



**SHANGHAI: BIG CHANGES AHEAD
(Revised)**

BASIC INFORMATION		World Rank	Similar to
Urban Area Population (2008)*	14,250,000	14	Kolkata, Moscow
Projection (2025)	17,360,000	14	Osaka-Kobe-Kyoto, Kinshasa
Urban Land Area: Square Miles	800	37	Mexico City, Phoenix, Kuala Lumpur
Urban Land Area: Square Kilometers	2,070		
Density: Per Square Mile	17,800	280	Rio de Janeiro, Santiago, Surabaya
Density: Per Square Kilometer	6,850		
*Continuously built up area (Urban agglomeration) Land area & density rankings among the approximately 750 urban areas with 500,000+ population. Data from Demographia World Urban Areas data. See: ¹ <i>Demographia World Urban Areas Population & Density</i> <i>Demographia World Urban Areas: 2025 & 2030 Population Projections</i>			

November 23, 2008

HOW SHANGHAI HAS CHANGED SINCE 2001

It had been seven years since I had last visited Shanghai. As appeared likely, there were big changes in the interim. This was most evident in the construction that has occurred in Pudong (Slides 93-126), the new business center on the east side of the Huang Pu (Pu River). In 2001, the skyline was dominated by the Pearl of the Orient television tower and the Jin Mao Building, itself the fourth tallest in the world. There was little between the two. Slide 1 shows the change. Now only the top of the Jin Mao Building can be seen from the same vantage point, the rest being blocked by buildings that are nearly as tall between it and the river. The southern end of the picture is anchored by the new Shanghai World Financial Tower, which local people referred to as a “beer can opener.”

The changes and additions to the skyline are not limited to Pudong. There has also been much construction in Puxi (west of the Huang Pu). Further, according to the Shanghai Yearbook, there were 1,000 buildings of 30 or more stories in 2000 and nearly 2,600 in 2006. There is much more to come. A number of new towns have been built and there has been much additional residential construction on and beyond the urban fringe. The Lianggang new town, located at the southeastern corner of the city/province is expected to have up to 1,000,000 residents by 2020 (Slides 27-31).

This article provides perspectives from the 2008 visit. The original article, written in 2003, covers the 2001 visit and is reproduced below.

¹ <http://www.demographia.com/db-worldua.pdf> and <http://www.demographia.com/db-worldua2015.pdf>.

SHANGHAI WORLD FINANCIAL CENTER

The Shanghai World Financial Center (SWFC) had the tallest roof in the world when opened during the last year (Slides 128-146). Officially, there are four taller buildings --- the Burj in Dubai, Tower 101 in Taipei and the twin Petronas Towers in Kuala Lumpur. Only the Burj, still under construction, has a higher roof. SWFC was the first building in the world to have a higher roof than the Sears Tower in Chicago (the other buildings were taller only because they incorporated spires into their designs, however the highest habitable space was below that of the Sears Tower). SWFC is 1,614 feet high (492 meters), which compares to the Sears Tower at 1,450 feet (442 meters).

SWFC has the world's highest observation tower. It has three levels at the 94th, 97th and 100th floors. One would expect superb views from these levels, however, the design of the building casts reflections that make it impossible to obtain clear pictures from the top level and difficult from the lower levels.

THE BUND

One of Shanghai's principal attractions is The Bund, a collection western style buildings constructed before World War II on the west bank of the Huang Pu (Slides 170-192). The Bund stretches virtually uninterrupted for approximately one mile (1.6 kilometers). Additional Bund buildings are on the north bank of Suzhou Creek and other historic western style buildings are located within the first few blocks west of the Bund. Among the most notable buildings are what was built as the Hong Kong and Shanghai Bank headquarters, the Bank of China and the Peace Hotel (closed for renovations). The Hong Kong and Shanghai Bank building served as Shanghai's government administrative building following the 1949 revolution. It now houses the headquarters of the Shanghai Pudong Development Bank.

