The Second Line

by

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A thesis
presented to the University of Waterloo
in fulfilment of the
thesis requirement for the degree of
Master of Architecture

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

A political boundary divided the City of Shenzhen in 1978. The southern portion is designated as a Special Economic Zone (SEZ), while the northern region remains a part of hinterland China. The divide creates a geographical and psychological chasm in the administrative and ontological existence of Shenzhen. The locals dubbed this border "the Second Line".

The Second Line and SEZ were a part of Chairman Deng Xiaoping's open and reform economic policies in 1978. The SEZs were designated areas along the southeast coast of China for the socialist state's experimentation with global capitalism. After years of wars, revolution and repression of the individual pursuit of capital, Shenzhen underwent extraordinary urban and economic development, growing from clusters of villages holding 300 000 residents to a megalopolis of more than a million in one decade.¹

The Second Line drove uneven urban and economic growth in the Shenzhen SEZ. The radical speed of development and opportunities brought workers from rural areas of China. They made up the economic and urban substructure of the city, but were excluded from urban social welfare. Shenzhen's industries rooted in instability and disposability of labour discouraged the settlement of the floating population.

The thesis proposal conceptually commemorates the site of the Second Line, and pays homage to its crucial role in the urban and economic formation of Shenzhen. At the urban scale, it acts as a public infrastructure, providing a framework for interface between the segregated territories of the city. The social housing component of the proposal is an architectural response and challenge to policies that allow for the migration of rural workers without provisions for everyday life. The proposal subverts the divisive ideology of the boundary through inhabitation, and creates a space of dwelling on the Second Line.

Lawrence Liauw, "Leaping Forward, Getting Rich Gloriously, and Letting a Hundred Cities Bloom," in "New Urban China" *Architectural Design* vol 78 No 5 (2008): 6.

[∨] Figure 0.1 The Second Line as seen from Zhongshan Park

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I would like to thank Dereck Revington and Philip Beesley for preliminary conversations that formed the foundation for various ideas and methods in the book.

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"Submission of Shenzhen SEZ Plan of Expansion to the State Council; Unification of Regions Within and Without the Second Line (深圳特区延伸方案上报国务院 关内关外合一)," Last modified January 29, 2013, http://www.szol.net/vip/article/2009-11-18/24040-1.htm.

Guo Gang, "The Sub-National Aspect of the Post-Mao Economic Reform," Department of Political Science, University of Rochester, 1999.

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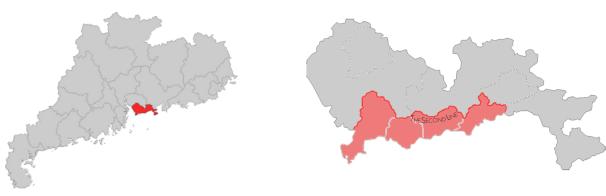
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Introduction

After the fall of the Qing dynasty in 1912, over half a century of warfare and political mobilization in modern China devastated the national economy. When Deng Xiaoping became Chairman of the Chinese Communist Party (CCP) in 1978, the state was in dire need of economic reform. One of Deng's major policies was the instillation of Special Economic Zones (SEZ) along the southeast coast of China to encourage foreign investment and trade as an experiment with the global free market. Shenzhen was the largest and most successful of the SEZs.⁴

In order to make the SEZ, the area of Bao'an was elevated to the status of Shenzhen municipality. The southern portion (closest to Hong Kong) was designated the new SEZ, while the northern portion made up the non-SEZ portion of the city. The site of the Shenzhen SEZ was strategically chosen for its geographic adjacency to Hong Kong, the international magalopolis that would act as a model to emulate for urban and economic expansion. The Second Line that divided Shenzhen in two and demarcated the boundary of the SEZ is named parallel to the First Line, which severed Hong Kong from China in its cession to Britain in 1842. The close combination of foreign capital and inland labour caused the birth and exponential growth of the new city, flattening the hilly landscape and constructing skyscrapers at record-breaking speeds in the desire to be lifted out of perpetual poverty. Persistently exceeding the central government's most optimistic projections for growth throughout its history, Shenzhen has become the poster child for the modern Chinese economic framework of "capitalism with socialist characteristics". In 2010, the success of the Shenzhen SEZ encouraged the expansion of the Zone to include Shenzhen municipality in its entirety, causing the de facto annulment of the Second Line.

Conceptually, the thesis intervention is situated on the former site of the now virtual Second Line in memorialization of its integral role in the urban and economic development of Shenzhen.

The incredible speed of development left lines of urban and social disparity in its wake. This thesis argues that the continual success of Shenzhen through time, from its economic policies to its social stratification, from the historic development of modern China to the urban form of the city today, were necessarily dependent on a series of divisions at both macro and micro scales, in both physical and virtual forms. The Second Line is perceived to be the inaugurating macro apparatus of division. Its ideology is further perpetuated in micro segmentations of the city.

Peter Rowe and Seng Kuan, Architectural Encouters with Essence and Form in Modern China, Cambridge: MIT Press, 2002, 2-22.

Tao Yitao and Lu Zhiguo, ed., China's Economic Zones: Design, Implementation and Impact, UK: Paths International Ltd, 2012, 1-20.

Kwan Yiu Wong, ed,. Shenzhen Special Economic Zone: China's Experiment in Modernization, Hong Kong: Tai Dao Publishing Co., 1982, 3-7.

[&]quot;Shenzhen SEZ to Increase in Area through the Removal of the Second Line; New Area to be Almost Twice that of Hong Kong (深圳特区拟撤关扩大 面积将接近两个香港." Qilu Evening News (齐鲁晚报), May 21, 2009. http://news.sina.com.cn/c/2009-05-21/072315660067s.shtml.
"Submission of Shenzhen SEZ Plan of Expansion to the State Council; Unification of Regions Within and Without the Second Line (深圳特区延伸方案上报国务院 关内关外合一)," Last modified January 29, 2013, http://www.szol.net/vip/article/2009-11-18/24040-1.htm.

The urban fabric of Shenzhen is a collage of segregated territories. The three main typologies of the urban village (also known as Village-in-the-City or ViC), factory-dormitory compound, and new developments of gated communities are respectively tenured by demographic segments of indigenous farmers, the floating migrant population, and the nouveau riche. Urban form exacerbates the stratification of society, causing three distinct types of social reality to co-exist in Shenzhen in adjacent isolation.

The ground plane of the thesis proposal acts as a public infrastructure, a framework to generate interface between the archipelagos of self-contained territories. The unconventional interaction between various social classes seeks to leverage the characteristics of each for reciprocal benefit.

Since Deng shifted the nation's developmental focus to cities, large-scale urban development has drawn millions of rural workers to work in construction and light manufacturing industries. It is estimated that as much as 15% of the Chinese population are floating migrants. Although temporary work permits allowed transient populations to form the economic foundation of the city, the Household Registration system (hukou legislation of 1958) prevented their settlement in urban areas by denying state social welfare such as public healthcare, education, and right of residence. The situation is exacerbated in Shenzhen, where the economy was built on ubiquitous factories founded upon the instability of job security and disposability of labour. While villagers had a hold on the land and investors on the economy, migrant workers were left out of both systems. They necessarily found residence in either transient dormitory barracks or in overcrowded urban villages.

The thesis intervention is an architectural response and challenge to existing policies that govern migration. By creating a space of dwelling with relative permanence, the proposal carves a physical niche in the city for those responsible for its construction, and in doing so, impels policy changes for the allocation of a place of dwelling for the floating segment of the population.

The twelfth Five-Year Plan (2011-2015) ⁹ and new social housing objectives ¹⁰ at both the national and municipal levels are beginning to address the vast economic disparities within Shenzhen and other boom cities. However, many policies only cater to a specific demographic segment, while the *hukou* system and deep social prejudices continue to propagate physical and psychological divisions within the Chinese population. ¹¹ The thesis proposal seeks to accelerate political reform through architectural intervention. Its goal is to subvert the divisive ideology of the Second Line through inhabitation, re-evaluate the relationship between urban and rural populations and the nature of their co-dependence, and create a secure space of dwelling to stabilize the precarious existence of migrants in the city.

Du Juan, "Shenzhen: Urban Myth of a New Chinese City," Jornal of Architectural Education 03 (2010): 65-66.

Pun Ngai, Made in China, Durham: Duke University Press, 2005, (80-)83.

 $[\]label{eq:first-section} \begin{tabular}{ll} Five-Year Plan," Accessed June 2, 2013, http://www.cbichina.org.cn/cbichina/upload/fckeditor/Full%20Translation%20of%20the%2012th%20Five-Year%20Plan.pdf. \end{tabular}$

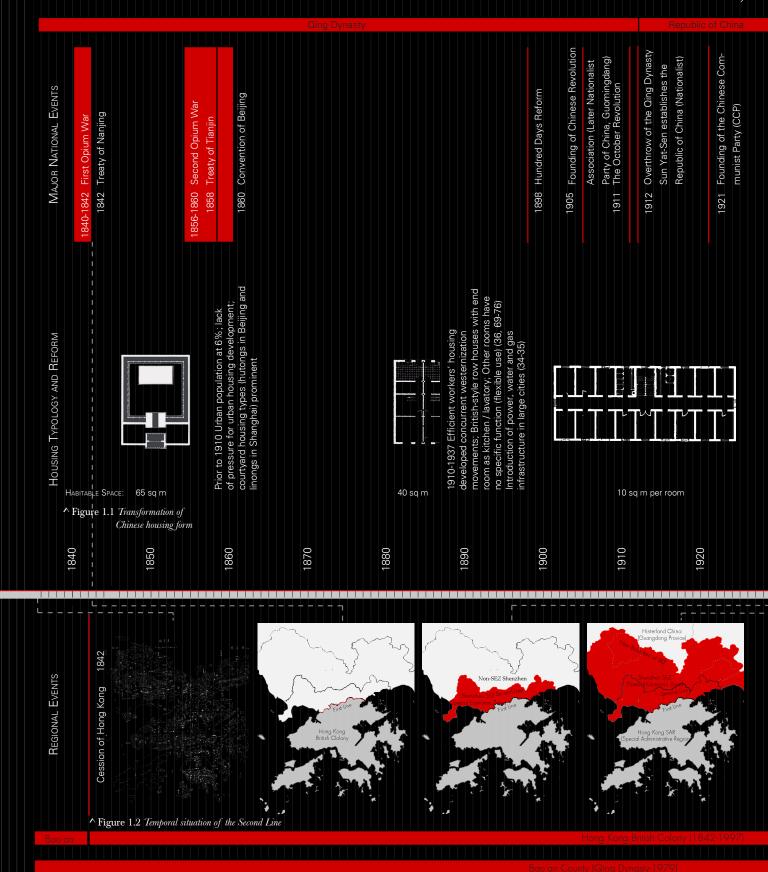
Du Juan, "2011 Shenzhen & Hong Kong Bi-City Biennale of Urbanism \ Architecture (2011 深圳 & 香港城市 \ 建筑双城双年展: 10 Million Units: Housing an Affordable City (广厦千万 居者之城)," *Architectural Journal* (建筑学报) 3 (2012): 110-114.

Yukio Yamaguchi and Masumi Shinya, "Affordable Housing for Rural Migrant Workers in Urban China," Nihon Fukushi University and Nanjing University: 2010.

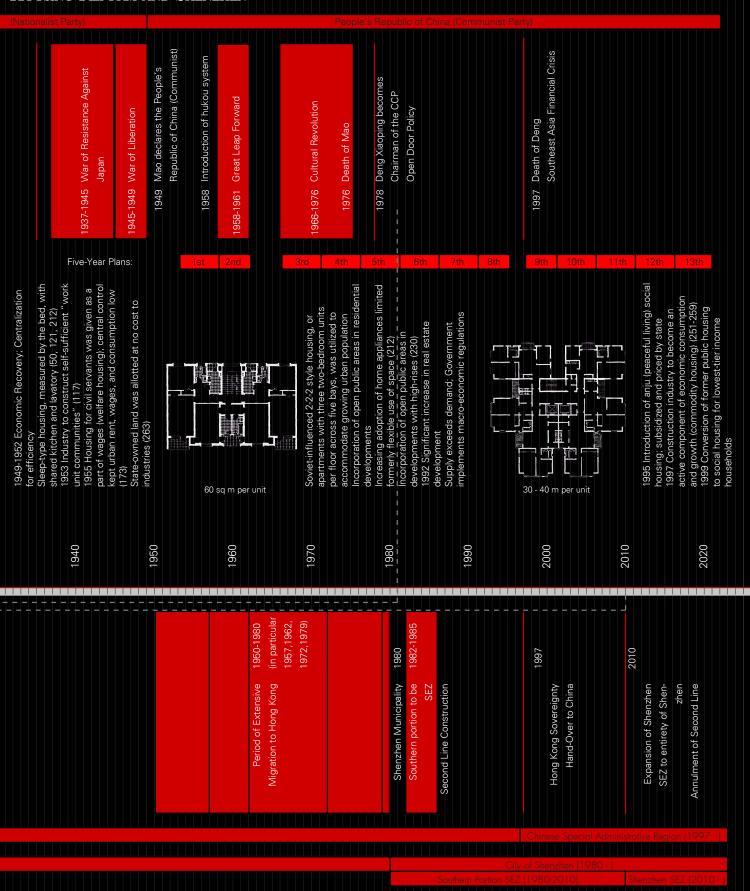


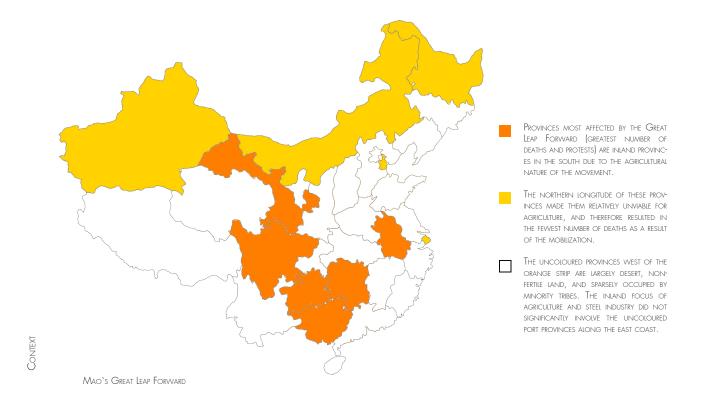
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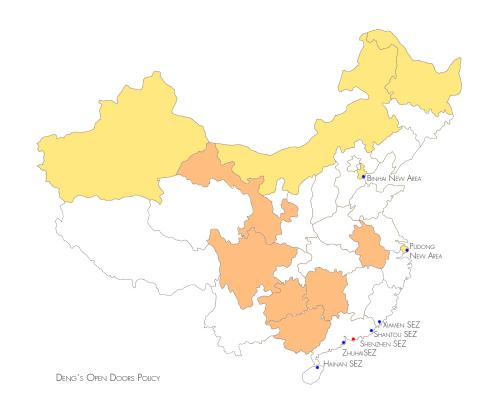
A BRIEF HISTORY OF CHINA,



HOUSING REFORM AND SHENZHEN







Years of internal warfare and revolution throughout the twentieth century caused Chinese technological advancement and industrialization to lag far behind the developed countries in the west. When Deng Xiaoping became Chairman in 1978 following the death of Mao Zedong in 1976, he sought to transform the State-Planned Economy to a Comprehensive Market Economy by encouraging private industries to create social wealth. De-emphasizing ideologies instilled during the Mao era, Deng propagated the slogan "to get rich is glorious" to reform the Chinese economy. Implementing the new system of "capitalism with socialist characteristics", Deng learned from the failure of past nation-wide movements (such as the Great Leap Forward), and propagated the mantra "let some areas get rich first", testing economic theories and practices in small, contained areas. Successful trials could then be applied to the rest of the state, while unsuccessful models would be contained and not permitted to contaminate the national economy. Rather than to focus on inland China and agricultural practices like Mao, Deng designated a series of ports along the southeast coast of China. As these areas were neglected in earlier reforms, they were considered underdeveloped and "cultural deserts". In the eyes of the central government, the agricultural fields of the newly designated Special Economic Zones (SEZ) were the ideal tabula rasa landscapes for "getting one step ahead".

The SEZs were geographic areas that practiced a different set of economic policies from the rest of China. The special laws allowed and encouraged industrialization and international investment. The policy was so radically different from the suppressive, state-owned economy, that it unleashed a floodgate of economic activity in the SEZs. The SEZs were politically subjugate to their respective governing provinces, but reported economic activities directly to the central government for the sake of expediency.²

The duality of power in the city created opportunities for developers' contention with the administration. Building and development permits within SEZs could be made with a civic focus to appeal to the provincial authority, or with economic rationale to persuade the central government. The lack of jurisdictional clarity in the dual system created consequential loopholes that would play an important role in the balance of legal and illegal development of Shenzhen.³

Mihai Craciun, "Ideology," in *Great Leap Forward: Projects on the City I*, Köln: Taschen and Cambridge: Harvard Design School, 2001, 44-155.

Kwan Yiu Wong, ed., Shenzhen Special Economic Zone: China's Experiment in Modernization, Hong Kong: Tai Dao Publishing Co., 1982.

³ Ibid.

Sigure 1.3 Respective targeted areas of Mao Zedong and Deng Xiaoping's political reforms



Nanshan



Futian



ГПОНП



Yantian

Up until the Qing Dynasty (ending in 1912), the site of modern Shenzhen and Hong Kong were a part of Bao'an County, which was largely made up of agricultural fields, fishing villages and small towns. The parcelling of the area began with the British cession of Hong Kong and the New Territories as a result of the Opium War in 1842 in the Treaty of Nanjing. The area flourished under a western paradigm to become an internationally renowned port city. During the years of political turmoil in China, many Chinese fled through Shenzhen to Hong Kong, creating ties of kinship across the bay, which would later facilitate crucial financial relationships that contributed to the economic success of Shenzhen.

Bao'an County was an ideal location for the implementation of the largest SEZ due to its location in the Pearl River Delta and proximity to Hong Kong. The neighbouring city contributed 91% of foreign investment in the inaugurating years of the SEZ.⁶ Bao'an County was elevated to the status of Shenzhen Municipality in concurrency with the designation of the new Zone.

The Shenzhen SEZ is defined by the First Line of the Hong Kong border to the south, and a similarly impenetrable Second Frontier of China, or the Second Line, to the north. The significant difference between the First and Second Lines is that while the parcelling of Hong Kong was imposed on the Chinese nation by an external power, the division of the Shenzhen SEZ was enacted within China by its own political leaders in an experiment to artificially accelerate the development of the economy.

The Second Line cut through the municipality, defining the northern boundary of the SEZ. The initial development of Shenzhen was effectively linear, connecting the existing border town in Luohu District containing existing settlement to Shekou Peninsula, an industrial port owned by a private Hong Kong company. Shekou and Nantou Township nearby became the anchors of the new Nanshan District. The resulting region between the two nodes became Futian District, and the new centre of municipal administration. Luohu expanded into the commercial centre of Shenzhen, and Shekou Port redeveloped into a new social and commercial hub. The mountainous Yantian District to the east developed into container ports alongside beach resorts. The other two larger northern regions of Bao'an and Longgang were included within the municipality of Shenzhen, but excluded from the initial SEZ policy.

As a central effort, the SEZ policy mandated a team to be sent from every province of China to aid in the construction of Shenzhen, allowing for the expedient flattening of the hilly landscape of Bao'an county. The rapid urbanization and new records in the speed of construction coined the term "Shenzhen speed" as the apotheosis of China's modern development.⁷

In an unwitting fulfillment of Deng's notion of the "cultural desert," Shenzhen deliberately ignored to the palimpsest of Chinese customs in favour of Western paradigms. The political mandates of the SEZ and Second Line directly shaped the planning and execution of urban and architectural form in the development of the city.

Peter Rowe and Seng Kuan, Architectural Encouters with Essence and Form in Modern China, Cambridge: MIT Press, 2002, 2-22.

He Huifeng, "Forgotten Stories of the Great Escape to Hong Kong," South China Morning Post, January 13, 2013, http://www.scmp.com/news/china/article/1126786/forgotten-stories-huge-escape-hong-kong.

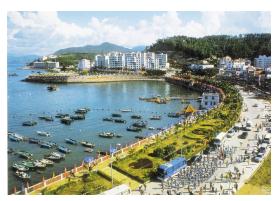
Kwan Yiu Wong, editor, Shenzhen Special Economic Zone: China's Experiment in Modernization (Hong Kong: Tai Dao Publishing Co., 1982), 27.

Laurence Liauw, ed., "New Urban China," Architectural Design vol 78 No 5 (2008).

