June 2020

CHINA REPORT

CONSTRUCTION PROCUREMENT AND COST INTELLIGENCE

RLB 利比 Rider Levett Bucknall

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WESTERN CHINA, THE DESIRABLE FUTURE

The New Land and Marine Routes for Western Regions is being deployed at full speed, linking the new economic agglomeration model in the west

With the announcement of the "Master Plan for New Land and Marine Routes for Western Regions" issued by the National Development and Reform Commission in August 2019, the construction of the new land and marine routes in the west will be promoted, linking the "One-Belt-One-Road" to Chongqing, Sichuan, Guizhou, Yunnan, Shaanxi and other western provinces to form new strategic infrastructure for the development of the western region.

The new government policy will highlight the geographical advantages of important hub cities, Chongqing and Chengdu. It also covers important western cities such as Guiyang and Kunming, extending to Xi'an and Lanzhou, bringing new economic growth stimulus to the west.

According to the "Statistical Communiqué of PRC on the 2019 National Economic and Social Development" released by the National Bureau of Statistics, the GDP of the western region was RMB20.5185 trillion yuan, an increase of 6.7%, accounting for about 21% of the total GDP of the country; The real estate investment was RMB3.0186 trillion yuan, an increase of 16.1% (higher than the national average growth of 9.9%), accounting for about 23% of the national real estate investment.

The entire western region has a vast territory, with a land area of 6.78 million square kilometers, accounting for 70% of the total area of the country and a population of about 380 million, accounting for 27% of the total population of the country.

From the analysis of various aspects including the land area, population density, GDP, real estate investment growth rate in the western region and the inclination of central government policy, the economy of the western region has great development potential.

▲ The schematic diagram of the New Land and Marine Routes for Western Regions

The Western Triangle Economic Zone is based on the Chengdu-Chongqing Economic Zone, with real estate market developing steadily

The "Western Triangle Economic Zone" comprises Chengdu, Chongqing, Xi'an and Chengdu and their surrounding areas, with a total area of 200,000 to 300,000 square kilometers containing about 50 cities, creating a large economic entity in the western region.

From the planning of "Chengdu-Chongqing Economic Zone" to the recent mutual recognition of provident funds in these two cities, the Western Triangle Economic Zone has started to break the inter-city barriers; the flow of people will expedite the development of infrastructure, such as the marine routes and the railway between two cities, port and aviation hubs. Bonded logistic parks, free-trade zones and new urban planning will develop rapidly. Chengyu economic circle will become another economic center after Pearl River Delta Economic Zone and Yangtze Delta Economic Zone.

With the formation and continuous development of the "New Land and Marine Routes for Western Regions" and "Western Triangle Economic Zone", it is bound to attract a large number of foreign and domestic investment, thereby bringing in high-quality, high-standard and high-level real estate projects.

COST OBSERVATION OF CURTAIN WALL CONSTRUCTION IN CHINA

With the development of China's economy, people start to have higher expectation for quality of life and work life. There are more and more super high-rise office buildings and apartment / residential buildings in major cities. Greater emphasis is placed on the quality of facade and its performance in insulation and energy conservation for these high-rise buildings. The components of building facade has evolved from traditional system of solid wall with tiling finishes, doors and windows to curtain wall system with unitized installation.

RLB has participated in many iconic projects using curtain wall systems, such as Shanghai Tower, Shenzhen Ping An Financial Center, Guangzhou Chow Tai Fook Financial Center, Chongqing Raffles City, etc., and has accumulated experience and cost data in all aspects of the curtain wall system.

Nanjing Jinling Hotel (RLB 's first project in China) —The building facade adopts doors, windows and external tile walls.

Shanghai Tower—Double glazed curtain wall system, featuring glass curtain wall units mounted on a set of gravity steel rod and steel ring beam structural system.

Since the curtain wall is always a cost driver in the overall project costs, special attention should be paid to the following points when preparing budget / cost estimate:

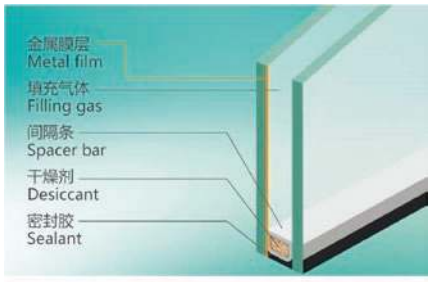
- The design and the choice of material (e.g. imported materials, extra-large size components, etc.);
- The local climatic conditions of the project (such as sunlight, maximum wind force and wind pressure, average temperature and its pattern in each season, etc.);
- The construction / installation method, such as unitized curtain wall, etc.;
- The impact of national and local regulations & practice notes on the external walls design (such as curtain wall structure safety assessment, environmental impact / light pollution assessment, green building & energy conservation, fire safety requirements, etc.)
- Client's requirements (such as indoor railing, indoor ventilation, centralized control blinds, etc.).