THE NEW DEEPWATER PORT

Shanghai has built a new port, nearly 20 miles (30 kilometers) off shore where Hangzhou Bay meets the East China Sea (Slides 31-32). It is reached by the Donghai Bridge from the Lianggang New Town, which is itself 30 miles (50 kilometers) from the core of Shanghai. The port of Shanghai, which includes facilities on the Huang Pu and Yangtze Rivers.

SHANGHAI URBAN PLANNING MUSEUM

The Shanghai Urban Planning Museum is located in the People's Square, in the center of Shanghai. This facility is unique in having a detailed model of most of urban Shanghai. The model takes up most of one floor and can also be viewed through a large opening from the floor above (Slides 65-67) .

VILLAS (DETACHED HOUSING)

Chinese urban areas have expanses of detached housing, which are locally referred to as "villas." I had noted a number in satellite photographs, but they were all located far from the core of the city and I could not justify the time that would be necessary to reach them by taxicab. At the Shanghai Urban Planning Museum, however, I noted the detached housing located to the east of

Century Park in Pudong. This location could be easily accessed by a ride on Metro line 2 and a walk of a bit more than one mile (1.6 kilometers).

The walk was along the south side of Century Park. On the south side of the street there were a number of luxury high rise condominiums (Slides 148-156). The villa development is Regency Park. Like virtually all detached housing developments in the Orient, the houses are behind strict security, which makes taking photographs difficult. The Regency Park development is large, with a four lane street running through the center and separate security gates for the neighborhoods (Slides 157-168).

It is anticipated that the Shanghai Pujiang new town will include a large number of villas when completed (Slides 23-25). Further, a number of villa developments in the western part of the city/province were observed after takeoff from Hongqiao International Airport and along the rail line to Hangzhou (Slides 87-91).

MULTIPLE UNIT HOUSING

Most of the housing in Shanghai is multiple unit. There are a large number of high-rise condominium buildings and many smaller, older buildings. Even the most modest of these seem to have air conditioners (Slide 57), which is a necessity in this humid climate.

MAGLEV

Shanghai has the world's fastest commercial train operation. The Maglev train operates from the Longyang Metro station, well south of the Pudong business district to Pudong International Airport (Slides 194-198). The fastest operations make the 19 mile (30 kilometer) run in 7:20 and achieve a top speed of 268 miles per hour (431 kilometers per hour). The top speed is achieved for only 53 seconds. There are plans to extend the line to the Hangzhou urban area, approximately 110 miles (175 kilometers) away from the west terminal. There have been public protests and it is not clear when (or if) the line will be completed. The impetus for the line appears to have been lessened by Chinese successes in high speed rail. Currently, the Beijing to Tianjin high speed rail train (CRH) reaches nearly 220 miles per hour (350 kilometers per hour) and there are reports that lines under construction could reach 240 miles per hour (380 kilometers per hour), which is close to the top operating speed of the maglev train. High speed rail trains consume considerably less energy than maglev trains.

Ridership on the maglev train has been disappointing. One of the principal reasons is that the line's terminal is a good distance from the core of the city. Once being left at the Longyang Metro station, riders still have to complete one-quarter of the distance by cab or Metro. The missing quarter has by far the most intense traffic congestion of the trip.

We tested a trip on a Saturday from the People's Square, in the core of the city, to the airport, using the Metro to connect to the Maglev train. From the Metro station at People's Square to Pudong International Airport ticket lobby took 40 minutes. This was actually a very good time, since there were no lines at the ticket counters for either the Metro or Maglev and the Maglev train left within one minute of our arrival. If it were assumed that a rider started at the far end of People's Square, say at the Park Hotel, the walk to the Metro station would take another five minutes. It seems likely that a taxi would be faster.

Further, it appears that the stations are not built to handle large crowds. Each station has a single stairway and escalator, which were crowded even with the light loads.



