

Construction Cost Handbook

CHINA & HONG KONG 2021

Arcadis Asia Limited
Arcadis Hong Kong Limited



Electronic Cost Handbook

Download the PDF version by scanning the QR code below

1. Download the PDF version from our website to your mobile or tablet device.



2. Download our App - Asia Cost Guide



1	
2	3
4	

Handbook Cover Photos:-

1. Alibaba Hupan University, PRC
2. Rank and File Quarters for HKSAR Fire Services Department, Pak Shing Kok, TKO
3. Water World_Ocean Park, Hong Kong
4. Beijing Chong Li Project, PRC

The following handbook of information relating to the construction industry has been compiled by:

Arcadis Hong Kong Limited

17/F, Two Harbour Square,
180 Wai Yip Street
Kwun Tong, Kowloon
Hong Kong

Telephone : (852) 2911 2000
Fax : (852) 2911 2002
Email : info-hk@arcadis.com
Website : www.arcadis.com/asia

© Arcadis Hong Kong Limited 2021

All rights reserved. No part of this publication may be re-produced or copied in any form without prior written permission from Arcadis Hong Kong Limited.

The information contained herein should be regarded as indicative and for general guidance only. Whilst every effort has been made to ensure accuracy, no responsibility can be accepted for errors and omissions, however caused.

If advice concerning individual projects is required, we would be happy to assist.

Unless otherwise stated, costs reflected in this handbook are **Hong Kong costs at 4th Quarter 2020.**

Arcadis Hong Kong Limited would like to acknowledge the assistance of **Knight Frank** and **Baker McKenzie FenXun** in providing additional data and information for this publication.



ISO 14001 : 2015
Certificate No. : EMS685471



OHSAS 18001 : 2007
Certificate No. : OHS685471



ISO 9001 : 2015
Certificate No. : FS684805

TABLE OF CONTENTS

Table of Contents	1
Calendars	3
About Us	5

1. CONSTRUCTION COST DATA

Construction Costs for Hong Kong	9
M&E Costs for Hong Kong	11
ACMV Costs for Various Designs and Developments in Hong Kong	13
Fit-out Costs for Hong Kong	15
Unit Costs for Ancillary Facilities for Hong Kong	17
Construction Costs for Selected Asian Cities	19
M&E Costs for Selected Asian Cities	25
Major Rates for Selected Asian Cities	31
Construction Cost Specification	37

2. GENERAL CONSTRUCTION DATA

2021 Outlook	43
Building Cost Trends in Hong Kong	49
Material Prices in Hong Kong	53
Labour Index in Hong	56
Labour Wages in Hong Kong	57
Estimating Rules of Thumb and Design Norms	59
Construction Activity in Hong Kong	65
Construction Value in Hong Kong	66
Hong Kong General Construction Insurance	67
Specified Forms for Buildings Ordinance or Regulations for Hong Kong	69
Summary of Building Regulations for Hong Kong	73
Percentage Site Coverage and Plot Ratios for Hong Kong	74
Evolving Regulations for Green Building in China	77
Procurement Strategies and Form of Contracts	83
Construction Workdone Forecast	87

3. PROPERTY

Property Commentary	89
Property Indicators	95
Gross Floor Area (GFA) Calculations in Hong Kong	97
Gross Floor Area (GFA) Calculations in PRC	99
Construction Floor Area (CFA) Definition	101

4. OTHER INFORMATION

Utility Costs for Selected Asian Cities	103
Public Holidays	107
Arcadis Asia Services	115
Directory of Offices	117
Health & Safety Management System	131
Quality Management System	132
Environmental Management System	133

2020

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4							1	1	2	3	4	5	6	7
5	6	7	8	9	10	11	2	3	4	5	6	7	8	8	9	10	11	12	13	14
12	13	14	15	16	17	18	9	10	11	12	13	14	15	15	16	17	18	19	20	21
19	20	21	22	23	24	25	16	17	18	19	20	21	22	22	23	24	25	26	27	28
26	27	28	29	30	31		23	24	25	26	27	28	29	29	30	31				