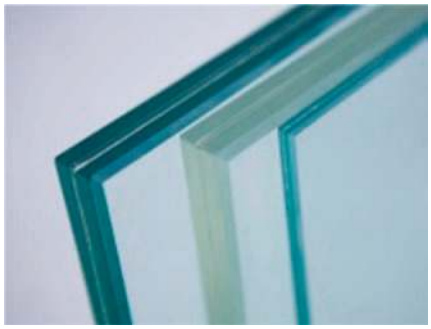
Installation of unitized curtain wall

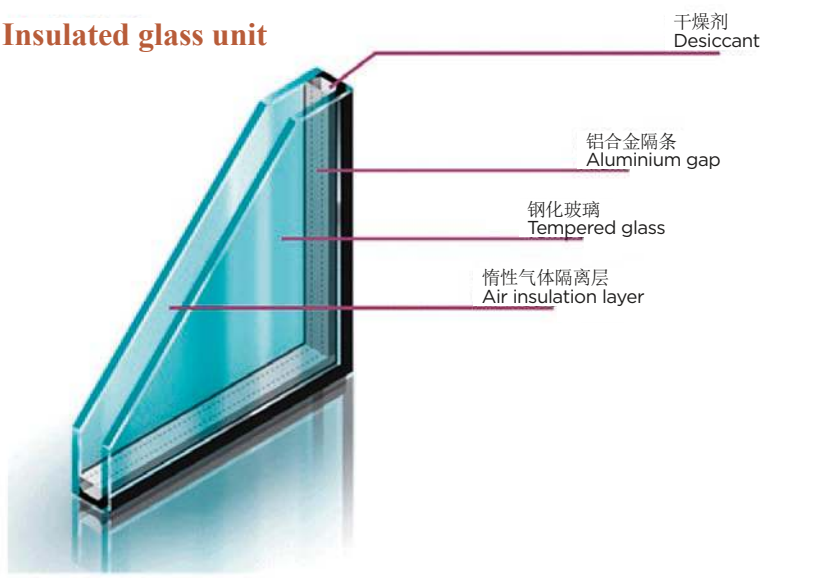
COST OBSERVATION OF CURTAIN WALL CONSTRUCTION IN CHINA

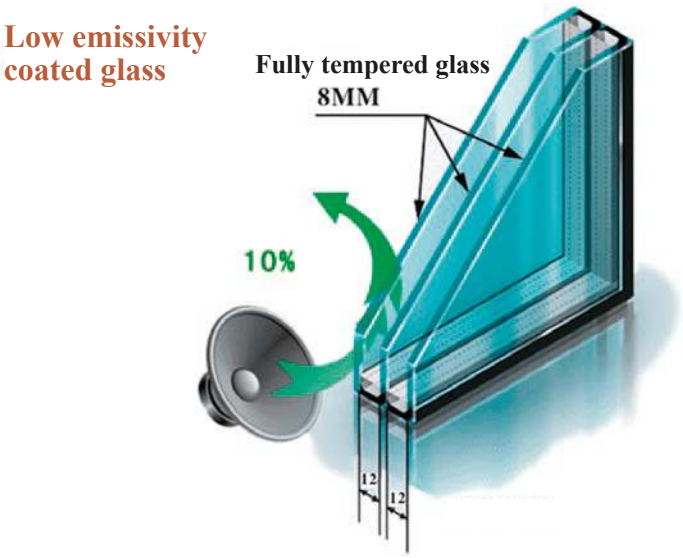
As government regulations and developers continue to improve their requirements on energy-saving, sound insulation and safety of buildings, through "green building star rating", "LEED energy-saving rating" and "WELL", glass curtain walls are required to achieve better UV light blocking rate, higher permeability, better security, etc., so as to enhance sunshading, energy saving, ventilation and sound insulation performance.

The performance of the glass material for curtain wall has improved comprehensively, evolving from the double glazed coated tempered glass to the double glazed Low-E (single silver film) coated tempered glass. The ultra-white double glazed laminated Low-E (double-silver / triple-silver film) coating is extensively used by more and more super high-rise projects.









COST OBSERVATION OF CURTAIN WALL CONSTRUCTION IN CHINA

The energy-saving coefficient U-value of the glass panel has also been improved from the early 2.5 ~ 2.8W / (m^2k) to the current stage of 1.3 ~ 1.4W / (m^2 k), providing better solutions for green and environmental friendly buildings.

Brief description of the glass energy-saving configuration	Description of the process involved	Unit rate of process/ product RMB/m^2	U-value (theoretical calculation) W/(m^2k)
Standard double glazed	12mm standard double glazed	45	2.5~2.6
Single silver Low-E double glazed	Single silver Low-E coating +12mm standard double glazed	75~80	1.8~1.85
Single silver Low-E double (warm edge technology) glazed	Single silver Low-E coating +12mm composite material double glazed	95~100	1.65~1.7
Double silver Low-E doubled glazed	Double silver Low-E coating +12mm standard double glazed	105~110	1.6~1.65
Double silver Low-E hollow (warm edge technology) glass	Double silver Low-E coating +12mm composite material double glazed	125~130	1.4~1.45
Triple silver Low-E double glazed	Triple silver Low-E coating +12mm standard double glazed	135~145	1.55~1.6 (Better sunshade efficiency than double silver)
Triple silver Low-E double (warm edge technology) glazed	Triple silver Low-E coating +12mm composite material double glazed	155~165	1.35~1.4 (Better sunshade efficiency than double silver)

Note: The above table is for extra cost of processing in China, the prices in the table above do not include the material cost for glass.

The development of BIM (Building Information Modeling) system brings convenience to design, manufacture, processing and construction of building curtain walls, so that the design of more special-shaped, curved, and multi-angle curtain walls can be better achieved.

RLB is actively participating in the application and promotion of BIM technology. Through the research and application of new technologies, new materials, new processes and new software in the construction and curtain wall industries, RLB is constantly improving the refinement of cost management and the accuracy of cost estimation.

