears to float across the complex. This light-handed quality is also continued onto the glazed walls enclosing the halls and links between. Within an architectural geography intrinsic to exhibition halls of this ilk, the Shanghai Exhibition Center is hardly unique in its contemporary characteristics and flexible functional arrangement. It is, however, comparatively singular in its uninterrupted spatial coherence using relatively few elements and in its resulting light and airy affect. While the overall image is certainly striking in its apparent simplicity and execution, it promises to appropriately take something of a back seat, as it were, to the exhibits on display.

Riverfront Developments

Although not an explicit part of the Puxi-Pudong axis under discussion here, another element of Shanghai's efforts to knit the city together, so to speak, across the prominent seam of the Huangpu River, is a recent sequence of waterfront plans and proposals. Historically, as outlined earlier, the Huangpu was Shanghai's working waterfront, lined with industry, shipbuilding facilities, warehouses and the like. Apart from the Bund and areas around the mouth of Suzhou Creek, the city turned its back on this waterfront, not changing this orientation until the introduction of Pudong's intensive development altered its geographic centrality and significance. To date, much of this planning and these proposals have yet to be fully realized. They do, however, give insights to what might be in store for the city in the relatively near future. In overall location and alignment, the areas concerned also form something of a counterpoint to the territories just discussed running west to east. Along the Huangpu, the alignment is roughly and primarily north-south, and the proposals, although not without potential architectural interest, are principally concerned with provision of public open space and environmental amenity.

Planning got underway around 1998 when Skidmore, Owings & Merrill, in collaboration with SUPDI, was commissioned to give an overall vision and structure to the Huangpu riverfront development by the Shanghai P & K Development Company and the Shanghai Port Authority – a large property holder in the area.[59] This study examined a 7-kilometer length of the river, between the Yangpu and Nanpu bridge crossings, encompassing an area of about 4.8 square kilometers. As the commission was taken up, the aim was to envisage ways of reconnecting Shanghai to its waterfront through the dedication of the majority of its length on both sides of the river to open space. Also of importance was finding ways of linking this open-space structure back into the emerging regional network and of identifying and amplifying places of local character.[60] Clearly at hand, was an intention of creating a new identity for the waterfront, along with encouragement of appropriate maritime use, preservation and enhancement of historic buildings and places, as well as provision of an economically viable and socially responsible plan. This effort was followed in 2000, when the Shanghai Urban Planning and Administration Bureau organized conceptual design along much the same territory, although this time within the framework of their 1999-2020 Plan for Shanghai and encompassing an area of some 22.6 square kilometers. Again Skidmore, Owings & Merrill were involved, along with Sasaki Associates and Philip Cox's group. Four areas for more considered attention were identified including the two bridge-crossing districts and two inner-city districts defined as Pier 16 at Shiliupu and the North Bund, extending along the Huangpu on the Puxi side from the mouth of Suzhou Creek. The aim of this exercise was to further define the physical context within which to improve civic open space. At much the same time, in 2001, a collection of schemes was also produced for the urban design and landscaping of Suzhou Creek, running for a length of around 13 kilometers westward from the Huangpu. These schemes were produced by EDAW, RTKL and the Kirkland Partnership.[61]

Anything like a comprehensive plan has yet to emerge from these deliberations, although evidence of their broad intents has begun to materialize. There is, for instance, considerable local redevelopment along Suzhou Creek, the creation of Riverside Park and Promenade flanking Lujiazui opposite the Bund, the beginning of development on the North Bund, and recent reconsideration of the Bund itself. The North Bund Development Project by the SWA Group, for instance, calls for housing, retail and recreational use along a 2.1-hectare length of the

--- 1 | 2

--- 3 | 4

--- 1
The Bund's Revised Promenade (Peter Rowe)

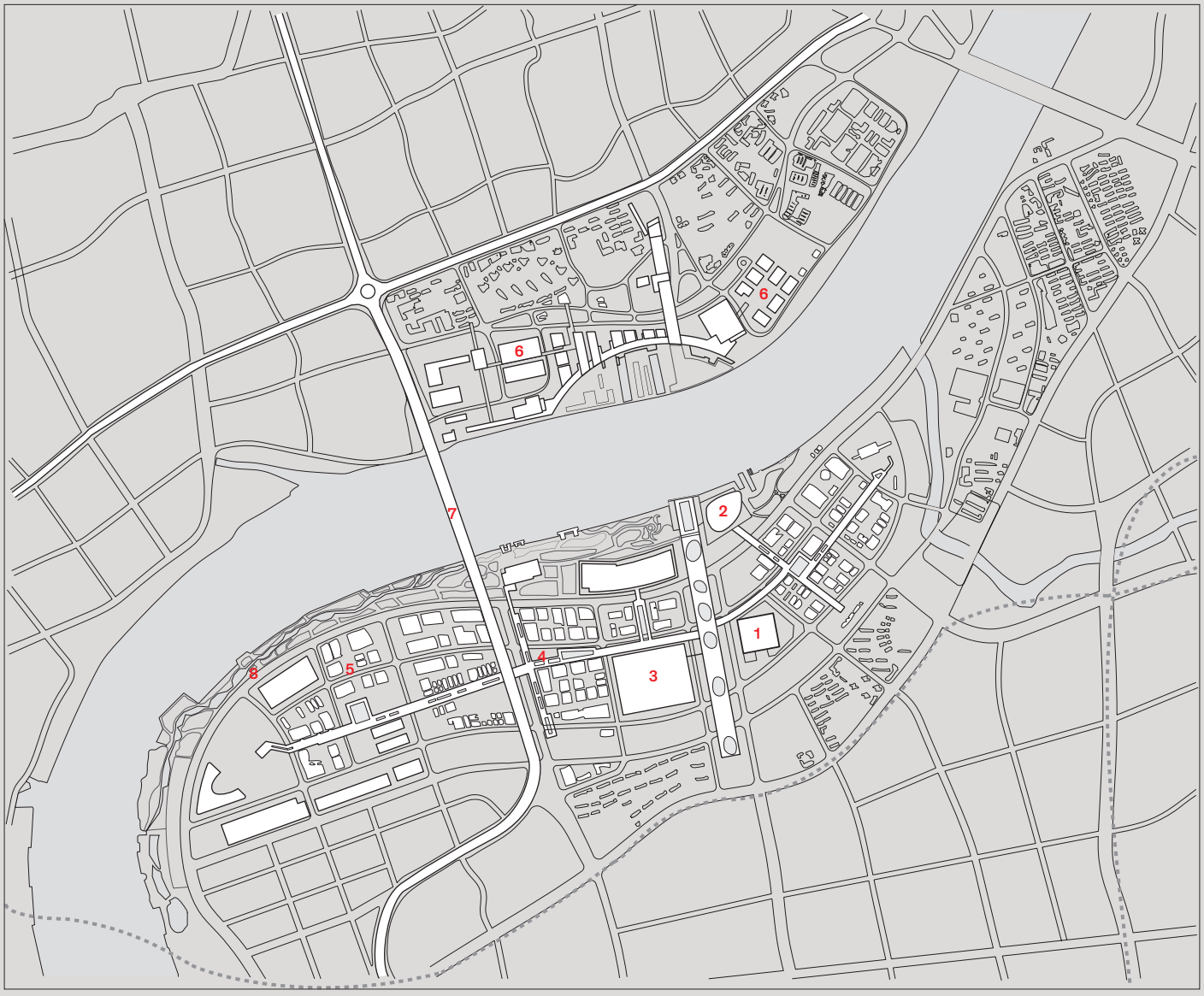
--- 2
The North Bund Project (Courtesy of the SWA Group)

--- 3
Houtan Park Beside the 2010 Expo (Yu Kongjian)

--- 4
Baoshan Steel on Display at the 2010 Expo (Har Ye Kan)

--- 5
Plan of the Shanghai 2010 World Expo Showing
1. The China Pavilion,
2. The Performance Center,
3. Theme Pavilion,
4. Public Activity Center,
5. Self-Built State Pavilions,
6. Enterprise Pavilions,
7. Lupu Bridge and
8. Houtan Park (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 5



Huangpu, encompassing an area of 60 hectares. Prominent in the proposal is a variegated and terraced waterfront park and promenade, also serving as a flood-control zone for the riverfront.[62] Competition for the redevelopment of the Bund along a 1.8-kilometer length was won in 2008 by Chan Krieger Sieniewicz to replace the existing raised riverfront promenade and 10-lane highway of the 1990s. This proposal reduces the carriageway to a four-lane boulevard, with other lanes underneath, while providing for a community park, a 200-meter long barge park, and folded planes of landscape with pavilions and public uses between the folds.[63] At present this project lies in abeyance, as the city moved forward with the extensive subsurface roadwork prior to staging of the 2010 Expo, the first major riverfront project to materialize.

The theme of Expo 2010 Shanghai was 'Better City, Better Life,' intended to incorporate ideas about sustainability and the balancing of urbanization with natural and other environmental circumstances. Apart from moving redevelopment of the Huangpu River along, this was clearly an attempt to shift focus within and about the city away from years of relative environmental neglect. Like the Olympics for Beijing it also provided a highly visible opportunity to showcase the city's progress and forward-looking orientation. A master planning and design ideas competition was conducted in 2001 for the Expo including: Architecture Studio – the eventual winner – Philip Cox, Albert Speer and Partners, DGBK & KFS, RIA, Marcià Codinachs, and Scacchetti and Partners.[64] The site encompassed an area of 5.3 square kilometers on both sides of the river, immediately north of the Lupu Bridge. Accommodations called for 310 hectares for exhibitions and 126 hectares for an 'Expo Village,' intended to demonstrate concepts of sustainable urban development. Redevelopment of the territory, as elsewhere along the Huangpu, would involve relocation and demolition of factories, docklands and warehouses, many in a largely moribund condition. A conspicuous feature of Architecture Studio's proposal was an elliptical canal embracing the Huangpu and an axial arrangement through the site with an extraordinary 600-meter long and 250-meter high 'Flower Bridge' straddling the river. The bridge was to remain after the Expo, to serve as a major urban space in Shanghai, open to pedestrian and non-motorized traffic. Other conspicuous elements of the scheme were the inclusion of natural features, such as green corridors, the Magnolia Park on the Puxi side of the river, along with further man-made canals. Within these green environments, varieties of known and acclimated species of plants, primarily coming from Chinese stock, were to be on display. Subsequent development of these and other ideas was taken up through another round of proposals in 2004 through 2007 by the Shanghai Tongji Urban Planning and Design Institute.[65] Under these more definitive design exercises, the site was extended south, beyond the Lupu Bridge crossing and the 'Flower Bridge' was eliminated, although the axial alignment of the complex perpendicular to the Huangpu remained, as did the green corridors at least initially. Pavilions built for the occasion – a recurrent aspect of Expos – were concentrated mainly on the Pudong side and historic sites of interest, like the Jiangnan shipyard in Puxi, were restored and rehabilitated. If anything, subsequent planning iterations appear to have emphasized legibility over ingenuity and de-emphasized the fuller integration of the river and environmental features. The one exception was the Houtan Park by Yu Kongjian of Turenscape located in a 1.7-kilometer strip, some 30 to 80 meters in width, immediately beside the Huangpu, upstream from the Lupu Bridge.[66] Primarily designed to treat river water through a sequence of natural filtering, settling and aerating processes, the park also provides for flood protection, wildlife conservation and leisure-time recreation. Remnants of old factories were also pressed into service and a landscape palette deriving from both agriculture and a variety of wetland circumstances was deployed across the site.

Legibility, Spaciousness and Scenography

In its recent rise to prominence, Shanghai has fulfilled an almost century-long ambition of crossing over, substantively, from Puxi to Pudong. One consequence has been near completion of a roughly circular outline of the central city, where there was once a wide gap in the sweep of urbanization. Another has been Shanghai's relative compactness, now inhabited broadly at a density of 13,000 people per square kilometer, above the nominal target for Chinese cities at 10,000 people per square kilometer. With the obvious exception of the Bund, yet another outcome has been

a re-orientation towards the river, rather than away from it as in the past. During this period and as noted earlier, there has also been a strong belief in the efficacy of master plans cascading down in a conforming manner from the metro level to district plans, detailed control plans at the block level, and then on to the specific level of building projects. Again this process has occurred without much of any citizen participation, either for improvement or for compromise. In addition, in Shanghai, there is an overwhelming newness and rapidity to what has been constructed. Statistically, for instance, of all the buildings that were constructed after 1952, well over 80 percent have occurred since the plans to reinvigorate the city were put in place in the mid-1980s. Unlike in Beijing, however, this construction of 'New Shanghai' has been a less constrained undertaking. There was none of the formidable and time-honored artifice quality of Beijing to contend with, effectively eliminating any conservative impetus in Shanghai's planning and project ambitions. Unfortunately, in places, this has also resulted in the demolition of a significant number of historical buildings, before countervailing policies gained traction around 2001.

Stretching from the Renmin precinct eastwards to Century Park and its environs, what then are the broad features in play across the territories and architectural geographies discussed here? In response, they can probably be summarized most concisely under a rubric of legibility, spaciousness and scenography. By and large, architectural development in each territory followed a clear diagram of building layout that was immediately legible and straightforward with respect to program, infrastructural support, broad lot layout, as well as orientation. Most, if not all buildings were individually placed in a comparatively unencumbered and, one might say, spacious terrain of open space, landscape and roadway alignments. To be sure, certain coherences among buildings sometimes came into play, like height, apparent volume, and subscription to contemporary appearance, although each had its own breathing room, as it were. This spaciousness, in turn, traded on the legibility of overall plan diagrams, but also lent a somewhat less than fully urban feel to building ensembles, as noted earlier. It was primarily a strategy of specific parts making up a whole, but often without the whole being much more than the sum of the parts. Sheer size and scale also remains something of an issue. Many blocks are large, roadways are often very wide, as are plazas. Moreover, what is known about some of the thinking behind the plans suggests that this was deliberate. It was as if spatial experience of the projects discussed was primarily intended by way of sweeping views, vistas and panoramas, without too much by way of more intense, close-up and intimate encounters. Both broad qualities – legibility and spaciousness – lead further into what can be seen often leaning towards scenographic presentation. As discussed, this was certainly deliberate in the contrivance of a skyline scenography for Lujiazui, although it is also quite apparent elsewhere, like the Renmin precinct. Buildings, rather than being seen as architecture *qua* architecture, or as articulations of a well-established urban fabric, constitute parts of a scene with a particular underlying narrative, depending upon the territory as a field of action and choices made within its intrinsic architectural geography. Mostly, across the projects discussed, not surprisingly, this narrative has been state authority, cultural reach and financial power projected towards the present-future and not to the past.

In all of this orientation, however, it is not as if Shanghai has somehow abandoned itself entirely. These days a hankering for *hai pai* – or Shanghai style – referring back to the 'Golden Era' of the 1920s and 30s – can often be seen on display in merchandizing, restaurant décor and other day-to-day appropriations. In this discussion, 'Shanghai-on-Shanghai' comes across scenographically at the Bund as a point of departure for Lujiazui and in the easy acceptance of architectural eclecticism more generally, especially regarding building shapes and appearances. Legible diagrammatic qualities in planning can also be seen to derive from the Greater Shanghai Plan of the 1930s and plans in the early 1950s, as do the infrastructural extravagances involved. Historically even, the aspiration to cross into Pudong from Puxi is inherently about the particular geography of Shanghai in a topographic and locational sense. Then too, there is the apparent harmonizing of Pudong with Puxi across the Huanpu River described earlier, giving the new district an almost equal status, quite apart from any traditional reflections about balance, including *yin and yang* and the like, that might have been involved.

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63 Edward Keegan, 'Chan Krieger Sieniewicz to Redesign Shanghai Riverfront', *The Architect*, vol. 97, no. 3 (2008), p. 25

64 Zheng, 'Urban Planning and Expo 2010 Shanghai', p. 108; Seng Kuan and Peter G. Rowe, '2010 World Expo Master Plan', in Kuan and Rowe, eds., *Shanghai: Architecture and Urbanism for Modern China*, pp. 31-32

65 Tongji University College of Architecture and Urban Planning, 'Special Edition on the Expo 2010', *Ideal Space* (October 2004); Thomas J. Campanella, 'Portal to the Future: Expo 2010 Shanghai, China', *Architectural Record,* vol. 8 (2010), pp. 52-58

66 Kongjian Yu and Turenscape Design, *2010 Shanghai Expo – The Houtan Park* (Beijing, 2010)

During the past 50 years or so, since the first commercial jet airliner was introduced, demand for air travel has steadily increased with few interruptions. Statistically, since 1987 when the volume of air travel reached over a billion passengers per year, there has been more than a doubling to around 2.2 billion passengers in 2010.[1] Moreover, this steep rise, also in the wake of full-fledged globalization, has occurred despite downturns after the September 11th, 2001 terrorist attacks in the USA and the more recent turbulent financial and economic storms around 2008 and beyond. A considerable amount of this air traffic was generated in North America, now accounting for roughly a third of all passenger and freight movements. Further, almost half of the airports rated in the top 20 or 30 worldwide by passenger traffic are located in the U.S., with both lists constantly led since 2000 by Atlanta and Chicago, now at around 90 and 70 million passengers per annum respectively.[2] In both cases, deployment of 'hub-and-spoke' configurations of larger and smaller regional airports, now widespread internationally, pushed volumes of traffic in a steep upward direction. In addition, Atlanta's Hartsfield-Jackson airport underwent substantial expansion and improvement during the city's run-up to the Olympic Games in 1996, becoming the world's busiest airport by 1998.[3] Looking forward in time, the overall market for air travel is expected to continue to grow, at least up until around 2020 or 2025, although perhaps more slowly than in the past. Presently, continued sluggishness in global trade, fuel-price volatility and the specter of stricter environmental legislation are likely to continue to dampen substantial rapid future developments.

Not unexpectedly, given rising economic performance and global involvements, the Asia-Pacific and East Asian markets for air travel have climbed well up in the world rankings. In 2010, almost 30 percent of all passenger travel occurred in this market, challenging North America and Europe for the majority position in air services.[4] Again not unexpectedly, much of this came as a consequence of China's rise in prominence and concerted infrastructural investment. For instance, in 2000 Japan was East Asia's most active country in air travel, with a fleet of 480 aircraft and close to one-and-one-half times China's share of domestic flying and fully two-and-a-half times its share of the international market. Nowadays, these measures have turned around with China's air fleet totaling around 1,400 aircraft with the expectation of doubling by 2025, and with Japan at below half of China's domestic volume and also below parity in the international market.[5] Again looking further into the future, as much as a tripling in travel volume from China might be expected, judging from comparable ratios of aircraft seats per population now flown in the USA. Among airports, Beijing, including its new terminal completed for the 2008 hosting of the Olympic Games, is currently ranked number eight, with around 56 million passengers per year. Hong Kong is ranked number 12 with close to 50 million passengers per year, but number four in total international travel and number two in cargo. Singapore is also ranked in the top 20, with close to 38 million passengers per year and Shanghai's Pudong airport ranks number three in cargo, worldwide, although out of the top 30 airports in passenger travel with 28 million per year. Perhaps surprising to non-locals or those less familiar with Japan, Haneda airport, close in to Tokyo, is ranked worldwide at number four in passenger traffic at 67 million passengers per year, very largely from domestic travel, whereas the internationally better know Narita airport, further away from Tokyo, also runs outside the top 30, with declining air traffic since 2000, although still ranking number eight in international travel and in cargo volume.[6] As these figures and comparisons suggest, airports throughout the world are very important components of many people's lives, nowadays, along with also being significant measures of prestige.

Territorial Expansions of Scope and Scale

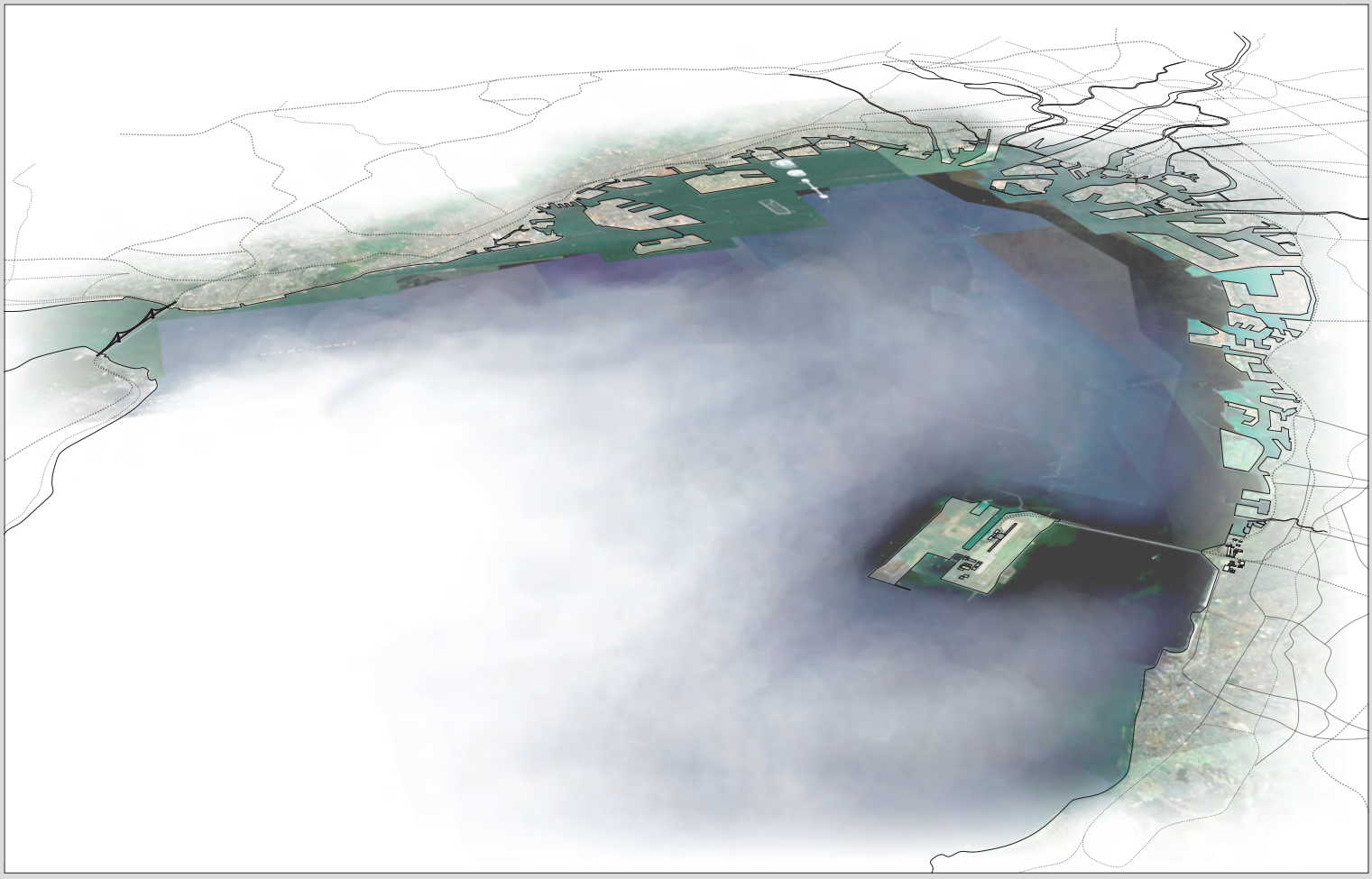
Starting in the 1990s, several new airports emerged in East Asia as distinct from additions to existing facilities, charting new territories in the scope and scale of infrastructural and related improvements. Almost without exception, rising air traffic demands, along with frequent aircraft movements around the clock and related noise and atmospheric pollution, led to remote locations. To be accessible and useful, these locations, in turn, required direct, efficient and high-volume links to urban centers, as well as a variety of choices among modes of transportation for coming and going. Sites also needed to be conveniently supported by relatively large work forces of

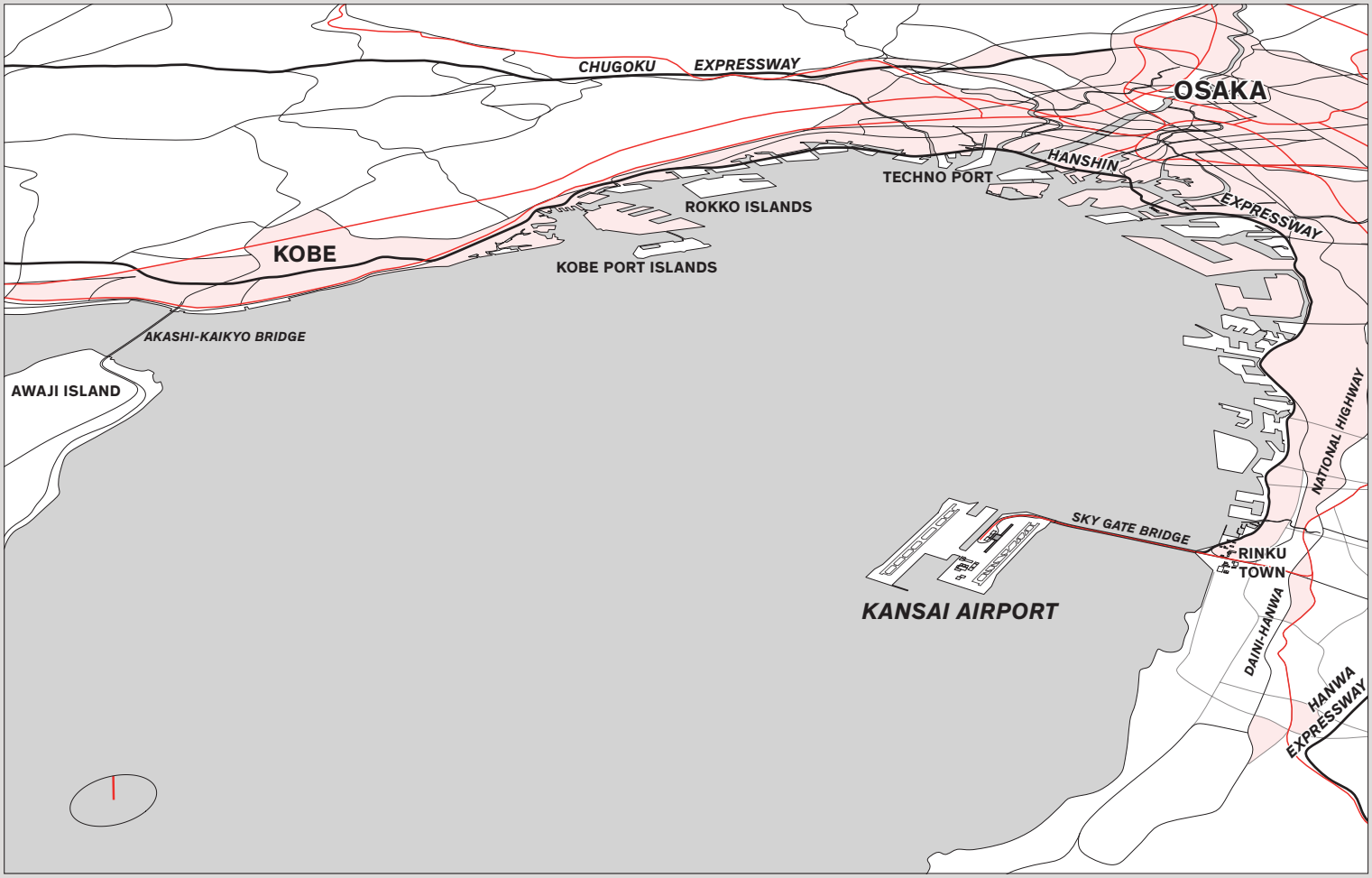
CHAPTER FOUR

FLYING IN AND OUT OF TOWN

--- 1
General Perspective of Kansai Airport

--- 2
Kansai Airport and Its Regional Context




CHUGOKU EXPRESSWAY
OSAKA
HANSHIN EXPRESSWAY
TECHNO PORT
ROKKO ISLANDS
KOBE
KOBE PORT ISLANDS
AKASHI-KAIKYO BRIDGE
AWAJI ISLAND
NATIONAL HIGHWAY
SKY GATE BRIDGE
RINKU TOWN
KANSAI AIRPORT
DAINI-HANWA
HANWA EXPRESSWAY

somewhere on the order of 30 to 40 thousand employees for larger airports, including a broad range of passenger services as well as cargo-handling facilities.[7] With appropriate multipliers in numbers to support this primary workforce, not to mention family members, populations of 150 to 200 thousand people or more were not unimaginable, often requiring construction nearby of new towns and satellite developments. Passengers in transit with discretionary time on their hands, as well as layovers for short-term meetings and events, drove up demand for close-by retail shopping, restaurants, business facilities, hotels and even conference centers. Consequently, airports quickly became de-specialized into a wider variety of functions and programmatic components, closer in kind to contemporary mixed-use centers in the cities with which they were associated. For example, somewhere on the order of 30 percent of the passengers at Heathrow airport in London – one of the most used for international travel in the world – comprise the 'in-transit' or 'layover' category.[8] The sheer upward trend in passenger and cargo demand also brought the need to accommodate large fleets of aircraft and new generations of larger planes, all requiring ample runways, taxiways and turning aprons. In short, both the scope and scale of airport and related operations became larger. In several cases the new airports and their associated landside improvements were among the largest engineering enterprises in history. Moreover, three in particular are conspicuous in charting these new territories. They are: Kansai in Japan, Pudong in the greater Shanghai area of China, and Chek Lap Kok in Hong Kong – the most extensive of the three undertakings.

Among the first of its kind in setting the agenda for new comprehensive airports, infrastructural, service and supporting facilities took place in the Kansai region of Japan, the nation's second most populous area, with some 20 million inhabitants primarily in the cities of Kobe, Osaka, Kyoto and Nara. Ostensibly to help rectify local decline in business activity and to remedy imbalances in Japan's regional distributions of population and economic activity strongly skewed in favor of Tokyo, the project was conceptually underway by 1986, although opened for public use later in 1994. The idea, however, of reclaiming an artificial island in Osaka Bay for an airport dated back to 1971 in order to both accommodate increased levels of air traffic and to avoid noise problems in denser urban areas, especially since the airport was to operate for 24 hours for the first time in Japan. This decision was also taken in a political climate similar to the one that gave rise to Narita well outside of Tokyo in 1978 and also led to a raft of environmental legislation in Japan more generally.[9] Further, the Itami airport facility in Osaka, originally constructed in support of the 1970 World Exposition, was becoming hemmed in by buildings and overstretched in its operating capacities.[10] In addition, the economic outlook during the mid-1980s for the region as well as for Japan, was seemingly bright, long before the collapse of the expanding bubble of over-speculation in the early 1990s. Other major projects in Osaka Bay, slated to have major economic impacts, were also contemplated, such as Rokko Island near Kobe, the Osaka Bay Phoenix Project and Technoport Osaka. Certainly from all these perspectives the new airport made sense and the Kansai International Airport Company was formed to undertake the project, working in collaboration with the Ministry of Transportation of Japan, as well as with Japan Rail (JR) and more local authorities like Nankai Electric Railway Co.

The site selected for creating the off-shore island to house the airport was located 40 kilometers south-west of central Osaka on the eastern side of Osaka Bay. The island was made by depositing earth, sand and crushed rock onto an 18-meter deep seabed, behind rock-filled perimeter embankments, to a thickness of 33 meters accounting for subsidence. Collection of these materials necessitated razing two nearby topographical features and quarrying a nearby island. Reclamation began in 1987 and continued into 1991. The earliest appearance of the island, that eventually became visible from space, was the outer embankment edge measuring some 11.2 kilometers in circumference tailored to respond to prevailing wave effects, although roughly rectangular in shape. Some problems were encountered with an accelerated rate of subsidence, which was originally expected to continue for around 11 meters over a 50-year period, slowing down the overall construction process until it was rectified.[11] Nevertheless, the airport facility was underway by 1990, with a first phase incorporating

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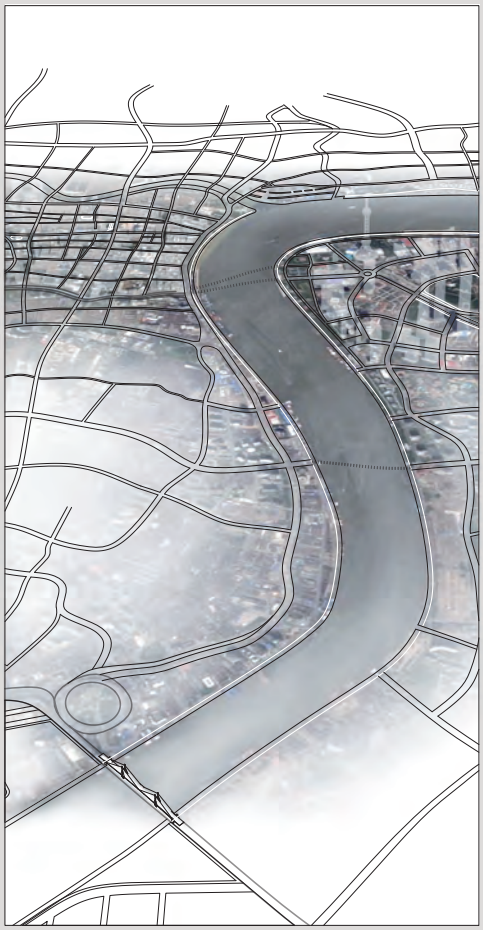
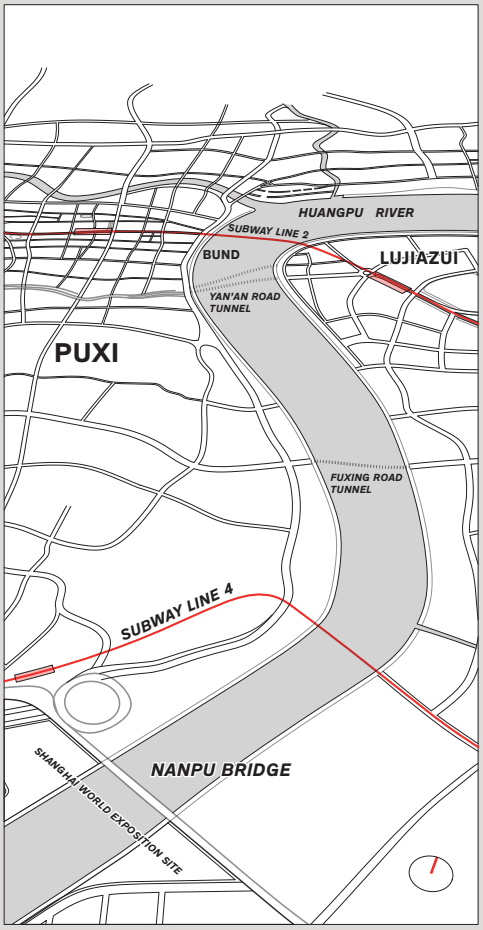
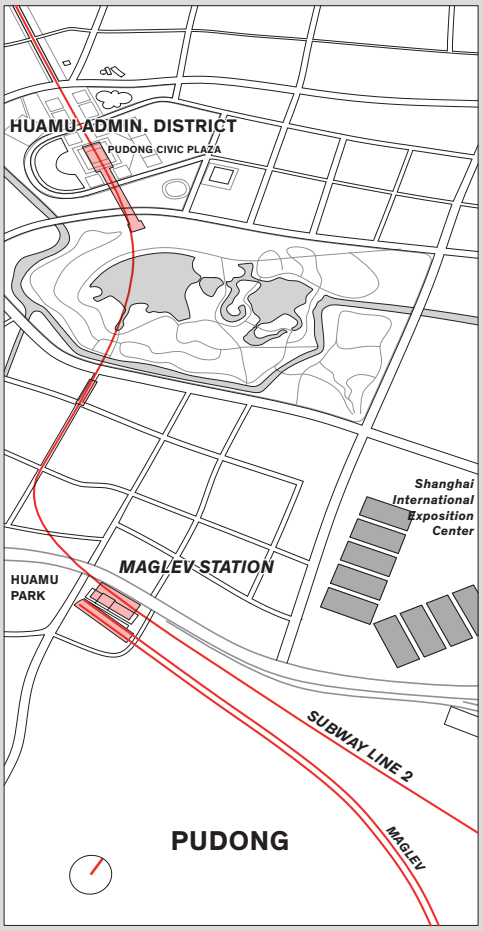
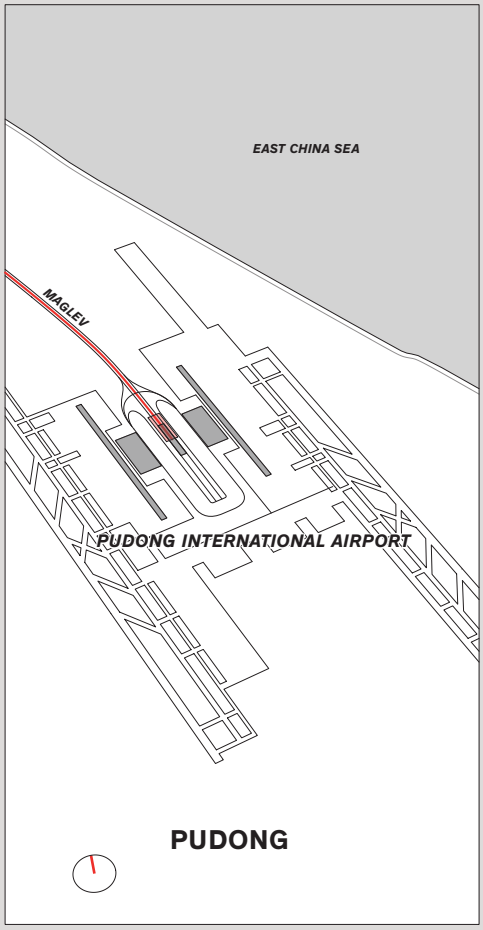
Perspectives of the Shanghai-Pudong Airport's Linkage to Shanghai

--- 2
Details of the Shanghai-Pudong Airport's Linkage to Shanghai




HUANGPU RIVER
SUBWAY LINE 2
BUND
LUJIAZUI
YAN'AN ROAD TUNNEL
PUXI
FUXING ROAD TUNNEL
SUBWAY LINE 4
NANPU BRIDGE
SHANGHAI WORLD EXPOSITION SITE


HUAMU ADMIN. DISTRICT
PUDONG CIVIC PLAZA
Shanghai International Exposition Center
MAGLEV STATION
HUAMU PARK
SUBWAY LINE 2
MAGLEV
PUDONG


EAST CHINA SEA
MAGLEV
PUDONG INTERNATIONAL AIRPORT
PUDONG

--- 1

--- 1
The Nanpu Bridge, Shanghai
(Shanghai Urban
Construction Archives)

--- 2
The Yangpu Bridge, Shanghai
(Shanghai Urban
Construction Archives)

--- 3
The Xupu Bridge, Shanghai
(Shanghai Urban
Construction Archives)

--- 4
The Lupu Bridge, Shanghai
(Har Ye Kan)

--- 5
The Maglev Train at Pudong
(Shanghai Urban
Construction Archives)

--- 2 | 3

4 ---

5 ---

a 3,000-meter runway accommodating 160,000 take-offs and landings or 25 million passengers per year. Two additional phases were scheduled for later construction, with a 4,000-meter runway immediately to the north and a 3,400-meter runway splayed outward at an angle to better accommodate different wind patterns. A bridge was constructed, spanning the 3,750-meter distance between the airport island and the shore. Named the Sky Gate Bridge, this structure was designed to carry two types of transportation, with a double-track railway running at the lower level and a six-lane highway above. The central portion of the bridge was supported by a massive two-storey truss 2,700 meters in length and fixed 43 meters above sea level. Equalizing of the levels of railway and roadway with terminal facilities on the island was then accomplished via a sloping 700-meter approach to the island. All this infrastructure was conceived of as 'life-line links,' carrying gas, electricity, water, etc., in addition to transportation, and was engineered seismically with special protection against typhoons.[12] During the planning stages, the International Airport Passenger Terminal Building was conceptualized by Nikken Sekkei largely in a conventional fashion with domestic services at one end and international services at the other. When asked to offer an evaluation of this proposal along with others, Aéroports de Paris (ADP) – the design consultancy of Paul Andreu – proposed an alternative arrangement housing the domestic and international flights on different floors of a single multi-floor terminal. This proposal was well matched to the long rectangular island under construction and offered flexibility, clarity and an openness in operation, including the possibility of quick transfers, that appealed to the Kansai Airport Authority. It was soon adopted as the project moved forward into an architectural design competition for the terminal building in 1988.[13]

Immediately on the landward side of the airport island, Rinku Town was created, covering an area of 320 hectares and incorporating three existing urban districts in Osaka Prefecture. The purpose of the town was to house and cater to the airport workforce, as well as to support related business, logistics and various additional distribution processes. Included in the masterplan were also sites for industry, along with residential and commercial areas. The literal and figurative 'gateway' adjacent to the Sky Bridge was to be marked by a tower building some 225 meters in height, rising 56 floors above grade, with around 110,000 square meters of space accommodating international conference facilities, hotel functions, office space and areas for business exchanges. All of these facilities, as well as the airport proper, also became embedded into the national and local transportation networks. More specifically, rail links through Rinku from elsewhere in the region were provided via JR operating the Haruka Express from Kyoto, and by Nankai Electric Railway Co. through its special rapid airport train, initially planned to express the image of a lobby-like room extending fantastically from Osaka to the airport and designed by the architect Hiroyuki Wakabayashi.[14] Highway links were provided from the nearby Kinki, Hanshin and Hanwa expressways currently connecting together the major cities in the region with the airport. Ferry boat connections also provided access to the airport across Osaka Bay from Kobe and from Shikoku Island to the west. Travel time from Kyoto to the airport is roughly 75 minutes and just 30 minutes by hydrofoil ferry from Kobe. Although not a part of the Kansai Airport project as such, the Akashi Kaikyo Bridge was opened in 1998 between Awaji Island linked to Shikoku Island – one of Japan's four main islands with a population of around four million people – and the mainland. Spanning 3,910 meters, it is the world's longest suspension bridge, with towers rising close to 300 meters in height.[15]

Following closely after Kansai in both date and significant aspects of layout was the Shanghai-Pudong International Airport in China, together with its links back to Shanghai. Sited in the Shiwan Xiang of Pudong, the airport complex occupies about 30 hectares of flat low-lying land adjacent to the sea and, again, it is relatively remote from the city it serves. Design of the project began around 1996, although planning began occurring earlier. The first phase was completed in October of 1999, coinciding with the 50th anniversary of the Peoples' Republic of China and in advance of Shanghai's hosting of the ASEAN conference in 2000. The original terminal, one of four modules grouped along a central axis in plan, accommodated up to 20 million passengers per year, potentially increasing, with further modular development, to around 70 million passengers by 2040 or thereabouts.[16] Recently a second phase, underway in 2005,

was completed as a near mirror image in overall organizational characteristics to the original terminal building and extending the number of runways from two to three. The overall concept was again initially advanced by ADP, with Paul Andreu and his associates also serving as architects for the first-phase building.[17] In its linear configuration, separated levels of arriving and departing passengers, as well as in the layout of major programmatic components from landside to airside, like entry, ticketing and retail, it is like Kansai in its directness and clarity. Indeed, although relatively novel at the time, this typology is commonplace by now among new terminal buildings. Also like at Kansai, the design-build process was on a fast track, with the terminal foundations beginning construction as the superstructure was still under detailed consideration. In addition, further similarities can be noted in the close juxtaposition of terminal buildings with well-developed landscapes, designed in Pudong by Michel Desvigne in the form of large reflecting pools transected by roadways and a grid of well-planted courtyards spanning across the site close by the buildings.

Linkage to other parts of the greater Shanghai metropolitan area and beyond were provided through a network of expressways, including Shanghai's Outer Ring Road, arcing up to Baoshan in the north, and the new bridge and causeway crossing to Chongming Island. Although not at first, a high-speed rail connection was eventually opened on New Year's Eve of 2003, running from the station at the center of the airport to the Longyang Road Station in the Zheng-Jiang Hi-Tech Garden area of Pudong near Century Park and close by to an active subway station. The unusual aspect of the connection was the deployment of magnetic levitation technology, or Maglev, pioneered by Germany's Transrapid Technology Company, for the first time in East Asia. With maximum speeds of over 500 kilometers per hour and an operating speed of 450 kilometers per hour, the Maglev train was fast. Not shy on passenger-carrying capacity, the Maglev system also enjoyed advantages over high-speed rail applications with regard to noise emissions, smoothness of ride, and accommodation within compact urban areas. It had the disadvantage of dedicated gridways, first costs and, as yet, a small number of suppliers. The 10 to 15 minute ride from the airport traveled through terrain that hardly took advantage of the Maglev's superior characteristics, apart from speed.[18] However, this was probably not the point of the application, which was to serve as a testbed for further deployment in China's more than widespread future high-speed rail network, as well as the bragging rights that went with such a future-oriented initiative.

Critical crossings of the Huangpu River into Puxi, and the bulk of Shanghai's central city were provided by four bridges complemented with underwater tunnel crossings in between. All the bridge crossings span a considerable width of river and attain a 46-meter clearance to accommodate busy river transport beneath. Also, all four bridges were designed by teams led by the Shanghai Civil Engineering Design Institute, as suggested in the previous chapter.[19] Furthest downstream toward the confluence of the Huangpu and Changjiang is Yangpu Bridge, a striking twin-towered cable-stayed structure with a main span of 602 meters and an overall length of 7.7 kilometers. The reversed Y-shaped pylons reach a height of 223 meters and are visible from central Shanghai. Built between 1991 and 1993 well in advance of the airport, the Yangpu Bridge provides a major crossing on Shanghai's Inner Ring Road. The profile of the bridge carries six lanes and two outward pedestrian pathways. Paired as the other major crossing on the Inner Ring Road upstream from the Yangpu is Nanpu Bridge. Built between 1988 and 1991 and inspired by the Alex Fraser Bridge in Vancouver, Canada, it was the first bridge to be completed across the Huangpu. Also a cable-stay bridge with H-shape pylons 150 meters in height, it spans 423 meters with an overall length of 8.6 kilometers, part of which is a spiral ramp for entry and egress on the Puxi side. By contrast, Lupu, the next bridge across the Huangpu features an arched span of 550 meters in length, the longest of its kind in the world. Built between 2000 and 2002 the bridge serves southern parts of Shanghai and access to the 2010 World Exposition site. Furthest upstream is Xupu serving the southern segment of Shanghai's Outer Ring Road. It is about 6 kilometers in length with a main span of 590 meters. An A-shaped configuration of the twin towers provides an elegant profile to the suspension structure and the upward-arching roadway beneath.[20]

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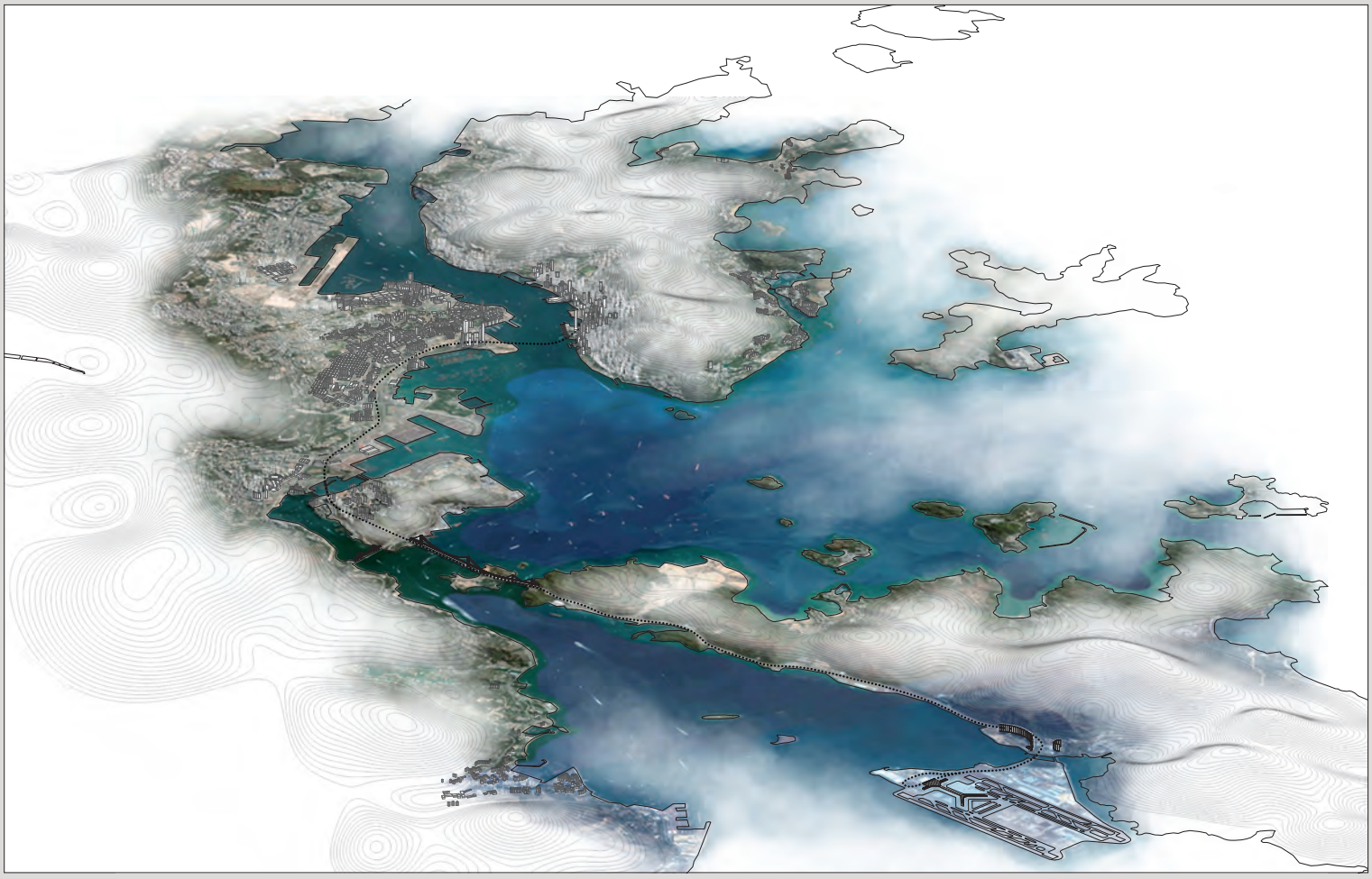
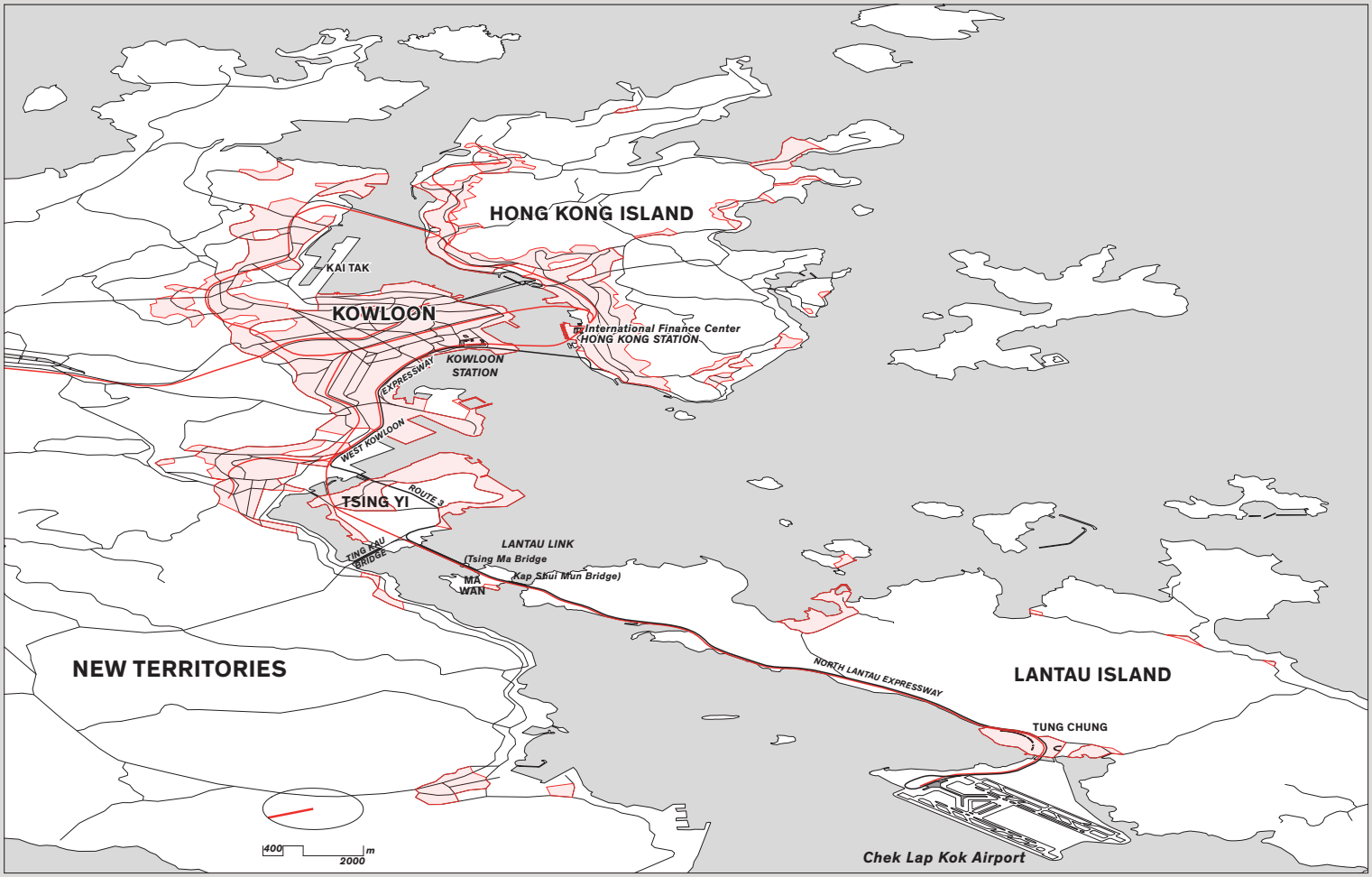
Perspective of Hong Kong and the Airport Core Program

--- 2
The Hong Kong Airport Core Program in Context




HONG KONG ISLAND
KAI TAK
KOWLOON
International Finance Center
HONG KONG STATION
KOWLOON
STATION
EXPRESSWAY
WEST KOWLOON
ROUTE 3
TSING YI
TING KAU
BRIDGE
LANTAU LINK
(Tsing Ma Bridge
Kap Shui Mun Bridge)
MA
WAN
NEW TERRITORIES
NORTH LANTAU EXPRESSWAY
LANTAU ISLAND
TUNG CHUNG
400
2000
m
Chek Lap Kok Airport

In 1989, the island of Chek Lap Kok off the northern coast of Lantau Island was designated as the site for the Hong Kong's new airport by the Hong Kong government's *Port and Air Development Study*. It was to replace the venerable and increasingly dangerous Kai Tak venue in Kowloon dating back to 1926, and to accommodate a rapidly expanding demand for passenger and cargo movements. Shortly after the government's decision, in 1990, the New Airport Projects Co-ordination Office (NAPCO) was formed to serve as design and construction managers for the massive undertaking, acting on behalf of the project owners: the local government of Hong Kong, the Airport Authority, the Mass Transit Rail Corporation, and the West Harbor Tunnel Company. Headed by Bechtel, especially in the person of Tudor P. Walters, its Vice-president, NAPCO then launched forward into the Hong Kong Airport Core Program and what became one of the biggest civil engineering undertakings in history with a projected total cost, at the time, of some USD 21 billion. NAPCO was also responsible for raising funding for the program, a process which was closely shadowed by British and Chinese political interests, especially near the eve of Hong Kong's handover back to China in 1997, close to the airports ultimate deadline. Initially China was unconvinced of the program's worth. Finally, in 1995 an agreement was reached by which Hong Kong would fund 75 percent of the costs through an equity investment in the undertaking, drawing on fiscal reserves of USD 19.5 billion and from USD 57.7 billion set aside for foreign-exchange trading. Loans would cover the remaining 25 percent and the Chinese, warming to the project, agreed to participate in second-phase funding. In addition, fees to be paid by private companies for the right to develop different components came into play. To keep up with the tight schedule and to minimize costs, NAPCO awarded lump-sum fixed-price contracts and shunned untried system applications and technologies.[21]

Ten specific projects made up the Airport Core Program. First and foremost there was the new airport at Chek Lap Kok, initially specified to accommodate some 35 million passengers per year and 2.6 million tons of cargo rising eventually through expansions to around 87 million passengers and nine million tons of cargo by 2040. Second, close by to the airport, was the Tung Chung New Town accommodating an eventual support community for the airport of some 200,000 or more people and to be built in four phases up until around 2011.
Then, at the other end of the undertaking was the West Kowloon Reclamation Project incorporating 334 hectares of land for highway and rail construction, as well as for residential, cultural and commercial development, together with the Central Reclamation Project on Hong Kong Island and the overall project's terminus at the Airport Railways Station on 20 hectares of land also incorporating further expansions into the harbor of the central business area. Between these two geographically distant locations were six projects comprising necessary components of linkage. They were the Lantau Link with the Tsing Ma and Kap Shui bridges and the Ma Wan viaduct; the North Lantau Expressway; the Airport Railway; Route 3 in the vicinity of Tsing Yi; the West Kowloon Expressway; and the Western Harbor Crossing from Kowloon to Hong Kong Island.[22]

The initial major undertaking at the airport site was to level the 302-hectare expanse of hilly Chek Lap Kok Island, as well as the much smaller 8-hectare nearby expanse of Lam Chau Island nearby, to make a 1,248-hectare platform necessary for the new airport facility, including its outstretched runways. Hong Kong's Gammon Construction and Japan's Nihimatsu Construction, along with Costain, Morrison Knudsen, Ballast Nedam, Jan de Nul and China Harbour Engineering, undertook the work, valued then at some USD 1.2 billion, finishing up in 1995 after only 41 months of work. Essentially to provide the base, Chek Lap Kok and Lam Chau Islands were reduced to a height of 6 meters above sea level with additional fill supplied by nearby earth-moving and dredging. Overall, the operation distributed around 350 million cubic meters of rock and other fill, while monopolizing much of the world's dredging fleet at the time. A plan for the airport facility was prepared by the Greiner Maunsell Consortium, including HOK, which provided the basic Y-shaped footprint in plan for the terminal. The architectural commission for the terminal was awarded in 1992 to the Mott Consortium comprised of Foster and Partners as lead architects, BAA and Mott Connell, with Ove Arup and Partners brought on for the engineering.[23] Finally, the new airport was officially opened on July 6, 1998, around one year after the handover of

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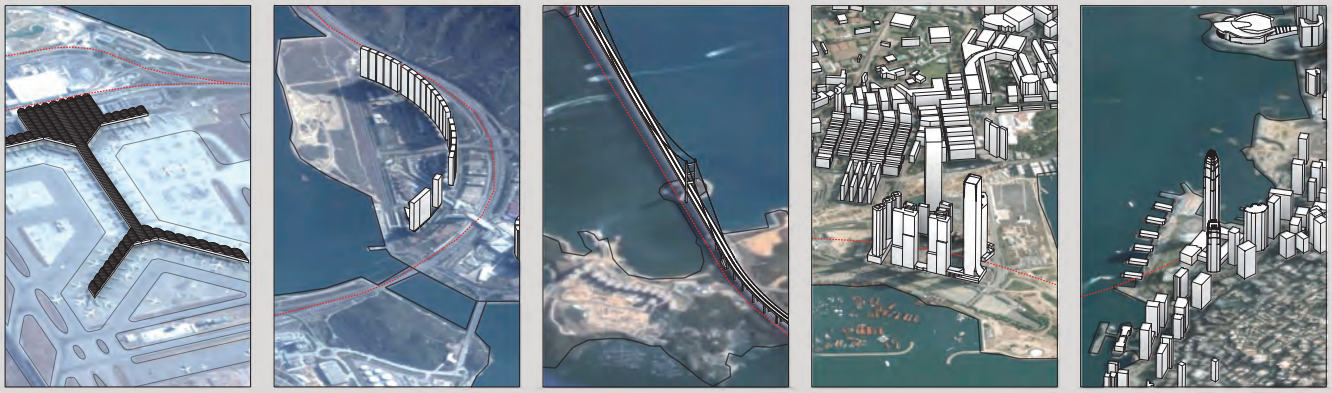
Vignettes of Elements of the Hong Kong Airport Core Program



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--- 1
Kansai Airport
Terminal in Context
(Shinkenchiku-Sha)

--- 2
The ‘Canyon’ at Kansai
(Shinkenchiku-Sha)

--- 3
The ‘Big Space’
at Kansai
(Shinkenchiku-Sha)

--- 4
The ‘Wing’ at Kansai
(Shinkenchiku-Sha)

--- 5
Section Through
the Kansai Terminal
Showing
1. The ‘Canyon’
2. The ‘Big Space’,
and 3. The ‘Wing’
(Drawn by Jong-Hyun
Baek & Pilsoo Maing)

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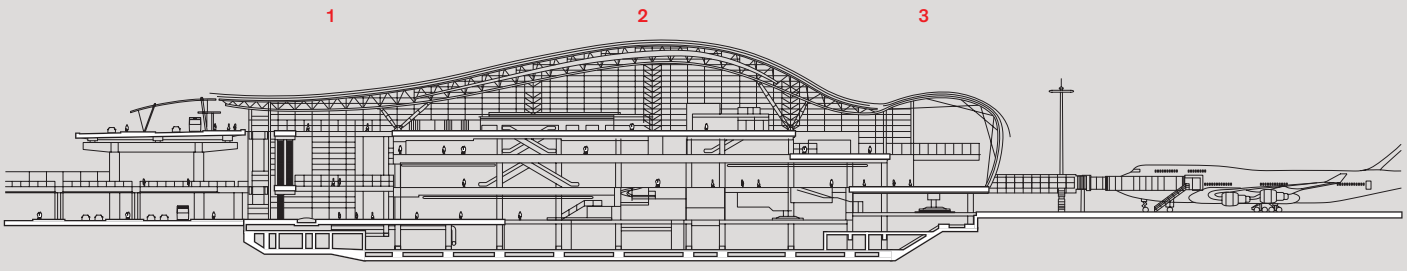

Hong Kong to China. A second runway was completed shortly thereafter in 1999, along with the expansion of the terminal and related handling facilities. Although in a somewhat different planar configuration than at Kansai or Pudong, the terminal building is also very long, with a 1.3-kilometer concourse, served by a people-mover system, and with a total initial floor area of some 490,000 square meters. Beyond all these statistical references, again like Kansai, the Chek Lap Kok airport platform can be seen readily from space.

