June 2021

CHINA REPORT

CONSTRUCTION PROCUREMENT AND COST INTELLIGENCE

RLB 利比 Rider Levett Bucknall

OFFICES AROUND THE WORLD

AFRICA

Angola
Luanda

Botswana
Gaborone

Kenya
Nairobi

Maldives
Hulhumale

Mauritius
Quatre Bornes

Mozambique
Maputo

Namibia
Windhoek

Nigeria
Lagos

Seychelles
Victoria

South Africa
Cape Town
Durban
Pretoria
Stellenbosch

MIDDLE EAST

Qatar
Doha

Saudi Arabia
Riyadh

United Arab Emirates
Abu Dhabi
Dubai

ASIA

North Asia
Beijing
Chengdu
Chongqing
Guangzhou
Guiyang
Haikou
Hangzhou
Hong Kong
Macau
Nanjing
Nanning
Seoul
Shanghai
Shenyang
Shenzhen
Tianjin
Wuhan
Wuxi
Xian
Zhuhai

South Asia
Bacolod
Bohol
Cagayan de Oro
Cebu
Clark
Davao
Ho Chi Minh City
Iloilo
Jakarta
Kuala Lumpur
Laguna
Metro Manila
Phnom Penh
Singapore
Subic
Yangon

India Alliance
Bangalore

EUROPE

United Kingdom
Belfast
Birmingham
Bristol
Cardiff
Cumbria
Leeds
Liverpool
London
Manchester
Sheffield
Thames Valley
Warrington

RLB | Euro Alliance
Austria
Belgium
Bulgaria
Croatia
Czech Republic
Denmark
France
Germany
Greece
Hungary
Ireland
Italy
Luxembourg
Montenegro
Netherlands
Norway
Poland
Portugal
Romania
Russia
Serbia
Spain
Sweden
Turkey

OCEANIA

Australia
Adelaide
Brisbane
Cairns
Canberra
Coffs Harbour
Darwin
Gold Coast
Melbourne
Newcastle
Perth
Sunshine Coast
Sydney
Townsville

New Zealand
Auckland
Christchurch
Hamilton
Palmerston North
Queenstown
Tauranga
Wellington

AMERICAS

Caribbean
St. Lucia

North America
Boston
Calgary
Chicago
Denver
Hilo
Honolulu
Kansas City
Las Vegas
Los Angeles
Maui
Mexico City
New York
Phoenix
Portland
San Francisco
San Jose
Seattle
Toronto
Tucson
Waikoloa
Washington DC

2020 REVIEW AND 2021 OUTLOOK OF REAL ESTATE DEVELOPMENT IN CHINA

	Beijing		Chengdu		Shanghai		Shenzhen	
	2020	Year-on-year growth (%)	2020	Year-on-year growth (%)	2020	Year-on-year growth (%)	2020	Year-on-year growth (%)
Investment in Real Estate Development (Unit: RMB 100 million)	3,938.20	2.6%	2,846.67	9.2%	4,696.83	11.0%	3,562.58	16.4%
# Residential Buildings	2,317.35	13.6%	1,868.76	18.8%	2,417.81	4.3%	1,932.83	27.3%
Office Buildings	313.24	-17.5%	225.88	-1.2%	832.75	20.8%	697.92	16.2%
Commercial Premises	841.72	-8.4%	322.27	-22.6%	559.65	22.4%	412.79	11.4%
Housing Construction and Sales Area (Unit: 10,000 m^2)								
Floor Space under Construction	13,918.60	11.2%	19,098.70	-7.3%	15,740.34	6.3%	9,661.44	21.3%
# Residential Buildings	6,715.30	19.1%	10,582.10	-8.6%	7,712.25	3.6%	4,793.00	21.0%
Newly-commenced Area	3,006.60	45.0%	3,844.20	-16.4%	3,440.62	12.3%	1,882.36	29.3%
# Residential Buildings	1,716.40	71.0%	2,261.40	-5.6%	1,756.37	11.7%	983.10	27.2%
Floor Space Completed	1,545.70	15.1%	1,419.50	-22.1%	2,877.78	7.8%	640.88	12.0%
# Residential Buildings	728.50	24.9%	845.00	-15.8%	1,627.61	12.0%	341.00	12.3%
Sales Area	970.90	3.4%	3,680.30	4.2%	1,789.16	5.5%	929.16	12.4%
# Residential Buildings	733.60	-7.0%	2,826.70	10.6%	1,434.07	5.9%	772.53	17.3%

Note: 1. The above data is extracted from the 2020 statistical bulletins issued by Municipal Bureaus of Statistics and other related data.
2. The "year-on-year growth (%)" is the comparison of the growth rate for the whole year of 2020 against the same period in 2019.

At the beginning of 2020, the sudden outbreak of COVID-19 pandemic reduced the productivity and economic activities not only in China but also in the entire world, and its impact persists. Although China has quickly contained the virus, all industries inevitably suffered and there was no exception for the real estate industry. Looking back to 2020, some key indicators of the first quarter such as the investment amount, the construction area and the saleable area, reached the historical low compared to the same period last year. In the second quarter, the real estate industry rapidly recovered as the mitigation measures worked — the investment amount and the saleable area quickly rebounded. In the second half of the year, continuous efforts led the real estate market in stepping out of the pandemic haze.

The above table only compares the real estate performance in Beijing, Chengdu, Shanghai and Shenzhen. The total real estate investment in these four cities significantly increased in 2020 compared to the previous year, indicating the demand for properties remained robust. Among them, the residential sector performed the best: Shenzhen was up by 27.3%, Chengdu by 18.8%, Beijing by 13.6% and Shanghai by 4.3%. In view of the newly-commenced residential buildings: Beijing grew by 71%, Shenzhen by 27.2%, Shanghai by 11.7% but Chengdu declined by 5.6%. Considering the floor space of residential buildings completed: Beijing rose by 24.9%, Shanghai and Shenzhen rose by nearly 12% and 12.3% respectively, but Chengdu declined by 15.8%. With regard to the saleable area of residential buildings: Shenzhen grew by 17.3%, Chengdu by 10.6%, Shanghai by 5.9% but Beijing dropped by 7%.

As the pandemic has been gradually brought under control, it is expected that the investment amount and the construction and saleable floor area of newly-commenced residential buildings will continue to grow throughout 2021. Therefore, the real estate industry will remain to play a key role in driving the GDP growth.

With the growth of real estate investment and the implementation of the government's reform plan on project cost, we are optimistic about the growth of the cost consulting business in 2021.

URBAN RENEWAL — CONSERVATION OF HISTORIC BUILDINGS

In recent years, an increasing number of cities in China have been undergoing urban development. Many of them have initiated many "reconstruction of the old town" and "urban renewal" projects which involved conservation of some significant historic buildings. When conserving historic buildings, it is vital to preserve their historic features and cultural characters of them so as to respect their local traditions and beliefs with regard to the selection of building materials and craftsmanship. In addition, the contractors shall be competent and qualified to carry out historic buildings preservation. (All these requirements pose challenges to the cost consultants during project execution.)

Rider Levett Bucknall (RLB) Limited is honoured to have the opportunity to provide full quantity surveying services to the CR Land's Dachong Village renovation project (hereinafter referred to as "Dachong Project") in Nanshan District, Shenzhen. Covering an area of 684,000 square metres with total floor area of about 3 million square metres, the Dachong Project is set as one of the five iconic urban renewal projects of Shenzhen under the "12th Five-Year Plan". The Dachong Village is an ancient village featuring a number of historical relics such as the Ancestral Hall of Family Zheng, an ancient temple and two decades-old banyan trees. The inner culture of indigenous villagers can be sustained through preservation. RLB has also accumulated valuable experience from this project.