SHANGHAI IN 2001

(Published September 2003)

(Slides 3-19)

One enters Shanghai through one of the most modern and attractive international airports in the world. Pudong Airport is located on the banks of the Yangtze River, across a broad, developing plain from the city of Shanghai. On the way to the city, new housing developments are passed, both single and multi-family. There is also the low-density commercial sprawl that can be found in the suburbs of Phoenix, Portland, Copenhagen or Goteborg. But the city itself is very dense.

And the language barriers are significant. While English has been required of school students for some years, the lack of practical day-to-day use makes it very difficult to use. Even at western style hotels, communication can be very difficult. This one quickly learns in attempting to rent a car. It took 36 hours to find out how and where to rent a car. Perhaps the greatest challenge was explaining to hotel personnel that I wanted a car, and not a driver. Eventually I took a taxicab ride to the city's second, and older airport, Hongqiao beyond the ring road on the west side of the city. There the rental car agency clerk and I communicated sufficiently enough for me to be issued a temporary Chinese drivers license (which regrettably had to be surrendered with the car) and for me to learn that I could drive the car anywhere in China, including to the Three Gorges Dam site, 1,000 miles away, with only a small break in the motorway in China's fourth largest urban area, Wuhan. That will be for another day, however, when I return to take advantage what is already the world's second most extensive (and highly tolled) motorway system, which will eventually cover 35,000 kilometers --- from north to south and east to west.

Within the ring road and to the west of the Huang Pu (River Pu) is very dense development. The most densely populated wards have densities of from 100,000 to 150,000 per square mile, higher than the most dense districts of Paris, though not as dense as parts of Hong Kong, Mumbai and

Cairo. There are hundreds of high-rise apartment buildings. But there is more high-density low-rise development, older buildings of two and three stories. There are some wide streets in this old core, but for the most part the streets are narrow. The entrepreneurship of local residents is evidenced by the many small businesses along these streets.

In the middle of the city is a cross of elevated motorways, meeting at the huge interchange just to the west of the main commercial core. From beneath, the interchange looks like a star and is festively lit at night. A pedestrian bridge level is below the main interchange, providing grade separated crossing of the wide streets below. Vegetation is tastefully placed in plant holders constructed as a part of the elevated roadways. The Nanpu Bridge (southern bridge), which carries the first ring road, is an intriguing entry to the city, an architectural gem, with a stacked circular off-ramp similar in concept to the Canadian Pacific spiral tunnel at Kicking Horse Pass (Alberta-British Columbia).

When I was in Shanghai (2001), there were construction cranes virtually everywhere, as the skyline of the city was changing by the month. New skyscrapers were being built not only in Pudong (“west of the river”),² across the river from old Shanghai, but also in the old core itself. Nanjing Road is the main thoroughfare, heading toward the old southern capital of the same name, 300 kilometers to the west. This central shopping street bustles with pedestrian shoppers who pass by the Park Hotel, the new civic buildings and the large screen televising the latest news or statement by government officials. Nanjing Road and the old Western commercial area on the west bank of the Pu are best seen on foot, unlike the rest of the urban area, which requires a car.

The core is full of attractions, from the Tea House in the old city to the Jade Buddhist Temple, with virtual blazes of incense --- a welcome diversion for a wannabe High Church Anglican.

The Pudong business district is all new and one of the largest in the world. It is similar to La Defense in Paris by virtue of its being adjacent to the core of the city, which will makes it possible for public transport to provide effective service. But the spatial design of Pudong is more like an American or European edge city than a central business district such as Shanghai’s commercial core. Here the streets are wide. The buildings, some of the tallest in the world, are not terribly close to one-another. Close by are low-rise apartment buildings that house much of inner Pudong’s residents. Just beyond the Pudong center, to the east, one encounters much lower densities and plentiful enough petrol stations.