PREFABRICATED CONSTRUCTION

When being asked of how a building be constructed, people may have the below in their minds :

> *Within enclosed construction site, the building under construction would be covered with green nets and there are many scaffolding on the external wall. Firstly, the foundations would be built, then the construction would be commenced from bottom to roof, floor by floor ...*

In fact, there is another method to construct a building now-not all processes are required to be completed on site. Many building components, such as floor slabs, stairs, columns and beams, can be produced in advance in the factory, and then assembled at the site like toy blocks. Of course, constructing a building is more complex and rigorous than toy blocks. For example, concrete will be placed during assembly of components to ensure a stable and safe structure.

This construction method is called prefabricated construction. As the name implies, it is to assemble prefabricated components into a whole building. Compared with traditional methods, prefabricated buildings would improve efficiency, shorten the construction period, and are environmental friendly, etc.

Prefabricated construction is a key national strategy for the reform and improvements of construction industry. It is also driving up and refreshing the construction market.

According to the requirements of the Ministry of Housing and Urban-Rural Development, the goal of the policy is to adopt prefabricated construction in more than 15% of the new buildings in the whole country by 2020. The three major urban agglomerations (the Beijing-Tianjing-Hebei region, the Yangtze River Delta and the Pearl River Delta) as the regions with developing prefabricated buildings as key tasks, target to achieve more than 20% of building areas with prefabrication; for other cities with residential population of over three million where prefabricated building development shall be actively advanced, the target is to achieve more than 15%; for the remaining cities where such development is encouraged, the target is to achieve more than 10% of building areas with prefabrication.

PREFABRICATED CONSTRUCTION

Image / SIPG Military Road Project

1.Introduction of Prefabricated Buildings

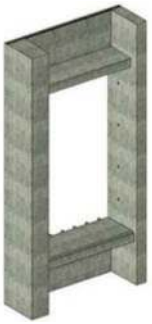
Prefabricated buildings: the main parts of structural systems, external envelope, equipment and pipelines, and interiors are constructed with prefabricated parts and components.

Prefabricated concrete structure: The structural system of the building is prefabricated with precast concrete structure or "PC" (prefabricated modules).

■ **Common PC component styles：**

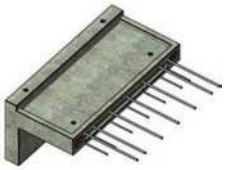
PC shear wall panel

PC enclosure wall panel



PC bay window panel

PC balcony panels



PC air conditioner platform

PREFABRICATED CONSTRUCTION

■ **Common precast door and window embedded parts :**

Embedded plates and bolt point only

Embedded steel subframe

Door and window frames completely embedded

Two important terms are:

- **Building prefabricated rate :** the ratio of the amount of material used in the prefabricated components of the structure and envelope to the total amount of material used of the corresponding component in the prefabricated building above ± 0.000.

- **Building assembly rate :** the ratio of the number (or area) of prefabricated components and building parts in a prefabricated building to the total number (or area) of similar components or parts.

For example, Shanghai stipulates that for newly built residential buildings with a building height more than 100 meters, the prefabricated rate shall be no less than 15% or the assembly rate shall be no less than 35%.

PREFABRICATED CONSTRUCTION

2.Cost analysis of prefabricated buildings

A project in Pudong area, Shanghai Unit rate reference for the costs of prefabricated components (unit: RMB/m^3)	
Material cost	3,200~3,500
Labor cost	300~350
Preliminaries	150~200
Management fees, profit	70~120
Regulation fee and tax	560~630
Total cost	4,280~4,800

3.Documentation for PC project

With different level of detail in tender drawings, there are different options of drafting the Bills of Quantities items. However, the aim is to ensure the integrity of unit rates incorporating all available information and tender drawings. The following illustrate two project case studies:

■ **Project A**

Construction drawings are available at the time of tendering: the installation details, methods, production and inspection, requirements for transportation, stacking and assembly construction, connection requirements between components and cast-in-place structures, sleeve grouting operation requirements for steel bar connection, waterproofing design for prefabricated components, quality assurance and construction safety are all described and detailed in drawings.

- **Bills Of Quantities:**

1. Use provisional quantities for the Bills of Quantities and unit rates to be based on a lump sum basis;
2. The items of each prefabricated component in the Bills of Quantities shall be described in concrete cubic meters according to the different prefabricated components, and the provisional quantity for the project shall be measured based on the drawings;
3. The design, production, transportation, storage, secondary handling and installation, concrete, steel bars, accessories, grouting, conduits, waterproof silica gel, embedded parts, support, etc. of all prefabricated components are to be included in the corresponding unit price. The Tenderer's unit price is to include all costs involved in completing works on the drawings;
4. Rate adjustment of prefabricated components: if the price increase of materials exceeds ± 5%, adjustment is required;
5. The rebar is priced based on the published cost information on government website, and the difference in quantity is adjusted based on the actual construction drawings.

PREFABRICATED CONSTRUCTION

■ **Project B**

Only schematic drawings and brief descriptions of the installation method, production, inspection, transportation requirements, and hoisting requirements of the prefabricated components are available. The connection details, rebar drawings, waterproofing details, etc. are not available.

- **Schedule of Rates:**

1. Use schedule of rates on a lump sum basis;
2. Select the appropriate prefabricated items from the project database as the basic items, and list the corresponding prefabricated components, design drawings, production, transportation, storage, secondary handling and installation, concrete, steel, auxiliary materials, grouting, sleeve, waterproof silicone, embedded parts, support, etc. as the basis for unit rate composition;
3. At Final Account stage, the unit rate is adjusted and compared with the details of the construction drawing;
4. The rebar adjustment is as Project A;
5. General notes for Schedule of Rates shall be provided.