Sigure 1.4 Four regions of the Shenzhen SEZ



Nan'ao 1970



Nan'ao 2004



LIANGTANG 1982



Liangtang 2005



Huaqiangbei Street 1981



Huaqiangbei Street 2005



 $\verb|^Figure 1.5| \textit{Transformation of Shenzhen} \quad \verb|Shennan Road 1983| \\$



Shennan Road 2005





Nantang 1979

Nantang 2007







Shekou 2007



WINDOW TO THE WORLD 1982



Window to the World 2007



Shenzhen Bay 1983



Shenzhen Bay 2007



DIVISION

In the chapter "Micropolitics and Segmentarity" in Gilles Deleuze and Felix Guattari's A Thousand Plateaus, the authors describe three types of lines: the molar, the molecular, and lines of flight. The 'molar' refers to massive yet clear-defined assemblages such as the state apparatus, often referred to as the structured (arboreous), macro and territorialized. The 'molecular' refers to the micro practices of politics in the social sphere that often go unperceived, responses and behaviours of individuals that may accumulate to in emergent (rhizomic2) behaviour. Deleuze and Guattari argue that while concentrated power may appear to have significant impact on the populace, the greater source of influence lies in molecular administration, as the means of exerting power over the practice of everyday life.3 This dichotomy of dividing lines lends itself well to the development and structure of Shenzhen. While the molar apparatuses of the Second Line and the hukou are formally imposed on the region of the Shenzhen SEZ, they generate molecular fissures that infiltrate the physical, social, and economic growth of the city. Urban development rooted in efficiency has generated introverted enclaves of development, each with a specific architectural typology and a corresponding tenureship by a segment of society. The three main assemblages explored in this thesis are the urban village and indigenous farmers, the factory-dormitory compound and migrant workers, and newly developed gated communities and the 'explosive rich'. Within these molar and molecular frameworks of division, Shenzhen's unique agglomerations of geography and people, as well as their administrative and cultural identity, evolve and relate in unexpected ways to create emergent 'lines of flight'.4 This third type of line subverts the segregation exerted by the first two types, and can be found the resourcefulness of Shenzhen's indigenous and migrant inhabitants who leverage the conditions of the SEZ to productive and self-preserving ends.

The Second Line is a macro apparatus that concentrates the accumulation of capital within the Chinese state. Its physical boundary constrains large-scale urbanization and foreign investment to a limited geographic area. The result, after a long history of political and economic suppression, was an explosion of development within the Zone.

The macro policy of the SEZ was also the direct cause of a shift in land tenureship at a micro scale. Bao'an County was largely comprised of villages and farmland, a millennia-old practice that tied labour to property. When the fields were deterritorialized through expropriation and subsequently re-territorialized as urban development, the movement caused a rift in the assemblage of rural practice, thereby altering the function of the village by removing the territory of labour. The transformation of traditional villages into villages-in-the-city can be seen as a micro re-territorialization (from a place of dwelling to a proprietary source of monetary income), but also as a line of flight, durationally situated at the junction of the Mao and Deng eras of reform. By leveraging the combination of their rights of land ownership and the influx of migrants who do not have legal right of residence in the city, the indigenous farmers took creative advantage of the conditions imposed by the central government, and self-assimilated into the new urban society of production. In addition to becoming landlords, farmers have likewise taken a cue from the formal corporations situated in place of their fields.

Gilles Deleuze and Felix Guattari, "Micropolitics and Segmentarity," in A Thousand Plateaus, translated by Brian Massumi, Minneapolis: University of Minnesota Press, 1987, 208 - 231.

Tom Conley, "Micro" and "Molecular," in *The Deleuze Dictionary*, edited by Adrian Parr, Edinburgh: University of Edinburgh, 2005, 175-178.

Christopher Alexander, "A City is Not a Tree," *Design* n 206 (1966).

Michel de Certeau, The Practice of Everyday Life, translated by Steven Rendall, Berkeley: University of California Press: 1988.

Gilles Deleuze and Felix Guattari, "Micropolitics and Segmentarity," in A Thousand Plateaus, translated by Brian Massumi, Minneapolis: University of Minnesota Press, 1987, 208 - 231.

Villagers formed light industries of their own, magnifying traditional power relations within the village to that of a corporation, evolving to match the zeitgeist of production and partaking in the economic prosperity of the SEZ.

The hukou system is a territorializing apparatus that segregates the Chinese population into an urban-rural dichotomy. Its purpose is to maintain the existing social structure of the state. However, the rapid urbanization of modern Chinese reform policies and subsequent labour demands saw the emergence of a double standard in policies that govern the inhabitation of cities. The allocation of temporary work permits draws migrants to enter and work in the SEZs. The economic opportunities presented in cities attract others to enter illegally still. While these migrant workers are permitted to form the sub-structure of Shenzhen's successful economic model, their lack of urban hukou prevents their access to social welfare and amenities for living, as the state disengages itself from financial responsibility for the floating population. Dormitories within production compounds are made deliberately deplorable to discourage longevity of stay, while the migrants who rent units within overcrowded urban villages are without the ability to lay any claim to property. In this way, the SEZ polices draw rural peasants to cities in a deterritorialization of residence and labour reinforced by the hukou system. While integration into the production apparatus reterritorializes work, there is inadequate amenity for the provisions of dwelling. This creates a new demographic segment as a direct result of the SEZ economic reforms. Dubbed the floating population, the displaced workers do not fully conform to the legal description or lifestyles of the urban or rural dweller, but have rather developed their own distinctive characteristics as an informal conglomerate, with a new, complex division of formal and informal identities that divide the ontological and physical reality of the migrant.⁵

Conversely, the migration of young rural people to city factories can be seen as an unexpected opportunity. Social scientist Pun Ngai noted that while the labour of workers are exploited in the industry, the prospect provides an (albeit temporary) escape from the patriarchal system in rural China, generating emergent lines of flight in the urban-rural relationship of identity and territory.⁶

The final component of the micro territories of division is found the newly developed gated communities. As the Second Line reterritorialized capital within the SEZ, the economic incentives relocated dwelling spaces of those who operate and flourish within the new framework. In ivory towers elevated far above the city, the culturally rootless enclaves are ubiquitous the world over, and deterritorialize the identity of their inhabitants despite their physical solidity. They have more in common with the manifestation of global capitalism than the specific political and geographic topology of Shenzhen.

Both indigenous farmers of Shenzhen and the floating population have left their traditional practices to evolve with the development of the nation. The juxtaposition of their rural identities with the new urban environment has been pivotal in finding creative new niches with the changing economic climate, evolving to unprecedented emergences and complex assemblages.

⁵ "The Method of a Magazine." *Urban China* 50 (2011).

Pun Ngai, Made in China, Durham: Duke University Press, 2005, 49-76, as quoted in Adrian Blackwell, "Shenzhen: Topology of a Neoliberal City" in Shaping the City, 2nd Edition, edited by Rodolphe El–Khoury and Edward Robbins (London: Routledge, 2013, 287.

In 1978, Deng drew a line through Bao'an County, upgrading the region to the status of Shenzhen municipality, and designating an area within the first Special Economic Zone.⁷ The line Deng demarcated became the Shenzhen SEZ Administrative Line (深圳经济特区陆地管理线), colloquially known as the Second Line (二线关).⁸

The Second Line carved through the city, beginning in Anle Village (安乐村) in Nantou District to the west and ending at Xiao Meisha Beach (小梅沙) on Beizaijiao (背仔角) Peninsula in Yantian District to the east. The four districts south of the Line (Nanshan, Futian, Luohu, and Yantian) situated adjacent to Hong Kong were designated the new SEZ, while the two larger districts to the north (Bao'an and Longgang) remained a part of hinterland China.

The Second Line was implemented in the early 1980s, and played a significant role in the urban, social and economic development of the Shenzhen SEZ. However, the disparity in administration, policies and practices between SEZ and non-SEZ Shenzhen became a point of contention with local residents and the municipality. The success of the SEZ caused the Zone to be expanded to include Bao'an and Longgang Districts in 2010, causing the de facto annulment of the Second Line¹⁰.

PLANNING AND IMPLEMENTATION

After Deng's initial sketch of the Second Line in Beijing, the central government sent helicopters over Bao'an County to perform a series of three aerial surveys in order to determine the exact dimensions of the SEZ. 11 The final account in late 1980 placed the area at 327.2 square kilometers (eventually increased to 396 square kilometers). 12 A portion of the Second Line was implemented along the Wutong (梧桐山脉) and Yangtai (羊台山脉) mountain ranges 13 to take advantage of the natural barrier created by the difficulty in geographic elevation in order to dissuade illegal crossing. Major geographic features were retained for cultural or practice reasons, and became the sites for parks and recreation. 14

To prepare for the construction process, the engineering team surveyed the entire length of the Second Line on foot over a period of two-and-a-half days. They unexpectedly came across a number of existing villages that were located directly in the projected path of the Line. The central government's abstract planning on a map, and the aerial overview surveys had neglected to take such fine grain development into consideration. Through a series of discussions with the residents, it became evident that it would be beneficial to the borderline villages to be included within the SEZ boundaries, as the policy would inflate their land prices, and make the inhabitants privy to the benefits of the SEZ. The administration negotiated with

Mihai Craciun, "Ideology," in Harvard Design School Project on the City: Great Leap Forward, ed. Chuihua Judy Chung et al. (Koln: Taschen, 2001), 133.

Tao Yitao and Lu Zhiguo, editors, China's Economic Zones: Design, Implementation and Impact (UK: Paths International Ltd. and China: Social Sciences Academic Press, 2012), 1, 15.

Huang Weiwen, "Story of the Borderline (说界)," Urban China 24 (2007): 30.

^{10 &}quot;Shenzhen SEZ to Increase in Area through the Removal of the Second Line; New Area to be Almost Twice that of Hong Kong (深圳特区拟撤关扩大 面积将接近两个香港)," *Qilu Evening News (*齐鲁晚报), May 21, 2009, http://news.sina.com.cn/c/2009-05-21/072315660067s.shtml.

^{11 &}quot;How Did the Second Line Come to Be? (深圳二线关是怎么来的?)," last modified June 08, 2010, http://jt.sz.bendibao.com/news/201068/210926.htm.

¹² Huang, 2007, 30.

¹³ Ibid

[&]quot;How Did the Second Line Come to Be?", 2010.

the villages on a case-by-case basis, which resulted in the inclusion of some villages in the SEZ and excluding others. These border villages would later influence the construction of the Second Line, and contribute to the legal and illegal economies and practices of the Shenzhen SEZ.

PHYSICAL DESCRIPTION AND ADMINISTRATIVE FUNCTION

The initial 126 kilometer-long Second Line was fully lit by streetlights and barred by a 2.8-meter high wire fence. Eight checkpoints were distributed over its length (later increased to fifteen). The Line was further supported by 24 minor checkpoints, 25 self-administered checkpoints for franchises situated along the Line, and 163 watchtowers dispersed across the 90.2 kilometer-long patrolled cobblestone road. 15

The State Council approved the final plans for the Second Line in 1982, and construction began later the same year. The main body of the line and checkpoints were completed in 1983, and the supporting infrastructure and utilities were put in place in 1984. The Line became fully functional as an administrative apparatus in 1985. The final construction cost of the Second Line was 1.38 hundred million RMB. The line is 1985.

The administration of the Line fell to the jurisdiction of the Seventh Detachment of the Guangdong Province Border Police, a sector of the People's Liberation Army (the national armed forces). Every citizen who passed into the SEZ was subject to inspection at a checkpoint and required to display a People's Republic of China Boundary Region Pass (中华人民共和国边境地区通行证) in addition to government-issued personal identification (身份证). Obtaining an SEZ pass was often preceded by months of paperwork, which included the provision of proof of employment and political affiliation, invitation from within the SEZ, and monetary deposit. The administrative involvement in gaining access to SEZ was akin to that of entering another country.

Checkpoints provided pedestrian access through a main administrative building and vehicular passage in adjacent booths set up across the roadway. The exact configuration of the restricted area of the checkpoint depended on the location and frequency of use. Infrastructure for the provision of utilities, including electricity, water, and communication devices, was constructed to support the entirety of Second Line and its checkpoints. Auxiliary facilities such as lodging and training grounds for the guards of the Seventh Detachment were also incorporated in the development of the Line.

The distance between the major checkpoints of the Second Line made life inconvenient for farmers whose villages were in close proximity to the boundary. In the construction of the Line, the residences and fields of a border village would often land on opposite sides of the fence. The long route to a checkpoint, compounded by long lines and wait times for processing and inspection, made the situation unviable for the productive practice of agriculture. In response, the administration placed a series of twenty-four farming passes (耕作口), colloquially known

¹⁵ Huang, 2007, 30.

^{16 &}quot;"How Did the Second Line Come to Be?", 2010.

¹⁷ Huang, 2007, 30.

Ou Ning, "Border Plan (边界计划)," last modified December 13, 2007, http://www.china-up.com/special/wenhua/exhibit/pdf/边界计划.pdf.

Shen Ying, "Shenzhen Anniversary: Second Line," last modified September 9, 2010, http://www.360doc. com/content/10/0909/15/22953_52389176.shtml.

as 'minor checkpoints', along the Line for easier access, and used in conjunction with specially issued agricultural passes.²⁰

Between major and minor checkpoints, the Second Line was defined by a wire fence supported on concrete posts. A single guard occupied each watchtower and kept civilians away from a segment of the Line to prevent illegal passage.²¹

URBAN IMPLICATIONS

The existing nodes of development at Nantou market town and Buji railway station became ideal locations for the initial implementation of checkpoints. The construction of the Second Line and geographic restriction of development caused urbanization within the Zone to accelerate exponentially, breaking records with the speed of high-rise construction to the point where the Official Plan could not keep up with the pace of physical development. ²² As entrepreneurs preferred to develop within the area of the SEZ due to the critical urban density and the economic incentives provided by the SEZ, a large discrepancy grew between the value of real estate inside and outside the Line. ²³ New roads and public transportation systems of the SEZ were aligned in the east-west direction in parallel with the Second Line. Highways leading out of the restricted zone necessarily passed through a checkpoint. ²⁴

Social Problematic

The placement of the Second Line was planned from a macro administrative and geographic point of view. Consequentially, its location was somewhat arbitrary with regard to the micro political conditions on the ground. The imposed disparity of economic opportunity and development placed on Bao'an County became a cause for discontentment and concern for local residents. For example, the priority the SEZ placed on economic and industrial growth caused an inflation of employment opportunities within the Zone. However, the workers who were employed in the lower tiers of industry could not contend with such high land prices, and necessarily lived in non-SEZ Shenzhen where housing was affordable. For these workers and other commuters, crossing the Second Line was a daily occurrence. Many lower-middle class workers necessarily depended on public transportation to get to work and services. Throughout the life of the Second Line, drivers and passengers of buses were required to disembark at checkpoints, wait in line to be individually inspected and processed through a checkpoint, then re-embark on the other side. Crossing the border at least twice a day, particularly during rush hours, was a continual source of frustration for the local residents of Shenzhen.²⁵

Further aspects of contention arose with the government's task to apply two sets of laws to the same municipality. Different policies dictated the social and political practices of the SEZ and non-SEZ portions of Shenzhen and created inconsistencies in administration and permeated the Second Line's ideology of division throughout the city. For example, fines for running

^{20 &}quot;How Did the Second Line Come to Be?", 2010.

²¹ Ibid.

Nancy Lin, "Architecture," in Harvard Design School Project on the City: Great Leap Forward, ed. Chuihua Judy Chung et al. (Koln: Taschen, 2001), 165, 193-195, 211.

Ou Ning, "Shenzhen's Flower Arrangement Lands and the Second Line (深圳插花地与二线关)," *Ouning's Blog*, November 18, 2005, http://www.alternativearchive.com/ouning/article.asp?id=34.

²⁴ Craciun, 2001, 119.

²⁵ "Questioning the Shenzhen SEZ Second Line (质疑深圳特区'二线关')," *China Reform (*中国改革) 05 (2002): 21-22.

a red light were significantly higher in the SEZ due to the density of the city and the more stringent enforcement. The taxi system was divided into red and green-painted cars. The "in-Zone" red cabs, equipped with drivers who had SEZ passes who mainly served the area inside the Second Line, though they were able to move across the border freely. The "out-Zone" green cabs could only service the non-SEZ part of Shenzhen, and were not allowed within the SEZ. The sparseness of development and longer traveling routes gave the green cab drivers a distinct disadvantage in the business. ²⁶ These administrative and de facto apparatuses of segregation would forge a deep social and psychological chasm in the population of Shenzhen.

FLOWER ARRANGEMENT LANDS / VILLAGES

The exact location of the Second Line had always been a point of contention, leading to legally ambiguous practices by residents and developers situated immediately adjacent to the boundary. Landowners with property just outside the Line would develop their parcel, and offer border guards monetary incentive to "open a door" in the Line. If the negotiations were successful, the site would be effectively absorbed into the line, and gain an SEZ address. This would allow the landowner to reap the economic benefits and incentives of the SEZ, while maintaining a property with a low purchase value. ²⁷ These practices constantly altered the specific geography of the Second Line, and its geometry on the ground would continue to evolve throughout its lifetime.

A significant phenomenon on the Second Line were Flower Arrangement Lands or Villages (插花地/村). These were a particular incidence of the ubiquitous urban village. The Flower Arrangement Villages were situated on or near the Second Line. Their development would continue through the boundary, so that the Line would pass through or adjacent to a village. These settlements were named as a metaphor to slotting stems in a flower arrangement, an invading organism that pushed its way through the structure of the Second Line in a self-assimilation of property and inhabitation. Large clusters of such villages developed around Meilin and Buji Checkpoints, at the junction of the non-SEZ districts of Bao'an and Longgang, and the central SEZ regions of Futian and Luohu.

These illegal developments originated from the lack of jurisdictional clarity, when the physical, constructed Line varied from the planned, political Line drawn on the map. As a result, the inhabitants of the discrepant spaces between the two iterations of the line were able to make an argument for refusing the governing power of either bordering district. This situation created a de facto no-man's land ($\equiv \pi \equiv 1$) between the boundaries of the SEZ and non-SEZ districts of Shenzhen. The discrepancy in authority made it difficult for either district to administer the area. As a result, these lands were often left alone, and illegal development would be condoned through neglect.³⁰

'Illegal construction' in this case denotes development that did not seek or gain official approval from the appropriate administrative body. The practice was not confined to flower arrangement villages, but was found throughout the urban villages of the SEZ. As the restriction against informal development was not strongly enforced by the administration during the growth phase of Shenzhen's creation, the lack of governance facilitated the act of illegal construction. Perhaps its speed of urbanization allowed

- "Submission of Shenzhen SEZ Plan of Expansion to the State Council; Unification of Regions Within and Without the Second Line (深圳特区延伸方案上报国务院 关内关外合一)," last modified January 29, 2013, http://www.szol.net/vip/article/2009-11-18/24040-1.htm.
- ²⁷ Huang, 2007.
- Z8 Ibid.
- 29 "Luohu Takes Jurisdictional Responsibility of the Second Line; the End of Flower Arrangement No-Man's Lands (罗湖全权接管二线关 插花地三不管时代终结)," Southern Metropolitan Daily (南方都市报), October 8, 2003, http://www.szlh.gov.cn/icatalog/a/2003/j08/a1187_587401.shtml.
- 30 Ibid.

Shenzhen to be built as much by illegal activity as by legal construction and investment.³¹

Consequences

While the non-jurisdictional nature of the Flower Arrangement Lands and other urban villages allowed for greater flexibility and scope of land use, they created difficulty in the lives of the villagers over time.

The most significant negative factor in illegally developed areas was the lack of physical infrastructure, including electricity, water, and communications to support daily life. Although some utilities were illegally diverted from primary lines of resource in the municipality, the doit-yourself technologies lacked professional expertise and were often unreliable and unsafe.³²

The informal developments also lacked supporting social infrastructure, particularly in agencies tied to the district level of administration. The illegal developments had no clear sense of being within the jurisdiction of any district. As a result, the administrative bodies would often refuse responsibility, leaving the residents orphaned of governance. The villagers would have no place to obtain legal titles (such as the certification of marriage or death) or the right to a hospital. As these villages did not fall into a policing precinct, there was no place to report crimes. They were also excluded from surrounding school districts. Parents in the villages were often forced to send their only children to unregistered, "black" schools that would likely fail to meet regularized standards of public schools in China.³³

ADMINISTRATIVE INTERVENTION

In 2003-2004, the municipal government of Shenzhen officially addressed the issue of Flower Arrangement Villages as a "blind spot" or "black hole" in the administrative system. Unauthorized diversion of infrastructural systems of electricity, water, and communications was also cited to be problematic. More specifically, the government pointed to the structural inadequacy of the illegal residences. As most of the buildings were constructed without permit or standardization, they did not necessarily adhere to the appropriate building codes, nor were they subject to processes of inspection and quality control. The often hilly terrain where the villages were situated put the residences in danger of structural failure. 34 Accumulation of inadequate foundations, along with sub-standard construction methods and materials compounded over years of weathering, caused the houses to be in a state of near collapse. Incidents involving buildings slipping down the steep topography were held up as examples by the government. In particular, a case in 2004 that killed two people was cited to spur on the urgency of the movement.³⁵ In September of 2004, the municipal administration initiated a movement to 'thoroughly clean-up' of the Flower Arrangement Villages. In particular, the jurisdiction of illegal border developments between Luohu and non-SEZ Shenzhen were assigned to Luohu District. The Luohu government would necessarily take responsibility for the quality of life and lawfulness in all aspects of social and physical support in the neglected developments. A part of the initiative included the overall assessment of schools in the area.

³¹ Craciun, 2001, 121.

