THE**URBANIST**GUIDE

TO

GREAT STREETS OF

SINGAPORE'S CHINATOWN

Christi Bowler Elflein

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For Bill, Jack, and Phebe

CONTENTS

14 AN URBANIST'S GUIDE TO **SINGAPORE'S CHINATOWN**

16 History of Singapore

22 Chinatown Kampong

26 The Shophouse

28 Utilities and Sanitation

8 **AUTHOR'S NOTE**

12 MAP OF **SINGAPORE**

30 GREAT STREETS OF **BOAT QUAY**

32 Boat Quay

34 Landmarks and Parks

36 GREAT STREETS OF THE **TOURIST DISTRICT**

38 Pagoda Street

40 Mosque Street

42 Sago Street

44 Trengganu Street

46 Landmarks and Parks

60 GREAT STREETS OF DUXTON HILL

62 Duxton Hill

64 Duxton Road

66 Landmarks and Parks

76 GRATITUDE AND ACKNOWLEDGMENTS

78 SOURCES

48 GREAT STREETS OF TELOK AYER

50 Telok Ayer Street

52 Amoy Street

54 Club Street

56 Telok Ayer Alleys

58 Landmarks and Parks

68 GREAT STREETS OF BUKIT PASOH

70 Bukit Pasoh Road

72 Keong Siak Road

74 Landmarks and Parks

AUTHOR'S NOTE

Photo by Elena Boyce

I have to brag. I have been blessed with an amazing family and the gift of girlfriends at each stage of my life. I call Jacksonville Beach, Florida, home and consider it a hidden gem. So why would I leave my comfortable nest to move halfway around the globe to Singapore? I could say I was escaping my emotions from the loss of my dad, and I could say I had wanderlust that needed to be fulfilled. Truth be told, the answer is much simpler. I'm a trailing spouse. My husband is a special agent with the Naval Criminal Investigative Service. We've made many "nests" through his career, and I've always been up for the next adventure, growing my career more haphazardly, in a perpetual state of learning-by-exploring.

I like to consider myself a professional tourist - a professional tourist equipped with an urban planning degree.

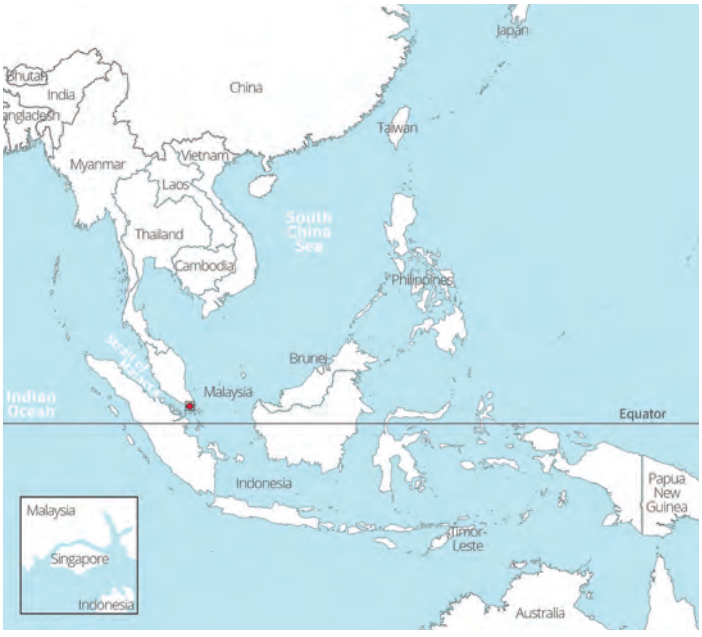
When we moved from Florida to Singapore, I set a goal to learn all I could

about Southeast Asia's neighborhoods and streets and write a book about my findings. I never thought that when I drove out of my parents' driveway on July 8, 2019, departing for our Southeast Asia adventure, that our promise to return home to visit the following summer would turn into three years.

Six months after that moment, Covid-19 turned the world upside down, and we were isolated in Singapore. Making lemonade from lemons, I switched my focus from Southeast Asia to Singapore.