As already noted, the Tung Chung New Town was located on Lantau Island directly across a relatively short distance from the airport, again much like at Kansai. It is the ninth new town in Hong Kong since the beginning of the New Town Programme in 1973 and, in addition to accommodating support for the airport program it also arose from the 1992 North Lantau Development Study. Envisaged to have a planned population of around 200 to 260,000 by 2011, as noted earlier, build-out of the new town could accommodate as many as 320,000 people. Connected to the airport by the three Sea Channel Bridges, Tung Chung was planned with four basic districts on 760 hectares of both natural and reclaimed land, including a coastal strip for the new highway and railway link to the airport. Anthony Ng Architects were primarily responsible for the first phase of the town's master plan, calling for 1.5 million square meters of development, including 12,500 apartments, 60,000 square meters of retail space, 23,500 square meters of hotel and around 16,500 square meters of office space. Overall, the town was perceived by planners as an important visual statement for travelers entering and leaving the airport, again much like aspects of the Rinku New Town at Kansai. In fact, the arc of high-rise buildings, inscribing the route immediately to and from the airport, especially for the Airport Express railway line, is crossed by a bridge of commercial space with an accessible roof, forming almost a literal gateway. The arc or crescent of towers, primarily accommodating housing units, rises to a height of from 32 to 38 stories, across from a mixed-use center that includes shops, offices and a hotel. In addition to airport workers and their families, Tung Chung has also been planned for others who might work elsewhere but be attracted to the new town because of its relatively undeveloped location and panoramic views over the water.[24]

The component of the extensive West Kowloon Reclamation Project most pertinent to the Airport Core Program was Kowloon Station and its immediate environs. The station is the largest on the Lantau and Airport Railway (LAR) that extends out to the airport, serving as the main terminus for the Kowloon area on the Airport Express and Tung Chung Mass Transit rail lines, with airport check-in and arrival facilities. It is also a major inter-modal interchange embracing rail, bus, car, taxi and para-transit forms of transportation. Occupying a 13.6-hectare site that is rectilinear in overall plan, the station site and its associated development was situated on freshly reclaimed land consisting of some 30 meters of sandy fill requiring enclosure of the below-grade station by a diaphragm wall installed via an open-cut method of construction. Accommodations called for 1.7 million square meters of building for the station, residential areas, commercial areas, hotel functions and the transportation interchange. Also included were 1.7 hectares of gardens and recreational facilities and an internal roadway system. A competition for the station and adjacent development was won in 1992 by Terry Farrell and Partners who simplified the original concept study in the competition brief, reorganizing the station functions to fit succinctly into a 300-meter long by 180-meter wide structure. Kowloon Station was completed in 1998, even as other aspects of the larger Kowloon Reclamation Program languished, including the southern harborfront cultural and mixed-use complex submitted to competition in 2000 and initially won by Foster and Partners before now being resurrected in another competition focusing on cultural facilities such as a museum, concert halls and other performance spaces. More or less adjacent to Kowloon Station is the yet to be fully completed Union Square development, with a 100,000-square meter shopping mall, 250,000 square meters of office space, 8,000 residences, leisure space and Hong Kong's future highest building at 108 floors – the International Commercial Center by Kohn Pedersen and Fox.[25]

The final point of arrival for visitors to Hong Kong and especially for businessmen, was the Hong Kong Station of the LAR and the Airport Express. This complex, also comprising airport check-in and arrival facilities along with adjacent retail,

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--- 1
Shanghai-Pudong Airport at Night (Courtesy of Paul Andreu)

--- 2
Entry to Shanghai-Pudong Airport (Courtesy of Paul of Andreu)

--- 3
Interior of Stage One of the Shanghai-Pudong Airport (Courtesy of Paul Andreu)

--- 4
Interior of Stage Two of the Shanghai-Pudong Airport (Peter Rowe)

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Section Through the Shanghai-Pudong Airport (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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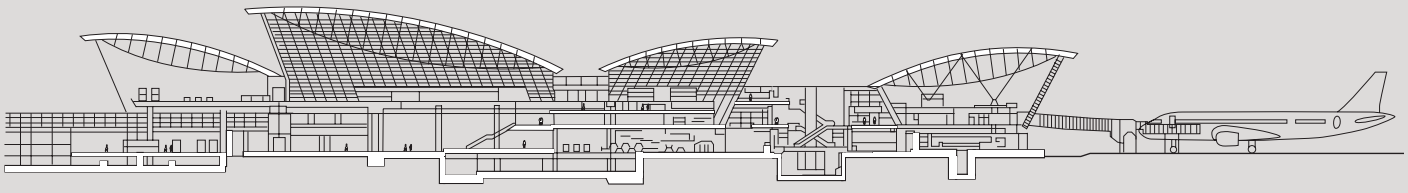

was situated on 4 hectares of the somewhat larger Central Reclamation Project extending northward into the harbor from the dense high-rise business area along the edge of Hong Kong Island's Central District. It is adjacent to Exchange Square, Hong Kong Land Limited's first phase of prestigious office development, the property which fetched a world-record price for the then waterfront site in the Central District at the height of the city's property boom, on which two 50-storey towers were constructed. The LAR station is also adjacent to the 415-meter tall International Finance Center tower, completed in 2003 by Cesar Pelli, another part of the new Central Reclamation Project site, and connected back under Connaught and Des Voeux Roads via basement and tunnel areas to Hong Kong's Central Station. Delays in contracting land-filling of the area until 1993 placed time pressure on the station schedule designed by the local firm of Rocco Design Partners with Ove Arup and Partners as engineers. Like in Kowloon, the station and railway installation required diaphragm walls, enclosing an area of around 280 meters by 100 meters to a depth of four levels below grade.[26]

Among the remaining six projects comprising the links between central Hong Kong and the airport, there was 34 kilometers of railway made up of 8 kilometers of tunnels, 6 kilometers of elevated structures, with 20 kilometers of track at grade level and seven stations including the one at the airport itself. Similarly, there was 34 kilometers of new roads and several spectacular bridges, including the Tsing Ma Bridge as part of the Lantau Link. With a main span of 1,377 meters, at the time of completion, it was the world's longest suspension bridge to carry both road and rail on two decks. The main span was made up of 69 deck sections, each measuring 18 meters long by 40 meters wide and 7.3 meters deep, all suspended from 1.1-meter diameter cables some 62 meters above shipping lanes in the waters below. Also part of the Lantau Link, the Kap Shui Mun Bridge, though smaller, was a design challenge, requiring a cable-stayed structure supporting one of the heaviest decks for its length and with a main span of 430 meters. The Tsing Ma's location in a narrows between Lantau Island and the mainland called for a design that could withstand typhoon winds upwards of 300 kilometers per hour. Begun in 1992 and completed in a remarkably short time of four years it was a joint-venture effort between Trafalgar House Construction, Costain Civil Engineering and the Mitsui Company. Other aspects of the rail and roadway construction included: the North Lantau Expressway as a 12.5-kilometer long dual three-lane highway; the LAR carrying both the Airport Express Line and the local Tung Chung Mass Transit Line; Route 3 as a dual three-lane, twin-tube tunnel through Tsing Yi Island and a channel bridge and eight-lane viaduct through Kwai Chang; and the 4.2-kilometer dual three-lane West Kowloon Expressway. Also there was the six-lane crossing under Victoria Harbor between the Hong Kong Central District and Kowloon.[27]

In addition to the sizeable Stations in the Central District and in Kowloon, the other major station was located at Tsing Yi part way between the airport and downtown on an island that was largely uninhabited until the 1960s, followed by roadway construction and public and private housing estates, as well as a town center, in the early 1970s. The new Tsing Yi station was designed to handle a substantial volume of traffic up to 17,000 passengers per hour, rising to around 24,000 people per hour in 2021. The general scheme for Tsing Yi was conceived of as a joint-venture property development with residential and commercial space, including offices, comprising 291,000 meters of floor area and 12 high-rise residential towers housing some 10,000 inhabitants in 3,500 dwelling units, all above a six-storey podium – one of the thickest in Hong Kong. Since its inception in the 1970s, a significant source of the Mass Transit Rail Corporation's (MTRC) revenues has come from joint-venture property developments, with roughly 50 percent of the MTRC's 38 stations, prior to the LAR, having associated property development. Indeed, by selling development rights to build huge commercial and residential complexes around some six stations along the new rail route to the airport, Hong Kong has reaped some of the higher real-estate values it created by building the new infrastructure in the first place. This value-capture process also concentrates new offices and residences at and around transit nodes, allowing most workers and residents to commute by train. In effect, it also forms the basis of a linear city along the rail route.[28]

Towards Clarity, Integration and Naturalism

Within their broad artificially contrived platforms and although not without some earlier precedents, East Asia's new airport developments, beginning with Kansai, chartered a new architectural geography for airport terminals. Separately and collectively, the passenger terminals at Kansai, Pudong and Chek Lap Kok drew away substantially from the decidedly utilitarian, spatially ungenerous and formally undistinguished character that most other terminals had fallen into after the heady days of early airline travel when a sense of pride and adventure had pervaded the architecture. Apart from sheer scale – for Kansai's, Pudong's and Chek Lap Kok's terminals are big – the new geography was thoroughly infused with an architecture of clarity, integration and an almost organic sense of naturalism. Certainly the coherent and largely unitary horizontal forms of the terminals created singular and arresting presences within the vast flat landscapes of their infrastructural platforms. Guiding and coping with high volumes of passenger and visitor movements via simple and direct diagrams with appropriate and obvious functional separations was at least clarifying, if not psychologically and physically beneficial to users. Clear and consistent orientation, often signaled by exposed elements of the buildings structural and cladding systems, further reinforced this guidance and knowledge of precise location, as did provision of long and lofty interior views, as well as visual contact with the outside world. By moving well beyond discrete building units into thoroughgoing multi-use complexes of flows rather than divisions, the increased functional variety of these new terminals was accommodated across lounges, departure and arrival areas, retail and restaurant services, conference spaces, business venues, exhibition areas and ready access to hotel space. Modal interchanges among varieties of transportation were also seamlessly incorporated within terminals. Integration of another kind was also undertaken, involving the matching or conformance of internal space with external volumes via continuous softer as well as adjustable spatial and material geometries. In this and other regards, the close association of engineering with architecture and an inherent interest in deriving and following geometric disciplines verged close to ideas about organisms and underlying structures, rules of combination, parts systematically making up wholes, parsimony in elemental formation, and so on. Such naturalistic tendencies *mutatis mutandis* also reflected back and became amplified in the high degrees of function, formal and structural integration, as well as in the unitary and singularity of overall terminal organizations.[29]

The design competition for the International Passenger Terminal at Kansai got underway in 1988, with 15 practices invited to compete. It was won by the Renzo Piano Building Workshop and design development was a collaboration between the Building Workshop and Ove Arup and Partners, with Nikken Sekkei and Aéroports de Paris in supporting roles on specific subsystems and Japan Airport consultants dealing with airside planning and negotiations with officials and members of the client group. Indeed, on the Building Workshop and Arup side of things, it was the last project in which four core members of the much earlier and very well-known Pompidou Center design team collaborated – Renzo Piano, Noriaki Okabe, Peter Rice and Tom Barker.[30] From the outset Piano and his colleagues immediately recognized the advantages of Aéroports de Paris brief and concept program for a multi-floor terminal with domestic and international flights from different floors. They also opted for a straightforward rectilinear and unitary building form which became stretched to a length of 1.7 kilometers, served by a people-mover system to accommodate boarding access to some 40 to 42 aircraft berths. This format also made sense in relationship to the airport's island platform and runway configuration. Essentially, international departures were accommodated on the fourth level of the long boarding wings, with arrivals on level three and domestic departures and arrivals on the second and first levels, respectively. Movement from the landside to the airside was choreographed from a transport nexus immediately adjacent and connected to the terminal, followed by three major spaces referred to as: the 'canyon,' the 'big space,' and the 'wing.' The 'canyon' served as a meeting point and provided easy vertical access up and down inside the complex. Essentially, it was a slot of space, suggestive of the name 'canyon,' with crossing floors or walkways. The 'big space,' again as the name suggests, was a

lofty space sweeping up and then down over the international ticketing and check-in lobby, whereas the 'wing' as already described was, put simply, a gigantic boarding bridge. The 'big space' also communicated directly and easily with a retail, restaurant and special services floor, also extending outwards to the 'wing' with arrivals and baggage claim, logically enough, on a couple of levels below. Both direct movement from landside sidewalk to an aircraft and with digressions for, say, shopping and meeting in between, were very clear and immediate. They also unfolded effortlessly in interim spaces that were generous, even lofty, well-appointed, light and airy. Even though all were under the one roof, there was also sufficient difference so that there could be little doubt as to where passengers were and what they might expect next.

Hand in hand with the broad spatial concepts, the technical and material aspects of the architecture also broke new ground. Apparently, Peter Rice proposed a structure that would aid orientation by being visible and strongly directional – oblong rather than squarish. There was also the desire to be light-handed, as it were, with the unifying roof structure allowing it to smoothly adjust to local exigencies, and, if possible be clad with regular rectangular panels. This led in the direction of a toroidal geometry, that built on an earlier experience at the Bercy commercial complex in 1991, reducing the cladding problem at Kansai to 90,000 identical high-grade stainless-steel tiles instead of some 30 differently sized tiles.[31] It also extended to geometric discipline guiding the advanced engineering of the exposed structure which, in turn, was almost organically intrinsic to the spaces' character and articulation towards orientation. Tom Barker's contribution in mechanical engineering was to find a way of devising air conditioning by blowing conditioned air across the ceiling without obtrusive duct work in what was another first time at that scale.[32] Broad expanses of fenestration integrated into the folded-down roof structure provided panoramic views of the seascape outside and beyond the runways and introduced contrasts in natural lighting which also aided orientation. The graceful curvilinear roof was in fact composed of a double roof, with a waterproofing and insulating inner layer, and an outer layer of stainless-steel panels that, taken together, offered considerable thermal performance, quite apart from almost magically catching and re-reflecting the sun as it moved across the sky above the airport. Rice and his colleagues at Arup were no strangers to the idea of deriving a geometric discipline for a form. On the much earlier Sydney Opera House project for instance, they had to find a geometric discipline that would approximate the form of Utzon's shells and allow them to be clad in repetitive units – chevron-shaped in that case. This Opera House application was different from Kansai, however, in at least one important way. The geometry in Sydney was rigid – a spherical geometry – and resulted in a mismatch between in internal space of the building and its external volume.[33] Kansai's softer toroidal geometry, by contrast, allowed the roof to conform to internal shaping requirements without a loss of discipline. Again there is an elegance, a harmony and a sense of inevitable underlying structure that almost appears to be natural in its import.

A similar high degree of clarity and integration is to be found in the terminal configurations at the Pudong International Airport. The phase I building, designed by Paul Andreu of ADP and covering some 230,000 square meters of floor area, was subdivided into four programmatic components. Moving from the landward side, they were a lofty drop-off platform, partially enclosed by a curvilinear roof structure; a capacious departure hall under a similar roof configuration, leading to a retail area; and then on to a 1,400-meter long gate concourse, by way of glazed bridges, which was also enveloped by a curvilinear roof structure. Angled curtain walls and mullions exaggerate the vertical thrust of the terminal and also integrate columns carrying the light roof structure above, constructed from prestressed parabolic trusses. Free of their usual diagonal members the upper chord of these trusses are in compression, whereas the lower chord – formed by a cable – is carried in tension. Numerous intervening vertical supports, illuminated by skylights and cast against a dark-blue background resemble, as Andreu puts it, "a shower of comets falling from the sky."[34] The general structural grain of the successive curvilinear roofs and trusses also provides useful directional guidance to passengers and users below, as at Kansai. The overall atmosphere, especially in the long gateway concourse is also restful and serene, suspended as it seems to be between earth

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The Airport at Chek Lap Kok (Dennis Gilbert)

--- 2
Interior Serenity at Chek Lap Kok (Dennis Gilbert)

--- 3
Entry on Arrival at Chek Lap Kok (Peter Rowe)

--- 4
Plan of Chek Lap Kok Airport (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 5
Section-Elevation of Chek Lap Kok (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 6
Detail Section of Transportation Hub at Chek Lap Kok (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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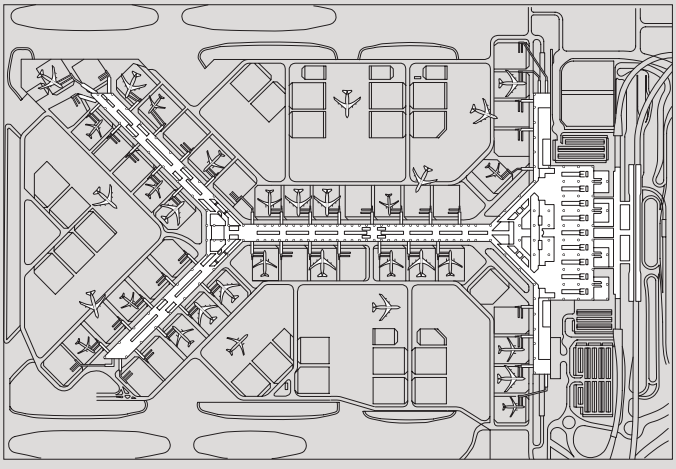

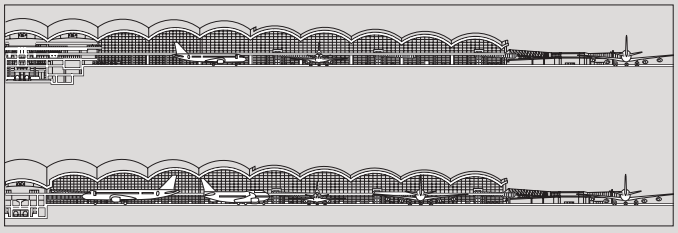

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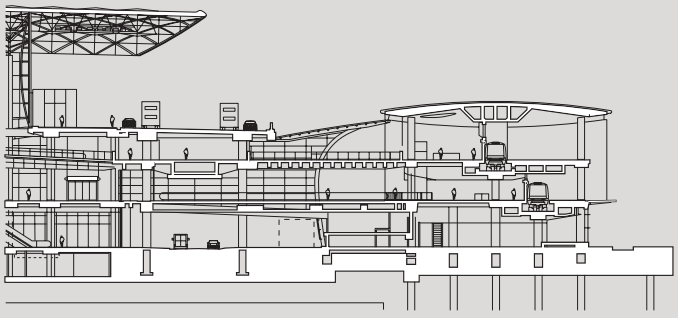

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and sky. The departure hall and retail areas are also extensive and spacious, around 400 meters long by 170 meters wide in total, with two main levels for departures and arrivals and with transverse division into smaller areas given over to international and domestic traffic. There are 28 gates served by the terminal proper with 11 remote locations for a total of 39 berths. Retailing and passenger services largely take place within low enclosures lining the concourse areas, adding a sense of spatial variety and scale to the overall ensemble. Reasonably high-grade material finishes also add to the intended stature and importance of the architecture and the repetitive, non-linear basic geometry of most of the spatial enclosure, does quickly suggest organic properties, although not as overtly as at Kansai.

The second phase terminal, built adjacent to the original building to the west of the central axis of the overall complex, was designed by what is now the Shanghai Xian Dai Architectural Design Group, one of the largest firms of its kind in the world. As might be expected the general design is similar to phase I, although without quite the same level of detailed nicety and refinement. The format of the terminal also has the same direct layering of drop-off departure hall, retail and concourse and directly accommodates slightly more gates without remote locations, at around 37 in number.[35] Improvements have been made, however, between the two phases of terminal construction by way of what has been termed an 'integrated transportation center' providing direct and commodious access to rail transit, the Maglev train, long-distance buses, public buses, taxis, parking space, together with waiting rooms, self-check-in counters and some shopping space. As in the airline terminals, spatial organization is there to facilitate inter-modal travel and passenger transfers, all within an environment that is relatively airy and spacious. The third runway and soon-to-be-completed additional runways are around 3,400 meters in length and graded at 'class 4F,' suitable for the landing and taking off of the new class of very large jet airliners like the Airbus A380. The phase II expansion also adopts a three-level structure to facilitate passenger transfers and transitioning. It is composed of international departures on the top level, a middle level of international arrivals and a lower mixed level for both domestic departures and arrivals.

Preliminary schematic drawings suggest that the final two modules of the Pudong airport, bringing it up to an ultimate capacity of probably around 80 million passengers per year, may well be in the form of an interconnected curvilinear array of concourses, splayed out towards the by then five runways. Early designs by the Richard Rogers Partnership also appear to emphasize an organic, sculptural design of the new Terminal 2, comprised of free-form-like roof and enclosing structures, billed to be sustainable, adaptable to future growth, functionally well-integrated and able to move passengers effortlessly through arrival and departure processes.[36] Finally, although receiving little commentary, the landscape component of the master plan, by Michel Desvigne, including the gardens and other aspects of phase I, warrant notice. At work appears to be an exercise in complementary juxtaposition, whereby material from the natural realm is brought together with the stuff of manufacture, although with sensibly similar formal qualities. The straightforward rectilinear layout of the terminal in phase I, for instance, readily dovetails with the underlying grid-iron pattern of vegetated landscape and courtyard gardens, just as the sweeping forms of the elevated roadway system hover above similarly abstract and expansive reflecting pools.

The Passenger Terminal at Chek Lap Kok by Norman Foster and his associates, with its spread of distinctive flowing roof modules, has been alikened to a dragonfly extending its wings to the two adjacent runways and using its body to circulate passengers boarding and disembarking flights. As Foster himself put it he was "determined to return to simplicity and ditch the clunkiness of the conventional airport with its heavy roof laden with equipment," arriving instead at "a roof based on 129 barrel vault modules with 36-meter spaces facing a lattice frame of diagonal and longitudinal elements that are supported by circular cantilever columns on regular grids."[37] In effect, it was a follow-on from an earlier precedent at Stansted in England, built in 1991, with development of a standard module that could be applied to nearly every part of the airport building. It was to be light, easy to build from replicable pieces, and efficient to fabricate and assemble. Low glazing-to-floor area ratios also made the enclosure very energy-efficient, further augmented by a sophisticated building service management

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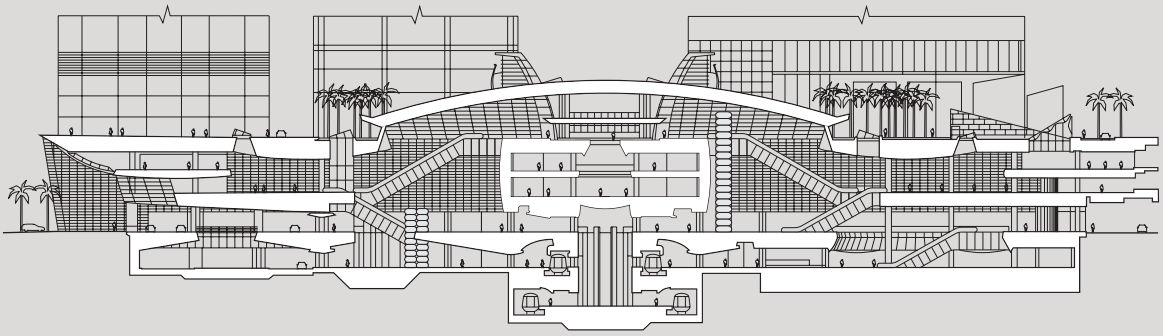

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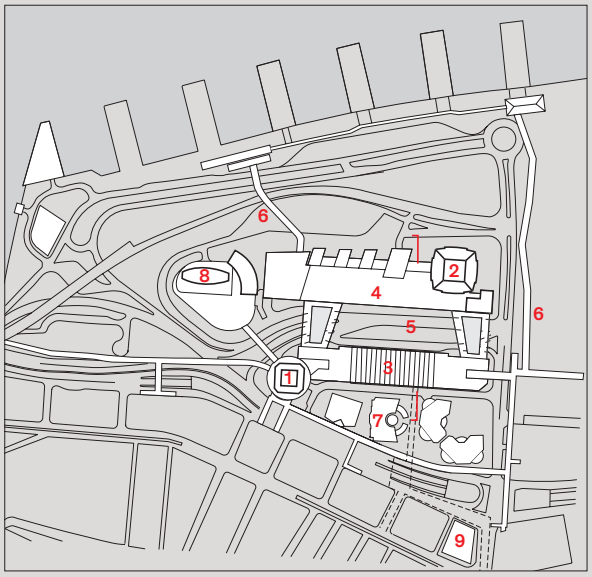

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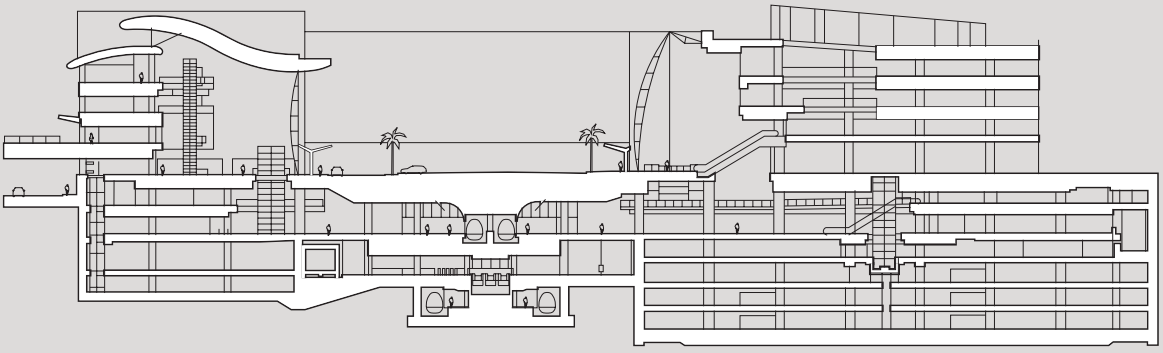

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Plaza Area at Kowloon Station (Courtesy of TFP Farrells © Daniel Wong)

--- 2
Kowloon Station Interior (Courtesy of TFP Farrells © Daniel Wong)

--- 3
Section Through the Kowloon Station (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 4
Plan of the Hong Kong Central Station and Environs Showing
1. One IFC,
2. Two IFC,
3. Hong Kong Station,
4. IFC Mall,
5. Underpass,
6. Footbridges,
7. Exchange Square,
8. Hotels,
9. Worldwide House
(Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 5
Section Through the Hong Kong Central Station (Drawn by Jong-Hyun Baek & Pilsoo Maing)

system contracting the use of mechanical equipment during idling and off-peak periods. Indeed, this approach turned out to be five times more energy-efficient than a typical urban roof system. Constructed from a lightweight steel lattice, covered by a fabric membrane providing the wavy profile, the terminal roof dips and rolls over the length of the building. Skylights fit into each of the 129 roof modules and the roof is supported on interior columns and also connects to the outside wall-mullion supported glazing system. Given its rather extraordinary length, at well over 1 kilometer, the terminal's under-roof space is one of the longest enclosed public spaces ever made.[38] Throughout, it is suffused with calm spaces, bathed in filtered natural light and affording spectacular panoramic views towards aspects of Hong Kong's strong natural land and seascape.

Again like both Kansai and Pudong, the terminal building's movement diagram is very simple and direct. Beginning at the Ground Transportation Center on the east side, analogous in function to Pudong's 'integrated transportation center' without the shopping, bridges carry passengers over a void where other passengers come into view. Again this is somewhat like crossing the 'canyon' at Kansai. Then, led by parallel roof vaults which swoop upwards to the west, passengers are drawn into the ticketing and check-in area and then through security checkpoints and retailing, ultimately into the concourse area, servicing some 50 separate gates. More stratified than either Pudong or Kansai, the terminal has eight levels. There are the people movers and baggage hall at the lower levels, with the remaining six levels servicing a large retail complex, arrivals and departures, lounges and ticket centers. Further, these six levels, more or less under the expansive roof, have few internal walls, allowing views throughout the terminal and through the surrounding 4.4-kilometer perimeter of glass walls to the outside. This external glazing is supported on light bow-string trusses unobtrusively providing a regular meter to the concourse area. Again the resulting transparency imbues the interior space with an unusual 'airiness' and 'lightness' and also aids in immediate perception of the terminal's spatial organization. As suggested, baggage handling, climate control and other related services are under floor, with regard to the public areas. Again there is separation of arrivals on a lower floor from departures above. In short, the terminal provides an efficient, unconfusing, gentle and even serene manner of moving from land to air and *vice versa*, also within grand welcoming spaces and with rather extraordinary outward views.[39]

Clarity of circulation and integration of function also carries over into the architecture of the main airline terminal's satellites in the stations along the way from central Hong Kong. Design of the large Kowloon Station by Terry Farrell and Partners pursued a three-dimensional approach of some six separate functional layers forming a thick and highly active podium, primarily of retail along with pedestrian and other forms of transportation movement, including check-in facilities for the airport.[40] Like elsewhere in Hong Kong, the complex is an almost entirely, publicly accessible internalized environment, with few sharp spatial disjunctions among functional components. Indeed, it is as if the city has moved almost fully inside and in this case, the airport has moved into the city. Above several pedestrian levels is an external plaza and a new ground level of sorts. By elevating this area, the architects were able to combine several physical roles: the provision of a public space between buildings, the roof of the station, and the entrance to the large arrival and departure halls of the Airport Railway. Contained in the center of the site, the station itself was defined by the intersection of two perpendicular axes which also served, appropriately enough, as the most public domain within the entire development. This concentration of both vertical and horizontal circulation directly at the center of the project, clearly simplifies passenger navigation and spatial experience through an otherwise large and relatively complex system of transit and related functions.

Similar levels of clarity, directness and integration were brought to bear on the LAR's Central Station by the Rocco Design Partnership, although within more conventional and less interiorized urban circumstances. There the prominent and well-made curtain wall, running along the street, clearly announces the airport station's presence and both the pedestrian connections back into the city and the easy progression of layers, down to the rail bed itself, facilitate navigation. The matter-of-factness of these otherwise unusual building and infrastructural assemblages also plays away from 'organic'

and 'naturalistic' definitions to another meaning of the term 'naturalism,' rooted in everyday realities. Also part of the matter-of-factness of these complexes is an inevitable blurring between public and more private realms, much as the street corners of old were both home to a few and yet a meeting place for many.

Extensions and Other Modes

Elaboration of this new territory in airport and airport-related infrastructure improvement extended well beyond the 1990s and into the new millennium. Again there were significant contributions to be found in East Asia. The Incheon International Airport complex in South Korea of 2002, for instance, further integrated different modes of transportation along with spatial separation of terminal components. There was also a shift of emphasis to a significant and conspicuous modal interchange, in the form of the Incheon Ground Transportation Center, connected to two separate arrival and departure concourses. Located on the outskirts of the port city of Incheon on an island – Yeongjong – the airport site was another land-reclamation project, joining together two smaller islands in the process. Strong connections are offered eastward to Seoul some 70 kilometers away by expressway and by rail, and to nearby Incheon, as well as to its Songdo satellite, via the Grand or Incheon Bridge.[41] Although not as singular in focus nor as ambitious in scope as Hong Kong's Airport Core Programs, many similar components were involved in linking the otherwise remote airport site back to urban centers and to areas of new development. The Incheon Ground Transportation Center – the hub of the new international airport – was the subject of an international competition in 1996 won by Terry Farrell and Partners. Completed in time for the soccer World Cup in South Korea in 2002, the Center forms the arrival and departure point to and from Seoul, as well as to other cities. It is one of the world's largest transportation buildings, at 279,000 square meters in area, as well as being enclosed by a distinctive, organically shaped profile made from sheet-metal components and glass. In relation to the two passenger terminals, it is largely a freestanding structure, rising to a height of six storeys and housing five rail systems, including intercity, airport express and light rail networks, as well as bus and coach stations, together with taxi bays and car parks. Built for the Korean Airport Construction Authority, the complex, along with the airline passenger terminals, accommodates 50 million passengers per year, even if the present volume of traffic is less. Throughout, the strategic positioning of specific elements of the airport complex and the well-appointed spatial interludes between them make for a seamless transition from one mode of transportation to another.[42]

Terminal 3 at Singapore's venerable Changi Airport by Skidmore, Owings & Merrill was completed in 2008, adding further incremental development to the well-interconnected terminal facilities, although shifting the architectural emphasis away from 'flight and travel' towards a stronger emphasis on Singapore as a place and center of tropical excellence. Changi, located on the eastern side of Singapore Island, was a military airport under the British prior to World War II, together with accommodating some civilian flying. Shortly after the birth of the island republic, it became the national airport, although also sharing air and land space for military purposes. In 1995, the original transit and departure hall underwent extensive refurbishment to provide new and better facilities. This was followed in 2000 by a pier extension to this same facility, referred to as Terminal 1. Similarly, Terminal 2 was expanded in 1996 and upgraded in 2006, with a convenient transit connection back into the city provided by the Changi Airport MRT station, located between the two terminals. Terminal 3 was begun shortly thereafter, primarily for international rather than regional flights. Designed to accommodate an additional 20 million passengers annually, the new terminal is relatively large, at 300,000 square meters in floor area, located on four upper levels and three basement levels. A new people-mover system was installed to connect between the three terminals, along with a high-speed baggage system for quick transfers between terminals. Somewhat differently than at the other East Asian airports except at Pudong, a nine-storey 350-room hotel is located immediately adjacent to the terminal, and not in a more remote location. The architectural highlight, however, is undoubtedly the five-storey high vertical garden, called the 'Green Wall,' measuring some 300 meters by 15 meters, separating the entry area and the security and retail functions

beyond. Further, the entry area's roof is punctuated by some 900 skylights which admit a soft dappling of natural light into the interior. As alluded to earlier, the overall affect is more about the tropical, vegetative and lively circumstances of Singapore then it is about departure or arrivals. The literal greenhouse elements, along with the scattering of sculptural art are both playful and inviting, transforming the airports lobby area into a public space within the city and a fitting merger of global and local aspirations.[43]

Terminal 3 at the Beijing Capital International Airport by Foster and Partners of 2008, took only four years to design and complete in time for the Olympic Games. It is the world's largest building and is billed as the most advanced airport, continuing the further ratcheting up in scale of East Asian facilities to a degree where relatively new design and occupancy criteria come into play concerned with footprint, perimeters, spatial clarity and high service standards. Located between the existing eastern runway and the future runway, Terminal 3 and the Ground Transportation Center together enclose a floor area of approximately 1.3 million square meters, mostly under one roof and running for a length of 3.25 kilometers. Designed to accommodate upwards of 50 million passengers per annum by 2020, the building's layout also aims to resolve the modern complexities of air travel, as well as providing a thrilling and welcoming celebration of flight and of contemporary China. Comprised of three connected and light-filled volumes with access to over 60 gates capable of servicing jumbo airliners, the overall profile and layout of the building is straightforward, fanning out at either end, a little like at Chek Lap Kok, to accommodate arrival and departure halls for both domestic and international gates, with a set of domestic gates in the middle volume. With a soaring aerodynamically shaped roof, the overall form of the complex has been alikened to a dragon, although it has been made to respond to stringent passive environmental concepts, like south-east oriented skylights and related control systems, as well as for conserving footprint and yet maximizing perimeter for more numerous gate locations. In fact, it is 17 percent larger in floor space than Heathrow's terminals 1, 2, 3, 4 and 5 combined and yet communicatively far more efficient, as well as in energy consumption.[44] Direct visual connections between the lower level and an open mezzanine level above, all under a distinctive red-to-yellow colored ceiling lattice, amplify the building's spatial clarity. Again as at Chek Lap Kok, all the spaces are naturally lit and afford outside views. The unifying roof is also punctuated by skylights, bringing natural light deep into the building. Connections from one end of the building to the other, with stops at the center, are handled by an automated people mover which travels at 80 kilometers per hour, sometimes in an open landscaped cutting, adding further to the overall sense of horizontal orientation. Tapering of the folding roof canopy towards the edges of some of the building's periphery also provides for a more intimate setting for passengers traversing towards their boarding gates.

Similar design thinking regarding the elevated status of travel terminals and the clarity and integration of their spatial layouts has also extended beyond airports to other modes of transportation in East Asia. The Yokohama International Ferry Terminal by Foreign Office Architects of 1995-2002 is a clear and well-celebrated example.[45] Generally configured as a straightforward, linear pier connection out into the bay from one of the main east-west streets in the older coastal area of Yokohama adjacent to the waterfront park, the terminal rises several storeys in height accommodating both pedestrian and vehicular traffic. Rather than solely a building, however, the terminal appears to be also conceived of as a landscape. Double-curving surfaces, ramps and planes combine to form a hard- and soft-scape topography, also enclosing room-like programmatic volumes for waiting and recreation underneath. Like Kansai, the organic analogy here extends to the basic planning grid or module and the distortions that are extrapolated out across the resulting surfaces. A preponderance of timber material also softens sensible contact with the building, as well as helping to naturalize it through consistencies with other piers. At anchor, the ferry boats appear to be pulled alongside another marine element of less than definable character and, if anything, most resembling a park. Unlike other ferry-terminal piers which tend to be occupied only during times of arrival and departure, the Yokohama facility does, in fact, serve several functions, spanning across a spectrum of leisure-time pursuits.

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--- 1
Yokohama Ferry Terminal
(Shinkenchiku-Sha)

--- 2
Interior of the Yokohama
Ferry Terminal
(Peter Rowe)

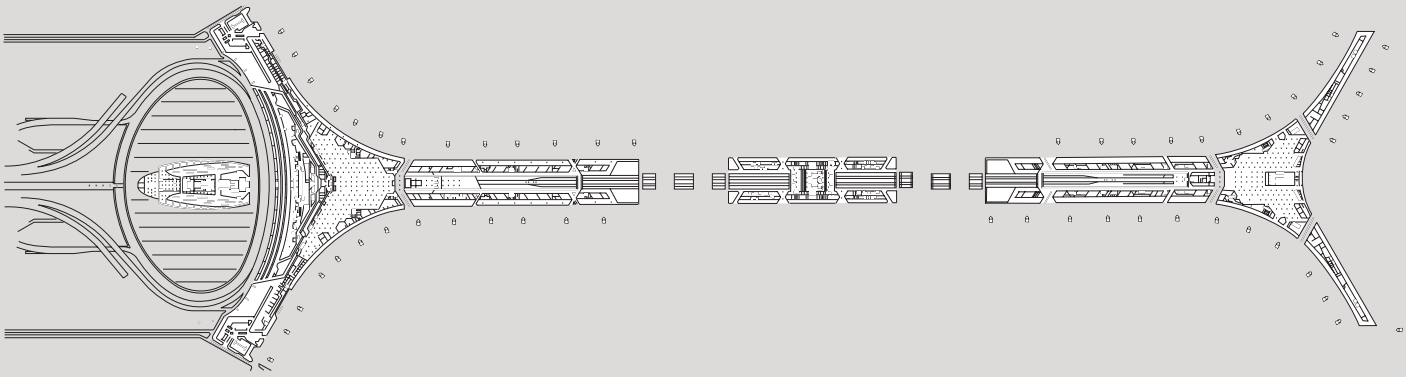
--- 3
Incheon Ground
Transportation Center
(TFP Farrells)

--- 4
Changi Airport,
Terminal 3
(Peter Rowe)

--- 5
Beijing Airport,
Terminal 3 (Peter Rowe)

--- 6
Plan of Beijing Airport,
Terminal 3 (Drawn by
Jong-Hyun Baek &
Pilsoo Maing)

--- 6



Moving further afield into other types of terminals, major urban rail stations in China have also begun to take on distinctive organizations and forms. One typology that emerged with the South Station in both Shanghai and Beijing is dominated by a circular plan form for the bulk of the station building. The Shanghai South Station designed by AREP in conjunction with East China Architectural Design Institute, and built between 2003 and 2006 for the Ministry of Railways, has a round roof that is sloped rather like a traditional straw hat worn in paddy fields. It covers six levels, the spatial stratification from which distinguishes among traffic flows and a *modus operandi* which conforms to the requirements of Chinese train stations for controlled access to trains.[46] The 60,000-square meter roof structure, which has a diameter of some 255 meters, covers the entirety of the station, except for some sidings which trail off in the horizontal direction of the main lines of travel. The roof itself comprises three layers to control interior light levels, with shading devices on the upper surface, an intermediate enclosing layer of polycarbonate honeycomb material, and a lower perforated metal soffit. Like the airline terminals, the station integrates the transit facilities, including for modal changes, with retail facilities and other passenger services. As in the stations of old, it serves as a literal and symbolic gateway to the city and is transformed at night into a blazing beacon of light. Similar in many respects, the Beijing South Station by Terry Farrell and Partners, in conjunction with the Tianjin Design Institute, resulted from a design competition and was built between 2006 and 2008.[47] The program required inter-modal passenger interchange between subway, bus, car and taxi, as well as associated facilities. The design and master plan proposed to create an urban link with the surrounding cityscape, close to the southern section of Beijing's north-south axis and via a landscaped pedestrian spine. The overall form of the station in plan is also circular, covering a floor area of some 218,000 square meters, with the central portion also shaped somewhat after a domed peasant's hat. In comparison with the enormous Beijing West Railway Station that was built only some 10 years earlier in 1996, architecturally there is much less emphasis on traditional resemblances to gates and walls and, like the airline terminals, more consideration is given to functional integration, clarity in movement and a spacious lightness to enclosure.

Finally, the beginning and end of many trips occur at subway stations for locals and tourists alike. From the Maglev in Pudong, for instance, they can connect into Shanghai's expanding subway network. From either the Kowloon or Central Stations in Hong Kong, the MTRC can be accessed immediately. Similarly in Taipei, the new rail link to the airport is integral with the city's mass transit system, and so one could go on. A distinctive feature of many of these subway stations is the simultaneous provision of retail commercial activity to be sure, but also the accommodation of public space, performance areas and art installations. In short, subway stops have morphed, at least in part, into 'cultural landscapes' as they are referred to in Taipei, or simply into multi-use environments in other places.[48] Often the civic aspect in play also reflects local conditions at or near transit stops. The sunken plaza at the Jing'an stop in Shanghai by Lin Jiwei and Associates, for example, frequently hosts temporary markets and product displays, not at all out of keeping with earlier, traditional uses of East Asian temple complexes. Elsewhere, public art is conspicuous, as in the giant abstract sculpture near the entrance to the subway stop beside the Renmin precinct at Nanjing Road. The forecourt to the Olympic Green transit station in Beijing has already been mentioned in passing, as has the subway entrance on the Huamu civic plaza in Shanghai also serving the sprawling underground Yatai Xinyang Fashion and Craft Market. Both are clearly fashioned as components of public spaces befitting their local circumstances. Overall, these cultural orientations are relatively new to the region, moving well beyond their forerunners in the largely commercial labyrinths of, say, Kita-ku in Osaka or Shinjuku in Tokyo.

Changed Circumstances

Since Kansai, Pudong and Chek Lap Kok, numerous other airport improvements have been made in East Asia, most notably in China. There, regional hubs like Zhengzhou, Wuhan and Kunming have been either extensively refurbished or newly constructed, following many of the same design principles regarding clarity of movement, integration of function, lightness

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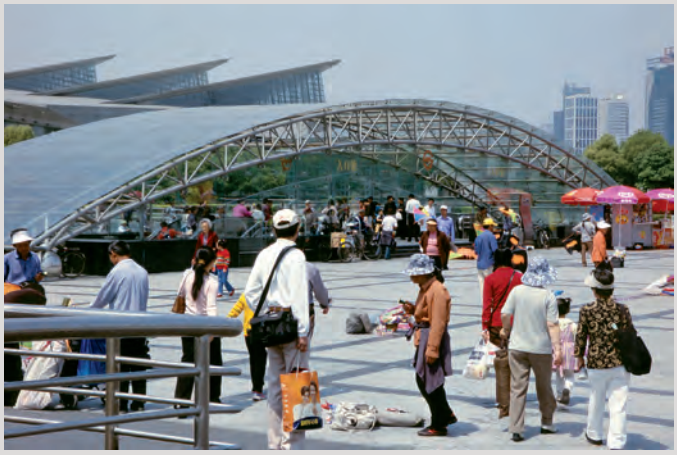

--- 1
Beijing South Station
(Courtesy of
TFP Farrells
© Zhou Ruogu)

--- 2
Interior of Beijing South
Station (Courtesy
of TFP Farrells
© Fu Xing Studio)

--- 3
Shanghai South Station
(Courtesy of SNCF
DAAB-AREP)

--- 4
Sunken Plaza at the
Jing'an Subway Stop,
Shanghai
(Courtesy of Lin
Jiwei and Assocs.)

--- 5
Sculpture at Entry to
Renmin-Nanjing Road
Subway Stop, Shanghai
(Peter Rowe)

--- 6
Contemporary Head
House at Huamu Plaza
Subway Stop, Shanghai
(Peter Rowe)

of structure and transparency of enclosure. By and large, this 'new' architectural geography of airline terminals is less remarkable than it used to be back in the 1990s. A paradigm shift has occurred and the new territories are beginning to be well charted. Indeed, in some of the original circumstances, the optimism surrounding the new airport construction and related activities has abated, notably in Japan. Operations at Kansai airport, that stood so conspicuously at the beginning of contemporary trends, have diminished substantially from a peak in 2000 of 20.6 million passengers per year to around 15 million passengers per year in 2008, with much of this downturn occurring in international travel.[49] Clearly, the earlier ambition of the Kansai region's economic development has subsided. Scheduled projects never came to fruition as the 'bubble economy' of the late 1980s and early 1990s – when the airport was conceived – took its lasting and painful consequences. Tokyo, it seems, has also not been entirely spared, with Narita without much recent growth and beginning to languish on the far outskirts of the metropolitan area in comparison to Haneda Airport much closer in. At 67 million passengers per year, Haneda is already very well travelled as noted earlier, even without the recent announcement of significant levels of international flights above its staple of domestic travel.[50] Elsewhere in the world, convenient local access and less-crowded and up-scaled airport facilities are also becoming popular, perhaps signaling a shift in yet another direction for air travel.

Among the newish breed of airports like Kansai, Pudong and Chek Lap Kok, not to mention Beijing, several compelling situational logics appear to have driven physical outcomes and geographies. First, there is the situational logic associated with the dictates of having remote sites to avoid environmental nuisances and similar adverse impacts on nearby established settlements, along with the pressures of high travel demand. From this, vast platforms for the airport's operating facilities were created, often in otherwise benign or less inhibiting seaward locations. The result was very little context, other than the platform's engineering and visual access to often striking seascapes and landscapes, presenting the opportunity of tangible transparency in the terminals' exposure. Also, seemingly necessitated were extraordinary transportation linkages back to urban areas, often also requiring further engineering reaches in span and carrying capacity. All things considered, airports entered squarely into the realm of infrastructure and infrastructure systems, rather than belonging to those of specific buildings or discrete facilities. Further, the scope of these systems engaged populations and activities at the scale of small cities.

A second related situational logic is driven by the sheer scale and functional complexity of the contemporary airport facilities under discussion and the concomitant need for integration and clarity in passenger movement, along with convivial if not distinctive place making. Generally, this appears to have pushed the architecture of terminals and similar facilities in the direction of openness with provision of extensive visual connections, as well as the appearance of structural order serving as visual cues to direction and orientation. The placement of distinctive spatial parentheses, like the 'canyon' at Kansai or the 'bridges' at Chek Lap Kok, were also strategically deployed to aid in navigation and enjoyment of spatial experience. Coloration and texture of ceiling and soffit materials also came strongly into play for the same purposes, as did the careful modulation of internal and external light. Modal interchange among a widening variety of types of transportation rather than being suffused throughout a terminal or cobbled together in a relatively *ad hoc* manner, became concentrated into specialized centers, as at Pudong, Beijing and Incheon, among other airports. This trend led in turn to concepts of integration that relied less on spatial togetherness, than on particularization and articulation of functional parts. In this respect the terminal 'concourse' component, though still important, even if relatively simple in design conception, appears to have become a less dominant and spatially separable consideration.

A third and closely related situational logic to the scale of facilities is the need to cover vast expanses of building. The new Beijing International Terminal is, after all, the largest building in the world and by some margin. Under the further disciplines of cost control, ease of fabrication and effectiveness of maintenance, reductions in the number of separate components

and construction details are usually sought after. Deployment, particularly on a large scale, of limited numbers of different repetitive, and hence modular, units are favored. As described earlier, this in turn often leads to the search for geometric and engineering principles that allow a building's fabric to be spun out, as it were, from a small set of components and fabrication rules. This form of construction, largely by way of constant application of an assembly code, verges on analogies with natural or organic processes. Unlike earlier modular building systems with a limited variety of possible spatial outcomes, the toroidal and other geometric principles on display in this group of airports allow for local modulation and flexibility without departure from an underlying discipline. This aspect, in turn, leads in the direction of an openness of profile and dominant architectural form, although also raises the issue of a relative lack of natural closure and finitude. Indeed, most of the airport structures under examination here have this wave-like overall presence to them, which, like literal waves elsewhere, suggest incomplete and continuous processes. Furthermore, this quality does not seem inappropriate for something that is fundamentally infrastructural, rather than a resulting structure or even superstructure.

Finally, a fourth situational logic arises from the time and place of the airports themselves in the larger international context. They were being built in East Asia when the cities, and indeed nations concerned, were arriving to new prominence on the world stage, beginning to compete vigorously in globalized markets, and starting to serve rising domestic demand for air travel. The exception may appear to be Japan, which had certainly arrived toward the peak of international status sometime earlier, although largely through Tokyo and not regional conglomerations like Osaka, Kobe and the Kansai region. Among few other kinds of building sites, brand-new airports made obvious venues to signal arrival on the world stage. They were often the first and last points of contact among visitors and, as far as domestic traffic was concerned, came about at a time in which air travel was often still glamorous, exciting and something of a novelty. Today, in fact, five East Asian countries are ranked in the Top 10 worldwide, by extent of air travel, with Japan at number two, followed by China at number four, Hong Kong at number seven, South Korea at number nine and Singapore at number 10. Tourism to parts of East Asia has also been on the rise, especially to China, which now ranks number four, internationally. Quite apart from the contingencies already discussed about scale, scope and infrastructural support, symbolic architectural choices in favor of cutting-edge technologies, material contemporaneity and modern spatial qualities also make sense in an international climate in which East Asia is beginning to steal the march on well-established regions of the world. Culturally, China, for instance, has long been eschewing the past as a constant point of reference, as it moves forward with its process of modernization, as have other countries in the region.

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10 Peter Buchanan, 'Kansai', *Architectural Review*, vol. 196, no. 1173 (1994), p. 34

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As elsewhere in the world, claims have been brought to bear on property resources in East Asian cities involving conversion from one set of circumstances into another. Almost without exception, these conversions have been either sanctioned or undertaken by the public sectors involved, under general assumptions about achieving more productive use and societal benefit. Even in relatively top-down and centralized governmental decision-making situations it seems that justifications of these kinds are required. Setting aside more purely conservation purposes, what is often at stake is requalification with regard to type and scale of use. Upward economic pressures either in or around central urban areas, for instance, often result in redevelopment and new building at increased heights, larger volumes and in different configurations. Most central business districts have evolved in this manner. Territorial shifts also in the sense of re-aggregations or different aggregations of land parcels often occur to accommodate larger building footprints, better ground-level amenity and improved infrastructural service. In fact, among other places, several inner-city areas of Tokyo have recently undergone this kind of transformation. Also, sometimes at stake are territorial shifts in use, typically in the direction of broader diversity and often slanted towards cultural and public open-space programs. Again among other places, recent examples are to be found in inner-city Tokyo, as well as in Taipei and in Singapore. Apart from re-aggregations of property and requalification of its use, reclamation may also involve conversion through environmental remediation of brown-field sites into more productive purposes, again particularly in and around central urban areas. Sites associated with moribund industry, abandoned or under-used railways and port facilities often present reclamation opportunities, as seen at the Shanghai Expo discussed earlier, or in numerous American cities like Boston and Baltimore, let alone in Europe. In the past, use and building requalification of territories has also been used almost solely for the purpose of socio-economic relief, as in extensive and site-specific affordable housing provision, although more recently the efficacy of this approach has been broadly brought into question.

Another strain of territorial reclamation, prevalent in many parts of East Asia, literally involves land-filling on the territorial borders of cities with adjacent water bodies. This practice was already apparent in the building of extensive airport platforms described in the previous chapter. It has also been a part of Singapore's and Hong Kong's development almost from their inceptions as colonial possessions in the 19th century and in a place like Tokyo, since the beginning of the Japanese Meiji Restoration, again in the 19th century. Indeed, over time, something like one quarter of Singapore's land area is due to spoil disposal from dredging and other forms of land-filling ultimately amounting to reclamation from the sea. Although this practice is not inexpensive nor without environmental side effects, economic pressures have favored seaward advancement of coastal property, especially in land-scarce environments like Singapore, or in challenged topographical circumstances like Hong Kong or in the shallow estuarine areas of Incheon, South Korea. Finally, all cases of territorial reclamation discussed here, either as requalification of the type and scale of use or as literal land reclamation, involve significant amounts of what might be termed 'urban district making', or simply extending the city in question. To be sure, accommodation of more particular uses and functional orientations, like entertainment or 24-hour use, might be involved, particularly in an effort to upgrade and competitively amplify the scope of a city's sought-after livable circumstances. Nevertheless, the territories under discussion also tend to embody a quotidian purpose of urban fabric extension involving rebuilding with conspicuous and prevalent uses existing in the city in question. Returning to instances of less-than-successful past examples of urban redevelopment, there is the rather obvious danger of gross over- or under-commitment to perceived societal needs and wants. If anything, this probably argues, *ceteris paribus*, in favor of locally commonplace recipes for territorialization and an under-emphasis of highly specialized spatial and formal circumstances. However, overreaching in such a direction is also not without its dangers, potentially leading to blandness and wasted opportunity.

CHAPTER FIVE

RECLAIMING AND REMAKING TERRITORIES

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View of Marina Bay, Singapore, and Its Environs

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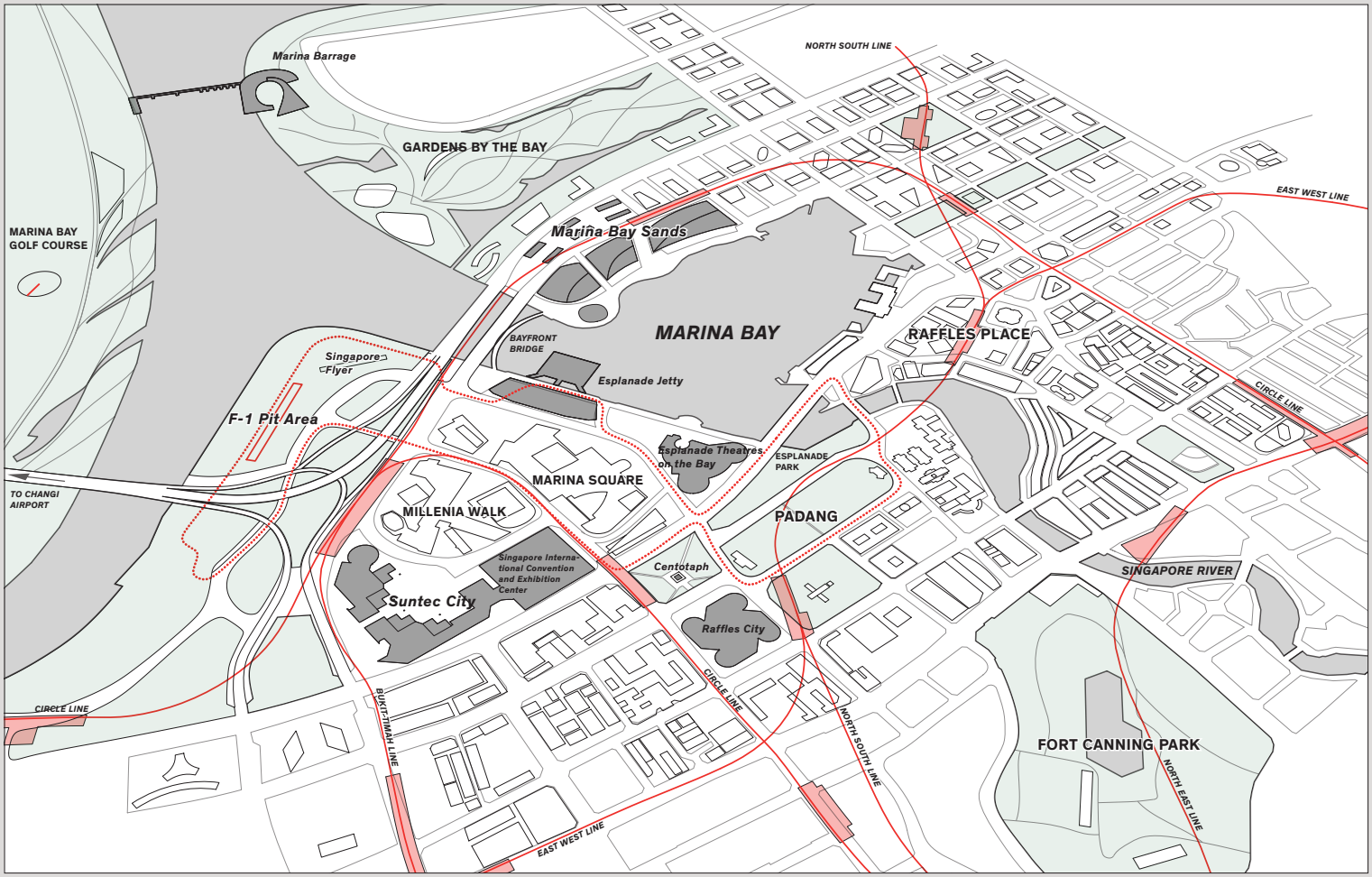
Elements of the Marina Bay Environment, Singapore


Marina Barrage
NORTH SOUTH LINE
GARDENS BY THE BAY
EAST WEST LINE
MARINA BAY GOLF COURSE
Marina Bay Sands
MARINA BAY
BAYFRONT BRIDGE
RAFFLES PLACE
Singapore Flyer
Esplanade Jetty
CIRCLE LINE
F-1 Pit Area
Esplanade Theatres on the Bay
ESPLANADE PARK
TO CHANGI AIRPORT
MARINA SQUARE
MILLENIA WALK
PADANG
Singapore International Convention and Exhibition Center
Centotaph
SINGAPORE RIVER
Suntec City
Raffles City
CIRCLE LINE
BUKIT TIMAH LINE
CIRCLE LINE
NORTH SOUTH LINE
FORT CANNING PARK
NORTH EAST LINE
EAST WEST LINE

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--- 1
Suntec City (Peter Rowe)

--- 2
Convention Center at Suntec City (Peter Rowe)

--- 3
Convention Center Lobby Interior at Suntec City (Peter Rowe)

--- 4
Plan of Suntec City Showing
1. Convention Center,
2. Office Towers,
3. Retail Atrium,
4. Fountain and Plaza,
5. Entertainment Retail and 6. Retail
(Drawn by Jong-Hyun Baek & Pilsoo Maing)

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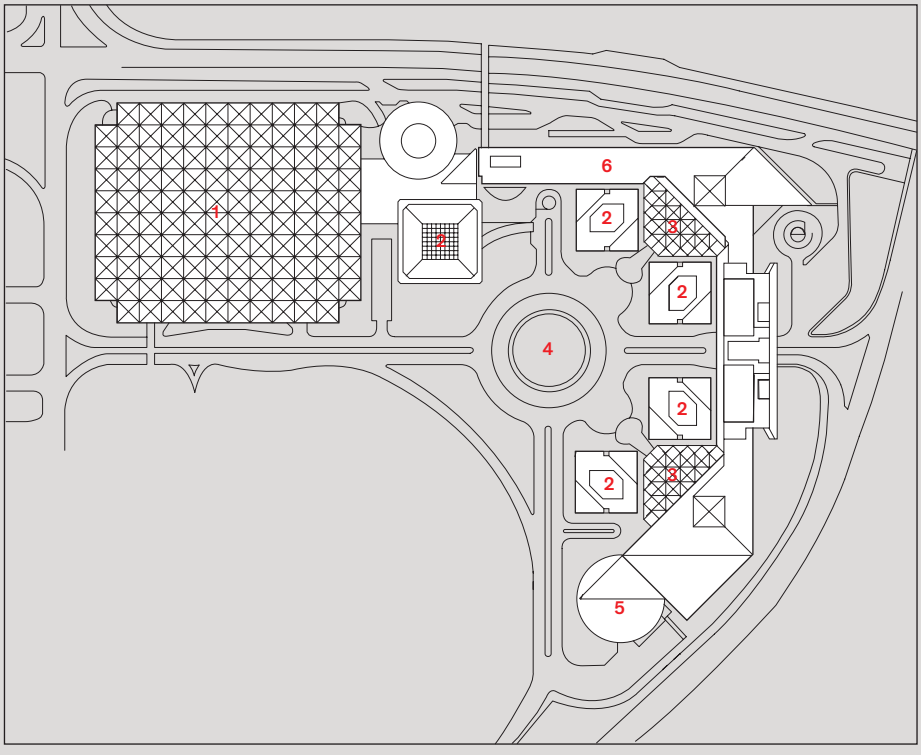

From Sea to Land

One place where this tension is being played out is in Singapore's seaward reclamations along with its recent architecture of entertainment and events. Perhaps not surprisingly, given pressures for development balanced against needs for freshwater and related environmental conservancy, Singapore's land mass has been expanded significantly, especially during the past 30 years or so. Over this time, some 140 square kilometers have been added, amounting, as noted earlier, to around an additional 25 percent of the original land area.[1] One such expansion occurred in the early 1980s and into the 90s, adjacent to the city center around what became Marina Bay, at the mouth of the Singapore River, and the Kallang Basin at the mouth of the river of the same name. All told, three areas of reclaimed land have been made, including Marina North adjacent to Beach Road – the former sea frontage of colonial Singapore and the termination of the grid of streets in Coleman's 1837 plan – Marina East on the seaward side of Kallang Basin, and Marina South on the seaward side of Marina Bay.[2] Of particular interest here are Marina North – the first territory to be developed in the form of convention, hotel, shopping, entertainment and related commercial complexes – and Marina South, only now undergoing development. Also of note is Marina Bay itself, with a marine barrage across its mouth preventing saline intrusion and an active process of osmosis, creating it into a freshwater body for future non-potable use. Marina North is transected by a relatively sparse and curvilinear network of major roadways, freeing up broad sites for development. By contrast, Marina South is slated to have a tighter grid work of streets, leading seaward from existing adjacent development and around the edge of Marina Bay. Also within this 360 hectares of prime land are several undesignated reserve parcels, the spacious Gardens by the Bay – a public park – and a cruise terminal along the seaboard side. The entire enterprise was set in motion by the Singapore Government through its Economic Development Board, among other agencies, and with master planning and further guidance given to property development by the Urban Redevelopment Authority of Singapore. Tasked to take a primary role in defining and managing the island republic's physical environment, the Urban Redevelopment Authority was established in 1974 under the Housing Development Board, one of two original superboards, alongside the Economic Development Board, in Singapore's domestic administration. Impetus to move on the development of the newly reclaimed lands, especially within Marina North, was spurred on when the island state's economy went into recession in 1985 for the first time since the colonial days of 1960, as noted earlier. Further, this downturn was mainly attributed to a loss of competitive edge under rising labor costs, and a lack of diversity in productive economic sectors, as well as an over-commitment of resources to aspects of collective consumption like housing. As indicated in this book's introduction, this is also about the time that Singapore began its wholesale transition from being a 'development state,' with a relatively narrow yet well-orchestrated production orientation, to a 'competitive state,' capitalizing on a broader range of global transactions and supply-side investments to increase its advantage.