³² Ibid.

³³ Ibid

Many illegal practices described can be applied to urban villages at large; conditions such as hilly terrain and lack of district jurisdiction is specific to flower arrangement villages.

Jin Yong, "Shenzhen Second Line Flower Arrangement Villages to Implement 'Evacuation Movement' Immediately (深圳"二线"插花地 实施"空楼行动"刻不容缓)," Shenzhen Special Economic Zone Daily (深圳特区报), September 6, 2004, http://sz.focus.cn/news/2004-09-06/76047.html.

Those which were below standard would be shut down and its students dispersed to surrounding public schools.³⁶

The procedure set out by the municipal government included the complete evacuation and demolition of the illegal structures, investigation of past mistakes of jurisdictional neglect and implementation of appropriate disciplinary actions, increase of management, encouragement of adherence to new laws, and increased cooperation between all parties involved in the administration of the villages.³⁷

DECLINE OF THE LINE

The inconveniences of daily life as well as the formal and *de facto* divisions of Shenzhen have caused contention against the Second Line almost since the day of its inauguration. Its administrative significance and jurisdictional severity had continued to decline over the years to the point where the checkpoints were practically ineffectual by the year 2005. ³⁸ However, a number of issues kept the administration from the official annulment of the Second Line.

At the conception of the Second Line, the administration predicted that the system would be effective in preventing crime within the SEZ. As every person who entered the Zone would be accounted for, it was believed that known criminals would not be able cross the border. The actual effectiveness of this optimistic forecast remains unproven.³⁹

A second point of contention lay in the livelihoods of the border guards of the Seventh Detachment. They had been devoted to administering and patrolling the Second Line for the past few decades, and would lose their jobs upon its eradication.⁴⁰

Amidst the accumulation of protests and complaints from the inhabitants of Shenzhen, the issue of the possible annulment of the Second Line was first officially brought up by the administration in 1998 in the "Two Sessions" (两会) meeting of Shenzhen. It raised the problematic issue of the "one city, two policies" nature of Shenzhen's governance. The Second Line was criticized to have divided the city and prevented its holistic development. Shenzhen could not move forward from the SEZ period toward further urban and economic expansion as a disjunct entity. The discussion led to the State Council's survey of Shenzhen in June of 2000. The investigation concluded that the Second Line did not hinder the economic and urban development of Shenzhen.

The conflict reached a climax in the national "Two Sessions" meeting of 2003. Major issues of note included the traffic congestion at the busy passageways of Nantou, Tongle, Meilin and Buji, as the checkpoint system was the only method of access between SEZ and non-SEZ areas. The problem was expected to be resolved if the checkpoints and the time-consuming inspection process were eliminated. The management and upkeep of the Second Line also

³⁶ Luohu, 2003.

Feng Yiju, "Shenzhen Municipality to Thoroughly Clear Illegal Construction in 'Second Line' Flower Arrangement Lands (深圳市全面清理"二线"插花地违法建筑)," Shenzhen Special Economic Zone Daily (深圳特区报), September 2, 2004, http://www.southcn.com/news/dishi/shenzhen/shizheng/200409020325.

³⁸ Ou, 2005.

Huang Weiwen, in conversation with the author, 2012.

⁴⁰ Ibid.

cost tens of millions of RBM every year. As Shenzhen was politically subjugate to Guangdong province but economically tied to Beijing, the cost of operation had a negative impact on the national budget. The matter was once again put to rest in January 2008, when the State Council concluded that the Second Line would not be annulled before the next General Election of Hong Kong in 2017, thereby keeping the Line in place for at least another decade.⁴¹

However, the issue of the Second Line quickly re-surfaced in the 2009 review of the Shenzhen Comprehensive Reform Experimental Plan (圳综合配套改革试验方案). The review indicated that the existence of the Line affected the "scope, land, and financial situation of Shenzhen", with each item pending further investigation. In Shenzhen's transition from an SEZ of China to an international megalopolis, the lag in speed of urbanization outside the Zone made Shenzhen less competitive as a coherent municipality on both the national and international level.

The decision to officially annul the Second Line was approved as a part of the 2009 Reform Plan. This plan resolved to put an end to the 'one city, two policies' conflict, and restored Shenzhen's sense of cohesion as a city. The formerly non-SEZ districts of Bao'an and Longgang became incorporated into the SEZ in 2010. The effort added 1,553 square kilometres to the existing 395 square kilometres of the original SEZ, forming a total area of 1 948 square kilometres, or nearly twice that of Hong Kong and the New Territories (at a combined 1 103 square kilometres).⁴⁴

The geographic boundaries of SEZ policy was moved to the northern boundary of Shenzhen, between Bao'an and Longgang Districts (now a part of the SEZ), and the bordering cities of Dongguan and Huizhou.⁴⁵

Practical questions remain with respect to the treatment of the former site of the Second Line. For the time being, much of infrastructure of the checkpoints and fences remain. The urban and social problems caused by the Line, including of issues of traffic congestion, disparities between the two parts of Shenzhen on either side of the Line, and Flower Arranging Lands are beginning to be addressed, and may only be resolved over time.

^{41 &}quot;Shenzhen SEZ to Increase in Area through the Removal of the Second Line; New Area to be Almost Twice that of Hong Kong (深圳特区拟撤关扩大 面积将接近两个香港)," *Qilu Evening News (*齐鲁晚报), May 21, 2009, http://news.sina.com.cn/c/2009-05-21/072315660067s.shtml.

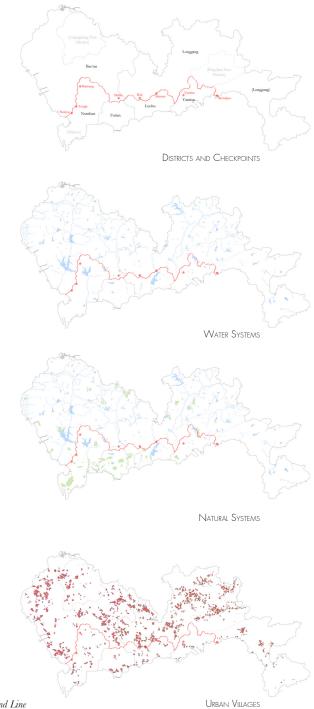
⁴² Ibid.

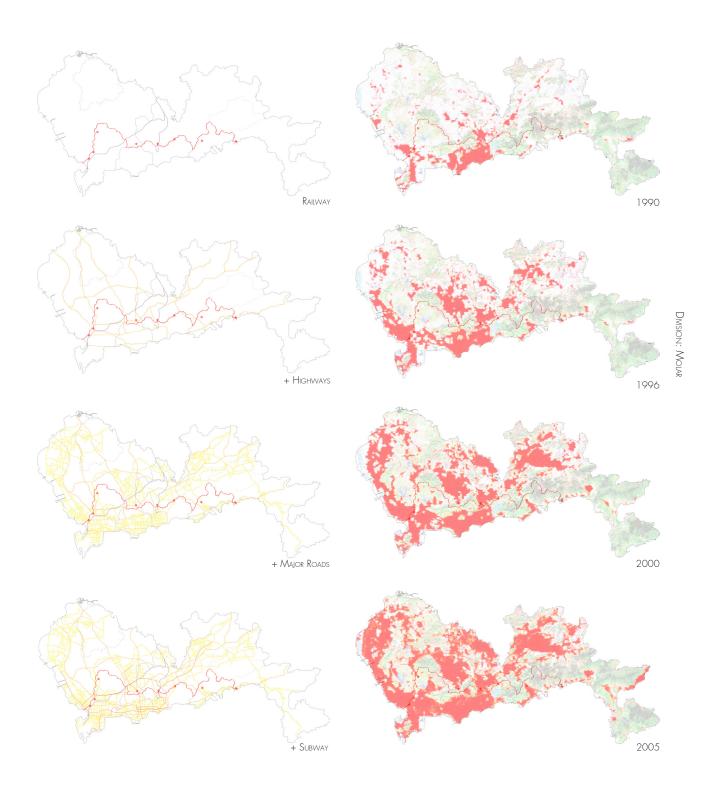
⁴³ Ou, 2005.

⁴⁴ Shenzhen, 2009.

⁴⁵ Ibid.

FACTORS THAT SHAPED THE SECOND LINE (NATURAL SYSTEMS AND EXISTING SETTLEMENT)







Checkpoints were the main means of entering and exiting the SEZ. They provided both pedestrian access through the main administrative building, as well as vehicular passage in adjacent booths set up across the roadway. The exact configuration of the restricted area of the checkpoint depended on traffic frequency and specific location. Utility infrastructure, including electricity, water, and communication devices, was constructed to support the entirety of Second Line and its checkpoints. Auxiliary facilities such as training and lodging grounds for the guards of the Seventh Detachment were also within the scope of the development of the Line. The guards patrolled the fences adjacent to checkpoints closely in order to prevent civilians from approaching the vicinity of the boundary and to discourage illegal crossing.⁴⁶

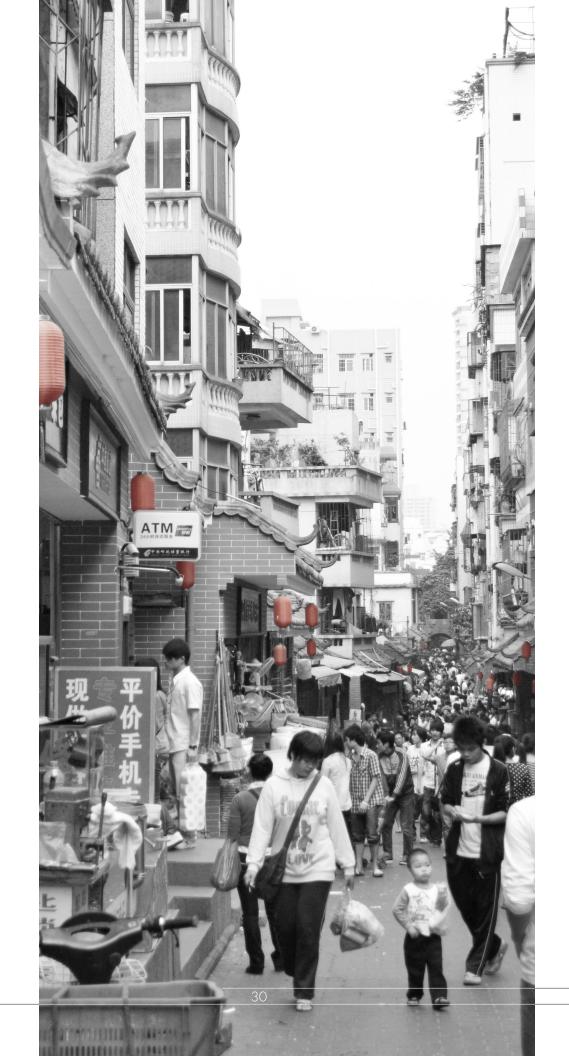
The original eight checkpoints include Nantou (南头), Tongle (同乐), Baimang (白芒), Meilin (梅林), Buji (布吉), Shawan (沙湾), Yantian (盐田), and Beizaijiao (背仔角).

The distance between the major checkpoints of the Second Line made life inconvenient for farmers whose villages were adjacent to the boundary. In the construction of the Line, it often happened that residences and fields of a border village would be divided by the impassable wire fence. Two or three soldiers would inhabit each minor checkpoint to regulate the flow of people. The relative frequent occurrence of minor checkpoints alleviated congestion and unnecessary waits times in the daily routine of the indigenous farmers.⁴⁷

The following pages survey the abandoned infrastructure and re-appropriation of the former apparatus of administration after the Second Line was annulled in 2010. The impressions also serve to provide context to areas adjacent to the restricted Second Line and components of the collage city that resulted from the fusing of formerly separated districts. The creative leveraging of land under indeterminate jurisdiction serves as informal precedents to the design proposal.

⁴⁶ Huang, 2007, 28-35.

[&]quot;How Did the Second Line Come to Be?", 2010.



Nantou checkpoint is located near Nantou market town. Prior to the implementation of the SEZ, the walled town was the commercial, economical, and political centre of Bao'an County. This west-most checkpoint was one of the first to be constructed due to the existing settlement and critical density of development.

Two of the major traffic arteries of the city, Shennan Dadao and Beihuan Dadao, feed into Nantou checkpoint, while Zhongshan Park lies just inside the Line. Like all other checkpoints, commuters on the public transit system were required to disembark the vehicle at the Line, be administered through the checkpoint, and board another bus on the other side, causing local protests against the inconvenience brought on by the Second Line. The Nantou checkpoint administers passage from Bao'an District (non-SEZ) into Nanshan (SEZ), and connects Shenzhen SEZ to Dongguan and Guangzhou.

Today, the checkpoint is the centre of a transportation hub. Highway and walkway bridges swirl in front of the main administrative building, which continues as a bus terminal. The offices on the second floor are now used mainly for storage, while the ground floor has been taken over by shops.

Beihuan Dadao has been constructed parallel to the former site at Nantou. Remnants of the Line are evident around the checkpoint.

An earth mound marks the former location of the line, and steps built into the side of the hill provide easy access. Migrants have co-opted the land around the Line due to its lack of clear jurisdiction in tenureship and created a linear shantytown made of found objects. The inhabitants collect and sort through garbage for useful material, finding a labour niche for the former rural dwellers seeking a new, prosperous life in the city.

Opposite Nantou Market Town
32 ^ Nantou Checkpoint Opening
Ceremony 1982
- Nantou Checkpoint in Use 2005
v Nantou Checkpoint Abandoned
2012
33 Mound marking the former Second

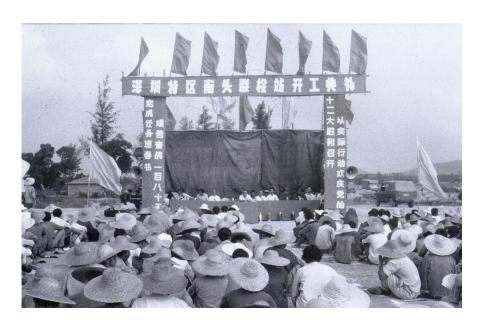
33 Mound marking the former Second Line with carved steps for ease of access

34 Linear shantytown re-appropriation of former site of the Second Line
 35 Shantytown residents at work sorting garbage

Nantou Checkpoint

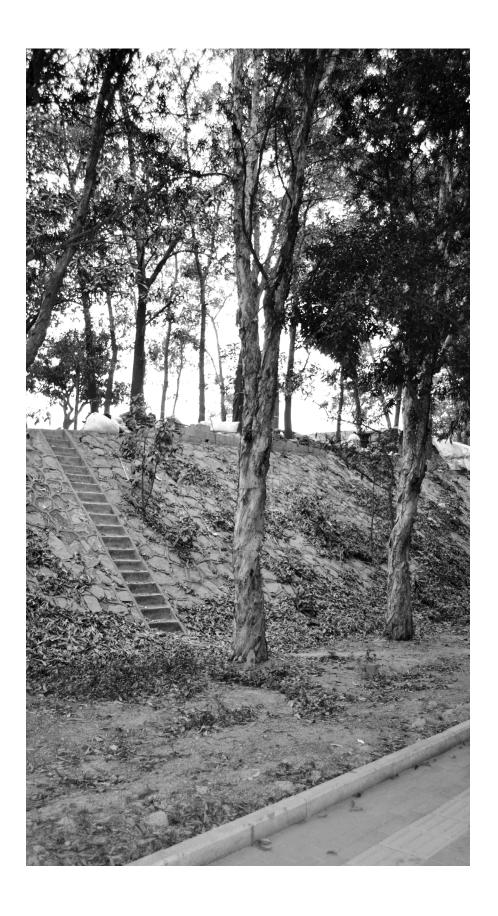
Figures 2.2.1.1-8 Impressions of Nantou Checkpoint

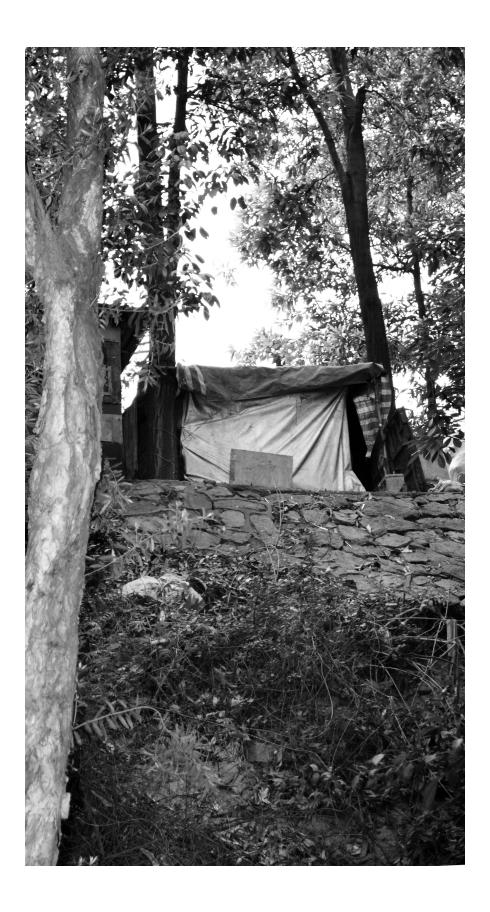
南头检查站

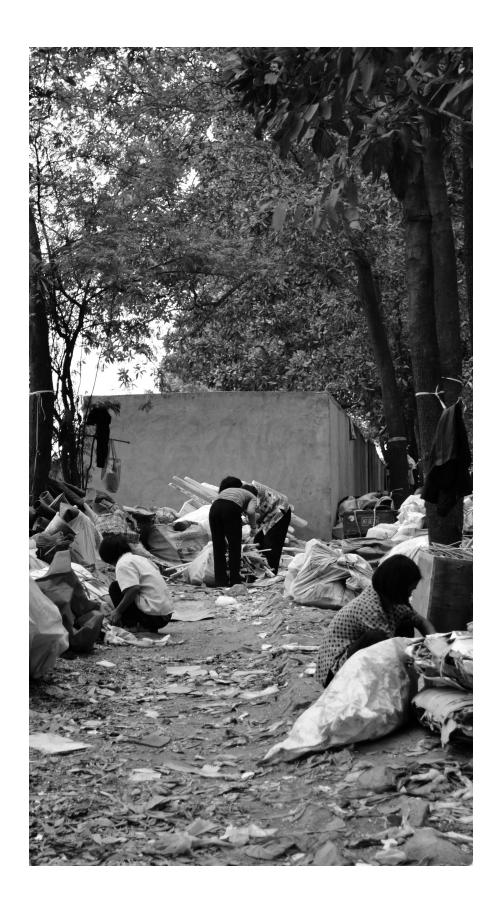


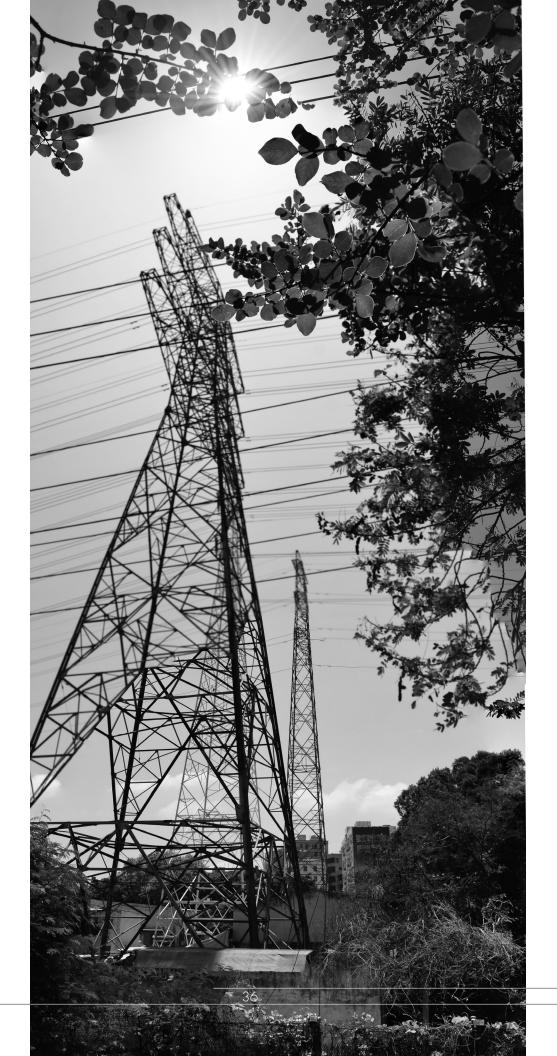












Due to the high urban density and level of traffic in the western region of the Shenzhen SEZ, Tongle Checkpoint is situated only about 2.5 kilometres down the street from Nantou. The checkpoint is named after the adjacent Tongle urban village and connects Bao'an and Nanshan Districts. It is the main access point from the SEZ to Bao'an International Airport and Guangzhou via the Guang-Shen Expressway.

As the location of the Second Line was made along a mountain ridge, Tongle is situated north (rather than east) of Nantou. It is located in the outskirts of urban development, and situated parallel to a hydro line. Despite the electrical towers (or perhaps because of them, making the area undesirable for commercial development), farmers have appropriated a linear swath of land into makeshift homes. There is no mound here to mark the line, thus allowing for agricultural patches for each house as a means of livelihood. Opposite the dirt road that provides access to the shacks, intense construction is underway for a new high-tech park.