The unit price of assembled components is comparatively expensive and the items in the pricing documents are more comprehensive. In order to avoid claims arising due to unclear descriptions, when drafting the pricing document, the following shall be paid attention to:

1. Clarify with the Design Team the prefabrication rate, type of prefabricated component, installation method, connection detail between components, waterproofing detail, surface finishes, door and window opening details, thermal insulation installation method, etc. The description of components in the pricing document should be as close as possible to the form used in actual construction to ensure that the pricing are comprehensive and complete;
2. Clarify with the Client and Design Team about mechanical and electrical pipes and cables in prefabricated components;
3. Clarify the external insulation system with the Client and Design Team;
4. It is recommended that the Client and the Design Team should use embedded steel subframes in external wall to ensure better waterproof performance of the doors and windows.

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

(All rates described are at 1st Quarter 2020 Prices)

	Building materials		Beijing	Chengdu	Chongqing	Guangzhou	Hangzhou	Nanjing	Shanghai	Shenyang	Shenzhen	Tianjin	Wuhan*	Xian
1	Reinforcement bar HPB235 (1st-class) 10mm	¥/t	4,261	3,498 HPB300 8-10mm	3,913 HPB300	3,795 HPB300	4,212	4,311 HPB300	4,093 HPB300	3,217 HPB300	4,258 HPB300 (1st class) 6.5-10mm	4,183	4,080 HPB300	3,840
2	Reinforcement bar HRB400 (3rd class) 10mm	¥/t	3,973	3,568 HRB400 8-10mm	3,997	3,828	4,026	4,253	4,153	3,377	4,615	3,989	4,233	3,893
3	Reinforcement bar HRB400 (3rd class) 25mm	¥/t	3,770	3,483 HRB400 18-25mm	3,957	3,875	3,881	4,171	3,993	3,267	4,336	3,880	3,978	3,893
4	Reinforced concrete Grade C30 5-25mm aggregates P8 waterproofing (without pumping fee)	¥/m^3	508	553 5-31.5	500 Average of main areas of the city, electric pump	670	646	597	681	337	704	506	523	655
5	Timber Formwork local commonly used materials	¥/m^3	2,000	3,165 1830 × 915 × 15	1,226 Average of main areas of the city, logs	1,348 pine broad	1,780 pine logs Φ 14-16 x 600cm	1,795	1,851	1,723	2,511 1830x915x18 3rd Class blackboard	2,228	2,203	2,052 pine logs
6	Portland cement Grade 42.5(bulk)	¥/t	502	476	527 Average of main areas of the city, bagged	546	620	592	577	343	621	455	494	502
7	Sand Rough/mixed	¥/t	102	129	275 Average of main areas of the city, extra fine sand	208	135 Gross sand	198	191	52	153	86	271	278
8	Hot rolled equal-leg angle steel 45-50×3-6mm	¥/t	3,283	3,681 Q235 L50 × 50 × 5	4,217 Q235 4-8mm	3,930	4,294 Q235B	4,394 Equal-leg angle steel	4,197 Equal-leg angle steel 45-50 × 3-5mm	3,253	4,647 Angle steel	4,038	4,279	4,223
9	Galvanized steel sheet 1.0mm	¥/t	4,353	6,000 0.5-1.2mm	4,870	4,172	4,837	5,092 Hot galvanized steel sheet Q235B	4,533 Hot rolled steel sheet Q235 δ ≥1.0	3,840 Continuously hot-dip zinc-coated steel sheet 1.00-2.5 Z275 (two-sided)	5,112	4,822	4,945	5,047
10	Seamless steel pipe 108×3.5-4mm	¥/t	4,732	6,100	4,863 108 x 4.5mm	4,854	5,510 108x4mm	5,159	5,416 108 × 3-4.5mm #20	4,173 68-159	5,723 Seamless steel pipe	4,747	4,539 108 × 4.5-5mm	5,497
11	Galvanized welded steel pipe 20mm 26.75x2.75mm	¥/t	4,552	5,094	5,460 Hot dip galvanized steel pipe Q235 / Q195 DN15-20	5,542 Galvanized water, gas transportation pipe	5,674	5,771 Hot dip galva-nized steel pipe DN15-DN32	4,951 Φ 20 mm	3,583 DN25-DN32	5,789 Hot-galvanized steel pipe	5,498	4,396 20 × 2.75mm	5,220
12	Hot-rolled steel channel Grade a steel #16-18mm	¥/t	3,488	3,783 Q235 #18mm	4,213 Q235 16-22#	3,976	4,263 Q235B	4,425 Steel channel	4,040 Q235 # 16	3,327 5-30#	4,671 Steel channel	3,996	4,228	4,207
13	Float glass 5mm	¥/m^2	23	24 White float glass	27 White float glass	34	37	39	28	30	33	33	33	35
14	Aluminium A00 aluminum ingot	¥/t	13,653											
15	Copper 1# electrolytic copper	¥/t	45,950											
16	Steel fire-rated door (Grade II)	¥/m^2	412(#)	550(#)	520	368 Single-leaf	520	620 Single-leaf	625	560	600(#)	564(#)	595(#)	637
17	Timber fire-rated door (Grade II)	¥/m^2	410(#)	380(#)	320	430 Single-leaf	420	-	357	398(#)	680(#)	425(#)	504(#)	377
18	PHC piles Φ 400A	¥/m	-	165(#)	-	156 Thickness 95mm	142 Thickness 95mm	203	180 Φ 400AB Thickness 95	100(#)	139 Thickness 95 mm	144 Φ 400AB Thickness 95	195(#)	240
19	APP Modified Bitumen Water-proofing membrane 3 mm PY	¥/m^2	35	38(#)	24 APP- I -PY-PE-3mm	27	36 4mm	37	27 APP-I-PY-PE	23(#)	36(#) SBS 3mm	25(#)	27	32
20	Cementitious Waterproofing Coatings Type I two-component	¥/kg	11	18(#)	16 JS-I latex	12	8	11	11 JS-I	9(#)	13	13	17(#)	10
21	Interior wall Latex paint Type II	¥/kg	16	15(#)	9 paint	11	17 latex paint	13	16(#)	11	11(#)	12	10	13(#)
22	Advanced Acrylic Exterior Wall Latex paint Type II	¥/kg	25	23(#)	28 import emulsion paint (luminant)	27	21 elastic emulsion paint	16	24(#)	12	25(#)	26	33(#)	16(#)