Shanghai is busy expanding its transportation system The Metro is being expanded to 180 kilometers, and an outer ring road is under construction. Soon to open also is the new Mag Lev line to the airport for those who need to reach airplane speeds, however so briefly, over taxicab distances to reach a Metro station where a transfer can be made to complete a trip to the core.

Incomes are low by Western standards, but it is not obvious to nearly the same extent of other middle-income urban areas, such as Rio de Janeiro, Mexico City, Buenos Aires or Sao Paulo. This also an urban area (and a country) that is making rapid economic strides. Like elsewhere, the rail based transport systems will not be up to the decentralizing travel demand. More and more “Shanghai Buicks” are seen on the road and it is likely that the motorcar will be much of the transport future here. Part of that is due to the superior mobility it provides, even in intense traffic congestion, and part is due to over-investment (and consequent under-investment in a

² Pudong is a large ward of Shanghai, stretching from the Huang Pu to the Yangtze River, where the international airport is located.

more balanced system) in public transport lines that serve the historic core will never be the draw it once was. It may be the ultimate irony that overinvestment public transport corridors themselves is a principal contributor to motorization.

Virtually all of the population growth is outside the inner ring road, and much of that is beyond the new outer ring road. A drive into the suburbs finds far lower residential densities and commercial developments such as a Carrefour hypermarket.

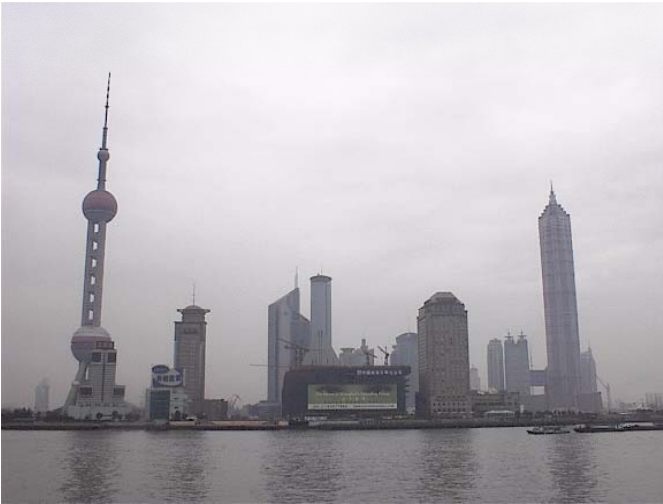
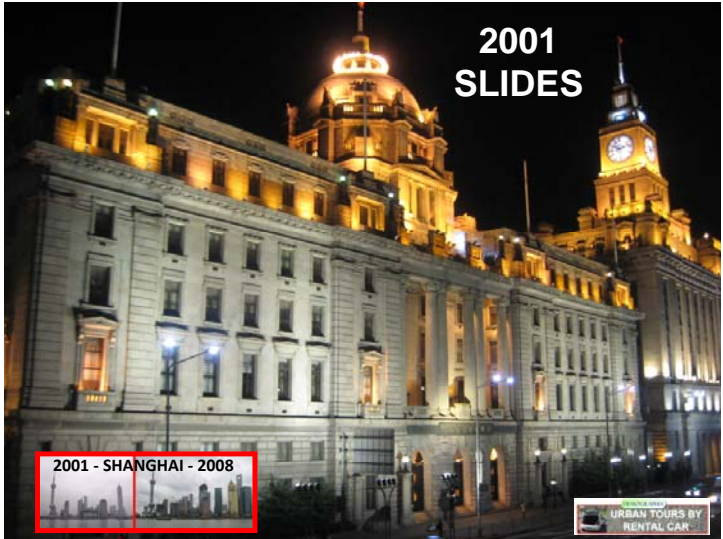
Shanghai, like Beijing, Tianjin and Chongqing, challenges urban definitions. Here, the city is larger than the urbanized area, some 2,400 square miles. The city contains large tracts of rural land. Toward the Yangtze are broad riverine plains yet to be transformed into more comfortable suburbs. There is much room to grow, and much growth yet to come. Approximately 70 percent of China's population is in rural areas that are largely much poorer than the urban areas on the east coast. No different than Americans or Brazilians, it can be expected that more and more Chinese will flock to the comparatively affluent East Coast cities. Indeed, in the distant future, it may be Shanghai or Beijing, or even the emerging Pearl River metropolis (Hong Kong-Shenzhen-Guangzhou) that displaces Tokyo-Yokohama as the world's largest.