The checkpoint itself is oriented towards vehicular travel, and the main building is preceded by a large traffic plaza. The traffic island once occupied by guards is now a convenience shop in a cart.



Opposite	Farmer dwellings under hydro towers along the former site of the
38-39	Second Line Tongle Checkpoint 2012
39	Temporary construction workers' barracks adjacent new high- tech park development
40-41	Agricultural re-appropriation adjacent fence marking the former site of the Second Line
42-43	Juxtaposition of architectural typologies in the city

TONGLE CHECKPOINT

同乐检查站

Figures 2.2.2.1-6 Impressions of Tongle Checkpoint







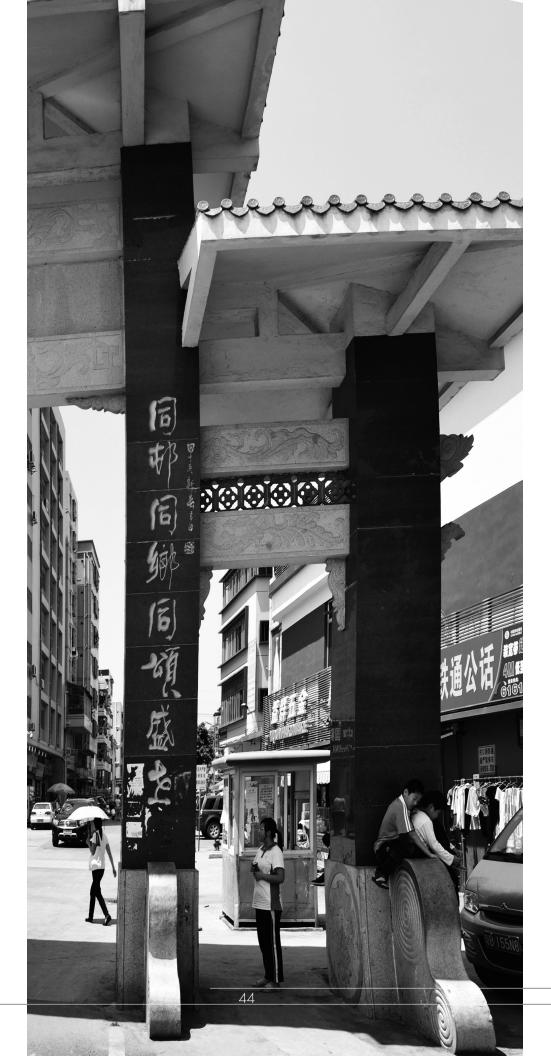












Baimang is situated further north than any other point in the Line. It is the eastmost checkpoint that provides access from Bao'an into Nanshan, and is connects the SEZ to Shiyan and Gongming townships in Bao'an District.

Baimang is also named after the adjacent urban village. A large traffic circle sits at the end of the cul-de-sac style street from within the zone that leads to the site, and a traffic island acts as makeshift waiting area for yet another bus terminal at the checkpoint. The former main building has been divided up into retail units according to its architectural bays, two of which are currently occupied.



Opposite 46-47 Baimang Village-in-the-City main gate Newly developed area of Baimang Village-in-the-City Handshake building adjacent in old Baimang Village-in-the-City

BAIMANG CHECKPOINT 白芒检查站

Figures 2.2.3.1-4 Impressions of Baimang Checkpoint









Baimang is situated further north than any other point in the Line. It is the eastmost checkpoint that provides access from Bao'an into Nanshan, and is connects the SEZ to Shiyan and Gongming townships in Bao'an District.

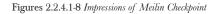
Baimang is also named after the adjacent urban village. A large traffic circle sits at the end of the cul-de-sac style street from within the zone that leads to the site, and a traffic island acts as makeshift waiting area for yet another bus terminal at the checkpoint. The former main building has been divided up into retail units according to its architectural bays, two of which are currently occupied.

Meilin allows passage from Bao'an into Futian, the region of the political Shenzhen city centre. The checkpoint marks the beginning of the Mei-Guan Expressway, and leads to Dongguan, Tangxia, and Fenggang, as well as the townships Longhua and Bantian in Bao'an.

The Meilin urban village has expanded into three distinct developments, which are situated along the east-west running Meilin road within the Zone, about three kilometers south of the checkpoint. First Meilin Village is an example of a well-to-do village corporation, who had the monetary to develop from the ViC model into a gated community filled with new, brick-clad apartment buildings. Shuttle buses run from the village to Wal-Mart and other large chain stores. The Second and Third Meilin villages are less prosperous, but have also transformed from the usual village typology to concrete slab apartment residences.

An anomaly of the checkpoint as of April of 2012 is that it still appears to be in use. The main building is still occupied by guards who inspect identification of those who pass from outside the Zone. However, around the perimeter of the building, one side is fenced off and inaccessible, but the other merely holds a warning sign, and pedestrians walk freely around the side of the checkpoint. Convenience stores and fast food vendors have opened shop along this facade of the building, flagrantly acknowledging the passage.

Like the other checkpoints, bus terminals are situated on either side of the building.





Opposite Developed Condos of First Meilin Village-in-theCity

51 < Meilin Checkpoint

> Accessible side of main building lined with food vendors

52 < Prohibited side of Checkpoint building

> Visitors passing through the Checkpoint Street fruit vendor in Third Meilin Village-in-the-City

53 Young resident of First Meilin Villagein-the-City

> Meilin Checkpoint 梅林检查站















Buji checkpoint allows access to eastern parts of Guangdong, such as Huizhou and Chaoshanmeizhou, as well as Fujian province. The area was traditionally the main transportation node of Bao'an County. The rail station at Buji connected the agricultural region to Hong Kong to the south, and Guangzhou to the north. Today, its infrastructure network includes the Shen-Hui Expressway, Caopu Metro Station on the Longgang Line, and Buji Checkpoint of the Second Line, in addition to the train. Both Buji Metro Station and Township are located north of the checkpoint.

Given this nexus of flows, it is no wonder that the checkpoint at Buji had the highest flow of pedestrian and vehicular traffic of all Second Line Checkpoints during its use. The wide Shen-Hui Expressway with its ten drive-through checkpoint booths runs parallel to the rail and the elevated metro, placing great emphasis on motorized travel. Buji is the only checkpoint where the main administrative building is split on either side of the street, each with its own bus terminal, respectively to travel within and without the Line. A skywalk connects the two checkpoints and Caopu Metro Station.

Today, the administrative buildings remain open in the form of shops and public washrooms.

The intensity of infrastructural development has traditionally increased the settlement density at Buji. The area is notorious for its "sticking flower" lands and villages that transverse the Second Line, blurring the exact location of the boundary.

Opposite Elev 56-57 Buji 58-59 Urb

Elevated Caopu Metro Station Buji Checkpoint 2012 Urban village development in Buji Precinct

> Buji Checkpoint 布吉检查站

Figures 2.2.5.1-4 Impressions of Buji Checkpoint











Shawan Checkpoint is situated between Longgang and Luohu districts and adjacent to Shenzhen Reservoir. It allows access to eastern parts of Guangdong such as Huizhou. The checkpoint mainly directs traffic of small vehicles and is a terminal for both local and long-distance buses.

The building is situated with traffic plazas on either side (dealing with in-Zone and out-Zone traffic, respectively) and allows open access to passers-by. The upper offices and units on the ground floor are leased out as storage areas for fashion vendors. A room on the lower floor acts as an office and ticket kiosk for long-distance bus companies. A recreational basketball court is installed in a portion of the building.



Opposite Utilities at Shawan Checkpoint
62 Long-distance bus ticket vendor and administrative office
62-63 Shawan Checkpoint in the evening

SHAWAN CHECKPOINT 沙湾检查站

Figures 2.2.6.1-4 Impressions of Shawan Checkpoint









Yantian Checkpoint is located in close proximity to the railway and industrial land use. This checkpoint leads to eastern regions of Guangdong, such as Huizhou and Chaoshanmeizhou. It is named after Yantian district, and allows access between Longgang and the SEZ. Due to the mountainous topography, the latter two checkpoints are less frequented than the others.

Yantian district is known for its industrial container ports and beachside resorts.



Opposite 66-67 Elevated expressways of Yantian Yantian container port

YANTIAN CHECKPOINT 盐田检查站

Figures 2.2.7.1-3 Impressions of Yantian Checkpoint









Beizaijiao is situated on Shenzhen's eastern shoreline between Longgang and Yantian districts. It allows access to Nanou township and Daya Bay Nuclear Power Plant.

The checkpoint is named after the undulating scenic peninsula it is located on, and is known for its beach resort and recreational facilities.



Opposite Recreation amenities at Beizaijiao Peninsula 70-71 Beizaijiao Checkpoint

> Beizaijiao Checkpoint 背仔角检查站

Figures 2.2.8.1-3 Impressions of Beizaijiao Checkpoint











The household registration system was created in 1958. The policy, known as the hukou ($\dot{P}^{\dot{}}\Box$), classified Chinese citizens as either rural or urban dwellers and associated them with specific geographic locations. This conservative apparatus of administration effectively tied people to territory, acted as an intra-state passport system to control migration, allowed for the ease of census and facilitated the implementation of nation-wide mobilizations. The two types of hukou were each associated with a different set of rights and policies, effectively creating two classes of citizens. 48

One of the main differences in the administration of rural and urban *hukou* lay in land tenure. Urban dwellers had full access to social welfare and benefits, but had no permanent right to land, which remained property of the state. When property is purchased by an individual, it is in effect a lease of use rights for a period of 70 years, upon the termination of which the land is returned or re-leased (re-purchased).⁴⁹ Rural dwellers lived in clustered villages within walking distance to one another, and were allowed use rights to land beyond their residences for farming. However, rural dwellers were excluded from social security, and had no right to access urban facilities such as public education and healthcare. Due to sparse development and geographic distance from the central and municipal seats of power, state policies were somewhat less stringently enforced in rural areas.⁵⁰

In the villages of Shenzhen prior to the implementation of the SEZ (then Bao'an County), the population of each village was made up of members of the same family and shared the same last name. New dwellings were built as male children married, while female children moved to the villages of their husbands.⁵¹

At the implementation the SEZ in 1978, the government negotiated with indigenous inhabitants and allowed them to keep the land on which they dwelled in exchange for the seizure of their agricultural fields for urbanization. ⁵² The village would have collective use rights to the site, and each male member was allocated a piece of property of approximately ten by ten metres for inhabitation. ⁵³

Having been deprived of their livelihoods, villagers creatively leveraged the influx of migrant population who had come to take part in the economic boom, but lacked public housing provisions. The farmers extruded their formerly single-story houses to small apartment buildings. These new developments, known as Villages-in-the-City (城中村, abbreviated as ViC) or urban villages, often range from three to seven stories tall, depending on the financial situation of the village and the individual farmer, and are self-constructed using available materials and technologies. The original owners of the house would often take a unit in the building, and rent the remaining spaces to migrant workers. ⁵⁴ In this way, the farmers of

Delia Davin, Internal Migration in Contemporary China (London: Macmillan Press, 1988), 7.

Yushi Uehara, "Unknown Urbanity: Towards the Village in the City," in "New Urban China," edited by Laurence Liauw, Architectural Design, vol 78 no 5 (2008), 52-55.

⁵⁰ Ibid. Dong Guoli, "Pseudo-Peasant, Pseudo-Citizen," *Urban China* 50 (2011), 80-81.

In conversation with villagers of Lou Cun in the Bao'an District of Shenzhen.

As land in China is owned by the state, The confiscation of land for state use or development is not uncommon. The most famous examples of this are the Three Gorges Dam on the Yangtze (2003) and the Olympic Village in Beijing (2010), both of which displaced millions of residents and razed traditional fabric for the implementation of massive government projects.

Ma Hang, "'Villages' in Shenzhen: Persistence and Transformation of an Old Social System in an Emerging Mega City," PhD diss., Bauhaus-Universität Weimar (2006) 192.

The floating population in the rental sector, which includes migrant workers, students, and new entrepreneurs to the city, takes up a very large portion of the demographics within urban villages. For example, in a study of Houting Village, it is found that of its more than 25 000 inhabitants, only 300 were indigenous to the village, making up approximately 1% of the population.

Sigure 2.3.1 Urban Villages: Orthographic and Isometric Drawings



Shenzhen (and much of developed southern China) became landlords, simultaneously being subsumed by the capitalist nature of the new city and generating to lines of flight in social land appropriation.⁵⁵

The close ties of kinship made the village an ideal entity for the implementation of collectivized industry. Resourceful villages upgraded their traditional power structure to that of a corporation, creating jobs and generating income for their residents through the creation of single-product light industries. Their success can be attributed to the greater invested interest of the company shareholders, in comparison to a conventional corporation made up of members joined only by capital.⁵⁶

However, as Shenzhen became an established municipality, the ViCs became problematic in the eyes of the administration. They were effectively self-governed and excluded from official planning, and thereby considered an obstruction in the process of thorough modern urbanization. ⁵⁷ Clusters of villages were dispersed throughout large cities in southern China, creating extreme visual juxtaposition between the envisioned urban future and uncomfortable reminders of the past.

Furthermore, the extrusion of single-storey houses into apartments caused the buildings to be too closely clustered. Dubbed 'handshake buildings' (where one can, presumably, reach out the window to shake hands with a neighbour), 58 they have become breeding grounds for unhealthy and unsanitary conditions, where lack of light penetration and inadequate infrastructure for basic utilities have caused deplorable environmental conditions. 59 As a result, laws were put in place to dictate the development and expansion of new villages, including minimum distances between buildings, creating a strictly gridded urban form adjacent their older counterparts , both nestled within the city fabric. 60

Nevertheless, urban villages remain one of the most socially vibrant typologies in Shenzhen, and continue to be a significant form of habitation for the indigenous residents and a large proportion of migrant workers in the city. Innovative transformation of ground floors and street spaces into markets, small businesses, and outdoor living rooms effectively negotiate shared public spaces. This thesis views the human-scaled architecture as an ideal proportion for social appropriation, and socially successful in comparison to the sharply contrasting sterile spaces found between buildings in factory-dormitory compounds and gated communities.

The thesis intervention seeks to embody the characteristics of scale as a framework for the generation of communal living and social dynamism.

Adrian Blackwell and Xu Jian, "New Village = Industrial Village: The Cellular Structure of the Factory Territory," in *Urban China: Work in Progress*, edited by Brendan McGetrick and Jiang Jun, Hong Kong: Time Zone and Urban China, 2009, 52.

Yushi Uehara, "New Village = ViC (Village in the City): Change ViC into the Urban Footprint of China," in *Urban China: Work in Progress*, edited by Brendan McGetrick and Jiang Jun, Hong Kong: Time Zone and Urban China, 2009, 47.

- Meng Yan, "Urban Villages," in "New Urban China," edited by Laurence Liauw, Architectural Design, vol 78 no 5 (2008), 56-59.
- Jian Jun and Kuan Xiaoming, "The Taxonomy of Contemporary Chinese Cities (We Make Cities): A Sampling," in "New Urban China," edited by Laurence Liauw, Architectural Design vol 78 No 5 (2008), 16-21.
- "How Did the Second Line Come to Be?", 2010.
- O'Donnell, Mary Ann. March 19, 2010. "What Exactly is an Urban Village, Anyway?" Shenzhen Noted. http://shenzhennoted.com/2010/03/19/what-exactly-is-an-urban-village-anyway/.
- Ou Ning and Cao Fei, "San Yuan Li," posted by Ou Ning, last modified May 6, 2007, http://www.youtube.com/watch?v=w7zt9uLKGNA.
- Zhang, Xueshi and Wang Lechi. "Boom! Shenzhen," posted by Mary Ann O'Donnell. Last modified December 8, 2011. http://www.youtube.com/watch?v=8a5v55RXEuI



< Figure 2.3.2 Urban Village

The danwei (单位, or work unit) was the primary urban labour system utilized during the Maoist era. Work units were state-owned compounds physically composed of amenities for work and dwelling. They included shops, elementary schools, and recreational facilities to support the daily lives of its inhabitants. The danwei also encompassed the state's administrative apparatus for social welfare (such as lifetime job security and housing) and public administration (such as license for birth or marriage) of its employees. 61

Shenzhen's adoption of the western paradigm of private industries and the capitalist labour system was a radical departure from this stable system of employment. The city was built on private foreign investment for industrial manufacturing in order to meet global needs. As lighter industries offered smaller start-up costs, Shenzhen has become the ideal production ground for high-tech corporations. On a tabula rasa of social and economic infrastructure, Shenzhen integrated itself into the workings of capitalism as efficiently as possible in order enter the world market with a competitive edge.

Former agricultural land was appropriated for industry, to become a produdction zone. The two most prevalent architectural typologies of the factory and dormitory appeared similar to the *danwei* model, but were stripped of excess amenities to ensure maximum efficiency and transience of labour.⁶³

The implementation of private employment was rooted in the unskilled labour of the Chinese rural population and the opportunities created by the SEZs and rapid urban development caused significant economic disparity between urban and rural areas. As a result, many young people in rural areas migrated to urban centres, with temporary work permits and illegally, in order to augment the household income of their rural families. Migrant labour in Shenzhen can be found primarily in the construction, light-manufacturing, and service industries. Both provided minimal accommodations for their workers; the former in temporary barracks, and the latter in dormitories situated within factory compounds. In both cases, residences were made deliberately sparse and often overcrowded to discourage longevity of stay. The dormitories were not intended to be comfortable dwelling places, but simply a pragmatic component in the process of capitalist production. The instability and disposability of labour discouraged the formation of unions or negotiation for workers' rights, thereby perpetuating the systematic exploitation of rural workers in the city. Exploration of the city.

Furthermore, workers with (and without) temporary work permits maintained their rural status in the *hukou* system. As such, they (and their descendents) were not eligible for urban public healthcare, education, or right to housing in the city. Combined with their general lack of education and training, job prospects for migrants were confined to the lowest segment of urban employment.⁶⁶ Although the state had administratively allowed for rural migrants to

Ya Ping Wang and Alan Murie, "Social and Spatial Implications of Housing Reform in China," *International Journal of Urban and Regional Research* 24.2 (June 2000): 402, 409.

Mike Daisey, "Mr. Daisey and the Apple Factory," *This American Life*, http://www.thisamericanlife.org/radio-archives/episode/454/mr-daisey-and-the-apple-factory.

Pun Ngai, Made in China: Factory Workers in a Global Workplace, Durham: Duke University Press, 2005, 5-6.

⁶⁴ Ibid, (80-)83.

⁶⁵ Ibid, 5-6.

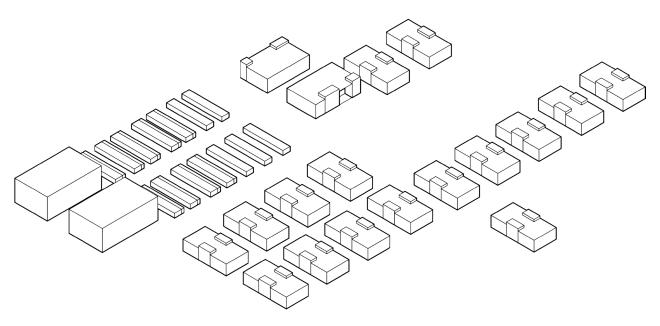
⁶⁶ C Cindy Fan, "Migration and Labour-Market Returns in Urban China: Results from a Recent Survey in

form the sub-structure of the economy of the city, they made no provisions for dwelling. The assimilation of migrants into the social welfare system are beginning to be addressed in the Twelfth Five-Year Plan (2011-2015), and includes the implementation of compulsory education for the children of migrants up until high school (as is the case for urban dwellers). 67

Long-term migrants with families have integrated into the private rental sector found in urban villages. Although the practice displays a creative reciprocal leveraging of economic and social situations at hand, rural migrants remain powerless in the monopoly over land and economy in the city of Shenzhen. ⁶⁸

Legislation in 1999 allowed migrants to purchase housing in large city cores at market price (thereby gaining urban *hukou*). Unfortunately, the segmentation of the labour market and low wages did not allow for its actual implementation.⁶⁹

Although migrant workers are arguably in most dire need for social housing, they are excluded from qualification by their rural status. In response to the social disparity enacted toward the floating population, the thesis proposal administratively targets this disenfranchised demographic in the provision of social housing within the city, requiring work permits rather than urban hukou for distribution.



^ Figure 2.3.3 Factory-Dormitory Compound: Isometric Drawing Figure 2.3.4 (Overleaf) Factory-Dormitory Compound

Guangzhou," Environment and Planning A33 (2001), 484-486.