Notes:

1. The above prices (except items 14, 15 and those marked with "#") are based on either guiding price from websites or 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;
6. *:The price is at January 2020, Wuhan.

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

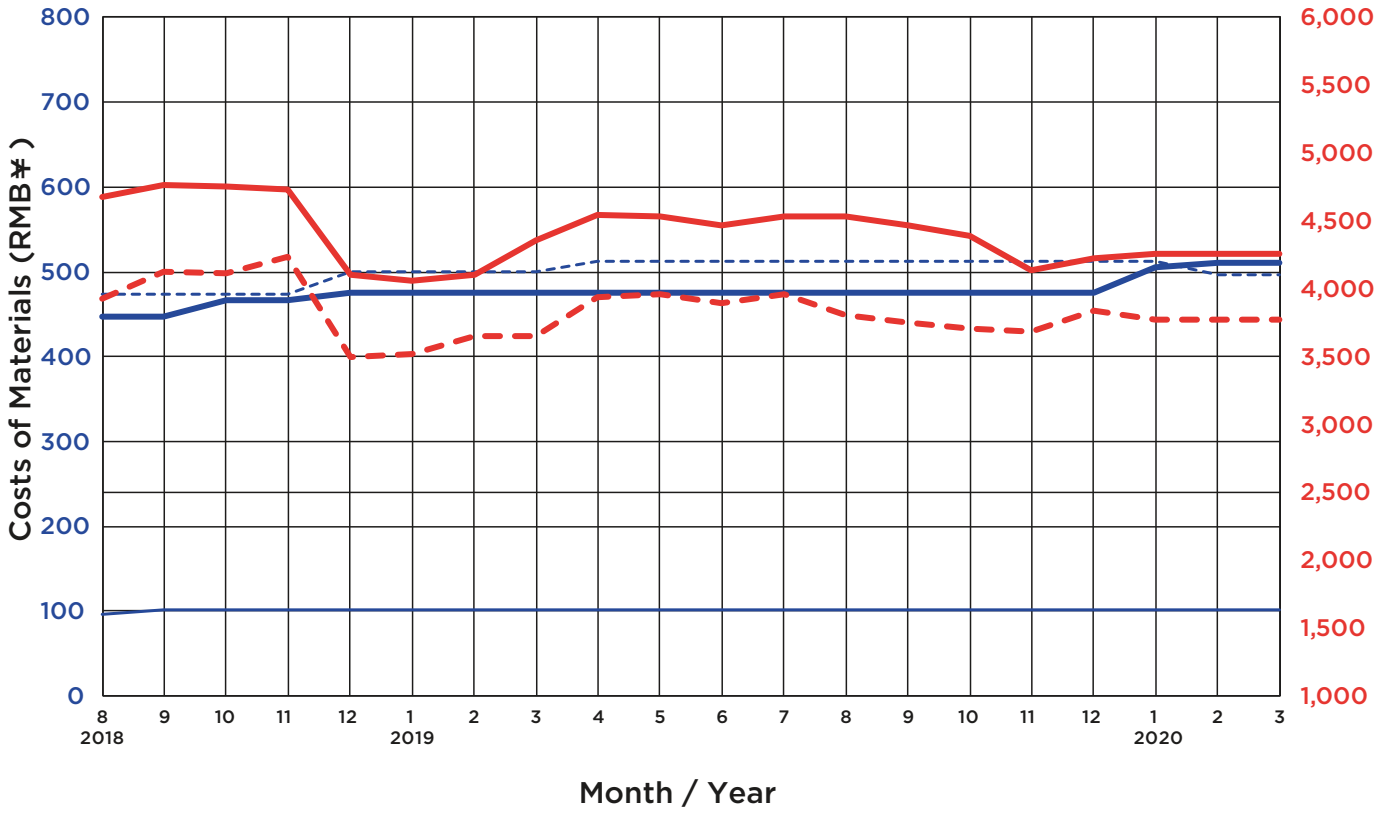
(All rates described are at 1st Quarter 2020 Prices)

Selected Trades (according to the general public standards)		Beijing	Chengdu	Chongqing	Guangzhou	Hangzhou	Nanjing	Shanghai	Shenyang	Shenzhen	Tianjin	Wuhan	Xian
1	Joiner (construction)	290	266	274	279	264	310	280	287	380 Decoration Joiner	282	245	298
2	Painter	267	196	244	268	240	288	300	248	329	248	182	250
3	Formwork erector	289	266	289	283	259	310	280	287	367	291	227	310
4	Plasterer (normal)	269	230	235	265	231	292	300	275	338	264	187	253
5	Bar Bender	269	258	273	279	244	295	280	239	353	293	191	350
6	Bricklayer (masonry)	278	237	235	268	265	288	320	268	344	282	210	300
7	E&M worker	246	165	233	265	231	295 Metalware worker	300	236	319 Average plumber/ electrician	289	190	240
8	Concretor	248	190	240	254	225	281	280	199	337	270	191	240
9	Waterproofer	271	188	229	254	239	285	280	248	288	257	177	280
10	Plasterer (Surface)	346	214	260	283	246	304	340	283	369	342	201	310
11	Scaffolder	284	252	279	276	263	301	350	272	365	308	220	320
12	Welder	288	204	239	276	272	299	320	226	324	332	224	280
13	Rigger	278	176	198	254	238	283	280	252	324	227	200	210
14	Glazier	346	164	219	261	234	281	300	248	329	353	167	320
Average daily wage (1-14)		**284**	**215**	**246**	**269**	**247**	**273**	**301**	**255**	**340**	**288**	**201**	**283**