This article shows the characteristics of preserving historic buildings by taking the repair works of the Ancestral Hall of Family Zheng in Dachong Village as an example. The repair work is similar to that of the King Ancient Temple.

Picture of the Ancestral Hall of Family Zheng before Conservation

The Dachong Village (formerly known as Dayong Village) was formed in late Song Dynasty and early Yuan Dynasty more than 700 years ago in Nanshan District of Shenzhen.

The Ancestral Hall of Family Zheng was constructed in the Ming Dynasty and underwent two major repairs in the Qing Dynasty and the Republic of China. As a result, the main structure of the ancestral hall also reflected the architectural style of the Qing Dynasty.

The Ancestral Hall of Family Zheng was constructed with masonry, showing prominent characteristics of architecture in the Pearl River delta and western Guangdong Province. With a width of 13 metres and a depth of 28.7 metres, the Ancestral Hall comprised an entrance hall, front and rear courtyards, a memorial archway and a back hall. Besides, there were side rooms encircling the courtyards.

URBAN RENEWAL — CONSERVATION OF HISTORIC BUILDINGS

Cost Management — Main Architectural Characteristics of the Ancestral Hall of Family Zheng and the Corresponding Challenges:

Formulation of the List of Decorative Components

Article 21 of the Law of the People's Republic of China on the Protection of Cultural Relics stipulates: “The repairs, maintenance, and removal of immovable cultural relics shall abide by the principle of "not changing the original state of the cultural relics". During repairing, the concept of “restoring the old elements” shall be upheld by adopting the original materials, craftsmanship, and technologies to the greatest extent, so that the historical information of cultural relics can be properly preserved and continued.”

As stated in the tender documents in 2015, the developer should provide the demolished decorative components to the contractor for reinstallation. The contractor was responsible for the protection, necessary repairs as well as other logistics issues of the components such as packaging and transportation to the construction site. If some decorative components were no longer usable after examination, the contractor should obtain the approval of the developer before purchasing new ones, which should be the same as or similar to the original.

To prepare an accurate list of repair works, especially for reinstallation of decorative components after protective demolition, RLB has assigned a team of quantity surveyors to check the inventory of decorative components with CR Land’s project team. Many photos were taken for record . A list of decorative components was compiled, sorting by their section, location and nature. Remarks were made to each item indicating the reinstallation drawing number to facilitate the bidding process afterwards.

Decorative Component for the Eave

Decorative Component for the Ridge

URBAN RENEWAL — CONSERVATION OF HISTORIC BUILDINGS

Traditional Mortise-tenon Joint

The Ancestral Hall of Family Zheng was completely broken up into components, repair and re-assembled as it was. During the process, the adoption of mortise-tenon joint was compulsory for connection of components. This requirement was stipulated in the technical documents.

The mortise-tenon joint was ingeniously applied to break up the traditional masonry-timber structure into parts which allowed flexibility to deform. In this respect, the structure can bear heavier loading and have better seismic resistance.

Making a mortise and tenon joint requires high standards of craftsmanship. The contractor has not only to obtain a qualification for ancient architectural projects, but also has extensive experience in construction of ancient architecture. They should emphasize the use of traditional craftsmanship while meeting safety and waterproof requirements of the ancient architecture.

Beam-roofed Structure with a Courtyard, West Corridor, and Rooms in Two Rows

The tensile Structure in the Ancestral Hall of Family Zheng

Tensile Structure

When repairing the rear courtyard of the Ancestral Hall of Family Zheng, a tensile structure (including the steel structure) had to be built. Inadequate design details and its small-scale hindered the tendering process. RLB used its best endeavours to look for qualified suppliers to participle to tender.

Different suppliers provided quotations with different brands of the imported membrane materials, with the same guarantee period of 15 years. The prices offered for standard supported connectors such as the PE coated steel wire ropes and anchor heads were quite close, but the prices for the steel structure varied a lot.

After the investigation, we found that it was due to the ambitions drawings prepared by the suppliers. Thus, RLB coordinated with the design team of CR Land to obtain more drawing details. After several rounds of discussion, we finally assisted the client in determining the price by entrusting the general contractor to execute in the form of a change order.

URBAN RENEWAL — CONSERVATION OF HISTORIC BUILDINGS

The Reinforcement Scheme

During reconstruction, native soil of Dachong Village was used for backfilling to preserve local traditions. However, different settlement of the raft foundation appeared unexpectedly afterwards. CR Land and their designer team immediately stabilized the existing structures (including the grouting processing) while RLB provided a timely cost estimate of the reinforcement to ensure the smooth progress of the project.

Picture of the Ancestral Hall of Family Zheng after Repair Works

The Entrance of the Reconstructed Ancestral Hall of Family Zheng

The Screen Door of the Reconstructed Ancestral Hall of Family Zheng

The project was completed in 2016 after a year construction. The revitalized Ancestral Hall of Family Zheng is adjacent to the Dachong New City Garden which is embedded in the cluster of super high-rise office buildings and residential buildings. It is also opposite to the King Ancient Temple and two old banyan trees. The mix of classical buildings and modern high-rise buildings offers a unique sense of beauty.

COSTS FOR REAL ESTATE DEVELOPMENT IN CHINA

The major costs and fees are as follows:

1. Land cost

2. Advance works

2.1 Design fees

Design fees cover hydrogeological survey, topographic survey and map, planning and design services for foundation and lateral support system, architectural, structural, building services and fitting-out works, civil air defense (self-built civil air defense), landscape, traffic, etc;

2.2 Consultancy fees

The consultancy fees exclude design services mentioned in section 2.1 above, project management, and consultancy services for various work sections including electrical and mechanical installations, curtain wall , fit-out, lighting , acoustic, logo and signage , traffic, hotel management, business, kitchen equipment, laundry equipment, green building/LEED, quantity surveying, legal, etc;

2.3 Costs of temporary facilities

Costs of temporary facilities cover temporary provisions for water and electrical supply, access roads, hoarding and fencing, drainage and sewage, site levelling, etc. If also covers relocation of gas pipes and fire hydrants, and trees.

2.4 Professional advisory fees

Professional advisory fees covers feasibility study, facade assessment and expert report, energy saving calculation, environmental impact assessment, construction surveying and mapping, pile testing, geotechnical monitoring, environmental and ultility monitoring, sunshine assessment, aseismic assessment, lightning protection test, ultity survey, waterproofing consultancy and assessment, flood risk assessment, traffic assessment, environmental impact assessment of power substation, assessment of construction drawing review, deep foundation pit assessment, boiler room safety assessment, third-party fire safety assessment, indoor environmental assessment, audit of final account, etc.

2.5 Tendering fees

Tendering fees cover tendering services for surveys, design, construction and project management.

2.6 Quality assurance and inspection fees

It includes fees for quality assurance and various inspection such as environmental monitoring, site surveying and mapping, special funds for bulk cement, termite prevention, safety inspection for special equipment and special funds for new partition materials.

2.7 Planning permit application fee
2.8 Project monitoring fee
2.9 Insurance premiums
2.10 Document preparation fee
2.11 Royalties and Patents
2.12 Compensation fee for civil defense construction outside project site

3. Construction Costs

Construction Costs cover various work sections including piling, works, lateral support works, earth and stone works, structural and architectural works electrical works, HVAC works, plumbing and drainage works, ELV works, fire protection works, gas system engineering, lift engineering, facade engineering, interior fit-out works, flood lighting engineering, external works and landscaping works.