One of the first and most enduring landmarks in Marina North is Suntec City. Comprised of four 45-storey office towers, the lower 18-storey Suntec City Tower, some 55,000 square meters of retail and commercial space in a four-storey podium, as well as the Singapore International Convention and Exhibition Center, it is one of the largest commercial developments in Singapore. In fact, when built it was the biggest single private development on the island with a total enclosed area nearing 500,000 square meters of space. Completed in 1997, the concept design resulted from a collaboration between the firms I. M. Pei and Partners, and Tsao and McKown, with the local firm of DP Architects joining Tsao and McKown in design development.[3] The five towers were arranged around a spacious, tree-lined fountain plaza, with a further backdrop to this active public open space provided by the L-shaped podium wrapping around the north, or back side, of the project. Although not identical, the strong sculptural forms of the towers share a common architectural language, including well-proportioned, raised portico entries. Vaguely reminiscent of Rockefeller Center in New York in its formal devices, Suntec City has been successful in creating its own sense of a context in what was a flat, relatively featureless tract.

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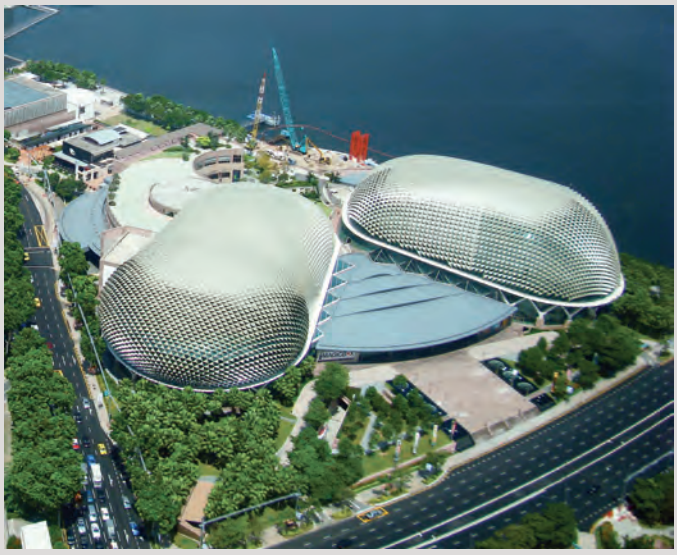

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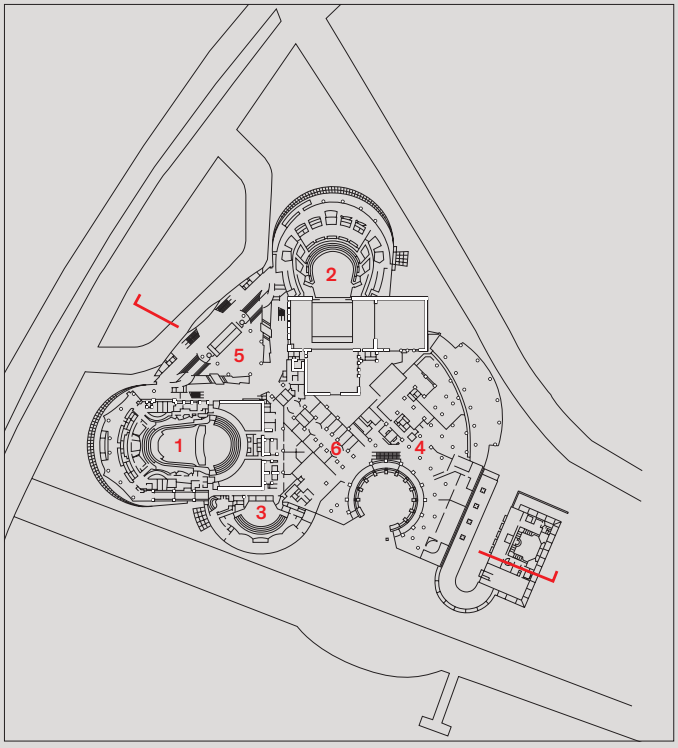

3 ---

--- 1
Esplanade Theaters on the Bay (Peter Rowe)

--- 2
Roofscape at Esplanade Theaters on the Bay (Peter Rowe)

--- 3
Lobby Interior of Esplanade Theaters on the Bay (Peter Rowe)

--- 4
Plan of Esplanade Theaters on the Bay Showing
1. Concert Hall,
2. Theatre,
3. Recital Studio,
4. Food, Beverage and Retail,
5. Concourse,
6. Theatre Street
(Drawn by Jong-Hyun Baek & Pilsoo Maing)

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Section of Esplanade Theaters on the Bay (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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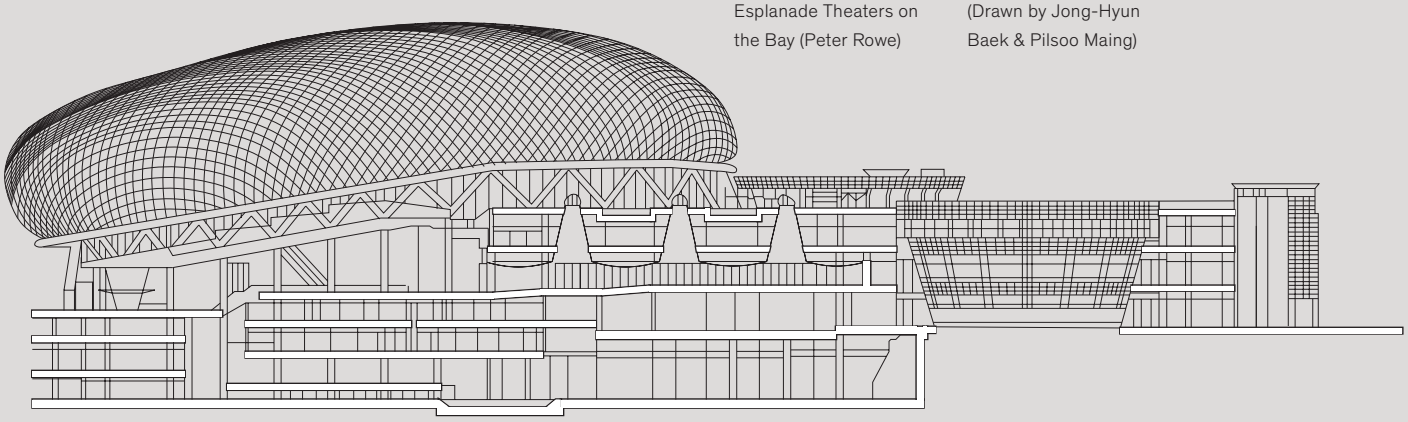

Arcaded enjoyment of water, tree canopies and shade are offered by internal pathways reminiscent of Singapore's traditional 5-foot ways running along the street edges of buildings. The idea of Suntec, which allegedly derives from the Chinese characters for *xin da*, meaning 'new achievement,' originated with the Singaporean government. Essentially, it was conceived of as an initiative to encourage a group of Hong Kong investors to invest in Singapore. In fact, the 11.7-hectare property was offered for bidding in 1988 by the Urban Redevelopment Authority and awarded to the City Development Company, twelve shareholders of which were private Hong Kong investors. Given the depressed economic circumstances at the time, investment at such a scale, with construction costs totaling USD 1.7 billion, was courageous, although prescient from today's vantage point.[4]

Integrated into the commercial complex, through lower-level links of retail space, stands the Convention and Exhibition Center. Adroitly organized around vertically stacked halls, theaters and break-out rooms, the compact volume of the facility provides for ready and straight-forward access to various conference or convention venues. These qualities are further supported by an expansive glazed area for circulation, replete with multiple escalators, running full height along the streetside of the center, facilitating access to buses and para-transit. The multi-pyramidal roof, formed from a lattice of triangular truss sections, spans 170 meters by 69 meters, allowing for internal flexibility in arrangement of convention venues, and is one of the largest spans of its kind in the world. The relative simplicity and warm wooden paneling of the meeting halls also adds positively to the experience of the Center and provides an unusual degree of both intimacy and dignity to the proceedings that go on there. Programmatically, the Convention and Exhibition Center was a stipulation by the Singaporean Government in the absence of a large-scale internationally-oriented facility and in order to benefit the surrounding businesses.[5] It also brought a specific focus to the newly developed area almost instantaneously, a recipe the Urban Redevelopment Authority and others appear to have been following elsewhere in both requalifying and redeveloping districts on the island more distinctively.

With Suntec City the situational logic of district making changed or was sharpened in other ways as well. Around the onset of the project, Singapore abounded with relatively claustrophobic, seamless shopping centers and office towers with, as one commentator put it, "a streetscape dictated more by sanitized interiors of shopping arcades than by urban landmarks and public open spaces."[6] By contrast, Suntec fully liberated the tower building ensemble through organization around an outdoor monumental central plaza and fountain, and through external cutaway bases to the towers and broadly skylit retail areas. On the other hand, a quotidian arrangement of building volumes and public spaces was also made with the straightforward street walls along Raffles Boulevard and the Nicoll highway, and by setting the Convention and Exhibition Center on the edge of the site. In sum, these arrangements made Suntec City appear as part of the existing downtown and not as a separate enclave or enclosure. Shortly afterward, the Millennia Singapore project that was completed one year later in 1998, brought still more instant context to the land reclamation site with an additional gross floor area of some 293,000 square meters. Comprised of four towers, dominated by the pyramidally capped Millennia Tower at 41 storeys, the complex is a mix of hotels, commercial space, and a retail galleria.[7] Another joint venture, between the firms of Kevin Roche, John Burgee and Philip Johnson, again with DP Architects, the somewhat overscaled architecture and post-modern expressive forms nowadays seem out of date. Podium-level pedestrian circulation through the complex also comes across, in places, as being overly contorted and theatrical.

Along the water's edge of Marina Bay, although tied in by location to the heart of the civic and cultural district of Singapore including at Marina North, stands the Esplanade - Theatres on the Bay, by Michael Wilford and Partners. Completed in 2002, it ranks among the larger performing arts facilities in the world. Occupying a prominent 6-hectare site, at the corner of Esplanade Drive and Raffles Road, the complex consists of a 1,800-seat concert hall, a 1,900-seat lyric theater, a 200-seat black box theater, a 200-seat recital studio, several outdoor performance spaces, and commercial augmentation via the three-storey Esplanade Mall.[8] Most striking about the

complex is the vast, complex, curvilinear and organic-appearing form of its overarching glass shells, replete with a mesh of sunshading devices of varying geometry – affectionately called locally, the 'durian,' after the fruit. Beneath these layers, the two large theaters effectively appear as buildings inside the large covered volumes, a little like at Beijing's National Theatre. The interplay of light and shadow, especially within the foyer areas and gained from the roof structure, can vary from dazzling to dappled, giving one the sensation of being under a large tree and thereby extending the sunshading function well into the metaphorical realm emblematic of dwelling in the tropics. The roofscape of the complex is also generously handled as a respite from the bustle below and a vantage point from which to view the broader context of Marina Bay. Landscaped open spaces are arranged, deftly taking into account appropriate sight lines and offering, within them, moments of both community and intimacy. A third large theater is also planned for the complex, to be further knitted in to the ground-level pedestrian experience of the water's edge. In effect the resulting Waterfront Promenade recovers a hallmark of the much earlier colonial termination of the city with the seashore along Beach Road, mentioned earlier.

Marina South is largely a work in progress. Prominent among recent projects underway is the Marina Bay Sands complex, by Moshe Safdie. Opened in 2010, the complex features three 50-storey hotel towers, housing some 2,600 luxury accommodations and forming upward-swooping pedestals for a sky park 220 meters above ground spanning and cantilevering across the top, on the northern side, by some 50 meters.[9] A little over one hectare in area, this sky park hosts a variety of outdoor amenities, including jogging paths, swimming pools, gardens and spas, as well as offering a panoramic view towards both the central city and to the sea. The Waterfront Promenade, slated to be continuous around the Bay and forming something of a seamless lobby for the hotel, is integrated into the complex via a multi-level retail arcade made up of three shell-like structures, combining civic spaces, shopping and both indoor and outdoor public spaces. More independently, the sculptural form of an Arts and Sciences Museum, resembling a grand lotus flower, is located on the promontory, where Marina Bay moves out towards the sea. The use, almost throughout, of enveloping and fluid shapes marks something of a transition by Safdie from Euclidean to curved Riemannian forms. It also marks a continuation of the presence of underlying mathematical-geometrical matrices.[10] Unlike other instances, as with so-called 'blobs,' these matrices appear to be sources of systematic and conceptual inspiration, rather than matters of style. Still, a distinctly organic-mathematical approach can be seen at work.

All told, the integration of the Waterfront Promenade, the shopping arcade and other related facilities will incorporate some 600,000 square meters of space with about 100,000 square meters of leading-edge retail space, acclaimed restaurants, and a convention center for around 45,000 participants and two 2,000-seat theaters. The further inclusion of a casino into what has otherwise been described as an 'integrated resort' with strong governmental backing, is something of a departure programmatically, from Singapore's earlier straightlaced attitude, although not without considerable debate. A driving force behind the integrated resort, is the Las Vegas Sands Corporation which invested around USD 5.5 billion in the project.[11] No less a partner, however, was the Singaporean government which sees the resort as a key element in raising the country's tourist competitiveness and ensuring its long-term success. As one senior official put it, integrated resorts will help move Singapore towards becoming "a sophisticated, cosmopolitan city where global business will want to be based, where an expatriate workforce will want to be posted and where foreign talent will want to migrate."[12] Also within the official logic they will also make local additions to recreational, retail and entertainment offerings. Indeed, catering to the business traveler and meetings, incentives, conventions and exhibitions trade (BTMICE), Marina Sands stands to attract some 600,000 visitors during its first years of operation. Considering that BTMICE visitors now comprise about 25 percent of the current total of 14 million or so annual visitors, this infusion will amount to a significant 17 percent rise.[13]

Linking the promontory next to the Marina Sands resort back across the mouth of Marina Bay towards the Esplanade Theater complex is an unusual double-helix pedestrian bridge designed by the Cox Group in conjunction with Arup engineers.

Recently completed in 2009, the 280-meter long span is the first of its kind in the world, with an obvious reference to the structure of DNA and, by extension, to a symbol of 'life' and its continuity.[14] Further fun has also been overlaid on the Marina Bay district with the Singapore Flyer – a giant Ferris wheel – rising some 170 meters above the ground. Designed by Kisho Kurokawa with Arup and Partners as well as the local DP Architects, it offers extraordinary observation of broad segments of the city and especially back towards the central business district. The spectacle of night-time Formula One car racing, has also recently been introduced winding in a tortuous loop along city streets. This temporary venue, first made public to rapt audiences around the world in 2008, was also the site of technological innovation and prowess, in the form of special night-lighting installations.

The regular gridwork of streets organizing the city blocks in the southern portion of Marina South has been broken and punctuated by several conspicuous and shapely high-rise buildings, well in keeping with an accentuated yet quotidian approach to district making mentioned earlier. One such project is Sail @ Marina Bay, slated to be the tallest residential building in Singapore and the tenth tallest in the world. At 70 storeys and 254 meters in height, the tallest of two towers – the other being 63 storeys – will house 119,000 square meters of gross floor area. Taken together the two towers will comprise 1,111 standard apartment units, plus special penthouses and other accommodations. Shaped like the sails of yachts, the towers will rest on a sculptured base allowing water to run through the site at the edge of Marina Bay.[15] Unlike other parts of East Asia that have moved over towards the programmatic structuring of all towers into mixed components usually made up of retail, commercial or similar bases, commercial offices and then hotels or apartments, or both, often with observation decks, restaurants and similar facilities at the very top, uses of towers in Singapore are invariably more homogenous. This reflects preferred conditions of separable access to residential, as distinct from commercial buildings, issues of parking and matters of security. In these regards, Marina South is no exception, with a planned mixing of uses largely occurring between rather than within building blocks.

Out towards the sea an extensive public open space is being created by the National Parks Board of Singapore. Adjacent to the Marina Sands complex, the 54-hectare Gardens by the Bay is nearing completion as the first of three phases of a broader 101-hectare project mentioned earlier. Planned by a team led by Grant Associates following an international competition, Gardens by the Bay, among other themes, embraces interactive displays of botanical products that have been important for Singapore, as well as those that play a role in the daily lives of people in the tropics of Southeast Asia. Prominent features of the scheme are also the cluster of 'supertrees' and the conservatory complex along the shoreline. Avatar-like, the 'supertrees' are fantastic vertical gardens soaring between 25 and 50 meters in height with some interconnected by walkways. In addition to providing shade, lighting and having service elements and an exclusive bar, these structures incorporate rainwater and photovoltaic collectors and serve as environmentally friendly engines for the conservatories. Essentially a group of large green houses on Marina Bay, the conservatory complex consists of 'cool dry' and 'cool moist' installations showcasing plants from various climatic zones as well as forming flexible venues for events and exhibitions. Designed as a relatively self-contained ecosystem of natural and artificial elements, the project further underlines the theme of 'tropical excellence' and Singapore as a garden city.[16]

Another site of seaward reclamations and an architecture of entertainment and events in Singapore extends to Sentosa Island and its adjacent mainland environs. Close to the HarbourFront Mass Rapid Train Station and the bridge causeway to Sentosa Island is VivoCity – a large shopping mall by Toyo Ito opened in 2006. With a gross floor area around 140,000 square meters, this otherwise compact multi-storey structure houses some 350 entertainment, food-beverage, and retail outlets. Probably most distinguished by its large, curved and sculptural exterior cladding, the swirling lines of the interior's major circulation and gathering spaces also mark a departure from standard mall design. In addition, this fluid sensibility extends to the broad expanse of the complex's roof structure and outdoor open spaces – perhaps the most successful and public-spirited aspect of the scheme. There, a variety of

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---1
Marina Bay Sands
(Har Ye Kan)

--- 2
Towers at Marina Bay
Sands (Har Ye Kan)

--- 3
Skypark at Marina Bay
Sands (Har Ye Kan)

--- 4
Shopping Atrium at
Marina Bay Sands
(Har Ye Kan)

--- 5
Double-Helix Pedestrian
Bridge at Marina Bay
(Har Ye Kan)

--- 4

5 ---

spaces incorporating water elements, public art and theatrical night lighting, cohere into a playful and delightfully whacky environment, inviting children to play, adults to wander or relax and for all to have an unusual vantage point to view Sentosa beyond. A 1,000-seat open-air amphitheatre, against a backdrop of the nearby hills, also provides a venue for fashion shows, international bazaars and local festivals.[17]

Across the strait of water, separating VivoCity from Sentosa Island lies the site of the second 'integrated resort' promoted by the government, including a 15,000-square meter casino, six hotels, a theme park by Universal Studios, a convention and conference center, a maritime museum and marine animal park, as well as extensive retail and related commercial space. Launched as a project in 2006 and largely to be completed in 2010, the master planner and design architect for this massive complex is the firm of Michael Graves and Associates. To date, images of the project can only be described as formally exuberant and even phantasmagorical, portending a Las Vegas-like atmosphere, along with many of its material trappings. Sponsored by Genting International, the USD 4.7-billion project named Resorts World Sentosa is projected to receive some 15 million visitors in 2010. Then, by 2015, the resort is projected to account for around 50 percent of the target set by Singapore's Tourism Board for revenues at USD 9.81 billion, the largest single contribution to the island republic's tourist receipts. In fact, taken together Marina Bay Sands and Sentosa are expected to add on the order of 35,000 jobs to the nation's workforce and contribute 1.7 percent to its gross domestic product in 2015.[18] Whether a complete future transition is made in the country's image from a nanny state to a racy resort city remains to be seen, as is the desirability of such a transition. In the meantime, however, both resorts appear to have shrugged off the adverse effect of tough rules against certain gambling practices like junketing.

Moving away from Singapore, another recent example of land reclamation from the sea in support of broad district making is the Songdo free zone in Incheon, South Korea, also billed as the Songdo International Redevelopment. Originating in a national government policy that went into effect in the second half of 2003, the idea of creating 'free economic zones' like the resort zones of Singapore, was to reposition South Korea more competitively in the world market. In fact, three of the five 'free economic zones' initially designated were in the metropolitan boundaries of Incheon, an urban area of some 2.7 million inhabitants located about 60 kilometers west of Seoul on the coast next to the Yellow Sea. The other two were Yeongjong, the site of the international airport discussed briefly in the last chapter, and Cheongna, a sports and leisure complex to the north of the present urban area of Incheon. Given Incheon's relatively vacant low-lying topography and shallow, tidally influenced coast line, all three of the sites involved at least some land reclamation, including almost the entirety of the Songdo site to the south of Incheon proper. Designation as a 'free enterprise zone' carried with it favorable conditions for development with regard to funding, regulation and infrastructural support. The business model largely in effect at Songdo involved heavy reliance on private finance. For instance, the bridge linking the land reclamation to the international airport was developed as a private concession. Also, while the metropolitan government paid for and constructed the land base, which was relatively straightforward and inexpensive given the topography and tides, it then reaped the benefit of subsequent property transactions.[19]

Overall, the project was developed by Gale International in one of the first instances in South Korea of a foreign developer alongside of the local POSCO E&C.[20] Construction began in 2002, somewhat ahead of the 'free economic zone' designation and is scheduled to be completed, at least according to the procedures in place, by 2015. Initial plans were proposed by Rem Koolhaas and OMA, followed by a more definitive scheme by Kohn Pedersen Fox. While the area earmarked for Songdo's eventual development is extensive, the initial area of the more or less rectangular landfill site used for the Songdo International Development is around 650 hectares, located about 11 kilometers from the center of Incheon. The functional program of use calls for 10 million square meters of mixed use, including around 50 percent in commercial space – the primary component in line with Songdo's emphasis on knowledge industries – 35 percent in residential space, 10 percent in retail space and a more or less equal amount in public space,

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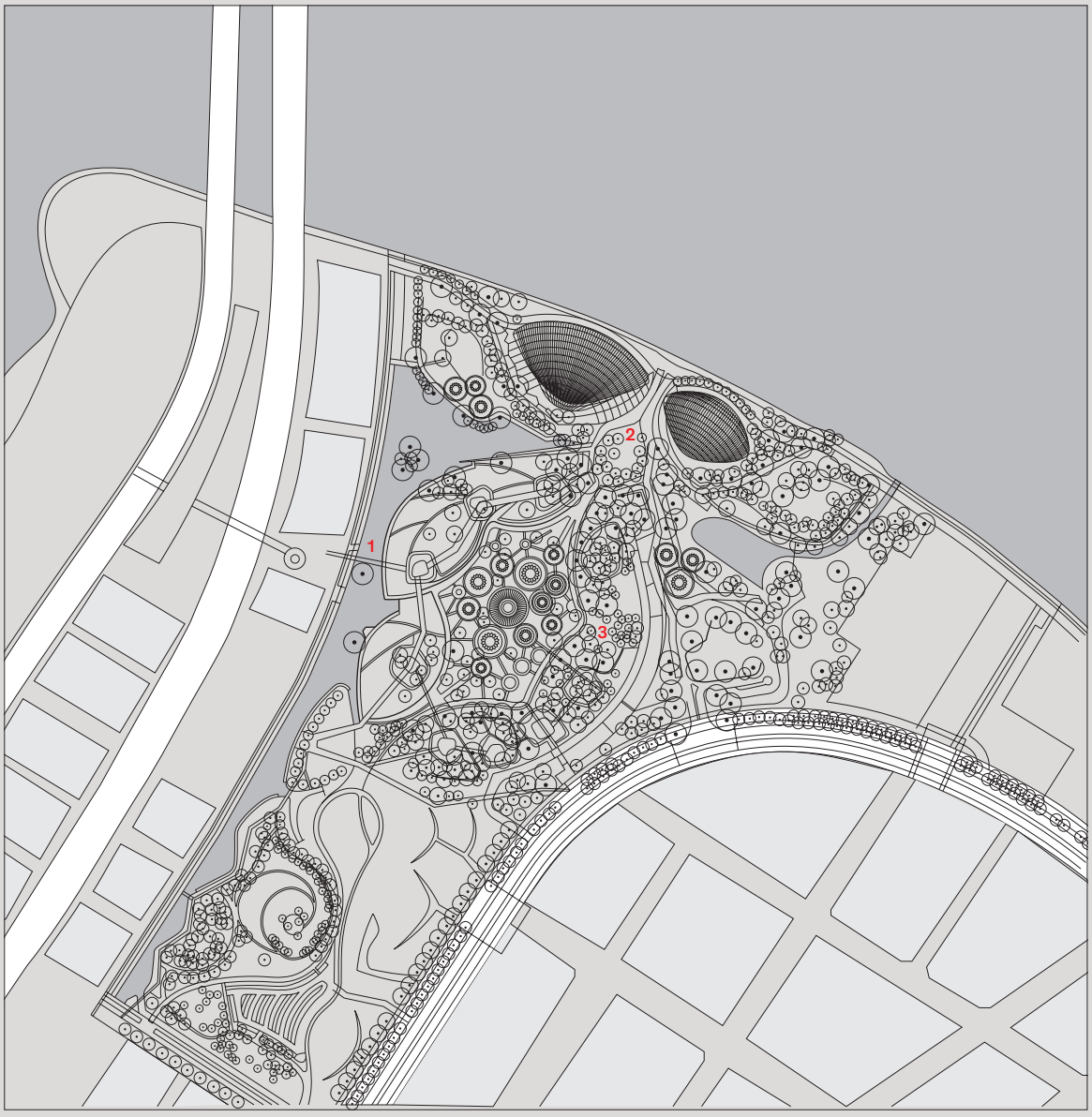

--- 1
VivoCity (Har Ye Kan)

--- 2
Interior at VivoCity
(Har Ye Kan)

--- 3
Resorts World
Sentosa (Har Ye Kan)

--- 4
Bridge at Incheon
(Courtesy of Incheon
Municipality)

--- 5
Rendered Segment
of Songdo
(Courtesy of KPF)

--- 6
Gardens by the Bay
Showing
1. Entrance and
Underpass,
2. Conservatory
Green Houses,
3. 'Supertrees'
(Drawn by Jong-Hyun
Baek & Pilsoo Maing)

including some institutions, and 5 percent in hospitality space. A central park around 43 hectares in area is to be located at the center of the development, surrounded largely by a gridwork of moderately sized blocks. Some 22,500 housing units will be constructed, primarily in the form of mid to high-rise apartment units, and with a residential population eventually on the order of 100,000 inhabitants.[21] No doubt the non-residential bias of development will also attract commuters from outside, within the broader Incheon and Seoul metropolitan areas. First-phase development included as much as 10,000 apartment units, five office towers, a convention center designed by Kohn Pedersen Fox and a large retail mall. To date, around 100 buildings have been completed or are under construction. In addition to these components, a substantial build-up of educational institutions is anticipated, including the relocation of the Incheon University campus and the building of a satellite campus for Yonsei University scheduled to be well linked to both Incheon and Seoul, as well as to their hinterlands.[22] At present, the most conspicuous element of public transportation infrastructure is the Incheon Bridge noted earlier, one of the world's longest fixed link sea crossings, connecting Songdo directly to the international airport over a distance of 12.3 kilometers. Within this length of crossing 8.4 kilometers are in the form of low viaducts and 1.8 kilometers in approach bridges, with a 300-meter cable-stayed navigation span towards the center. Owned by KODA Development, a joint venture between UK enterprises and the City of Incheon, design and construction was also a joint venture among Halcrow and Arup, with local firms of Dasan and Samsung Construction, among others. Within the relatively flat topography, the gently curving sweep of the sea crossing forms an arresting visual counterpart.[23]

Considerably older are urban waterfront reclamations and redevelopments in Tokyo and Yokohama, Japan. Aside from early seaward expansions of the lowland Shitamachi area of Tokyo in the form of islands dating back at least to the Meiji Restoration, there have been several more comprehensive proposals. The most famous of these is undoubtedly the Tokyo Bay Plan of 1960 by Kenzo Tange, boldly proposing extensions of the central area of Tokyo across the adjacent bay in the form of linear infrastructural elements and buildings on platforms and relatively small islands. Grouped with other Metabolist urban proposals, Tange's plan was also largely a critique of the earlier 1956 First National Capital Region Development Plan with its insistence on territorial equilibrium for Tokyo around dispersed and decentralized concentrations of activity. Even bolder, at least in geographic scope, was Kisho Kurokawa's 1987 proposal of the New Tokyo Plan of 2025, stretching from Osaka to Tokyo along the Tōkaidō Corridor, and part of which envisaged construction of a huge new island in Tokyo Bay to be laid out in the form of a uniform roadway grid and intersecting canals.[24] This, in turn, was something of a response to the Amano Proposal, a piece of national policy named after its author – Masanori Amano of the then ruling Liberal Democratic Party – aimed at stimulating domestic economic demand and lowering rising property speculation through local commercial construction projects in and near the center of Tokyo. At much the same time, the Waterfront Subcenter City Development Promotion Plan was formulated, following Mayor Suzuki's announcement of Rainbow Town (Rinkai Fuku-Toshin) in 1985.[25] Further elaboration of this development framework in 1988 by the Tokyo Metropolitan Government – the principal landowner of island properties in Tokyo Bay – resulted in actionable plans for the waterfront covering some 448 hectares of land and calling for the housing of 60,000 residents and the accommodation of 115,000 workers, with the Daiba District, incorporating Rainbow Town, being designated as a leisure and entertainment area, as well as communications zone in the city. Home to Tange's futuristic Fuji Television Building, among other larger-scale projects, full development of Rainbow Town has been thwarted by the drastic economic downturn following the bursting of the real-estate and related bubbles in the early 1990s. In addition, the strong emphasis on an infrastructure of large roads and broad transit service, comingled with large tracts of land and little connective urban tissue, led to a spatial result that, in the words of one observer, was "abstract, characterless and often desolate."[26] Certainly, by 1997 the initial plan of accommodations was revised downwards to a working population of 70,000 people and a residential population of 42,000 inhabitants in some 14,000 dwelling units, of which only 2,105 had been completed.[27]

Waterfront development in nearby Yokohama some 40 kilometers to the south of Tokyo embraced a combination of land reclamation and land readjustment, together with port redevelopment. It also fared somewhat better than in Tokyo. Although the idea of constructing a contemporary waterfront city dates as far back as 1963, the means of achieving it began in earnest in 1970 through negotiations with Mitsubishi – one of Japan's large corporate conglomerates or *zaibatsu* – to relocate their shipyards, thus freeing up property for urban redevelopment. These negotiations were successfully concluded in 1981 leading to the establishment of Minato Mirai 21 in 1983, translated as "the future seaport of the 21st century."[28] One year later a public-private corporation of the same name was created and the redevelopment project launched across a site of some 35 hectares in area. Referred to in Japan as a 'third sector corporation', this development partnership included the City of Yokohama, Kanagawa Prefecture, Japan Rail, as well as local land owners and businesses. Initially, it was formed to simply create a waterfront environment for recreation, conferences, port administrative services and a certain independence on these functions from Tokyo.

Over time the project became more ambitious in scope, extending to the capture of direct foreign investment and global interaction. Like Rainbow Town in Tokyo, the basic rules for urban redevelopment were established in 1988, together with agreement among the participants on necessary themes and project components. Since then, probably the most significant, if not notorious, contribution has been the Landmark Tower at 70 storeys, rising some 296 meters above the ground and having around 392,000 square meters of floor area, including offices, a shopping mall, a sports club, multi-purpose halls, restaurants and an observation deck on the 69th floor. Designed by the Stubbins Group, it is the tallest building, so far, in Japan, with blocky columnar corner structures infilled with broad yet tapering floor plates. Somewhat more elegant is the sail-shaped profile of the Intercontinental Hotel of 1991, rising 31 storeys and having 559 rooms and 41 suites. Indeed, it and the adjacent Queen's Square development, together with Rinko Park, became something of a symbol of contemporary waterfront revitalization in the 1990s. Programmatically, Queen's Square is a composite business complex including a variety of commercial and hotel sources. Rinko Park is given over almost exclusively to recreation pursuits, although it is edged by a well-constructed, stone-faced and paved esplanade.[29]

Besides Singapore and coastal urban areas in Japan, Hong Kong can also lay claim to a long history of land reclamation from the sea. In fact, a common quip there is that if circumstances continue you will be able to walk from Central on Hong Kong Island to Kowloon over what was once Hong Kong harbor. Less frivolously, recent reclamation projects include making way for the terminal stations and surrounding developments of the Airport Core Program discussed in the last chapter, along with emerging land reserves for an extensive cultural and commercial center in Kowloon West. There is also the Cyberport development by Arquitectonica on Hong Kong Island, including some reclamation, along with cutting and filling associated with the hilly topography.[30] However, this was more of a special-built project, than an opportunity for district-making in the more commonplace sense being discussed here. Judging from the failed competitions among proposals for the West Kowloon, the same might also be said for projects on that site.

Accommodating Scalar Necessities

A characteristic common to many East Asian Cities is a relatively fine-grained scale to inner-city and neighboring urban development. It is usually horizontally dense, involves a variety of uses and often takes place on parcels of land with small footprints. Rising property value results in upward extensions of buildings, although frequently also discourages easy transfer of private property among a myriad of local owners each seeking high profit margins. So-called 'pencil buildings' emerge with conspicuously thin slenderness ratios alongside of a hodge-podge of other lower structures. Streets are generally narrower and are quite often remnants from prior eras of traditional forms of settlement. There is undoubtedly a sense of spontaneity and charm about these environments and they usually match well any preponderance of small business enterprises. In today's commercial and global circumstances, however, such environments are frequently inefficient and increasingly obsolete. The necessity of more floor space, wider

floor plates, better access, greater building volumes and more special-built facilities, calls for large land parcels and more extensive development tracts. Contemporary programming also often calls for adjustments to building, zoning and similar codes. In short, re-aggregation and requalification of what is in place, by way of urban fabric and existing property dispositions, is required. Otherwise, the city in question runs the risk of failing to be competitive and failing to fully capitalize on its local assets and advantages.

Tokyo and other parts of urban Japan began to seriously face these necessities for being more competitive during the upswing of the 'bubble economy' at least from the mid-to-late 1980s, if not earlier. At this time it became apparent to decision makers in both the public and private sectors that more substantial scale and scope was required in contemporary inner-city construction. The influential Nomura Research Institute, for instance, estimated a need for some twenty to fifty more business skyscrapers to service Tokyo as a world financial center.[31] Prominent developers like the Mori Construction Company, were beginning to make concerted efforts to aggregate property in order to build at a bigger and more efficient scale. Public-sector authorities like The Tokyo Metropolitan Government, also began eyeing opportunities among their extensive land holdings to promote larger-scale projects. Indeed, many of the efforts to productively harness land reclamation and waterfront redevelopment, discussed earlier, stem from this period. From many points of view, these strategies also seemed less prone to difficulty, especially in property aggregation and requalification, and therefore less prone to failure. Then suddenly with the bursting of the 'bubble economy' in the early 1990s that had built up during the preceding years, much of the wherewithal to shift Tokyo and other Japanese cities into a more efficient and globally receptive stance fell away. If anything, though, the resulting crisis also highlighted the pressing need for Tokyo and urban Japan to be more competitive, bringing with it broader agreement that led to a number of large-scale projects by the turn into the new millennium.

Among opinion leaders, there was mounting concern about Tokyo's declining international competitiveness, particularly behind Singapore and Hong Kong in East Asia while Shanghai had only just begun to emerge at the time. As noted in the first chapter, new listings on the stock exchange, for instance, which were on a par with New York in 1992 were then one third as many. The number of international conferences hosted in Tokyo had slipped 30 percent since 1993 and were half as many as those hosted in Singapore. The amount of park space and other amenities was small in comparison to many other places and, notably, the quality and scale of both office and residential space was below that in other major international cities. Certainly by the later 1990s, government advisory bodies like the Strategic Economic Council were beginning to call for action and by 2000, Prime Minister Koizumi's office, although not prone to meddle in the Tokyo metropolitan area's affairs, designated special zones within the city where the normal rules of development could be suspended in favor of larger, more efficient projects.[32] Among the kinds of projects that rather quickly transpired, some like Shiodome, took place on brownfield or industrial sites, held in large ownerships. Others, such as Roppongi Hills, involved painstaking aggregation of multiple property ownerships. Still others, like Tokyo Midtown, involved private acquisition of large property holdings divested by government authorities. Finally, further projects like at Marunouchi and Tokyo Station, involved piecemeal modification and redevelopment of existing property holdings. All told, at least four strategies could be seen at work, in addition to the waterfront and land-reclamation projects described earlier.

Shiodome is both a place and a project. Located in Minato-ku adjacent to Shinbashi and Ginza near Tokyo Bay, it was formerly a railway terminal and siding, as well as the site of Shinbashi Station, the Tokyo terminus of the first railway line in Japan from 1872 to 1914 before it was moved to Tokyo Station. Originally, Shiodome, which simply means 'keeping out the tide' was land filled by the Shogun Tokugawa Ieyasu in the 17th century to make way for *daimyō* or aristocratic estates. In contemporary times, the station and rail area was closed in 1987, effectively abandoning 22 hectares of land. At much the same time the Japan National Rail (JNR) became privatized – later renamed Japan Rail (JR) – and the Shiodome land parcel was transferred to the JNR Settlement Corporation in 1988, and earmarked for sale to discharge some of JNR's financial liabilities. From the mid-1980s until around 1995, the Tokyo

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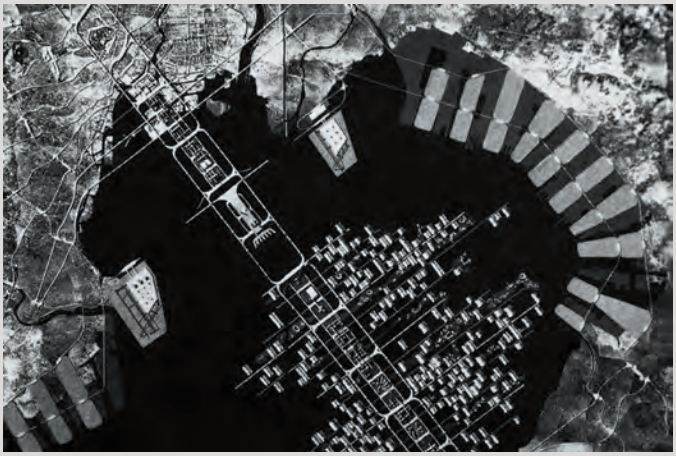

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--- 1
Tokyo Bay Plan of 1960 (Courtesy of Tange Archive)

--- 2
The Landmark Tower and Minato Mirai 21 (Peter Rowe)

--- 3
Tower at Shiodome (Livio Sacchi)

--- 4
Elevated Walkway at Shiodome (Peter Rowe)

--- 5
Tokyo Station City (Mitsui Fudosan)

--- 6
Tokyo Station City Interior (Peter Rowe)

Metropolitan Government reviewed proposals for the site before settling on the approval of a redevelopment plan.[33] It was not until sometime later in 2002 and 2003, however, when Tokyo began to revive from the collapse of the 'economic bubble,' that construction began to materialize. Today the complex is comprised of some thirteen skyscrapers, accommodating among other uses a number of corporate headquarters, as well as a southern extension which includes three tall residential apartment towers and a small park. The contemporary overall character of the redevelopment is made even more striking through the immediate adjacency of Hama Rikyu Park to the seaward side of the site. Originally a rather typical *daimyō* garden replete with a tidal pond and wild duck hunting preserves, Hama Rikyu acquired its name meaning 'detached palace on the coast' after the onset of the Meiji Restoration during the 19th century, when it became a preserve of the imperial family. Today it is part of many tourists' itineraries and is classified as a special scenic site under the Cultural Properties Protection Law of Japan.[34]

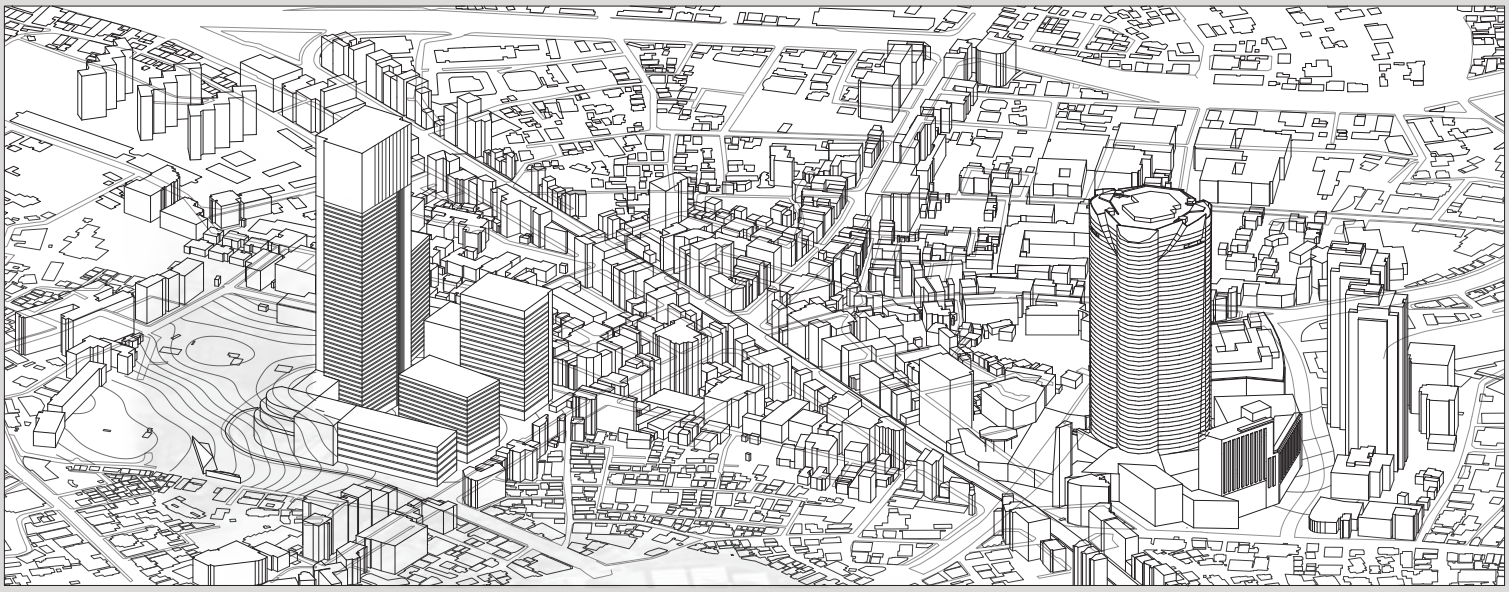
Architecturally, the redevelopment at Shiodome is divided among spacious urban blocks, each with one or more tall, glassy high-rise towers. Uses primarily consist of offices, often with a media orientation, consistent with other nearby functions and agglomerations. Also present are hotels, retail commercial complexes and a reconstruction of the original Shinbashi Station now used as an exhibition space. Prominent among the high-rise towers is the Dentsu Headquarters building of 2002 by Jean Nouvel, rising some 213 meters above grade and with an adjacent retail and entertainment facility by the Jerde Partnership. Also, opposite on the landward side of the complex, is the Shiodome City Center by Kevin Roche John Dinkeloo and Associates, with a substantial total floor area of some 218,000 square meters, rising to a height of 216 meters. This building plays host to the corporate headquarters of All Nippon Airways, as well as to numerous shops and restaurants. The most prominent media presence, apart from the Dentsu advertising company, is the Nippon Television Tower, at some 198 meters in height, by the Richard Rogers Partnership in collaboration with Mitsubishi Jisho Sekkei, housing a television station, associated offices and shops. Located nearby is the Shiodome Media Tower by Kajima Design, accommodating offices, a hotel and related shopping. The Matsushita Electrical Works by Nikken Sekkei and the redo of the old railway station by the same firm, programmatically add a connection with past uses of the site.[35] Although the ensemble of tall towers is certainly striking in its own right, especially with sizeable floor plates in a context of rather more narrow and lower buildings, circulation in and around the site is even more notable. As in other parts of Tokyo, like Shibuya and Shinjuku, pedestrians circulate primarily via above-grade walkways with intermittent below-grade passages and even plazas. Roof gardens on lower structures are also immediately accessible as are transit stops – the Yurikamome line runs right through the site. This seemingly *ad hoc* array of above and below-grade links and structures lends an almost science-fictional quality to the redevelopment which is not without its somewhat dystopic and alienating moments. Certainly an appreciable human scale often appears lacking amidst all the mechanistic circulatory contrivances and pathways.

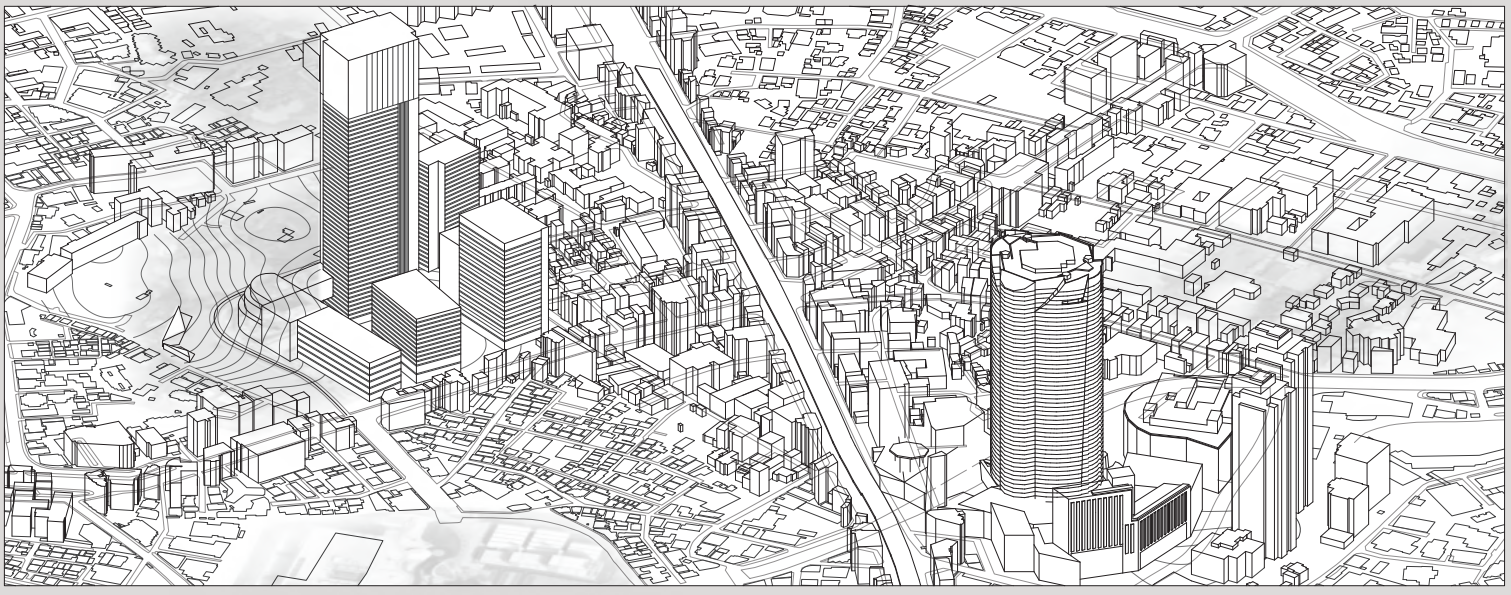
Another project that was hatched before Japan's economic meltdown was Yebisu Garden Place dating from 1985, although with construction taking place between 1991 and 1994 during the beginning of the economic slump. Owned by a branch of the Sapporo Beer Company the complex was built on a former industrial brewery site which was converted into mixed use. Connected to Ebisu Station by a horizontal travelator, the development takes its name from the community which was founded in 1928 and grew up around the original Japan Beer Brewery Company facilities. Indeed, the station itself was built by the beer company in 1901 to facilitate the distribution of its products. This *modus operandi* was not at all foreign to Tokyo at the time, when real-estate and other entrepreneurs built railways and related facilities in order to improve the locational advantages of their property holdings and operations. In the meantime the company was reorganized and renamed as Sapporo Brewers Ltd., before moving beer production out to Chiba in 1988 and leaving the site ripe for redevelopment. Today the mixed-use complex comprises 394,000 square meters of built space on 10.3 hectares of land containing a 40-storey office tower, a 24-storey hotel, specialty retail

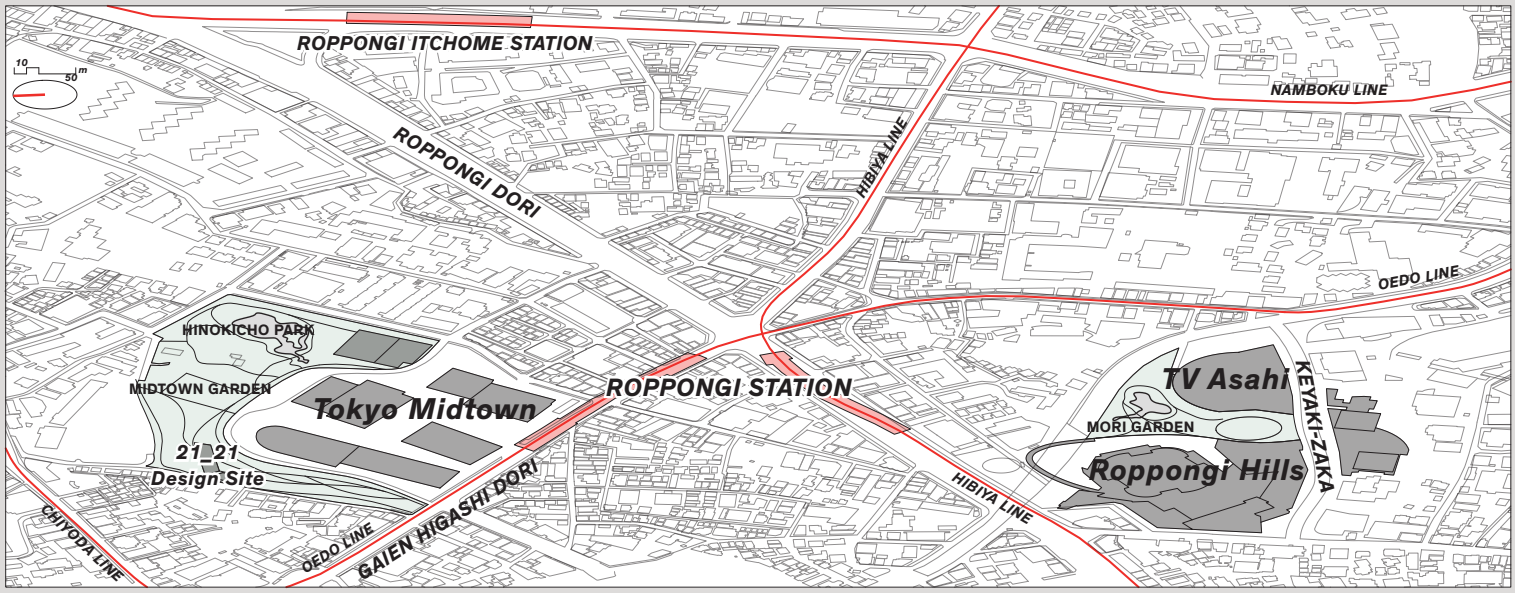
Next Page:

--- 1
Three Views of Tokyo
Midtown and Roppongi
Hills

--- 2
Tokyo Midtown and
Roppongi Hills in Context



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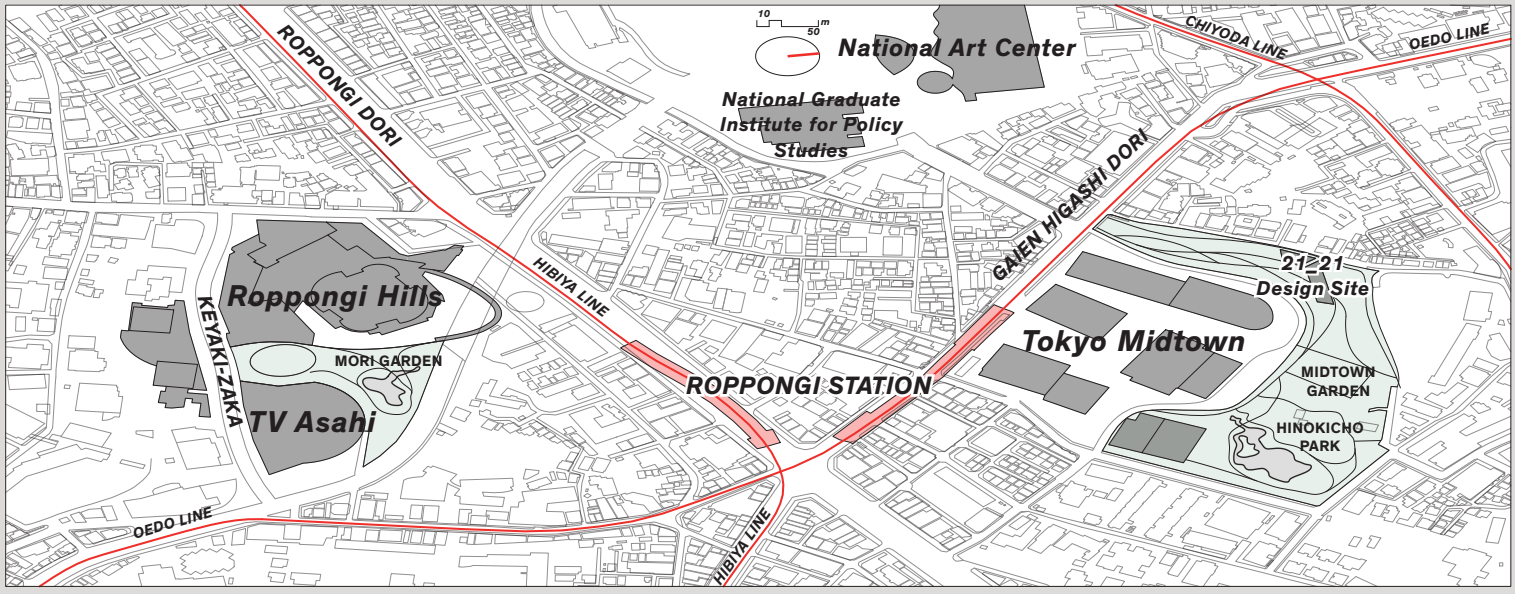
NAMBOKU LINE
ROPPONGI DORI
HIBIYA LINE
OEDO LINE
HINOKICHO PARK
MIDTOWN GARDEN
Tokyo Midtown
ROPPONGI STATION
TV Asahi
KEYAKI-ZAKA
MORI GARDEN
21_21 Design Site
Roppongi Hills
GAIEN HIGASHI DORI
HIBIYA LINE
CHIYODA LINE
OEDO LINE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National Graduate Institute for Policy Studies
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GAIEN HIGASHI DORI
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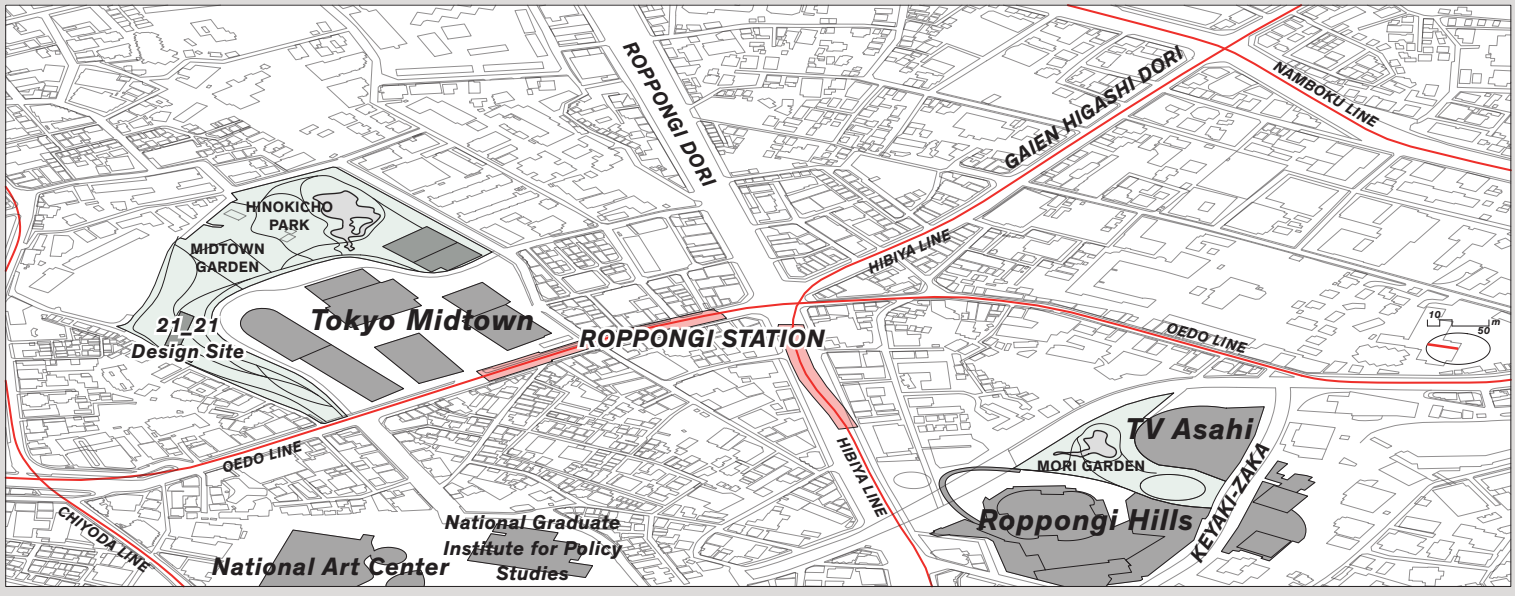
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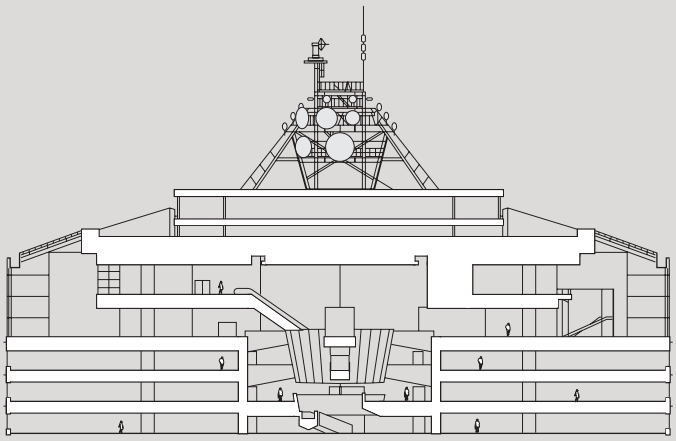

--- 1
Tokyo Midtown
(Shinkenchiku-Sha)

--- 2
Aerial of Roppongi
Hills in Context
(Shinkenchiku-Sha)

--- 3
Art Center Entry and
Shopping Center
at Roppongi Hills
(Shinkenchiku-Sha)

--- 4
Entry Plaza
and Canopy at
Tokyo Midtown
(Shinkenchiku-Sha)

--- 5
Plan of the Mori Art
Center at Roppongi
Hills (Drawn by
Jong-Hyun Baek &
Pilsoo Maing)

--- 6
Section Through
the Mori Art Center
(Drawn by Jong-Hyun
Baek & Pilsoo Maing)

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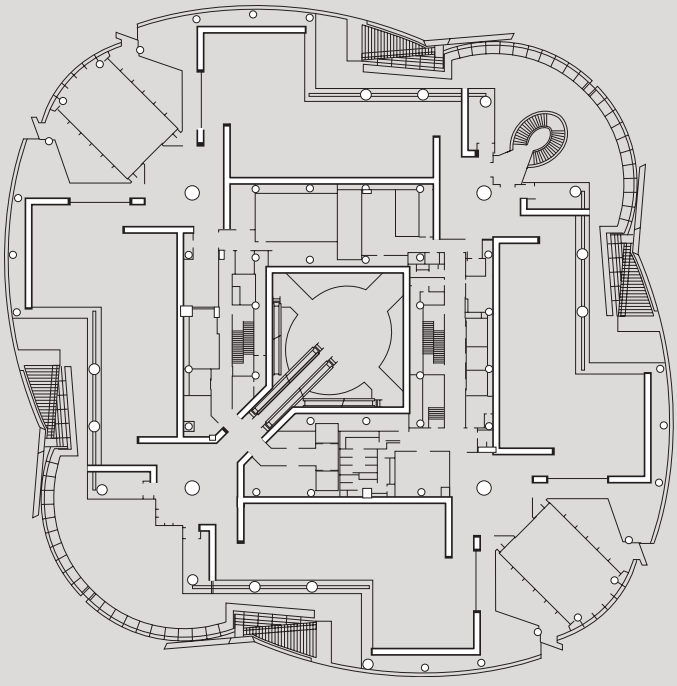

space, the headquarters of the Sapporo Brewery Company in renovated old structures, and condominiums as well as rental units in several 32-storey towers. The Tokyo Metropolitan Museum of Photography and a sizeable cinema are also part of the complex, along with an extensive multi-purpose hall serving as convention space.[36]

Overall, the project was facilitated by a special urban area designation by the government, a little like an overlay district, which enabled non-residential uses to be constructed in what was otherwise regarded as a residential area. Certain exactions were also made on behalf of the public sector, including the travelator to Ebisu Station and about 20 percent of the land area being given over to municipal roads, parks and other public improvements. The overall layout and design of the complex is somewhat stylistically post-modern and not particularly noteworthy save a spacious public open-space atmosphere. The taller buildings are located towards one end of the site, and are organized around a hub of sorts that leads into a plaza with a capacious garden room. This ensemble forms, in turn, a central spine to the site and the main public area. Further variety in green open-space provision accounts for somewhere on the order of 30 percent of the site area. Widely visited, the complex has become economically successful in spite of Tokyo's economic woes, turning a profit in leasing activities by around 1998 and well ahead of schedule.[37] At that time one suspects that the project's appeal drew from its eclectic array of architecture, emphasis on open-space use, and slightly theme-park atmosphere.