Notes:

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

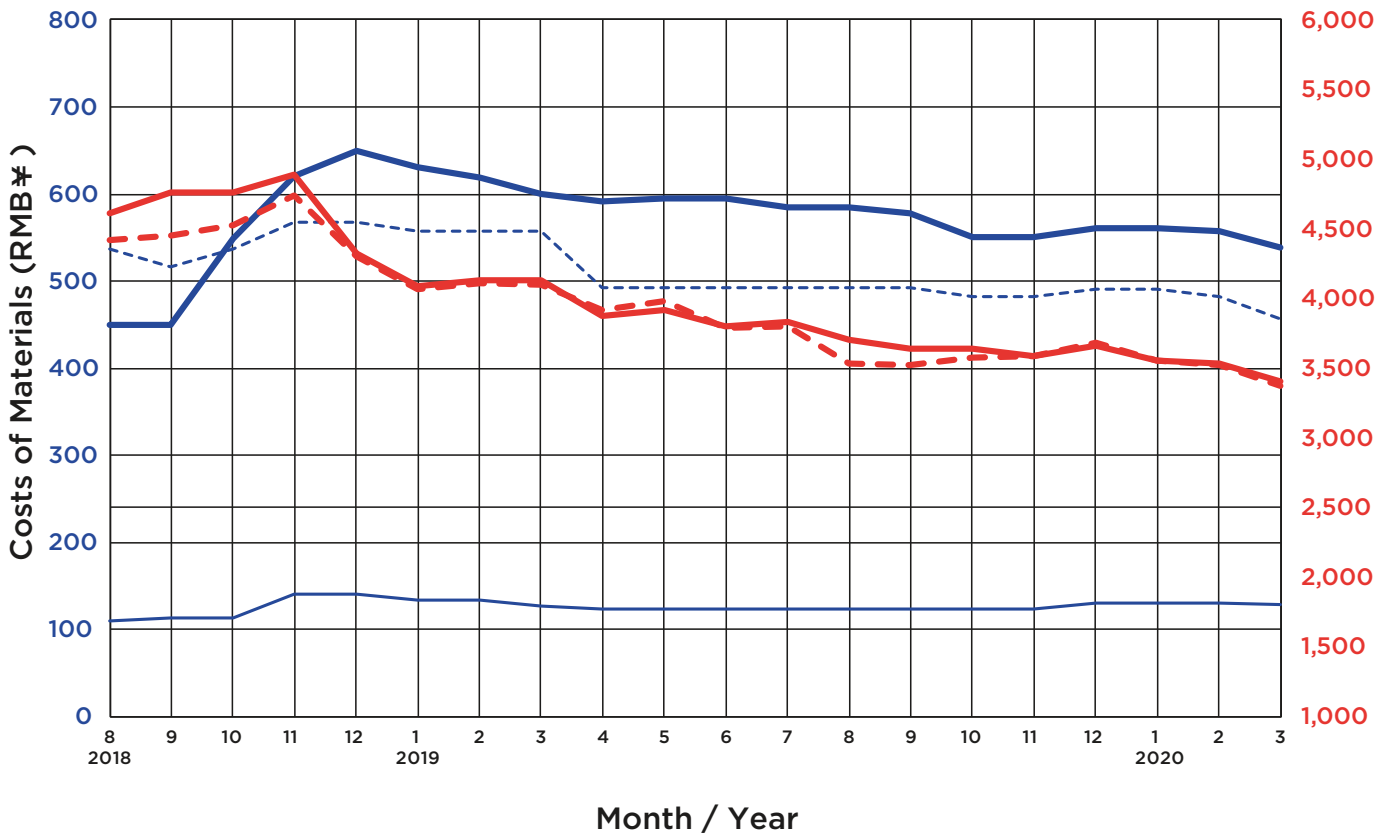
Wholesale Prices of Selected Building Materials in Beijing



Building Materials			Wholesale Prices of Selected Building Materials in Beijing																				
			2018					2019												2020			
			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	—	4,672	4,767	4,750	4,728	4,108	4,056	4,099	4,358	4,544	4,535	4,465	4,535	4,535	4,473	4,385	4,137	4,226	4,261	4,261	4,261
Reinforcement bar HRB400 (III) 25mm	¥/t	·····	3,922	4,130	4,116	4,233	3,500	3,517	3,647	3,655	3,938	3,956	3,894	3,956	3,805	3,752	3,708	3,690	3,841	3,770	3,770	3,770
Portland cement Grade 42.5 (bag)	¥/t	·····	474	474	474	474	500	500	500	500	513	513	513	513	513	513	513	513	513	513	496	496
Reinforced concrete Grade C30 5-25 stone P8 waterproofing (without pumping fee)	¥/m³	—	447	447	466	466	476	476	476	476	476	476	476	476	476	476	476	476	476	505	510	510
Sand (rough/mixed)	¥/t	—	97	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102	102

(Source: www.bjzj.net)