4. Infrastructure costs

Infrastructure costs include utility connections, in-coming power supply, communications system, television facilities, environmental sanitation facilities, etc.

5. Public facilities fees

The public facilities fees cover expense arising from private investment in public facilities in newly developed area.

6. Contingencies

Contingencies cover expense arising from unforeseen events and price fluctuation.

7. Taxes

It includes all taxes， levied by the relevant departments and local governments, in related to the project development.

8. Indirect expense

Indirect expense include property management fee, maintenance cost, property transaction fees, ownership certificate, marketing and finance charges.

The above costs are not exhaustive. Investors shall seek professional advice before investment as regulations and charges vary between regions.

COSTS FOR REAL ESTATE DEVELOPMENT IN CHINA

Cost Analysis

This case study exemplifies the costs associated with a commercial development in Guangzhou, which comprises a 3-storey basement for carpark, office towers of 10-storey and 37-storey.
The height of office tower is 207 meters.
Site area is about 11,600m². Total construction floor area is 134,000m².
(Price as at first quarter of 2021)

Item	Total Cost	Cost/m²	Percentage
	RMB (Million)	RMB/m²	%
1. Land cost	1,925.00	14,366	57%
2. Advance works	244.74	1,826	7%
2.1 Design fees	45.70	341	1%
2.2 Consultancy fees	-	-	0%
2.3 Temporary works	97.20	725	3%
2.4 Professional consultation fees	14.60	109	0%
2.5 Tender management fees	-	-	0%
2.6 Quality assurance and inspection fee	7.78	58	0%
2.7 Planning permit application fee	71.61	534	2%
2.8 Project supervision fee	7.34	55	0%
2.9 Insurance premium	0.26	2	0%
2.10 Project design archive fee	0.26	2	0%
2.11 Royalties and Patents	-	-	-
2.12 Compensation fee for civil defense construction outside project site	-	-	-
3. Project construction costs	1,150.10	8,583	34%
4. Infrastructure costs	-	-	-
5. Public facilities fees	-	-	-
6. Risk and uncertainty costs	37.49	280	1%
7. Taxes during development period	-	-	-
8. Indirect costs	26.62	199	1%
Total Costs for Real Estate Investment (1-8)	**3,383.96**	**25,253**	**100%**

YONG'EN CHRISTIAN CHURCH IN SHANGHAI NEW BUND INTERNATIONAL BUSINESS DISTRICT

Designed with a unique and novel appearance, Yong'en Church is an architecture blending Christian culture with international and contemporary design. It is a public Christian church in Shanghai New Bund International Business District. The chief architects, Iñaki Ábalos and his wife, are the architecture experts and professors of the Department of Architecture at Harvard University.

With its unique location at the intersection of West Gaoqing Road and Pingjiaqiao Road in Qiantan, Pudong New Area, Shanghai, Yong'en Church offers a natural passage of the international business and residential areas of the New Bund. It is also part of the urban linear park planned along the Huangpu River.

Yong'en Church is an architecture comprising two buildings in the north and south. The southern building is a four-storey office building while the northern building is a two-storey church, featuring a main church with a capacity of 600 people, a chapel holding up to 100 people and some related facilities.

Covering an area of 2,027 square metres, Yong'en Church has a total construction area of 2,837 square metres. The project was commenced in January 2017 and passed the completion acceptance at the end of December 2018. Rider Levett Bucknall was honored to provide full quantity surveying services to this project.

Some key architectural features are highlighted as follows:

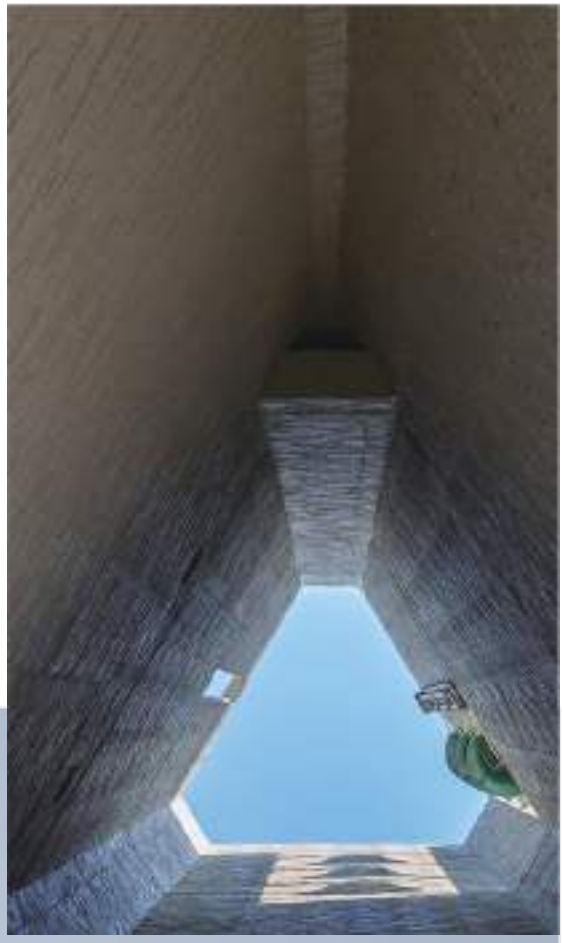
There is a covered corridor separating the religious and secular functions. It accentuates the church entrance and also provides adequate ventilation in the indoor environment.