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4						1	2	1	2	3	4	5	6	
5	6	7	8	9	10	11	3	4	5	6	7	8	9	7	8	9	10	11	12	13
12	13	14	15	16	17	18	10	11	12	13	14	15	16	14	15	16	17	18	19	20
19	20	21	22	23	24	25	17	18	19	20	21	22	23	21	22	23	24	25	26	27
26	27	28	29	30			24/31	25	26	27	28	29	30	28	29	30				

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4						1	1	2	3	4	5			
5	6	7	8	9	10	11	2	3	4	5	6	7	8	6	7	8	9	10	11	12
12	13	14	15	16	17	18	9	10	11	12	13	14	15	13	14	15	16	17	18	19
19	20	21	22	23	24	25	16	17	18	19	20	21	22	20	21	22	23	24	25	26
26	27	28	29	30	31		23/30	24/31	25	26	27	28	29	27	28	29	30			

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	1	2	3	4	5	6	7	1	2	3	4	5		
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26
25	26	27	28	29	30	31	29	30						27	28	29	30	31		

2021

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
					1	2	1	2	3	4	5	6	1	2	3	4	5	6		
3	4	5	6	7	8	9	7	8	9	10	11	12	13	7	8	9	10	11	12	13
10	11	12	13	14	15	16	14	15	16	17	18	19	20	14	15	16	17	18	19	20
17	18	19	20	21	22	23	21	22	23	24	25	26	27	21	22	23	24	25	26	27
24/31	25	26	27	28	29	30	28							28	29	30	31			

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3						1	1	2	3	4	5			
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
25	26	27	28	29	30		23/30	24/31	25	26	27	28	29	27	28	29	30			

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3						1	1	2	3	4	5			
4	5	6	7	8	9	10	8	9	10	11	12	13	14	5	6	7	8	9	10	11
11	12	13	14	15	16	17	15	16	17	18	19	20	21	12	13	14	15	16	17	18
18	19	20	21	22	23	24	22	23	24	25	26	27	28	19	20	21	22	23	24	25
25	26	27	28	29	30	31	29	30	31					26	27	28	29	30		

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2		1	2	3	4	5	6	1	2	3	4				
3	4	5	6	7	8	9	7	8	9	10	11	12	13	5	6	7	8	9	10	11
10	11	12	13	14	15	16	14	15	16	17	18	19	20	12	13	14	15	16	17	18
17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25
24/31	25	26	27	28	29	30	28	29	30					26	27	28	29	30	31	

2022

<p>JANUARY</p> <p>S M T W T F S</p> <p>1</p> <p>2 3 4 5 6 7 8</p> <p>9 10 11 12 13 14 15</p> <p>16 17 18 19 20 21 22</p> <p>23/30 24/31 25 26 27 28 29</p>	<p>FEBRUARY</p> <p>S M T W T F S</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28</p>	<p>MARCH</p> <p>S M T W T F S</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28 29 30 31</p>
<p>APRIL</p> <p>S M T W T F S</p> <p>1 2</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>24 25 26 27 28 29 30</p>	<p>MAY</p> <p>S M T W T F S</p> <p>1 2 3 4 5 6 7</p> <p>8 9 10 11 12 13 14</p> <p>15 16 17 18 19 20 21</p> <p>22 23 24 25 26 27 28</p> <p>29 30 31</p>	<p>JUNE</p> <p>S M T W T F S</p> <p>1 2 3 4</p> <p>5 6 7 8 9 10 11</p> <p>12 13 14 15 16 17 18</p> <p>19 20 21 22 23 24 25</p> <p>26 27 28 29 30</p>
<p>JULY</p> <p>S M T W T F S</p> <p>1 2</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>24/31 25 26 27 28 29 30</p>	<p>AUGUST</p> <p>S M T W T F S</p> <p>1 2 3 4 5 6</p> <p>7 8 9 10 11 12 13</p> <p>14 15 16 17 18 19 20</p> <p>21 22 23 24 25 26 27</p> <p>28 29 30 31</p>	<p>SEPTEMBER</p> <p>S M T W T F S</p> <p>1 2 3</p> <p>4 5 6 7 8 9 10</p> <p>11 12 13 14 15 16 17</p> <p>18 19 20 21 22 23 24</p> <p>25 26 27 28 29 30</p>
<p>OCTOBER</p> <p>S M T W T F S</p> <p>1</p> <p>2 3 4 5 6 7 8</p> <p>9 10 11 12 13 14 15</p> <p>16 17 18 19 20 21 22</p> <p>23/30 24/31 25 26 27 28 29</p>	<p>NOVEMBER</p> <p>S M T W T F S</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28 29 30</p>	<p>DECEMBER</p> <p>S M T W T F S</p> <p>1 2 3</p> <p>4 5 6 7 8 9 10</p> <p>11 12 13 14 15 16 17</p> <p>18 19 20 21 22 23 24</p> <p>25 26 27 28 29 30 31</p>