Where is Singapore? I'd like to divert here for my American friends. If you are like I was, and have never been to Asia before, you might need a little guidance on locating Singapore on a map. Look at the world map and zoom in, way in. Find Southeast Asia, then look for Malaysia. Run your finger south almost to the equator, where you'll see a "Little Red Dot." That's Singapore!

Source: ASEAN UP



Singapore is a small country, an island city-state. Picture a whole country inside the Atlanta I-285 perimeter, with a dash of Disney, a slice of Manhattan, and a dab of rainforest, baked at 90°F, then doused in a saucy mix of Chinese, Malay and Indian spices. Best served with white sticky rice. Are you getting a feel for Singapore yet?

The country is composed of one main island with 63 smaller satellite islands. The mainland of Singapore measures approximately 31 miles from east to west and 15 miles from north to south, with 120 miles of coastland. The South China Sea is to the east, and the Strait of Malacca is to the west, positioning Singapore at the southern tip of the busy shipping lanes that connect the Pacific Ocean to the Indian Ocean.

Singapore is a land of rolling hills, jungle, and rainforests in its natural state. With human settlements came the gradual loss of the jungle, and with increasing populations came the loss of agricultural land. Most of Singapore is urbanized today.

I set about exploring this city set in a jungle in earnest. I took walking tours and read every guidebook written. I met locals and asked lots of questions. I researched, photographed, measured and analyzed dozens of neighborhoods and streets. The heritage neighborhoods, built before the car was king, have rich pedestrian networks. These networks may not be apparent at first glance, but once you start exploring on foot, there are connections through alleys, mid-block walkways, and even public access through buildings.

One neighborhood in particular, Chinatown, took a large part of my focus. It is more than just a neighborhood. It is a village of several smaller neighborhoods, each with its own history and nuances of character. The streets of Chinatown are narrow, connected using a grid and alleys, and lined by two and three-story shophouses. It is fabulously compact and walkable. And when I opened an aerial of Chinatown and laid a pedestrian shed circle on top of it, I was happily surprised at how well the core of Chinatown fit inside it. A pedestrian shed is a circle with a quarter-mile (400 m) radius, the average five-minute walk, and the textbook size of a traditional neighborhood. Chinatown packs quite a punch inside that pedestrian shed.

What is a great street? A great street is a street full of life. People are drawn to walk down it, visit the places on it, and explore it. But a street does not become great by accident. There is a recipe, a design to making a street walkable.

In the books, *Street Design* by Victor Dover and John Massengale, and *Walkable City* by Jeff Speck, theories of walkability and street design are explored. To attract people to walk down a street, the walk must be useful, safe, comfortable and interesting. A useful walk is when a person has a reason to walk down the street, such as for a particular destination. A walk is safe when a pedestrian is not under threat of being hit by a car, meaning traffic is slow and there is a buffer such as trees. A comfortable walk is provided by the "outdoor room," or public space, created between the buildings lining a street. When the width of a street is equal to the height of the buildings, the room has a one-to-one ratio, which is very comfortable for people. As streets get wider, or there are no buildings to define the walls of the outdoor room, the

street becomes uncomfortable for people to be on it. Lastly, an interesting walk can be achieved by great architecture, beautiful scenery, and art or something as simple as painted doors. The list that makes a street interesting is infinite.

This book identifies the streets that are great in Singapore's Chinatown. The streets in this book are full of life because their proportions are comfortable, they are safe and interesting, and there is a reason to be there.

My planner's toolbox.
Identifying great streets is easy. It's the streets teeming with life. Once I identified the great streets, I busted out my planner's toolbox to study the streets and learn from them. How are these streets useful, safe, comfortable and interesting? These are the tools I used:

Cross-sections.
I measured the streets in the field and on Google Earth. Then I created one sample cross-section for each street using Street Mix. All the streets' widths and layouts do vary; therefore, the cross-sections shown in this book are just a sample of the street. I do not guarantee they are exact. They are simply meant to illustrate the street's outdoor room.