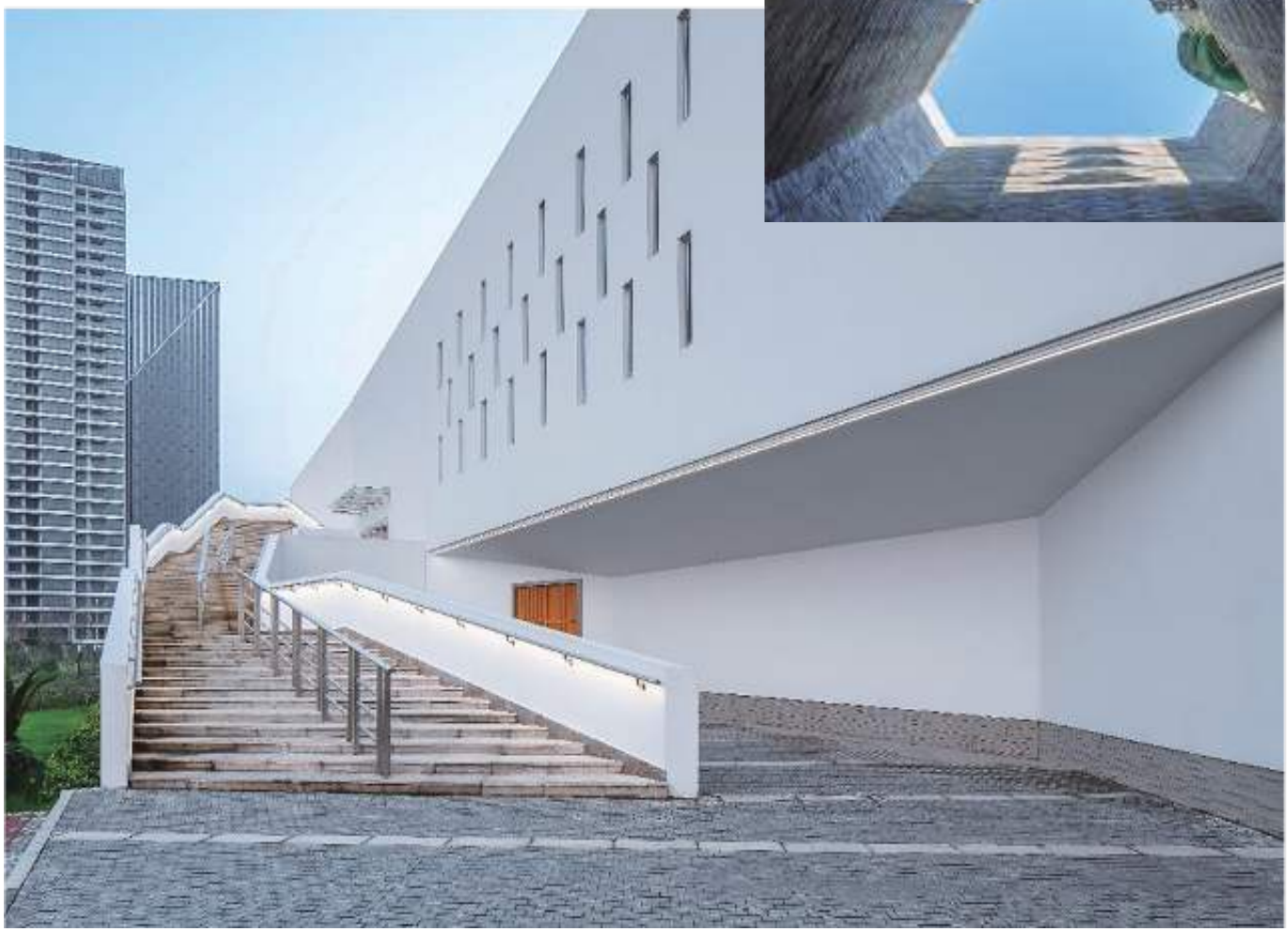
The chapel, located at the centre, is the main body of the church. It integrates the best acoustic and visual features in an auditorium with transparent surroundings. Serving as a symbolic community space, its design balances the dimension and appearance of the whole. Following the traditional church buildings, this church adopts a design with simple finishing materials. For example, the dark gray fair-faced concrete is used for the surface layer of ground while white mortar is used for wall finishes. Besides, the ceiling adopts modern fluorocarbon-sprayed cement pressure plates.

YONG'EN CHRISTIAN CHURCH IN SHANGHAI NEW BUND INTERNATIONAL BUSINESS DISTRICT

There is a huge staircase connecting the church and the surrounding park. Climbing up the steps, visitors can enter an area for church services and a rooftop garden. The rooftop garden is a natural observation deck providing a panorama view of the Huangpu River and surroundings, resembling the architectural style of the European cathedrals in Milan, Barcelona and Paris.

The fair-faced concrete is applied on both inner and outer surfaces of the triangular bell tower.





AVERAGE WHOLESALE PRICES OF SELECTED BUILDING MATERIALS IN SELECTED CITIES OF CHINA (RMB)

(All rates described are at 1st Quarter 2021 Prices)

	Building materials		Beijing	Chengdu	Chongqing	Guangzhou	Hangzhou	Nanjing	Shanghai	Shenyang	Shenzhen	Tianjin	Wuhan	Xian
1	Reinforcement bar HPB235 (1st-class) 10mm	¥/t	4,552	4,079 HPB300 8-10mm	4,750 HPB300 8mm	4,499 HPB300	4,940 HPB300	5,228 HPB300	4,957 HPB300	4,110 HPB300	5,086 HPB300 (1st class) 6.5-10mm	4,766 HPB300	4,811 HPB300	4,687 HPB300
2	Reinforcement bar HRB400 (3rd class) 10mm	¥/t	4,439	4,096 HRB400 8-10mm	4,750 HRB400E	4,557	4,967	5,109	4,863	4,163	5,259	4,533	4,913	4,623
3	Reinforcement bar HRB400 (3rd class) 25mm	¥/t	4,177	4,130 HRB400E	4,737 HRB400E	4,577	4,845	5,027	4,713	4,150	5,029	4,493	4,828	4,623
4	Reinforced concrete Grade C30 5-25mm aggregates P8 waterproofing (without pumping fee)	¥/m^3	505	491 5-31.5	430 Average of main areas of the city, electric pump	657	636	538	708	326	700	531	496	520
5	Timber Formwork local commonly used materials	¥/m^3	2,000	2,922 1830×915×15	1,903 Average of main areas of the city, sawn timber	1,348 pine broad	1,780 pine logs Φ14-16 x 600cm	1,777	1,851	1,930	2,455 1830x915x18 3rd Class blackboard	2,037 logs	2,178	2,070 pine logs
6	Portland cement Grade 42.5(bulk)	¥/t	443	398	505 Average of main areas of the city, bagged	510	588	511	585	351	564	451	463	527
7	Sand Rough/mixed	¥/t	102	137	240 Average of main areas of the city, extra fine sand	198	140 Gross sand	200 Coarse sand	213	56	149	91	234	243
8	Hot rolled steel angles 45-50×3-6mm	¥/t	4,401	4,292 Q235 L50×50×5	4,913 Q235 4-8mm	4,477	4,926 Q235B	4,998 Equal-leg angle steel	4,740 Equal-leg angle steel 45-50 × 3-5mm	4,143	5,197 Angle steel	4,569	4,857 Equal-leg angle steel 45-50 × 3-5mm	4,937
9	Galvanized steel sheet 1.0mm	¥/t	5,752	6,367 0.5-1.2mm	6,023	5,315	6,303	6,001 Hot galvanized steel sheet Q235B	5,113 Hot rolled steel sheet Q235 δ≥1.0	5,373 Continuously hot-dip zinc-coated steel sheet 1.00~2.5 Z275(two-sided)	6,567	5,738	5,727 Hot rolled steel sheet Q235 δ≥1.0	6,307
10	Seamless steel pipe 108×3.5-4mm	¥/t	5,260	5,867	5,743 108 x 4.5mm	5,372	5,760 108x4mm	5,489	6,314 108×3-4.5mm #20	4,837 68~159	6,047 Seamless steel pipe	5,151	5,270 108 × 4.5-5mm	5,527
11	Galvanized welded steel pipe 20mm 26.75x2.75mm	¥/t	5,584	5,650	6,240 Hot dip galvanized steel pipe Q235 / Q195 DN15-20	6,179 Galvanized water, gas transportation pipe	6,271 20*2.8mm	6,273 Hot dip galvanized steel pipe DN15~DN32	5,816 Φ20 mm	4,340 DN25~DN32	6,499 Hot-galvanized steel pipe	6,033	6,161 20×2.75mm	5,920
12	Hot-rolled steel channel Grade a steel #16-18mm	¥/t	4,432	4,422 Q235 #18mm	4,953 Q235 16-22#	4,505	4,896 Q235B	5,119 Steel channel	4,683 Q235 16#	4,220 5~30#	5,092 Steel channel	4,488	4,942	4,927
13	Float glass 5mm	¥/m^2	23	27 White float glass	27 White float glass	37	37	49	37	30	36	31	37	43
14	Aluminium A00 aluminum ingot	¥/t	16,000											
15	Copper 1# electrolytic copper	¥/t	61,520											
16	Steel fire-rated door (Grade II)	¥/m^2	350(#)	572(#)	520	404 Single-leaf	520	657 Single-leaf	810	633	600(#)	590(#)	595(#)	630
17	Timber fire-rated door (Grade II)	¥/m^2	413(#)	391(#)	320	455 Single-leaf	440	-	510	482(#)	600(#)	470(#)	504(#)	450
18	PHC piles Φ 400A	¥/m	-	180(#)	-	160 Thickness 95mm	153 Thickness 95mm	214	176 Φ400AB Thickness 95mm	100(#)	155 Thickness 95mm	128 Φ400AB Thickness 95mm	203 Φ400AB Thickness 95mm	252
19	APP Modified Bitumen Water - proofing membrane 3 mm PY	¥/m^2	32	35(#)	24 APP-Ⅰ-PY-PE-3mm	28	36 4mm	34	27 APP-I-PY-PE	25(#)	34(#) SBS 3mm	34(#)	27(#)	31
20	JS Cementitious Waterproofing Coatings Type I two-component	¥/kg	10	18(#)	15 JS-I latex	12	8	8	11 JS-I	11(#)	12	13	20	19
21	Interior wall Latex paint Type II	¥/kg	17	17(#)	9 paint	11	17 latex paint	12	16(#)	11	11(#)	12	10	17(#)
22	Advanced Acrylic Exterior Wall Latex paint Type II	¥/kg	25	31(#)	28 import emulsion paint (luminant)	27	21 elastic emulsion paint	17	24(#)	12	25(#)	25	16(#)	24(#)