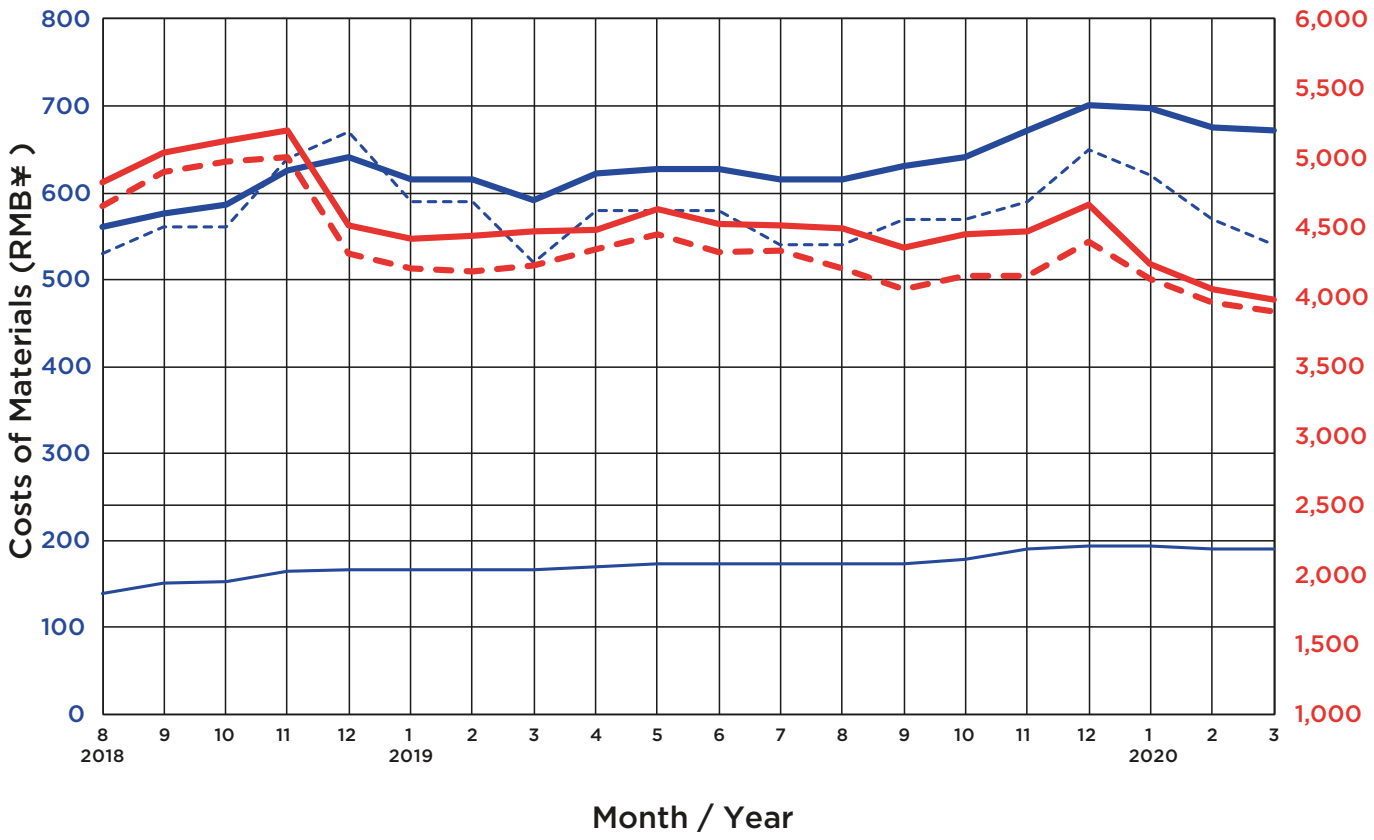
Wholesale Prices of Selected Building Materials in Chengdu



Building Materials			Wholesale Prices of Selected Building Materials in Chengdu																				
			2018					2019													2020		
			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	—	4,615	4,762	4,764	4,890	4,320	4,088	4,126	4,128	3,876	3,918	3,797	3,836	3,706	3,637	3,640	3,590	3,655	3,556	3,529	3,408
Reinforcement bar HRB400 (III) 25mm	¥/t	·····	4,415	4,451	4,527	4,740	4,300	4,065	4,107	4,101	3,914	3,983	3,789	3,800	3,535	3,523	3,575	3,582	3,682	3,554	3,521	3,373
Portland cement Grade 42.5 (bag)	¥/t	·····	537	517	537	567	567	557	557	557	493	493	493	493	493	493	482	482	491	491	482	456
Reinforced concrete Grade C30 5-25 stone P8 waterproofing (without pumping fee)	¥/m³	—	450	450	548	620	650	630	618	600	591	595	595	585	585	578	551	551	561	561	558	539
Sand (rough/mixed)	¥/t	—	110	113	113	140	140	133	133	127	123	123	123	123	123	123	123	123	130	130	130	128

(Source: www.sceci.net)