2023

<p>JANUARY</p> <p>S M T W T F S</p> <p>1 2 3 4 5 6 7</p> <p>8 9 10 11 12 13 14</p> <p>15 16 17 18 19 20 21</p> <p>22 23 24 25 26 27 28</p> <p>29 30 31</p>	<p>FEBRUARY</p> <p>S M T W T F S</p> <p>1 2 3 4</p> <p>5 6 7 8 9 10 11</p> <p>12 13 14 15 16 17 18</p> <p>19 20 21 22 23 24 25</p> <p>26 27 28</p>	<p>MARCH</p> <p>S M T W T F S</p> <p>1 2 3 4</p> <p>5 6 7 8 9 10 11</p> <p>12 13 14 15 16 17 18</p> <p>19 20 21 22 23 24 25</p> <p>26 27 28 29 30 31</p>
<p>APRIL</p> <p>S M T W T F S</p> <p>1</p> <p>2 3 4 5 6 7 8</p> <p>9 10 11 12 13 14 15</p> <p>16 17 18 19 20 21 22</p> <p>23/30 24 25 26 27 28 29</p>	<p>MAY</p> <p>S M T W T F S</p> <p>1 2 3 4 5 6</p> <p>7 8 9 10 11 12 13</p> <p>14 15 16 17 18 19 20</p> <p>21 22 23 24 25 26 27</p> <p>28 29 30 31</p>	<p>JUNE</p> <p>S M T W T F S</p> <p>1 2 3</p> <p>4 5 6 7 8 9 10</p> <p>11 12 13 14 15 16 17</p> <p>18 19 20 21 22 23 24</p> <p>25 26 27 28 29 30</p>
<p>JULY</p> <p>S M T W T F S</p> <p>1</p> <p>2 3 4 5 6 7 8</p> <p>9 10 11 12 13 14 15</p> <p>16 17 18 19 20 21 22</p> <p>23/30 24/31 25 26 27 28 29</p>	<p>AUGUST</p> <p>S M T W T F S</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28 29 30 31</p>	<p>SEPTEMBER</p> <p>S M T W T F S</p> <p>1 2</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>24 25 26 27 28 29 30</p>
<p>OCTOBER</p> <p>S M T W T F S</p> <p>1 2 3 4 5 6 7</p> <p>8 9 10 11 12 13 14</p> <p>15 16 17 18 19 20 21</p> <p>22 23 24 25 26 27 28</p> <p>29 30 31</p>	<p>NOVEMBER</p> <p>S M T W T F S</p> <p>1 2 3 4</p> <p>5 6 7 8 9 10 11</p> <p>12 13 14 15 16 17 18</p> <p>19 20 21 22 23 24 25</p> <p>26 27 28 29 30</p>	<p>DECEMBER</p> <p>S M T W T F S</p> <p>1 2</p> <p>3 4 5 6 7 8 9</p> <p>10 11 12 13 14 15 16</p> <p>17 18 19 20 21 22 23</p> <p>24/31 25 26 27 28 29 30</p>

ABOUT US

Arcadis is the leading global Design & Consultancy for natural and built assets. Applying our deep market sector insights and collective design, consultancy, engineering and project management services we work in partnership with our clients to deliver exceptional and sustainable outcomes throughout the lifecycle of their natural and built assets. In Asia, we have over 4,000 people covering the multiple market across all sectors focused on improving quality of life.