Aerial Views.
Where possible, I found high-rise buildings from which I could get a bird's eye view. Block patterns, neighborhood boundaries and street layouts can be observed from above.

Photography.
Using photography, I documented each street from its center to show the outdoor room created by the street and its buildings; and from its sidewalks to illustrate the pedestrian experience. I also took pictures of the architecture, the street life and, of course, anything else interesting.

Research.
The history of the street is a significant part of what makes it interesting. To learn the history, I used every form of research, from reading historical plaques to studying guidebooks to meeting locals and learning directly from the people who grew up in Chinatown.

Observations.
The simple act of spending time on each street is invaluable. I ran, walked and biked the streets. And I stopped to enjoy each street. Observing a street is a great excuse to sit and have coffee or meet friends for happy hour.

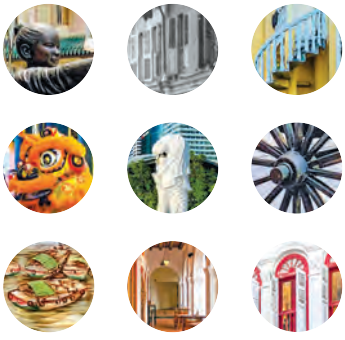
Who is this book for?
This book is for urbanists and anyone with wanderlust. If you are an architect, engineer or designer, I hope you find inspiration in these pages. This book is for locals wanting to see Chinatown through different eyes. This book is for expats who are curious to learn more about Singapore's streets. This book is for travelers planning a trip to Singapore. These are must-see streets.

Christi Bowler Elflein, AICP
Singapore
May 2, 2022

MAP OF SINGAPORE

Map Data @ OpenStreetMap Contributors

AN URBANIST'S GUIDE TO SINGAPORE'S CHINATOWN



View of the Marina Bay skyline from Bay East Garden.

Singapore's iconic Merlion sits near the mouth of the Singapore River overlooking Marina Bay.

Singapore is home to about 5.5 million residents, of which only 3.5 million are Singapore citizens, and typically is visited by upwards of 19 million tourists each year. Its compact size, international population, and multi-cultural heritage result in an interesting, spicy mix. Harmony is displayed through each religion's holiday celebrations, and pride is evident in the preservation of historic ethnic neighborhoods.

Nearly three-quarters of Singaporeans have Chinese heritage, many of whom had ancestors who migrated from China to Singapore during Colonial times. Since this is the largest ethnic group, the Chinese culture is well represented in Singapore, from food to language to celebrations, like Chinese New Year.

This cultural heritage is most apparent in Chinatown, the largest preserved ethnic neighborhood and a popular tourist destination.

A dive into how Singapore became the metropolitan city it is today is paramount to understanding Singapore's Chinatown and its streets.

• • •

HISTORY OF SINGAPORE

This mural, painted by local artist Yip Yew Chong, juxtaposes modern Singapore with historic Boat Quay and its busy port activities along the Singapore River.