Notes:

1. The above prices (except items 14, 15 and those marked with "#") are based on guiding price from websites; periodicals published by local construction cost management office; or market prices published by "China construction material online" ;
2. Items 14 & 15 in the above table are based on final price by end of month published by Shanghai Futures Exchange (www.shfe.com.cn), as a general reference price for all areas;
3. "#" means its price is based on the market prices;
4. "-" means local price is not available;
5. The price selection guideline is based on actual current market prices.

AVERAGE DAILY WAGES OF WORKERS FOR CONSTRUCTION INDUSTRY IN SELECTED CITIES OF CHINA (RMB)

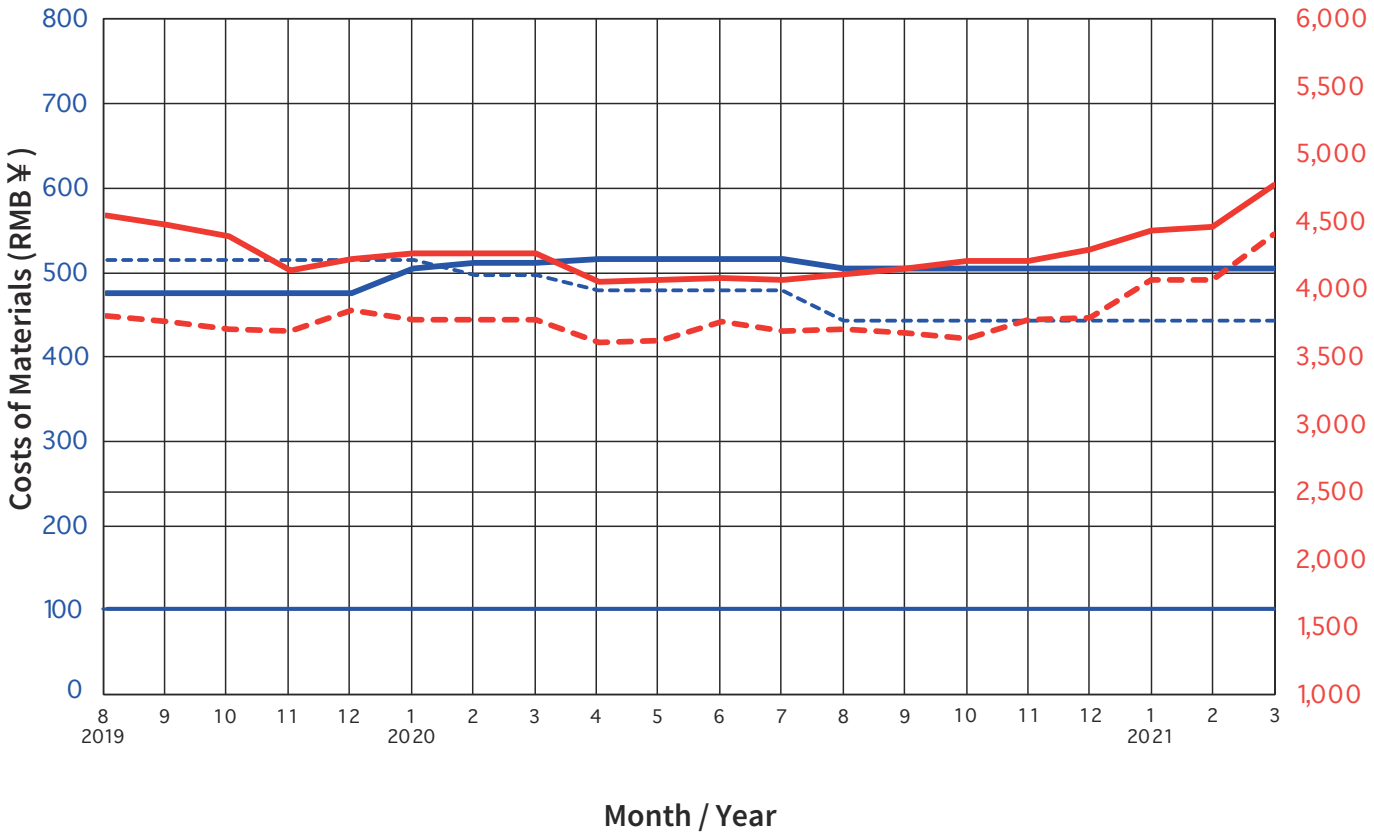
(All rates described are at 1st Quarter 2021 Prices)

	Selected Trades (according to the general public standards)	Beijing	Chengdu	Chongqing	Guangzhou	Hangzhou	Nanjing	Shanghai	Shenyang	Shenzhen	Tianjin	Wuhan	Xian
1	Joiner (construction)	321	299	276	305	275	403	350	275	387 Decoration Joiner	330	272	333
2	Painter	298	215	245	287	246	297	390	253	344	290	216	280
3	Formwork erector	322	280	292	316	275	390	370	268	402	330	261	320
4	Plasterer (normal)	302	231	236	283	238	320	380	263	338	310	217	281
5	Bar Bender	299	261	275	308	266	353	350	239	367	330	254	326
6	Bricklayer (masonry)	302	241	237	287	279	330	350	261	354	330	242	316
7	E&M worker	279	208	235	287	237 Metalware worker	353	370	243	339 Average plumber / electrician	320	215 Metalware worker	273
8	Concretor	270	234	242	272	231	297	360	204	348	300	237	280
9	Waterproofer	299	195	230	279	240	317	360	224	309	300	218	300
10	Plasterer (Surface)	376	241	262	294	250	330	400	270	389	380	227	295
11	Scaffolder	319	269	281	301	285	387	400	277	381	350	270	289
12	Welder	314	256	240	294	278	320	380	246	355	350	258	294
13	Rigger	278	215	200	265	244	337	340	248	328	270	239	280
14	Glazier	302	215	221	279	235	400	360	248	333	380	195	302
Average daily wage (1-14)		**306**	**240**	**248**	**290**	**256**	**345**	**369**	**251**	**355**	**326**	**237**	**298**

Notes:

1. Various types of daily wages are based on real-time construction market price. The data covers commercial, residential and industrial development projects; the wages are based on the weighted daily wages received from 2-4 contractors;
2. The above average daily wages include: basic wage, allowances, benefits, etc. i.e. all expense payable to workers;
3. Daily wage is based on 8 hours per day, excluding overtime allowance;
4. All trades are based on general labour.