Arcadis has a long history of leading expertise in providing Cost Management capabilities that ensure our clients' projects are delivered with a competitive advantage, exceed project requirements and deliver sustainable outcomes. Our Cost Management heritage is particularly strong in Greater China having set-up our first office in Hong Kong back in 1949. We entered the Mainland China market in 1984, introducing modern Cost Management techniques to its newly evolving construction market. Our initial commissions were from Hong Kong and foreign developers investing in China, however since then our client base has grown to include state-owned enterprises and local developers.

We are committed to further extending our professional expertise to include new areas like whole-life costing, and supporting the growing number of clients in Asia who are looking for high quality Cost Management solutions as they embark on projects in other parts of the world. Furthermore, we have aligned our operating models to facilitate innovation, ease knowledge transfer and enable the sharing of best practices. We work to ensure clients have access to our best resources, delivering the most appropriate solutions, at a cost that meets their requirements.

OUR CORE VALUES



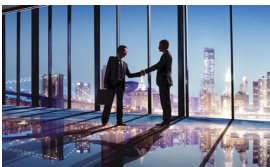
People First

We care for each other and create a safe and respectful working environment where our people can grow, perform, and succeed.



Integrity

We always work to the highest professional and ethical standards and establish trust by being open, honest and responsible.



Client Success

We are passionate about our clients' success and bring insights, agility, and innovation to co-create value.