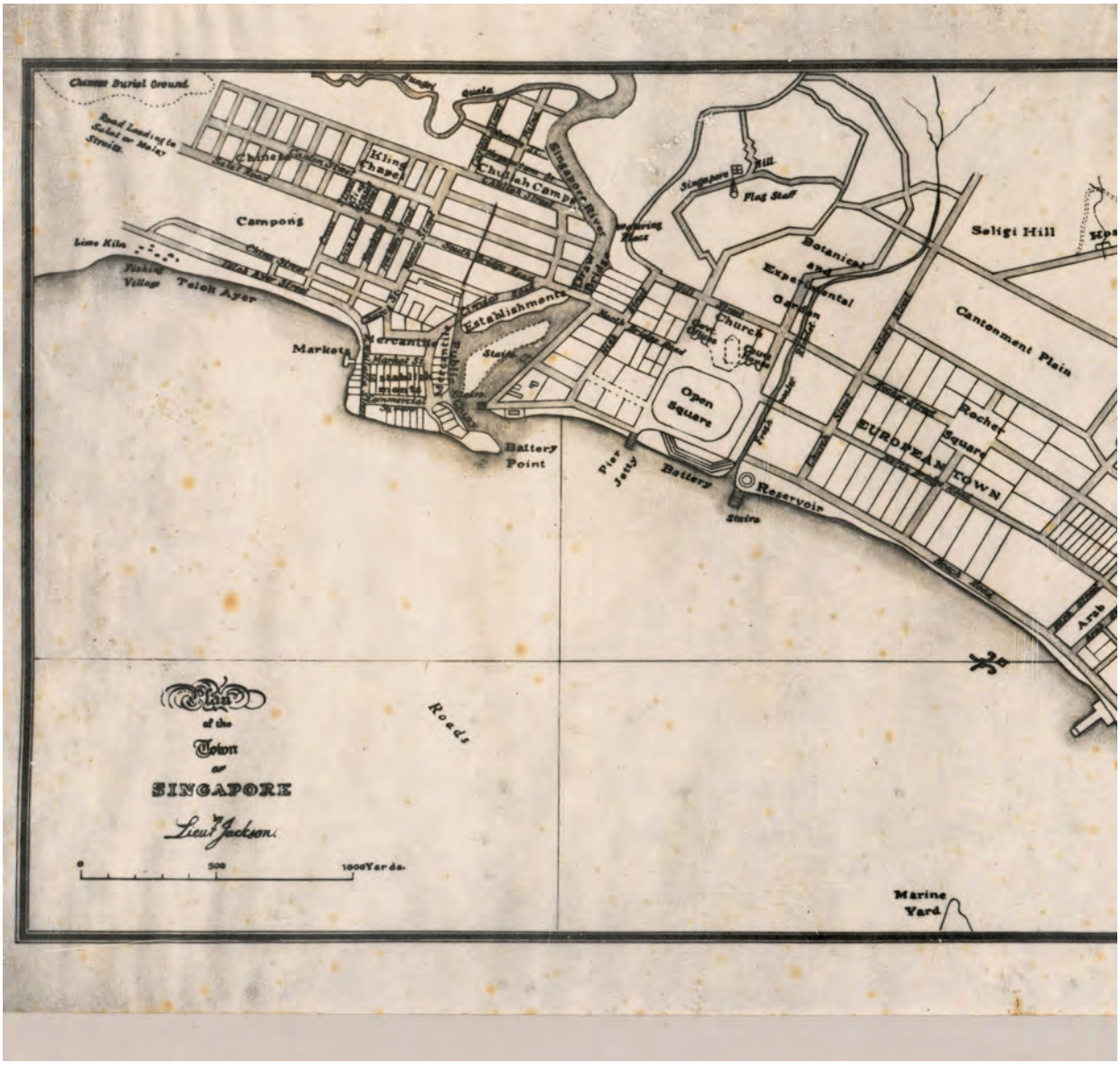
Singapore has been an important trading port for hundreds of years. Today, Singapore is the second busiest container port in the world.

The waters surrounding Singapore are where the story of Singapore begins.

The island is strategically located at the juncture of the South China Sea and the Strait of Malacca, the route sailed by trade ships between China and India as early as the 5th Century AD.

Malay legend tells the story of a Sumatran prince on an expedition in the late 13th century. After a storm, he sought refuge on this white sandy beach island, where he saw a creature that looked like a lion (although it was more likely a tiger). He felt this was a good omen and decided to establish a city there, calling it "Singapura," which means Lion City. The Kingdom lasted 100 years until it was burned to the ground.

Singapore remained a small fishing village, home to wild tigers and native Malays living in water villages for several more centuries until European interests began seeking safe harbors along the trade route in the early 1800s. The spice trade between the Spice Islands (in present-day Indonesia) and Europe was a thriving business at this time.



As a representative of the British East India Company, Sir Stamford Raffles was the Lieutenant-governor of Bencoolen, which is in present-day Indonesia.