SHANGHAI: THE ADMINISTRATIVE UNIT

(Added 2008)

Shanghai is one of four provincial level cities in China, the others being Beijing, Tianjin and Chongqing. Each of these jurisdictions includes substantial amounts of rural territory, and the largest, Chongqing, covers an area the size of Austria. Thus, use of the term "city" to describe these administrative jurisdictions is inconsistent with usual usage in most of the rest of the world. The same is true of the prefectural level cities, into which most provinces are divided.

The city (or province) of Shanghai was carved out of Jiangsu province and includes islands in the Yangtze River, including the large island of Chongming.



Pudong Business District from West Bank of Huang Pu: 2001 3



Central Motorway Interchange 4



Central Motorway Interchange: Night 5

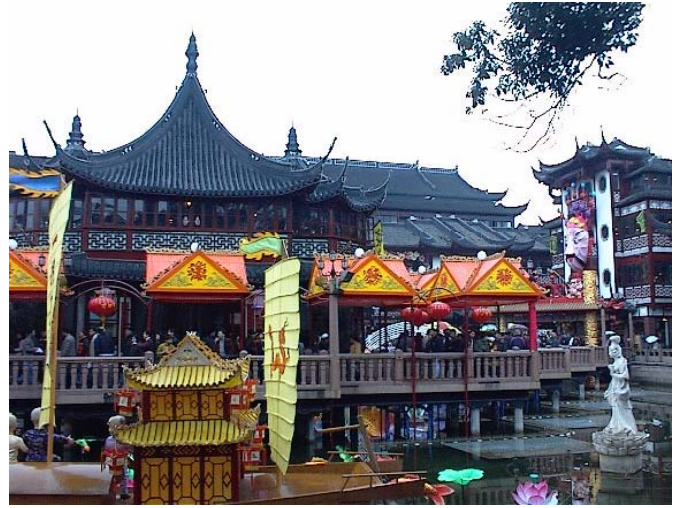


Low Density Residential Area in Central Business District 6



Old City

7



Old City

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Old City Residential District

9



Pudong: Jin Mao Building in Center

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The Bund: Former Hong Kong-Shanghai Bank Headquarters

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Screen on Nanjing Road

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Nanjing Road

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Nanjing Road: Park Hotel in Center

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Pudong: Residential District south of Business Center

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Residential District: North of the Inner Ring Road

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Carrefour Hypermarket: North of Inner Ring Road

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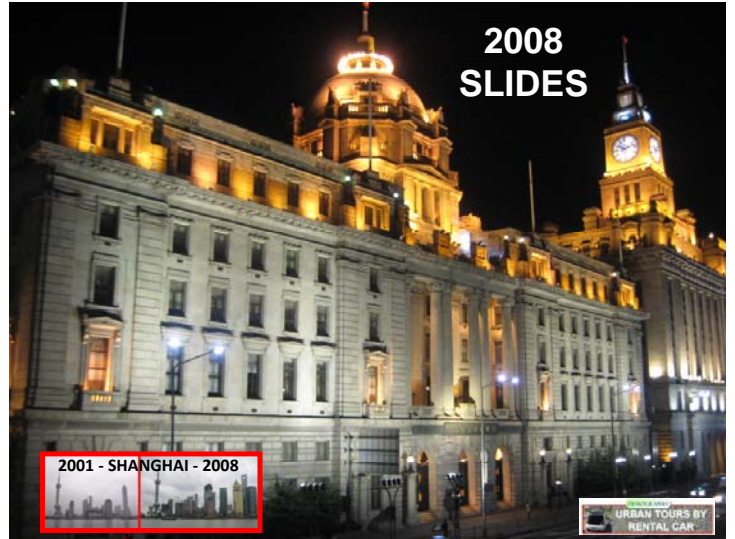
Residential District Inside Ring Road (North)