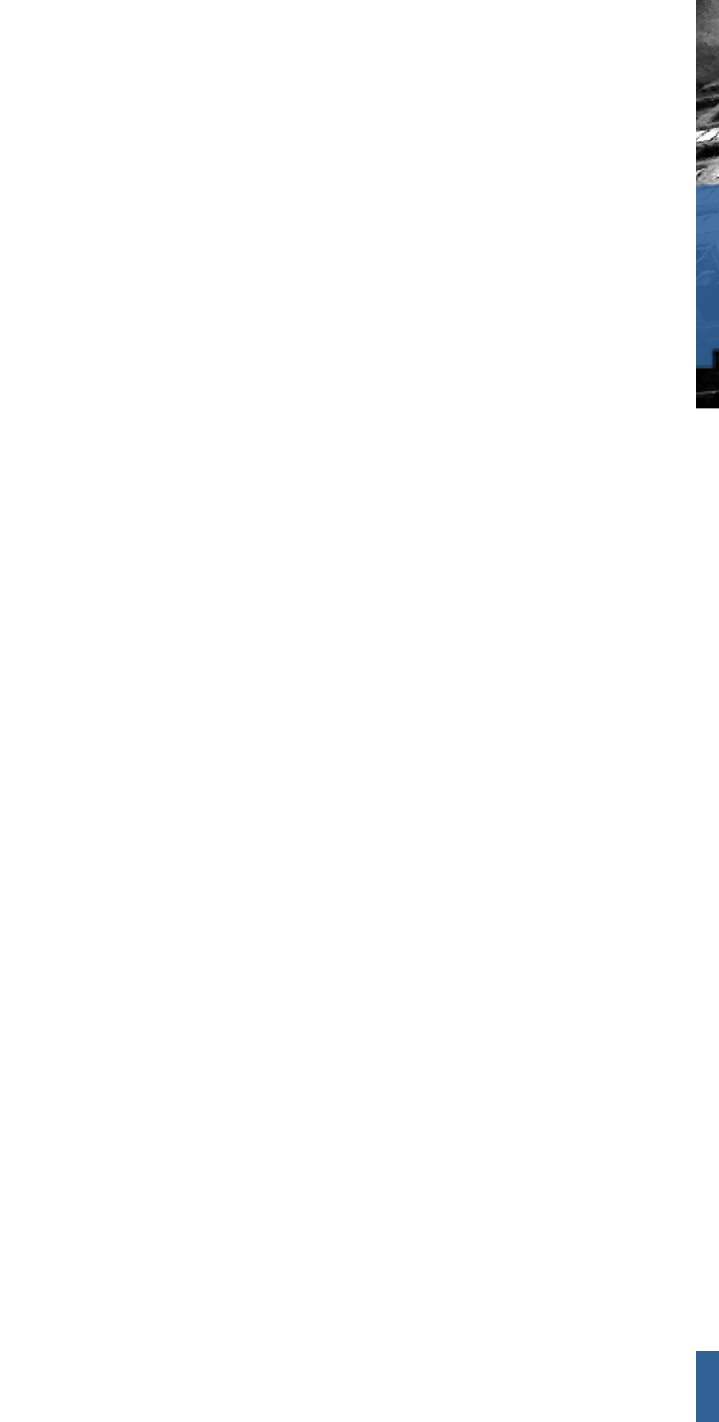
Collaboration

We value the power of diversity and our global capabilities and deliver excellence by working as One Arcadis.



Sustainability

We base our actions for clients and communities on environmental responsibility and social and economic advancement.





CONSTRUCTION COST DATA

1

Construction Costs for Hong Kong

M&E Costs for Hong Kong

ACMV Costs for Various Designs and
Developments in Hong Kong

Fit-out Costs for Hong Kong

Unit Costs for Ancillary Facilities
for Hong Kong

Construction Costs for Selected
Asian Cities

M&E Costs for Selected Asian Cities

Major Rates for Selected Asian Cities

Construction Cost Specification

1 CONSTRUCTION COST DATA

CONSTRUCTION COSTS FOR HONG KONG

CONSTRUCTION COSTS FOR HONG KONG

BUILDING TYPE	HK\$/m ² CFA		
	BUILDING	SERVICES	TOTAL
<u>DOMESTIC</u>			
Apartments, high rise, public authority standard	8,750 - 10,550	1,950 - 2,350	10,700 - 12,900
Apartments, high rise, average standard	19,450 - 21,350	3,750 - 5,450	23,200 - 26,800
Apartments, high rise, high end	25,200 - 28,450	4,800 - 6,550	30,000 - 35,000
Terraced houses, average standard	28,000 - 31,800	3,600 - 4,800	31,600 - 36,600
Detached houses, high end	40,300 up	6,000 up	46,300 up
<u>OFFICE / COMMERCIAL</u>			
Medium/high rise offices, average standard	17,350 - 19,350	5,550 - 6,950	22,900 - 26,300
High rise offices, prestige quality	21,200 - 23,950	6,200 - 7,650	27,400 - 31,600
Out-of-town shopping centre, average standard	16,800 - 19,850	5,900 - 6,750	22,700 - 26,600
Retail malls, high end	23,200 - 27,400	6,200 - 7,600	29,400 - 35,000

<u>HOTELS</u>			
Budget hotels - 3-star, mid market	22,250 - 22,600	6,850 - 8,400	29,100 - 31,000
Business hotels - 4/5-star	22,550 - 25,700	7,550 - 9,400	30,100 - 35,100
Luxury hotels - 5-star	27,550 - 31,000	7,550 - 9,400	35,100 - 40,400
<u>INDUSTRIAL</u>			
Owner operated factories, low rise, light weight industry	15,300 - 19,050	2,300 - 3,050	17,600 - 22,100
<u>OTHERS</u>			
Underground/basement car parks (<3 levels)	22,200 - 26,150	2,600 - 3,550	24,800 - 29,700
Multi storey car parks, above ground(<4 levels)	12,800 - 14,550	2,000 - 3,050	14,800 - 17,600
Schools (primary and secondary)	16,350 - 17,000	2,950 - 3,800	19,300 - 20,800
Students' residences	17,450 - 19,150	4,650 - 5,750	22,100 - 24,900
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	23,100 - 25,500	5,900 - 7,600	29,000 - 33,100
General hospitals - public sector	28,500 - 30,350	8,300 - 10,550	36,800 - 40,900

The above costs are at **4th Quarter 2020** levels.