Perhaps the most prominent attempt to secure larger and more efficient property holdings for development in Tokyo occurred at Roppongi Hills going as far back as 1982, when Minoru Mori and the Mori Building Company began planning and aggregating parcels of land on and around what was once a *daimyō* estate at the top of a hill, again in Minato-ku. Assembly of the property involved some 600 landowners – 200 of whom sold out – while 400 remained in the project as 'rights holders,' forming the Roppongi 6-Chome Redevelopment Association, with the Mori Building Company signing a contract with the Association to perform the actual construction. Essentially what Mori managed to do was to persuade landowners that their small parcels of land were not inherently valuable, but what they could create together could have real value. The Mori Building Company also agreed to purchase from the Association about half of the building space on the site, with those funds then being used to help pay the USD 1.8 billion, or so, cost of construction. The Mori Company then used its own funds plus some debt financing in order to complete the project.[38] This property 'pooling' arrangement has subsequently found favor elsewhere in Tokyo among groups of numerous owners of small properties developing larger-scale projects either with private developers like the Mori Company, or with the help of local government, like for instance, Chuo-ku in Tsukishima's redevelopment on the waterfront of Central Tokyo. It is also a strategy that is consistent with earlier 'collective clearance' practices, that were also exported to Korea. Mori himself has long been an advocate for high-rise development, including efficiently sized floor plates, dating back to his university days. More recently he was a member of the Strategic Economic Council, a government body charged with forming a recovery plan for Japan in the midst of its economic crisis. In 1999, he also published his 'New Deal Policy' for revitalizing Tokyo and lobbied strongly for replacing Tokyo's hodge-podge of buildings with high-rise structures, thus allowing for more open space, as well as a reduction in sprawl and traffic congestion.[39] For Mori, Tokyo was a horizontally congested city but one that was also vertically vacant.

What resulted at Roppongi Hills was a USD 5 billion project and one of the largest redevelopment efforts in Japan's history. In various stages of planning and design since the 1990s, it began materializing around the turn into the new millennium, with Roppongi Tower – its most prominent structure – opening in 2001. All told, the undertaking consisted of 725,000 square meters of floor space stretching across essentially three urban blocks, totaling 11 hectares of land and playing host to one of Japan's tallest skyscrapers, a 390-room luxury hotel, some 220 shops and a residential population of 2,000 people, well up from the 800, or so, who formerly inhabited the site. Although certainly containing ample office space and residential quarters, Roppongi Hills is also strongly focused on the entertainment sector. An art gallery is housed at the top of Roppongi Towers, T. V. Asahi has a studio facility on site and the shopping complex

by the Jerde Partnership began to blur the line between retailing and entertainment. The three segments of the redevelopment are defined by Roppongi Dori – a main thoroughfare – and Loop No. 3, at the transit entrance to the site above a subway station; a section stretching from the intersection of Roppongi Dori and Loop No. 3 down to Roppongi Keyaki-zaka Dori; and finally a largely residential sector across from Roppongi Keyaki-zaka Dori. The first sector, forming an interface with the broader Roppongi neighborhood, is comprised of the station plaza and some associated retail commercial space. The bulk of the redevelopment is in the second segment and is made up of the Roppongi Tower by Kohn Pedersen Fox; a Grand Hyatt Hotel; the stone-clad shopping and entertainment complex by Jon Jerde; the well-preserved Mori Garden of the original *daimyō* estate; and the T. V. Asahi building – a well-detailed, minimalist, glass and metal cuboid by Fumihiko Maki. The residential towers, consisting of tower blocks of varying heights and accommodating some 850 dwelling units, were planned and designed by Terence Conran and Partners. A layering of roadways and paths within the complex was contrived so as to reduce congestion and to improve the at-grade pedestrian experience of the redevelopment. In fact, a USD 64 million public subsidy went into the construction of buildings while, in an arrangement that was opposite of what was usual, the private sector covered the costs of the roads and related site infrastructure.[40] Throughout, hallmarks of the project are density and diversity in development, all aimed to lower congestion and other related costs and to improve the efficiency of land use.

Beside Maki's compact broadcast center, the most significant building is the Roppongi Tower, which more or less merges in with the retail complex on its lower four or so floors before rising some 51 storeys in the form of offices, with a further three floors at the top provided for a penthouse art museum – the Mori Art Center. With relatively broad floor plates of 5,500 square meters, it is one of the largest, if not the largest, office building in Japan, totaling some 333,000 square meters in available floor area.[41] Architecturally, the tower has an unusual curving geometry, with a folded base and top, as well as shifting planes on the vertical façades. In fact, this folding operation is apparently based on origami techniques. The prismatic volume of the art center, designed by Richard Gluckman, is essentially inserted into a series of folding façade planes and then arranged around dominant axes. As one commentator put it, the whole building seems to be "poised between purely globalist formal strategies" and "simplistic literal regionalism."[42] The relatively low height of the building outside of the Japanese context, along with the broad floor plates also makes the tower seem somewhat stubby and squat. Transportation, from the ground levels below up to the museum above, is made directly via a conically shaped pavilion, through a 20-meter bridge to the tower elevators. In addition to the origami reference, other Japanese influences purportedly run to the temple lines of the residences, the outright preservation of the *daimyō* garden, as well as the deployment of Japanese styles of gardens around the residences. Probably in the mind's eye of many observers, so does the minimalist aesthetic seen in parts of the hotel complex and, to be sure, in the Asahi broadcasting facility. Interestingly enough, returning to the theme of entertainment raised earlier, during its first six months of operation, Roppongi Hills attracted some 26 million visitors, compared to Tokyo Disneyland's 25 million visitors over one year of operation.[43]

The other major and nearby mixed-use complex that breaks the mould of earlier forms of development is Tokyo Midtown, which opened in 2008. Unlike Roppongi Hills, however, painstaking aggregation of property was not required as the entire project site was in a single ownership. Formally in a *daimyō* estate the property was most recently occupied by Japan's Defense Agency headquarters. In 2001, the government decided to sell the 8 hectares of land in order to help promote redevelopment of designated areas of Tokyo, partly under Koizumi's plan for the purposes of boosting the sluggish economy and the city's competitiveness. The sale at auction of the site was one of Tokyo's most expensive real-estate transactions, despite the economic downturn, with Mitsui Fudosan emerging as the developer, spearheading a consortium of investors. Nikken Sekkei undertook some initial studies resulting in the determination of the office floor plate's area at around 4,650 square meters, a little smaller than at Roppongi Hills, although wide by earlier Tokyo standards. Municipal regulations limited the building height on the site

and, together with sun-angle regulations, determined the mid-site location of the office tower. Then Skidmore, Owings & Merrill converted the schematic brief into a comprehensive site strategy, as well as assuming the role of the lead designers for the complex.[44]

The main entrance is located on Gaien Higashi Dori, in the form of an L-shaped paved and finished plaza, partly covered by a 26-meter high sculptural, glass-and-steel canopy. More or less around this plaza, five buildings are clustered including three office buildings, a residential tower by Jun Aoki and Sakakura Associates, and the Suntory Museum of Art by Kengo Kuma. Between and connecting several of the buildings is a four-storey retail galleria. This grouping of structures is then enscribed by a curvilinear roadway that also provides access to underground parking facilities. Further building occupation occurs in the well-landscaped outer extremities of the site, with the 21-21 DESIGN SIGHT museum by Tadao Ando, Hinokicho Park and another residential tower on the north-east side of the site. EDAW was responsible for the landscape architecture, which appears to have been developed largely as a complement to the architecture, primarily forming a greenbelt on the northern edge of the property. Within the complex are also housed a luxury hotel, restaurant and related entertainment venues. Indeed, almost without exception most buildings combine several major functions, especially within their vertical rise, by now a relatively common characteristic of Tokyo's commercial development as noted earlier. The main office tower, for instance, is crowned by a five-star hotel. Fully 40 percent of the site has been set aside as public space in a community-spirited gesture, but one that was also shaped by regulation and developmental stipulations from the government side. Transit access is immediate from a subway stop along Gaien Higashi Dori and some 140 mature trees were salvaged prior to construction for inclusion in the final scheme.[45] At 500,000 square meters in floor area, the complex is large by Tokyo standards, slightly bigger than Shiodome, although smaller than Roppongi Hills. Apart from the broad sweep of landscape around edges of the site, the careful spatial organization of the ensemble of major buildings and the plaza area are again, like at Suntec in Singapore, somewhat reminiscent of Rockefeller Center in New York.

The centerpiece of the project is the tall office-hotel tower adjacent to the canopy-enclosed entry plaza. Rising some 240 meters, or 54 storeys in height, it is among the highest buildings in town. As mentioned earlier, its program is divided between offices on the lower floors with a hotel above. Vehicular access is gained via the project's internal street running around the northern side of the main building complex. The variegated curtain wall makes use of layered segments of glass with terra-cotta louvers to enliven the towers surface and to reduce solar gain. The mid-point division of horizontal, as opposed to vertical planes, also rather deftly begins to dematerialize the façades and to disguise the relatively wide girth of the building. Consequently, although not much taller than the Roppongi Towers nearby, the Midtown Tower has a certain vertical elegance.[46]

Another architectural component of note is the Suntory Museum of Art by Kengo Kuma, which is located on the western side of the retail galleria and also entered via this space. Relatively modest in size, at a little over 5,000 square meters, or about half the size of the Mori Art Center at Roppongi Hills, the museum houses mainly historic objects in the form of paintings, textiles, ceramics and other ware. The galleries and other spaces, inside the box-like overall building form, vary in height and volume in a manner that is very appropriate to the work on display. Kuma displays his by now signature screens on both the inside and outside, echoing traditional shutters and lattice screens. An interconnecting feature among the spaces of the museum is a graceful glass stairway, which both centers and guides navigation for visitors. Construction of the museum in this prominent site also allowed the Suntory company to consolidate and put its considerable collection of artifacts on more public display.[47]

A similar collector's agenda is also at work in the freestanding 21-21 DESIGN SIGHT museum of furniture and household appliances situated in the gardens on the northern side of the Midtown complex. Although not exactly an afterthought, the site was offered by Mitsui for design in 2003, relatively late in the overall development process. Largely a joint venture between Tadao Ando and Issey Miyake, who guides the exhibition content, the small complex consists of a two-storey

museum of 425 square meters in area with an adjacent café of 217 square meters in the form of two trapezoidal buildings united by an exterior passageway.[48] In fact, constraints on the permissible floor area dictated a 5-meter tall structure above ground, with the remainder of the accommodations located below grade. Consistent with other projects by Ando, the entering light and resulting interior surface qualities of the museum are exquisite and very well gauged to the collections of objects on display. Moreover, at least for this author there is a more playful quality to the architecture than in many of Ando's other more somber projects.

Finally, in Maranouchi's redevelopment and Tokyo Station City, both in the very center of the city, the fourth strategy of piecemeal conservation, reconstruction and replacement can be seen at work. On the western side of the extensive area of railway tracks that make up Tokyo Station, Mitsubishi – one of the largest corporate conglomerates in Japan – has historically held ownership of many parcels of property in an area called Maranouchi, dating back into the Meiji Restoration and subsequent Taishō periods when pre-existing *daimyō* estates adjacent to the Imperial Palace were decommissioned and sold off. Parts of the area were originally redeveloped in 1890 as a residential district, designed by Josiah Conder, in the manner of Western precedents and even called 'Londontown.' Poor environmental performance forced re-use in the form of commercial office occupancy and, from then on, the well-located area thrived, becoming further redeveloped into part of Tokyo's commercial center well before World War II. With the dramatic rise in Japan's prosperity during the 1950s and 60s, Maranouchi continued to undergo rebuilding, this time in the form of modernist office blocks aligned along well-made, tree-lined streets. Part of this process of building reconstruction and replacement was brought on by the Kantō Earthquake which leveled much of Tokyo in 1923, and the allied bombing towards the end of World War II, which had a similar effect. It was also programmatically driven, as subsequent commercial areas required different kinds of building accommodations.[49]

Recently, beginning around 2001 and 2002, another spurt of building activity occurred. The Maranouchi Building, for instance, which originally dates from 1923, was refurbished and added to in the form of a 37-storey structure in 2002, comprised of business offices, restaurants and retail activities. In the old days the building was well known for its shops on the ground floor and for public uses on the second floor, an arrangement which was also observed in the new structure. A remnant of the old 'Londontown' development has also been conserved around an interior courtyard garden. It now acts as a museum of local history. Elsewhere, new high-rise buildings have emerged, mostly opposite the old station, like the Shin-Maranouchi Building in 2007, including commerce and high-end retail, as well as the Maranouchi Oazo building of 2004 with the first six floors occupied, among others, by some 24 restaurants and bars, a huge book store and with the 205-room Maranouchi Hotel above. In addition, the Old Tokyo Station is currently undergoing a facelift and Naka Dori, running more or less north-south from Maranouchi to Yūraku-chō is certainly among Tokyo's most attractive, tree-lined and pedestrian-oriented streets, now flanked by brand-name stores and high-end restaurants.[50]

Tokyo Station City on the opposite eastern side of the tracks, is a recent transformation of what was a more modest and lackadaisical area of town around the Yaesu entrance to the Station complex. The project is managed again by Mitsui Fudosan, with several other companies as stakeholders, including East Japan Railway. Mitsui also negotiates with the local government and residents in Yaesu and Chuo-ku, selects contractors, supervises construction and serves as the landlord of the North Tower, one of several high-rise structures in the complex. Also included is an extensive station basement area. The North Tower – Gran Tokyo North – opened in 2007 and was designed by Helmut Jahn, accommodating the up-scale Daimaru Department Store along with offices. Also included in the overall complex are copious retail facilities and hotels. An airy roof structure links the towers on the north and south sides of the Yaesu entrance, parallel to Sotobori Avenue. Other property in Yaesu is also undergoing 'pooling' arrangements among local land owners, although this time facilitated by Chuo-ku the local government rather than by a specific private

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View of the Xinyi District, Taipei

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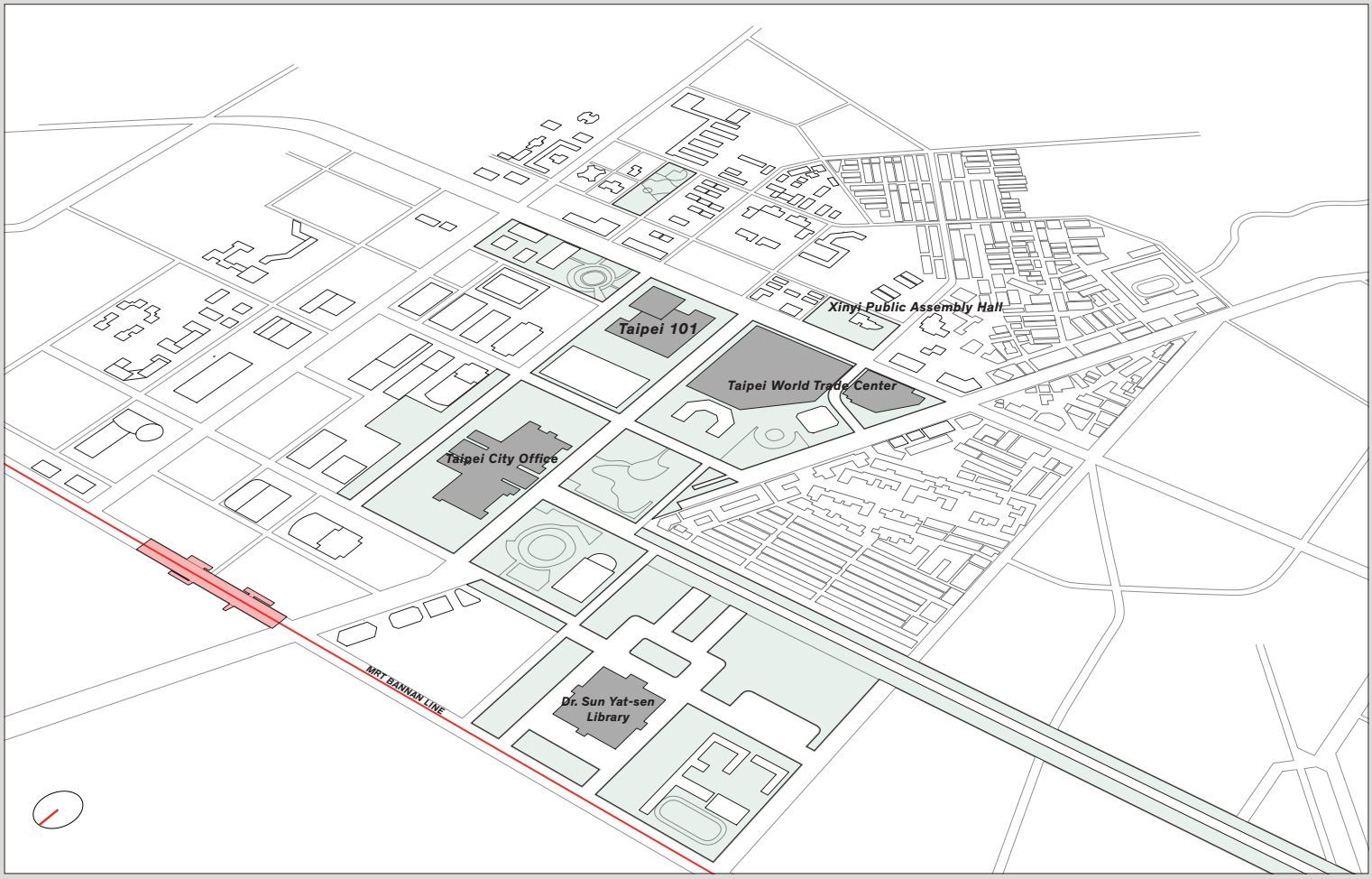
Aspects of the Xinyi District in Context


Taipei 101
Xinyi Public Assembly Hall
Taipei World Trade Center
Taipei City Office
MRT BANNAN LINE
Dr. Sun Yat-sen
Library

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The Taipei Financial Center – Taipei 101 – in Context (City of Taipei)

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Cross Connections in the Xinyi District (Alex Krieger)

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Taipei 101 (City of Taipei)

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Taipei 101 in Street Context (Alex Krieger)

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Section of Taipei 101 (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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Typical Floor Plan of Taipei 101 (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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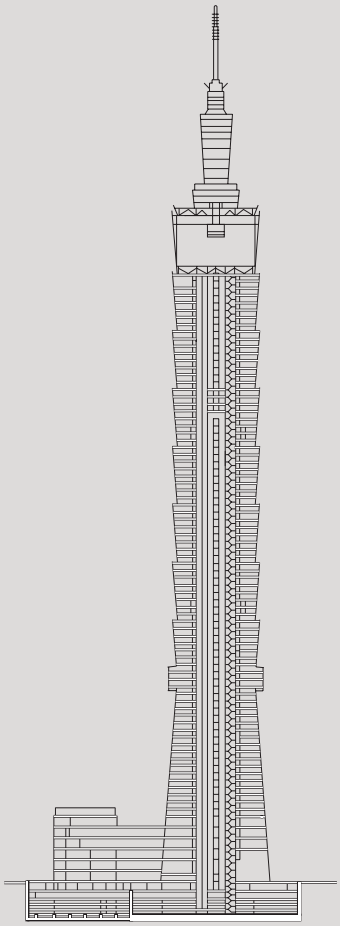

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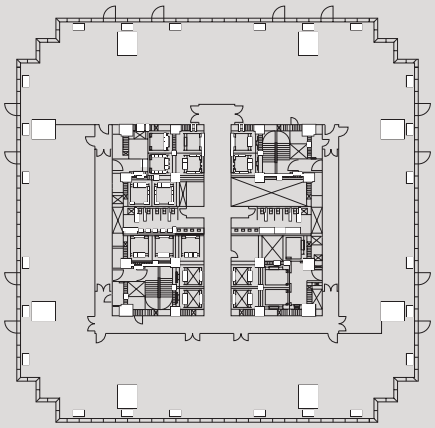

developer. The amount of floor area to date in the Tokyo Station City development is well in excess of 200,000 square meters and the explicit overall goal of the projects is urban and community revitalization in the Yaesu area, taking advantage of land development right transfers from property undergirding the Maranouchi transit line buildings.[51] One rather immediate effect of these redevelopments around Tokyo Station is a change in the sociology of the area's use away from the almost exclusive realm of businessmen – *sararimen* – into a much more diversified clientele, including women of all ages and occupations as well as younger people.

Providing Contemporary Prominence

Moving away from Tokyo and Japan, another conspicuous territory in East Asia undergoing similar redevelopment and transformation is the Xinyi district in eastern Taipei, Taiwan. With the name coming about through the consolidation and re-designation of urban districts in 1990, Xinyi covers an area of some 11.2 square kilometers, has a population of about 225,000 inhabitants, and is generally well known as a business, exhibition and office center. Indeed, in some quarters it is recognized as being the political, economic and cultural center of Taipei. It is home to Taipei City Hall; the Taipei Financial Center, or Taipei 101; the Sun Yat-sen Memorial Hall, honoring the modern father of China; and the Taipei World Trade Center, comprised of four buildings, including an exhibition hall, a convention center, the CETRA Tower and the Grand Hyatt Hotel.[52] In earlier times, Xinyi, lying to the east of the old town of Taipei, was the site of military depots and other establishments, including a sizeable hospital. After World War II Nationalists Guomindang soldiers, fleeing from mainland China towards the end of the Civil War, were assigned to former Japanese army depots as their temporary shelter. With little likelihood of returning to the mainland more permanent qualities were sought, resulting in the construction of the Si-Si Nan villages, which remained occupied until 1999 and into 2000. Commemoration of this occupation was then recognized in 2003 with the inauguration of the Xinyi Public Assembly Hall and Cultural Park on some 50 hectares of land within the district.[53] Redevelopment of Xinyi, especially with today's emphases on large-scale building and attraction of international visitors, largely coincides with Mayors Chen Shui-bian and Ma Ying-jeou's efforts to revitalize Taipei mentioned in the introduction, beginning in the 1990s. The checkerboard of wide urban blocks criss-crossed by comparatively wide thoroughfares clearly enhanced this form of contemporary development, together with a relative absence of the finer-grained quality of building characteristic of much of the rest of the city. Transit connections to the redevelopment district also improved its broader metropolitan accessibility and centrality, while both above- and below-ground connections among buildings and elements of the transportation infrastructure were contrived to also create a public cultural landscape. Overall, this modern approach to district development has been criticized from some quarters, because of its mono-dimensional character and lack of socio-economic support services and diversity. Nevertheless, these attributes may also be a matter of the relative newness of the development and the lack of maturation that can be expected in the future.[54]

By far the most prominent building in Xinyi and indeed in Taipei, is Taipei 101 or the Taipei Financial Center, which until recently, was the tallest building in the world at 508 meters in height. A land development contract was let for the complex in 1997 on a Build-Operate-Transfer (BOT) basis. Ground was broken in 1998 and the retail mall portion in the lower-level plinth to the project was opened in 2003 with the tower being inaugurated, with significant fanfare, in 2004. Large, at around 380,000 square meters in total floor area, the complex also has parking for some 5,000 vehicles.[55] Comparatively expensive, at around USD 1.7 billion, several of the project's cost overruns were due to increasingly exacting technical standards. To be sure, the prevailing context prone to earthquakes and typhoons led to special measures to safeguard the structures integrity. In fact, wind tunnel tests forced the installation of three tuned mass dampers on the upper floors of the tall tower to counteract significant sway created by high winds. Other obstacles faced during construction included a civil aviation halt called because of obstruction of a flight path into nearby Songshan Airport, until

the flight path itself was moved. Also, tragedy struck in 2002, again during construction, when a severe earthquake toppled several cranes killing some workers. Nevertheless, the structure when completed offered superb views from the inside, together with excellent lighting and climate control, with its facetted outward-facing skin of glass and aluminum covering eight floors at a time.[56]

The architects for the building were C. Y. Lee Partners, a local firm strongly associated with the so-called 'Taiwan Vernacular Clique' or, more broadly, with an Asian 'third way' strand of architectural design thinking which purportedly straddles or blends between east and west. The jade green tower is certainly not sleek and attenuated as such a contemporary structure might be in the west, but is rather more mannered in its likeness to a vastly scaled-up bamboo stalk.[57] Within the architectural geography of tall buildings on review in this volume, it lies towards the side of traditional references although not exactly in the same manner as say, the Jin Mao skyscraper in Shanghai which made reference to the venerable building type of the pagoda. At Taipei 101, the analogy to bamboo, as if the building was elevating upward joint by joint, combined with the overscaled corner and entry decorations, all from recognizable local sources, is both less singular and less architectural in its connotations. The immediate affect is a form of Chinese monumentalism, where scaling-up of artifacts and components is and has been reasonably commonplace and where underlying narratives rather than architecture *qua* architecture are also frequently deployed, as noted earlier. By now, in fact, C. Y. Lee is well known for deploying enlarged building details in a decorative post-modern manner. Several earlier commercial structures in Taiwan by him have such features. For example, there is the Hung-kuo Building of 1989 in Taipei and the slightly earlier NCKU Aerospace Apartment Building in Tainan. Apart from these considerations, Taipei 101 is also very much a symbol of progress, development and, more than likely, independence from China. Certainly, since the relatively recent onset of the democratic period and of bolder municipal ambitions from Taipei, forward progress has translated into greater prosperity, a more significant emphasis on amenity and on lifestyle choice.

Competitive Repositioning

As described, a driving force behind these large-scale urban transformations in East Asia has been a perceived need to reposition cities more competitively with regard to both domestic and international clients and audiences. For the most part this has meant moving away from narrow production-oriented conceptions of urbanization, noted in the introduction, towards more diverse and amenable lifestyles. Rising affluence has meant increased domestic demand in this direction, as has broader participation in the international markets for goods, services and labor-force retention. Situating these transformatory factors within specific cities has required two broad kinds of territorial appropriations within existing contexts, at least with regard to the tracts of property involved. One required land reclamation in the literal sense of creating a new physical topography, primarily from adjacent bodies of water. The other required substantial requalification of the rules of the game, primarily in terms of how property could be swiftly aggregated among numerous landowners, abruptly designated for different purposes, or physically converted with appropriate amelioration from prior uses. Apart from anything else, these otherwise radical operations were occasioned by official perceptions of poor functional efficiencies and of promising locations being hemmed in or otherwise compromised by less valuable uses. In all cases these new territories accommodated buildings that were bigger than earlier counterparts, more highly concentrated in activity and accessible location, and more diverse across a range of functions and uses. Within an institutional context dominated by top-down, governmental decision-making about most if not all aspects of urban development, these new territorial developments and this competitive repositioning was largely supply-side led. Even in Japan, which might appear to be otherwise inclined, the tight and complicit alignment of corporate and state-sponsored interests moved in much the same directions.

Definitions of territory of the other kind, involving programmatic recipes of use and activity, were also much the same across the numerous examples discussed. Almost without exception they involved a mix of commercial office, retail and residential building programs, leavened by inclusion of cultural

facilities usually in the form of art centers, museums, and exhibition spaces. Parks and other related aspects of public open space were also often prominently on display. In the balance between commonplace and more exotic aspects of urban district making, most often the latter quality seems to have received more attention than the former. Participation in constructed environments as diversions, in addition to facilitations of day-to-day activities, often seems to have been an agenda, sometimes bordering on environments as loci of entertainment. As with other broad generalizations, however, there have also been exceptions. One common feature of these various territories as 'fields of action' is that they have been relatively expensive economically. As narrated, typical price tags have been several billion U.S. dollars per project even if well within the confines of a particular territory. In some instances this has required considerable foreign investment and, one suspects, outside control, even if regulatory authorities like the Urban Redevelopment Authority of Singapore are strongly entrenched and forceful. In many other instances, it also means that a relatively exclusive group of investors and developers is at work, although this was usually the case in the past. A promising development, at least in some of the Japanese cases, is the appearance of landowner 'pooling' arrangements that embrace a much wider plurality of investors and potential direct financial beneficiaries of successful projects. On par, it must also be said that most of the projects discussed have proven to be financially successful, quite apart from their urban-architectural and other merits.

At least within the East Asian context, the large and sudden infusion of new urban space, typically at the single project level of 500,000 square meters or so of new floor area, has been significantly larger than prior development increments. Moreover, this constant upward push in scale has had reverberations. Probably the most common side effect has been the tendency to siphon off economic and social life from neighboring developments with the seemingly inevitable loss of local competitiveness on the part of usually smaller, apparently more dilapidated and older businesses. Over time, adjustments certainly can and do occur, but like the old adage about 'there goes the neighborhood' circumstances never return to where they once were. In many cases, the apparent 'losses' involved can be put down to substantial feelings of nostalgia, especially in the light of improved if different socio-economic outcomes. In other cases a more regrettable erosion of local specificity and urban character has also occurred. One notable aspect of almost all these large-scale projects is the consistent involvement of western design and planning firms, as well as business models, even if the sponsors behind the developments are almost entirely local. Certainly these territorial developments and indeed their architectural geographies, can be seen as strong conduits for the importation of contemporary international developmental practices, rooted in the West. The other form of siphoning off at work, is deliberate appropriation of functions from elsewhere in a city, in order to somehow enhance the mix and diversity of activities involved in the project. The case of Incheon in South Korea is perhaps most conspicuous in this regard, especially when it comes to removal of university and other facilities from nearby a struggling downtown to the new Songdo district, even if the new campus facilities appear to offer more flexibility for expansion. When taken to extremes, this kind of action can quickly lead, at the scales discussed here, to a pronounced bifurcation of experience, bordering regrettably on a 'two-city' phenomenon.

Physically and in terms of architectural geographies, the newly reclaimed territories also show various degrees of separation from the broader fabric of urban circumstances in which they reside. As repeatedly described, the sheer scale and bulkiness of building volumes is usually larger than in neighboring circumstances. After all, an upward push in scale is one of the primary necessities within the projects being discussed. Building typologies are also often at odds with those in nearby or other areas. Tall buildings are far from uncommon in East Asia. In fact, on the contrary, in most larger cities they are far more common than elsewhere in the world. Contemporary commercial skyscrapers, however, as distinct from simply upward extrusions in space, are relative newcomers and particularly at the height and volume of the more prominent buildings in the territories under discussion, where in almost all cases, the limits of prior experience were being pushed substantially upwards and outwards. Add to these

characteristics the typologically distinctive ensemble aspects of different buildings for different functions, even if mixing within the vertical rise of a given building is probably more substantial than in the West, for example, and the distinctiveness of many reclaimed territories is even more exaggerated. These features, together with often welcome high densities of interconnections among programmatic elements within a complex, lend a separated and enclave-like quality to developments. Roppongi Hills and Shiodome, to pick two projects in the Japanese context, certainly tend in this direction, whereas at Suntec City in Singapore such an outcome is far less obvious. The master planning underlying reclaimed territories like Rainbow Town in Tokyo, for instance, exhibits strong modernist tendencies towards large block-parcel developments with wide surrounding thoroughfares and bulky building volumes, at odds with the scale and grain of urban development in nearby mature areas of the city. While there is nothing necessarily intrinsically problematic with this approach, when development agendas shift or begin to falter, as they have at Rainbow Town and to some extent at Xinyi and Minato Mirai 21, then a sense of vacancy and even emptiness can creep in. Rather than being a question of style, this kind of outcome appears to be more a matter of over-determinancy and lack of flexibility in the intended territorial subdivision and internal articulation.

Also at work among the projects under discussion here, is a hubris factor. One might well ask, for instance, if the concentration of floor space at Taipei 101 is really necessary or justifiable outside of the excuse to build, for a time, the tallest building in the world. Similar skepticism might also be aimed elsewhere, for instance, at the 'firsts' racked up at Marina Bay. If nothing else in cases like these, if not throughout this whole discussion, there seems to be a solid belief that the pitch and tone of urban-architectural environments do matter. Clearly, attention-getting or attention-seeking is going on and the benefits expected by those involved, including strong governmental participants, appear to outweigh the perceived costs. Commodification of urban space might also be raised as an issue, especially with so much merchandizing and paid-for entertainment going on. However, commodities and trading are hardly uncommon to the Orient, especially in towns and cities. Moreover, if the 'product' value of the newly constructed environments is actually transcended by a broader 'service' value, even extending to less tangible qualities like status, bragging rights and symbolism, then the dangers of commodification must be muted. Anyway, in many cases the development processes and institutional arrangements involved have also provided substantial and popularly welcomed common-property resources as opposed to articles of trade, like parks, civic venues and other public facilities. Well-tested *quid pro quos,* or exactions, between the public and private sectors are well in evidence across the projects. More problematic, however, is the supply-side led public agenda predominately at work here and the hyperactive pursuit in some instances, of an urban architecture of entertainment and events. From a long-term perspective one might wonder about the fate of projects conceived in times of rapidly rising economic prosperity, if not excess, and then built with rising expectations after considerable economic downturn and turmoil. If nothing else, they now seem to be suddenly faced with emerging circumstances of socio-environmental accountability, downplayed conspicuous consumption and even austerity. Moving forward, there is also likely to be a new age in which different approaches to business, efficiency, labor and other social relations, as well as resource use, take place, perhaps necessitating different urban territories and architectural geographies.

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Keeping and re-using buildings and other elements of constructed landscapes is closely tied up with the temporal unfolding of urban processes in a manner that can be used to resist, temper or otherwise interrupt the widespread occurrence and hegemony of new developments. More or less since the advent of modernization there has been a widespread cultural if not broader societal reaction to its alleged leveling and reductive impacts. In the cause of maintaining cultural identity, preventing destruction of artifacts significantly related to the past, and averting the alienation that comes from being seemingly cut off from one's roots, nation states began enacting legislation. One of the first was the French with legislation in the early 1800s followed later by the British creation of the Society for the Protection of Ancient Buildings in 1877 and the Ancient Monuments Protection Act of 1882.[1] Highly involved were historic preservation movements and debates about types and degrees of restoration. Some like John Ruskin were against tampering with historic relics, preferring, instead, continuation of decay as a more authentic condition. By contrast, others like Viollet-Le-Duc were committed to moving beyond restoration into rebuilding historic monuments as reinterpretations of what they might have been under more ideal conditions. It was not until around the turn into the 19th century, with the leadership of the likes of Camillo Boito and Alois Riegl, however, that more consistent attitudes towards historic preservation and restoration began to emerge.[2] In the wake of World War II, particularly in devastated areas of Europe, orientations shifted in the direction of preservation and to conservation with its concern for future use. Programs and practices became codified further and after the Convention of Rome in 1956, international support and watchdog groups concerned with artifactual aspects of cultural heritage began to be established. Over time and certainly by 1972 with the formation of the International Council on Monuments and Sites (ICOMOS) and into the late 1970s with routine instances of landmark districts of various kinds in the USA and elsewhere, preservation and conservation activities were expanded beyond a focus on the representation of tradition through specific artifacts to encompass environments, including substantial adaptive re-use of buildings.[3] This also shifted planning and programming activities associated with cultural heritage in a direction which combined economic revitalization with preservation and restoration. Certainly by the 1990s this emphasis was *de rigueur* in most international as well as locally sponsored efforts. Without associated economic vitality even well-restored historic monuments would not survive, or so went the rationale.

Another major aspect of conservation in response to unwanted effects of modernization was keeping the natural environment from harm and maintaining its future productive use. Movement in this direction, however, followed a somewhat different pathway and timeline than historic conservation, at least in the West, although culminating with considerations of cultural heritage in a turning point into a post-modern ethos also by the latter part of the 1970s. In spite of warnings about the need for renewable resources and security issues by the Paley Commission in the USA as early as 1952, not to mention the elegant arguments advanced by people like Rachel Carson, it was not until 'Earth Day,' on 22nd April 1969, that a broader awakening occurred to the need for environmental responsibility.[4] Nationwide, this was the largest demonstration in the history of the USA and brought with it not only an awareness of the profligate status of much of the developed world but also the negative impacts of this profligacy on poorer countries as well, including many parts of East Asia at the time. Influential, if apocalyptic, publications like the *Limits to Growth* followed in 1972 warning against pollution and overuse of resources, to be further underlined by the OPEC oil embargo and energy crisis in late 1973.[5] These events, in turn, led to subsequent increases in conservation activity, technical innovation, more appropriate legislation and coping behavior, alongside continued willful deferment. The earlier sense of anxiety, however, began to subside. Nevertheless, by the Rio Conference in 1992, if not before, it was apparent to many people on the planet that environmental conservation was urgently necessary if humankind was to be preserved from the effects of global warming, shortages of water and other resources, as well as sudden reductions in biodiversity.

CHAPTER SIX

KEEPING AND RE-USING

As a part of the post-modern turn, the unfolding of these fields of actions or territories has been patchy and slow in coming to East Asia, although now arriving with a certain forcefulness. To be sure, people in Tokyo and Japan began to react vehemently to high levels of pollution, deprivation of sunlight and associated social injustices at much the same time as those in the West. Similarly, classification and historic preservation of monuments was of reasonably long-standing throughout much of the region, even if given short shrift elsewhere as well. Investment in preservation of the Forbidden City in Beijing, for instance, was undertaken from early on in the Communist regime, even as they were industrializing much of the remainder of the city. Also, reconstruction of major historic artifacts in Seoul followed not long after the end of the civil war in Korea, even as the military regime was pressing wholesale modernization forward. Nevertheless, broader area-wide commitments to historic preservation, let alone environmental conservation are comparatively recent in the region, dating from the late 1990s with some notable exceptions, especially in Japan. In large measure, this apparent deferment was rooted in national priorities and with primary commitments to economic progress over improvement of environmental and historic-cultural circumstances. In a phasing of political and social action not unlike that observed in the West during early stages of modernization, concerted historic and environmental conservation was considered unaffordable, except along the narrow lines suggested earlier. Like behavior according to the well-known Kuznet's curve, rising rates of economic production led to decreases in environmental and related qualities until a point was reached when these qualities were improved upon.[6] Although it is difficult to put a precise estimate on the economic levels associated with these kinds of turning points, South Korea, Singapore, Hong Kong and Taiwan appear to have passed such points by the mid-to-late 1990s, and with China beginning to move through more recently. As elsewhere in this volume, what follows is less of a survey of relevant urban-architectural projects as vignettes of conservation, or of keeping and using, at work in East Asia. They range across preservation, adaptive re-use, environmental remediation, resource management and restoration.

Reconciling Areas and Fragments of the Past

A common course of action within the broader territory of historic conservation within urban landscapes is adaptive re-use of buildings, including at times both preservation and restoration activities. Sometimes involved are substantial parcels of property, whereas at other times a single building is at stake. Prominent among examples of this architectural activity is Xintiandi in Shanghai by Wood and Zapata, even if its conservation value is regarded by some to be inferior to its commercial contribution to the city's revitalization. Xintiandi was the first phase of the much larger Taipingqiao development on the outskirts of what was once the Old Chinese city. Taipingqiao occupies an area of about 28 hectares, across some 17 city blocks and was master planned by Skidmore, Owings & Merrill after Shui On, the Hong Kong-based company of Vincent Lo, was invited by the local government to redevelop this part of the Luwan District in 1996. Several stipulations included maintenance of some of the old-style of the housing on site and retention of Yi Da, the building where the Communist Party held its first national congress in 1921. The remainder of the development comprises several luxury hotels; a 68-storey office tower; some 6,000 apartment units, well above the 2,300 units of original housing that required relocation; five live theaters; and a man-made lake partially above a large underground car park.[7] At the time, this was one of the first portions of the French Concession to be redeveloped, an area that was once densely packed with *lilong* housing – a popular local hybrid between a European row house and a traditional Chinese courtyard house that began to be developed in Shanghai from about the 1860s onwards.[8] Coming in different heights and sizes, the *lilong* across most of this area were three storeys in height, although interspersed, on occasion, with more palatial villas, one of which was retained as a private club in the Xintiandi portion of the Taipingqiao development. Over the intervening years and particularly during the Maoist period, the *lilong* often became overcrowded, dilapidated, and sorely in need of repair. Consequently, in further redevelopment of much of the site preservation was hardly an option, quickly giving way to building reconstruction.

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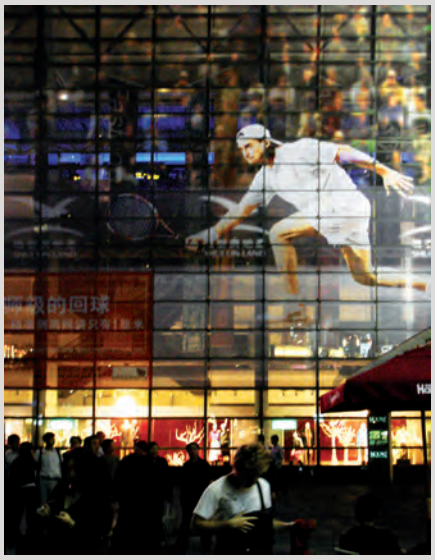

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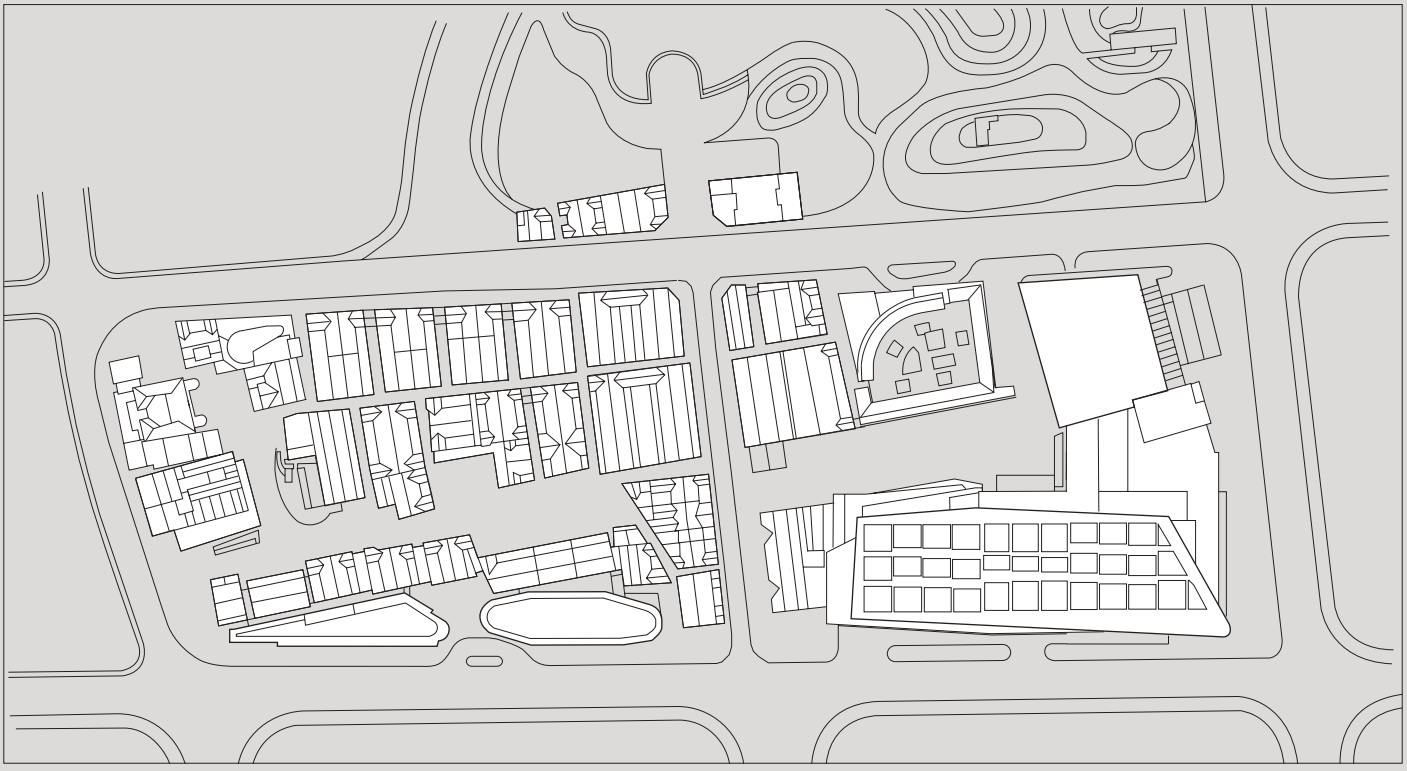

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Restored Lanes at
Xintiandi (Peter Rowe)

--- 2
Covered Passage
Among Shopfronts
(Peter Rowe)

--- 3
The *Lilong* of Xintiandi
in Earlier Times
(Peter Rowe)

--- 4
New Building at
Xintiandi (Peter Rowe)

--- 5
Site Plan of Xintiandi
(Drawn by Jong-Hyun
Baek & Pilsoo Maing)

Xintiandi, which opened in 2000, essentially occupies what were once two forlorn blocks in the original *lilong* milieu. There, the architects essentially saw the project as an exercise in adaptive re-use and creating, as they put it, "a new place with a new identity."[9] In fact, Xintiandi means 'a new world' in Chinese and with most of the existing buildings on the verge of collapse, rather extraordinary efforts were directed towards what could be saved and restored, combined with pursuit of a sympathetic style of new building. Finally, some 100 of the original stone gates (*shikumen*) to the *lilong* front courts were retained and incorporated into restaurant and store fronts. Techniques like injecting cement compounds into crevices within the old stone work, were employed in order to preserve this much of the original building. Careful recovery of original brickwork on the site in the characteristic slate grey color of Shanghai, together with deep-red clinkers, also lent a consistent material palette to the reconstruction. Employment of old craftsmen also helped ensure authenticity of construction where it could be applied. Then, in those parts of the site, particularly at the southern end, where nothing of the old building could be saved, the architects intelligently reverted to a contemporary and complementary approach using light and airy metal and glass curtain walls. The new uses run mainly to restaurants and eateries of various kinds, together with fashionable stores, an exclusive hotel, and some offices. Xintiandi is also one of the first urban projects to reinvent Shanghai's future based on its past.[10] Clearly at work was a deliberate interplay of *hai pai*, or 'Shanghai on Shanghai,' by now becoming more and more apparent throughout the city. Even if far from a true restoration, the project does retain or conserve the ambience of Shanghai's 'golden age' through its pedestrian lanes, building materials and scale of development, not to mention through its support of what might be called a 'cosmopolitan lifestyle.' At a cost of USD 58 million, high annual rates of return on the order of USD 9 million have ensured profitability and, with foot traffic on the order of upwards of 30,000 people per day, trade is brisk and employment is high. This kind of success has also attracted a certain notoriety to the project as a model for development elsewhere. In fact, Shui On have preserved Xihutiandi, a similar project in Hangzhou and Benjamin Wood has applied his architectural approach to the Zhujiajiao Watertown project in the Changjiang Delta.[11] Seen in an older and broader context, Xintiandi is also reminiscent, in its urban-architectural approach, to Ghiradelli Square in San Francisco or to Covent Garden in London, among other projects.

At much the same time as the construction of Xintiandi, several municipal governments in China, including Beijing followed later by Shanghai, began to pursue plans for historic preservation and conservation. In both cases these covered large territories as physical expanses and as courses of action. As mentioned earlier, preservation of Beijing's historic monuments had relatively early beginnings in China, dating back at least until the beginning of the Maoist period. However, it was not until some time later that broader area-wide conservation became enacted, largely through the 1982 masterplan for the city and its provisions for Traditional Courtyard Preservation Districts, still later to be expanded to include conservationist redevelopment projects like the Ju'er Hutong of 1989, by Wu Liangyong.[12] Nevertheless, further erosion of Beijing's historical fabric under mounting real-estate development pressures rose to crisis levels by the middle to late 1990s, resulting in the 1999 drafting of the Twenty-Five Historic Areas or Blocks Plan, by the city's Planning Commission.[13] This plan also returned to some of the language of the 1993 master plan's emphasis on historic preservation, essentially involving two components. One was to cover cultural relics or monuments. The other addressed conservation areas within the old city in addition to its monumental sites. As designated, these areas covered 649 hectares with an additional 389 hectares on which there were related construction controls, amounting to 21 percent of the land area of the old city. Together with the sites of historic monuments, like the Forbidden City, the total rose considerably higher, to 42 percent of the old city. Conservation in this context took on several interpretations ranging from outright preservation, through conservation of key characteristics of traditional areas, like the lane structure, to contributions of preservation, conservation and new building emphasizing ideas about historical continuity. Falling into the latter category, under pressures of quicker financial returns was the Nanchizi Pilot Project along the eastern edge of the moat of the Forbidden City. Initiated under a delicate incremental approach developed by staff from Tsinghua University, the Municipal District rather quickly switched to a plan of rather more wholesale urban

renewal in 2002. This resulted in a *fengmao* or townscape simulacrum of the traditional urban fabric, in which row houses replaced the original courtyard arrangements – *siheyuan* – and fewer lanes were preserved.[14]

In Shanghai, the issue of conservation began to get underway in 2001 with the formation of a historic landscape and monuments office within the city's Urban Planning Administration Bureau. This was quickly followed in 2002 with promulgation of the Shanghai Historic Service District and Outstanding Historic Architecture Conservation Regulation followed by its fuller instrumentation and implementation in 2007.[15] Drawing on a careful review of conservation experiences and practices in different cities in the world, as well as the earlier efforts in Beijing, Shanghai charted its course along the lines of establishing clear management principles for drafting specific local area-wide plans and for regulating at a detailed level, where necessary, within those local plans. To begin with, 12 Historical or Cultural Scenic Districts were designated and conservation plans drafted. For the most part these districts were reflective of Shanghai style – *hai pai* – and of Shanghai's urban and architectural townscape across different periods within the city's modern era. Another 32 Historical or Cultural Districts have since been added, bringing the total for which conservation plans have been or are being prepared to 44 and covering a vast area of some 41 square kilometers. All told, the number of sites of so-called 'exceptional historical buildings' is around 635, incorporating 2,142 buildings. The basic format of specific conservation plans consists of a definition of the district's boundaries and significant townscape features, followed by specification of the kinds of regulatory controls required to conserve these features, and then identification of specific building sites and buildings requiring particular attention. At each step, an attempt is also made to rather clearly and defensibly justify the rationale for the conservation involved.[16]

Returning in the direction of Xintiandi, historic conservation and an architecture of contemporary juxtaposition is clearly on display in older areas of Singapore. Unfortunately as the new nation state wrestled with the consequences of mass immigration, dwindling trade and the need to stimulate employment during the 1960s and early 70s, many parts of its historic urban fabric became egregiously overcrowded, dilapidated and fell into disrepair. With subsequent recovery and better economic times, relatively short shrift was also paid to these older quarters and many parts of them were demolished to make way for needed modern projects. These trends and attitudes, however, changed in more recent times both from sensed needs to preserve material of the past as integral to Singapore's identity, and in recognition of the value of this heritage to outside visitors and to tourist trade. Of course, Singapore is hardly alone in this progression of events. Today, for example, parts of the city's Chinatown, India town, the Boat Quay, Clarke Quay, as well as historic buildings of colonial administration and occupation, have been stringently preserved and many restored. An issue of both conservancy and architecture remains, however, around how to deal sympathetically and effectively with remnants of the past alongside of new building, particularly in broader environments where the exigencies of both must clearly remain in play.[17]

One area in which old and new have been combined is in the redevelopment and revitalization of China Square – the site of one of Singapore's earliest Chinese settlements – jam-packed at one time with shophouses, interspersed with occasional temples and civic buildings. The shophouse building type was once ubiquitous throughout South-East Asia and in parts of China. As its name implies, it basically takes the form of a shop on the ground floor, facing a street and with storage space behind, atop of which is a residence, usually of the shop owner, and sometimes with additional rental accommodations. Arranged in rows with party walls between units, each shophouse occupied a proportionally elongated site with a narrow frontage, therefore maximizing the number of commercial establishments along a given street. Alleys at the back frequently provided service access to ground-floor storage areas and in many places, including Singapore, protection from inclement weather was provided by a semi-open arcade along the street, colloquially referred to as 'five-foot ways.' Typically rising in height to two and mostly three storeys, capped with tiled pitched roofs, the front facades often manifested considerable architectural investment in bold cornice lines, decoration and shuttered windows. Having fallen into disrepair, and ravaged by later building, the area was ripe,

if not overdue, for redevelopment in the latter part of the 1990s. Indeed, several extensive projects were undertaken almost at once, including Capital Square and the neighboring area of Far East Square.[18]

Occupying an irregular 1.1-hectare site, forming a transition between Singapore's financial district and the adjacent China Square area, the Capital Square complex, by the local firm Architects 61, unabashedly brings together a 16-storey modern office tower with restoration of 19 three-storey traditional shophouses along both China and Pekin Streets. Opened in 1998, the significant footprint of the office structure, with a gross floor area of some 35,800 square meters on a relatively small site, is cleverly broken down into three components, punctuated by slender unfenestrated shafts, thus reducing its apparent scale.[19] The highlight of the complex, however, is the variegated pedestrian experience that is provided, deftly integrating the shophouses with the office tower through a sequence of relatively informal outdoor spatial parentheses. This pedestrian experience is further augmented by a more formal urban plaza, created by setting back components of the office tower on the corner of Church and Telok Ayer Streets at the edge of the financial district. A fully glazed, double-height entry to the tower's lobby eases the transition between external and internal space, helping to perpetuate the continuity of the open pedestrian sequence. In addition, a podium-level parking structure adjacent to the urban plaza, usefully mitigates the otherwise inherent incongruity of the office tower and the nearby shophouses. By contrast the Far East Square development, across Pekin Street from Capital Square, by DP Architects, called for conservation of some 60 shophouses on its 1.4-hectare site and inclusion of a low-rise car park. Again, though, contemporary architecture was unabashedly combined with the historical fabric of the shophouses, in the form of steel and glass coverings to several pedestrianized existing streets, offering welcome climatic relief, as well as location of needed elevators and escalators outside of the shophouses to help maintain their authenticity. The glass-clad parking structure, with its inward-sloping facade facing the forecourt of the complex on Cross Street, also makes no pretense of being literally contextual. Programmatically, Far East Square is home to a broad collection of creative agencies and media companies, along with restaurants, shops and cultural venues, like the conversion of Fuk Tak Chi – the first Chinese temple in Singapore – into a heritage museum.[20]

One kind of venue where adaptive re-use of existing buildings has enjoyed widespread application is contemporary art galleries, exhibition and performance spaces. First gaining traction in places like SoHo, New York, during the 1970s into the 90s, the more recent re-use of old industrial buildings in other regions of the world, including East Asia, has probably less to do with mimicry for its own sake than a response to common parameters such as cheap, well-lit and unencumbered relatively large spaces, together with surroundings that allow for a certain freedom of improvisation and remaking. In China the most well known of these kinds of circumstances is the Da Shanzi Art District, in general, and Factory 798, in particular. Located between the Third and Fourth Ring Roads in Beijing, adjacent to the highway running into the city from the airport, Factory 798 was originally a part of the larger No. 718 Amalgamated Factory complex, dating from the early Maoist period when industrialization was a primary orientation in development of the 'socialist city.' With aid from the Democratic People's Republic of Germany this complex was constructed between 1954 and 1957 to house state-run electronic production. In fact, Factory 798 was originally called the Huabei Wireless Electronic Equipment Factory and was one of three components of the larger No. 718 complex. Over time it played a strategic role as a vital source of Chinese military armament, including in its nuclear program and development of satellite launch technology. In 1964, during one of the lowest ebbs in China's modernization and under reshuffled defense-industry management, the amalgamated scheme of No. 718 was repealed and replaced by a renumbering of factories, including No. 798. The whole complex occupies about 64 hectares of what was once farmland on the then outskirts of Beijing which became rather swiftly occupied by some 40 low-rise industrial buildings and supporting infrastructural installations like steam plants, various forms of piped reticulation, and a truck-accessible roadway grid. Most of the buildings were constructed of reinforced concrete and of brick. Many had lofty, curved saw-tooth roofs, glazed in a northerly direction, and some also had oversized slanted glazing at lower levels. Even though China was

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Conservation at Nanchizi, Beijing (Har Ye Kan)

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Fengmao at Nanchizi, Beijing (Har Ye Kan)

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Arcade at Far East Square, Singapore (Har Ye Kan)

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Shophouses and 'Five-Foot Ways' at Far East Square, Singapore (Har Ye Kan)

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China Square, Singapore (Har Ye Kan)

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poor at the time, this industrial development was not without pragmatic modernist architectural qualities, no doubt care of the East Germans involved. Employing up to 20,000 workers, the factory complex remained viable and even vital for several decades, before winding down its production and becoming obsolete by the late 1990s.[21]

With the asset value of the property of little worth, the complex was turned over to Seven Stars, a state-owned enterprise charged with holding and redeveloping the site. Apart from preparing it for more profitable use in the longer run, Seven Stars also recomposed the factory spaces into real-estate ventures, renting out the somewhat decrepit buildings to help pay pensions and allowances to former factory workers. At much the same time and largely by word of mouth, avant-garde artists, art dealers, designers, and architects started occupying and renting space. The influx was substantial and by 2002 about 50 percent of the buildings were occupied in the form of art studios, galleries, exhibition spaces, design companies, bookstores, restaurants and cafés. All told, about 50 separate enterprises became settled, including some that constructed their own buildings and enclosures, alongside renovations to the existing structures. Certainly by 2002 and 2003, government qualms and opposition to contemporary art had changed. In fact, there was something of a complete turnabout, from opprobrium as a deviant activity to support as a source of international prestige. In the meantime, the Chinese contemporary art market overseas was flourishing, as were the reputations of more prominent artists. What was once a repressed and even covert activity was now big business. Moreover, when Beijing staged its first Biennale, shortly after Shanghai's successful event, it turned to Factory 798 as the venue. Sometime earlier in 1995, the Central Academy of Fine Arts, a well-known art and architecture school in Beijing, established a branch campus in Factory 706, next to Factory 798 in the Da Shanzi art district.[22] No doubt the Academy, with its strong ties to the contemporary art scene, was also attracted by cheap and useful space and may have sensed what was going to occur in the area.

As suggested, the degree of renovation across the factory complex varies from practically nothing to fully-fledged refurbishing. Some of the markings of past occupation have been deliberately left, like some propaganda slogans painted in red on the concrete factory walls. Uncertainty surrounding the ultimate disposition of the property seems to have deterred more complete rehabilitation, although like western art centers Factory 798 is a hip industrial setting that trades on a certain incompletion and fashionable signs of wear and tear. The government's apparent embrace of the facility, at least for the near-term future promises more longevity and security, although the costs of remaining are likely to be higher, deterring participation by many up-and-coming artists. Unlike other precedents of adaptive re-use, like Mass MoCA by Bruner/Cott in Massachusetts which also makes re-use of old otherwise abandoned industrial buildings, the presence of architecture is less strong at Factory 798. To be sure, as mentioned, new construction has occurred, including resurfacing and reglazing of some of the larger, more architecturally significant shed buildings. However, this appears to be more *ad hoc* than a complete and thoroughgoing commission. Also of note in the complex are the outdoor courtyard spaces and construction of several pools that also serve as exhibition spaces and lend an aesthetic quality to the place which is not strictly industrial. As Factory 798 became more prominent in its new guise, Bernard Tschumi was commissioned to create a scheme for more wholesale renovation and extension. His proposal was the superimposition of a lattice-like structure of building hovering above the existing factory spaces, allowing them to maintain much of their earlier historic value.[23] However, this approach, not unlike what he pursued with the successful Acropolis Museum in Athens, has not materialized.