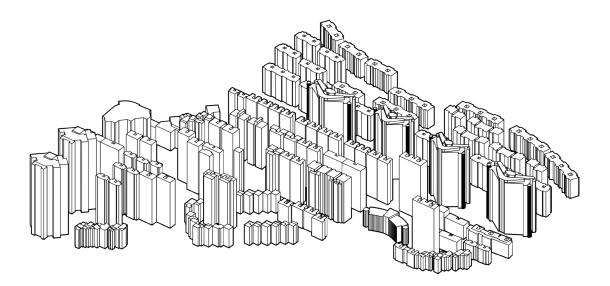
^{67 &}quot;Full Translation of the 12th Five-Year Plan," Accessed June 2, 2013, http://www.cbichina.org.cn/cbichina/upload/fckeditor/Full%20Translation%20of%20the%2012th%20Five-Year%20Plan.pdf.

Meng Yan, "Urban Villages," in "New Urban China," edited by Liauw, Laurence, Architectural Design, vol 78 no 5 (2008), 56-59.

⁶⁹ Wang and Murie, 2000, 406.









The 暴发户 (bao fa hu, literally, the explosive rich) of Shenzhen has taken full advantage of the suddenly liberal market in China for the accumulation of capital. The new generation of nouveau riche showcases the overwhelming success of Deng's reforms, while glittering new developments exemplify the glorious economic future of the state.

Population and capital growth rates radically exceeded the most optimistic of projections by the central government.⁷⁰ The colloquial term "Shenzhen speed" described the velocity at which skyscrapers were erected in the city, which firmly established the city's position in leading the nation to a new age of prosperous modernity.⁷¹

The formally planned development in Shenzhen often took the form of vast government buildings that exuberated monumentality, Central Business Districts (CBD) that mimic the western model for capitalist urban design, and gated communities that isolate the economically and socially elite above the city from the working class. These developments grow planimetrically in concentrated clusters alongside urban villages and factory compounds, making the urbanscape of Shenzhen a collage of single-typology archipelagos.⁷²

A self-fulfilling prophecy of Deng's 'cultural desert',⁷³ the high-rise condo towers in Shenzhen are culturally foreign to its specific geography, and have more in common with the ubiquitous practice of global capitalism. They are valourized as a symbol of status for the occupant, while the agglomeration of urban form hails the economic success of the state. They enact a deliberate erasure and separation from traditional cultural practices and technologies, setting distance against the perceived backwardness of the recent past.⁷⁴

In a city as new as Shenzhen, purchasing property at market price (as well as graduation from Shenzhen University) gives the property owner local Shenzhen *hukou*. The census in August of 2012 states that of an estimated 15.1 million residents of Shenzhen, only 1-2 million hold local urban *hukou*.⁷⁵ The great disparity in numbers of official and unofficial residents speaks to the very small percentage of privileged class above the vast majority of the middle and lower classes that make up the under-structure of Shenzhen's economy and labour force. The state's representation of Shenzhen as an economic success serves to highlight the extreme high-income segment of the population, whereas in fact the reform has only further exacerbated economic disparity within the city.

Although the thesis intervention has no illusions to halt the perpetuation of capitalism and economic disparity, the proposal physically interacts with gated communities in an effort toward empathetic integration of the fragmented social classes of the city.



Kwan Yiu Wong, ed,. Shenzhen Special Economic Zone: China's Experiment in Modernization, Hong Kong: Tai Dao Publishing Co., 1982, 25-83.

Record-breaking construction rates of "one floor in three days" (Shenzhen International Trade Centre, 1980s) to "one floor in two days" (Kingkey Financial Center Plaza, or KK 100 Plaza, 2010)
Mary Ann O'Donnell, April 27, 2013, "On Shenzhen Speed," Shenzhen Noted. http://shenzhennoted.com/2013/04/27/on-shenzhen-speed/;
Sun,Yuchen. "New SZ Speed Set." Shenzhen Daily. September 3, 2010. http://szdaily.sznews.com/html/2010-09/03/content_1219261.htm#.

⁷² Craciun, 2001, 126-131.

⁷³ Ibid, 111-113.

⁷⁴ Lin, 2001, 175.

Mary Ann O'Donnell, September 10, 2011, "Population and Hukou Update, 2012," Shenzhen Noted, http://shenzhennoted.com/2012/07/05/population-and-hukou-update-2012/.

Sigure 2.3.5 Newly Developed Gated Community: Isometric Drawing and Photograph Figure 2.3.6 (Overleaf) Shenzhen Central Business District







The economic reforms of 1978 did not only have macro impacts on the physical urbanization and development of China, but also significantly altered the relationship between the state, <code>danwei</code>, and housing.

Between the revolution of 1949 and the death of Mao in 1976, China operated as a State-Planned Economy⁷⁶. The state owned all work units (public enterprises) and land, while private property ownership was criticized as a 'capitalist tendency'. Housing was incorporated into public social welfare and taken into consideration in determining workers' wages. During this period, all financial distribution and allocation for housing was solely managed by the central government, while municipalities and work units served as administrators to the public at large. A portion of the national budget was allocated to each *danwei* for the organization, construction, and distribution of housing to its employees at a negligible rental rate (at 2-3% of household income between 1949 to 1990). The lack of financial pressure on individuals for the provision of housing allowed the state to keep wages low and control consumption in urban areas. However, the strong emphasis placed on production (over consumption) during Maoist reform often caused funds for the development and maintenance of housing to be diverted to other state objectives. Exacerbated by the rapid urbanization movement, a large discrepancy grew between housing demand and supply, thereby causing a perpetual shortage of housing.

In the state-distribution system, the allocation of housing was determined by the status or seniority of the head of the household rather than pragmatic spatial and economic needs of the inhabitants, such as family size or income. As high-ranking officials determined the allocation of housing, imbalances in power and conflicts of interest led to public complaint against corruption and unfair distribution.⁸²

Each *danwei* was an enclave that held the workplace and dwellings for its employees, and amenities to support daily life. Although there were discrepancies in the size and type of units allocated to individuals of various social rank, there nevertheless existed a balanced mix of incomes and demographics within each compound. The close proximity of work and habitation further alleviated congestion and commute expenses in the city.⁸³

Deng's economic reform policies sought to transition the nation into the Planned Commodity Economy, and the distribution of housing from the welfare system to a productive market that would actively contribute to national economic growth. Funds were given to municipal governments and work units to implement residential developments, effectively decentralizing economic responsibility for housing. The eventual goal of the policies was to encourage private home ownership by individuals in a comprehensive private housing market. An initial test performed in select cities for individuals to purchase private-sector dwelling units at construction

The three stages of economic development practiced in the People's Republic of China since its inauguration: the State-Planned Economy (1949-1978), the Planned Commodity Economy (1985-1991), and the Socialist Market Economy (1992-2000).

The latter two systems sought to move progressively towards a comprehensive market economy (with Chinese characteristics), but were often prevented from doing so by the persisting socialist political structure. Lü Junhua, Peter G. Rowe and Zhang Jie, *Modern Urban Housing in China*, 1840-2000, Munich: Prestel, 2001; and Ya Ping Wang and Alan Murie, "The Process of Commercialisation of Urban Housing in China," *Urban Studies* 33:971 (1996).

⁷⁷ Wang and Murie, 1996, 971.

⁷⁸ Wang and Murie, 2000, 397.

⁷⁹ Wang and Murie, 1996, 973.

Wang and Murie, 2000, 402.

⁸¹ Wang and Murie, 1996, 971.

⁸² Thid

Wang and Murie, 2000, 402.

Sigure 2.4.1 Factory-Dormitory Compound in Bao'an District

cost came up with poor results. Key reasons identified with the failure of the experiment lay in the inability of civil servants to purchase housing with their controlled wages, and the low rental price of public housing further discouraged existing tenants from purchasing property.⁸⁴

The unsuccessful trials led to reforms of the wage and rental systems. As China moved into the Planned Commodity Economy, the next set of policies focused on raising rents in public sector housing to cover basic costs, including the acquisition of property, construction, and maintenance. The extra rental funds collected by the municipality and work units would then be re-invested in subsidies towards the purchase of property in an effort to create a financial balance between rental and purchasing markets. To help employees with the additional cost of housing, a portion of their wages (adjusted at <25%) was issued in housing-subsidy tickets that could only be put towards housing consumption. The eventual goal was to phase out purchase subsidies by public bodies through the gradual increase of wages, thereby severing ties between employment and housing. Property bought with subsidies up to this point gave the owners use rights to inhabit and pass on through inheritance, but not property rights to resell on the free market. 85

With the introduction of the Socialist Market Economy in 1992, the Housing Provident Fund was implemented to simultaneously deepen the reform and to alleviate financial burden for housing to individual households. The initiative allowed work units to put aside a set percentage of wages (adjusted at around 5%) to a savings account towards the purchase of housing with mortgage and subsidies from the state. ⁸⁶ In 1994, three tiers of property costs were introduced based on household income. High-income families would purchase property at market price; the middle and low-income households paid a basic price, which includes the costs of property acquisition, construction, and management; for households who could not afford the basic price, a standard price would be applied as a transitional mechanism. ⁸⁷ Housing purchased with subsidy (the latter two categories) could not be re-sold on the free market. They would either be resold to the original seller (a public entity), or upon approval, return to the seller a portion of profits from the sale. ⁸⁸

Despite the optimistic projections of the housing reform, the high-income sector of the population remained a small minority. As developers sought to provide the highest-profit making sector of the industry, the construction industries focused on housing demand rather than need.⁸⁹ There still remained a large portion of the population in the middle to low-income classes without adequate provision.

Spatially, market demand inflated land prices within urban centres. As private enterprises replaced work units, public residential compounds were dismantled to build high-density enclaves for the economic elite. Although units in new developments were offered to original tenants of the site for a subsidized price, civil servants with controlled wages seldom had the means to afford a luxury home. As a result, most old neighbourhoods were dispersed and relocated to the urban periphery, thus exacerbating the spatial separation of social classes in the city. The new system of housing distribution independent of workplace contributed to urban congestion and commute costs.⁹⁰

While housing reform was beneficial to high-income civil servants, other demographics were put at a distinct disadvantage. Young, educated people who had previously been provided free housing by

⁸⁴ Wang and Murie 1996, 974, 976.

⁸⁵ Ibid, 975-976, 978.

Richard J. Buttimer Jr, Anthony Yanxiang Gu, and Tyler T. Yang, "The Chinese Housing Provident Fund," International Real Estate Review 7.1 (2004):1, http://www.umac.mo/fba/irer/papers/past/Vol7_pdf/1-30.pdf;
 Lü Junhua, Peter G. Rowe and Zhang Jie, Modern Urban Housing in China, 1840-2000, Munich: Prestel, 2001, 257-258.

⁸⁷ Wang and Murie, 1996, 982-983.

⁸⁸ Wang and Murie 2000, 404.

Anirban Mostafa, Francis K. W. Wong, and Eddie C. M. Hui, "A Study on Housing Provision System towards Housing Affordability in Shanghai," Shanghai Star, June 5, 1998, 1.

⁹⁰ Wang and Murie, 2000, 410-414.

their work units now struggle to purchase houses in city centres. The Provident Fund favours seniority by virtue of accumulation over time, and young professionals often necessarily find housing the private rental sector. Severe overcrowding often occurs due to a lack of monetary means, leading to their collective colloquial name "Ant Group 2.0". 91

In recognition of urban housing shortages in the low-income segment of the population, the Twelfth Five-Year Plan (2011-2015) has put forward ambitious objectives for the construction of social housing. The initiative calls for ten million new units to be built in China in 2011, 240 000 of which would be located in Shenzhen.⁹²

There are currently two tiers of social housing in China. The anju (安居, or 'peaceful living') social housing programme was introduced in most large cities in 1994. Anju is implemented in tandem with the private construction sector. The government allows for financial tax and permit incentives on the developers' acquisition and maintenance of property. In return, the resulting units are sold at a subsidized price as stipulated by the state. An additional tier of standard social housing for the lowest-income households was introduced in 1999. This type of housing often involved the re-appropriation of former public housing developments. As these were considered a transitional space of dwelling, and did not necessarily contribute to the privatization of state-independent home ownership, the inhabitants of this tier were required to maintain household income below a specific benchmark.⁹³

The base requirement for qualification for social housing and subsidies included local urban *hukou*, permanent employment in the public sector, and proof of income. The household registration system continues to exclude a large segment of the population from state welfare, and the floating population is not eligible to make use of advantages offered by the state. Urban *hukou* holders in Shenzhen make up less than 15% of the total population. As the city is made up of mostly private industries independent from the state, the new employers were free from any financial obligation to house their employees in anything more habitable than a dormitory. So

Shenzhen represents a particularly aggravated case of housing inequality, beginning in the steep variation of land prices within and without the SEZ and further exacerbated by sharp disparities in socio-economic demographics. As a city with a sparse indigenous population, the *hukou*, originally a socialist apparatus of control, has today produced economic polarization. In a city of workers, the ability to purchase housing has become synonymous with the right of dwelling. While housing reforms sought to break ties between housing and workplace, they only served to re-bind the process to the flow of capital.

The thesis proposal acknowledges the capitalistic tendencies of the development of Shenzhen, but takes a stand against discriminatory practices enacted by the hukou. Adhering to existing practices of social housing, the intervention seeks to recognize the unacknowledged demographic of the floating population in the public distribution of dwelling, as an architectural effort toward their social and urban acceptance and integration.

^{91 &}quot;The Ant Group, Version 2.0 (蚁族 2.0)," in Urban Congestion: the Logic Behind the Chaos, Urban China 56 (December 2012) 50-55.

⁹² Du Juan "2011 Shenzhen & Hong Kong Bi-City Biennale of Urbanism \ Architecture (2011深圳 & 香港城市 \ 建筑双城双年展: 10 Million Units: Housing an Affordable City (广厦千万 居者之城)." Architectural Journal (建筑学报) 3 (2012): 110-114.

[&]quot;Full Translation of the 12th Five-Year Plan," Accessed June 2, 2013, http://www.cbichina.org.cn/cbichina/upload/fckeditor/Full%20Translation%20of%20the%2012th%20Five-Year%20Plan.pdf.

Lü Junhua, Peter G. Rowe and Zhang Jie, Modern Urban Housing in China, 1840-2000, Munich: Prestel, 2001, 264-266.

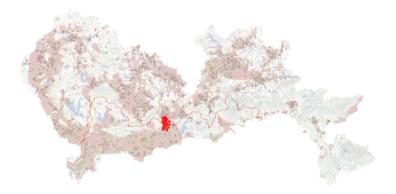
O'Donnell, Mary Ann. September 10, 2011. "Population and Hukou Update, 2012." Shenzhen Noted. http://shenzhennoted.com/2012/07/05/population-and-hukou-update-2012/.

Wang and Murie , 2000, 402, 406.
 Wang and Murie , 1996, 985.



CASE STUDY: BUJI





^ Figure 2.5.1 Location of Buji Precinct in Shenzhen

In order to better understand the Lines of Division at work at an urbanistic and architectural scale, the area around Buji Checkpoint has been chosen for a closer study.

Buji has historically been the site of transportation in the area. It was the railway stop, connecting the region to Hong Kong to the south, and Guangdong province to the north. It has since been supplemented by the Shengui highway (connecting Shenzhen to Guizhou), Caopu metro stop, and Buji checkpoint. A series of wholesale markets for agricultural equipment and livestock have taken advantage of the hub and located themselves alongside the highway.¹

The molar division of the Second Line is virtual today - it has been developed over by gated communities to the west side of the highway, and an urban village has extended itself over the Line to the east.

Like most villages, its geographic location would not have been taken into account when the Second Line was drawn on a map in Beijing, and as such, it is unclear where the actual boundary of division is. The south half of the village appears less organized in plan, and would have been constructed based on the original configurations of the houses, taking into account a mixture of geographic topography, feng shui, and social proximities. The north half of the village would have been land given to the village through negotiations with the state. The new village is planned with a regular grid, and likely followed by-laws governing the distances between buildings.

Flower Arrangement Villages that transverse the Second Line may have had a hand in smuggling workers across the border (for a fee) during the reign of the Second Line. This service may well serve as the main occupation or industry of the village. This is a particular problem in the view of the official administration, and is often cause for movements for razing urban villages.² One argument presented in this particular case is the lack of structural integrity of the self-built apartment buildings due to the steepness of the terrain on the site.

Kwan Yiu Wong, editor, Shenzhen Special Economic Zone: China's Experiment in Modernization (Hong Kong: Tai Dao Publishing Co., 1982).

² Huang Weiwen, "Story of the Borderline (说界)," Urban China 24 (2007).











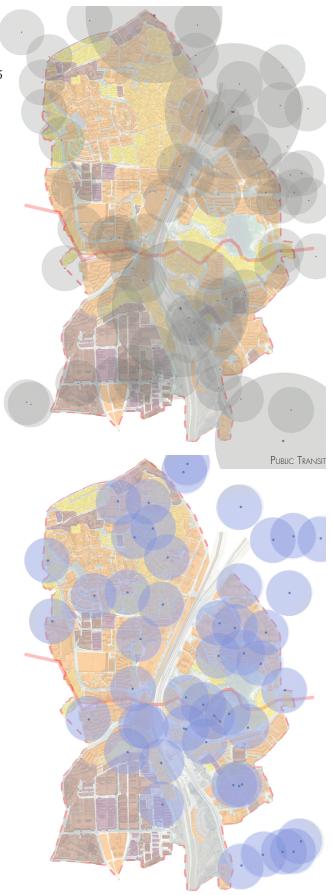




+ Dormitories

New Development

In mapping the social infrastructure of the area, a walking radius of 500 meters (approximately 5 minutes) is determined as the service area. The radius then re-adjusted based on adjacency of institutions. For example, subway stations cover larger areas than bus stops, hospitals cover larger areas than clinics, secondary schools cover larger areas than elementary schools or kindergartens, and so on.



> Figure 2.5.3 Proximity of Social Infrastructure and Service Area

Kindergartens and Daycare Centres



This set of drawings fine-tunes the previous circle diagrams by accounting for social structures within the city.

Thicker lines indicate larger institutions that cover greater areas of service, such as metro station vs. bus stop, or hospital vs. cliinic.

These areas of use may either follow or transgress the molecular territories of division. For example, many gated communities contain elementary schools that are likely used only by the members of that specific community, while amenities such as bus stops and hospitals are shared by residents of different social classes. Social infrastructure may both reinforce and subvert the micro lines of division.

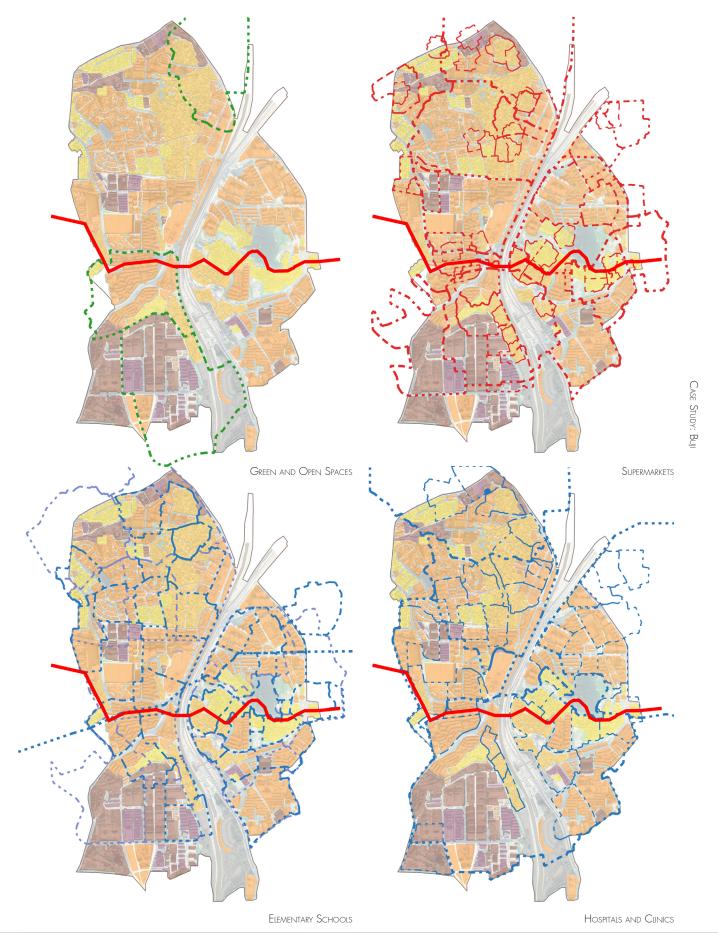
In this case, a division-reinforcing institution is one where the dotted lines of its user group follows the boundaries of micro territories below, while a division-subverting institution is one where the dotted lines cross the boundaries of micro territories of division. The latter creates spaces of overlap between demographics; the potentialities for unexpected interaction are lines of flight that are advocated in this thesis.





> Figure 2.5.4 Lines of Exacerbated Division + Lines of Flight

KINDERGARTENS AND DAYCARE CENTRES





Intervention



The Second Line has made Shenzhen a place of contradiction. While the city exemplifies the miracle of the modern Chinese economy, it also illustrates the destructive impacts of reckless development on socio-economic disparity. The architectural intervention takes the form of a linear infrastructure physically situated on former site of the now virtual political boundary.

The thesis proposal seeks to embody three principles:

MEMORIALIZATION - The thesis recognizes the significance of the Second Line in urban and economic reform and the development of the City of Shenzhen, and subsequently the state of China. As such, the proposal physically re-constructs the space of the now virtual Second Line as a monument to the success of Deng's Special Economic Zone and the modern Chinese economy.