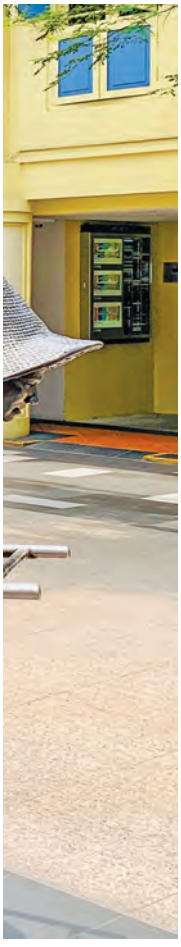
Wanting to promote the commercial interests of the East India Company, Raffles sailed out in search of the perfect place to establish a new port along the Malacca Strait.

He landed in Singapore in 1819 and began the next chapter in Singapore's history. Singapore, Penang, and Malacca became known as the Straits Settlements and became powerful trading stations controlled by the British East India Company.

The new city was carefully planned. Raffles tasked Lieutenant Philip Jackson to draw his vision, emphasizing communal harmony and ease of trade. The result was the 1822 Raffles Town Plan, also known as the Jackson Plan. Raffles' vision was influenced by other colonial towns he had been to. Streets were grided and organized around the Singapore River. Public parks were located at important intersections. Government buildings were placed on Singapore Hill, today called Fort Canning, with a commanding location. And villages, called kampongs in Malay, were established for the different ethnic residents to maintain communal harmony. European Town stretched from the seafront to the north bank of the Singapore River. The Chinese settlement was planned near the existing Chinese kampong south of the river. The area around the Sultan's residence, known as Kampong Glam, was designated for Bugis settlers, the local Malay population, and Arab merchants. The Chulias, the seafaring workforce from India, were to settle in an area upstream of the Singapore River.

1822 Raffles Town Plan Courtesy of National Archives of Singapore

The slow nature of transportation, rickshaws, ox carts, and hackney carriages kept Colonial Singapore bound to the areas laid out in the Raffles Town Plan. This statue of a coolie pulling a rickshaw is by artist Lim Leong Seng.



Singapore was a free port with no income tax, no import tax, no corporate tax, and no port tax. Raffles' policies attracted maritime traffic and migrants quickly. In the first five years, Singapore grew to 10,000 residents.

In 1867, Singapore became a British Crown Colony, and Britain invested heavily in Singapore to modernize it.

New public buildings were built, a modernized police force was created, and institutions were established. During this same period, the advent of the steamship and the completion of the Suez Canal in Egypt increased transcontinental shipping traffic. Singapore's economy and population saw significant growth.

Confidence in England's ability to protect Singapore was dashed during World War II. The darkest of Singapore's days occurred when Japan occupied Singapore from 1942 to 1945. After the war, Singapore became an independent colony in 1959, joined Malaysia as a state in 1963, then became fully independent on August 9, 1965 (August 9 is celebrated as National Day).

Singapore's first Prime Minister, Lee Kuan Yew, led the new country out of economic shambles and into a vibrant, world-class shipping, financial & manufacturing hub. One of the key factors contributing to the foundational success Singapore is benefitting from today was creating a new master plan. It laid out an expansive vision that included the Mass Rapid Transit (MRT) system, the highway network and the international airport. It also had a special focus on building affordable housing. Singapore's housing situation was dismal after World War II. It had one of the largest slums in the world with major sanitary problems. This focus has paid off. Today, there is almost no homelessness, and nearly 90% of Singaporeans own their residence, with 80% living in HDBs (Housing Development Board public housing).

The rapid growth and modernization that has occurred since the 1960s has earned Singapore the title of one of the Four Asian Tigers. Like all cities, Singapore's built environment has evolved. Still, the bones of the Raffles Town Plan, remnants of Singapore's maritime past, and multi-cultural religious and civic monuments remain. These nods to the past are particularly evident in Singapore's largest heritage neighborhood, Chinatown.

CHINATOWN KAMPONG

Chinatown Circa 1905 Courtesy of National Archives of Singapore.

Sir Stamford Raffles' 1822 Town Plan allocated a significant area south of the Singapore River to immigrants from China.

"His generous allocation arose from his belief that this 'industrious race' would always form the largest community, an assumption that became a fact," says Jason Toh in Singapore through 19th Century Photographs.