Also of note elsewhere in China are other adaptive re-uses for the sake of art, unofficial exhibitions and local museology. Bridge 8 is a complex in Shanghai which includes a literal bridge across a major thoroughfare in an inner-city district, linking a renovated former automobile body shop and other industrial facilities to a new building across the street. Again the home to designers, architects, art dealers, artists and cultural producers of various kinds, the shed buildings and informal walkways among them, sprinkled with cafés, offer an attractive itinerary for casual tourists, as well as art aficionados. Elsewhere along the Suzhou Creek in Shanghai and as well as the 'Loft' in Kunming, similar industrial spaces

are in the throws of conversion to art spaces, even if nothing quite on the scale of Beijing 798 is as yet on offer. One final complex of note in this territory of adaptive re-use is the Ningbo Urban Museum of 2004 by Ma Qingyun of MADA s.p.a.m. Backed by the port city's investment company, the museum is part of a plan for the construction of buildings to increase the number of public amenities in Ningbo, especially along the Waitan riverfront. Located next to a dock, which serves as the main entrance to the building which otherwise backs on to the city proper, the museum consists of refurbishment of an old four-storey warehouse. Principally the slabs and reinforced-concrete structure were retained while an entirely new surface treatment was provided in the form of a translucent enclosure. There the use of glass block was also used to register the zig-zag path among floors for exhibition and other spaces within the building.[24] This unusual combination of glazed elements, along with meticulous detailing, also lent a certain material nobility to the building, not inappropriate for a civic museum. Generally, the refined architectural approach pursued at the Ningbo Museum lies towards the other end of the spectrum of architectural geography applicable to adaptive re-use than the rough-and-ready approach at Beijing 798 with Bridge 8 somewhere in between. Folds in the space among the floors were also skillfully adjusted to address the programmatic needs of an auditorium, workshops, and lounge areas, in addition to the broader expanses of exhibition space.

Environmental Interventions

Urgently needed although far less prolific in China are successful natural environmental projects. To date, China has substantially deferred the amelioration of adverse environmental impacts of development in favor of economic production. Consequently, it is one of the current global heavy-weights in environmental abuse. It tops the list in carbon emissions, producing something like 20 percent of the world's output. Some 45 percent of cities are without adequate water supplies, due either to scarcity or to pollution, or to both and in spite of recent improvements.[25] In fact, management of water resources may well be the major environmental problem in China. Productive ecosystems are constantly being threatened by burgeoning new urban development and industrialization. Arable land, another apparently dwindling land-based resource is also below that necessary for food self-sufficiency and is becoming an issue of national security. Almost everywhere, or so it seems, the push towards modern industrialization and urban development is exceeding environmental carrying capacities.

Elsewhere in East Asia the situation is less grave, although also not without issues. Japan, as mentioned earlier, appears to have already passed through its eras of developmental boom and environmental bust, although over commitments of resources to public works projects like dam building, road building, and shoreline protection also continue to place strains on its natural system. Singapore has pursued an aggressive 'green-blue' plan since the mid-1990s in the interests of environmental conservation and protection. In fact, its adoption of state-of-the-art amelioration technologies, as at Marina Bay in the area of water desalination and treatment, have made it something of a leader in pursuit of environmental quality. Taipei continues to suffer from air quality problems in its comparatively closed basin topography, along with environmentally erosive activities on its surrounding hillsides. In Hong Kong water conservation continues to be an issue, as does hillside encroachment and harbor pollution, although none of these are as egregious as they once were. If anything, outside impingement on the Special Administrative Region from the rest of China and particularly from Shenzhen across the border, poses more serious environmental problems. Seoul and South Korea are also better places than they once were, now paying considerably more attention to environmental conservation as a part of improving the amenity of urban living conditions.

An early attempt to improve both flood control and water quality in China took place in Chengdu, the capital of the western region province of Sichuan. Starting as early as 1992 and gaining momentum by 1994, the Fu and Nan (Funan) Rivers Comprehensive Revitalization Project addressed mounting environmental problems of the twin river system flowing through the central areas of Chengdu, a city with a metropolitan population on the order of nine million inhabitants. In fact, the Funanhe, or Fu and Nan River system, is part of much larger Minjiang Tributary, one of the primary water catchments for the western reaches of the Changjiang (Yangtze), before it discharges some 1,800 kilometers to the east into the China Sea.[26]

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Axonometric View of the 798 Art District in Beijing

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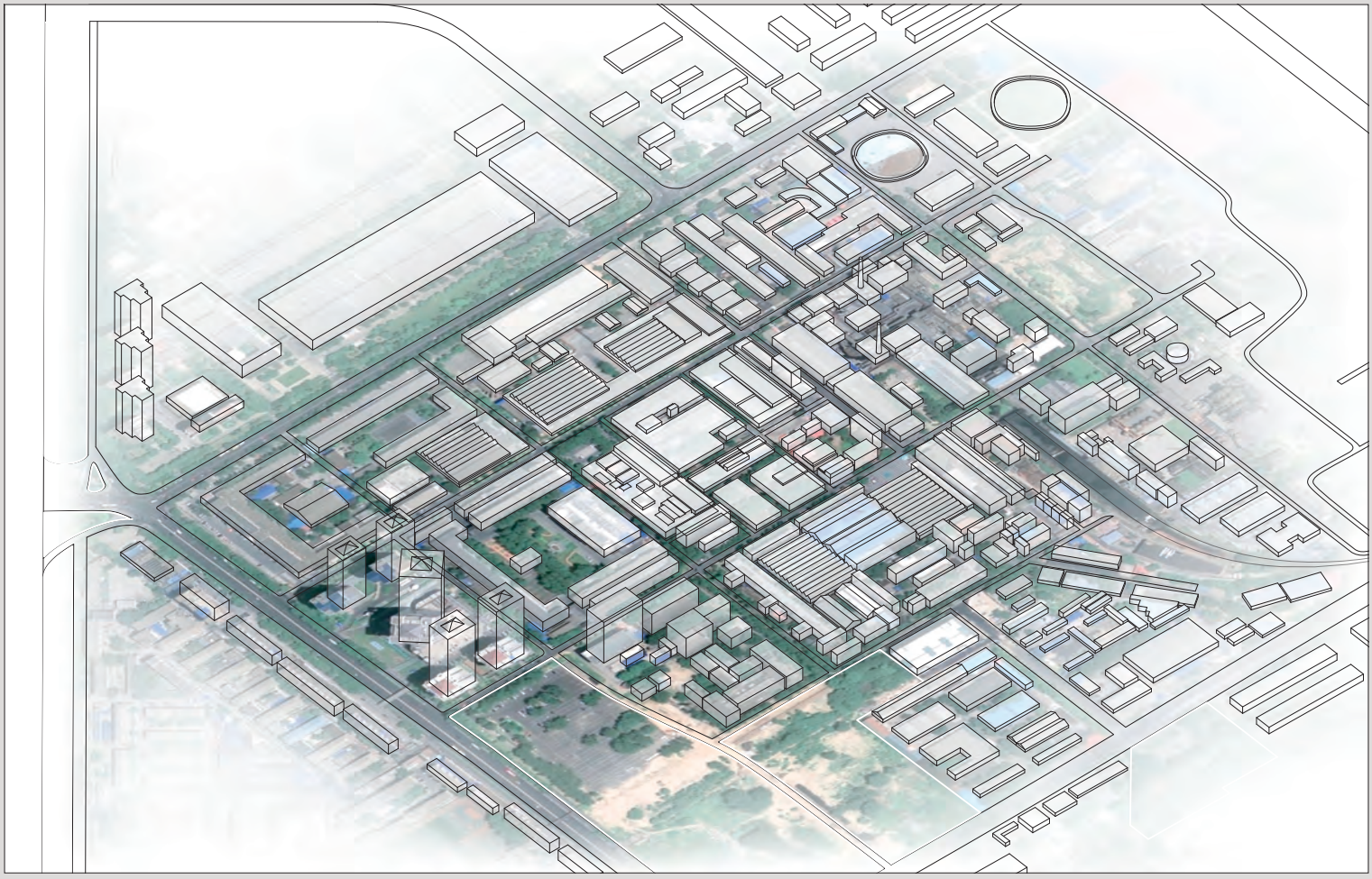
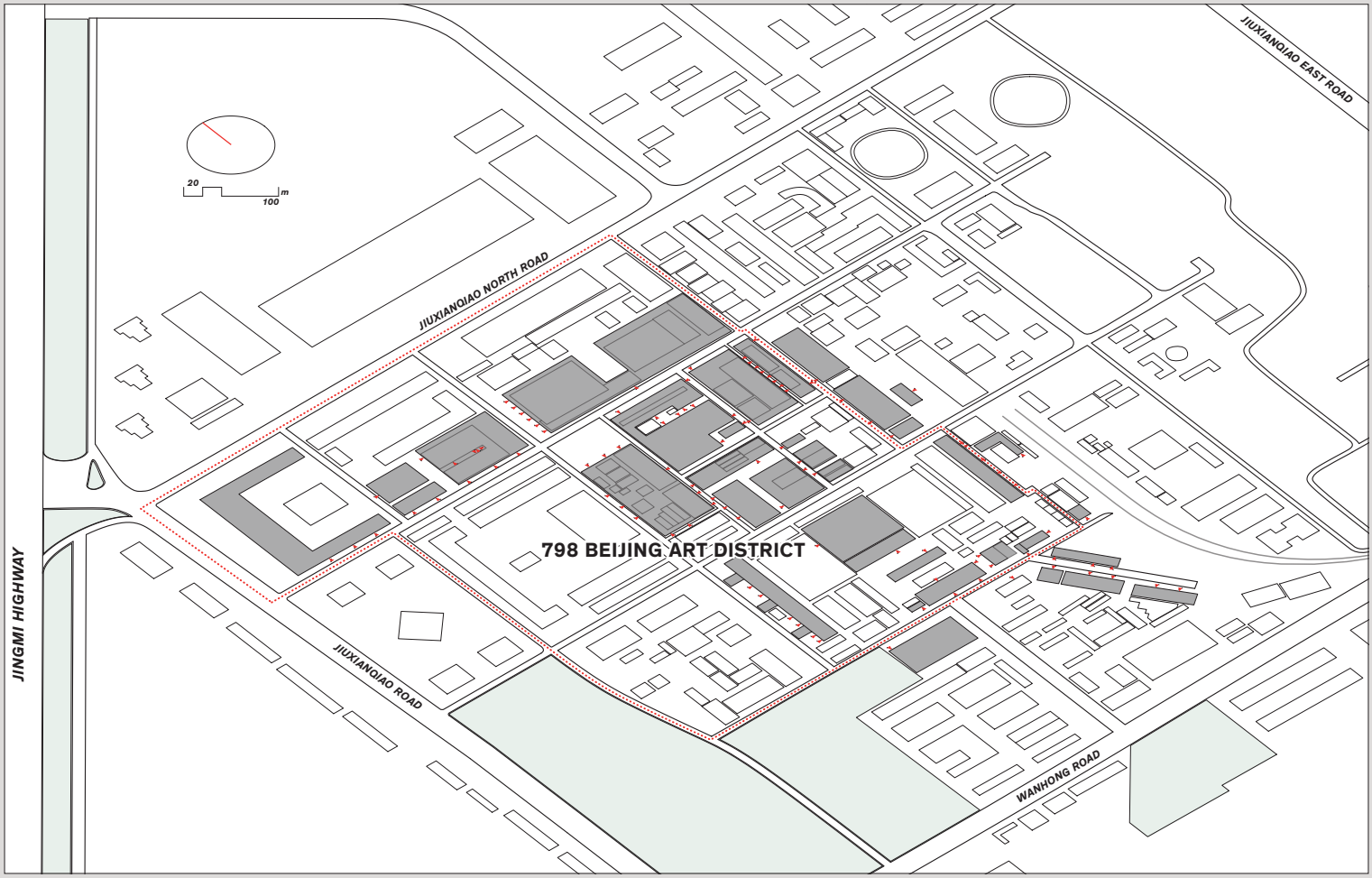
The Beijing 798 Art District in Context

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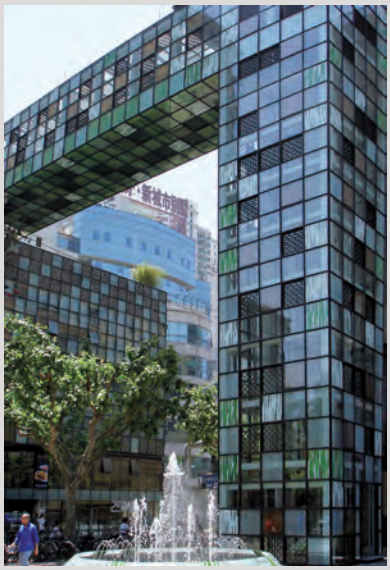

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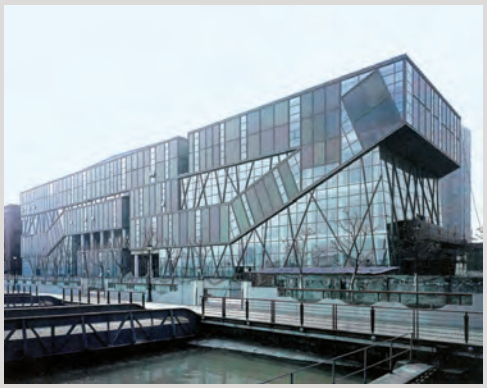

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Factory Artscape at 798, Beijing (Peter Rowe)

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New Studio and Exhibition Space at 798, Beijing (Peter Rowe)

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Bridge 8 in Shanghai (Peter Rowe)

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Café in Bridge 8, Shanghai (Peter Rowe)

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The Ningbo Urban Museum (Courtesy of MADA s.p.a.m.)

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Section of the Ningbo Urban Museum (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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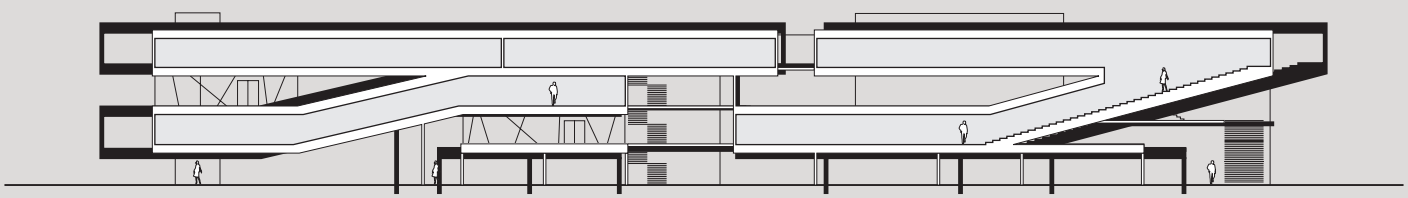

When it was undertaken, the Funanhe Revitalization Project was China's largest comprehensive water-quality and clean-up initiative, combined with flood control and wastewater treatment. Apart from its aquatic focus, the project also involved considerable relocation of residents from outmoded and dilapidated dwellings along the river banks, as well as installation of an extensive system of parks and gardens, also along the waterway. Stone embankments were created in inner-city areas threatened by flooding, along with some re-channeling elsewhere along the rivers, as well as deployment of both structural and non-structural approaches to flood-plain management. Selective restorations, in a traditional manner, were also undertaken when opportunities presented themselves along the river way, including at least one covered bridge characteristic of the area in former times. As conditions improved, the city which had previously turned its back on the rivers became more closely aligned with them. Real estate values, among other aspects, rose, helping to turn formerly blighted locations along the river way into prime locations for residential and mixed-use development.

Amid this recovery and revitalization, one auspicious element within the Funanhe Restoration is the Living Water Park, located on a 2.4-hectare riverbank site to the north of Chengdu's central area. A collaboration between Zhang Jihai – the Director of the Funanhe Restoration Bureau – Betsy Damon – an American environmental artist – and Margie Ruddick – a landscape architect – the park serves as an educational model demonstrating how water can be cleansed by biological means. Completed in 1998 at a modest cost of USD 2.5 million, the main component of the park is a 500-meter long system that filters water through aeration surfaces, anaerobic settling ponds, constructed wetlands and vegetated purifying ponds. Water from the river is pumped in and flows through this system and then returns to the river in a cleansed state. Through observation points along its length, including flow-through sculptures, the system also aims to convey a story about the river's original landscape character, the consequences of pollution and what can be done about it. Within the scheme, references are made to the Sichuan landscape and there is an abundance of vegetation, including rare species from the Mt. Emei area of northern Sichuan.[27] Riverbank terracing provides close access by park goers to the river, as well as living space for amphibians. An amusement pond for children adds further to the parks enjoyment. Cited among the Ministry of Construction's best practices of Chinese human settlement developments for the period 1996 to 2000, the Living Water Park and broader Funanhe Revitalization Project, fall into the long-standing tradition of *dian xing*, or models for emulation.[28] Dating back at least into the Ming Dynasty, *dian xing* was administratively employed to bring actions and habits of mind into alignment with good and preferred practices. This concept also saw application during other periods like, for instance, in the Maoist 'campaigns.' Going considerably further than regulatory controls, these models not only pointed to problems but also indicated how they might be resolved in specific enough terms to be generally applicable and useful. In today's environmentally crisis-gripped milieu in China, these kinds of 'best practices,' or *dian xing*, offer one of the most effective approaches to sustained environmental remediation and eventual improvement.

Also a part of the Minjiang tributary system, the Sha River, Shahe, runs in a wide arc out and then back through the eastern side of Chengdu. It also plays a major role in flood management and is responsible for something on the order of 90 percent of the city's industrial water and significant amounts of its municipal water supply. During earlier development stages, neglect and intense industrialization substantially lowered the river's water quality. Other sources of this impairment also included city waste, raw sewage, deforestation of lands along the river, intrusion of coal silt and indiscriminate disposal of rural garbage. For long periods waste loadings ran well above treatment capacities and by 1999, the Shahe was pronounced virtually dead by knowledgeable authorities. Wildlife and fish life vanished and the river became a severe public health hazard, materially increasing pollution further downstream. This state of affairs also had a reciprocal effect on industrial production, especially of the kind requiring some modicum of clean water. Combined with deteriorating transportation infrastructure, also through neglect of common-property resources, a significant obstruction developed to Chengdu's industrial and economic growth. Wholesale disregard of Shahe's environmental conditions also led to a declination of former recreation facilities

and service amenities associated with the river's banks and surrounding areas.[29]

Around 2001, with widespread recognition of this predicament, the Chengdu Shahe Restoration Project Incorporation was founded. It consisted of a large number of stakeholders in the Shahe's watershed, although primarily government organizations and several influential investment agencies. Some 22 kilometers in length and serving an area of about 12,400 square kilometers including 3,000 hectares of farmland, the sheer reach and importance of the river was considerable. Once organized, the project group then set out to improve the river's water quality, flood control, riparian management, waste disposal and public use.[30] Beyond those involved directly in the Project Incorporation, other stakeholders were actively embraced, including representatives of communities within the project's reach, affected businesses, various design institutions, environmental groups and professional bodies. Partnerships with media also facilitated this co-operation and collaboration. Of primary importance, throughout the project, effective collaboration was underpinned by recognition that ecological improvement, on the one hand, would be accompanied by economic and social benefits, on the other. As one official put it, "environmental protection and sustainable development needed to be achieved within the context of the contemporary enterprise system."[31]

Spanning across inherently different environmental conditions, a multi-faceted water-recycling infrastructure was developed, together with enhancement and enlargement of wastewater treatment systems. Large-scale reforestation and riverbank control measures were carried out, including the relocation away from the river of encroaching housing projects and major industrial facilities. Municipal and rural waste, as well as silt accumulations within the river itself were targeted through large-scale clean-up projects, often involving volunteers, along with a public education campaign aimed to prevent misuse of the river. Historical and cultural sites were enhanced for public recreational use, including several historical bridges. In tandem with environmental improvements, the roadway and related transportation system was substantially re-jiggered, incorporating more river crossings and riverside access points. Parks and natural preserves were also inserted along the length of the Shahe effectively producing a substantial greenbelt around the eastern side of Chengdu. Overall, the project has helped to stabilize water flows, improve water quality for potable and industrial use, and introduce vibrant aquatic and terrestrial bio-diversity to the riverine environment. Ecosystem restoration has also been accompanied by improved community attitudes towards the river and, as with the nearby Funanhe, a higher sense of value in its redevelopment potential and use. Several upper and lower reaches of the Shahe, for instance, are now beginning to play host to high-end housing and mixed-use developments. Recently, other projects to comprehensively recover China's riverine environments have also emerged like the Suzhou Creek Rehabilitation Project in Shanghai, including its Meng Qing Yuan, a public open space similar to Funanhe's Living Water Park.

Over the past half decade, one project that has claimed considerable attention as a likely future model of energy and environmental conservation is Dongtan (literally 'eastern sandbank'), which was designed and master planned by Arup and Partners near the eastern tip of Chongming Island at the mouth of the Changjiang river. Unfortunately and seemingly with little warning, however, the project has been placed on what seems like permanent hold, even as the island has been further opened up by completion of a lengthy bridge crossing connected to the Shanghai's outer ring road in Pudong described earlier.[32] Chongming Island, within the broader administrative ambit of Shanghai is the largest island in China. Currently it is primarily farmland and home to around 700,000 inhabitants, including evacuees from the Three Gorges Dam area up river. In a relatively short time, this population is expected to expand to around two million people. The eastern tip of Chongming is also the location of an internationally famous protected bird habitat – the Ramsar – which as far as ecosystems go is unique in the world. These days, it and neighboring wetland areas host some two million migrating birds, including very rare species, like the Black-faced Spoonbill which is even less numerous in China than the Panda bear. With some 18 ferry crossing routes, Chongming has been an active farming area for some time and, in the process, also the site of marshland filling in order to increase the area of accessible and available farmland. The new bridge, with two more planned on

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General View of Funanhe and Shahe in Chengdu

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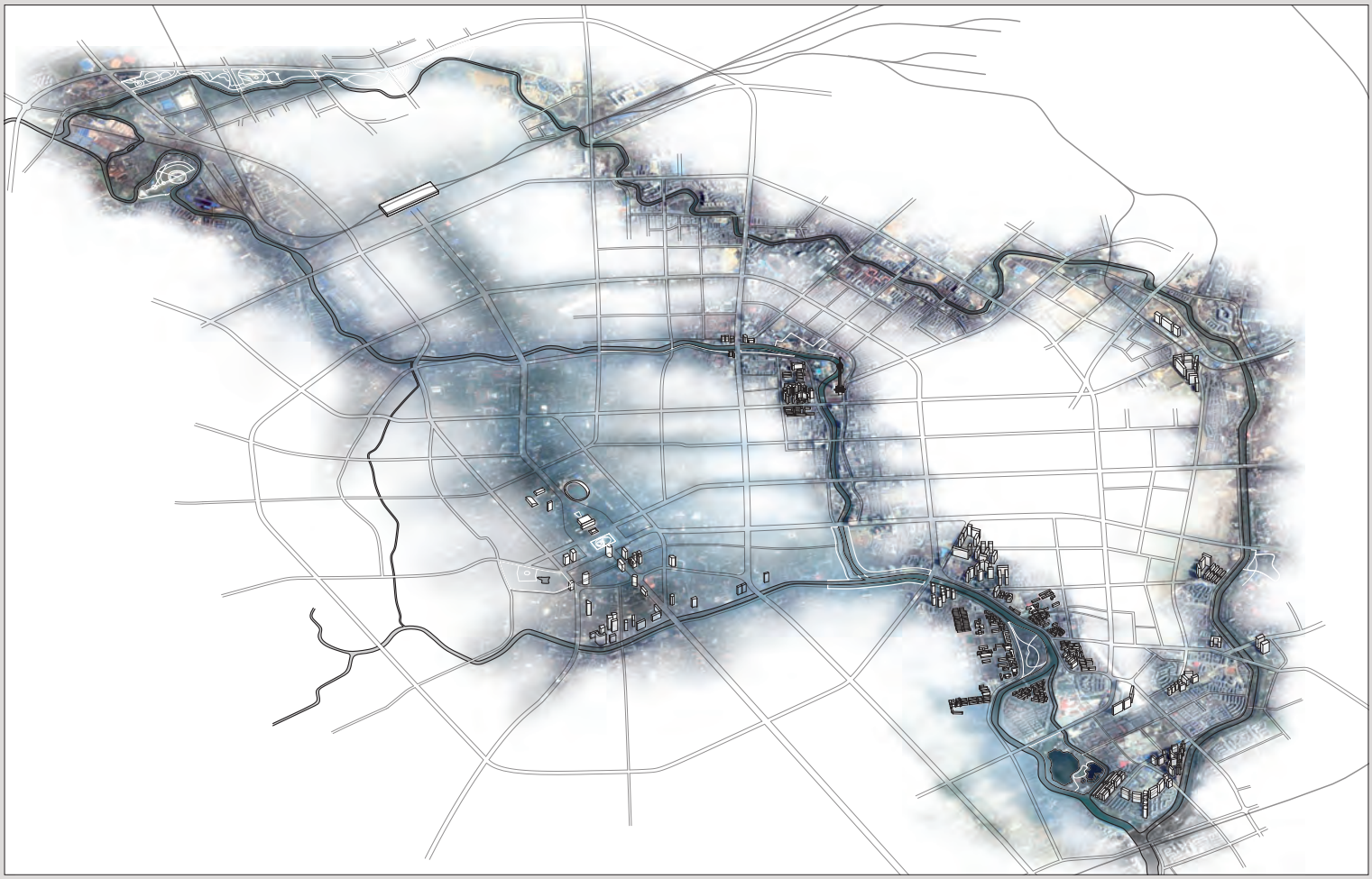
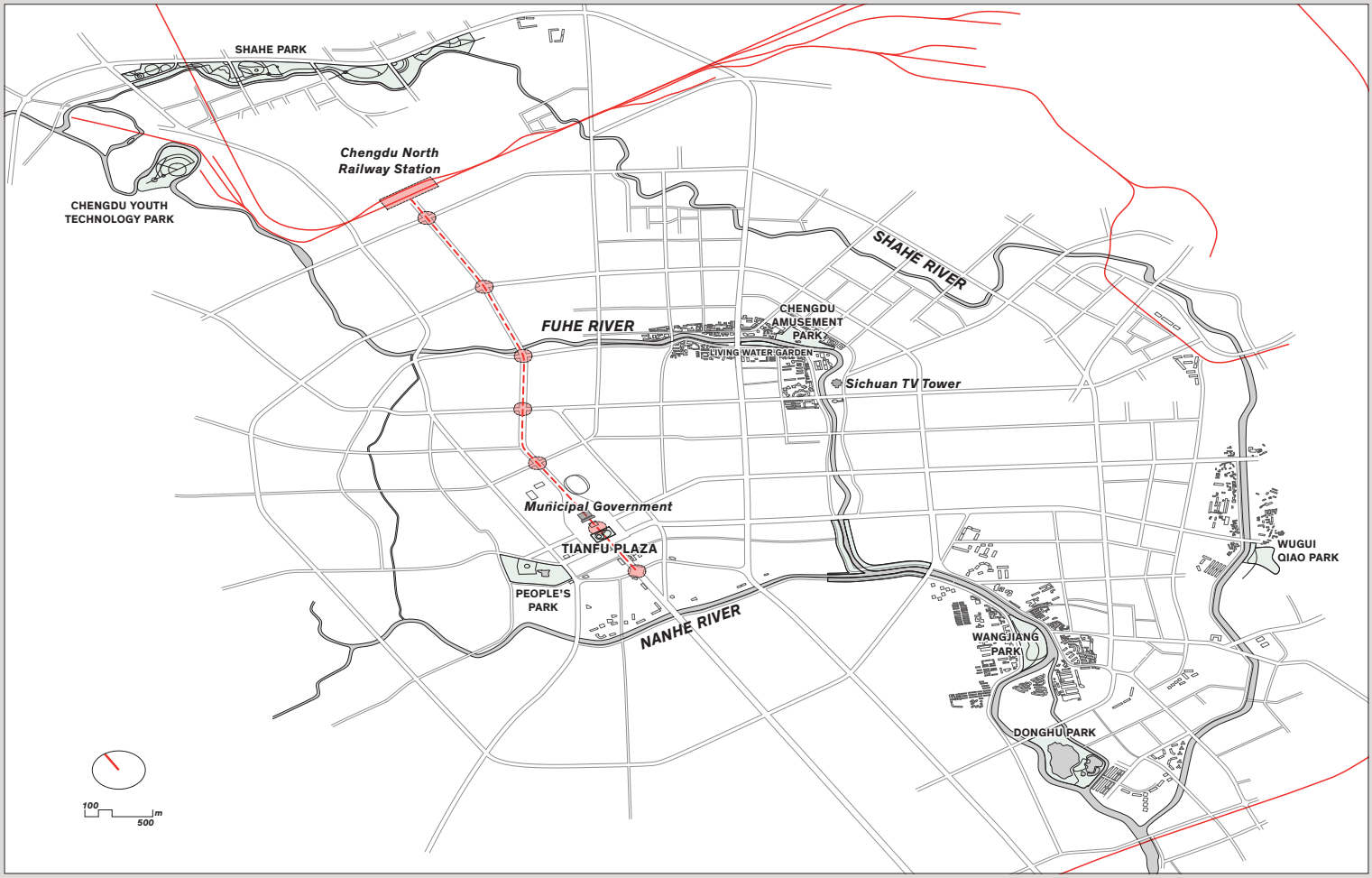
The Funanhe and Shahe Projects in the Context of Chengdu




SHAHE PARK
Chengdu North Railway Station
CHENGDU YOUTH TECHNOLOGY PARK
SHAHE RIVER
FUHE RIVER
CHENGDU AMUSEMENT PARK
LIVING WATER GARDEN
Sichuan TV Tower
Municipal Government
TIANFU PLAZA
PEOPLE'S PARK
NANHE RIVER
WUGUI QIAO PARK
WANGJIANG PARK
DONGHU PARK
100
500
m

the northern Jiangsu side of the island, will ultimately add to the completion of China's extensive highway system. With the Dongtan project, Arup was working for the Shanghai Industrial Investment Corporation (SIIC), which dates back into the 1970s and, like other industrial investment corporations attached to large Chinese cities, is the commercial enterprise arm of the Shanghai government, explicitly involved in profit-seeking property development, among other ventures.[33] In the past, several of these investment corporations have come under close scrutiny by the Central Government for alleged corruption and other shady practices. Nevertheless, they are a large part of the revenue-producing mechanism that drives places like Shanghai forward.

The explicit conservation intention of Dongtan, which came into being with Arup after international agreement between Britain's then Prime Minister Tony Blair and China's President Hu Jintao in 2005, was for the development to be self-sufficient in energy and in food as a purpose-built 'eco-city.' It was also sited next to the Ramsar in order to provide protection for and preservation of this sensitive ecological area. The site provided for planning purposes was very large, at 8,400 hectares, and the eventual population was to be 50,000 inhabitants, comparatively small for a working satellite of Shanghai. The plan before the project was stopped was to create a concentration of three villages penetrated by green space and waterways across a 630-hectare site on the southern edge of Chongming Island. About 40 percent of the site was to be occupied by building with the remaining area in farmland and open space. Agriculture was to be intensive, largely in the form of 'plant factories' with plenty of employment opportunities for locals. The villages were to be comprised of eco-friendly businesses and low-rise, six-storey-high apartments. The road system was designed to discourage private motorized travel, with all dwellings placed within seven minutes of public transport in the form of buses with zero tail-pipe emissions, or water taxis moving along canals within the scheme. By balancing cost savings on items like reduced roads and road maintenance against markups for more efficient buildings, Dongtan was intended to be competitive by conventional cost standards. Energy needs were to be provided by biomass production and solar generation, plugged into a novel load-leveling and compensatory supply system. Peter Head and Arup, part of Dongtan's core design team, estimated that energy use could be reduced by two thirds or more over conventional levels.[34] The first phase, due to open in 2010 with the Shanghai Expo themed along similar lines, was to accommodate 10,000 people. More broadly within the larger plan, a 3.5-kilometer wide swath of farmland at the edge of the Ramsar preserve was to be converted to a wetland, with other swaths given over to eco-farming, horse riding and, curiously, given typically high environmental impacts, to golf.[35]

While no one seems to doubt Arup's prowess and earnestness in pursuing the project, it has received skepticism along the lines of being something of a ruse to deflect criticism from China's more general environmental abuse. Be that as it may, the construction of the highway bridge with island landfall only some 6 kilometers to the west of Dongtan, makes the site quite accessible from central Shanghai, let alone from vast areas of Pudong, with the implication of profits to be better gained from other uses. Also, criticism has been heard with regard to Dongtan's rather obvious attraction and affordability only to a business elite – hardly a general model for broad application in China, at least at this juncture. Also, related technical matters of successful scaling up to large sizes have been raised. All this being said, parallel and subsequent events still point in the direction of China's authenticity in pursuing model or demonstration projects – *dian xing* again – for large-scale eco-developments. Arup themselves reportedly signed three follow-on contracts with SIIC, and the 2008 agreements, reached between China and Singapore at the national level, point in a similar direction towards eco-city development in the Bohai Region adjacent to Tianjin.[36]

A City and Its Stream

One infrastructural and urban design undertaking that aimed at historic and environmental conservation, together with restoration, is the Cheonggyecheon Restoration Project, actively pursued between 2002 and 2005 by the Seoul Metropolitan Government. As alluded to in the introduction, not only was this an attempt to catalyze the economic and material revitalization of the city's sagging inner-city area but it also became the palpable symbol of a turning point in South Korean perceptions about governance and the quality of their urbanization that

had been building for some time. Central to the 2002 mayoral election in Seoul was a public referendum on the premise of being able to turn circumstances around quickly in the central city, through an ambitious public works project in the direction of reinvigorated investment opportunities, improved environmental amenity, historical recovery and socio-economic advancement. Among the candidates, Myung-bak Lee, now the President of the Republic of Korea, strongly advocated for this position and, more importantly, for immediate and rapid action. In doing so he came from behind to win the election. Shortly afterwards, work began on the Cheonggyecheon Restoration Project, as well as on further plans and projects in its vicinity.[37]

Cheonggyecheon's presence in what is now Seoul, South Korea, dates from the late 14th century, when the area and eventual walled city of Hanyang was designated as the capital of the Joseon Dynasty (1394-1910). At the time, Cheonggyecheon was a relatively small stream running from west to east, roughly through the center of what became the capital, as a tributary of the much larger Han River nearby to the south. From Hanyang's foundation Cheonggyecheon enjoyed geomantic significance in the arrangement of wind, water and other orientation corridors associated with cosmic breath (Korean *ki*) which strongly characterized the form and structure of the emerging city. The stream also supplied water for urban inhabitants and served as something of a border within the walled city, broadly separating the southern commoner quarters from the favorably solar-facing aristocratic precincts to the north. Not satisfied with the somewhat ephemeral stream or its natural condition, which on occasion could carry devastating flood waters, rulers in the Joseon Dynasty, starting with its founder King Taejo, undertook rectification activities. In 1411, for instance, a water management authority (*gaecheondogam*) was created by King Taejong and 52,800 people were mobilized for large-scale stream construction entailing embankments and channel widening. At the same time the Gwangtong Bridge was built leading across the stream in the direction of the palace precincts to the north. Later, in 1441, King Sejong installed a water marker in the Majeongyo Bridge to monitor water levels, while at much the same time creating another authority to periodically oversee repairs, maintenance and flood protection activities. Around this time the stream also became used as a sewer system. Much later, towards the end of the 18th century, King Yeongjo mobilized 200,000 people for 57 days in order to dredge the stream, straighten it and further reinforce its edges with embankments reinforced with stone.[38] If nothing else, this succession of public work activities suggest a concern on the part of the Josean rulers for the public safety, if not health, of their subjects and the significance of Cheonggyecheon to the city's infrastructure.

During the Japanese colonial occupation over much of the first half of the 20th century (1910-1945), an orientation toward public safety *vis-à-vis* flooding continued, together with a rising concern for public health. Cheonggyecheon underwent progressive straightening and further embankment, as well as being used as a conduit right-of-way for an area-wide sewer system. Dredging of the stream at regular intervals begun during the Joseon Dynasty, was continued by the Japanese through a periodic budget allocation from the central government. This was also the time at which Cheonggyecheon was called by its present name, which meant 'clean water' in Japanese. The Korean, in fact, was *gaecheon*, meaning 'open stream.' Korean as well as some Japanese factories were also constructed along the by now reasonably well-serviced areas bordering the stream. These aggregations also began to establish the merchant and light-industrial businesses that became a persistent feature of the area just to the east of the Central Business District. In 1926 the Japanese also began to formulate a plan to cover Cheonggyecheon with a reinforced-concrete deck. This plan, largely in the service of eradicating the outmoded appearance of a deteriorating water body, was later abandoned due to concerns about drainage during flood events. Then, between 1937 and 1942, work was undertaken, covering Cheonggyecheon in its upstream reaches between Taepyeongno and Gwangtongyo – near the main north-south roadway on axis with Gyeongbok Palace and what would become the fulcrum of the city's Central Business District. A mixture of low-rise building was then developed covering over much of the deck, along with a roadway.[39]

In the aftermath of the birth of the Republic of Korea in 1948 and the later civil war between North and South Korea, Cheonggyecheon finally became covered, although this time to make way for a broad transportation artery. Extending over 6

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--- 1
Living Water Park at Funanhe, Chengdu (Courtesy of Betsy Damon)

--- 2
Filtration at the Living Water Park, Funanhe (Courtesy of Betsy Damon)

--- 3
Settling Pond at Living Water Park, Funanhe (Courtesy of Betsy Damon)

--- 4
Rectification of the Shahe, Chengdu (Peter Rowe)

--- 5
Park and Water Basins along the Shahe, Chengdu (Peter Rowe)

--- 6
Plan of the Living Water Park, Chengdu (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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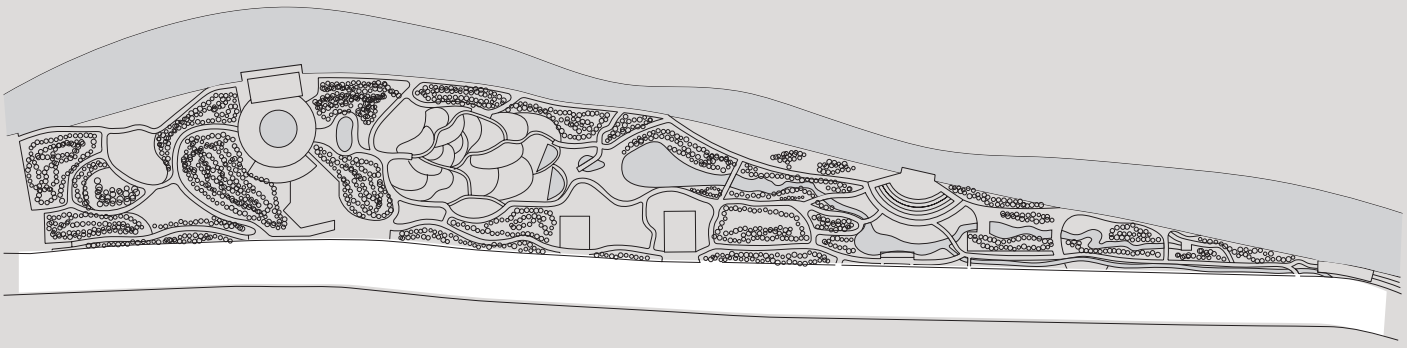

kilometers from Mojeongyo in the west to the Sindap Railway Bridge downstream in the east, full-scale work began on the roadway in 1958 and took almost several decades to complete. Over 240,000 people were mobilized as a reinforced-concrete deck on columns was placed into the stream bed and along its sides, together with drainage and sewer conduits. Consistent with Chung-hee Park's and the military junta's rather narrow production-oriented vision of modernization, an elevated expressway was also added above the at-grade roadworks between 1967 and 1976. Clearly, modernity was being identified with at least some of the trappings of having arrived in the automobile era and of having sufficient technical progress to build up-to-the-minute roadway infrastructure. Also being advanced at much the same time was high-rise apartment living, again being closely associated with having arrived in the modern world. Nearby to the Cheonggyecheon right-of-way, the 3.1 Samil Building – a Miesian steel and glass tower – at the junction with the elevated Samil Bypass leading to Namsan Tunnel No. 1, rose up and became another symbol of progress. So too was the avant-garde Sewoon Sangga complex, built on both sides of the Cheonggyecheon right-of-way in a tangential, north-south direction in a former firebreak cut through the dense urban fabric during the Japanese occupation. This remarkable multi-storey, horizontal, almost 1-kilometer long mixed-use project by Soo-geun Kim was made up of apartments, offices, commercial retail space and a hotel, all raised up on *pilotis* and interconnected with 'sky streets.' In fact, it was one of the few buildings realized anywhere in the world at the time that closely conformed to the academically influential 'Team 10' urban-architectural doctrine.[40]

Then, from around 1992 onwards, the heavily traveled expressway was subjected to increasing scrutiny and continued repair. Ultimately, it was deemed to be unsustainable by the Korean Society of Civil Engineering.[41] Over this period Cheonggyecheon was discussed, at least in professional circles and among some conservationists, leading to the idea of a stream restoration project with likely cultural, environmental and economic benefits. After winning the mayoral election, Myung-bak Lee embarked in earnest on the concept, with an intensive period of study and design dating from 2003, and then a final opening of the project to the public in October of 2005. With a construction period of only about 27 months, and at a cost of only 8 percent over its original budget at the tune of USD 380 million, Mayor Lee was vindicated in his pre-election position that the project could be completed rapidly and efficiently.[42] Today, the physical essence of Cheonggyecheon is a linear public space and stream recreation that originates at Cheonggye Plaza next to Gwangtongyo, amid a mostly high-rise building environment, and extends for a length of 6 kilometers. It is broadly comprised of three segments ranging from intensely urban, through gentler enclosure, into a more natural domain dominated by a riparian ecosystem. Although lauded by many, the project has not been without controversy and has required a balancing of historical, ecological and urban development factors. Moreover, its construction and continued embellishment is also intertwined with both past and more recent projects to reinvigorate central Seoul. These include earlier and ongoing efforts of conservation of the traditional building stock and ambience of nearby Insa-dong and Bukchon.[43] Also involved are the proposed four north-south axes and developments envisaged to transect Cheonggyecheon, with a 'historic corridor' on the west, a 'digital media corridor' and 'green corridor' towards the center, and a 'creative corridor' on the east. The 'historic corridor' has already received attention with the Gwanghwamun Plaza development in front of Gyeongbok Palace and the 'creative corridor' is currently receiving attention with the construction of the Dongdaemun Design Plaza and Park project. The 'green corridor,' however, eventually linking the Biwon Garden and Changdeok Palace through the Sewoon Sangga site to Namsan Mountain on the south, remains to be realized.[44]

Restoration of Cheonggyecheon got underway in 2003, based on a bid proposal prepared by the Seoul Metropolitan Government, the sole proprietor and funding source for the project. Bidding called for a fast-tracked design-build project in order to minimize the elapsed time of nuisance and disruption to surrounding areas, as well as to help ensure budgetary economy and simplify project oversight and accountability. Originally Yun-jae Yang, the Head of the Restoration Project Headquarters in City Hall had wanted to divide the project into four segments, but Mayor Lee – as former CEO of Hyundai Construction and who was no stranger to construction

management – decided on three segments in order to improve the economies of scale and the potential quality of bidding participants involved. Engagement of multiple contractors was also part of a broader tacit principle, often seen elsewhere in the project, of involving more rather than fewer participants. In fact, with its tripartite management structure of the Project Headquarters office in City Hall, a relatively large appointed Citizens' Committee to represent public as well as expert opinion and a Research Group to be concerned with broader planning and eventual monitoring issues, the Cheonggyecheon Project was the first public works undertaking in Korea of any size to involve such a broad-based and participatory form of governance. Later on in proceedings tensions arose, however, especially over issues of historic preservation and, to a lesser extent, environmental performance. In any event, the bid process resulted in awards to three consortia of construction and engineering firms. The upstream segment of 2 kilometers went to a group led by Daelim Construction, the middle segment of 2.1 kilometers went to the G.S. Construction group, and the 1.7-kilometer downstream segment went to Hyundai Construction's consortium. Dongil Engineering also played a prominent role in water engineering and management for the project. The storm event planned for throughout was one with a 200-year return cycle. This determination was based partly on the historical level of where the stream once flowed in relationship to the present pedestrian level, as well as allowing a sufficient margin of safety against known and anticipated floods. So far, the new Cheonggyecheon has not burst its banks.[45]

Among issues that needed to be resolved at the outset, the potential problem of severe traffic congestion with the removal of the elevated highway that carried some 168,000 vehicles per day was of particular concern. However, implementation of city-wide traffic improvements ahead of the Project construction, together with local measures proved to be effective. These involved expanded hours of transit service, provision of priority lanes for higher-occupancy vehicles along major thoroughfares, development of alternative routes moving from west to east across the city, circulatory city bus routes expressly servicing the Cheonggyecheon area, increases in parking fines and crackdowns on illegal parking to discourage indiscriminate automobile use, and constant maintenance of four lanes of traffic movement along the sides of the Cheonggyecheon right-of-way.[46] Another issue that required attention was the potential disruption, displacement and loss of business of some significant segment of the 60,000 or so small business enterprises that lined Cheonggyecheon, mainly to the east of the Central Business District and then on downstream past Dongdaemun. Resolution came by way of negotiations and meetings between the merchant committee, formed in 2002, and City Hall, with the City agreeing to provide small business loans for facility improvements, and to purchase goods in the Cheonggyecheon area. Relocation of merchant businesses, on a volunteer basis, was also organized to a new well-serviced facility in the south of Seoul and educational scholarships were made available to the children of merchants and business owners.[47] Dismantling the stream covering and the elevated highway, including the Samil Bypass to the Namsan tunnel, although not easy, proved to be quick and efficient. Despite the height of the Cheonggye Elevated Highway and the need to constantly maintain traffic movement along the sides of the stream corridor, thus limiting access, a record rate of around 1.8 kilometers of demolition per month was sustained. The combined use of wheel saws, special shoring-up techniques to prevent the demolition equipment from falling and transport of large segments of broken-up road away on flat-bed trucks for crushing at remote sites, was largely unprecedented in Korea. In fact, around 96 percent of the old roadway and structural material was recycled.[48]

After the bidding process, some disappointment was expressed in the design quality of submittals. This then precipitated revisions to the overall reference design across all three segments, especially with regard to the basic stream cross-sections. In comparison to the bid proposals, fundamental differences with the new sections included incorporation of two tiers within the overall stream section for the purposes of bringing people closer to the water during times of normal flow and for enlivening the landscape spatially. Asymmetry was also introduced, with a spatial allocation of pedestrian traffic mainly on the northern side and with the more heavily landscaped areas to the southern side. This was also made to improve the spatial quality of the stream corridor and to respond to hydrologic considerations as the water body

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General View of Dongtan Site on Chongming Island

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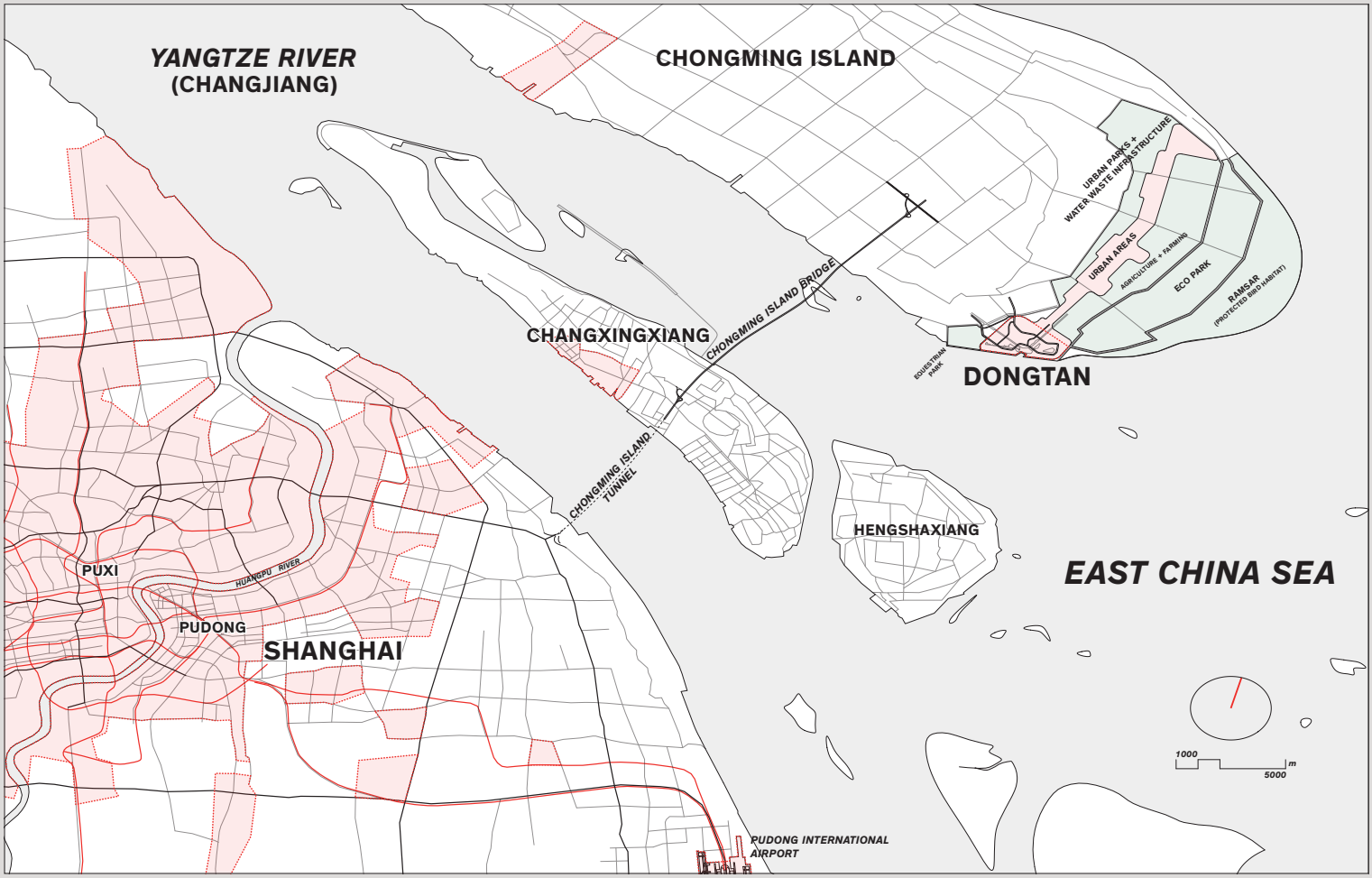
Dongtan on Chongming Island in the Context of Shanghai


YANGTZE RIVER
(CHANGJIANG)
CHONGMING ISLAND
URBAN PARKS +
WATER WASTE INFRASTRUCTURE
URBAN AREAS
AGRICULTURE + FARMING
ECO PARK
RAMSAR
(PROTECTED BIRD HABITAT)
CHONGMING ISLAND BRIDGE
CHANGXINGXIANG
EQUESTRIAN PARK
DONGTAN
CHONGMING ISLAND TUNNEL
HENGSHAXIANG
EAST CHINA SEA
PUXI
HUANGPU RIVER
PUDONG
SHANGHAI
1000
5000
m
PUDONG INTERNATIONAL AIRPORT

meandered downstream. As noted earlier, historically and otherwise, Cheonggyecheon was an ephemeral stream, even if prone to violent flooding. The constant water flow required by the reconstruction, or rather the stream recreation, was supplied by artificial means from the basements of nearby subway stations but mainly by pumping water back upstream from a treatment plant near the Han River. This was not the only solution and drew criticism from environmentalists who seemed to prefer a much more complicated, expensive, though more environmentally appropriate dispersed system of stormwater and sewage treatment feeding directly into the stream. Nevertheless, cost and time savings won out as they did with the general combined stormwater and sewage discharge system employed in the project, *in lieu* of a more modern separated system. Along the stream, the modified cross-sections resulted in both low-bank and high-bank conditions, consistent with the rise and fall of landscape components, with qualities varying from hard-edged circumstances to softer natural edges where space permitted. The high-bank conditions were typically comprised of masonry walls designed to recall the stonework of the earlier embankments of the Joseon Dynasty. A total vegetated area in excess of 6.4 hectares was planted primarily with native species of trees, shrubs and grasses. In addition a total of 2,270 street trees were installed along both sides of the stream channel, with planting conditions varying according to local circumstances. There were also nine fountains installed at various points along the stream's length and numerous detention ponds, stepping-stone devices and waterfront decks were installed. The positive impact on aquatic and wildlife species was almost immediate in both number and diversity. The heat island effect of the otherwise paved urban area was also noticeably ameliorated as was the monitored air quality.[49]

Bridge crossings were another prominent aspect of the project, with a total of 22 in number varying in length from 20 meters to 90 meters in downstream locations. Seven were for pedestrian use only. One was a restoration of an ancient structure, the ruins of which were discovered in the earlier entombed stream – the Gwangtonggyo Bridge. While another was a reinterpretation of an older bridge – the Supyogyo – the remains of which were erected in a public park during the late 1950s. The other new bridges are all unique and, seen as a group, are widely different in design character. Some, usually carrying heavy road traffic, are relatively straightforward, with particular embellishments along the outer edges, accommodating pedestrian movement. Others, and particularly pedestrian bridges, are effusive in shape and form, often drawing on a well-tried contemporary palette of arches and suspension supports. One explanation offered for the wide variation in forms was local contextual responses. More plausibly, an argument can be made in favor of an overall populist approach, within which variety and eclecticism certainly have their places, as do other fanciful flourishes which aim to grab the attention of passersby and deflect any hint of an overarching authoritarian presence. A companion to the bridges and landscaping at Cheonggyecheon is skillful night lighting, both to provide sufficient ambient illumination to make occupancy of the public spaces comfortable and also to lend a certain drama and vivacity to the night scene, as well as encouraging, welcoming and delighting night-time use. After all, one of the overall ambitions of the project was to bring people back into the central city and particularly in the evenings. Despite these embellishments and the landscape asymmetries, the overall presence of a more or less uniform stream channel remains strong. Whether it is too strong is perhaps debatable, given the pressing exigencies of adequately providing flood protection and responding to situational land-use related right-of-way constraints. Nevertheless, the sort of variation that might have been imagined along the otherwise three relatively distinct segments, including reference to them in broader master plans, is difficult to really discern. Viewed more positively, efforts to provide plaza space and street setbacks adjoining the stream corridor are to be applauded. Not only do they allow for a much welcomed and wider presence of the linear public space within the central city, but they also leave open the possibility of later further reconstruction of the stream section should the motivation and wherewithal arise.

Within the Restoration Project, public art also played a role. Major pieces included the upward spiraling shell-like form of 'Spring' by Claes Oldenburg with Coosje van Bruggen. Prominently located at the head of the Cheonggye Plaza, this sculpture signals the beginning of the project. Also on display are a number of wall murals. One with a historical theme is

a reproduction in glazed ceramic tiles of a painting of King Jeongjo's ceremonial journey to Hwaseong where, out of deference to his majesty, his presence is only depicted by his horse. Another with a popular theme is the 'Wall of Hope,' also in glazed ceramic tile, where about 20,000 Seoulites, students, displaced North Koreans and overseas Koreans participated in collectively making this 50-meter long mural. Still, other art works represent former functions and specific sites along the stream, like areas on the banks where laundry was washed on a daily basis, or where people crossed the stream at low ebb on foot.[50] The most significant building within the project is the Cheonggyecheon Cultural Center by Junglim Architects. Undertaken in 2003 and completed in 2005, the building occupies a narrow site of 0.25 hectares in area beside the road running alongside the stream at the upper level. The Center is relatively small at 1,470 square meters in floor area, and rises up four levels mainly as a continuous sloping ramp to a roof observatory at the top.[51] This outwardly glazed 'slopeway' ostensibly makes an analogy between the flow of participants in the center to the flow of water in Cheonggyecheon outside. The primary function of the Center is the display of the history and culture at various times along Cheonggyecheon, part of which includes reconstruction of portion of the dilapidated shanties that once lined the stream shortly after the end of the civil war. Within the center are seminar rooms for various public functions and an auditorium. Expansive views of Cheonggyecheon are afforded from the observation deck, corresponding to the same level as the expressway overpass that was there before.

As mentioned, preservation and conservation activities began to gain traction in Seoul in the vicinity of Cheonggyecheon in the late 1980s and early 90s, well before the stream restoration. In addition to still earlier work on palaces and other major monuments, at stake were the lane environments of the *hanok*, or traditional Korean houses that remained in the area. A little like the *roji* of Tokyo, the *hutong* of Beijing or the *lilong* of Shanghai, these were neighborhoods comprised of low courtyard houses linked together to form cohesive segments of urban fabric, with perhaps the major difference being the dendritic quality of the lane geometries in Korea, especially up the hillsides of the prevalent topography in the area. Insa-dong and particularly the Bukchon area stretching up beside Gyeongbok Palace and on the northern side of Cheonggyecheon began to receive attention in the lead up to Seoul's hosting of the Olympic Games in 1988. By 1990, the Bukchon Area Restoration Project was the first expansion of preservation activity in the city from spot or localized interventions into ones that were area-wide. Spurred on by the success of this and other projects the government increased funding to historic preservation and conservation activities in 1997 by fourfold.[52] Certainly by 2000, again as mentioned earlier, a more or less complete shift had occurred in policy orientation into preservation and conservation of broader environments away from monuments or singular artifacts concerned solely with the representation of tradition. In fact, the Cheonggyecheon Restoration Project, following on shortly thereafter, was also a beneficiary of this shift in attitude. Insa-dong, for its part, underwent some preservation activity, although most of the urban-architectural attention turned towards conservation of the area's unique ambience, even with necessary upward extensions in building. Long an area of the city inhabited by literati, artisans and artists, Insa-dong was also dotted with antique stores, small restaurants and shops featuring local Korean artifacts and produce.

Emblematic of the ensuing conservation activity was Ssamziegil by Moon-gyu Choi – an exhibition, shopping and restaurant court built in 2005 on a small irregular 500-square meter-site and with a total floor area of some 4,000 square meters, with two floors below grade, including one for parking, and four floors above grade. Notable as something of a reinterpretation of the indigenous courtyard building type, albeit with scalar amplification, Ssamziegil can also be thought of as a vertical extension of the streets around it, by way of its upward turning ramp connected at ground level to the streets at five points. A low roof spanning along the front facade is landscaped and the building is topped by a rooftop café.[53] Both the building footprint and scale are entirely sympathetic to the area and, along with Ssamziegil, there have sprung up a significant number of relatively small three- and four-storey structures in a form of local new vernacular built around vertical pedestrian movement within interior and exterior spaces. The nearby Tukwon Gallery by Moon-sung Kwon, for instance, is another example.