Furthermore, the line was the inaugurating apparatus of drawing migration into the otherwise agricultural milieu of Shenzhen, which resulted in the physical and economic construction of Shenzhen. The project seeks to valorize the mobility inherent in its creation and function, and creates a monument to migration.

Subversion - At grade, the intervention acts as an open public infrastructure that provides potential spaces of interface for the surrounding self-contained communities. A variety of communal, educational, recreational, transportation and commercial programmes respond to the immediate context and adjacent typologies to encourage appropriation, creating a framework for interaction among otherwise segregated demographics. The project acts as a social condenser that seeks to create common, civic spaces of gathering to subvert the dominating ideology of the divisive apparatus. Amenities inherent within each compound are leveraged for communal use and benefit in an architectural attempt to overcome social stigma and segregation through inhabitation of the Second Line.

Dwelling - Of the three main demographic groups in Shenzhen, the migrant population alone are without hold on land or capital. While migration policies allow for their participation in the physical construction of the city, there are no provisions for their settlement due to their lack of access to education, healthcare, and housing. The proposal finds a niche in the current state's initiatives to integrate the floating population into the city¹ through the introduction of a social housing project for migrants in the floors above the social infrastructure at grade. It intends to contribute to the existing state objectives for social housing,² but takes a stand against the discriminatory practices of its distribution. It will be publicly administered akin to the lower tiers of current social housing policies, but requiring working permits, including temporary ones, rather than urban hukou for qualification. Space will be allocated on a square footage basis, at a fraction of market price as pre-determined by the state. Tenants will purchase and build units within the structure, but will be required to sell the space back to the city at the end of their tenure at the current purchase price as set by the governing body. In this manner, units within the structure remain affordable for subsequent tenants. The architectural presence of the intervention seeks to accelerate the process of social reform and overcome urban-rural stigmatization through visibility and integration.

The first part of the design section introduces a series of strategies in the implementation of the project in terms of base structure, response to site, and potential unit configuration and appropriation. The tenant-finished strategy of units seeks to build a sense of culture by building within the mosaic of Chinese cultural backgrounds found in the City of Shenzhen.

The second portion of the chapter applies the systems to in situ sectional samples of the proposal at Buji Checkpoint.

^{1 &}quot;Full Translation of the 12th Five-Year Plan." Accessed June 2, 2013. http://www.cbichina.org.cn/cbichina/upload/fckeditor/Full%20Translation%20of%20the%2012th%20Five-Year%20Plan.pdf.

Du, Juan. "2011 Shenzhen & Hong Kong Bi-City Biennale of Urbanism \ Architecture (2011深圳 & 香港城市 \ 建筑双城双年展: 10 Million Units: Housing an Affordable City (广厦千万 居者之城)." Architectural Journal (建筑学报) 3 (2012): 110 - 114.

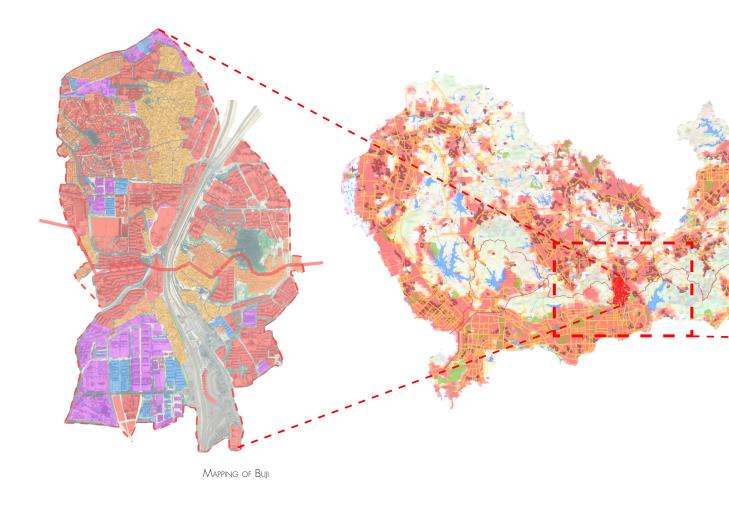
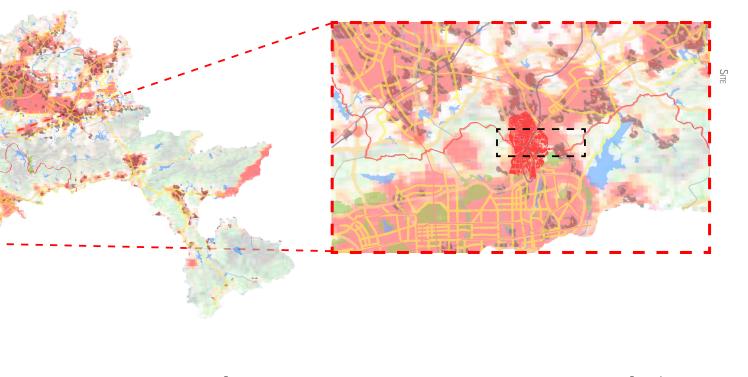


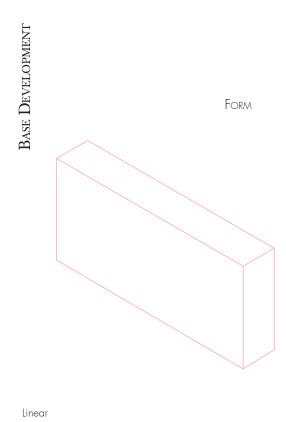
Figure 3.1.1 Site



Shenzhen Site of Intervention

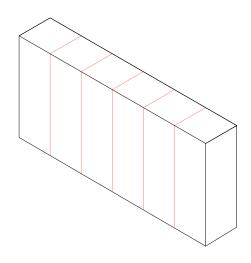






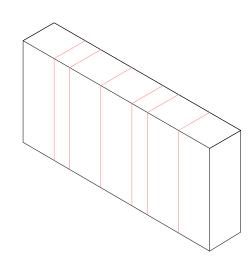
OPEN CIRCULATION (IN OPEN, INFORMAL CONTEXTS)

Dimension & Proportion



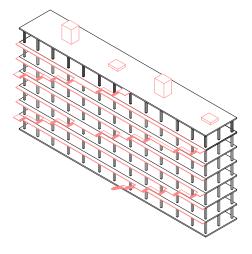
Base unit of urban village (10 m \times 10 m) due to familiarity of typology and human-scaled architecture for social appropriation



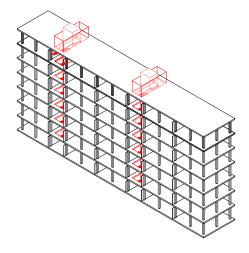


Base unit of urban village (10 m x 10 m) with breaks to allow for circulation core

Vertical Circulation & Utilities

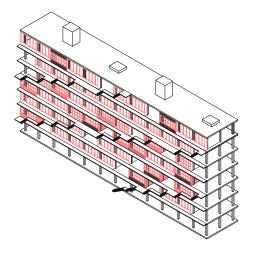


5 m x 5 m structural grid
Prioritizes community and publicness
Open stair with shared terraces / corridors to encourage
horizontal movement & social interaction
Utility cores spaced every third (5 m) structural bay, alternatively coupled with elevators for accessiblity
Permeable ground planes

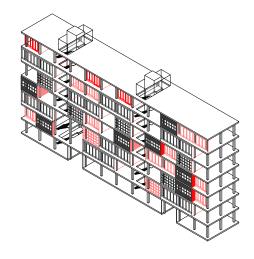


5 m x 5 m structural grid Prioritizes security and efficiency Concentrated utility, stair and elevator cores Semi-permeable ground plane

FACADE & FINISH

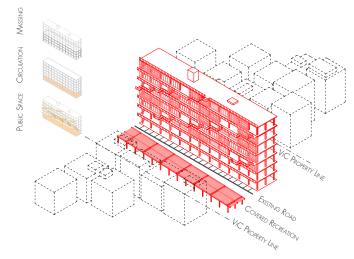


Tenant finished



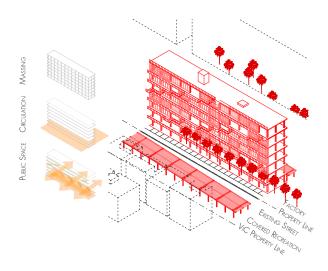
Tenant finished

Village + Village



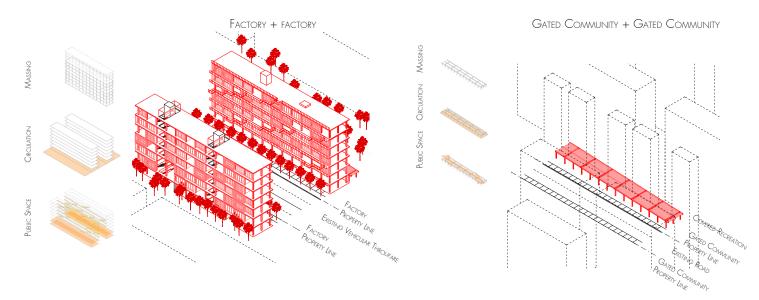
Situated at the natural access corridors within the village, the intervention adds onto existing retail activity at grade, creates open street walls, and intensifies social dynamics on site.

VIC + FACTORY



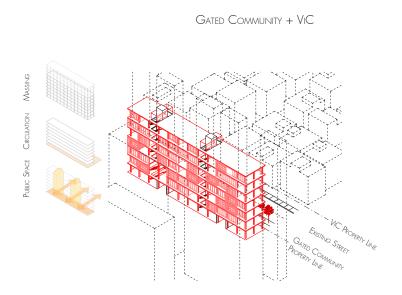
The situation leverages the social dynamism of the ViC and green environment surrounding the factory compound for shared amenities between the neighbouring demographics.

Figure 3.1.3 Context Development

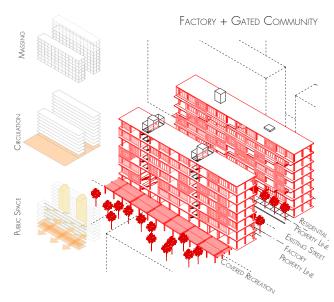


Situated on the greenbelts that buffer industrial parks from the road, the intervention creates a street front with added sidewalks for pedestrian access. Underdeveloped areas between the proposed structure and existing building become parks and recreational spaces.

The density of new developments do not allow for the addition of new built form without compromising light conditions at grade. The intervention is an open, covered structure to create a walkway, and where space allows, a parallel linear park.



The intervention mirrors the commercial and social activity of the ViC adjacent the gated community, bringing vitality and into the latter. In turn, the intervention draws the nouveau riche into the retail space of the village and provides a source of income for the businesses of the village.



Open park space provided by the greenbelts of factory compounds allows for the extension of use by the residents of the gated communities. Proximity in the sharing of space eases the effects of class discrimination and encourages the generation of social empathy and acceptance.

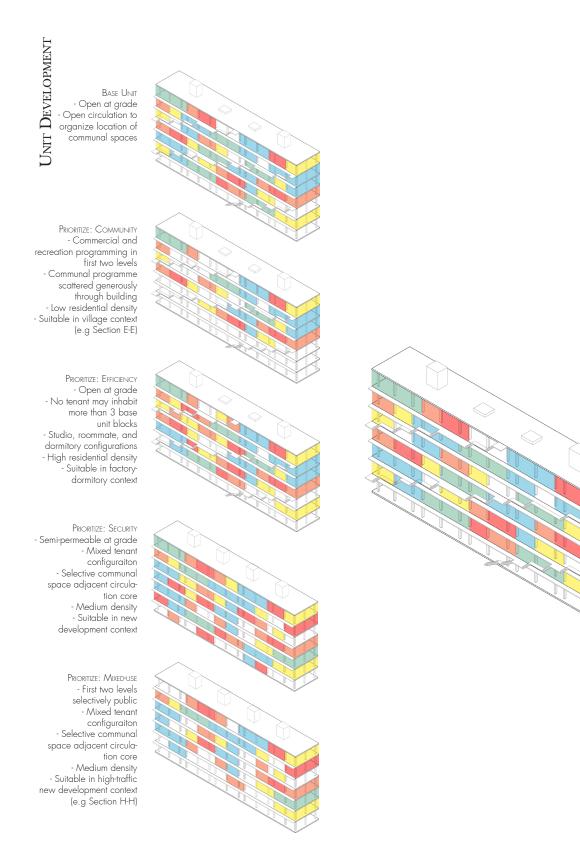
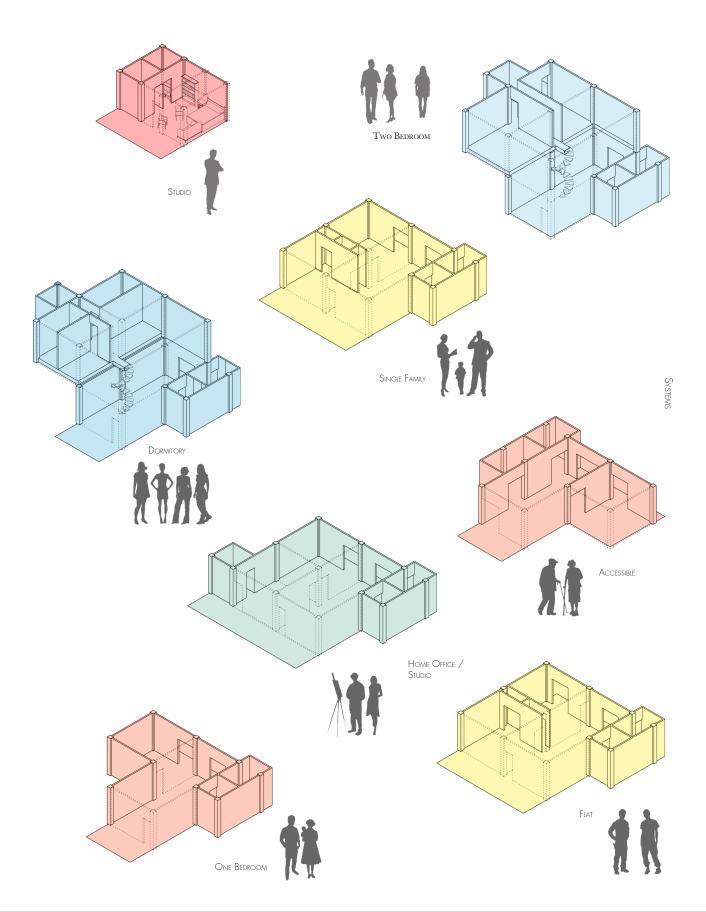
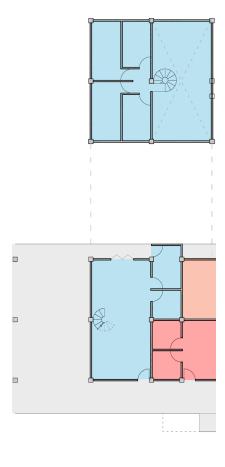


Figure 3.1.4 Unit Development





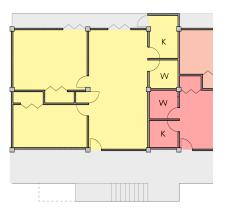
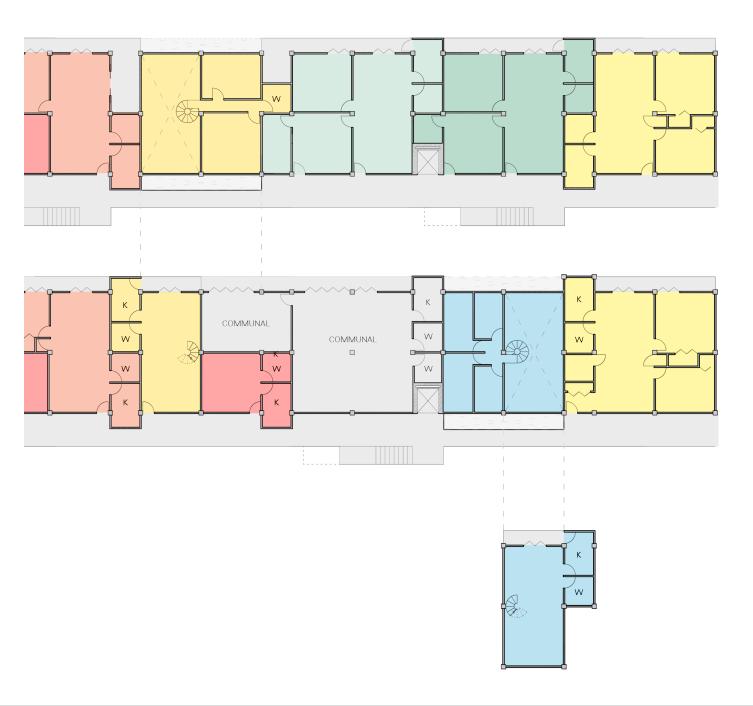


Figure 3.1.5 Floor Layout



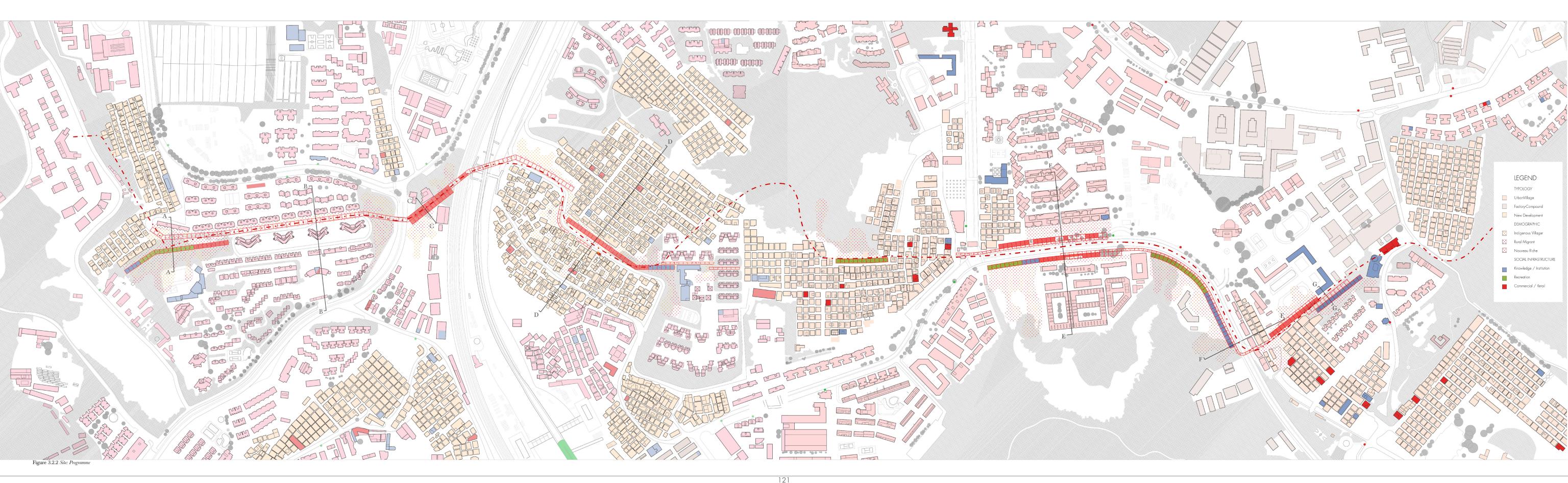


ON THE LINE





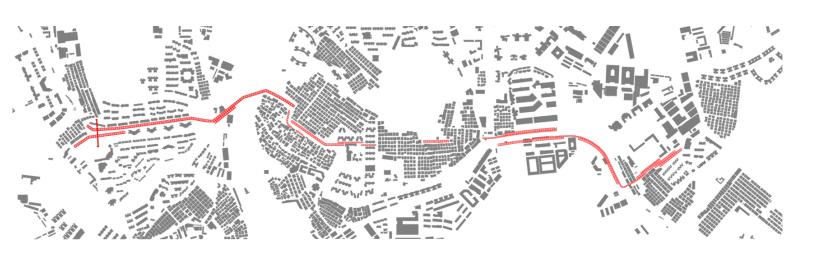




Existing Context \square

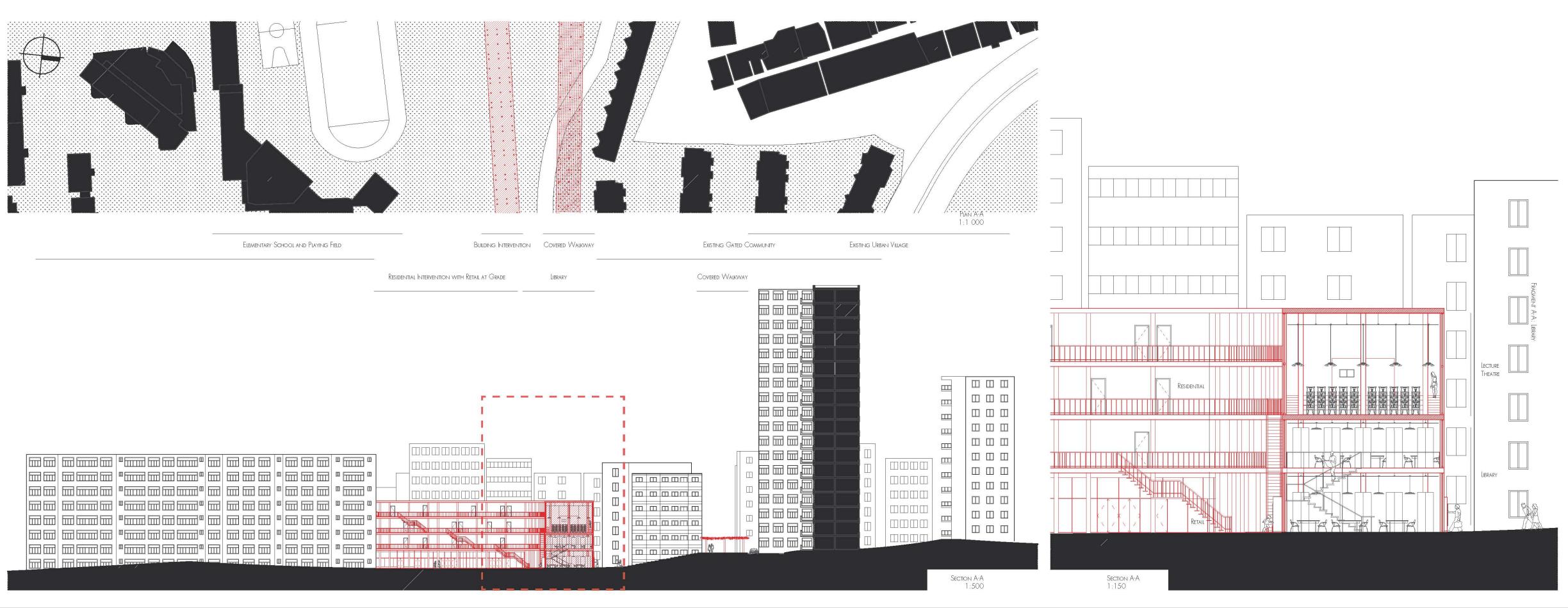
Infrastructural Invtervention 🗾

Impermanent Fixture 🛮



Fragment A-A: Library

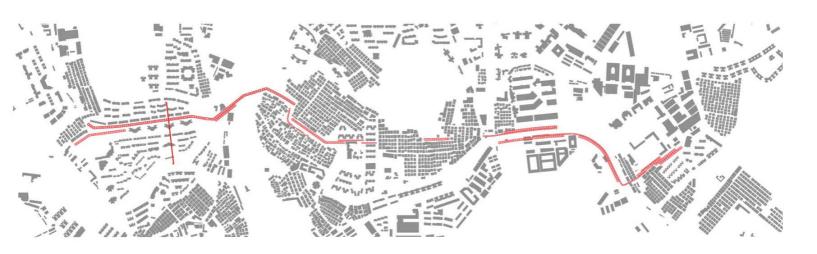
Figure 3.3.1 Fragment A-A: Library; Orthographic Drawings