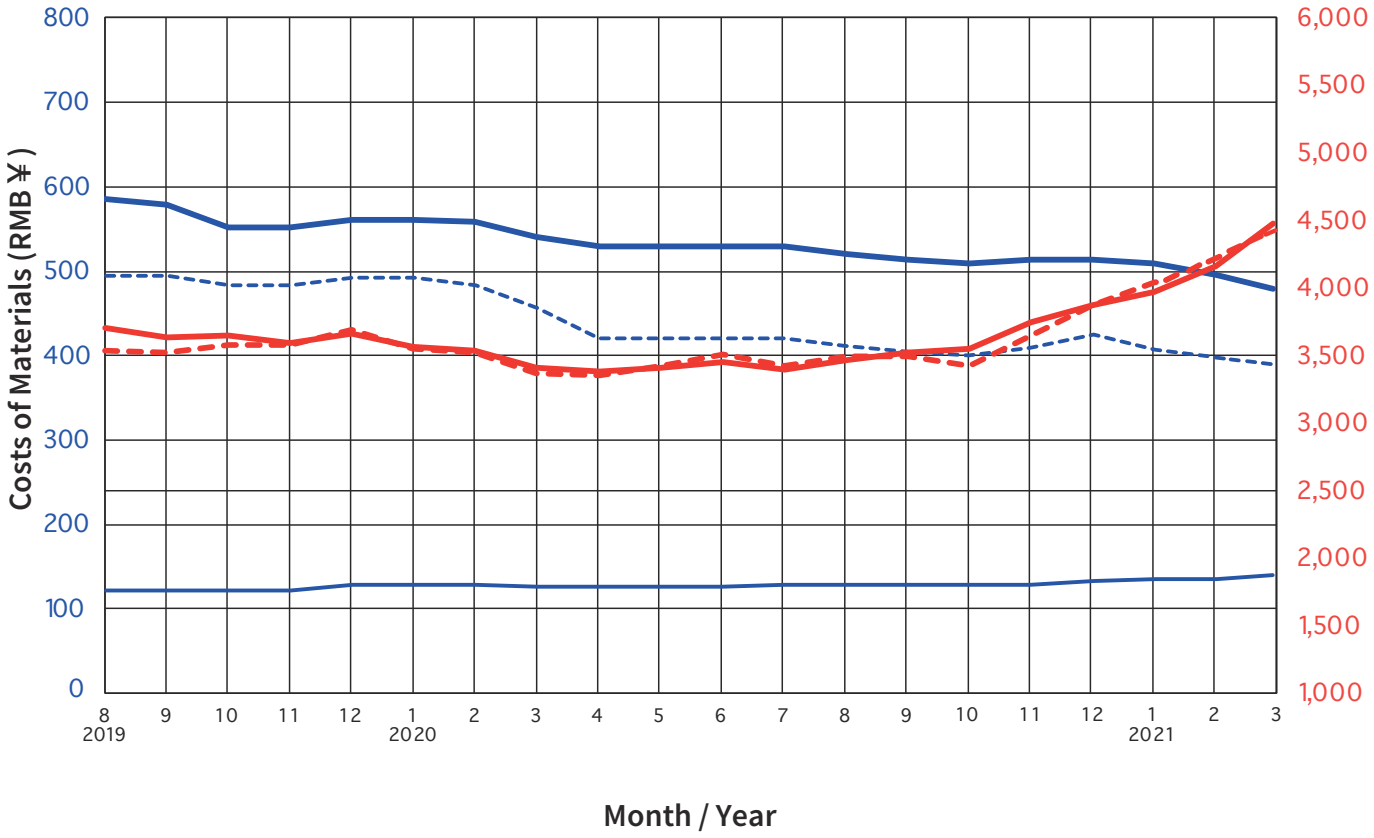
Wholesale Prices of Selected Building Materials in Beijing



Building Materials			Wholesale Prices of Selected Building Materials in Beijing																				
			2019					2020											2021				
			Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
Reinforcement bar HPB235 (I) 10mm	¥/t	—	4,535	4,473	4,385	4,137	4,226	4,261	4,261	4,261	4,058	4,062	4,080	4,062	4,106	4,150	4,204	4,204	4,292	4,425	4,460	4,770	
Reinforcement bar HRB400 (III) 25mm	¥/t	·····	3,805	3,752	3,708	3,690	3,841	3,770	3,770	3,770	3,611	3,619	3,752	3,690	3,699	3,681	3,637	3,779	3,788	4,062	4,071	4,398	
Portland cement Grade 42.5 (bag)	¥/t	·····	513	513	513	513	513	513	496	496	478	478	478	478	443	443	443	443	443	443	443	443	
Reinforced concrete Grade C30 5-25 stone P8 waterproofing (without pumping fee)	¥/m³	—	476	476	476	476	476	505	510	510	515	515	515	515	505	505	505	505	505	505	505	505	
Sand (rough/mixed)	¥/t	—	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	

(Source: www.bjzj.net)

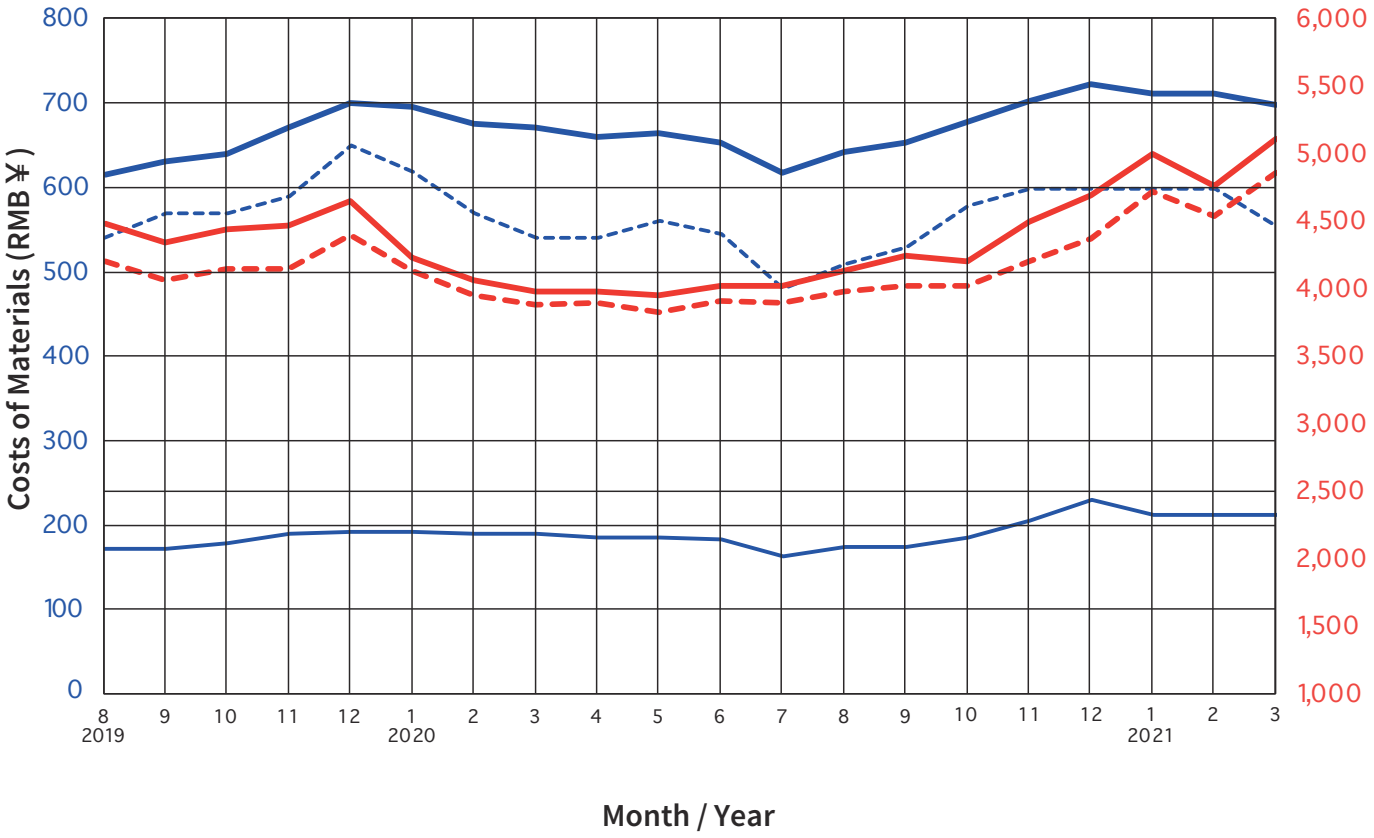
Wholesale Prices of Selected Building Materials in Chengdu