Next Page:

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General View of the Cheonggyecheon Restoration Project in Seoul

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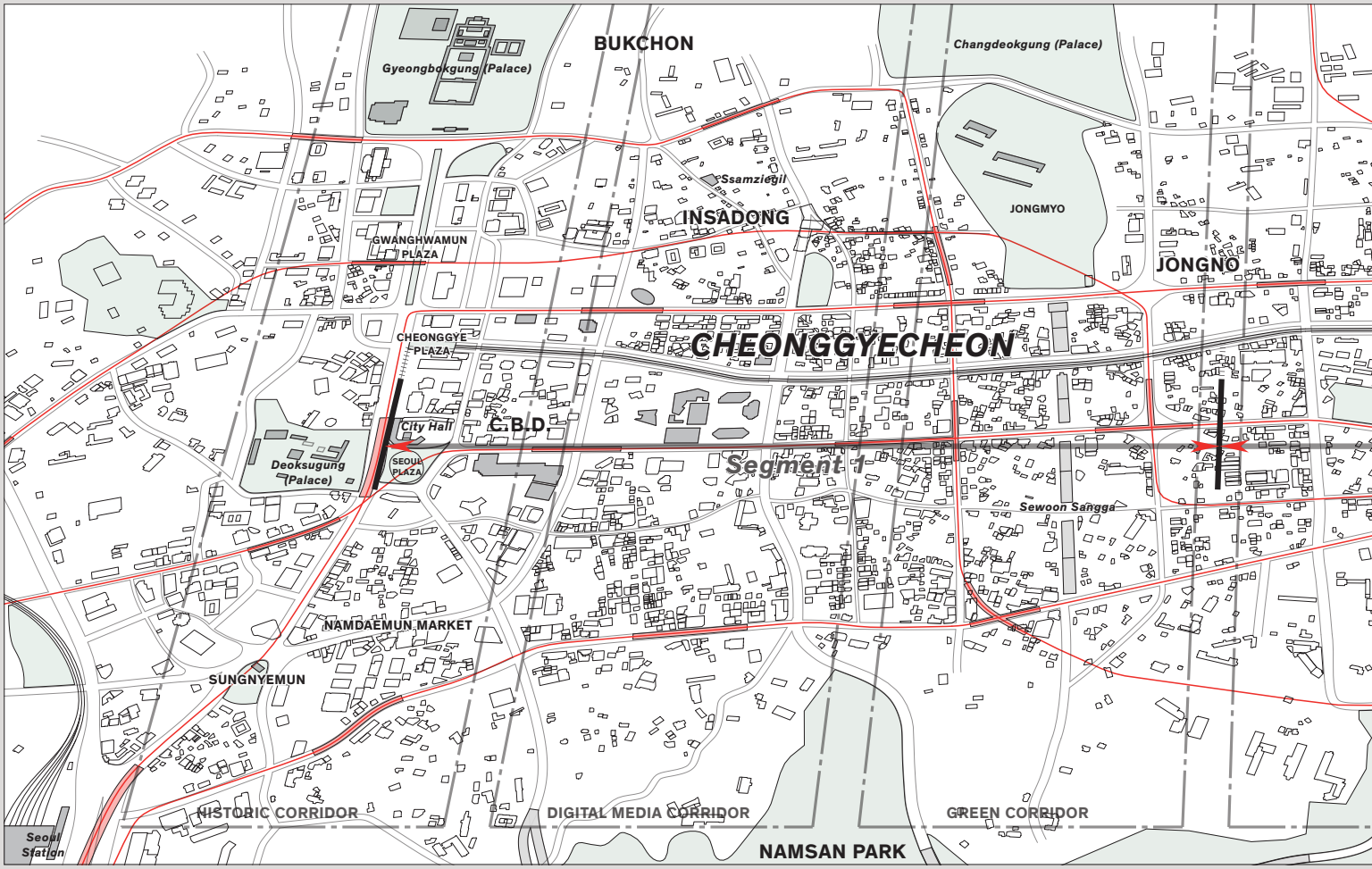
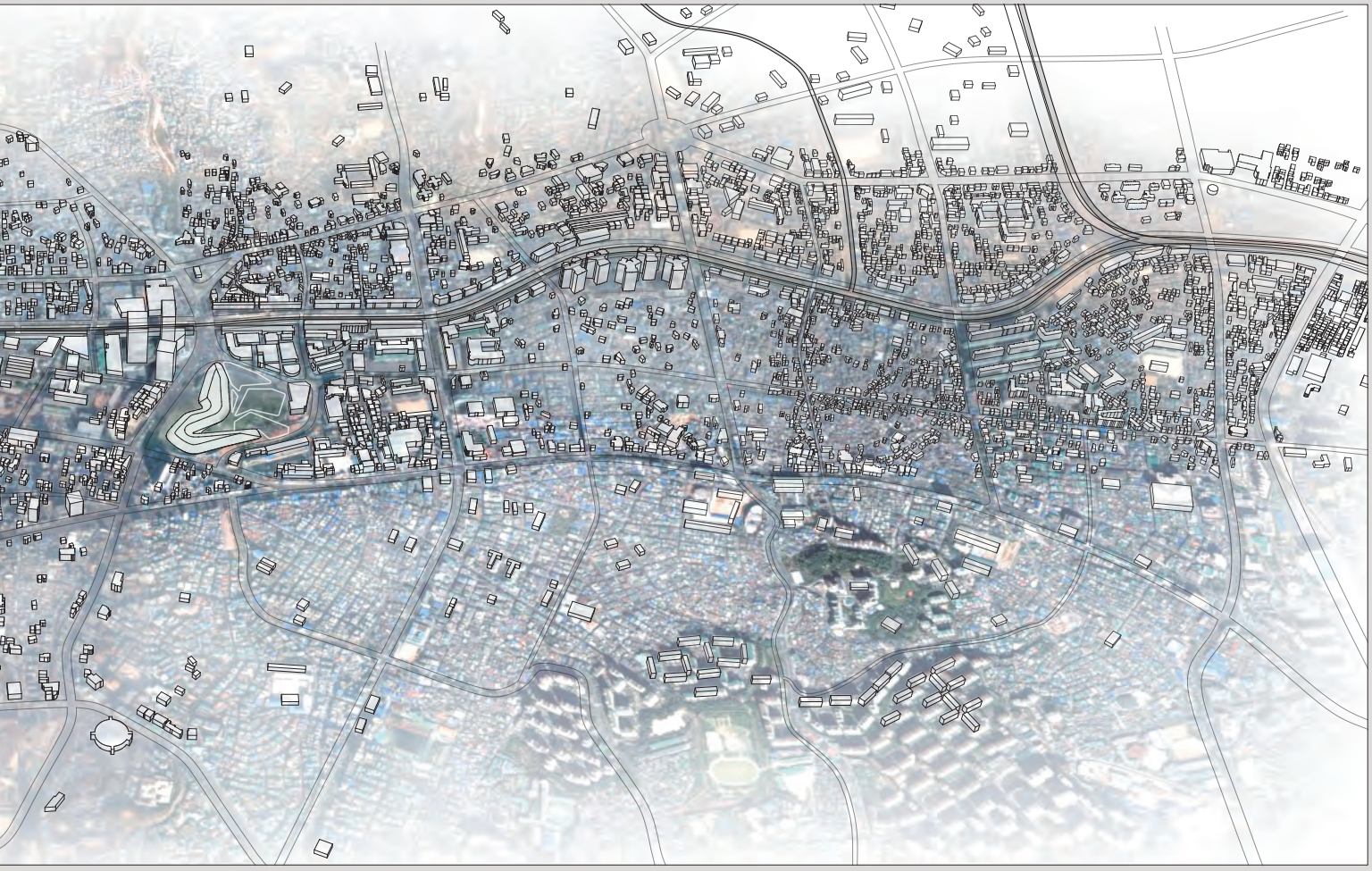
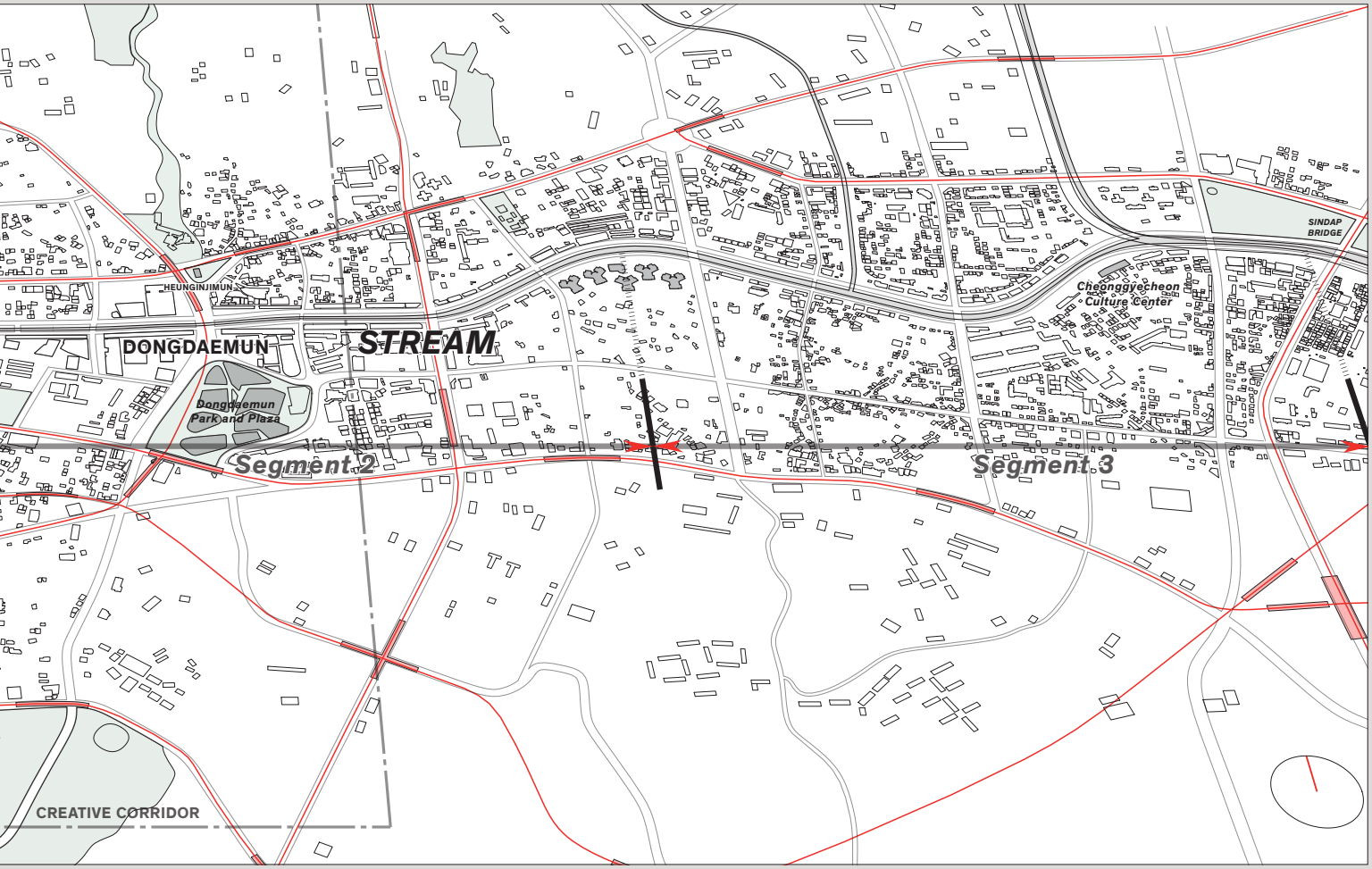
The Cheonggyecheon Restoration Project in the Context of Central Seoul


BUKCHON
Gyeongbokgung (Palace)
Changdeokgung (Palace)
Ssamziegil
INSADONG
JONGMYO
JONGNO
GWANGHWAMUN PLAZA
CHEONGGYE PLAZA
CHEONGGYECHEON
City Hall
C.B.D
SEOUL PLAZA
Deoksugung (Palace)
Segment 1
Sewoon Sangga
NAMDAEMUN MARKET
SUNGNYEMUN
HISTORIC CORRIDOR
DIGITAL MEDIA CORRIDOR
GREEN CORRIDOR
Seoul Station
NAMSAN PARK




SINDAP
BRIDGE
HEUNGINJIMUN
Cheonggyecheon
Culture Center
DONGDAEMUN
STREAM
Dongdaemun
Park and Plaza
Segment 2
Segment 3
CREATIVE CORRIDOR

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4 ---

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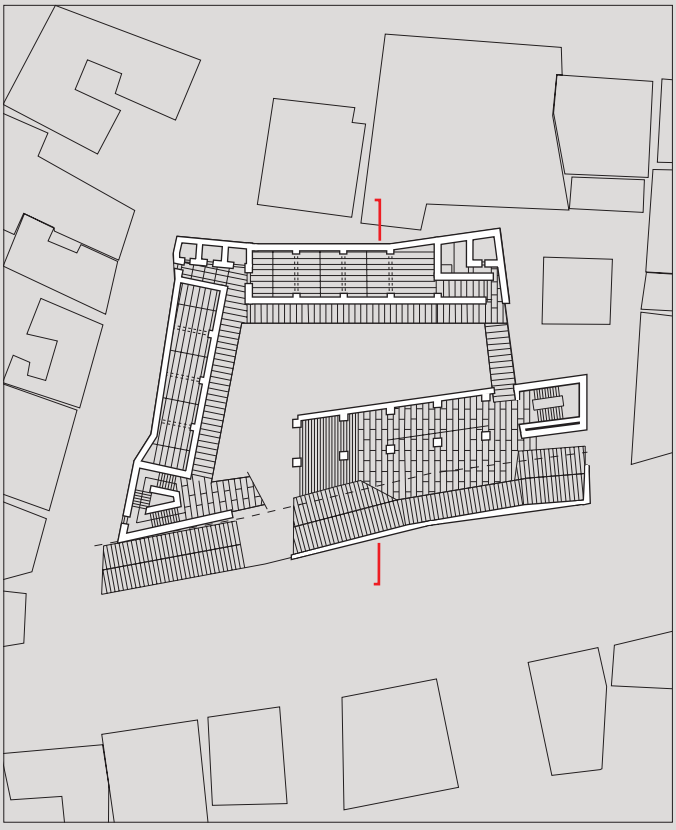

--- 1
The Cheonggyecheon Restoration Project at the Gwangtonggyo Bridge (Courtesy of the Seoul Metropolitan Government)

--- 2
The Cheonggyecheon Restoration Project at the Samil Building and Bridge (Courtesy of the Seoul Metropolitan Government)

--- 3
'Spring' at the Head of the Cheonggyecheon Restoration Project (Courtesy of the Seoul Metropolitan Government)

--- 4
The Court at Ssamziegil in Insa-dong, Seoul (Yongkwan Kim)

--- 5
Plan of Ssamziegil in Insa-dong, Seoul (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 6
Section Through Ssamziegil in Insa-dong, Seoul, Showing 1. Stores and Atrium, 2. Market, and 3. Parking (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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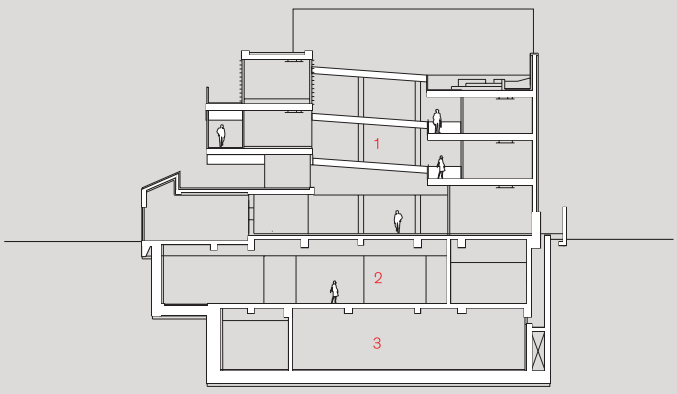

The idea of the four axes running perpendicular to Cheonggyecheon, mentioned earlier, was codified in the Urban Renaissance Masterplan of Seoul's central area of 2007.[54] Fundamentally, it was seen as an enhancement of the east-west civic improvement initiated by the earlier Cheonggyecheon Project and as a means of spreading revitalization in a north-south direction. Indeed, a little like Mayor (now President) Lee, the new mayor of Seoul – Se-hoon Oh – also made reinvigoration and improvement of the city's physical conditions part of his campaign in 2006. Gwanghwamun Plaza materialized within the eastern historical axis in 2008 and 2009. Formerly a 16-lane carriageway, now narrowed down to eight lanes, the earlier roadway terminating on the old gate – Gwanghwamun – with Gyeongbok Palace beyond, made way for an elongated paved plaza some 500 meters in length. Towards the southern end and Cheonggye Plaza, the paving dips down to provide access to underground passages resolving well-traveled pedestrian linkages beneath busy vehicular roadways and providing access to the subway transit system. No movement problems were encountered with this diminution of roadway width, largely due to the reformulation of traffic flows within the central area that accompanied the Cheonggyecheon Restoration Project. Devoid of much in the way of vertical structure, the plaza is furnished at the northern end by a large bronze statue of King Sejong sitting astride an entrance to a below-grade museum, in front of which several navigational and other artifacts are placed. At the other end of the plaza stands a statue of General Sun-sin Yi who defeated the Japanese in the 16th century, thus preserving the integrity of the Hermit Kingdom. In between on the floor of the plaza runs a timeline marking off major events during the period between the 15th century – King Sejong's rule – and 2008. Although criticized from some quarters, especially for the removal of the Gingko trees which now run down the eastern side of the road beside the plaza rather than down the middle, the abstract quality of the plaza does lend a certain solemnity and dignity to the urban space, appropriately lined by some public buildings.

Central to Mayor Oh's plans for further revitalizing the central area was the creation of a park and building complex in the Dongdaemun area associated with the fashion industry and the 'creative axis' of the Urban Renaissance Masterplan. The site strategy which also called for restoration of sections of the ancient wall that surrounded Hanyang, and which was demolished in 1915 by the Japanese, also played host to two athletic stadiums. One was Keijo Stadium, built between 1925 and 1926 in honor of a Japanese prince, and the first modern stadium in Seoul. It seated around 30,000 spectators and served as the city's main stadium until the Jamsil Sports Complex was completed in time to host the 1988 Olympic Games. After that the stadium took on a secondary role, primarily for football, until it was closed in 2008. The other venue was a baseball stadium, built between 1966 and 1968 as an expansion of the original athletic complex, and also something of a symbol of the same sort of modern progress described earlier. It was demolished in 2007 and 2008.[55] An invited international competition for what became known as the Dongdaemun Design Plaza and Park was held in 2007 with the aim of establishing a state-of-the-art public urban park and a design complex that would support a convention center, galleries and a design resource center. After the 1960s, the Dongdaemun area developed into the core of the Korean fashion industry, as fashion-related enterprises concerned with textiles, sewing factories and wholesale as well as retail outlets moved in on the heels of Cheonggyecheon being paved over. Today, it remains the home of intensive fashion markets and related design ventures, giving rise to the idea of providing an infrastructure for design for various kinds of applications. Also at stake was the expression of a new urban landmark, or a strategic point, amidst the relatively linear and homogenous scheme of the adjacent Cheonggyecheon project. More pragmatically an underground annex was also to be provided connecting the complex to the Euljiro Underground Arcade and to the Dongdaemun Subway Station, as well as allowing easy crossing to the eastern and western sides of the fashion district.

The international competition was won by Zaha Hadid Architects with what they referred to as a "metonymic landscape."[56] The proposal then went through further review and development, enjoying the strong support of Mayor Oh. The Seoul Metropolitan Government set up the Dongdaemun Design Plaza Design and Construction Group to oversee the project and, much like at Cheonggyecheon, engaged with relevant governmental, civic and citizen groups, including

the powerful Cabinet of Cultural Properties.[57] Now under construction, Hadid's scheme was cited by the jury for achieving an outstanding harmony between landscape and architecture and between tradition and modernity. In fact, the interactive relationship between architecture and landscape was also present in Sung-yong Joh's second-place proposal and in the vertical garden as a continuous extension of a horizontal park in Steven Holl's third-place scheme. The metonymic aspect, taken here to be substitution of a thing for that of the thing meant, much like a 'crown' for a 'king,' appears to embrace a number of useful circumstances and qualities. First, there is the similitude in scale, cohesion and landscape characteristics of the intertwined park and plaza complex with the former expanses and relatively singular horizontal structures of the stadia. This is by no means a matter of historical recall, to be sure, but it is strongly suggestive. Second, there is the striking, formal novelty of the project, reaching well beyond what might be seen as normal, suggestive of course, of the role of design in the world. This is after all a design complex and raises the otherwise thorny problem about how design, as a program, might be expressed. Third, there are the free-flowing forms passing through the entire site expressing dynamism and dynamic fields of influence, as well as movement between interiors and exteriors and within both, all evoking and even celebrating the inevitability of continual cultural change. Fourth, there are the noticeable references to Korean landscapes and paintings via numerous elements and morphologies, the references themselves being codifications of, and standing in for, not simply nature but human views of nature.

More prosaically, the proposal seems to begin with a new terrain revolving around the line of the reconstruction of the old wall through the site. On one side is the creation of a sheltered park through a reshaped site topography moving around, and rising over building elements, like a small relic museum, galleries, a restaurant and an event area. Also incorporated are archaeological remains laid bare in a park setting. On the other side is the Design Plaza complex proper, with its convention hall, capacious spiral exhibition space and other venues, ostensibly provided especially for small entrepreneurs and for fostering communication and information about design. The outer surface of this structure is to be finished in titanium panels lending a luminescent quality to its sculptural form. The use of its roof also is to act as an extension of the adjacent park. The area of the site is 6.5 hectares, with around 3 hectares dedicated to the park component. The total floor area is 85,000 square meters. A positive economic impact seems to be assured with a likely attraction of some two million people per year, a substantial increase in fashion sales and the creation of many more jobs.[58] During the approval process, Hadid's scheme ran the gauntlet over a number of issues, several of which are central to discussion of highly contemporary architecture in the milieu of restoration and conservation. First, there was the charge of failing to adequately address the site's historical and cultural value, also with peripheral carping that overseas architects somehow fail to make sufficient effort to understand sites and local histories.[59] Primarily, this charge seemed to hinge on an apparent failure to directly recognize the birthplace of Korean modern sports, the site of important political gatherings and the fortress wall. Clearly the last aspect is simply not the case. The wall is strongly in evidence, as are other relics. Also one of the metonymic qualities of the scheme described earlier conveys both the comparatively hermetic, or enclosed, character of the stadia and their landscape-with-building qualities. What is at stake here seems to be a question of the past and a matter of literal nostalgia and conservation, or as Hadid sees it, one of less literal and multiple interpretation. Second, there was the claim that the futuristic-looking project would clash with existing buildings, especially those of historic significance.[60] To begin with, there are few of the latter nearby, save the very obvious gate – Dongdaemun itself. As elsewhere, there are other ways of seeing this kind of relationship besides one of contextual conformance with historic exactitude. New projects, for instance, can be fittingly seen as complementary accompaniments to existing (historic) buildings. Indeed, it is the expressive dissimilarity and novel building-as-landscape, landscape-as-building quality of Hadid's project that appears most likely to be effective in counteracting, congregating, or otherwise spatially organizing, an array of surrounding structures which are anything but coherent or collectively distinctive. Third, there has been the charge of the city pushing an agenda of iconic and distinctive building, that is also wasteful and shallow, at the expense of local identity and history.[61]

Here, it must also be said that this charge extends well beyond the Dongdaemun Design Plaza and Park. There might, in fact, be something to be said in support of this charge in other instances. However, in the case of Hadid's project, the merits of plumping for 'local identity and history' depends rather much on which aspects of 'the past-present-future' of the circumstances involved one emphasizes or presses upon. Clearly the answer here is 'present-future,' with some accommodation of the 'past' and a convergence of strong design with civic identity, which under the prevailing conditions of fashion and creativity seems hardly inappropriate. Finally, there was the issue of population displacements, in this case involving street vendors who had been moved temporarily to the stadium area as a 'flea market,' around about 2004 in the wake of Cheonggyecheon project.[62] Many have since been relocated again in the publicly supported Seoul Folk Flea Market located in nearby Sinsul-dong.

Preceding well before the Urban Renaissance Masterplan of 2007, although now dovetailing into it, is the idea of a Sewoon Sangga redevelopment. Let in 2004, along with the Downtown Plan of the same year, an invited international competition almost exclusively of US-American and European participants was organized seeking proposals for a four-block area divided by the present Sewoon Sangga project and the then yet to be completed Cheonggyecheon Restoration Project. Once again sponsored by the Seoul Metropolitan Government, the program called for mixed-use although primarily for commercial office space with considerable below-grade parking. It was one of several designated site developments closely associated with the ongoing Restoration Project in the mind's eye of the public authority, which was also looking for opportunities to reinvigorate the area beyond the narrower confines of the stream right-of-way. The competition was won by Koetter Kim & Associates, with a well-organized yet fairly conventional approach, consisting of multiple high-rise building on each site forming a coherent focal point along Cheonggyecheon, at the crucial intersection of a linear green space running north south, enabled by the demolition of Sewoon Sangga.[63] To date, this project has not been realized even as numerous buildings within it have been designed, including others by competitors like Machado Silvetti. Partly this situation seems to be due to market uncertainties surrounding site redevelopment. In later versions of the 'green corridor' idea, like those associated with the Urban Renaissance Masterplan, the number of city blocks involved on both sides of Cheonggyecheon are more numerous, the length of the green spine is more emphatic and the program seems to have shifted more in the direction of inner-city living. Returning to the theme of historic preservation, nowadays a case might also be made for preserving and restoring part of the Sewoon Sangga complex. Certainly by 2001, heritage restoration in Korea was officially extended to include 20th-century buildings. Even more recently, discussion was taken up to expand official preservation statutes particularly to significant 'modernist' buildings. If these attitudes prevail it would seem hypocritical to dismissively demolish one of the modern period's path-finding structures, especially within a broader context, like Cheonggyecheon's, that espouses historic conservation. Nevertheless, looking back over the entire Cheonggyecheon experience, historically it has been at the forefront or come to symbolize major paradigm shifts in Korean urbanization. At first, in the Joseon Dynasty, it stood for feudal public improvements and public safety. Then in the post-war era it symbolized, at least in large part, the progressive modernizing impetus of production-oriented development before giving over, in the turn between the 20th and 21st centuries, to matters of amenity and livability.

Playing With Time

As stated at the outset, keeping and reusing buildings and other elements of constructed or supporting natural landscapes is about time and in the manner this chapter started out with, namely resisting, tempering or otherwise interrupting the pervasive hold of new developments. This could be seen at Xintiandi, for instance, and at China Square, or in Beijing's inner-city and in Bukchon. It was also present in otherwise new buildings, like Ssamziegil where an old urban idea or traditional typological reference was brought into play. To a substantial degree, figural representation gave way to adoption of a traditional spatial organizational format. In still other examples, temporal references to past conditions were more abstract even if just as suggestive. One of the metonymic qualities identified with the Dongdaemun Design Plaza and Park was an evocation of the spatiality – both enclosed and open – that was

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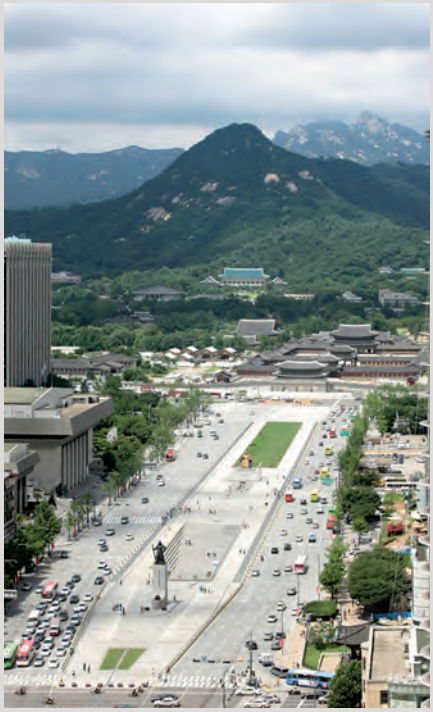

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Gwanghwamun Plaza (Courtesy of the Seoul Metropolitan Government)

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Interior at the Dongdaemun Design Plaza and Park (Peter Rowe)

--- 3
The Dongdaemun Design Plaza and Park (Peter Rowe)

--- 4
The Cheonggyecheon Cultural Center (Peter Rowe)

--- 5
Plan of the Dongdaemun Design Plaza and Park Showing
1. the Design Plaza,
2. the Restored Wall and Park
3. Cheonggyecheon
(Drawn by Jong-Hyun Baek & Pilsoo Maing)

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Sections Through the Dongdaemun Design Plaza and Park (Drawn by Jong-Hyun Baek & Pilsoo Maing)

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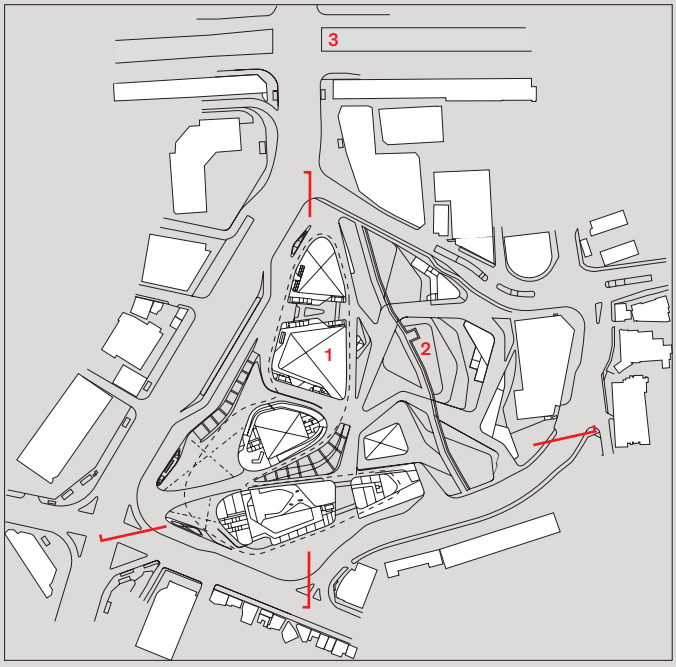

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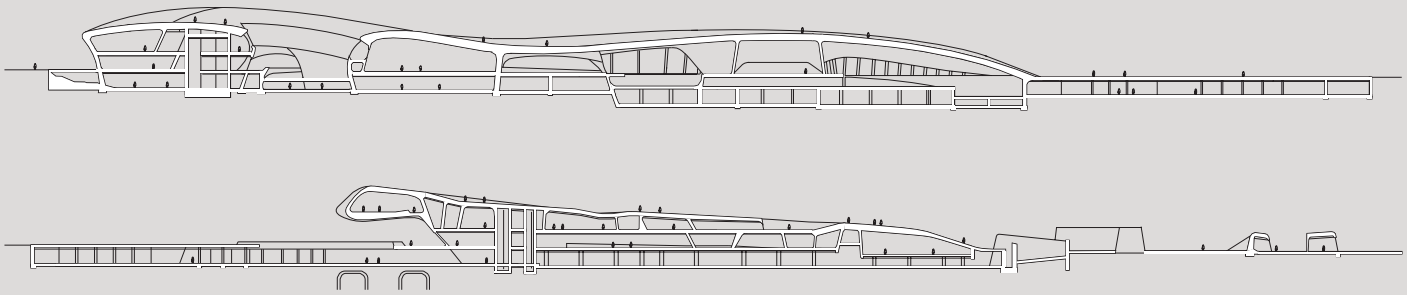

there when its site was occupied by the stadia. Nevertheless, in this and other projects, the forward thrust of time beyond the 'present,' and towards the 'future' also comes in to play. In manipulating 'the past-present-future' of any element of an urban landscape, be it a site, a building, an ecosystem or a landscape construction, emphasis may be placed on the 'past,' as in preservation; the 'past-present,' as in conservation, or on the 'present-future,' also as in conservation but together, more importantly, with sharp breaks from the 'past.' Indeed, a thoroughgoing futuristic proposal can be just as arresting and disruptive of the 'present,' where most urban development seems to take place anyway and almost by default, with at least a vague orientation to the past and to tradition. Therefore, keeping and reusing in the broad senses discussed here usually leave enough latitude in the thing being kept and re-used for its temporal inclination and manifestation to be architecturally orchestrated backwards and/or forwards. A preference for associations with the past is often easier for publics to accept, given positive aspects of familiarity, cultural continuity and the idea of tradition as an act of bringing across from some time beforehand. For others, however, it may be stifling, providing painful recollections of past circumstances rather forgotten, or simply not seen as useful. As aspects of the Cheonggyecheon story show, a 'modern' bearing can enjoy majority support one way at one time and quite another way at other times.

The question of the time-bound definitions of the circumstances and conditions of urban and other forms of development also extends to natural environments and even to standards associated with environmental performance. Back at Cheonggyecheon, for instance, with improved livability and amenity now affordable and widely expected, such standards approach almost pristine natural conditions, in this case with respect to water, whereas in days gone by they did not. Indeed, the keeping and reusing of aspects of natural systems, as at Funanhe, Shahe and Dongtan, discussed here, aim at certain performatory targets among others that might otherwise be entertained or imagined. Mostly they seem to aim at points close to marginally sustainable capacities of the aspects of the systems in question, rather than, say, moving well beyond into more prolific and thriving conditions as they might also do. This stance has at least the appearance of being rock solid, scientific and not subject to dispute. However, it is probably no less cultural and moveable than manipulating the 'past-present-future' of a building as recent global environmental debates have shown.

There are several other aspects of time here that also complicate matters. To begin with, time should not be seen as linear or as entirely serial as in regular installments. Rather it should be regarded as being eventful, as in a chronicle of events and one in which the tempo and concatenation of events rises and falls, as well as being richer in consequences at certain moments compared to others. As such, time might most appropriately be bundled into eras, or chronologies starting with noteworthy events. Going back to the introductory chapter, each of these eras, in turn, is associated with a particular discourse, or manner of speaking about events, and a language that defines what is discussable and by implication, what is desirable and what is not. As briefly outlined earlier, the chronologies and discourse geographies associated with keeping and reusing in both the territories of buildings and natural environments follow this pattern. So too did the longitudinal narrative about Cheonggyecheon in Seoul, South Korea. Today, as many of the projects described here show, the dominant discourse is about conservation and a keeping for future use that is more pervasive than in the past, with a wide variety of nuances, including in the spatial scope of operations among doctrines of adaptive re-use, restoration, reconstruction, and even reinterpretation. Similarly, issues of authenticity seem to cling to essential characterizations of eras that are also more inclusive and less authoritarian. Moreover, in keeping with more discriminating perceptions about changes in discourses and eras worthy of legitimization, historical creep has entered into many contemporary policy discussions about what should be preserved and conserved. Recent reconsideration of modern buildings and complexes in the cases of South Korea and Japan, for instance, point in this direction, as they have done earlier in the West.

Seen from a Western perspective many of the issues raised here about keeping and reusing, as well as approaches taken, might seem like *déjà vu* and arguably this is the case. As mentioned several times earlier, East Asia is a comparative newcomer to this territory. Furthermore, adopting approaches

that have enjoyed success elsewhere is not uncommon. *Ceteris paribus*, the costs of information, as an economist might put it, can be reduced considerably. In short, mimicry can be cost-effective and culturally, as well as environmentally, appropriate. Nevertheless, an apparent sameness in approach may also stem from other considerations. First, the fast pace of development has pushed many places in East Asia to now confront the same of very similar problems with regard to conservation and preservation as in the West, and within the framework of much the same kind of discourse, resources, and, logically enough, available techniques. Copying or not, the outlooks inevitably look much the same. In other words, when eras in the sense defined overlap, the actions which occur are similar. When they do not, as was the case in much of East Asia until its recent emergence from relative poverty and narrowly defined notions or urban development, then similar circumstances, even if they are there intrinsically, can be perceived quite differently, if at all. Second, much is made of the impacts of globalization, particularly in the direction of reducing differences between one place and another. The ubiquity of modern high-rise commercial developments owes its pervasiveness to the presence of international firms, business practices, and the need for similar environments, or so the story goes. Following on from this, a case might then be made that the rise and spread of internationally available perceptions and approaches to urban and environmental issues of conservation and of keeping and reusing elements of constructed environments, more generally, is due to globalization. This claim, however, might also be turned around by asking whether global urban developments owe some of their energy and resilience to the rising presence of these expectations of and approaches to conservation. A little like the use of a language and particularly a special language, they can be shaped to a purpose and be shaping of certain purposes over others in return.[64]

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63 Soo-hyun Chang, 'Sewoon District #4, Urban Redevelopment Project Design Competition', *Space (*November 2004), pp. 52-91

64 Robert McCrum, *Globish* (New York, 2010)

Apparel and fashionable attire have been both sought after and a mark of distinction among the nobility and well-to-do for centuries. Evolution beyond various artisanal activities of dressmakers and drapers into the fashion houses and brand names of today, however, dates from the mid-19th century or thereabouts.[1] In many respects this trend paralleled social modernization, the rise of the middle classes and increasing affluence in societies. For one thing, more widespread and ample leisure time led to demands for various kinds of clothing and accessories for different occasions. For another, expanding roles for women into different walks of life had similar consequences, as did the rise of youth cultures well beyond being seen but not heard. The first name to become famous in the world of fashion was that of Charles Frederick Worth, an Englishman who plied his trade in Paris, opening the house of Worth and Bobergh in 1858 after convincing his financial partner that fashion could move safely beyond a low-class occupation. Indeed, this gamble paid off as he quickly attracted an aristocratic, wealthy and sometimes notorious clientele, including the Empress Eugénie. Continuing on after the Franco-Prussian War, he opened the House of Worth on the Rue de la Paix in 1871.[2] Over this early period fashion establishments were not only the domain of women. During the early 1800s, for instance, Beau Brummell, epitomizing the well-dressed man, patronized tailors congregated together in the Burlington Estates of central London, including several on Savile Row, later to become virtually synonymous with high-quality men's bespoke tailoring. A little later on, no less a person than Napoleon III was also a frequent customer.[3] High fashion or *haute couture* in the modern sense, finally hit its stride around the turn into the 20th century and especially during the period between the two World Wars. Coco Chanel, one of the great fashion innovators, for instance, registered as a *couturière* on 21 Rue Cambon in Paris in 1919.[4] Lanvin and Patou became active in the same area in the 1920s, joined by the Spaniard Cristobal Balenciaga later in the 1930s.[5] Fashion magazines date from much the same period, beginning on a regular basis at least from 1912. In Paris and elsewhere, accessories, shoes and leather goods began to take on brand names, with the likes of Gucci and Prada in Milan, for example, in 1921 and 1923 respectively.[6] Nevertheless, the elements of prestige and exclusivity still surrounded high fashion, not to mention its cost.

After World War II, shifts began to occur in the relatively fledgling fashion industry, at first rather slowly and then more radically. *Haute couture* and the rituals of made-to-measure re-blossomed in Paris, particularly on and in the vicinity of the Rue du Faubourg Saint-Honoré. After entering the fashion house of Pierre Balmain during the war, Christian Dior, for instance, produced his first collection in 1947.[7] Coco Chanel returned to the fashion world in 1954, as did others from the pre-war period like Schiaparelli, Lanvin, Patou and Ferragamo. They were also joined by a group of rising stars like Givenchy, Saint Laurent and Cardin, strongly shaping the fashion world through the 1950s and 60s. The preeminence of Paris began to dwindle, however, as improved communication and trade altered the rapidity and scope with which fashion could be proliferated, along with an expanding and more international clientele.[8] The traditional divide between high society and members of the working class, that had buoyed up the exclusive aspect of fashion, was less able to be justified and became less obvious. Fashionable ready-to-wear apparel began rivaling made-to-measure lines, forcing prominent fashion houses in that direction, certainly by the 1970s if not earlier.[9] More and more people, especially in booming consumer societies, were being enfranchised into the world of fashion, the economies of which were leveling the proverbial playing field on the one hand and diversifying product lines and market niches on the other. Some brand names for certain kinds of goods branched out into others, like Miuccia Prada taking the well-established company successfully into ready-to-wear in the 1980s.[10] Mergers also occurred as within the powerful Louis Vuitton group. Still other circumstances fared less well. Savile Row's tailors, for example, fell into steady decline despite attempts to modernize their venerable style and approach, requiring collective action through the Savile Row Bespoke Association in the 2000s to avoid virtual extinction.[11] Centers of fashion also shifted to places like Milan, London and New York, in addition to Paris, on both the demand and production sides of the business.

CHAPTER SEVEN

STREETS
FASHION ON DISPLAY

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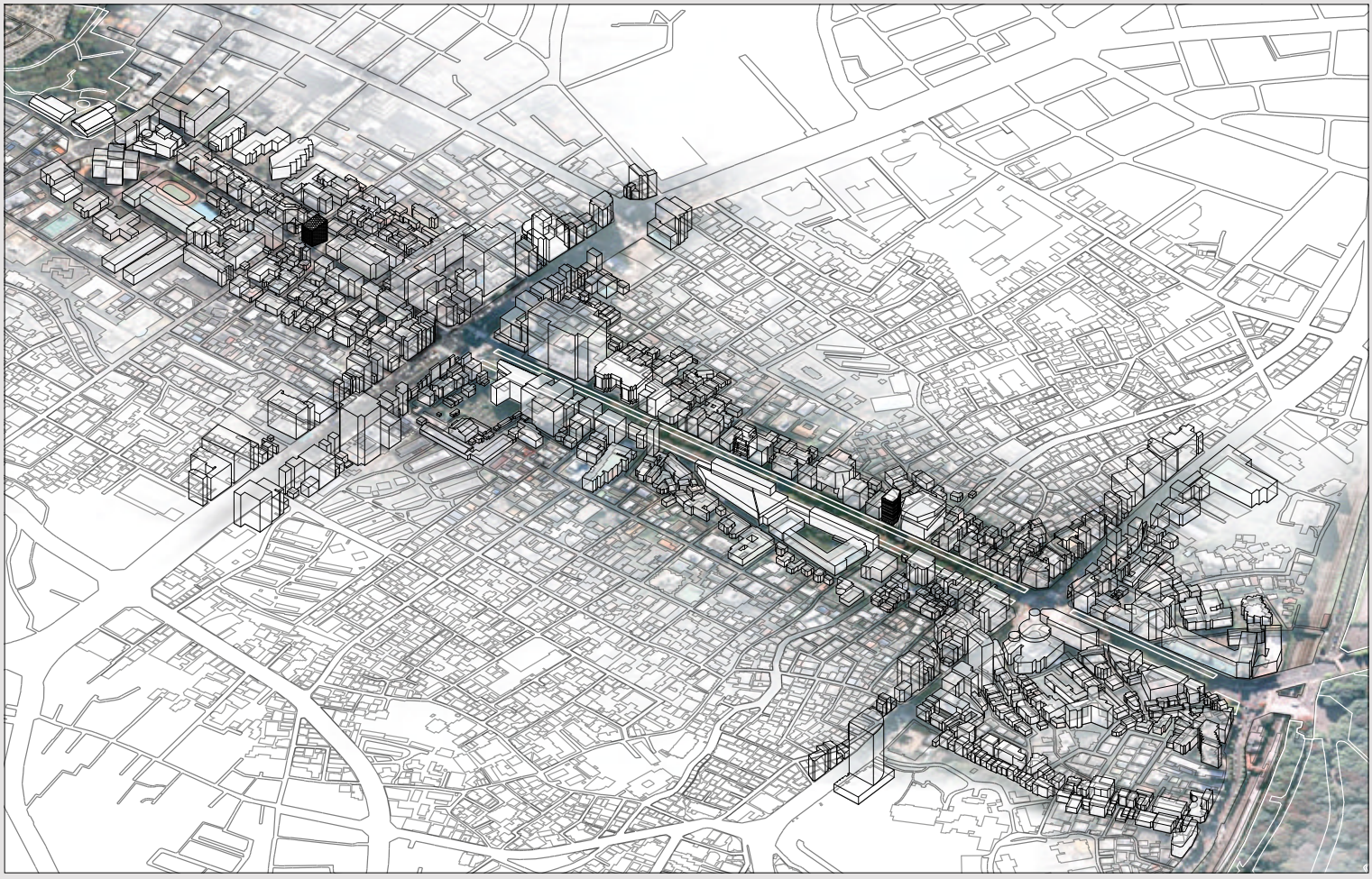
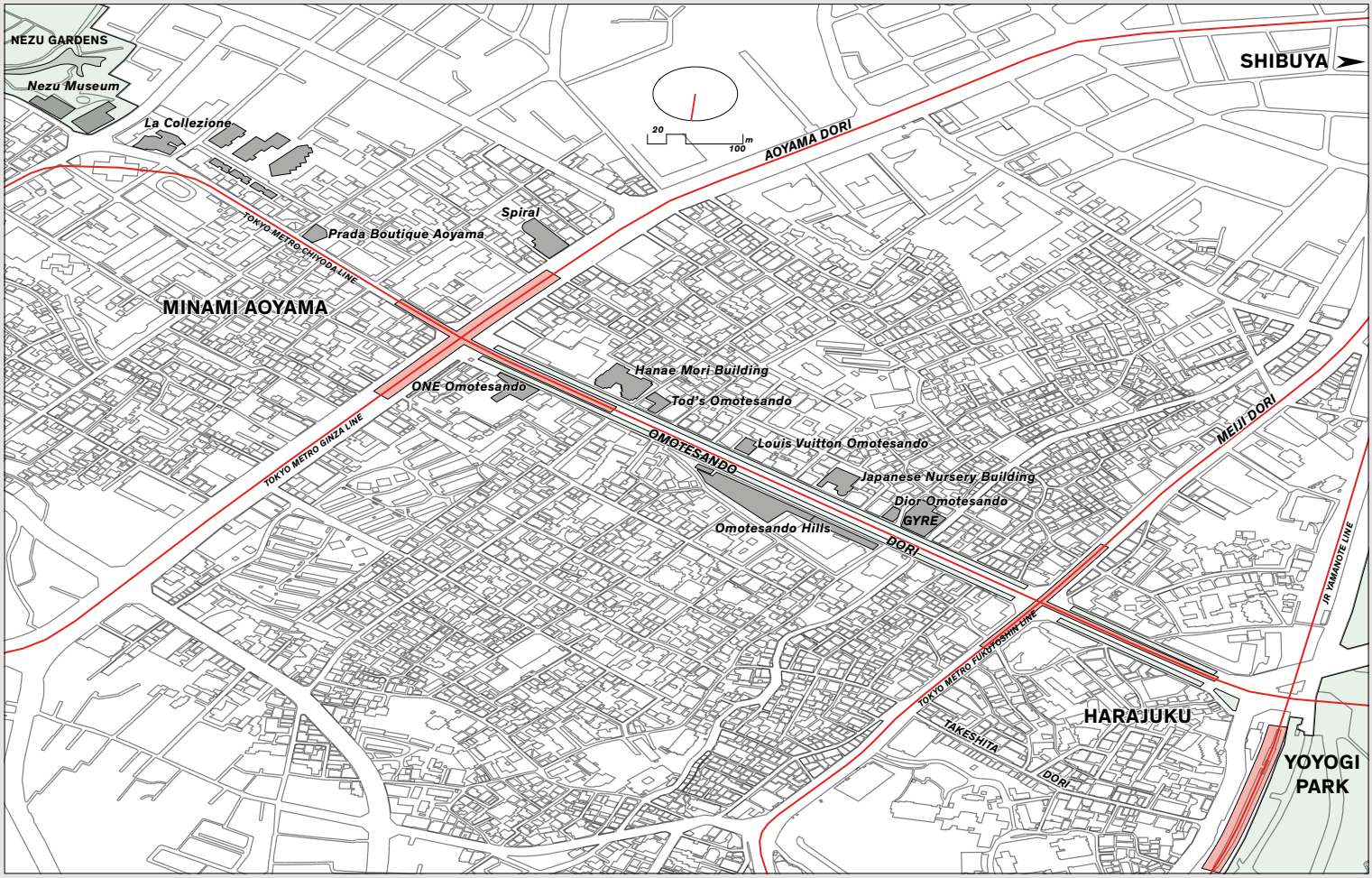
General View of Omotesandō and Its Environs

--- 2
Architecture at Omotesandō in Context




NEZU GARDENS
Nezu Museum
La Collezione
TOKYO METRO CHIYODA LINE
Prada Boutique Aoyama
Spiral
MINAMI AOYAMA
20
100 m
AOYAMA DORI
SHIBUYA
Hanae Mori Building
ONE Omotesando
Tod's Omotesando
TOKYO METRO GINZA LINE
OMOTESANDO
Louis Vuitton Omotesando
Japanese Nursery Building
Dior Omotesando
GYRE
Omotesando Hills
DORI
MEIJI DORI
JR YAMANOTE LINE
TOKYO METRO FUKUTOSHIN LINE
HARAJUKU
TAKESHITA
DORI
YOYOGI
PARK

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--- 1
Louis Vuitton,
Omotesandō
(Shinkenchiku-Sha)

--- 2
Dior, Omotesandō
(Shinkenchiku-Sha)

--- 3
Detail at Prada, Aoyama
(Shinkenchiku-Sha)

--- 4
Prada, Aoyama
(Shinkenchiku-Sha)

--- 5
Interior at Prada,
Aoyama
(Shinkenchiku-Sha)

--- 6
Plan of Prada, Aoyama
(Drawn by Jong-Hyun
Baek & Pilsoo Maing)

--- 7
Section Through Prada,
Aoyama (Drawn
by Jong-Hyun Baek
& Pilsoo Maing)

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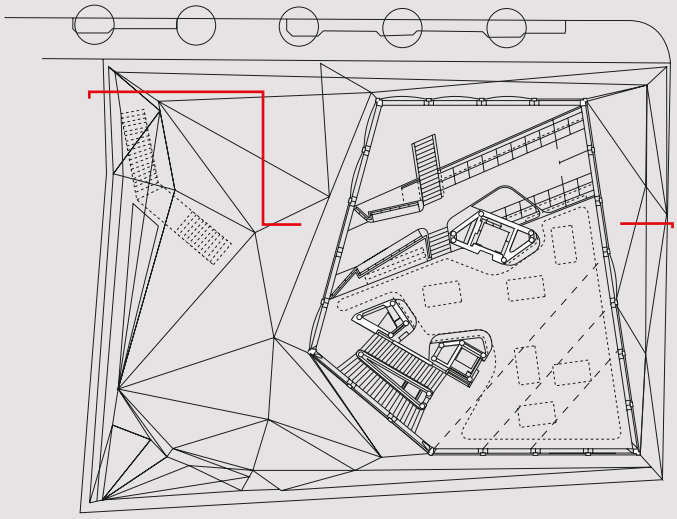

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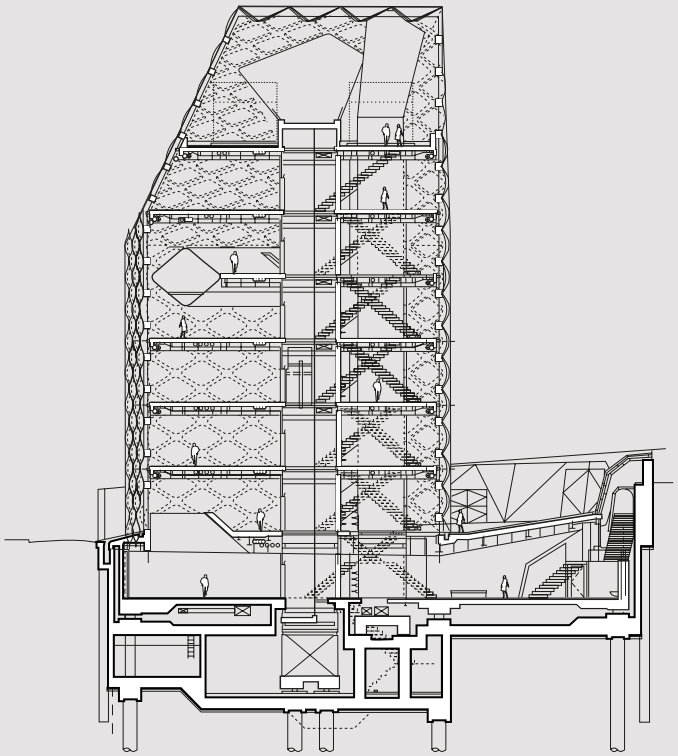

More recently, Tokyo can also be added to this list, with names like Miyake, Kawakubo and Yamamoto and brands like Comme des Garçons, quite apart from massive consumption of luxury goods from Europe and elsewhere by Japanese.

A prominent, early and largely self-reinforcing characteristic of the fashion world has been, and remains, its physical venue strongly identified with particular urban streets. The Rue du Faubourg Saint Honoré, mentioned earlier, leading westward from the center of Paris has long been associated with high fashion. The houses of Dior, Chanel, Valentino, Louis Vuitton, Bulgari, Hermès, Givenchy, Lanvin, Saint Laurent and Versace, to mention just a few, all have establishments there. The offices of the French *Vogue* magazine are also there, along with an assortment of luxury hotels, restaurants, embassies and very early foundations in the cosmetics business, with a perfume manufacturer as early as 1775 and Lancôme well established by 1935.[12] Similarly, Via Monte Napoleone in Milan is a prominent part of Milan's fashion district, referred to as the *Quadrilatero della moda* (literally 'fashion quadrilateral'). It is also located close to the center of the city, relatively nearby the famed La Scala Opera House and the Duomo. The street name derives from two sources: a financial institution – the Monte Camerale di Santa Teresa established in the 18th century to manage public funds, and the joining of Milan to the Napoleonic Italian Republic in 1804. It did not begin to become a leading center of international fashion, however, until after World War II, now housing emporia and offices of fashion houses like Armani, Gucci, Prada, Ferragamo, Versace, Ferretti and Bottega Veneta, again to name but a few.[13] Also in Italy is the well-known Via dei Condotti, leading from the Piazza di Spagna and the Scala della Trinità dei Monti, or Spanish Steps, to the main thoroughfare of the Via del Corso in central Rome. Named for the conduits that carried water to the Baths of Agrippa, during Roman times the street enabled people to readily reach the Pincio Hill from the Tiber River crossings to the west. The beginnings of the street as a center of fashion probably dates back to the atelier of Bulgari, opened in 1905, and also to the boutiques of the likes of Emilio Schuberth, who opened a fashion house in 1938, immediately seizing a sizeable upper-class clientele and remaining popular well into the 1950s with *la bella figura*.[14] Today, fashion establishments along Via Cordotti include Armani, Hermès, Cartier, Louis Vuitton, Fendi, Gucci, Prada, Valentino, Dolce & Gabbana and Brioni, with the likes of Byblos, Tiffany, Versace and the incomparable men's tailoring of Battistoni, nearby. Finally, many other cities, worldwide, have fashion streets, like Fifth Avenue in New York, Bond Street and Regent Street in London and Rodeo Drive, situated between Santa Monica and Willshire Boulevards in up-scale Beverly Hills. In fact, this three-block stretch is one of the most expensive shopping streets in the world, with boutiques like Bijan and also an assortment of high-end restaurants.

As one might imagine, given the various streets' histories, accumulations of fashion houses and related outlets and sheer physical development, each is unique in its own way. Indeed, this is all part of what distinguishes high fashion. Nevertheless, taken together, they also have a number of characteristics in common, that despite differences, verge in the direction of a particular fashion street typology. First, each is located near the center of its host city and particularly well located for the convenience of prominent local clientele, at least in the past. Second, each is a significant fashion street but within a broader area or district. The *Quadrilatero della moda* has already been mentioned in conjunction with the Via Monte Napoleone, which also includes other fashion streets like Via Mazzoni, Via San Andrea and Corso Venezia. The venerable Rue du Faubourg Saint-Honoré has lost ground more recently to the nearby Avenue Montaigne and the Chanel headquarters was almost always at 21 Rue Cambon, also nearby, with its facetted mirrored staircase linking the ground-floor store, to the second-floor *haute couture* dressing rooms and the third-floor apartment with its fourth-floor workshop. Similarly, Via Condotti is one of three streets, emanating more or less from the Piazza di Spagna, including Via Borgognona and Via Frattina. Third, each street is of almost the same length, not too long, suitable for strolling and window shopping and sufficient enough to be a coherent address within the city; Via Condotti and Avenue Montaigne, for instance, are around 600 meters in length, Via Monte Napoleone is slightly shorter

at around 500 meters and the Rue du Faubourg Saint-Honoré, although some 2000 meters in length has a concentration of fashion establishments along about 1000 meters of that length. Fourth, each street accommodates a mixture of uses including necessary components of the shopping experience, like cafés and restaurants, comingling with boutiques. This is certainly the case along the Faubourg Saint-Honoré and Avenue Montaigne, including luxury hotels and in Rome with the renowned Caffè Greco, which was established as early as 1760 and frequented particularly during the 19th century by a range of notable foreign literati and composers sojourning in the city like Stendhal, Goethe, Byron, Wagner and Keats.[15] Also, in addition to boutiques or similar emporia, these streets house business and communication aspects of the fashion industry including headquarter offices and prominent magazines. Fifth, in earlier times, establishment of fashion houses involved conversion of essentially residential streets into storefronts, show rooms and working areas for fashion and accessories. They did not involve special-built facilities. Overall, premises tended to be relatively small or compact, certainly in comparison to department stores, and in relatively good-quality buildings with appropriate balances of income to rent. The Via Monte Napoleone is in an area that was primarily built in a neoclassical manner with several palaces occupied by members of the aristocracy. Similarly Avenue Montaigne is well-built as is Via Condotti's environs in the earlier Spanish quarter of Rome. Savile Row – named after Lady Dorothy Savile, the wife of the third Earl of Burlington – was initially occupied by military officers and their wives as well as by persons of public distinction, like William Pitt the Younger.[16] Although somewhat narrow and nondescript, the Rue du Faubourg Saint-Honoré also has buildings of neoclassical architectural distinction. Finally, over time, each of these fashion streets has been subject to the obvious cluster effect of brand names attracting other brand names and of a certain amount of fame and notoriety attracting further fame and notoriety. Several other streets diverge from these common characteristics like Fifth Avenue in New York and Bond Street in London, largely by virtue of the prominent presence of department and other larger-scale multi-purpose stores, alongside boutiques and brand-name flagship stores.

From Shopfronts to Building Envelopes

Closest to these well-known European examples in an East-Asian context, at least by way of the array of brand-name stores each at a particular location is Omotesandō, relatively near the center of Tokyo in Japan. Stretching – including its easterly right-of-way environs – from the Nezu Museum in the Aoyama District on the east to Harajuku and Yoyogi Park on the west, Omotesandō, like its European counterparts, also accommodates a range of other uses alongside of its boutiques and luxury goods' stores, including cafés, restaurants, smart residences, offices of fashion firms and even embassies. Again as in Europe, a relatively compact 'front-street/back-street' character of presentation, along with the major crossing street of Aoyama, effectively creates a specific area or district in the city closely and quickly associated with trend-setting fashion and cosmopolitan lifestyles. As to length, strictly speaking, Omotesandō is relatively long compared to its European precedents at around 1,500 meters, although the most coherent agglomeration of stores occupies a smaller 600-meter length, running from Aoyama Dori down a gentle slope to Meiji Dori on the edge of Harajuku. The other Aoyama section of the street, back in the direction of the Nezu Museum, with its own agglomeration of fashion outlets is short, at about 400 meters in length. Addition of one brand name after another at Omotesandō also occurred conspicuously, as in Europe, compounding its attraction and close association with fashion. In this case it also happened rapidly, more or less from the late 1990s into the first decade of the new millennium. Once again as in Europe there were also some quite notable and early beginnings – seeds, so to speak, of what was to follow. Certainly the Hanae Mori Building, by Kenzo Tange of 1978, was a pioneer example of a fashion-brand building, conveniently located directly in front of one of the exits of the Omotesandō subway station. Then there is the Spiral Building by Fumihiko Maki of 1985, further along Aoyama towards Shibuya commissioned by Wacoal – the lingerie company – as a multi-use facility incorporating gallery space, a multi-purpose hall, a café, restaurant, bar, salons and, of course, shops. This structure takes its name from the seemingly floating spiral ramp, some 15 meters in diameter that encircles the

rear gallery space and climbs to the second floor. Reflective of the surrounding *ad hoc* building context, the exterior façade is multi-faceted and the facility itself has long been associated with a range of entertainment, involving art, music, film and theater events, in addition to merchandizing. Yet another early comer, was La Collezione by Tadao Ando of 1989 on the eastern end of Omotesandō. There are, however, several significant differences with the fashion streets and districts of Europe and elsewhere, at least one of which concerns the relative newness of Omotesandō itself and another, the contemporary mode of presentation of the fashion stores along its length.[17]

Omotesandō, meaning 'The Pilgrim's Way,' was constructed relatively recently, serving as a main street access to the Meiji Jingu Shrine from the venerable Aoyama Dori to the east. The Meiji Shrine, in turn, was also constructed at much the same time to honor the first emperor of the modernizing Meiji Restoration, being destroyed by allied bombing in 1945 and restored in 1958.[18] Something of a symbol of modernity in Tokyo, Omotesandō was laid out to approximate a Western boulevard – straight, generous in width and tree-lined with what became an incomparable array of majestic Japanese zelkova trees. It also was the site of experiments in modern living, with the construction of the Dojunkai Aoyama Apartments beginning in 1925, shortly after the disastrous Kantō Earthquake of 1923. The Dojunkai apartment format was a co-operative, multi-unit exercise in modern, self-contained apartment living and among the first of its kind in Japan. Relatively few units were built under this program and those on Omotesandō, even though they fell into disrepair by the mid-to-late 1960s, were among the most conspicuous examples.[19] More abstractly, Omotesandō also came to mark the modern push of urbanization in Tokyo, particularly after the Kantō Earthquake, in a westerly direction. Bracketing the ends of the street, as mentioned earlier, are Harajuku and Yoyogi Park adjacent to the Meiji Shrine on the west, and remnants of the *daimyō* aristocratic estate of the Aoyama family on the east, dating back to Tadanori Aoyama, one of the Shogun Tokugawa Ieyasu's retainers.[20] Subdivided over time and particularly during the collapse of the *daimyō* system during the latter half of the 19th century, subdivisions of the original larger property took on different guises. Some became smaller yet stately mansions and others fell into commercial use. Aoyama Cemetery, for example, was created from the broader land holding in 1872 as Tokyo's first municipal cemetery, and the Nezu Museum – formerly the Nezu Institute of Fine Arts – was opened to the public along with its vast and beautiful Japanese garden, in 1940. Holding the private collection of Nezu Kaichiro, specializing in Asian early modern art, an early structure for the museum, by Imai Kenji and Naito Tachu, was constructed of reinforced concrete in 1954.[21] The recent building complex, by Kengo Kuma of 2009, replaces this rather ugly structure with one much closer in resemblance to a Japanese traditional heritage of broad sloping roofs, evident timber construction and ceremonial 'tea houses,' or *sukiya* style. Apart from the sheer elegance of Kuma's handling of materials and detailing, this approach is clearly sympathetic to both the institution of the museum and the collection it houses. It also is a wonderful respite from the nearby pizzazz of Omotesandō. Harajuku on the west, by contrast, is the bustling haven of Tokyo's teenagers practicing their off-beat style solidarity, with stores for clothing, accessories, make up and beauty salons packed along Takeshita Dori and its offshoots, linking the much larger Meiji Dori through to the Harajuku subway station. First becoming well-known during the Olympic Games of 1964 because of its proximity to Yoyogi Park – one of the Olympic venues – Harajuku has maintained its village-like charm and small-scale *roji* environment, while also playing host to the colorful and often outlandish array of youngsters.

The other significant difference with Europe is the custom-built and iconic character of the luxury stores themselves. It is no longer a case of outward presentation by way of smart and even striking storefronts on the ground floors of converted buildings of otherwise reasonable to high quality and architectural merit. On Omotesandō, entire buildings have been designed to embrace and project the presence or spirit of particular fashion houses. Showcases for fashion have also become showcases for avant-garde architecture. Moreover, the likeness of the attention given to building envelopes and surface treatments with that of fashion wrapping human bodies is unavoidable. Further, to the extent that a style persists it is in the direction of a sophisticated yet transparent and even

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---1
Omotesando Hills (Shinkenchiku-Sha)

--- 2
Restored Dojunkai Apartment Building at Omotesando (Peter Rowe)

--- 3
Interior at Omotesando Hills (Shinkenchiku-Sha)

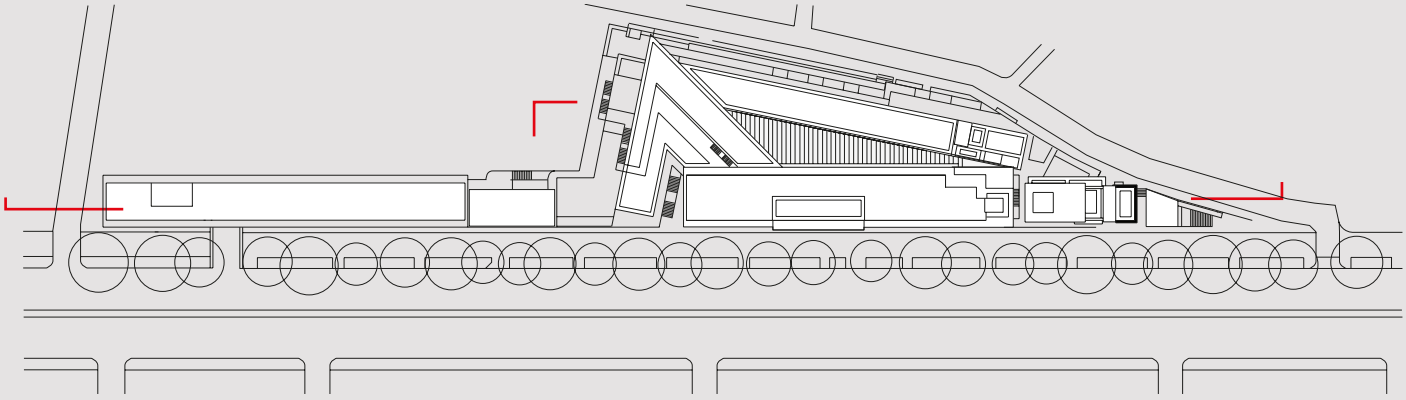
--- 4
Plan View of Omotesando Hills (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 5
Section Through Omotesando Hills Showing
1. Apartments,
2. Mall,
3. Dojunkai Apartments,
4. Parking
(Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 6
Tods, Omotesandō (Courtesy of Toyo Ito & Associates Architects, © Nacasa & Partners Inc.)