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Jade Buddhist Temple

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Pudong Business District from West Bank of Huang Pu: 2008

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Construction at 2010 Expo Site

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Shanghai Pujiang New Town

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Shanghai Pujiang New Town

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Shanghai Pujiang New Town

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South of the Huang Pu

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Lianggang New Town

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Lianggang New Town

28



Lianggang New Town

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Lianggang New Town

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Donghai Bridge to the New Port

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New Port

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Interactive Traffic Indicator

33



Nanjing Road & Peace Hotel

34



Nanjing Road

35



Nanjing Road

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Pudong from Mag Lev

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Pudong from Mag Lev

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Huang Pu

39



Puxi from Pudong

40



Goodyear Blimp

41



Huang Pu

42



Puxi

43



Huang Pu

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Huang Pu

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Huang Pu

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Puxi

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Huang Pu

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Puxi

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Puxi

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Moore Memorial Church (Near Nanjing Road)

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Northern Residential (Inside Inner Ring Road)

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Northern Residential (Inside Inner Ring Road)

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Northern Residential (Inside Inner Ring Road)

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Northern Residential (Inside Inner Ring Road)

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Northern Residential (Inside Inner Ring Road)

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Northern Residential (Inside Inner Ring Road)

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Northern Residential (Inside Inner Ring Road)

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Northern Residential (Inside Inner Ring Road)

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Northern Residential (Inside Inner Ring Road)

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Northern Residential (Inside Inner Ring Road)

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Core

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Core

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Core

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Shanghai Urban Planning Museum

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Shanghai Urban Planning Museum: Shanghai Model

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Shanghai Urban Planning Museum: Expo 2010 Mascot

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Park Hotel and Pacific Hotel

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Park Hotel

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Core

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Pacific Hotel

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Core

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Core

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Core

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Nanjing Road

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Nanjing Road

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Nanjing Road

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Nanjing Road

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Nanjing Road

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Inner Ring Road & Metro Station

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Inner Ring Road

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Inner Ring Road

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Development Outside Inner Ring Road (West)

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Canal from Hangzhou Train

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Freeway from Hangzhou Train

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Exurban Housing from Hangzhou Train

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Detached Housing from Hangzhou Train

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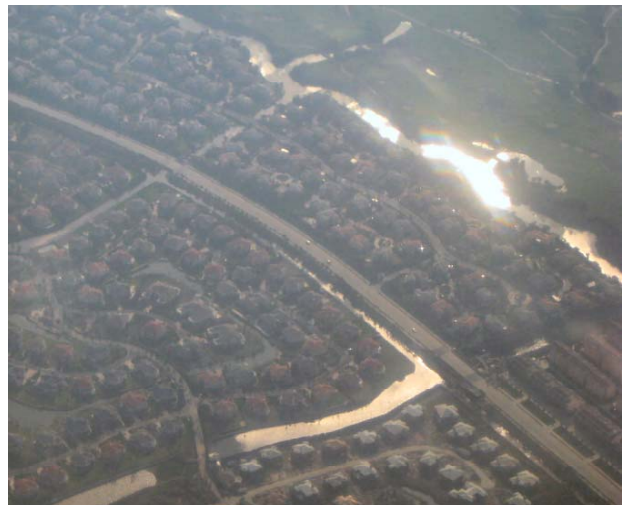
Detached Housing from Hangzhou Train

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Taking Off from Hongqiao International Airport