Existing Context 🛮

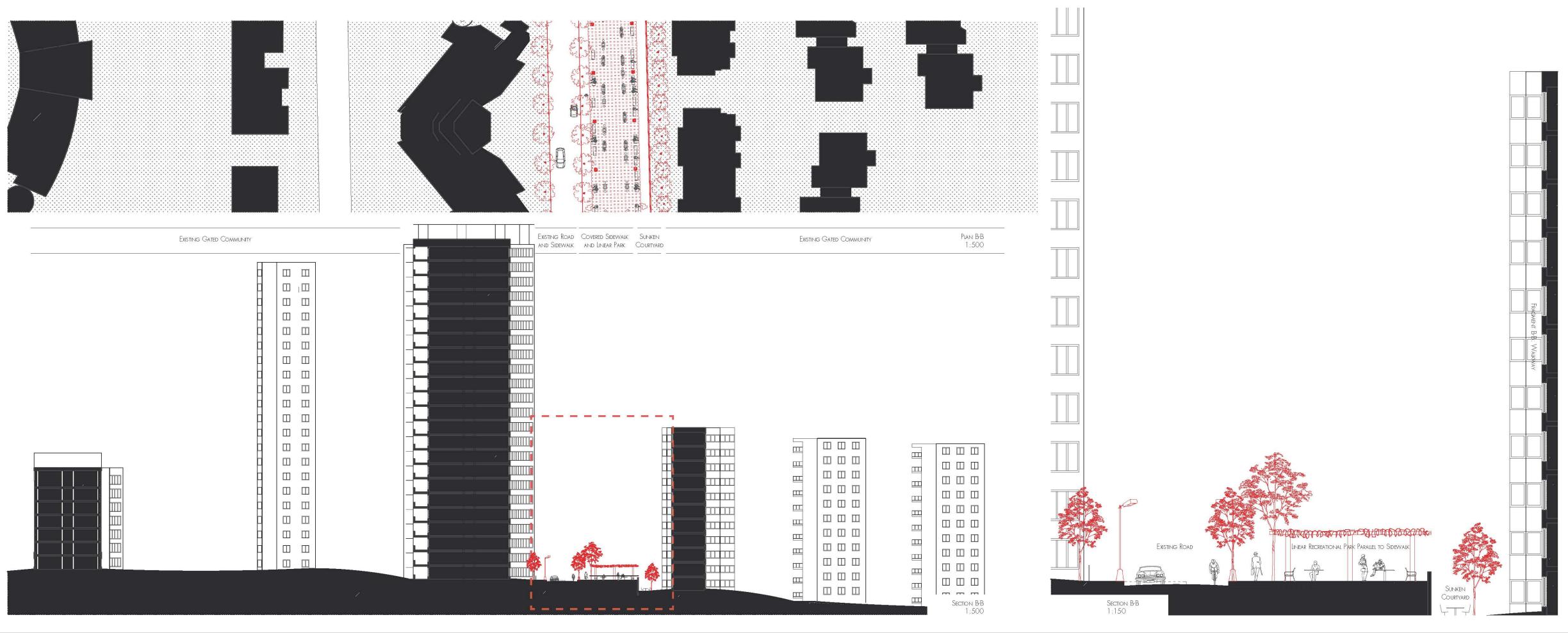
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FRAGMENT B-B: WALKWAY

Figure 3.3.2 Fragment B-B: Walkway; Orthographic Drawings



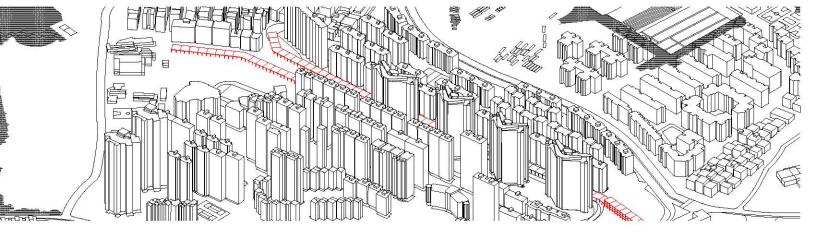
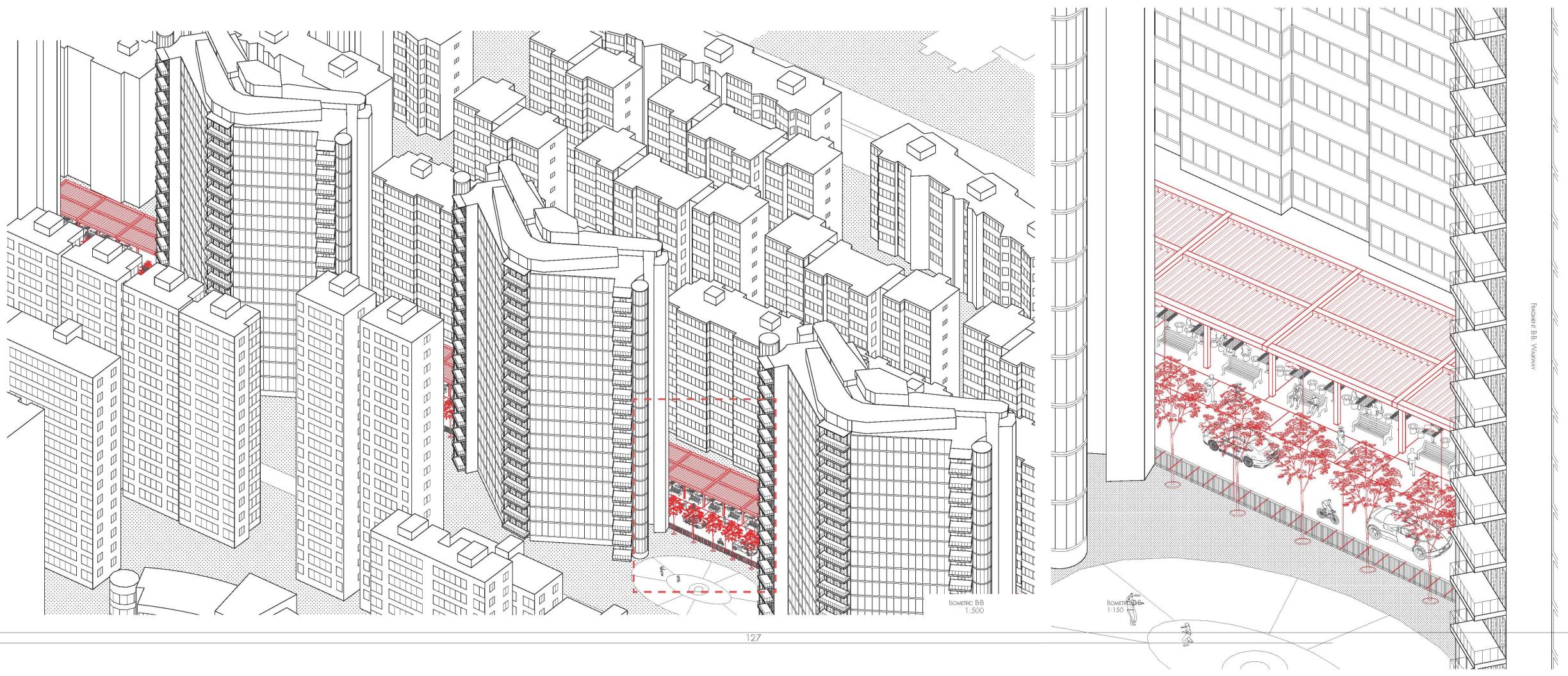


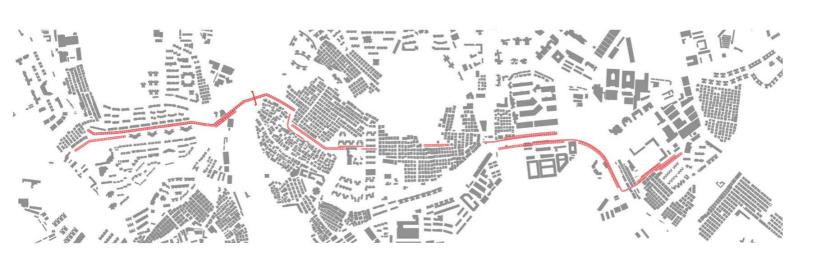
Figure 3.3.3 Fragment B-B: Walkway; Isometric Drawings



Existing Context $oldsymbol{oldsymbol{oldsymbol{oldsymbol{G}}}}$

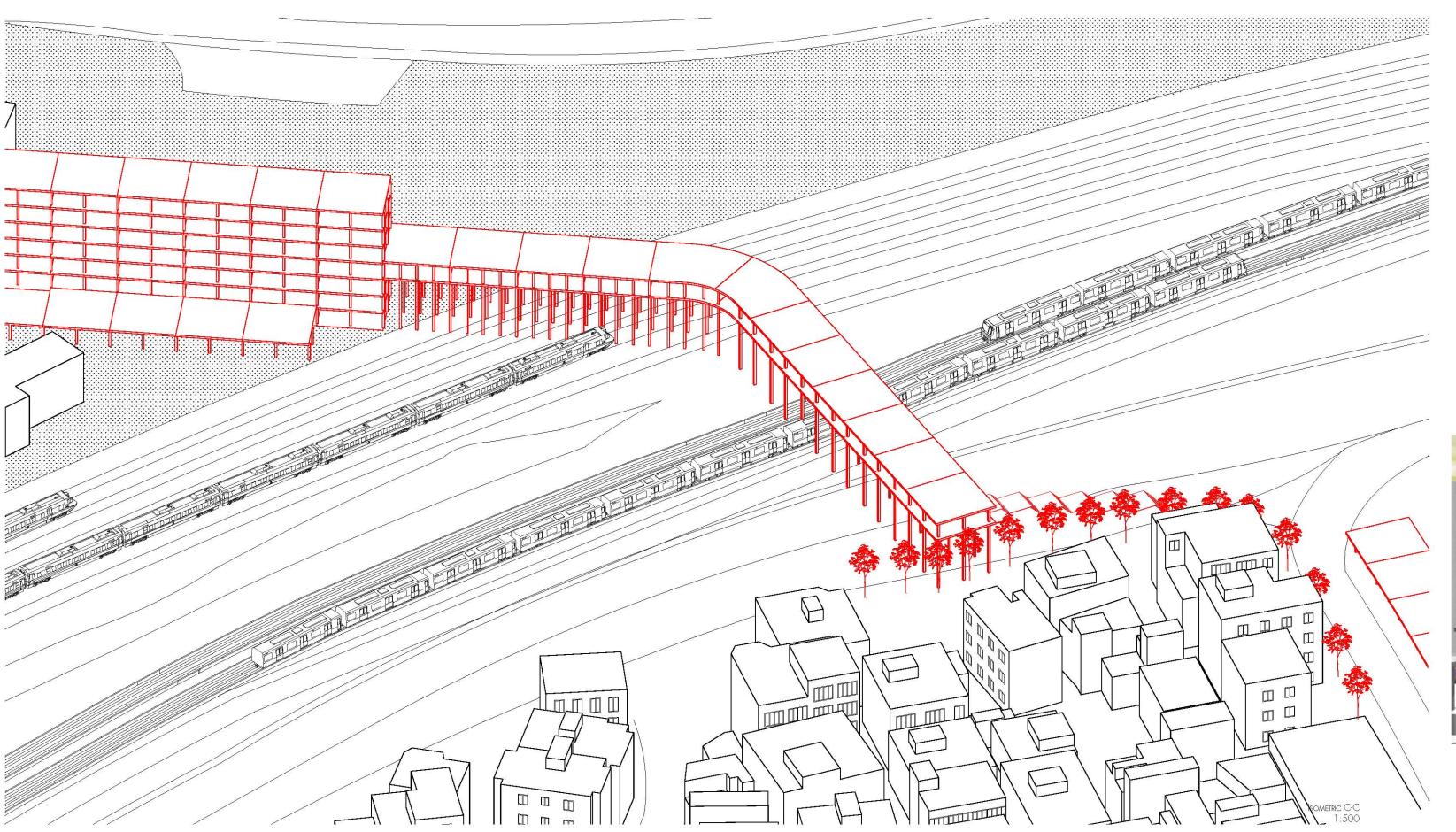
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Fragment C-C: Bridge

Figure 3.3.4 Fragment C-C: Bridge; Isometric Drawings and Vignette





Vignette C-C1 NTS



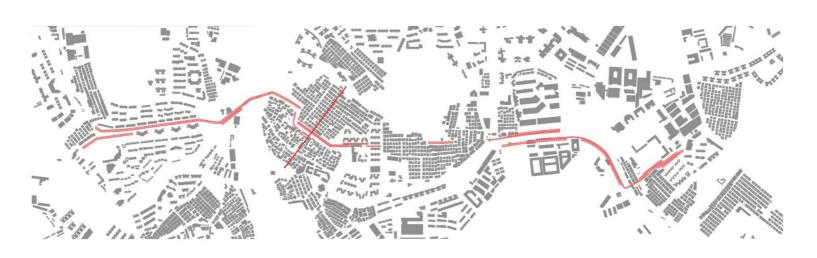
Figure 3.3.5 Fragment C-C: Bridge: Vignette



Vignette C-C2 NTS

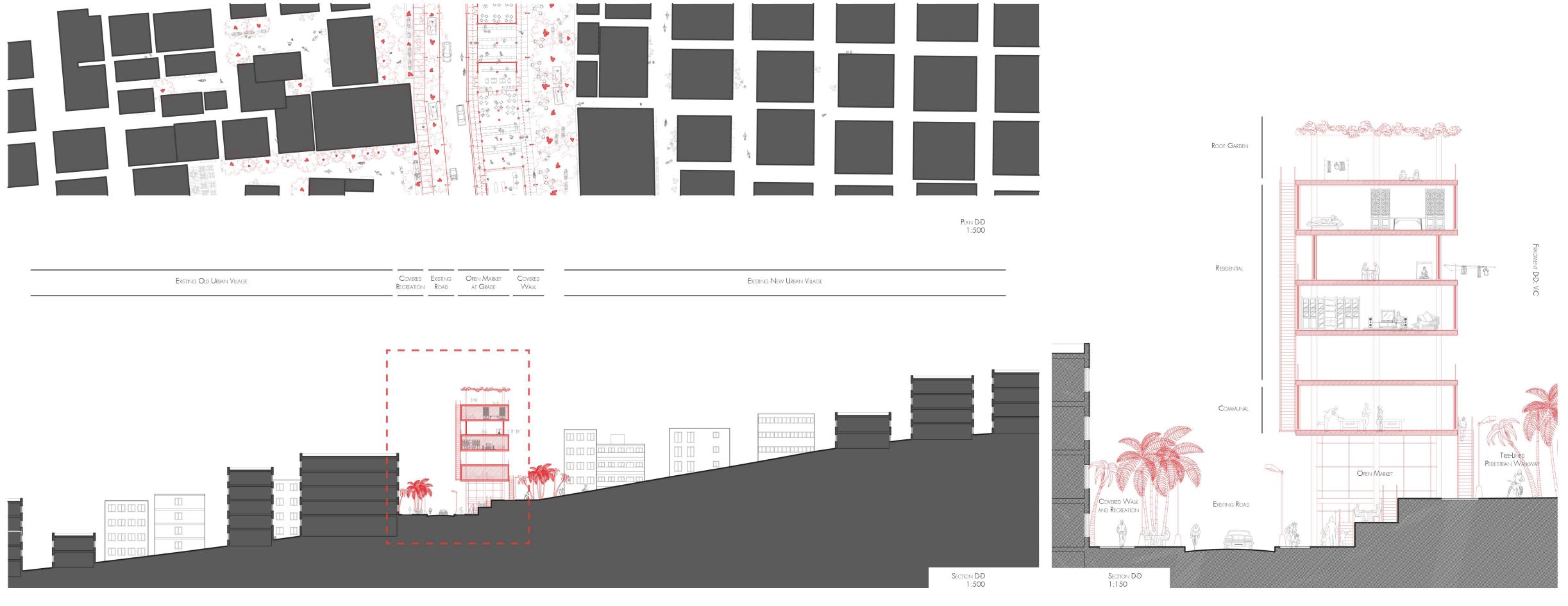
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Fragment D-D: VILLAGE-IN-THE-CITY

Figure 3.3.6 Fragment D-D: Village-in-the-City; Orthographic Drawings



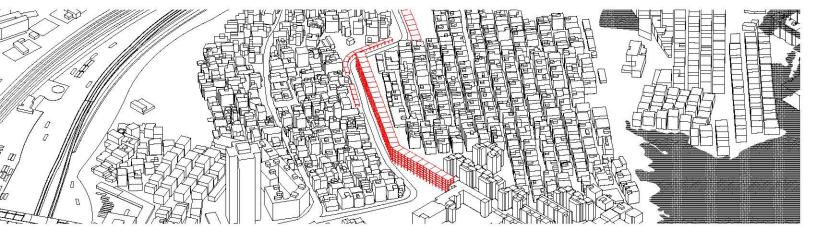
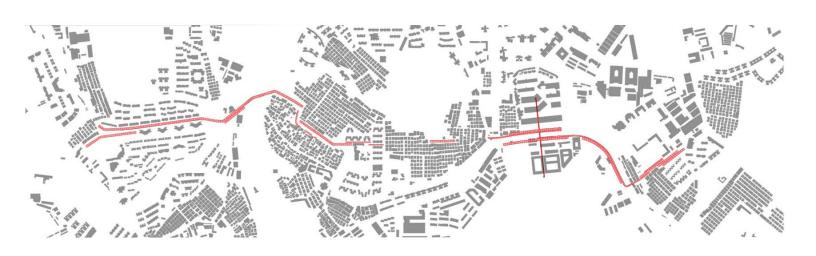