The streets of Chinatown were laid out in the town plan to give the immigrants familiarity with their hometowns. Streets were long and narrow and intersected at right angles where possible. Compatible trades were concentrated together, and the streets were named for them. For example, carpenters worked on Carpenter Street. The kampong was divided into precincts to group immigrants from the same province and dialect group. Cantonese people originating from Southern China lived in the area around Temple Street and Mosque Street, which is today the heart of the tourist

district. Hokkiens migrated from China's Fujian province and were allocated Telok Ayer Street. The Teochews, originating from China's Guangdong province, settled in Boat Quay.

Boat Quay and Telok Ayer were the first neighborhoods to be settled in the 1820s, as these areas were on the waterfront. Boat Quay is on the Singapore River and the site of the first port. And Telok Ayer was on Telok Ayer Bay, the landing site for most immigrants. Settlements then spread into Kreta Ayer in the 1830s. Bukit Pasoh and the neighborhoods of Tanjong Pagar, like Duxton Hill, were settled in the late 1800s and early 1900s.

These neighborhoods collectively formed the Chinatown Kampong.

As Singapore's population boomed, so did Chinatown's. The kampong became overcrowded and riddled with issues. The lack of indoor plumbing led to poor sanitation conditions. Prostitution was a big business because there were more male than female immigrants. Opium dens were rampant to feed addictions. Many coolies smoked opium to escape the harsh realities of their manual labor. Then the damage from World War II made matters worse. Chinatown was bombed and occupied by the Japanese. Chinatown became a slum.

Club Street in Chinatown in 1954. Photo taken by Ng Yeow Hua.

Post World War II, the government of the newly independent Singapore was committed to raising the living standards of its population.

As slums were cleared, residents were moved to public housing, and street hawkers were relocated to commercial centers, questions were raised about the future of Chinatown. Were slums being cleared, or was history being erased? A push to conserve the culture of Chinatown began, and in 1986, the government announced plans to conserve Chinatown. One by one, each neighborhood was designated a conservation district. Strict guidelines were established to preserve the physical historic character of the area, including building envelopes, the back alleys and the building heights. And efforts were made to extensively and sensitively renovate shophouses to bring them up to modern living standards.

Today, rather than seeing slums, luxury sports cars are a common sight along the streets of Chinatown.

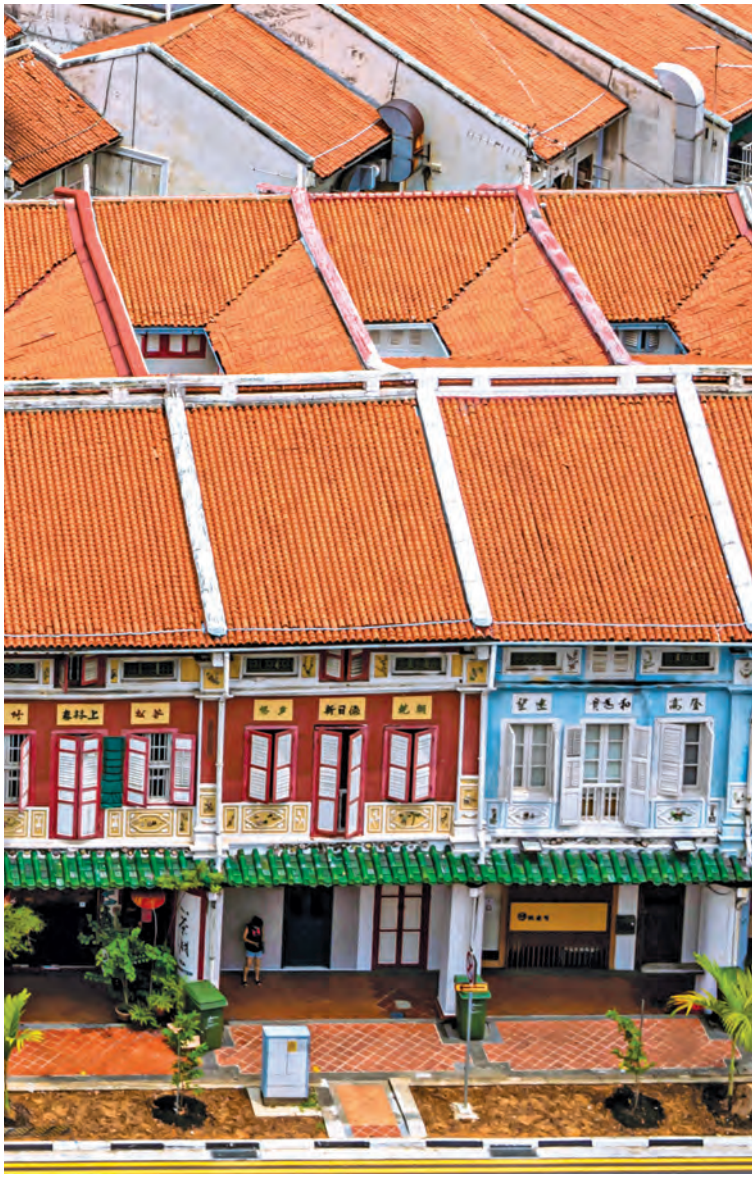
Chinatown's history is celebrated through festivals, such as this one at Thian Hock Keng Temple. Locals are celebrating the birthday of Mazu, the Goddess of the Sea, whom many immigrants thanked when they safely landed in Singapore.