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Detached Housing from Air

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Detached Housing from Air

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PUDONG
2008

2001 - SHANGHAI - 2008

URBAN TOURS BY
RENTAL CAR



Pudong at Night: 2008

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Pearl of the Orient

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Shanghai World Financial Center & Jin Mao Tower

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Pudong Business District

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Pudong Business District

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Pudong Business District: Shopping Center

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Pudong Business District

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Pudong Business District: Pearl of the Orient

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Pudong Business District: Residential

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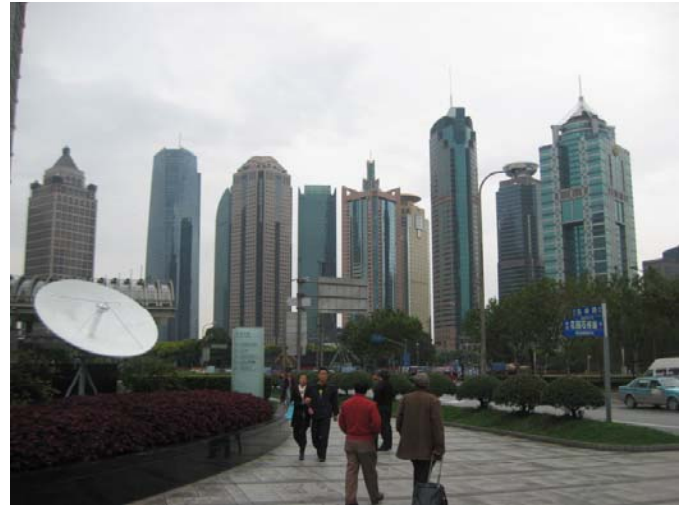
Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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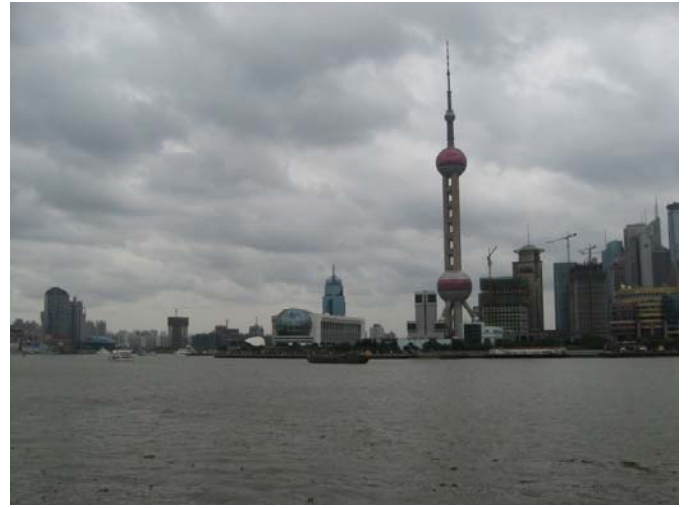
Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District & Huang Pu

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District

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Pudong Business District: Residential

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Pudong Business District

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Pudong Business District

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Shanghai World Financial Center

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Shanghai World Financial Center

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Shanghai World Financial Center: Observation Deck

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Shanghai World Financial Center: Observation Deck

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View from Shanghai World Financial Center: Century Ave. 133



View from Shanghai World Financial Center: Huang Pu South 134



View from Shanghai World Financial Center: Huang Pu North 135



View from Shanghai World Financial Center: Jin Mao Tower 136



View from Shanghai World Financial Center: Pearl of Orient 137



View from Shanghai World Financial Center: The Bund 138



View from Shanghai World Financial Center

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View from Shanghai World Financial Center: Puxi

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View from Shanghai World Financial Center: North

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View from Shanghai World Financial Center: The Bund

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View from Shanghai World Financial Center

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View from Shanghai World Financial Center: Puxi