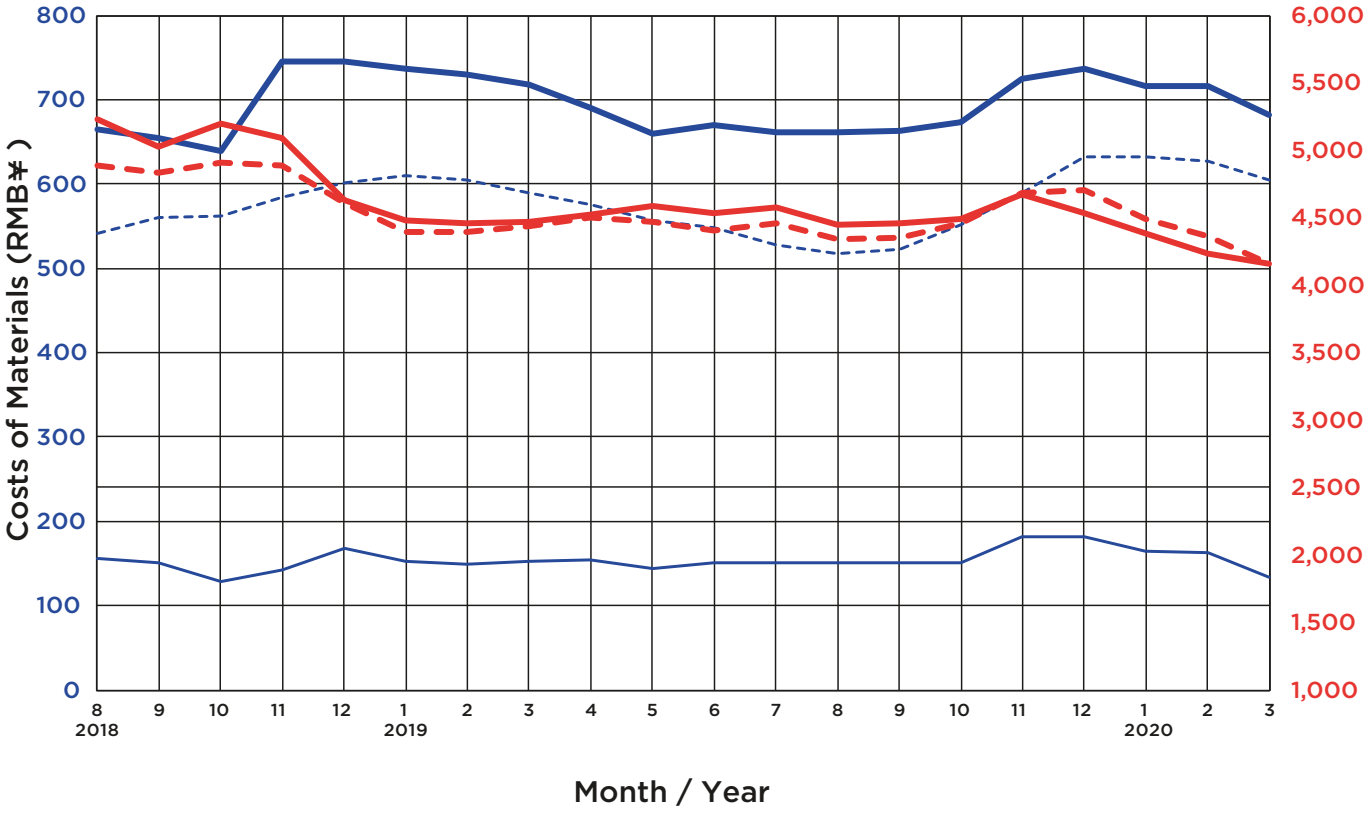
Wholesale Prices of Selected Building Materials in Shanghai



Building Materials			Wholesale Prices of Selected Building Materials in Shanghai																				
			2018					2019												2020			
			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	—	4,820	5,040	5,120	5,200	4,520	4,420	4,435	4,475	4,480	4,630	4,530	4,520	4,490	4,350	4,450	4,470	4,660	4,240	4,060	3,980
Reinforcement bar HRB400 (III) 25mm	¥/t	·····	4,650	4,900	4,970	5,010	4,310	4,210	4,185	4,230	4,340	4,450	4,320	4,330	4,210	4,060	4,150	4,150	4,400	4,130	3,960	3,890
Portland cement Grade 42.5 (bag)	¥/t	·····	530	560	560	640	670	590	590	520	580	580	580	540	540	570	570	590	650	620	570	540
Reinforced concrete Grade C30 5-25 stone P8 waterproofing (without pumping fee)	¥/m³	—	561	576	586	626	641	616	616	591	623	628	628	616	616	631	641	671	701	697	676	671
Sand (rough/mixed)	¥/t	—	139	150	152	164	165	165	165	165	170	172	172	172	172	172	178	190	193	193	190	190

(Source: www.shjjw.gov.cn)

Wholesale Prices of Selected Building Materials in Shenzhen



Building Materials			Wholesale Prices of Selected Building Materials in Shenzhen																			
			2018											2019								
			Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Reinforcement bar HPB235 (I) 10mm	¥/t	—	5,226	5,021	5,202	5,091	4,630	4,475	4,456	4,465	4,521	4,585	4,529	4,577	4,448	4,463	4,487	4,669	4,534	4,387	4,234	4,154
Reinforcement bar HRB400 (III) 25mm	¥/t	·····	4,890	4,828	4,913	4,886	4,607	4,395	4,391	4,439	4,506	4,464	4,406	4,456	4,338	4,354	4,459	4,686	4,703	4,488	4,357	4,163
Portland cement Grade 42.5 (bag)	¥/t	·····	541	561	562	585	602	609	605	589	575	556	549	527	518	522	551	589	632	632	627	605
Reinforced concrete Grade C30 5-25 stone P8 waterproofing (without pumping fee)	¥/m³	—	665	654	639	745	745	737	729	718	691	660	669	662	662	663	674	724	737	716	716	681
Sand (rough/mixed)	¥/t	—	156	151	128	143	168	153	149	152	154	144	150	150	150	150	150	182	182	165	162	133

(Source: www.szcost.cn)

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