THE SHOPHOUSE

Shophouses were the dominant building type in Chinatown between the 1820s and 1960s.

They are typically two to three stories tall, with a business on the ground floor and residences above, though some were solely residences. They were built directly on the street and featured a five-foot terrace that, when connected with other shophouses, created a continuous "five-foot way," a covered pedestrian passageway.

Sir Stamford Raffles wanted to use the shophouse form to create uniformity in the kampongs. He specified that they be constructed of brick and tiles. And he envisioned that the five-foot ways would provide space for residents to enjoy fresh air and the food from hawkers selling on their streets.



The covered five-foot ways measure five feet deep and vary in character between each shophouse, creating an interesting and pleasant place to walk.

Shophouses are usually two to three stories tall and average twenty feet wide.

UTILITIES AND SANITATION

Notice that no overhead wires clutter the view of the beautiful shophouses. This is how it has predominantly been since the early days of Chinatown.

Originally, live electrical wires ran directly underneath the five-foot-way pavement. It was dangerous.

Today, the wires all safely run deep underground. Modern Singapore has dug tunnels, some as deep as 260 feet (80 meters), to run the wires in and equipped them with high-tech robots and sensors to ensure a safe and secure power supply.

Chinatown's back alleys are hard working. They are used by shops for washing, by residents for drying clothes,

Utility wires are safely deep underground, not cluttering the view of the beautiful shophouses.

Night soil men used rear spiral staircases to collect sewage from each residential level before indoor plumbing was installed.

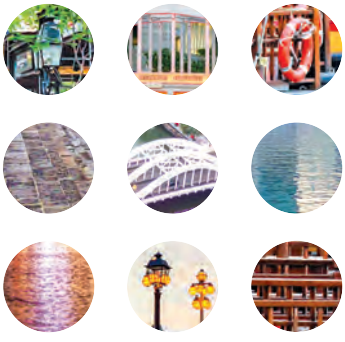
by pedestrians as shortcuts, by kids for playing and by workers to rest. Historically, they were also used by so-called "night soil men" to take away the household poop. Yes, poop!

Behind most shophouses is a spiral staircase. Many are now colorful and Instagram-worthy, but their original purpose was for the collection of human waste.

When these pre-war shophouses were built, proper sanitation and plumbing were not widely available in Singapore. The solution was to build on alleys with spiral staircases for rear access to each floor where the makeshift toilet buckets were located. Night soil men would climb the stairs at night to collect the bucket from each household on each level and replace it with a clean one.

They would cover the stench with soil and carry the buckets with a pole across their backs. As late as the 1940s, the buckets were dumped on the city's outskirts. Later, they were taken by trucks to a processing facility where the night soil was turned into fertilizer to be used on Singapore's farms. The last night soil processing facility was shut down in 1987.