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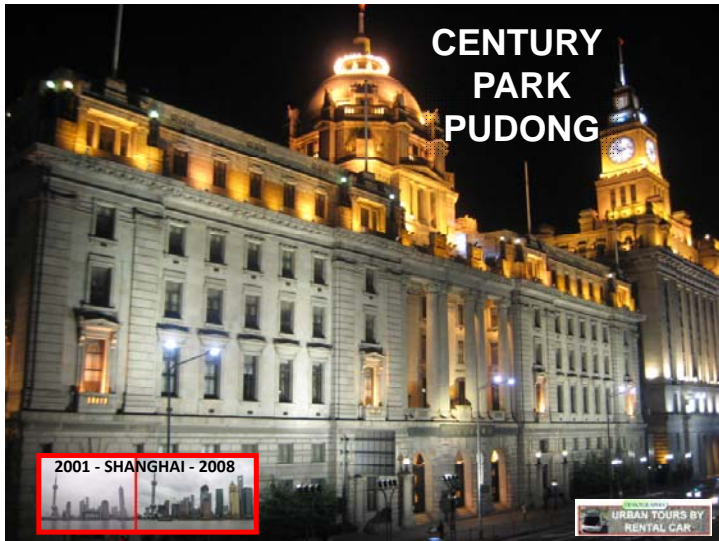
View from Shanghai World Financial Center

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Jin Mao Tower. Pearl of the Orient, Puxi & Suzhou Creek

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Century Park Area: Pudong

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Century Park Area: Pudong

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Century Park Area: Pudong

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Century Park Area: Pudong

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Century Park Area: Pudong

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Century Park Area: Pudong

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Century Park Area: Pudong

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Century Park Area: Pudong

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Century Park Area: Pudong

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Regency Park: Detached Housing

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Regency Park: Detached Housing

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Regency Park: Detached Housing

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Regency Park: Detached Housing

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Regency Park: Detached Housing

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Regency Park: Detached Housing

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Regency Park: Detached Housing

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Regency Park

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Regency Park: Detached Housing

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Regency Park: Detached Housing

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Regency Park: Detached Housing

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Regency Park: Detached Housing

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The Bund

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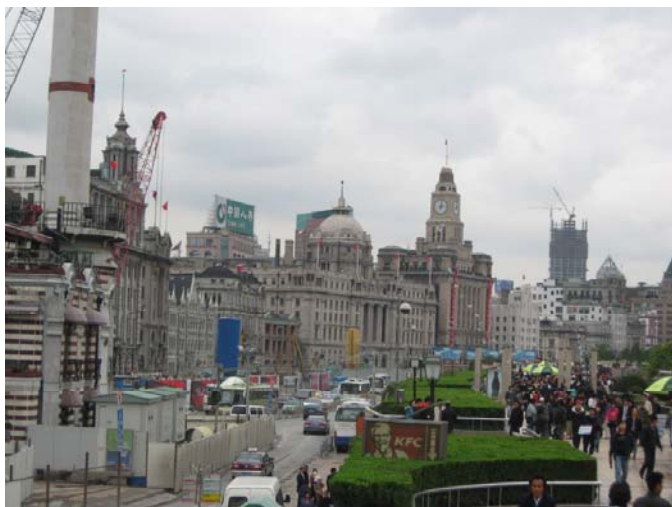
The Bund

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The Bund: Peace Hotel & Bank of China

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The Bund

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The Bund

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The Bund

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The Bund

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The Bund

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The Bund

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The Bund

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Former Hong Kong & Shanghai Bank Headquarters

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The Bund

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The Bund

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The Bund

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The Bund

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The Bund

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The Bund

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The Bund: Peace Hotel & Bank of China

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The Bund

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The Bund

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The Bund: Peace Hotel

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The Bund

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The Bund

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Mag Lev Station (at Longyang Metro Station, Pudong)

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Train

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Interior

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Speed Display at Maximum

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Pudong International Airport

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