--- 7
Interior at Tods, Omotesandō (Courtesy of Toyo Ito & Associates Architects)

--- 4



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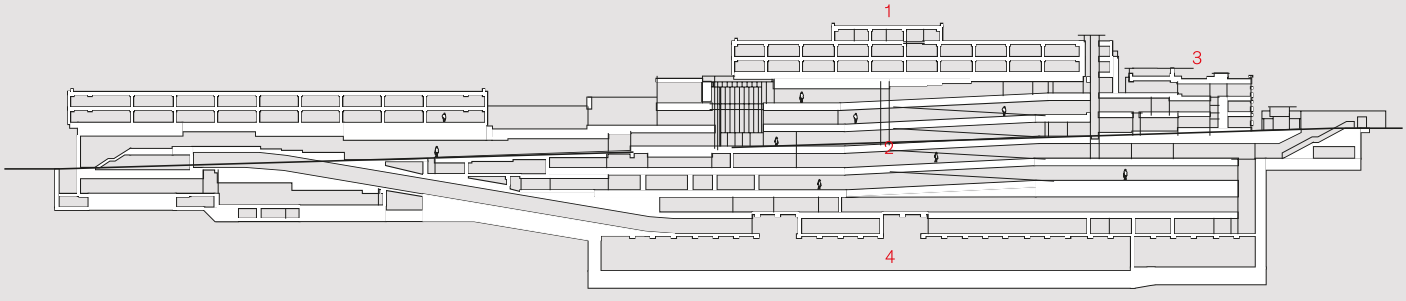

seemingly simple modernism. Indeed, many stores are like over-sized jewel boxes, or similar well-crafted containers, also closely associated with the world of fashion. Aside from Tange's early Hanae Mori Building, with its precise rectilinear geometry and sheer glass façades, designed as much as anything else to reflect the nearby zelkova trees, the contemporary relationship between architecture and fashion purportedly began with Jun Aoki's Louis Vuitton Building in Nagoya of 1999 at much the same time as Gyre was being installed on Omotesandō by MVRDV. This Louis Vuitton store was designed as a free-standing building having, in the words of the architect, a "purity of form" and a "strength of expression that would represent the spirit of the company."[22] Notably, the external surface of the structure deployed the overlapping of two traditional Ishimatsu (checkered) patterns, creating an arresting moiré effect, followed in 2000 by a store using similar architectural devices in Tokyo's Ginza district. Soon after, on Omotesandō, Aoki broke with this trend, although the freestanding character of his modest-scale Louis Vuitton store was maintained in the form of a four-storey structure, responding to the nearby environment of the Dojunkai Apartments, through the devise of composing the building through the stacking of what he referred to as "trunk-like boxes,"[23] each different but part of the same family. The overlapping Ishimatsu patterns were not used, but the resulting building façades had the same high quality of material and detailing, much like Louis Vuitton's own products.

Quickly, a number of other flagship and brand-name fashion stores materialized along Omotesandō and its environs all by prominent contemporary architects. There was, for instance, One Omotesando by Kengo Kuma of 2003 and Dior Omotesando by SANAA in the same year, with its 30-meter tall sheer box comprised of a double-skin façade of flat glass and soft curving, white translucent acrylic interior panels, recalling the drape of a dress. The Prada Aoyama Epicenter by Herzog & de Meuron was also completed in 2003 with Takao Kawasaki's Comme des Garçons coming along slightly earlier. Tod's Omotesando for the Italian brand of shoes and leather goods, by Toyo Ito, followed in 2004, at much the same time as Kisho Kurokawa's Japanese Nursing Association, which although not a fashion store, was a building that might be mistaken for one, with its glass core and striking antechamber. Then, breaking with this pattern of individual freestanding stores, there was the mixed-use, mall-like building of Omotesando Hills by Tadao Ando, which finally opened, after some controversy, in 2009. The strong association of high-style architecture with high fashion is perhaps understandable given the economics of the time in Tokyo, as well as the sheer narrowing of opportunities for architecture, alongside of the blossoming of brand names worldwide and their search for identity and competitive exposure.[24] The architectural gravitation in almost all cases towards a transparent and even simple modernism, often with strong surface inflections, was also probably understandable, at least in the Japanese context, as one commentator put it, due to the common notion at the time – around the collapse of the bubble economy and the Great Hanshin (Kobe) Earthquake – of avoiding more flamboyant architectures.[25] Certainly, Ito's Sendai Mediatheque of 2001 and Foreign Office Architects' Yokohama Port Terminal of 2002, among other work, had also began to reshape Japan's architectural geography.

Back in the realm of fashion, one building along Minami Aoyama within the general Omotesandō corridor to the east, that reflects the full thrust of this new architectural geography, is Herzog & de Meuron's Prada Aoyama Epicenter. Conceived as a project in 2000 although not completed until 2003, the building aimed to attract attention to itself and its products by being highly visible and a potential meeting point for people coming to the area. High visibility, in turn, was achieved through the building's height at 32 meters, above surrounding structures; the building's shape, deformed into an irregular configuration by building and zoning code compliance; and the building's form, as a crystalline confection of glazed surfaces. The potentiality of being a meeting point was achieved by creating a plaza next to the building, in the form of a 321-square meter open space, occupying roughly one third of the 953 square meters of site area and relatively unprecedented in densely packed Tokyo. Although relatively dispersed, with two basement levels and a further seven storeys above grade, the 2,860 square meters of store space was fluidly designed through the blurring of obvious distinctions between floors into a continuous space.[26]

Much of this and the external appearance of the building was accomplished through a high degree of integration between structure, space and surface within the building and all three components being seen more or less as a single unit. As such, the vertical cores, horizontal tube-like structural elements, floor slabs and the façade grills simultaneously define the space of the building, its specific functional exigencies, and its structure. The high degree of integration also allowed the architecture to become a fundamental component of viewing, showing, looking and exhibiting components so necessary in a fashion store and actual elements of sites of presentation. Information technology, as at other Prada stores, was interwoven into the design, with viewing screens and other devices on hand to show what was both available and becoming available in the particular store and elsewhere within the Prada empire.[27]

Tod's Omotesando Building by Toyo Ito follows a similar geographic trajectory of architectural conciseness, distinctive appearance, and singularity of image. Occupying an L-shaped site, although squarely on Omotesandō, the building is essentially six-sided in aspect. It is also seven storeys in height, with the bottom two floors occupied by Tod's shop, followed by three floors of offices above, and then a multi-function room and finally a meeting room on the roof. The total floor area, much like at Prada, is on the order of 2,600 square meters. Moreover, space within the building is also more or less continuous where that makes sense programmatically, with the 10- to 15-meter floor spans being free of internal columns. Otherwise, the architecture is an exercise in both "literalness and formalism," to use Ito's words.[28] Drawing on experiences at the Sendai Mediatheque and at the Brugge 2002 Pavilion, Ito sought to give both a graphic impression of a silhouetted row of Japanese zelkova trees, like those immediately outside, and to provide an abstract formal surface composition comprised of concrete structure and frameless glazed openings. Part of this strategy was also to distinguish the building from the other relatively straightforward façades along the street. In sum, all six façades are rather literal in that they reflect the branching diagram of a tree, also with the interior effect that the interior light ambience changes with rises in levels, as it does across the section of a tree. The façades are also quite formal in the manner in which the branch diagrams are actually registered and certainly in the sheer rectilinear and surface qualities of each composition. Although thoroughly modern in programmatic and general spatial qualities, again it is in the façade development and even ornamentation that Ito, by his own admission, is striving to transcend the geography of architectural modernism.[29]

Finally, breaking out of the mould of the freestanding store, as mentioned earlier, is Tadao Ando's Omotesando Hills project for the Mori Building group. In essence it is a mixed-use project, containing 130 shops, 38 residential apartments, several offices and other accoutrements of malls and similar projects, like food courts, restaurant and personal service outlets.[30] Reminiscent of Barcelona's L'Illa by Rafael Moneo, Omotesando Hills is relatively low in height and stretches along a very long street façade of some 250 meters. Overall, the building has six storeys below grade in various basement levels, including parking, with six storeys above grade. Of those above grade, the lower three storeys are given over to retail functions, whereas the upper three levels house apartments. The upper levels are also set back from the street, with landscaped roofscapes, in order to diminish further the apparent height and bulk of the overall building. Again the height and line of Japanese zelkova trees appears to have played a role in these alignments. Although originally commissioned in 1998, the project was not opened until 2006, partly due to controversy surrounding the eventual demolition of the Dojunkai Apartments spread across most of the site.[31] Briefly what happened was the Tokyo Metropolitan Government, as the public authority of record for the site sold its ownership rights in 1998. However, a requisite 'redevelopment union' was not established until 2002, given all of the other parties involved and decisions around the renovation, or not, of the apartments, plus all the by then very high real-estate values involved.[32] As described in an earlier chapter, these 'redevelopment unions' or 'union pools' have been an effective method for aggregating otherwise divided parcels of property ownership. One concession arising from this, was setting aside the so-called Dojun Wing of the project on its eastern end and in the form of some Dojunkai Apartments renovated into offices.[33]

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A View of Ginza to the East

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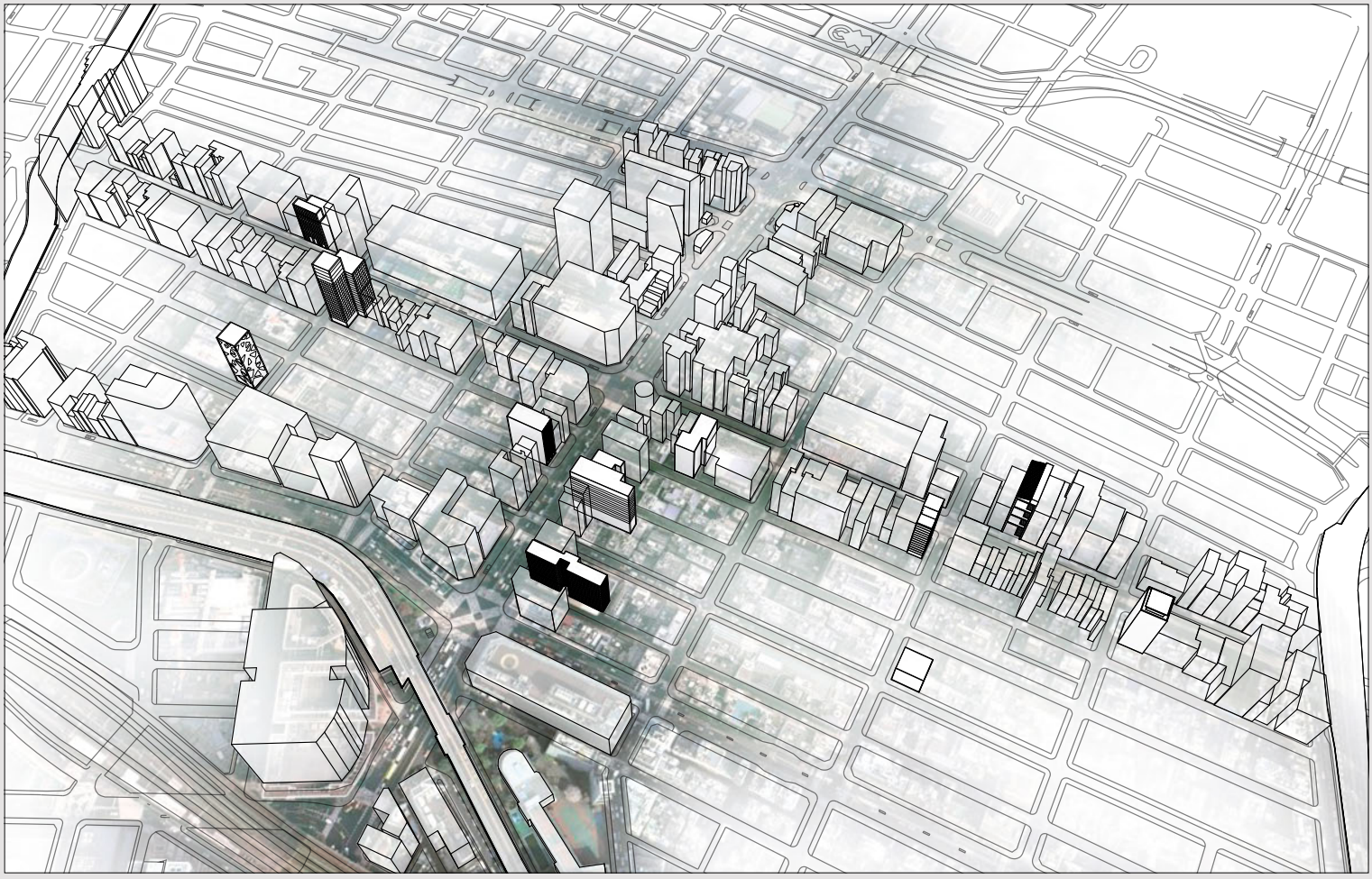
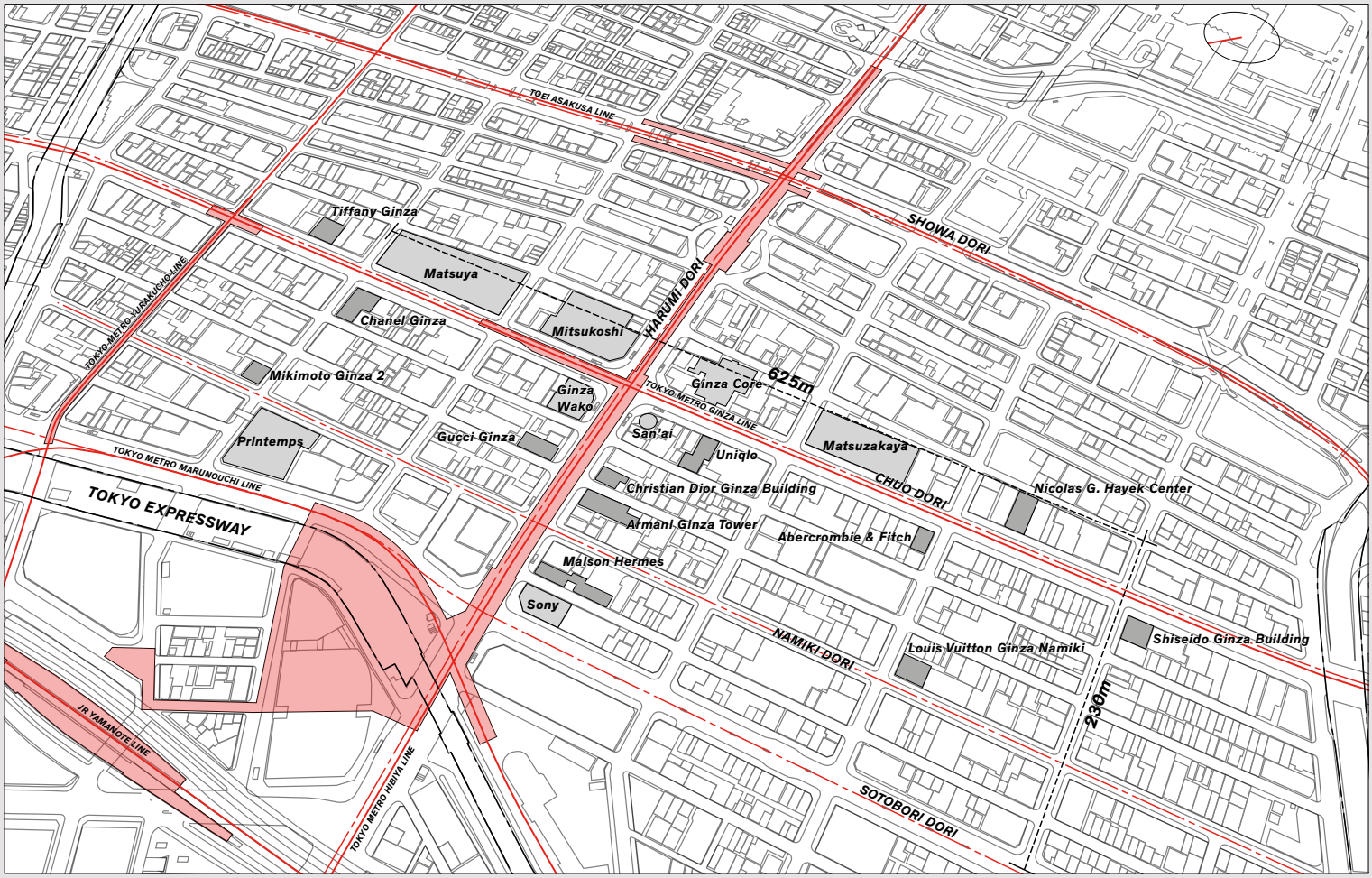
Fashion Stores in the Context of Ginza




TOEI ASAKUSA LINE
Tiffany Ginza
Matsuya
Chanel Ginza
Mitsukoshi
HARUMI DORI
SHOWA DORI
TOKYO METRO YURAKUCHO LINE
Mikimoto Ginza 2
Ginza Wako
Ginza Core
625m
TOKYO METRO GINZA LINE
Printemps
Gucci Ginza
San'ai
Uniqlo
Matsuzakaya
TOKYO METRO MARUNOUCHI LINE
CHUO DORI
Nicolas G. Hayek Center
TOKYO EXPRESSWAY
Christian Dior Ginza Building
Armani Ginza Tower
Abercrombie & Fitch
Maison Hermes
Sony
NAMIKI-DORI
Louis Vuitton Ginza Namiki
Shiseido Ginza Building
230m
JR YAMANOTE LINE
TOKYO METRO HIBIYA LINE
SOTOBORI DORI

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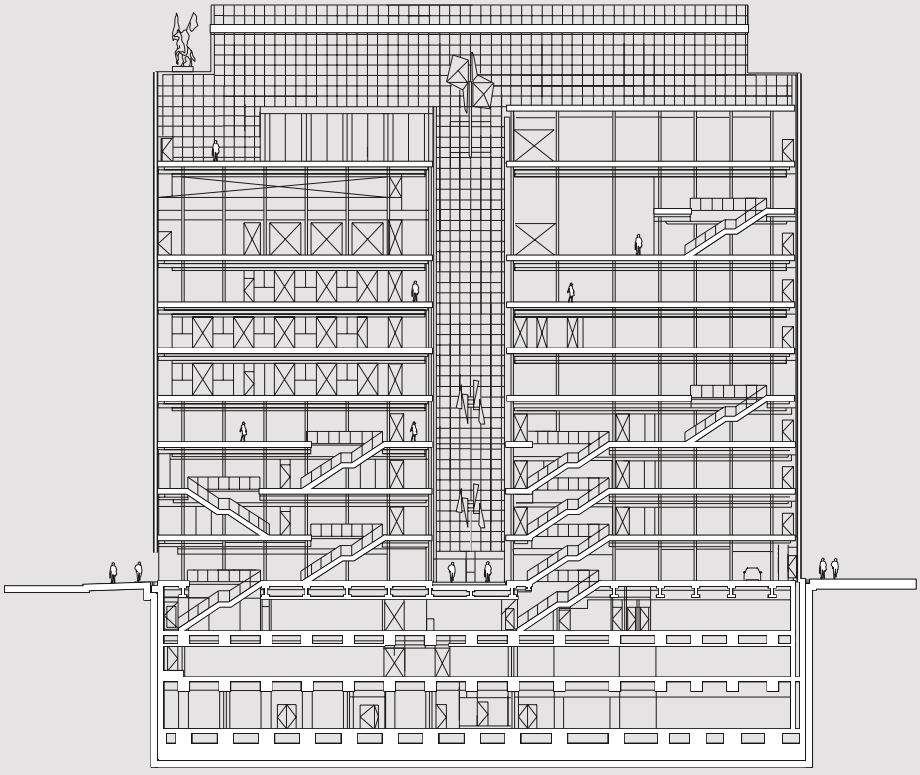

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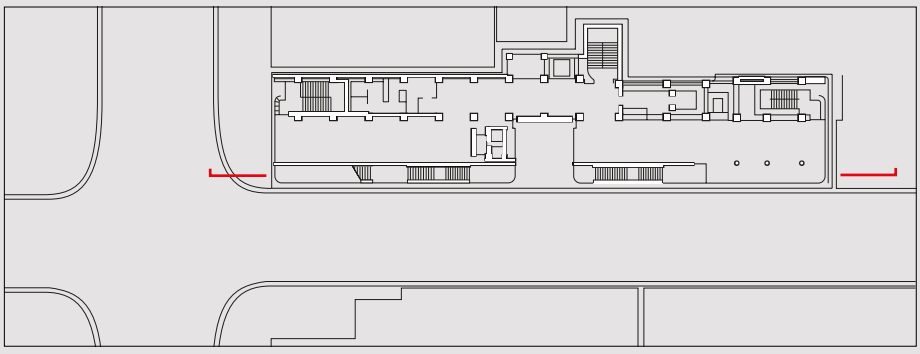

--- 1
Early View of the Wako Building and Chuo Dori (Postcard)

--- 2
The Entrance to Maison Hermes, Ginza (Shinkenchiku-Sha)

--- 3
Maison Hermes, Ginza (Shinkenchiku-Sha)

--- 4
Louis Vuitton, Ginza (© Daichi Ano)

--- 5
Section Through Maison Hermes, Ginza (Drawn by Jong-Hyun Baek & Pilsoo Maing)

--- 6
Plan at Ground Level, Maison Hermes, Ginza (Drawn by Jong-Hyun Baek & Pilsoo Maing)

In the heart of the project a gently sloping walkway, beneath a top-lit triangular atrium, provides access to five floors of shopping and related outlets, roughly themed according to the kinds of clothing, food and other products on offer and as one often finds in other commercial retail mall environments. The ground floor, for instance, incorporates stores of big-name designers, the second floor is given over primarily to boutiques and the third floor, just below the apartments, is where one finds restaurants. The third floor of the basement, by contrast, is set aside for multi-purpose stores ranging from books to electronics and additional cheaper food services. The external Omotesandō-side façade is primarily made of a glass-and-steel curtain wall, although it also embodies a LED 'Bright Wall' along its length. If anything, it is the architectural coherence that runs through the project and its mixture of uses, that distinguishes it from other retail malls, although it does not escape from this typology entirely despite its up-scale location, material quality and attention to architectural detail.[34]

In Tokyo and indeed Japan, the presence of larger-scale emporia exceeding even the size of Omotesando Hills are to be found most intensively together with smaller exclusive upmarket stores in the Ginza district, close to the Tokyo Station within the very center of the city. There, within a confined area of little more than 30 city blocks, large department stores cohabit with elegant, contemporary, custom-built flagship stores of prominent fashion brands. Originally, the Ginza acquired its name after the silversmiths and the silver coin mint that was established there during the early days of Edo. It was part of the *shitamachi*, or low city, set aside by the Shogun to accommodate mainly tradespeople, artisans and commoners, with specific areas allotted for particular functions, like silversmithing or blacksmithing. Morphologically, this was an area subdivided into a gridiron of relatively small lots, criss-crossed at various places by canals for water transportation, and densely populated. Ginza, perhaps because of the significance and precious nature of its product, was located near the Shogunal and *daimyō* estate area of central Edo, just to the east of Maranouchi. Modern Ginza dates from the period shortly after a fire devastated the area in 1872. Consistent with the underlying philosophy of the Meiji Restoration at the time, a Western architect – Thomas Waters – was commissioned to reconstruct the area in a modern manner. He then went on to produce the Ginza Brick Quarter, made up of two-to-three storey neo-Georgian brick buildings, with paved streets and modern lighting. Originally intended mainly for residences the rows of building were soon taken over for commercial activities.[35] Later on the area became associated with fashion for the first time through the antics of the *mobo-moga* youth – modern boys and modern girls – who went out of their way to dress in a most untraditional manner and to behave accordingly.[36] Then in the wake of the 1923 earthquake, which also had a deleterious effect on the area, the Ginza began to develop as a modern upmarket shopping district. The Mitsukoshi Department store was located there, adjacent to both Chuo Dori and Harumi Dori – soon to become, in real-estate market terms, the '100 percent corner' in all of Japan. The curving *art déco*-style Wako Building was built opposite and across Chuo Dori shortly thereafter in 1932. Crowned by the now very familiar Hattori Clock tower, this complex was built by Kintarō Hattori, one of Tokyo's new entrepreneurs at the time and founder of the Seiko watch company.[37] In the post-World War II period, Ginza continued to thrive. Most of the remnants of the Brick Quarter had disappeared. The area became increasingly well served by transportation with the subway, the nearby national rail service and the adjacent expressways. In addition, properties, already small, continued to be subdivided and where possible re-aggregated up into larger land holdings for further department stores, like Matsuya and the Ginza Core. By the 1960s, the Ginza had been such a mecca for shoppers and urban residents alike that Chuo Dori was closed during the weekends to create a pedestrianized street environment.[38]

Entering into the contemporary era, territorial aspects of Ginza in the senses of both domains of activity and physical occupation remained much as they were, although intensifying significantly. The area strongly associated with fashion and brand names of luxury goods, is encircled by a rectangle, centered on the intersection of Chuo Dori and Harumi Dori, of about 400 meters in a south westerly direction, around 225 meters in a north-easterly direction and some 200 meters in a north-westerly direction towards the main station and expressway. Chuo Dori has been the main spine of activity,

although of late, new buildings have also been emerging along Harumi Dori. The architectural geography of merchandizing, once dominated by department stores, primarily along Chuo Dori is now more sharply divided with the recent and glamorous emergence of much smaller, custom-built facilities for specific fashion brands. While the department store building typology is characterized by almost block-long, 10 or more storey buildings, the new luxury goods stores occupy what are often referred to as 'pencil buildings' because of their independent outlines, small footprints and relatively high rises. Largely a function of high property values, highly subdivided property holdings and a high degree of difficulty in re-aggregating such holdings, 'pencil buildings' are common in many older and denser urban markets in East Asia, although probably most notably in Tokyo and in Hong Kong.[39] What emerges in the context of this discussion are slender trapezoidal volumes, built out to the maximum allowable by zoning codes and building regulations, usually with narrow frontages or, preferably for exposure, on confined corner sites. Rising up to a nominal 30-meter height limit, most buildings are around 10 storeys in height, with retail stores usually on the lower levels, corporate offices for the brand name in the middle levels, and meeting rooms, galleries or other special accommodations above. Although the overall formula is much the same as counterparts on Omotesandō, independent Ginza stores are usually taller and larger, at around 6,000 or so square meters in total floor area. Also as at Omotesandō, much of the architectural effort is concentrated on the surfaces of the building envelope, and in these cases especially on the visible façades. If anything, over time this effort has become more and more an exercise in illumination and the posing of the building as a sign and a sign as a building, in addition to the other obvious reference to clothing mentioned earlier. Since early on the Ginza has always been one of East Asia's most prominent 'neon environments,' a quality that has only been amplified by these new building additions. Moreover, the prominence has allowed, if anything, contemporary lighting and related façade treatments to be less literal and more abstract.[40]

Within this architectural geography with its dual building typology, the older department stores are almost uniformly aligned with the long side along the major street, maximizing public exposure of the buildings. The Matsuya Department Store and the 10-storey Matsuzakaya Ginza Store of the Nagoya-based enterprise, are both more or less one block long, at around 100 meters and 75 meters respectively, and 35 meters or one narrow block in width. The internally directed logic of floor layouts, in what are quite vast buildings, leads to regularly articulated if relatively blank exterior façades and substantial signage. The more recently constructed Printemps Department Store of the Paris-based firm of 1984 has many of the same characteristics. Parenthetically, far from being modern enterprises, several of these department stores have involvements that reach as far back as the 17th century – in Matsuzakaya's case to 1611 and for Mitsukoshi back to 1673.[41] Indeed, concentrated zones within the city for marketing particular merchandise were very common in pre-modern East Asian contexts. During the Ming Dynasty in China for instance, this sort of physical arrangement was mandated for reasons of social and financial control. Similarly in Shogunate Japan and Edo, areas of specific market concentrations were also regulated, although other more entrepreneurial rationales were also at work as well.[42] Concentrations were and still remain convenient for shoppers, allowing clientele a range of similar stores in much the same location. By the same token, consumption of services, related products and provisioning can be made more affordable for merchants under the scalar economies of close physical aggregation. The same principles also apply, of course, to the looser yet also concentrated arrangement of the smaller brand-name stores involved in the Ginza, as well as elsewhere.

At first, design of specialty stores in Ginza began reasonably prosaically with the likes of Opaque Ginza by Sejima of 1998 and the Shiseido Ginza Building by Ricardo Bofill of 2001. The latter, for instance, was 11 storeys tall with a well-composed yet almost conventionally Western-style, red-paneled façade with a variety of window sizes. As the offices of the Shiseido Corporation, stores were located on the ground floor and a restaurant, with a panoramic view of the city was located on the top storey. Then Maison Hermès – the notable French fashion firm – opened its Ginza flagship store in 2001, setting a tone and style of public presentation for other brand names

to come. Designed by the Renzo Piano Building Workshop, with interiors by Rena Dumas, as has been customary at Hermès since around 1978, the building has a thin facade on Harumi Dori and a larger facade on an adjacent side street, effectively with a footprint of some 45 meters long and only 11 meters wide. Relatively tall by Ginza building standards, with 15 floors, the program of accommodations was distributed in what has become almost the standard format noted earlier, with boutiques on the lower five floors, followed upwards by offices, workshops, exhibition and multi-media areas and a hanging roof garden at the top.[43] Faced with providing a landmark building within the architectural diversity of Tokyo and Ginza, Piano alikened the building to the idea of a magic lantern, with an extensive glass veil as a continuous and luminous screen, alternating light qualities of day and night with transparency and light.[44] In essence the building became an essay in specially fabricated, 45-centimeter by 45-centimeter glass blocks as the dominant façade material, suspended from a flexible steel structure of cantilevered floor spans with a unique system of damper connections to mitigate against potential earthquake damage. The 6,000 square meters of total floor area was punctuated in the middle of the long side-street façade by a small plaza, that also served to connect to the extensive subway system below via an escalator. In fact, one of the conspicuous characteristics of this territory in Ginza is the almost continuous subway service that can be afforded across some four subway lines, not to mention the close proximity to Tokyo Station.

At the other end of an almost decade-long time spectrum is the Nicolas G. Hayek Center, named after the co-founder of the Swiss Swatch Group, famous for their innovative and high-quality watches. Opened in 2008 and designed by Shigeru Ban, this center features an arrangement of four open atria on its narrow façade with movable parts, like clocks, in the form of retractable shutters. In between along this time spectrum are a plethora of sheer trapezoidal buildings, like fashionable boxes, each featuring shimmering and at times glowing façades.[45]

As briefly discussed, Jun Aoki's moiré-patterned façade was one that led the way, opening in 2000. Dior Ginza, by Kumiko Inui in 2004, featured a double skin of overlaid sheets of aluminum on to which was punched large- and small-scale circular patterns. This rather severe abstract façade treatment was said to replicate the woven pattern prominent on Thonet chairs, one of Christian Dior's signature references, although the scalar difference produced a fabric-like wrapping to the building envelope regardless of this alleged association.[46] Toyo Ito continued to pursue patterned façades of openings set against a plain abstract backdrop with Mikimoto Ginza 2, a 10-storey second store of the brand in Ginza, replete with an exhibition hall and seminar rooms for quasi-public discussions among clients and others. Armani Ginza Tower by Massimiliano and Doriana Fuksas of 2007 makes a similar quasi-public gesture through restaurant and related facilities on its top floors, offering views of Tokyo, and is clad in an elegant glass and metal curtain wall, where the close spacing of the mullions of the lower floors resembles a skirt, especially when lit at night by LED strip elements. James Carpenter's Gucci Ginza follows the line of double-layered façades. The nine-storey flagship store's well-modulated elevations are enlivened by clear glass on the outer layer with prismatic bronze on the inner layer, producing an unusual and welcoming warm glow to the entire façade.[47] Illusionistic effects are also pursued across the facetted glass façade in the re-opening of Tiffany Ginza, the venerable company's Tokyo store by Kenzo Kuma of 2008. These matters of illumination and visual affect, however, seem to come to perhaps an inevitable conclusion with the 10-storey high media wall that serves as the façade of Peter Marino's 2007 Chanel Ginza.[48] This device allows projection of messages, images and patterns across a translucent surface, behind which the by now formulaic program unfolds store spaces, offices, exhibition and similar quasi-public venues, and a restaurant with a view.

Returning to the Nicolas G. Hayek Center, Shigeru Ban clearly breaks from the sheer and fashionably enclosed trapezoidal building. The subject of a limited competition, Ban apparently also departed from the original brief by seeking a way in which the seven or so brands of watches represented by the Swatch Group could have a higher modicum of equal access to the public in spite of a very narrow site, at a little under 18 meters in width. The rather ingenious solution was to have glass-enclosed elevators congregate at the ground level, each serving a particular brand's showroom above and also

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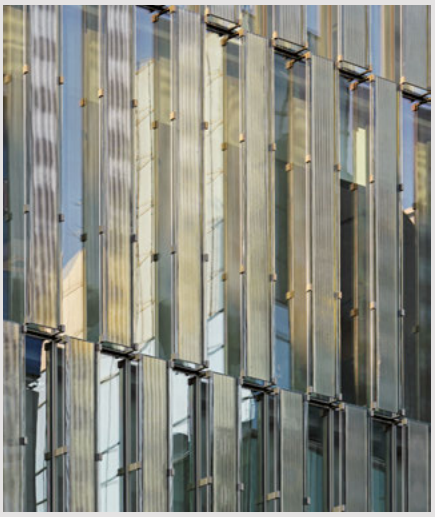

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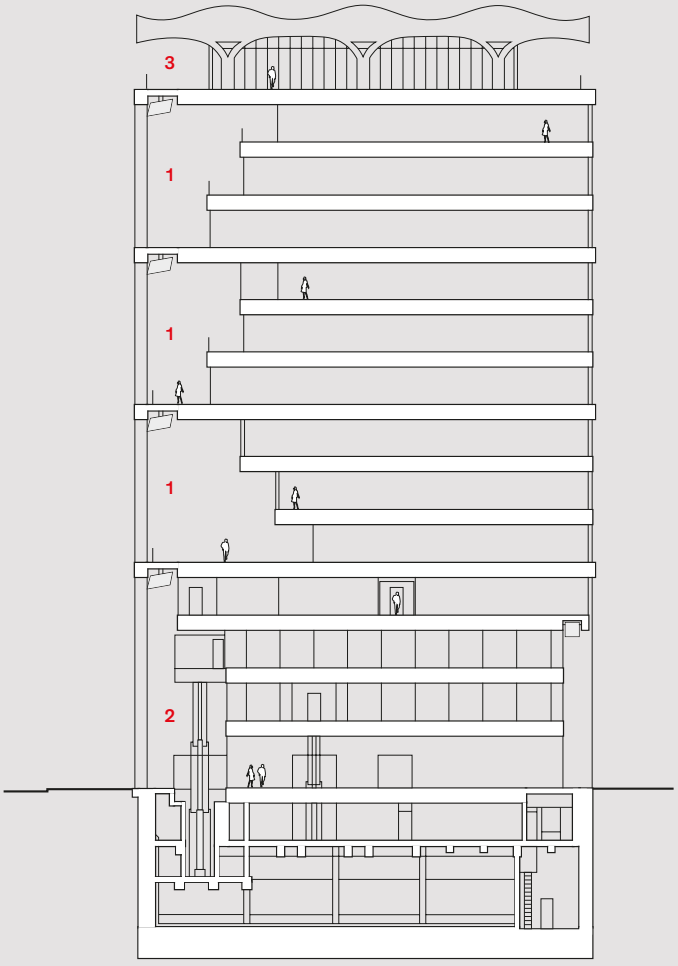

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--- 1
Dior, Ginza
(Courtesy of Kumiko Inui,
© Daichi Ano)

--- 2
Gucci, Ginza (Courtesy
of James Carpenter
Design Associates, Inc.,
© Andreas Keller)

--- 3
Façade Detail at Gucci,
Ginza (Courtesy of
James Carpenter Design
Associates, Inc.,
© Andreas Keller)

--- 4
Façade at Nicolas G.
Hayek Opened and
Closed (Courtesy of
Shigeru Ban Architects
© Hiroyuki Hirai)

--- 5
An Open Atrium at
Nicolas G. Hayek
(Courtesy of Shigeru
Ban Architects
© Hiroyuki Hirai)

--- 6
Section Through Nicolas
G. Hayek, Ginza Showing
1. Atrium,
2. Entry and Plaza,
3. Terrace
(Drawn by Jong-Hyun
Baek & Pilsoo Maing)

acting as a showcase for the brand's product. The building's accommodations were organized with boutiques on the first four levels and a basement, above which were three floors of customer services, followed by six floors of offices, and then an event hall with an undulating roof of woven steel strips overlooking the city.[49] Rather than a sheer façade, each major block of the building program incorporated an external atrium that could be opened up to Chuo Dori outside through a system of retractable shutters. These three- and four-storey volumes, in turn, gave a sense of volume and massing to the building, again in direct contrast to the continuous enclosure of other and earlier specialty store complexes. By remaining open at the ground level, all the way from the street front to the service alley behind, the lower level atrium, lined with its elevator showrooms, conceptually resembles a *roji*, or lane-like environment, common in the *shitamachi* in earlier times. Layers of a planted green wall make their way up inside the building, sustained by an elaborate irrigation and horticultural system. This is particularly apparent in the four-storey open entry volume, again seeming to make a direct reference to earlier verdant and village-like *roji* environments. Although without much apparent effort in that direction, Ban's architecture has strong local and traditional associations, in addition to more than adequately hosting world-renowned brands of luxury items. In this regard, the Hayek Center also turns expressively back again to earlier roots of its Ginza location in Edo's lower city.

As one might expect, given the density of high-fashion stores and their offshoots, both Omotesandō and Ginza are venues for publicly displaying fashionability in addition to shopping. In both cases pedestrian space is ample enough to be conducive to and even to encourage promenading. The variation between wide sidewalks and smaller, more intimate side streets and alleys also provide for moments of loitering and even hanging out, especially around steps and entrance ways. The mixture of accommodations both within and between the fashion houses and flagship stores provides ample space for programmed and impromptu activities. These are places where one can linger and while away the hours, or nip in and enjoy a brief respite from other day-to-day activities. They are also places, however, with particular spatial practices. Many parts of the Omotesandō environment are the domains of Japanese youth as alluded to earlier. Somewhat like the slopes of Shibuya, it is a place where they congregate, as one commentator aptly put it, "to preen, study and practice style solidarity."[50] Clad in multi-layered getups and sporting exaggerated hairstyles, not to mention make up and other adornments, they can be seen *en masse* exhibiting a nonchalance and, one suspects, a certain disdain for the equally though differently uniformed salary men and office workers who scurry by. The area of Omotesandō leading down from Harajuku is rife with this sort of invasion, as are neighboring side streets. Further up near and beyond Aoyama Dori, the crowd is more heterogeneous, although up-to-the-minute style is still very much on its mind. Ginza, by contrast, is the domain of a somewhat older clientele, probably with deeper pockets. It is much more, for instance, the domain of fashionable housewives among whom the penchant for luxury goods is undoubtedly high. A recent survey, for example, found that ownership of Louis Vuitton handbags by adult females up to the age of 59 years was on the order of 45 percent. There the particular spatial practice is referred to as the Ginbura walk, a version of slow shopping, conducted with a languid gait, often zig-zagging through the district, with pauses here and there, and interludes with friends for a snack, tea or coffee.[51] This is also an interior as well as exterior spatial practice, involving, among other venues, the aisles of department stores, and the tasteful décor of salons and upper-scale restaurants.

A Road to Diversion and Consumption

In similar veins, another territory of note, in both senses of the term, is Orchard Road in Singapore, a well-established route leading out from the center of the city and renowned in more recent times as an active site for fashionable retail activity and entertainment. Although not named as yet, the roadway appeared on maps of Singapore in the 1830s, running down the center of a valley and later becoming associated with the ill-fated planting and harvesting of gambier and pepper, responsible for clearing significant areas of the island's hinterlands. Over time this agricultural practice was replaced by nutmeg plantations and by fruit orchards, finally giving

the road its current name. As part of ribbon developments associated with improved transportation and suburban expansion, housing began appearing along the road as early as 1846, multiplying in number by the 1800s in the form of private homes and bungalows on the adjacent hillsides looking down into the valley and the road passing through it. By the early 20th century Orchard Road appeared as a well-shaped avenue flanked by voluminous Angsana trees, among other species, and played host to denser forms of development, including Cairnhill and Emerald Hill, where affluent Chinese and others gathered in spacious row and court dwellings, along with the appearance of some shophouses and apartment buildings, like Amber Mansions of 1922 closer into town, nearby to the prominent Heeren Building of 1931. Larger-scale and somewhat fashionable retailing, now a hallmark of the area, first occurred in the 1950s with Tangs, located on the corner of Orchard and Scotts Roads, among the first upmarket department stores in Singapore. By the time of the birth of the Island Republic in 1965, Orchard Road was a primary site of retail and associated commerce, with shopping malls like the Yaohan Department Store, opening in the early 1970s. Underground metro improvements, as part of the North-South Line of the Singapore Mass Rapid Transit System constructed in the initial development of the island state's Ring Concept Plan, dating from the early 1970s, significantly bettered earlier and often congested reliance on surface transportation. Running parallel to Orchard Road, on the south side, this line, with three station stops, further improved the area's accessibility and sponsored additional commercial development. Also to further relieve congestion, traffic flow along Orchard Road was made one-way, running in a south-easterly direction and compensated in the opposite direction by a loop system of parallel rights-of-way, like Somerset Road on the southern side. Closer in to central Singapore, Istana Park offers a tranquil setting away from the hustle and bustle of Orchard road's emporia and entertaining diversions. Replete with mature trees, water bodies, and lazy pavilions, this public park is also a reminder of the British colonial past, particularly in the form of the Istana Building of 1869, the former Government House.[52]

With improving economic circumstances during the 1980s and into the 1990s, despite a monetary downturn in 1985, construction of malls, hotels and related sites of entertainment burgeoned. As noted in the introduction, this was also an era when Singapore was beginning to relax somewhat from its straight-laced past, partly in response to declining popularity in the ruling People's Action Party's political hegemony over the country. Significant among the new improvements to Orchard Road at the time was the Ngee Ann City complex of 1993, by Raymond Woo and Associates. Straddling an elongated site with extensive frontage on Orchard Road, the complex comprises two 27-storey office towers on a multi-level podium of retail space, embracing a relatively small semi-circular public plaza, one of the very few in Singapore, at least back then. In broader international terms, the external architectural expression of the complex is post-modern, with all the trappings of a symmetrical disposition of building volumes, trapezoidal roof lines, use of polished red granite panels and stainless steel cladding, all enveloped by a two-storey colonnade around the perimeter. With a gross floor area of 169,000 square meters it remains among the largest complexes along Orchard Road. In addition, space was offered in the complex for public facilities including a public library, a post office and a civic plaza.[53] What also transpired at this time was the deepening, so to speak, of the pronounced valley topography by the construction of large and tall buildings along both sides of the road right-of-way. In sum, Orchard Road offered a wide variety of sectional profiles across its width and along its length, creating an array of spaces with different scales and relationships to each other and especially to the partly-enclosed out-of-doors. Among other consequences, this diverse array of spaces also supported a robust secondary economy of streetside kiosks, vendor stalls, push carts, display structures and mobile food trucks. During this time period, attention was also paid to pockets of remaining buildings with some historical significance in the Orchard Road environs. Emerald Hill, for instance, became subject to renovation and several additions, with many of the shop houses and row houses built in the early 20th century subject to historic preservation.[54] Of utmost priority, however, was catering to the tastes of Singapore's new and rising middle-class consumers,

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Axonometric View of Orchard Road's Primary Shopping Area

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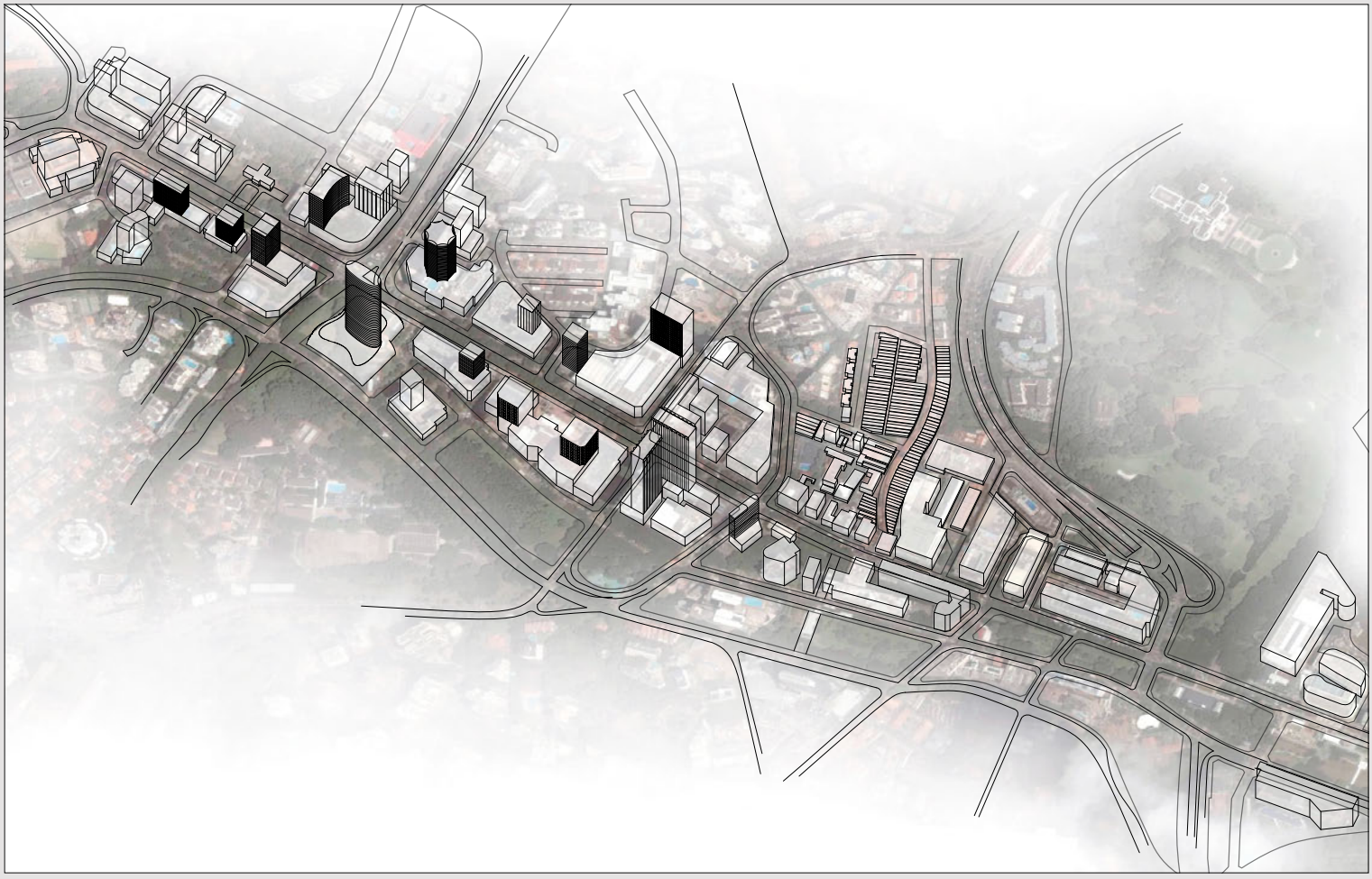
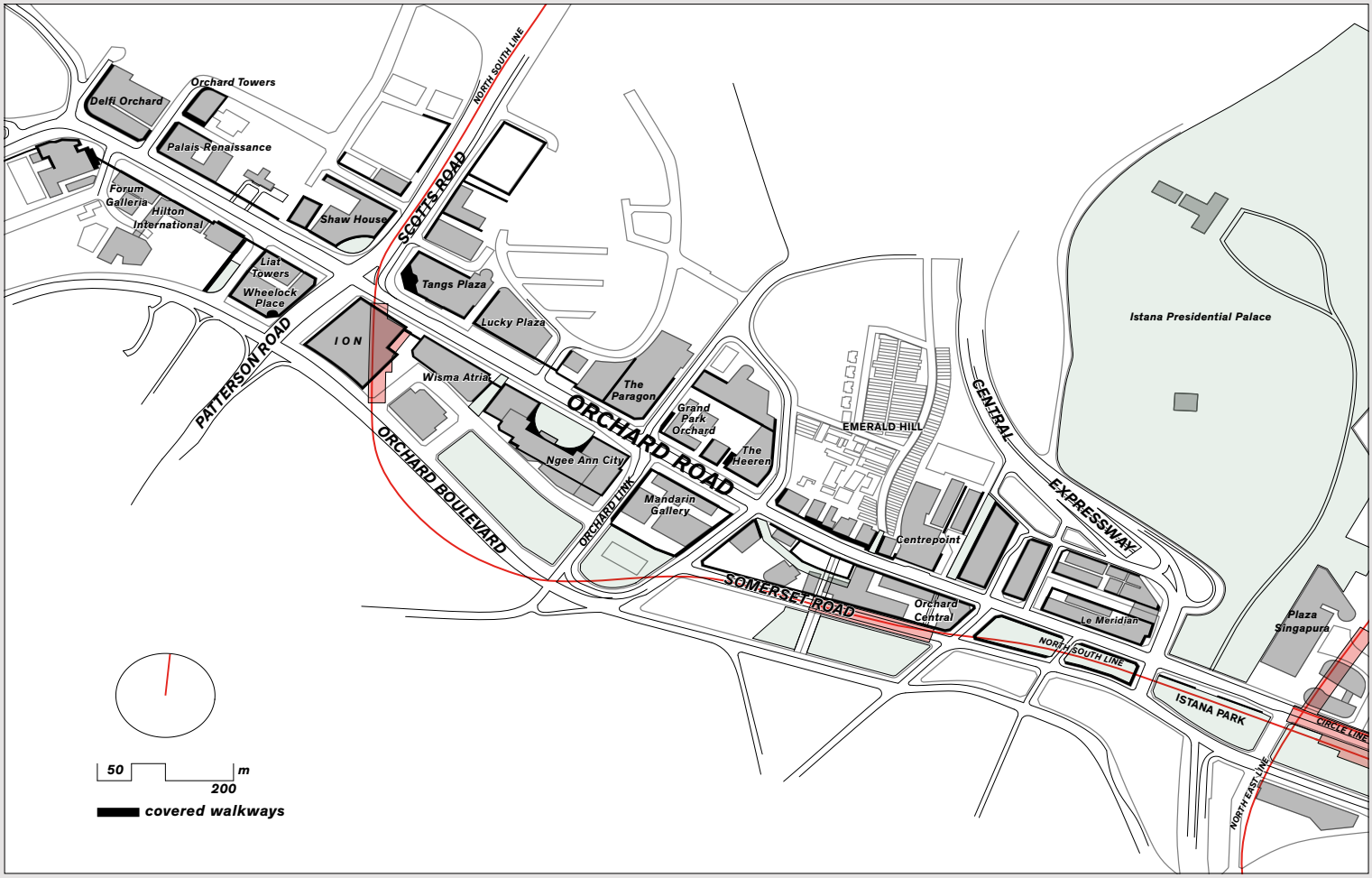
Shopping at Orchard Road in Context




Orchard Towers
Delfi Orchard
Palais Renaissance
Forum Galleria
Hilton International
Shaw House
Liat Towers
Wheelock Place
Tangs Plaza
Lucky Plaza
I O N
Wisma Atria
The Paragon
Grand Park Orchard
The Heeren
Ngee Ann City
Mandarin Gallery
EMERALD HILL
Centrepoint
Orchard Central
Le Meridian
Istana Presidential Palace
Plaza Singapura
ISTANA PARK
SCOTTS ROAD
NORTH SOUTH LINE
PATTERSON ROAD
ORCHARD BOULEVARD
ORCHARD ROAD
ORCHARD LINK
SOMERSET ROAD
CENTRAL EXPRESSWAY
CIRCLE LINE
NORTH EAST LINE
50
200
m
covered walkways

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--- 1
Under the Awnings
at Orchard Road
(Peter Rowe)

--- 2
Under the Angsanas
at Orchard Road
(Har Ye Kan)

--3
On the Corner at Orchard
Central (DP Architects
Pte Ltd (Singapore)
© Yan Son)

--- 4
Inside-Outside at Orchard
Central (Michael Sypkens)

--- 5
Plan of Orchard Central
(Drawn by Jong-Hyun
Baek & Pilsoo Maing)

--- 6
Elevation of Orchard
Central (Drawn by Jong-
Hyun Baek & Pilsoo
Maing)

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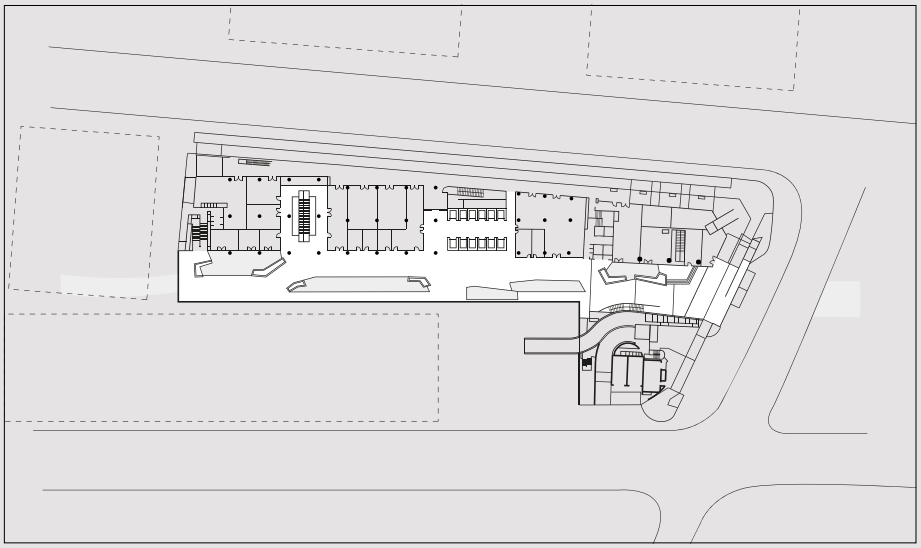

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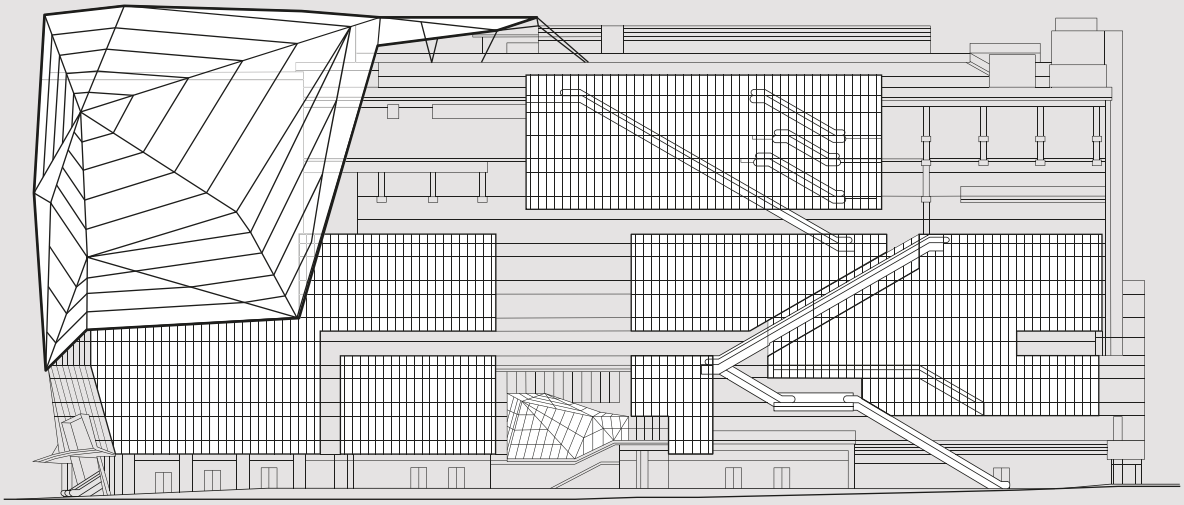

especially with their emerging penchant for high-end goods, more sophisticated environments and prompt service.

In 2005, the retail and entertainment core of Orchard Road, extending some two kilometers in length, became the subject of a multi-million dollar effort to rejuvenate its public pedestrian realm and to increase its retail venues. Movement in this direction began as early as 2001, with the Singapore Tourism Board's (STB) Master Plan for Making Orchard Road More Happening and continued with the deliberations of the Orchard Road Rejuvenation Task Force in 2003, one finding of which was to relax building and functional guidelines to encourage *alfresco* outlets and activities. Then in 2005, the Urban Redevelopment Authority (URA) announced its vision for the future of Orchard Road "… as one of the greatest shopping streets in the world, a pulse for fashion and all things hip and happening."[55] Although Orchard Road attracted more than seven million visitors each year, including 80 percent of arriving tourists, wear and tear over the years and the need to improve and diversify the pedestrian experience had become evident. Recently completed, the Orchard Road Mall Enhancement Program was launched as a design competition in 2005. This planned landscape and infrastructure enhancement involved expansion of walkways into one of the existing traffic lanes to create 'urban green rooms' to be used for performances and exhibitions in support of small and larger-scale public events. In addition, state-of-the-art lighting, co-ordinated street furnishings and multi-functional lamp posts were installed, together with three floral themes – mainly housed in both movable and fixed planters – along specific sections of the roadway.[56] The initiative was led by an inter-agency task force, headed by the STB and including the URA along with the Land Transport Authority. The Cox Group won the competition and, in partnership with the local Architects 61, were engaged to develop and design plans for the venture. This effort was also part of the STB's aspiration to roughly double tourist arrivals to Singapore over the next 10 or so years. Indeed, the idea of publicly mandated streetside improvements has a long history in Singapore, when one remembers that the notable 'five-foot ways' of shophouses were public spaces made in response to Sir Stamford Raffles' early stipulation for continuous public arcades.

Prior to the announcement of the plan, Wisma Atria, the first major commercial development on the south side of Orchard Road, underwent extensive renovation to a five-storey podium of shopping, opening in 2005. The original complex, constructed in 1987, also consisted of an 18-storey tower block. While the tower block remains, the upgraded shopping center, designed by the local DP Architects, engages more directly with Orchard Road's bustling street life. Overall, this project took advantage of new guidelines from the URA aimed at increasing visual excitement, as well as providing for integration into below-grade pedestrian network links to the Mass Rapid Transit Stations and shopping venues like nearby Ngee Ann City. In fact, this air-conditioned underground link between Wisma Atria and Ngee Ann City is one of the most intensely used pedestrian ways in Orchard Road and, for that matter, in Singapore. More specifically, the new URA guidelines promised engagement of gross floor area bonuses for developments and redevelopments that provided open or what they termed 'pop-out' façades and expanded building development to the fullest extent of building boundaries.[57] Clearly on their minds was enhancement of visual excitement along the road. This turn of events also coincided with a distinct shift from solid building forms, such as at Ngee Ann City, to new typologies predicated on surfaces and video walls, including those that could double as seasonal façades like the perennial multi-storey Christmas decorations that had always been a part of Orchard Road. Although Ginza, along with Times Square in New York were looked to as examples to follow, the eventual sheer scope and dynamism of the almost enveloping environments that were produced along Orchard Road became largely unprecedented. Another difference with both Omotesandō and Ginza is the high-rise development and the adjacency of high-class residential areas, alongside of hotels, entertainment and, of course, shopping.

A further turn in the direction of those 'total' shopping and entertainment environments is Orchard Central, recently opened in 2009, again on the south side of Orchard Road closer in to the center of town. Located at what was formerly Glutton's Square, one of Singapore's well-known food streets, Orchard Central is currently the tallest vertical shopping mall in the city at 12 storeys plus two basements of accommodation.