GREAT STREETS OF
BOAT QUAY



The calm waters of the Singapore River were a key component in Sir Stamford Raffles' vision of Singapore as a free port.

This is where trading would happen, and this is where the town would be built.

The Raffles Town Plan designated the southside of the river near the river's mouth as commercial and where the Chinese Kampong would be located. The river's edge consisted of dense mangrove wetlands, so in the early 1820s, the river's bank was built up by filling it in with earth from a nearby hill. This was Singapore's first infrastructural development project, and this new land would become Boat Quay, serving as Singapore's main harbor.

Boat Quay quickly became a busy port scene during the colonial era. Warehouses, called godowns, were built for Singapore's primary business, the entrepot trade, where goods were imported and stored to be traded or exported again. Chinese merchants built terraced homes with private jetties, and Chinese laborers, the Coolies, settled in. Bumboats, flat bottom barges, ferried goods to and from the godowns that lined the river's edge. The bumboats would tie up several deep, and coolies would load and unload goods in gunny sacks over their shoulders.

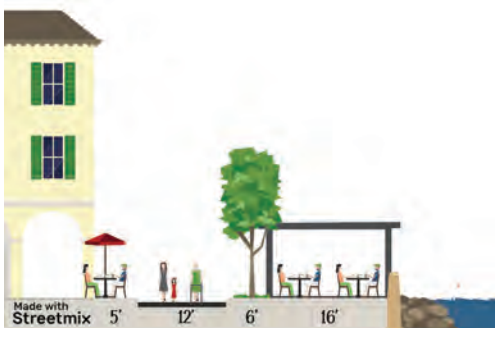
The port activities and warehouses, known as godowns, have been replaced with a lively restaurant and bar scene.

BOAT QUAY

Boat Quay is the name of the neighborhood and the street that runs along the Singapore River.

This port street played an integral role in Singapore's economic and physical growth for more than 150 years.

Gradually, modernization and newer ports on Singapore's western shores brought an end to harbor activities along the Singapore River, and the years of heavy use left the Singapore River polluted and Boat Quay run-down.



The original river-wall stone steps were retained during river restoration works to preserve the memories of the coolies hard work carrying gunny sacks between bumboats and the godowns.

A new chapter began to unfold for Boat Quay in the 1970s.

The Clean Rivers Project, from 1977 to 1987, removed pollution sources and the river's stench. The neighborhood received conservation status in 1989, and renovation of the godowns and shophouses of Boat Quay took place in the 1990s. The riverfront promenade was built in 1999, removing motorized vehicles from Boat Quay and creating a lively entertainment district with waterfront restaurants. In 2008, the Singapore Tourism Board made significant improvements to the pedestrian promenade along the river. And in 2016, the Urban Redevelopment Authority replaced the disorganized restaurant tents along the waterfront with uniform structures creating prime waterfront restaurant seating.

A pedestrian promenade runs the length of the Singapore River connecting Boat Quay to Marina Bay downstream and to Clarke and Robertson Quays upstream.

LANDMARKS AND PARKS

Elgin Bridge in Boat Quay is on the site of the Singapore River's first bridge.

The Singapore River is arguably the most significant "street" in Singapore.

It is a major transportation route, and Singapore's early wealth and economy were built along this waterway. Singapore celebrates the river's history and beauty with a riverfront promenade that runs the entire length of the river and with a series of important and beautiful bridges. The bridges were critical components of Singapore's success, aiding in the movement of goods and people.

The first bridge, a wooden footbridge, was built in 1819 in Boat Quay to connect the European settlement on the northern banks to the Chinese settlements south of the river. Several bridges were built on this site over time before the bridge we see today was built. Elgin Bridge, built-in 1929, is an iron suspension bridge with graceful high arches. It features four bronze roundels and six ornate brass lamps created by Italian sculptor Cavaliere Rodolfo Nolli.

Pedestrian underpasses were added in 1992 for safe passage under North and South Bridge Roads.

Bumboats, flat bottom barges, were used to ferry goods along the Singapore River until the 1980s. Today, they are used as tour boats and water taxis.