Figure 3.3.7 Fragment D-D: Village-in-the-City; Isometric Drawings



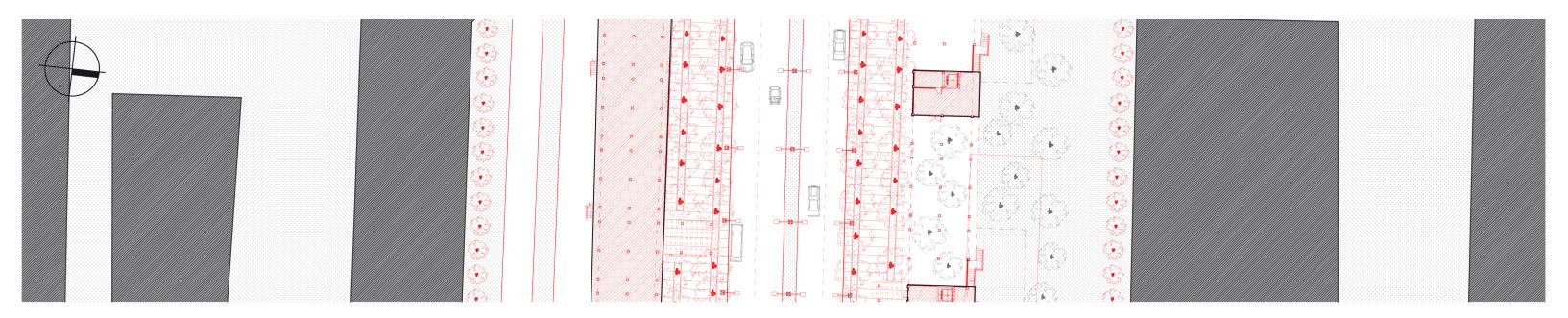
Infrastructural Invtervention 🗾

Impermanent Fixture 🗾



Fragment E-E: Double

Figure 3.3.8 Fragment E-E: Double; Orthographic Drawings

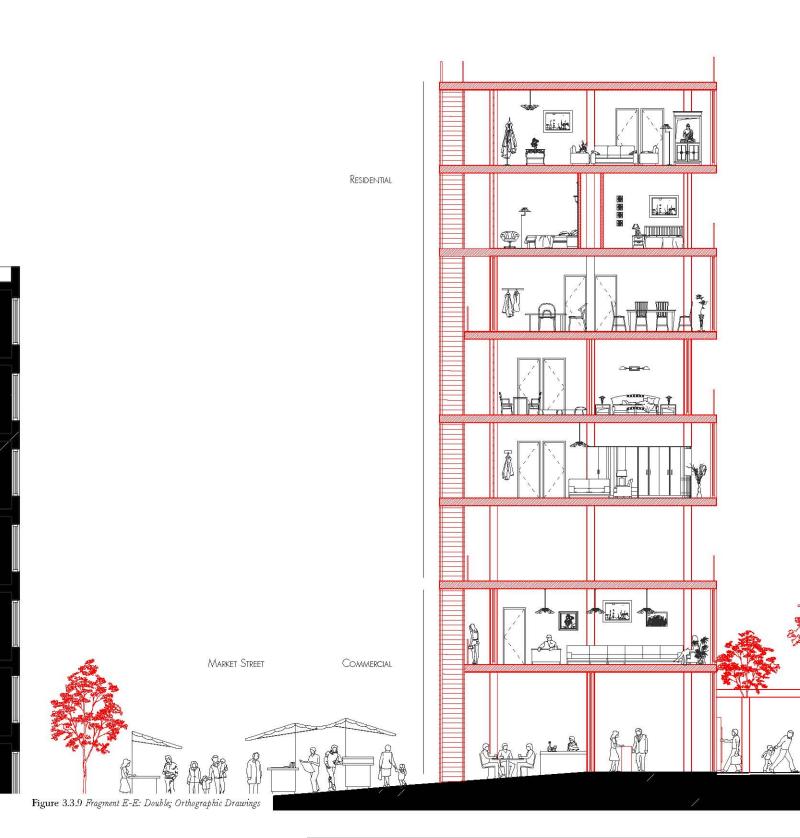


Plan E-E 1:500

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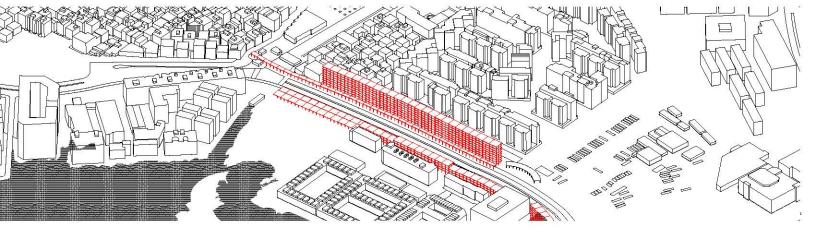
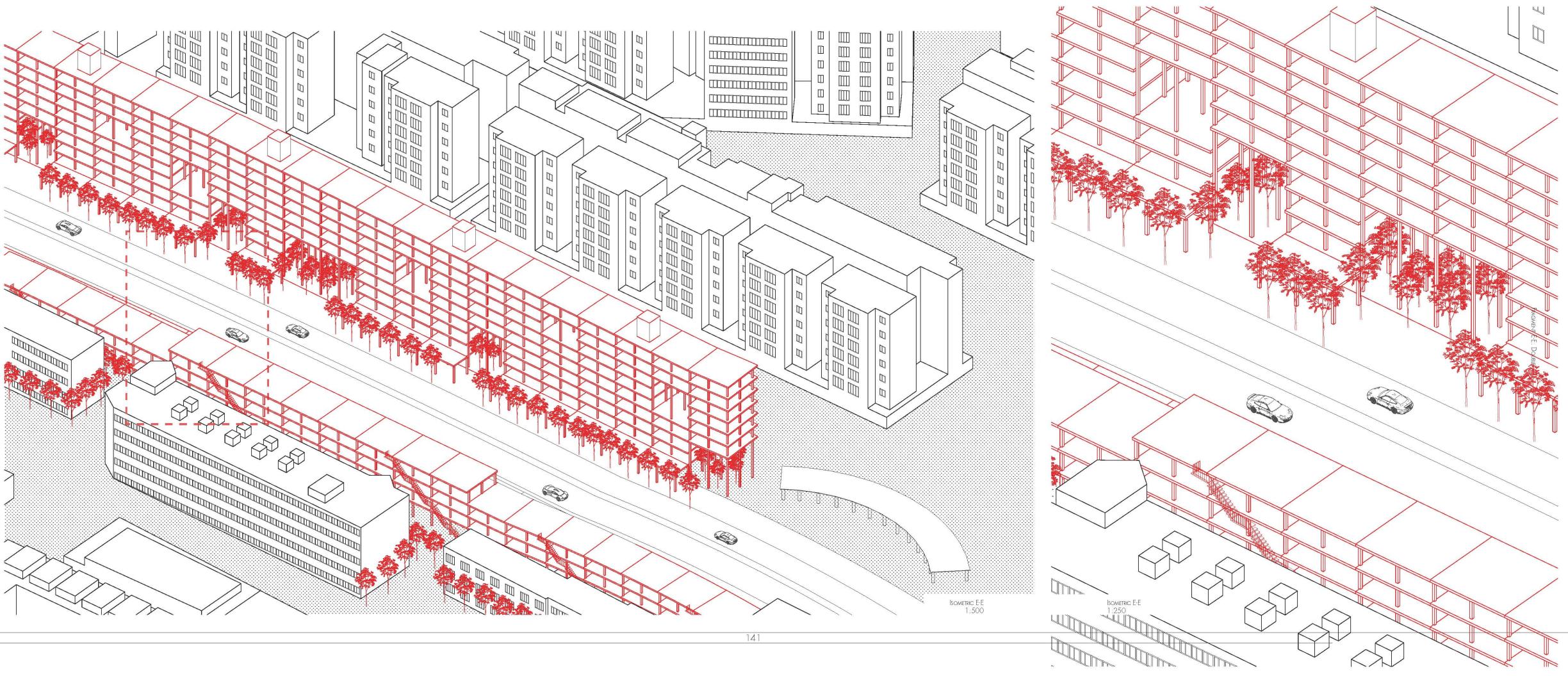
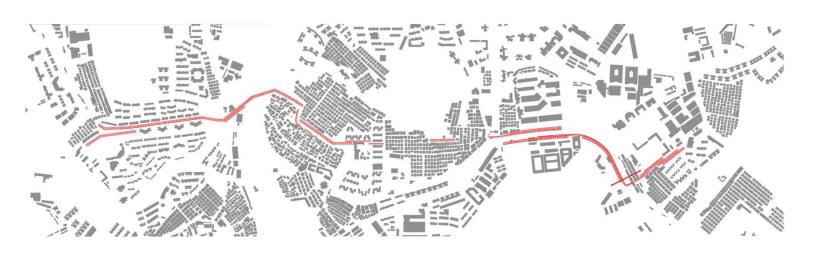


Figure 3.2.10 Fragment E-E: Double; Isometric Drawings



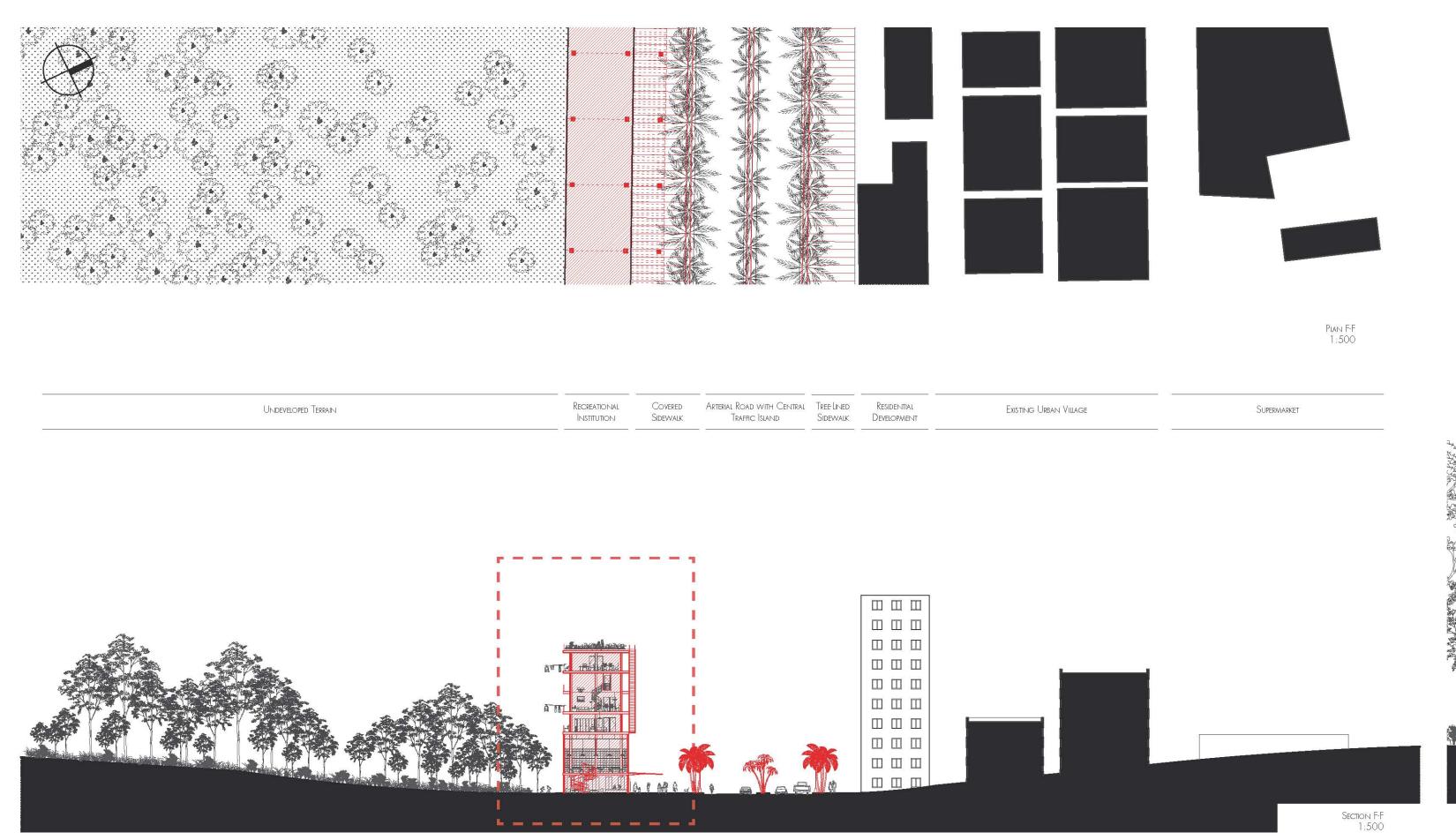
Infrastructural Invtervention 🗾

Impermanient Fixture 🗾



Fragment F-F: Nature

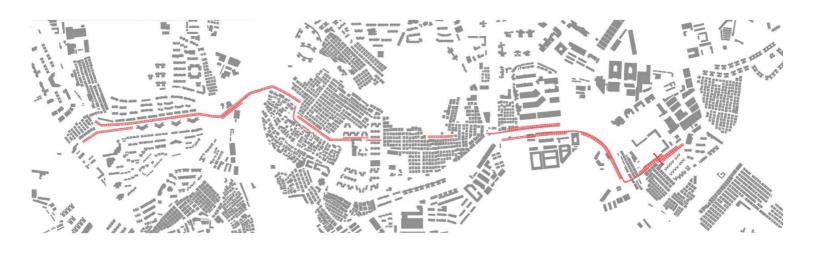
Figure 3.2.11 Fragment F-F: Double; Orthographic Drawings





Infrastructural Invtervention 🗾

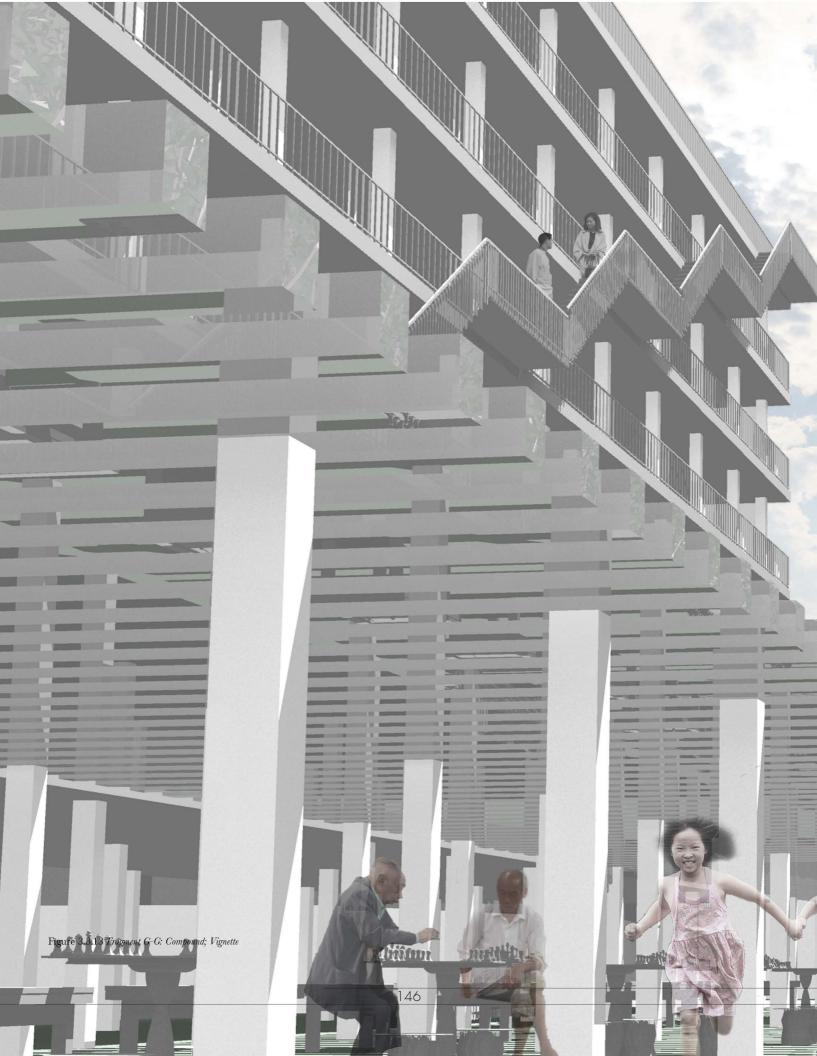
Impermanent Fixture 🗾



Fragment G-G: Compound

Figure 3.3.12 Fragment G-G: Compound; Orthographic Drawings









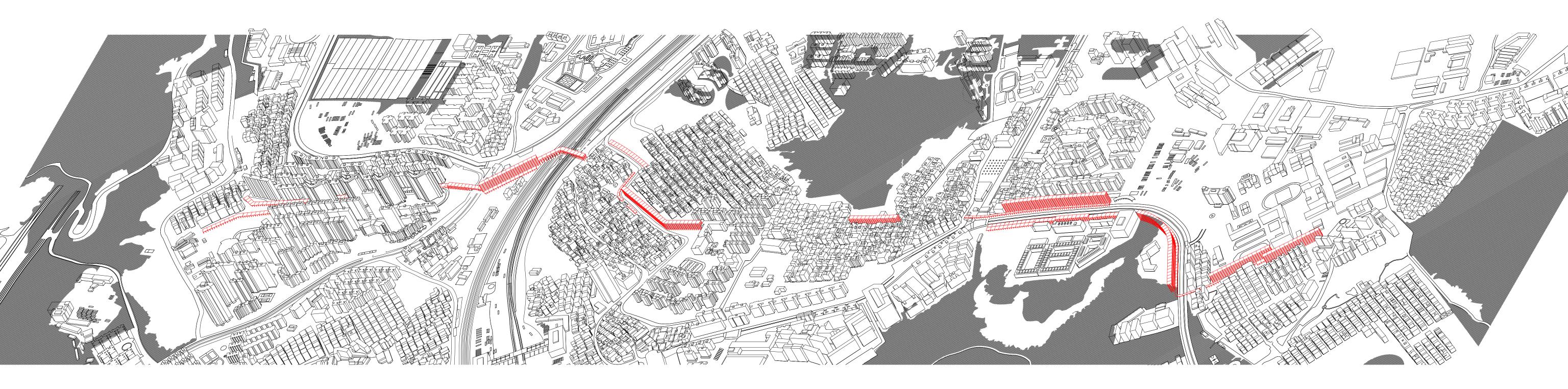


Figure 3.4.1 Site Axonometric

149





In practicing architecture in a (Chinese) capitalist economy, one may take on one of the following attitudes:

- 1. To engage unconditionally in the system of production and consumption.
- 2. To refuse participation in defiance.
- 3. To participate critically, situating oneself between the first two attitudes.

The first attitude enters the market without questioning or scrutinizing its validity. It doubts and denies research, resulting in the doubt and deniel of architectural meaning, the denial of architecture.

The second attitude may arise of a traditional Chinese or Marxist ideology. It chooses education, chooses research, often leading to an engagement with immaterial architecture. In practice, the refusal to participate often gives way to selective participation, often limited in scope, speed, and selection of commission.

The third attitude does not deny capitalism; does not believe in an inherent discrepancy between the free market and architecture. One perseveres in the process and method of architecture in the field of capitalism, perseveres in research. It is this third attitude in which we choose to operate.

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This thesis embraces an inherent self-contradiction. While the Second Line is recognized as a crucial apparatus to radically pull China out of economic destitution, it perpetuates social disparity and physically fragments the construction and function of the new city.

The thesis proposal conceptually and formally asserts a linear monumentality, but the dissolution of the structure at grade encourages social interaction and allows the project to exceed its linearity through the experience of occupation. The potential connectivity of otherwise segregated communities across the physical body of the intervention further disintegrates the divisive ideology of the Second Line , and creates a complex web across the structure from emergent lines of flight.

In an ever-changing political climate of continual reform, it is difficult, if not impossible, to predict the future of China's demographic and economic evolution. The unprecedented speed and extent of growth does not follow a pre-chartered line of course, but rather compresses time and undergoes several revolutions simultaneously. The precarious relationship between the state, the growth of the economy, and the middle class need to be continually addressed and negotiated.

The skeletal composition of the proposal deliberately encourages re-appropriation, allowing the project to evolve with the city, its policies, and its population. Although the structure itself is static, its programming takes on the transformational quality of Shenzhen, continually progressing through cycles of deterritorialization and reterritorialization through time.

While the Second Line exemplifies a particularly exacerbated scenario of division, similar struggles exist throughout the rest of developing China, if not the world. The conflict between the projected image of economic success built on a substructure of disparity has often been taken for granted as an inherent stage of economic revolution and growth.

In 2012, of the 15.1 million inhabitants of Shenzhen, only 1-2 million hold local hukou². The city is physically and economically constructed by the hands of the migrant population, yet existing state policies continually suppress their legibility as the dominant demographic in the city. Through the social housing scheme intended for this disenfranchised demographic, the project is not only a tribute to the politic and economic creation of the city, but is simultaneously a monument to migration.

The thesis project treads the boundary between an ideological manifesto and possible architectural proposal. It attempts to carve a niche for the disenfranchised demographic within the existing framework of state policies and objectives, while taking an unmistakable position against the current labour provision practices. As China moves into the future, architectural and urban proposals will necessarily be continually re-considered and re-evaluated in conjunction with new social and political realities, walking a fine line between the first two of attitudes above, and seeking creative, emergent lines of flight in leveraging the forces of the economy and collective social empathy.

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