Building Materials			Wholesale Prices of Selected Building Materials in Chengdu																				
			2019					2020												2021			
			Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Reinforcement bar HPB235 (I) 10mm	¥/t	—	3,706	3,637	3,640	3,590	3,655	3,556	3,529	3,408	3,386	3,402	3,447	3,393	3,471	3,520	3,543	3,750	3,871	3,967	4,027	4,244
Reinforcement bar HRB400 (III) 25mm	¥/t	·····	3,535	3,523	3,575	3,582	3,682	3,554	3,521	3,373	3,351	3,426	3,500	3,427	3,493	3,493	3,417	3,643	3,867	4,036	4,113	4,240
Portland cement Grade 42.5 (bag)	¥/t	·····	493	493	482	482	491	491	482	456	420	420	420	420	412	404	400	409	425	407	398	389
Reinforced concrete Grade C30 5-25 stone P8 waterproofing (without pumping fee)	¥/m^3	—	585	578	551	551	561	561	558	539	529	529	529	529	519	512	508	513	513	509	494	470
Sand (rough/mixed)	¥/t	—	123	123	123	123	130	130	130	128	128	128	128	129	129	129	129	130	133	136	136	138

(Source: www.sceci.net)

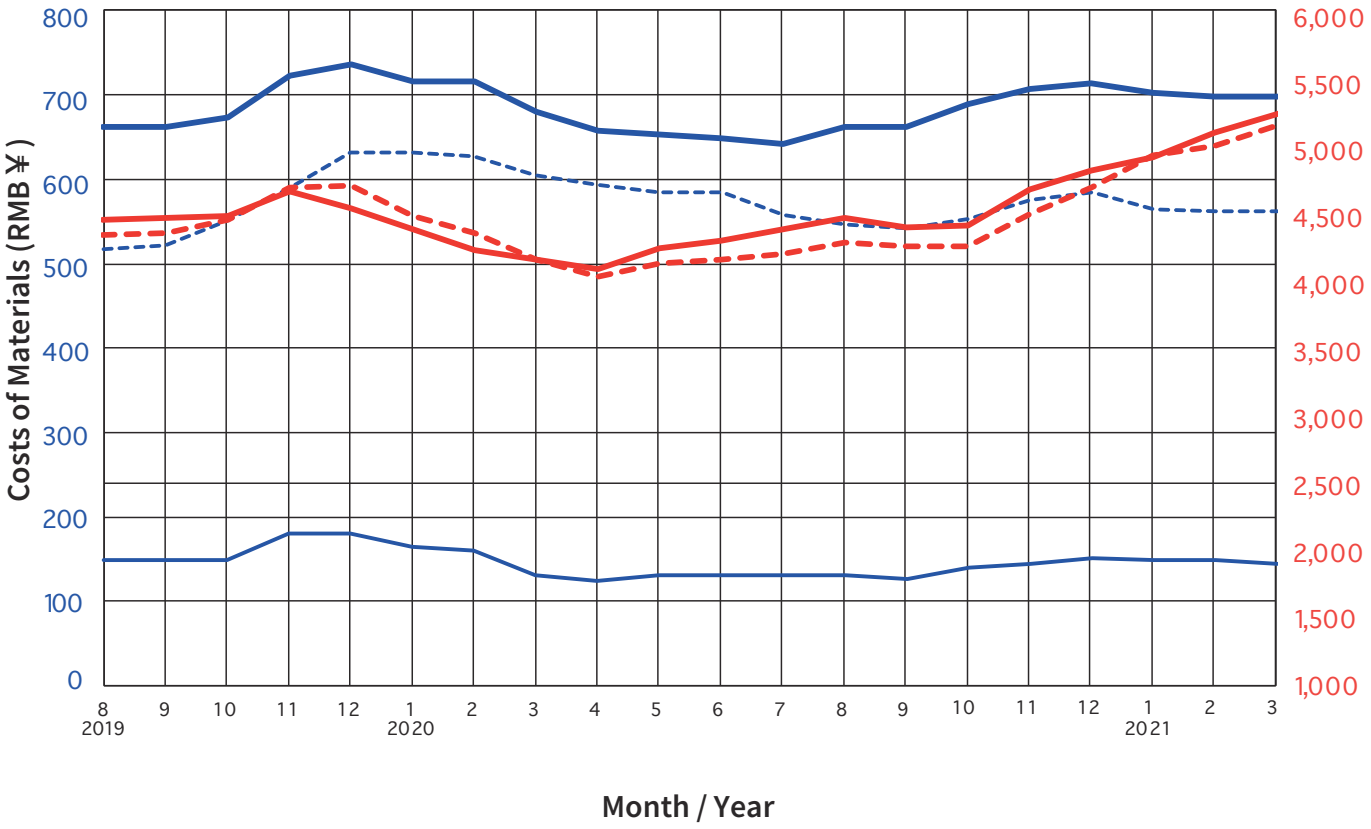
Wholesale Prices of Selected Building Materials in Shanghai



Building Materials			Wholesale Prices of Selected Building Materials in Shanghai																				
			2019					2020												2021			
			Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Reinforcement bar HPB235 (I) 10mm	¥/t	—	4,490	4,350	4,450	4,470	4,660	4,240	4,060	3,980	3,980	3,950	4,030	4,020	4,130	4,250	4,210	4,500	4,690	5,000	4,760	5,110
Reinforcement bar HRB400 (III) 25mm	¥/t	·····	4,210	4,060	4,150	4,150	4,400	4,130	3,960	3,890	3,900	3,830	3,910	3,900	3,980	4,030	4,020	4,210	4,380	4,730	4,540	4,870
Portland cement Grade 42.5 (bag)	¥/t	·····	540	570	570	590	650	620	570	540	540	560	545	480	510	530	580	600	600	600	600	555
Reinforced concrete Grade C30 5-25 stone P8 waterproofing (without pumping fee)	¥/m³	—	616	631	641	671	701	697	676	671	661	664	654	618	643	653	679	704	724	713	713	698
Sand (rough/mixed)	¥/t	—	172	172	178	190	193	193	190	190	185	185	182	162	174	173	186	206	231	213	213	213