It is also where the URA's idea of turning outwards into the external environment as a source of visual excitement is noticeably on display. The glazed Orchard Road façade is composed of volumes of space, in the form of protruding glass boxes – a version of the so-called 'pop-out' concept – linked together by a diagonally running array of glass enclosed escalators, zig-zagging their way up the façade and transporting people from ground level to further raised 'street' levels. These levels, in turn, form datums for particular groupings of stores and commercial outlets. The resulting 'thick' façade is intended to act as a "surface of social interaction," according to the architects, and its transparency is designed to help dissolve otherwise normal distinctions between inside and outside, or interior streets and the external street condition of Orchard Road itself. Reassembly of space within the mall itself occurs via the five-storey covered volume of Discovery Walk, which spans from the nearby Orchard Shopping Center, past Somerset 313 and through Orchard Central to Killiney Road. This 'Walk' paralleling Somerset Street covers the venerable Somerset Canal that flowed through the area in years gone by.[58] It also offers the opportunity to create another outward-oriented façade through development of a relatively porous building envelope of setbacks, protrusions and balconies. The protruding glass boxes along the Orchard Road façade are also densely equipped with LED lighting, which serve as a visual stimulus and provide a glimpse of internal activities via images and advertising *vis-à-vis* the tenants behind. Visible movement of people across as well as up and down the façade adds to this dynamism. Finally, a so-called 'web structure' appears as a textured skin, shaped at various angles, wrapping around the Killiney Road-facing façade. During the day, this structure reflects available daylighting differently, activating the visual effect, and becomes transformed at night into a giant lit canvas of LED installations, displaying digital art works, among other images. Although tall, the entire shopping mall complex is moderate in size by Orchard Road standards, at 36,045 square meters on an elongated, almost rectangular site of around 6,650 square meters. The architects were DP Architects, no strangers to this kind of commission locally in Singapore.[59]

At the other end of Orchard Road, across from Orchard Turn at the intersection with Paterson Road, is the massive ION Orchard complex that opened very recently. Billed as yet another new retail experience in the almost immersive sense of the word, and sitting above the Orchard Mass Rapid Transit Station, the complex is spread across 64,000 square meters of shopping, comprised of numerous stores, including many luxury brands. This eight-storey podium component is further composed of a series of volumes, with skin-like glass and metal layers revealing the interiors. This is especially prominent at the Event Plaza aspect of the project, next to the major roadway intersection, which links up with the public concourse adjoining the Mass Rapid Transit Station below, seen by the URA at least as an important urban space. There the semi-enclosed volume is a hybrid internal atrium with an external open plaza, some 3,070 square meters in area.[60] This, in turn, was composed as a multi-purpose venue to accommodate civic events. A closeby and curvilinear wave-like multi-media façade provides 'live' larger-than-life telecasts of these events, as well as others taking place within the complex. A floating glazed canopy, supported on large trunk-like columns reinforces analogies to vegetation and peeling of fruit skins. Overall the shopping area's plan is compact with a tall interior atrium offering orientation and a spatial backdrop to its irregular shape. One of the project constraints was accommodating changes to the Orchard Mass Rapid Transit Station, as well as allowing the station to remain open during construction. Part of these modifications was to satisfy the URA's need for Orchard Road development to be connected under shelter as much as possible and unencumbered by vehicular and service access. The media skin also serves as a showcase for digital art work, as well as tenant advertising and, like Orchard Central, seasonal decoration. Double-height shop fronts along the street and around the edges of the plaza also add to the colorful, dynamic and multi-sensory experience. Rising behind is a 56-storey, 218-meter high residential tower also with a shapely curvilinear façade and bringing the total floor area up to around 125,725 square meters on a 18,650 square meter site. Designed by RSP Architects, Planners and Engineers, with Benoy as interior specialists and Cesar Pelli's office consulting on concepts for

the exterior façades, the complex was a joint venture between CapitaLand Group and Hong Kong's Sun Hung Kai Properties, both very prominent international real-estate companies.[61]

Other building complexes now also contribute to the architectural exuberance of the Orchard Road area, like the Cathay Cineleisure Orchard complex by MGT Architects, completed as early as 1997 to serve as a part of what became known as the Youth Triangle, also defined by the nearby Heeren Building and the Youth and Skate Parks. Clearly, what has transpired in this particular territory of Singapore, certainly in recent times under the watchful eye of the URA, is an increasing focus on up-to-the-minute venues for consumption and spectacle. This orientation along Orchard Road has no doubt been pushed, as alluded to earlier, by Singapore coming to grips with its conditions and local realities of being a competition state in a world awash in global trade. State and supply-side involvement also comes from a rock-solid belief that the pitch and tone of urban architectural environments – the contours and colorations of their architectural geographies – do matter, and that prevailing conceptions of public space could be more relaxed and yet directed with appropriate channeling. Whether, however, the hyperactive pursuit of this agenda is fully successful in an emerging age, as stated in an earlier chapter, of more purposeful socio-environmental accountability, defrayed conspicuous consumption and even austerity, remains to be seen. As mentioned, the sheer scale of these enveloping environments along Orchard Road is an architectural geography that transcends the 'object building' of Omotesandō and Ginza and probably comes very close to Debord's warning about the combined seductive power of architecture, display media and capitalist consumption truly overwhelming everyday life.[62]

Along Orchard Road and within its interstices, however, there are activities and signs that also suggest a more inclusive, robust and bright future. As a geography of a range of spatial practices, it is more than simply another global shopping street. It is an urban public space layered with social complexities. To be sure, there is the rather constant flow of global workers and tourists. But, it is also a haven of local youth culture and the place where the Housing Development Board 'heartlanders,' at times staunch in their support of the People's Action Party, go out in the city. Moreover, different groups habitually gravitate to different places, as in Tokyo, defining them for their own use. Filipina guest workers, for instance, congregate in Sunday enclaves outside Lucky Plaza, down from Elizabeth Hospital and next to Mt. Elizabeth Road, in much the same manner as do the Filipina *amahs* outside the Hong Kong Shanghai Bank in Hong Kong. The 'Triangle Tribes' of various affiliations hang out in the so-called Youth Triangle, described earlier, many practicing their skate boarding skills under the watchful eyes of patrolling police officers. Sailors often occupy the bars and hotel areas up towards Tanglin Road on the western end of Orchard Road, once a designated red-light district. Brand-conscious youth and well-heeled adults congregate around the prime real-estate junction with Scotts Road, and so one could go on.[63] In fact, Orchard Road is one place in Singapore available for a certain amount of self-expression and even moderate transgression. If anywhere, its authenticity amidst all the glitzy shopping and entertainment, lies in the manner in which inhabitants' immediate and shorter-term future senses of personal attachment and even identity are being actively constructed and comingled. Then too there is the sedimented history of street names, vegetation from various eras and longer-standing patterns of use.

Pedestrianization for the Masses

Over the past decade or so, several prominent commercial streets in China have emerged as pedestrian malls. Located in or near city centers, these streets responded to the pent-up demand for places to visit, as well as catering to the shopping tastes of the economic elite and the rising middle class. Unlike earlier pedestrian schemes that were closely associated with cultural revival and historical architectural preservation, like Fuzimiao in Nanjing of 1989, the new pedestrian commercial malls borrowed directly from Western precedents and especially European formats from the boom period of such renovations there in the 1970s and 80s. Unlike the European examples, however, the motivation behind pedestrianization appears to have been differently inclined. Rather than being a part of a pragmatic need to revitalize moribund central areas of cities after several decades of automobile-oriented outward urban expansion, the impetus in China had more to do with

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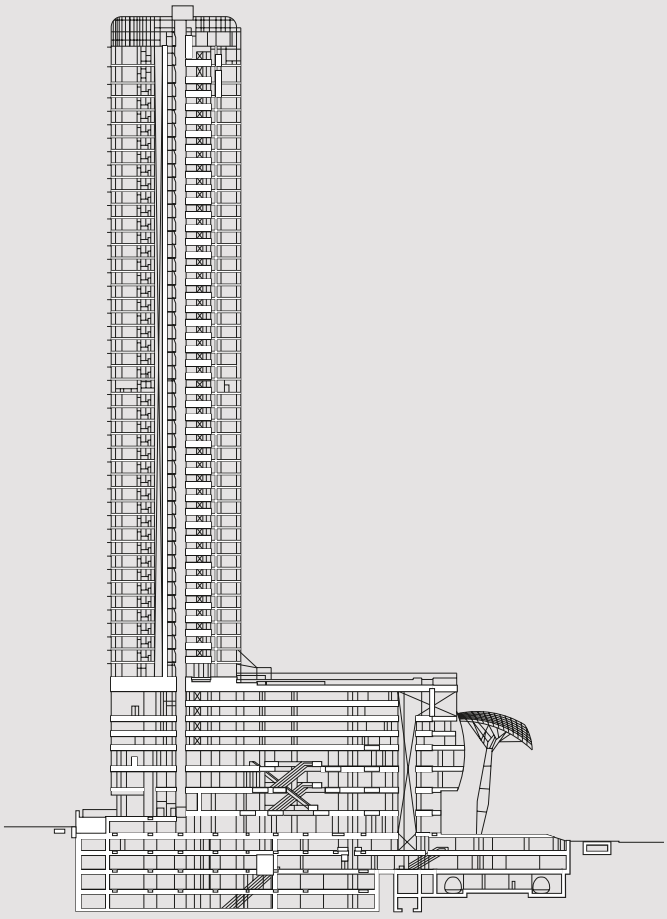


--- 1
Swirling Surfaces
at ION Orchard
(Michael Sypkens)

--- 2
Entry at ION Orchard
(Har Ye Kan)

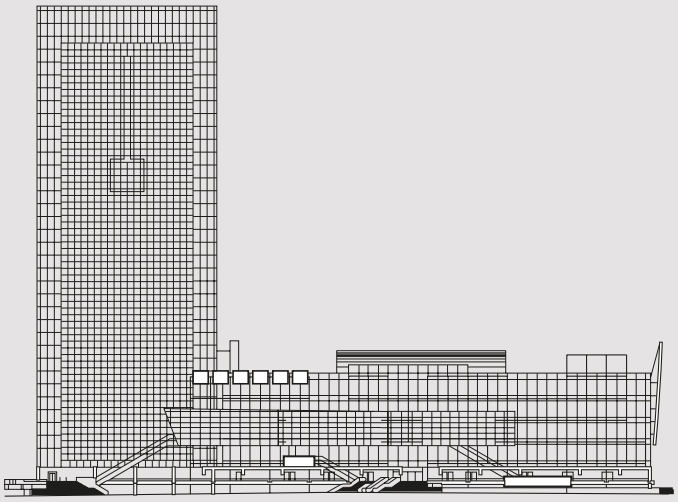
--- 3
Section Through ION
Orchard (Drawn
by Jong-Hyun Baek
& Pilsoo Maing)

--- 4
Mandarin Gallery and
Orchard Cineleisure
(Har Ye Kan)

--- 5
The Heeren
(Har Ye Kan)

--- 6
Elevation-Section
at Wisma Atria (Drawn
by Jong-Hyun Baek
& Pilsoo Maing)

6 ---



expressing contemporary and economic advancement with, as one observer put it, "popular international iconography meant to represent openness and cultural sophistication within the confines of commercial consumption."[64] Purveying relatively high-end goods and services to a growing public, the number and range of brand-name, ultra-luxury goods do not compare, as yet anyway, to Omotesandō or Ginza in Tokyo and for obvious reasons of disparity in consumer wealth. Nevertheless, spatial practices of strolling, being seen out in public and looking at others, as well as at least window shopping if not buying, often with a repetitive itinerary, are much the same. The relationship to vehicular traffic is also different than in Europe, where pedestrianized streets usually bear comparatively light volumes. In China, by contrast, central-city pedestrian malls have almost invariably closed off what were once major vehicular arteries, often posing difficulties for managing traffic circulation and for successfully merchandizing on neighboring streets now carrying higher vehicular loads. By and large, China's major pedestrian malls have proven to be successful with the public, recording pedestrian flows comparable with Europe's and North America's busiest malls, like Paris' Les Halles, as well as the quasi-pedestrianized circumstances described earlier in other parts of East Asia. Also, like both precedents and counterparts elsewhere, the sites of China's malls usually have considerable symbolic significance in their respective cities, primarily tied up with prior commercial use and linkage to other notable places.

Certainly in a Western-centric approach to commerce, Shanghai's Nanjing Road was the most prominent in China and continues to hold sway as an original and significant public place. First designated in 1865, nowadays Nanjing Road comprises two sections: Nanjing Road East, extending from the Bund (Waitan) to the Renmin Precinct; and Nanjing Road West, extending from Renmin by several kilometers to the Jing'an District. The eastern portion is the dedicated commercial zone, including the pedestrianized portion from Henan Road, west of the Bund, to Xizang Road on the edge of Renmin Square. Historically, Nanjing Road started out as Park Lane (Huayuan dao), linking the Bund via a relatively narrow street to a race track established by the British Race Horse Association in 1850 and also known as Bowling Green. Over time, Park Lane followed a succession of similar venues, with the second race course also called New Park in 1854, and finally the third and more permanent racecourse in 1862, occupying more or less the large area, of the present Renmin Precinct, bounded by Xizang Road on the east, Wusheng Road on the south, Huangpi Road on the west, and now Nanjing Road on the north. With these extensions, the right-of-way also became widened and surfaced with stone paving and sand, facilitating walking horses and pedestrian ambulation.[65] In 1864, the Shanghai Municipal Council located their city hall along the road, and gas lamps were installed a year later. Regarded by the Chinese as Shanghai's main street, it was referred to in the vernacular as *Da malu* – meaning the 'great road' and also with *ma* meaning horse.

Between 1917 and into the 1930s, Western-style department stores opened up, establishing the commercial culture's ascendancy along the road. The first among the large stores was Sincere Co. on the corner of Nanjing and Zhejiang Roads, in a pronounced *fin-de-siècle* architectural style. This was followed, nearby in 1918, by Wing On Co. and then the *art déco* Sun Sun Co. Department Store in 1926. By 1919, the Nanjing Road Commercial Association became established and during the later Republican Period, mass marketing publications and radio broadcasts, along with the department stores, actively promoted the consumption of luxury commodities.[66] With its central location, as elsewhere in this narrative, Nanjing Road became the point of origin for a wide variety and mix of commercial enterprises ranging from department stores, to silk shops, specialty stores, cinemas, hotels, restaurants and cafes. It was the place of the most influential trading houses (*hongs*), banks, companies and shops. It was also a primary site of modernity and resolute contemporaneity in Shanghai and in China, including early use of electricity and running water in the 1880s, trolley cars by 1908 and, later on, double-decker buses in 1934. Other prominent buildings also materialized in the 1920s and 30s, including the Park Hotel, described in the earlier chapter about Shanghai.[67] Throughout, Nanjing Road was also the site of major demonstrations and public outpourings, including those around 4th May 1919; the 30th May Massacre in 1925 when some 3,000 demonstrating students were brutally

suppressed by British authorities; and the celebration of Shanghai's liberation in 1949 by units of the People's Liberation Army. Commercial circumstances and certainly the era of Shanghai's dashing, refined, overtly cosmopolitan and modern style (*hai pai*) came to a standstill, however, with Japanese occupation during the Sino-Japanese conflict and World War II, when among other places, both Sincere Co. and Wing On Co. were bombed.

Nanjing Road's contemporary incarnation began shortly after the historic opening up of China to the outside world in the late 1970s and 80s. By the early 1990s, a novel scheme had been developed to help revive commercial activity and to give the road a needed facelift after years of neglect. Foreign companies were invited to sponsor segments of Nanjing Road, including Coca Cola, Pepsi Cola and other commodity firms, in return for which they could prominently display their advertisements and logos. Traffic was dense, especially along Eastern Nanjing Road, with numerous bicyclists jockeying for position and sidewalks largely fenced off from the road right-of-way. Pedestrian movement across busy intersections was facilitated by stairways and elevated walkways much like in Tokyo. Then, in the late 1990s around the celebration of the 50th anniversary of the People's Republic in 1999, this hustle and bustle was replaced by a pedestrian mall along the western half of Nanjing Road East. Arte Charpentier, in association with L'Établissement Public d'Aménagement de la Région de la Défense (EPAD) was placed in charge of the project, along with Zheng Shiling the prominent local architect, planner and academic.[68] The conversion of the roughly 28-meter wide right-of-way for a length of some 1,200 meters, consisted of five components.[69] First, there was the grade-level paving involving high-quality materials, like massive granite blocks and polished red marble imported from Italy. Subtle joint work in this ensemble of pavers also served to drain the street in times of downpours. Second, a line of services was established, slightly off-center from the center of the right-of-way supporting urban facilities, lighting, planters and street furniture. This line was introduced to both create spatial order on what was otherwise a plain surface and to functionally, as well as visually provide continuity along the pedestrian pathway. Third, the sides or flanks of the right-of-way were shaped so as to allow a free interplay with storefronts, neon signs, pictograms and typical Chinese urban visual animation. Fourth, intersections and particular widenings were used for public places and venues for temporary and permanent spectacles. One houses stage facilities while another had an animated fountain, co-ordinated with various water spurts and lighting effects, for the delight of children playing there in summer months. Finally, there were art works most notably in the form of decorative bronzes resembling those in Western cities and similar installations, like Faneuil Hall in Boston, where passersby could pose and have photographs taken. If anything, as others have noted, these artworks have an aura of sentimental populism about them, seemingly encouraging upbeat imagination of different places at different times.[70] At the Xizang end of Nanjing Road East, in association with the underground subway station, an obvious exception is the towering, abstract and curvilinear homage to the workers. However, its purpose is clearly public and political, whereas those of the smaller, life-size decorative bronzes are diversionary and entertaining.

Building around the Nanjing Road Pedestrian Mall, in those areas subject to intensive redevelopment again to the west near Xizang road and Renmin Square, has been pursued aggressively at something like eight times the former building density.[71] Primarily this redevelopment replaced low-rise residential mixed use and traditional *lilong* environments, mainly with high-rise office and hotel complexes. An unfortunate consequence has been increased vehicular traffic, as mentioned earlier, along narrow streets with widths on the order of a paltry 16 meters, depriving them of earlier pedestrian street life and the earlier, characteristically high intensity of retail trade. Not unlike the attraction factor of places like Roppongi Hills away from traditional commercial areas in Tokyo described in an earlier chapter, there has been a substantial convergence of street life on to the Nanjing Road Mall away from the network and fabric of narrow surrounding streets. Also, as mentioned earlier, the potential clientele strolling along Nanjing Road East these days has changed from prior times when the road, west of the Bund, was the precinct of European-style restaurants and cafés. Recently the demographics of visitors have shifted from affluent

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General View of
the Nanjing Road
Pedestrianized Area

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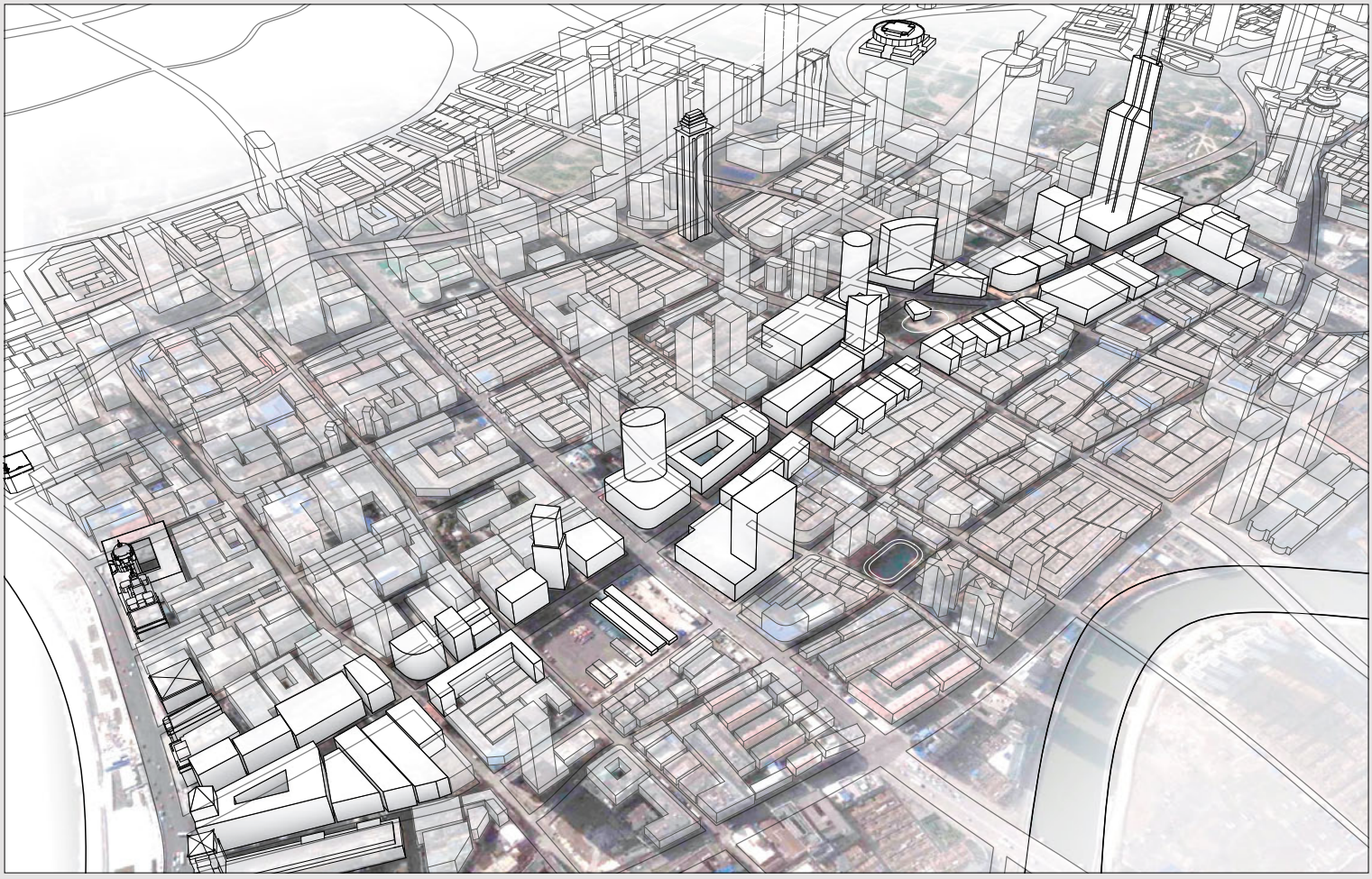
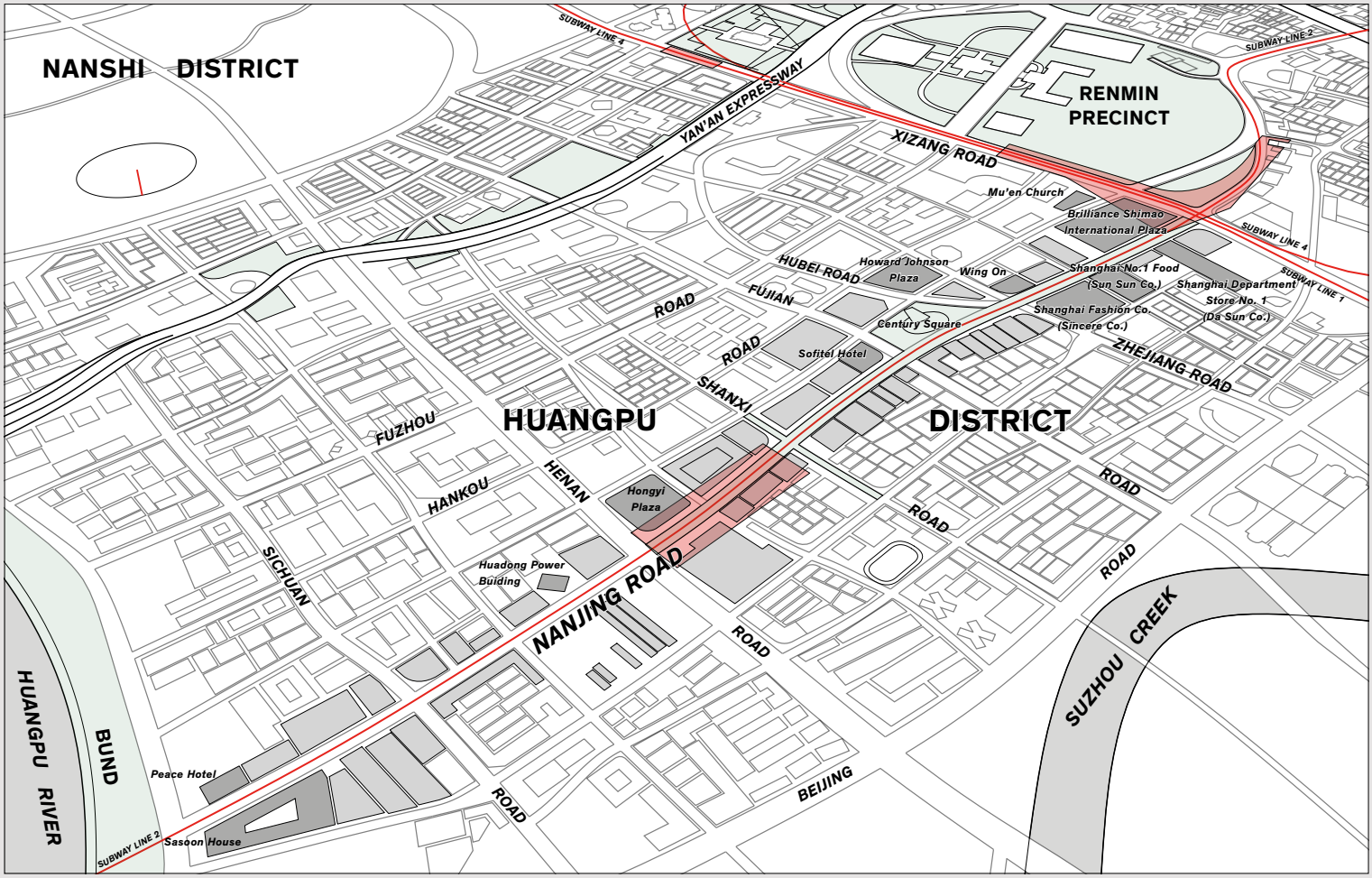
The Nanjing Road
Pedestrianized Area
in Context




NANSHI DISTRICT
SUBWAY LINE 4
YAN'AN EXPRESSWAY
RENMIN PRECINCT
SUBWAY LINE 2
XIZANG ROAD
Mu'en Church
Brilliance Shimao International Plaza
SUBWAY LINE 4
HUBEI ROAD
Howard Johnson Plaza
Wing On
Shanghai No.1 Food (Sun Sun Co.)
Shanghai Department Store No. 1 (Da Sun Co.)
SUBWAY LINE 1
FUJIAN ROAD
Century Square
Shanghai Fashion Co. (Sincere Co.)
ZHEJIANG ROAD
Sofitel Hotel
SHANXI ROAD
HUANGPU DISTRICT
FUZHOU
HANKOU
HENAN
Hongyi Plaza
SICHUAN
Huadong Power Buiding
NANJING ROAD
ROAD
SUZHOU CREEK
HUANGPU RIVER
BUND
Peace Hotel
SUBWAY LINE 2
Sasoon House
BEIJING ROAD

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--- 1
Nanjing Road at Century Square (Peter Rowe)

--- 2
Nanjing Road Pedestrian Area at Fujian Road (Peter Rowe)

--- 3
Coca-Cola Adopts Nanjing Road in the Early '90s (Peter Rowe)

--- 4
Pedestrianization of Wangfujing Road (Peter Rowe)

--- 5
Sun Dong An Plaza and Wangfujing Road (Peter Rowe)

--- 6
Jianghan Street in Wuhan (Peter Rowe)

local residents to less well-heeled tourists from around the country. Another consequence is that locations for higher-end luxury goods are to be found along the Bund and adjacent side streets, among a few other places, with some clusters next to Renmin Square on Xizang Road. Nevertheless, for locals and tourists alike, Nanjing Road still serves as a major location for celebration of Chinese New Year, New Year's Eve, Christmas and other seasonal festivities, often replete with fireworks. Moreover, *hai pai*, and 'Shanghai-on-Shanghai' is being rejuvenated in the eclectic mix of architectural styles, including extensive exterior restorations of department stores and other buildings from the 'golden age' of the 1920s and 30s, *in lieu* of more commonplace, sleek contemporary façades.

At much the same time as Nanjing Road, other pedestrian malls were materializing in other major Chinese central city areas. In Tianjin, for instance, there was the pedestrianization of Binjiang Avenue, over a distance of some 700 meters, with the perpendicular intersection with Heping Road also pedestrianized at one end. A symbolically significant site, Binjiang Avenue formed an important historical link within the city.[72] Wangfujing Avenue in Beijing almost immediately to the east of the Forbidden City, had long flourished as a market street. It was also closely associated with imperial history through nearby palaces and the present name of Palace Well Street dates from the early Qing Dynasty in the 17th century. Certainly in the Maoist period, Wangfujing was Beijing's main shopping street, with state-owned 'friendship stores' (*youyi shangdian*) and foreign consumer items on display.[73] It was also the site of an early department store from the 1954 by Yang Tingbao, a prominent architect of the period, set back with a forecourt on the street proper.[74] Pedestrianization has taken place from slightly to the north of Oriental Plaza – a massive mixed-use commercial complex on the corner with Chang'an (East Chang'an Avenue) – some 1,100 meters to the north, past the side of the old Catholic church, terminating at an intersection with several hotel complexes. Subject to a nine-storey height limit due to the proximity to the Forbidden City and its situational logic, the area around Wangfujing is comprised primarily of buildings with large footprints, distributed on large urban blocks, such as the block-long Sun Dong An Plaza by Wong Tung and Partners of 1998 – a faux Chinese shopping center, which launched Wangfujing as a luxury goods venue in contemporary times. These days, however, traditional Chinese roofscapes and other decorative motifs have consistently given way to glazed contemporary façades and flat roofs, with a LED and billboard culture beginning to rival Orchard Road in Singapore. Again this choice seems to be consistent with coveted expressions of openness, cultural sophistication and having arrived on the world stage. Overall though, Wangfujing lacks the intimacy and vibrancy of Nanjing Road, also due to the scale of the surrounding buildings and the sheer width of the street at somewhere in excess of 40 meters.

Offspring of Nanjing Road and other major city malls also occurred elsewhere almost throughout China, but with mixed success. Wuhan's Jianghan Street pedestrianization scheme is well-scaled, uncluttered with extraneous planting and street furniture, as well as pleasing in its façade variation. The earlier pedestrian mall in the center of Zhangjiagang in the Changjiang Delta of around 1999, by contrast, was barren, desolate and bereft of activity. Slavish cloning, prevalent in China until recently, is rarely a good idea. What the future holds for Nanjing Road appears to be an easterly extension from Henan Road all the way to the Bund, almost doubling its length. While this makes a certain sense, given the primacy of the Bund's location and the traffic calming of its recent major infrastructure improvements, the pedestrian mall will almost surely cease to be such a singular entity, adopting instead concentrations of activity and foci along its length. The same might also be said for Wangfujing Avenue's proposed extension northward, away from Chang'an, with the added difficulty of most people arriving at the southern end to be overcome.[75]

Locating and Sustaining Exclusivity

As noted earlier, fashion streets and districts in the contemporary sense were relatively new urban territories, even in earlier European contexts. As much as anything, their rise coincided with increasing affluence and the rise of the middle classes in modern societies. Largely a phenomenon imported into East Asia, these kinds of developments are comparatively very recent, mirroring both rising affluence on a sufficiently

broad base, increased levels of tourism, and a general widening of operations and opportunities for diverse lifestyles and quality environments with the region. Moreover, the fashion phenomenon, although highly transferable especially in a world of global markets, like its earlier European precedents, also trades on exclusivity and maintaining the uniqueness and integrity of brand names. This trading, in turn, plays on the favoring of certain locations in cities over others and in the physical presentation of products. Inevitably, the urban-architectural circumstances in which boutiques and stores are located becomes pertinent and important, as does the architecture of the stores themselves or a substantial portion of what surrounds the goods on display. More often than not, what lies in between these special environments, within the streets and districts themselves, is layered with spatial and social complexities and, upon closer analysis, not so easy to dismiss summarily as being frivolous, trivial and devoid of social meaning. In addition, all major shopping streets are unique, precisely because of local and interstitial conditions set against a recognizable familiarity of brand emporia from one place to another.

One way to view locations or emerging urban territories is as bundles of particular assets and services that may also change over time, in much the same way as was detailed with regard to Beijing's Central Business District in chapter two. It also follows, that certain functions, like fashion houses, retail stores and related activities in this case, require the surrounding presence of particular assets and services, as both necessary and sufficient conditions for sustainable and thriving locations. Indeed, the general characteristics associated with western precedents, noted earlier, seem to apply at least in Tokyo, Singapore and Shanghai. Suitable territories are centrally located, although not in the political or financial center of circumstances. Both affordability and access or proximity to clientele play mediating roles. The size and scale of appropriated circumstances, including architectural settings and other aspects of physical layouts, are appropriate to the mode and style of local merchandizing, which in the cases described here can be both large and relatively small. Almost without exception, concentration of shopping and related activity occur within 800 meters or less of street length, corresponding to an easy strolling or walking distance. As a consequence, fashion and related districts tend to be compact and relatively small, particularly in comparison to their broader cultural reverberations and notoriety. In all cases, mixtures of uses are involved and, indeed, nondescript aspects may be involved, particularly in the more funky side of appearances. Omotesandō is not, after all, like the Maranouchi financial district, nor is Orchard Road, even given its tidiness, like central Singapore or Marina Bay. There are hodgepodges of activities, buildings and *milieus* involved, much as along the venerable Rue du Faubourg Saint-Honoré.

The location and production of appropriate territorial exclusivity, in both senses of the term, however, requires moving beyond these general and underlying characteristics of the assets and services bundle. There is the need for something special, a particular ambience, an atmosphere, or certainly assets that allow such ambiences and atmospheres to be created and moreover, to be sustained. Such assets are also invariably singular within the broader local context and somehow unique, at least in the way they are bundled together with other assets and services. Here, certainly the zelkova tree-lined, modern, Western-style boulevard structure of Omotesandō comes to mind, tied up with more traditional side streets and back alleys. Similarly Orchard Road's vegetation and topography, tied in with prolonged and convenient access to public transportation and nearby well-established residential areas also comes to mind. In Ginza, there was the sheer location of the place to begin with, followed by a succession of physical transformations in the direction of fashion and other related forms of retail, sometimes even by accident. At Nanjing Road, as one of the few routes out of town, there was a close confluence with foreign, compradoric and local trade that combined it with a particular cosmopolitan feeling, at least superficially. In all instances, there was a sufficiency of history in the place, in a manner that was conducive to fashionability, so that particular assets could be lighted upon, manipulated and even amplified in the direction of further exclusivity. These were certainly not *tabula rasa* situations, as some would have it, but circumstances with a certain social layering and partial

sedimentation sufficient to be built upon. By the same token, none of these streets and surrounding areas were unmalleable or ossified. There was enough flux, maneuvering room and ambiguity in identity to result in further transformations.

Continued maintenance of exclusivity, once initially or embryonically established, is an active and reciprocal process between what is there and useful in a territory, and what is necessary to progress and keep pace with the times. In all the cases under discussion here, this has required a substantial amount of architectural investment. The use of traditional building circumstances in contemporary circumstances, as in the West, was not possible as it was an asset that did not or barely existed. The one possible exception being the re-appropriation of Shanghai *hai pai* style along Nanjing Road. Therefore further pursuit of exclusivity went well beyond renovation and creation of fashionable storefronts. At Omotesandō, for instance, the idea of relatively small exclusive stores, clearly with European roots, became candidates for replication, but also with an architecture intent on wrapping and clothing, as it were, the resulting modern forms with extraordinary surface effects. This movement also happened very quickly over the space of less than a decade, creating a new architectural geography for the brand-name fashion store. The one real exception was the mall at Omotesando Hills, although as can be seen by Jun Aoki's earlier initial diagnosis of prevailing site conditions, it was the relative modesty of the Dojunkai apartments which set the trend and not the shopping center that replaced them. A similar architectural geography emerged also in Ginza at much the same time and also over a short period, with well over a dozen relatively small-sized brand-name fashion stores opening in less than a decade. Given Ginza's existing visual exuberance, the features of this new Japanese architectural geography gravitated further in the direction of animated surfaces and lighting effects. Once again though, the basic form of the pencil buildings involved was simple and the program of accommodations ran beyond simply fashion boutiques into offices, restaurants and even quasi-public functions like galleries and meeting rooms. Then, at Orchard Road, where malls and shopping centers had been the primary mode of ambient gratification for some time, the geography of this architectural typology was extended and amplified to encompass larger volumes, higher degrees of interconnection, including with public transit systems, and novel exploration of outward-turning orientations to what were formerly fundamentally interior spaces. Again, like at Ginza, media walls and almost fantastic extravagances of illumination came into effect. Both at Orchard Road and at Nanjing Road, strong public-sector roles were asserted, seen in both the pedestrianization schemes that were deployed and in the economic stimulation and guidance that were offered. In essence, what distinguishes these East Asian examples from others elsewhere, as well as among themselves, is precisely the unfolding of the internal situational logics at play in the search for exclusivity and how that drives the architectural enterprise onward. In time, the examples discussed may lose out in competition with other places and fall into other uses. So far, however, they have not and seem, if anything, to be transforming in the opposite direction.

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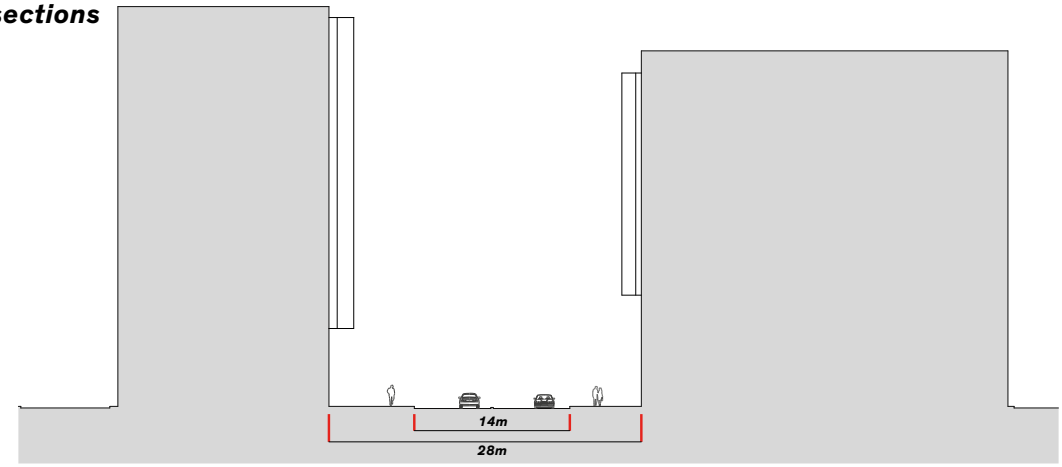
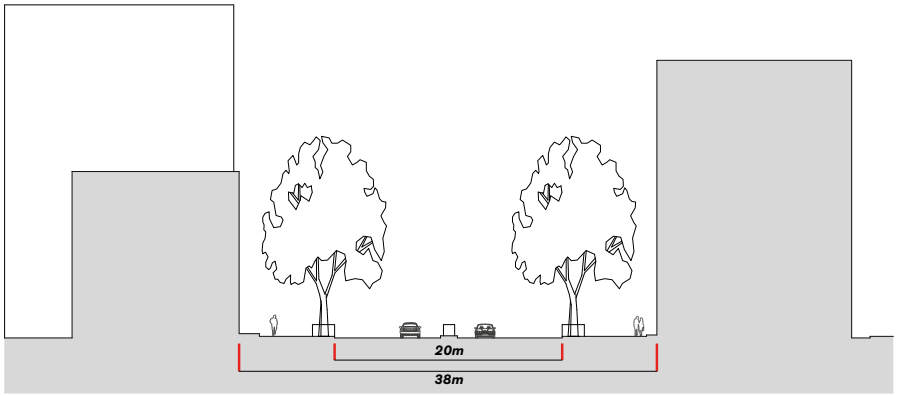
typical sections



GINZA CHUO DORI

**** pedestrianized on sundays and national holidays***



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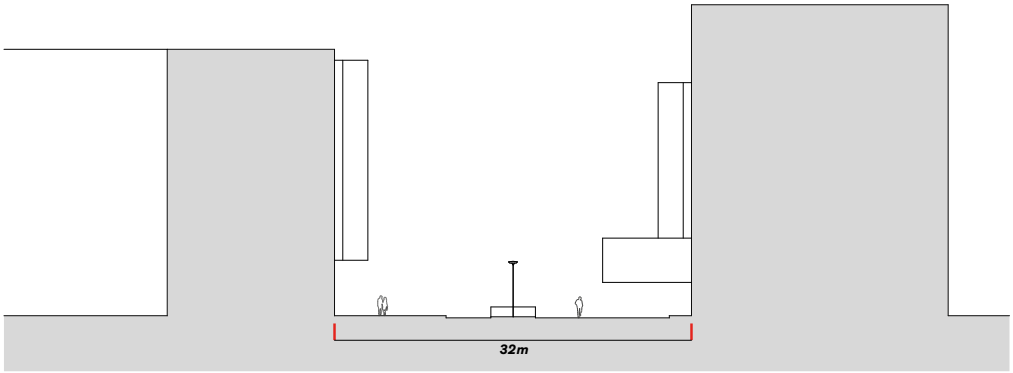
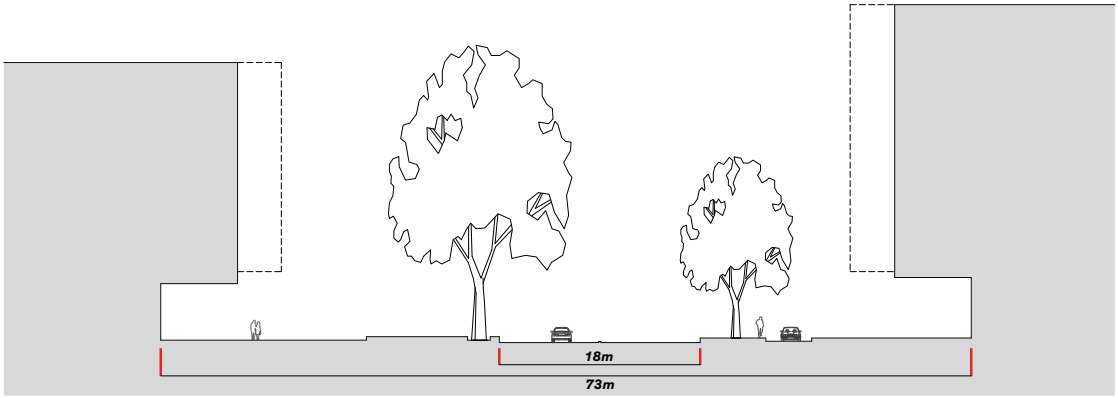


NANJING ROAD

**** pedestrianized***



ORCHARD ROAD

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Typical Sections of Fashion Streets in Ginza, Omotesandō, Nanjing Road and Orchard Road

Throughout, this book has been primarily concerned with architectural projects and their surrounding circumstances in East Asian cities. More specifically, it has been about significant territories of architectural production both as sites or parcels of land, and as courses of action. By no means, however, has it been a full account in the sense of a broad survey and subsequent categorization of building activity in the region. For instance, concentration on building more squarely in the public sphere precluded discussion of housing and much of the domestic realm. Also, particular building typologies like museums, for example, may have arisen in discussion, but given recent construction of them in China alone running into the thousands, anything like a systematic treatment could hardly have been attempted. Further, as the book title suggests, projects outside of urban areas were not included and discussion focused mainly on large or otherwise well-known urban settings. In addition, little attempt was made towards national characterizations of architectural production, even as the subject of expressive identity cropped up, in the belief that the cities and local circumstances themselves with their particular situational logics carried more weight. Along the way, borrowings from non-regional sources like the West were often evident, although emulation of practices and outcomes from inside the region were also not uncommon as in the more distant past. Nevertheless, with all this said, sufficient coverage was brought to bear and on numerous enough major buildings and prominent sites to profile a substantial part of the architectural emergence that has occurred over the past ten to fifteen years or so in East Asia. Moreover, as suggested in the introduction, this has been a period strongly marked by turning points in the narratives of modernization of many places in the region, away from earlier narrowly defined, production-oriented forms of development. Further, the projects discussed here can also be closely associated with these turning points and in some cases even epitomize them in the mind's eyes of broader publics.

At the risk of being overly repetitive, the emergent architectural territories and projects under discussion here invariably represented expansions of program from earlier experiences of urban space and time in East Asia. Generally, this expansion seems to have come by way of diversity of function and choice rather than by way of access among various strata of society. It also seems to have been a matter of wider and stronger leisure-time orientations and broader concerns with environmental ambience and amenity, often closely in line with well-established conditions elsewhere. However, the thrust of this expansion was hardly homogeneous among all cities or urban settings in the region. After all, although beset by its own problems, Tokyo was at a different and arguably more advanced stage of development a decade ago than, say, Shanghai. Nevertheless, the drivers underlying many of the emergent architectural territories discussed here showed characteristics and regularities in common. At one level the change involved was a matter of dealing with evident inefficiencies of prior eras like overcrowding, environmental degradation, poor service quality and inadequate building, or what economists might refer to as negative externalities. In other circumstances, new programs were introduced because of rising local demand, shifting aspirations, responses to outside competition and the subsequent need for greater attractiveness. More broadly and formally, this behavior may be seen to conform to something like a Kuznets curve or related model of urban-environmental transition in which, as suggested in an earlier chapter, when modern development occurs, environmental quality declines to a point when it rises again under pressure from rising incomes, making increased amenity both more affordable and necessary for further progress to be made. In many respects this happened in Tokyo and Japan some time ago, although it is relatively new in the Korean context and really only beginning to occur in parts of China. Then too, programmatic expansion and new architectural territories may simply have been responses to opportunities in specific sectors of activity concerned with sports, like the Olympics or similar events, expositions and conventions, as well as taking up with somewhat more ubiquitous global activities such as merchandizing and an architecture of consumption, particularly when the entry fee was low although competitively necessary. Similarly, across the region there was a notable emergence of much the same kinds of cultural venues, leisure-time facilities and sites of entertainment, alongside increased levels of public open space almost everywhere. Contrary to claims of overbearing globalization and homogenization, however, this tendency appears to have been more a matter of general subscription to broad categories of functions and amenable choices, but without concomitant commitment to the same particular architectural outcomes. After all, many countries enjoy football without the state and styles of play being anywhere near the same.

CHAPTER EIGHT

TERRITORIES, GEOGRAPHIES AND DISCOURSES

Beyond programs on the project conceptualization and planning side of affairs, circumstances were more sharply defined and peculiar to the region. In many if not most cases, projects were supply-side led and remained top-down in their guidance. Even if not directly state sponsored, the hand of government authorities and agencies was clearly present, even with the apparent opening up and liberalization going on in many quarters and a wider embrace of issues. In China, caught between a strong state and market forces, this might have been expected. But, it was also evident in the complicity between the public and private sectors in Tokyo's and Japan's redevelopment projects. It was certainly present in Singapore's image burnishing and re-branding exercises, as well as in Hong Kong and in Seoul. Civil society, though gaining some ground in places, remained largely weak in any pro-active urban sense. If anything, it was municipal government that became stronger and more prominent in its role as an agent of change. Partly this was due to greater fiscal wherewithal, although it was also probably due to wanting to take more control and to exercise more leadership, to a lesser or greater extent associated with a perceived closeness and sensitivity to demands and aspirations of citizenry. Physically, the territories under discussion tended to be newly created, often in a literal manner, and relatively large. They also frequently involved side-by-side development, usually close by existing central urban areas. This was certainly the case, for example, at Marina Bay, Pudong, Songdo and in Tokyo as well as at Yokohama Bay. Though without the same centrality, it was also apparent in the expressions of Beijing's axes and, by necessity, in all the airport projects. Plans underlying territorial developments tended to be conventional in style, largely master plans with a relatively coarse grain in scale and level of detail. By contrast, spectacle, scenography, monumentality or some other 'wow factor' was rarely ignored in these efforts. On the whole they appeared rather more celebratory and even triumphal than they were quotidian. Finally, seen collectively, the scale and novelty of operations was often breathtaking compared to elsewhere. There was, for instance, the tallest building in the world for a time, the longest suspension bridge, the first of a kind in airports, the largest building in the world, the fastest train ride, the most-attended exposition, the largest single infrastructure project, almost half the world's total construction going on in one place, and so one could go on.

In the shaping of territories and defining of architectural geographies among projects, common traits and tendencies can also be seen to have emerged alongside inevitable exceptions and even anomalies. Overt references to figural aspects of traditional building in East Asia occurred, if anything, during early days of this narrative. To be sure, the Jin Mao Tower, the Shanghai Grand Theatre and Taipei 101 are fine examples of such a point of view but numerically clearly in the minority of projects. Rather, contemporaneity in building material, structure and ultimately in form has been the dominant preoccupation almost in an orthodox modern and certainly hyper-modernist sort of way. In particular a search for geometric discipline, often away from Euclidean towards Riemannian or toroidal systems of organization was combined frequently with structural engineering innovation and parsimonious use of material components to give a particular and largely unprecedented appearance to many projects. The emergent architectural geography of undulating and even twisting surfaces, complex and ornamental truss work, inscribed material finishes, and sleek, highly abstract autonomous enclosures has often been occasioned by the sheer required scale of buildings and the extension of architecture to infrastructure in some cases. Such appearances are also symbolic of project ambitions and a striving to appear modern and contemporary in the world, as well as actively eschewing particular regional associations. Ironically perhaps, given the large amount of building involved, this architectural geography or kind of output may well come to signify East Asia in the fullness of time, much as a well-formed minimalism has already tended to pigeonhole Japanese architecture. Much has been made of the prolific use of foreign architects. Indeed, especially in China, it is difficult to think of a major project where they were not involved. As often enunciated here, however, fundamental control has rested mainly with locals, as has the setting of agendas with regard to styles and modes of expression. Moreover, despite the obvious architectural flamboyance in many projects, the overall approach has been frequently rather more conservative – as in safe – than it has been radical. Of course there were also exceptions as in the rethinking of airports and related infrastructure in the 1990s, as well as a few iconic buildings with the likes of CCTV, the 'Bird's Nest' and perhaps a few commercial high-rises.

Returning to the turning points of the introduction and the projects which followed, an inevitable question that arises is where do particular places in East Asia seem to be going, and how are discourses shaping architectural production likely to shift? Moving in an order with some priority, cities

in China at present appear to be largely in the thrall of an architecture for the 'New China,' one that is modern and Chinese, rather than Chinese and modern in emphasis. Contrary to some views, decision-making concerning urbanization is predominantly incremental and pragmatic rather than sweeping and ideological, as those in power are acutely aware of the ramifications of errors as in the past, which China, let alone the rest of the world, cannot afford. Among the decisions made in many projects presented here, the tactic of taking rather full advantage of low costs of information from others was on view, along with the useful habit of expropriating promising ideas and immediately imbuing them with Chinese characteristics. This has sometimes led to excesses or unnecessary slavish emulation, as in a proliferation of Central Business Districts, pedestrian streets, duplicative industries and even Tiananmen-like plazas. However, many of these excesses also seem to have been consigned to the past. As alluded to earlier, there has been a substantial rise in the 'municipal state' rivaling even the central government in China, with broad powers, considerable resources and increasing levels of independence. This is particularly evident among larger and more prominent cities. Moreover, these emergent municipal entities are not entirely like potential counterparts elsewhere. For instance, they are clearly not like city-states, such as Luxembourg or Singapore with separate constitutions and foreign affairs, nor are they quite as subordinate to higher powers as in parts of Europe and America. One potentially positive outcome is greater attention being paid to local circumstances and to comparative advantages to be found there by contrast to earlier homogeneous urban prescriptions. Even the differentiated histories of places – like Shanghai *hai pai* – can now come into play lending greater scope to the very real diversity among urban circumstances in China, quite unlike earlier unified official presentations. On the other hand, considerable co-operation on common agendas across the board, probably most notably in environmental remediation and urban-rural development, will be required in order for China not to find itself effectively trapped in certainly better though not ideal future circumstances. By 2035 or thereabouts, the 'urbanization project' will be more or less over, with what happens in the next ten to fifteen years likely to be pivotal in outcomes. In these regards, for better or worse, cities on the leading edge or development, like Shanghai and Beijing, are now strongly defining the urban-territorial and architectural terrain that the future may take. One mediating voice in the current discourse worth noting centers on the sparse but growing indigenous architectural production not very prominent in this volume which has tended to concentrate more on official narratives. There, a stress on locality, material specificity, and the realism of China still being a relatively poor country is becoming more strongly exhibited and to the good.

In Japan and Tokyo by contrast, dynamics appear to be moving in a different direction. The population is aging and already declining nationwide. Competitiveness, although making something of a comeback, has been lost with a concomitant felt need for higher levels of productivity, efficiency and, probably, diversity. Happily, local resistances to the hegemony of pro-development factions like the 'road tribe' and the 'dam-builders' have grown appreciably, indicating a belated but more effective rise of civil society in urban and other affairs. As they have relatively recently, pushes towards higher levels of building efficiency seem likely to sustain large-scale, high-rise commercial and mixed-use developments, although probably more to re-house them to attract many other firms. In Tokyo the belt of older ward structures surrounding the central core seems likely to become a new and different future territory for redevelopment, most propitiously in the form of predominantly residential and mixed-use development aimed at offsetting persistent transportation and commuting problems. Then too, at the other end of the building-scale spectrum, the kind of 'micro-urbanism' that came about recently as a consequence of the sheer shrinking of opportunities for architectural production elsewhere will likely continue to flower and proliferate, as it did in places in Tokyo like Omotesandō, Ginza and Daikenyama. This trend also seems likely to continue to extend to the domestic realm, particularly given the preponderance and community-wide preference for single dwellings. In short, a two-tailed building phenomenon seems likely to remain in place for some time, with productive architectural activity at both the large commercial and small micro-urban scales.

Among the smaller regional entities, Singapore seems likely to continue to focus development around exhortations and rhetoric like a 'city of tropical excellence' and a 'livable and vibrant community,' although these would appear to be a near saturation in the likes of shopping malls, entertainment venues and 'integrated resorts,' possibly requiring subsequent adjustments to both hype and program. Architectural explorations around 'glocal' themes involving hybrids of one kind or another seem likely to continue and more complex landscapes also seem likely to emerge, particularly as older industrial and housing estates are revisited as mixed-use

redevelopment opportunities and sites of further ecological remediation. One driver seems likely to be expansion of housing choices and standards better suited to the aspirations of a robustly expanding middle class. Another is continued shifts in the service sector towards more contemporary knowledge-based industries. Central control appears unlikely to be relinquished any time soon, in large part because of its successful application in the past and the consequent rock-solid belief in the physical perfectibility of urban circumstances. Although Taipei, by contrast, has a long history of private-sector *laissez faire* development with a preponderance of small business enterprises, its recent turn towards more emphatic government-led supply-side initiatives may well continue. It has certainly brought timely relief to a variety of environmental problems and improved the city's infrastructure. Similarly, the recent turn in Seoul and other urban centers in South Korea will likely continue towards a broader supply of urban amenities, especially with respect to public open space in what is otherwise one of the most densely populated urban circumstances in the region, together with a wider diversity of cultural leisure-time activities. Dominant national values of efficiency and working together combined with the emergence and toleration in the recent democratic period of diverse opinions and attitudes also appears likely to provide ample and fertile grounds for perpetuating populist approaches to public projects, rather than to those more on the cutting edge. Continued prevalence of small-scale enterprises alongside those of a conspicuously large scale also seems likely to sustain a two-tailed arrangement of opportunities for architectural production, not unlike in Tokyo.

Finally, what can be learned from this ensemble of projects, or more pointedly, from the ensemble itself? First, as at other times and in other places, urban architecture, particularly of a sizeable scale, is well-served by supply-side-led, and largely top-down planning and promotional processes. While certainly not purporting to support autocratic and dictatorial regimes no matter how tasteful they might be, the need for strong, widespread and sustained leadership in the sense of what to do and how to do it efficiently is apparent. Second, following on from the earlier discussion, it is clear that a local character in urban architecture emerges when projects are primarily and even solely in local hands, especially with regard to client structures, regulatory bodies and planners. Moreover, this 'localness' is increasingly a distinctly urban, municipal phenomenon, and one that avoids both the nationalism and the leveling effects of globalization by taking place in a more particular, lower, less abstract and less lofty domain of interests and practices. Third, as it was in the past, modernity or contemporaneity in architectural bearing and style is associated with collective feelings of having arrived or of emerging confidently on to the world stage. As it was, for instance, in the West, this becomes primarily a case of seizing the moment, so to speak, so that architecture is a matter of building at a time, rather than introspectively rummaging through a proverbial trunk of traditional garb in search of identities that might be discovered there. Fourth, when a disproportionate amount of urban development and building, relative to say population and wealth, takes place in one region for a lengthy enough period of time and during an era when the world at large is being reshaped by new and different transactional arrangements – as in globalization – then that region becomes a testbed for infrastructurally inclined projects also applicable elsewhere. This in turn necessarily leads to an internationalization of various aspects of building activity and technological development. By the same token, such high levels of building can also encourage importation of architectural artifacts associated with institutions, enterprises and public goods that are new to the region. Both circumstances have constantly transpired in East Asia during the past decade to a decade and a half, as have the three earlier observations.

Reflecting away from East Asia, what these observations might mean for developments in, say, Western cities is, of course, difficult to prescribe with any certainty. However, it certainly seems likely to create a far stronger reciprocal relationship in the interchange of knowledge, expertise and talent between the two regional spheres. In fact, this has already begun to happen in cultural exchanges, magazine and other media coverage, joint ventures, educational programs, and so on. All have become certainly more numerous and, one suspects, more meaningful than they were some 10 or 15 years earlier. Part of this experience also usefully involves looking at one's own circumstances through those of the other, which again of course can be edifying, quite apart from freer and more truly international trading in developmental, building and architectural ideas, applications and technologies. On the other hand, what has also happened in East Asia reinforces the idea, that in bedrock and fundamental ways, cities are and remain local to all our benefit, by way of inhabitation, orientation, manners of spatial appreciation and styles of management. Indeed, when thought of in these terms, it is difficult to imagine why circumstances should be otherwise.

ON REPRESENTING ARCHITECTURAL TERRITORIES IN DRAWINGS

by Michael Sypkens

In 1500, Jacopo de' Barbari completed an early perspective drawing of a European city: a bird's-eye view of Venice. It caused a stir, not least because of the immense detail and scale at which it was rendered. But more importantly, it changed the way the city was perceived. What had been a continuously unfolding urban experience could now be shared visually, as a single, tangible block of built matter. The engraving was neither abstract, like a plan, nor real, as from experience. It thus offered an enticing vision into an imaginary realm with scientific basis – a place in between cartography and reality.

The drawings of urban territories presented in this book attempt to provide something similar. However, the task faced the unique problem of having to draw the contemporary East Asian city. The built environment in East Asia is far from static (by contrast, buildings in Barbari's engraving can still be traced down to the position of the window). They are difficult to grasp, partly because building codes are not sacrosanct. Asian cities, therefore, tend to have irregular blocks and scattered building heights, with buildings of vastly different scales shouldering each other. Also, a lot of the planning is based on geomantic principles. At the social level, communities tend to be introverted with their 'backs' to the street. Though apparently fragmented, they form patches within a hierarchy of communities that are organically unified at the larger, urban scale. Perhaps owing to this sense of unity, notable buildings and streets are often inseparable – buildings are urban and streets are spatial. In fact, seeing them as a single entity – an urban 'territory' – reveals certain unique features that give meaning to the locale. Hence the problem: how to draw a territory?

Interestingly, within the visual culture of architecture or even urban design, there is often a clear project-context distinction, wherein the context frames the object to give it focus. City planners and geographers, on the other hand, prefer two-dimensional, plan-oriented projections to represent the urban scale. Though neither convention would do, adopting certain techniques of both would help define the vision of a territory as a single urban-architectural unit. So the questions beckoned: How to express the material and spatial qualities of a city while also presenting its logic of organization? How to draw urban environments that vary widely in scale? How to depict the continuous 'experience' of discontinuous terrains linked by infrastructure? And finally, how to illustrate the edge: at which point does a building dissolve into fabric, fabric into texture, texture into void?

Posed with this challenge, we were inspired by how we see cities differently with the evolving sophistication of the internet. More and more, we find that the 'virtual' precedes the 'real' in how we use the city. Even without access to more specialized GIS databases, we are presented with a luxury of geographic information through satellite images and GPS technologies. Multidimensional digital maps like Google and Bing offer street and bird's-eye views, precise aerial and topographic imagery along with simulated models of texture-mapped buildings, all blended in with infinite bulletins of interconnected data. Maps are becoming easier to copy, alter, develop, and share. Thus technically, the drawings shown here were made possible by the combination of 3D software and publically available information. The specific type of accessible data, however, varied from city to city; perhaps inflecting each drawing in its own way. User-generated models could occasionally be imported, but almost everything was built from scratch. Fortunately, working systematically with digital models largely simplified the task. While the framing and scaling of territories was guided by their composition and size, it was important to find views that were distinct from the common vignettes and panoramas so that the unique, 'emergent' quality could be accentuated. The effect was then achieved by the superimposition of maps and plans, rendered and drawn using techniques for the design of buildings. This gave them more detail and precision, which was needed because in many ways the project was architectural; rather than seeing territories as the sum of independent buildings, they were conceived as larger, three-dimensional entities made up of urban matter.

As far as the presentation goes, each territory is subdivided into two drawings: the rendering and the underlay. The rendering shows the texture of the city, its material palette, spatial qualities, its density and relationship of volumes. The underlay illustrates the systems that lies beneath; the natural and artificial networks that link and define the edges of each territory. This pairing offers a balanced demonstration of systems and qualities. But ultimately, the idea is to highlight the locale, to convey the insular and ephemeral qualities of an East Asian milieu. As clear entities within a larger urban matrix, these terrains are nevertheless fleeting images, subject to physical change and psychological reassessment. Thus pictorially, the rendering is intended to relate to local conventions of seeing – something in between *manga* and calligraphy – in order to stress the temporal and contingent nature of space. In total, they make up frames of transient domains, negotiating fiction and reality to produce glimpses of emerging territories.

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