(Source: https://ciac.zjw.sh.gov.cn/)

Wholesale Prices of Selected Building Materials in Shenzhen



Building Materials			Wholesale Prices of Selected Building Materials in Shenzhen																				
			2019					2020											2021				
			Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
Reinforcement bar HPB235 (I) 10mm	¥/t	———	4,448	4,463	4,487	4,669	4,534	4,387	4,234	4,154	4,086	4,239	4,294	4,388	4,464	4,402	4,415	4,671	4,815	4,916	5,100	5,242	
Reinforcement bar HRB400 (III) 25mm	¥/t	- - - - -	4,338	4,354	4,459	4,686	4,703	4,488	4,357	4,163	4,035	4,130	4,164	4,206	4,287	4,261	4,261	4,500	4,691	4,932	4,998	5,156	
Portland cement Grade 42.5 (bag)	¥/t	·····	518	522	551	589	632	632	627	605	594	586	585	557	548	542	554	576	586	565	563	563	
Reinforced concrete Grade C30 5-25 stone P8 waterproofing (without pumping fee)	¥/m³	———	662	663	674	724	737	716	716	681	657	654	648	642	663	663	689	707	713	703	699	699	
Sand (rough/mixed)	¥/t	———	150	150	150	182	182	165	162	133	126	132	132	132	132	128	141	146	151	150	150	146	

(Source: www.szcost.cn)

OFFICES IN HONG KONG, MACAU, MAINLAND CHINA AND KOREA

HONG KONG
15th Floor
Goldin Financial Global Centre,
17 Kai Cheung Road, Kowloon
Bay, Hong Kong
Telephone: 852 2823 1823
Facsimile: 852 2861 1283
E-mail: hongkong@hk.rlb.com

MACAU
Alameda Dr. Carlos D'
Assumpção
No. 398 Edificio CNAC 9º
Andar I-J
Macau SAR
Telephone: 853 2875 3088
Facsimile: 853 2875 3308
E-mail: macau@mo.rlb.com

BEIJING
Room 1803-1809, 18th Floor
East Ocean Centre
24A Jian Guo Men Wai Avenue
Chaoyang District
Beijing 100004
China
Telephone: 86 10 6515 5818
Facsimile: 86 10 6515 5819
E-mail: beijing@cn.rlb.com

CHENGDU
Room 2901-2904, 29th Floor
Square One
18 Dongyu Street
Jinjiang District
Chengdu 610016
Sichuan Province
China
Telephone: 86 28 8670 3382
Facsimile: 86 28 8613 6160
E-mail: chengdu@cn.rlb.com

CHONGQING
Room 1-3 & 17-18, 39/F,
IFS Tower T1,
No. 1 Qingyun Road,
Jiangbei District,
Chongqing 400024,
China
Telephone: 86 23 6380 6628
Facsimile: 86 23 6380 6618
E-mail: chongqing@cn.rlb.com

GUANGZHOU
Room 1302-1308
Central Tower
5 Xiancun Road
Guangzhou 510623
Guangdong Province
China
Telephone: 86 20 8732 1801
Facsimile: 86 20 8732 1803
E-mail: guangzhou@cn.rlb.com

GUIYANG
Room E, 12th Floor
Fuzhong International Plaza
126 Xin Hua Road
Guiyang 550002
Guizhou Province
China
Telephone: 86 851 553 3818
Facsimile: 86 851 553 3618
E-mail: guiyang@cn.rlb.com

HAIKOU
Room 1708, 17th Floor
Fortune Centre
38 Da Tong Road
Haikou 570102
Hainan Province
China
Telephone: 86 898 6672 6638
Facsimile: 86 898 6672 1618
E-mail: haikou@cn.rlb.com

HANGZHOU
Room 1603, 16th Floor North
Tower, Modern City Centre, No.
161 Shao Xin Road, Xia Cheng
District
Hangzhou 310014
Zhejiang Province
China
Telephone: 86 571 8539 3028
Facsimile: 86 571 8539 3708
E-mail: hangzhou@cn.rlb.com

NANJING
Room 1201, South Tower
Jinmao Plaza
201 Zhong Yang Road
Nanjing 210009
Jiangsu Province
China
Telephone: 86 25 8678 0300
Facsimile: 86 25 8678 0500
E-mail: nanjing@cn.rlb.com

NANNING
Room 2203, Block B, Resources
Building, No. 136 Minzu Road
Nanning 530000
Guangxi Province
China
Telephone: 86 771 589 6101
E-mail: nanning@cn.rlb.com

SHANGHAI
22td Floor
Greantech tower
436 Hengfeng Road
Jingan District,
Shanghai 200070
China
Telephone: 86 21 6330 1999
Facsimile: 86 21 6330 2012
E-mail: shanghai@cn.rlb.com

SHENYANG
25th Floor
Tower A, President Building
No. 69 Heping North Avenue
Heping District
Shenyang 110003
Liaoning Province
China
Telephone: 86 24 2396 5516
Facsimile: 86 24 2396 5515
E-mail: shenyang@cn.rlb.com

SHENZHEN
Room 4510-4513,
Shun Hing Square Diwang
Comm. Centre
5002 Shennan Road East
Shenzhen 518001
Guangdong Province
China
Telephone: 86 755 8246 0959
Facsimile: 86 755 8246 0638
E-mail: shenzhen@cn.rlb.com

TIANJIN
Room 502, 5th Floor
Tianjin International Building
75 Nanjing Road
Heping District
Tianjin 300050
China
Telephone: 86 22 2339 6632
Facsimile: 86 22 2339 6639
E-mail: tianjin@cn.rlb.com

WUHAN
Room 2301
New World International Trade
Centre
No. 568 Jianshe Avenue
Wuhan 430022
Hubei Province
China
Telephone: 86 27 6885 0986
Facsimile: 86 27 6885 0987
E-mail: wuhan@cn.rlb.com

WUXI
Room 1410-1412, 14th Floor Juna
Plaza,
6 Yonghe Road
Nangchang District
Wuxi 214000
Jiangsu Province
China
Telephone: 86 510 8274 0266
Facsimile: 86 510 8274 0603
E-mail: wuxi@cn.rlb.com

XIAN
Room 1506, 15th Floor, Tower F
Chang'an Metropolis Center
88 Nanguan Zheng Street,
Beilin District,
Xian 710068,
Shanxi Province
China
Telephone: 86 29 8833 7433
Facsimile: 86 29 8833 7438
E-mail: xian@cn.rlb.com

ZHUHAI
Room 1401-1402 , 14th Floor
Taifook International Finance
Building
No. 1199 Jiu Zhuo Road East,
Jida
Zhuhai 519015,
Guangdong Province
China
Telephone: 86 756 388 9010
Facsimile: 86 756 388 9169
E-mail: zhuhai@cn.rlb.com

SEOUL
Yeoksam-dong, Yeji Building 3rd
Floor, 513, Non hyeon-Ro
Gangnam-Gu
Seoul 135-880
Korea
Telephone: 82 2 582 2834
Facsimile: 82 2 563 5752
E-mail: seoul@kr.rlb.com

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