M&E COSTS FOR HONG KONG

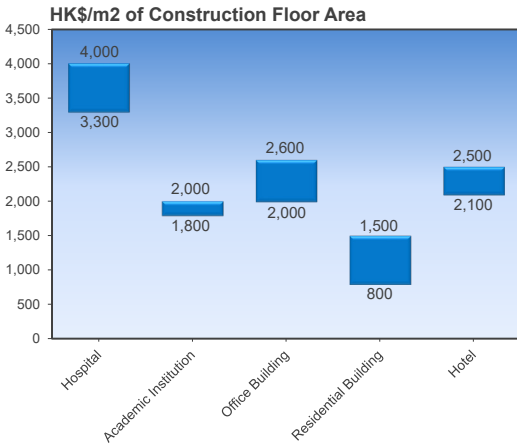
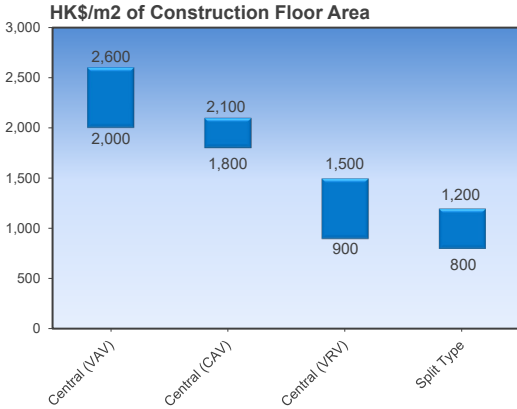
M&E COSTS FOR HONG KONG

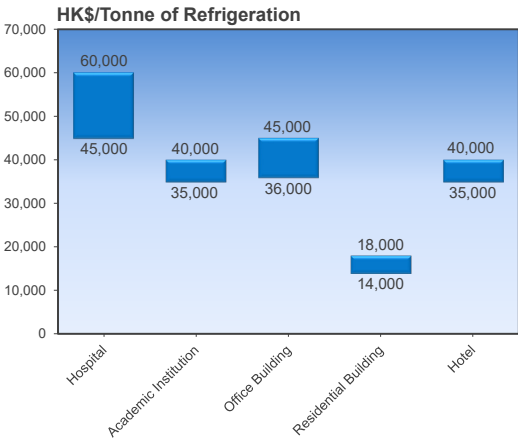
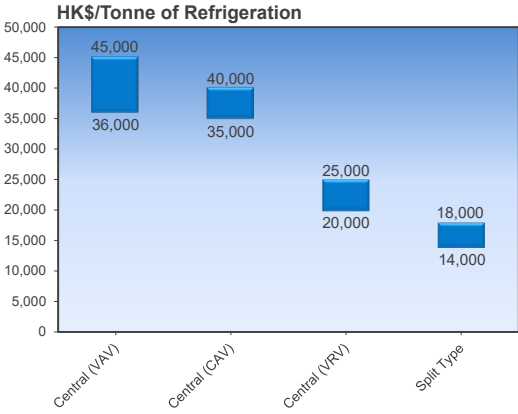
BUILDING TYPE	HK\$/m ² CFA					
	MECHANICAL SERVICES	ELECTRICAL SERVICES	FIRE SERVICES	LIFTS/ ESCALATORS	HYDRAULIC SERVICES	TOTAL SERVICES
<u>DOMESTIC</u>						
Apartments, high rise, public authority standard	--	600 - 700	150 - 200	300 - 350	900 - 1,100	1,950 - 2,350
Apartments, high rise, average standard	800 - 1,000	1,000 - 1,300	200 - 600	450 - 750	1,300 - 1,800	3,750 - 5,450
Apartments, high rise, high end	1,200 - 1,500	1,300 - 1,600	200 - 600	500 - 850	1,600 - 2,000	4,800 - 6,550
Terraced houses, average standard	1,000 - 1,400	1,100 - 1,400	100 - 200	--	1,400 - 1,800	3,600 - 4,800
Detached houses, high end	2,000 up	2,100 up	100 up	--	1,800 up	6,000 up
<u>OFFICE / COMMERCIAL</u>						
Medium/high rise offices, average standard	1,900 - 2,300	1,700 - 2,200	550 - 700	700 - 900	700 - 850	5,550 - 6,950
High rise offices, prestige quality	2,100 - 2,600	2,000 - 2,400	550 - 700	850 - 1,100	700 - 850	6,200 - 7,650
Out-of-town shopping centre, average standard	2,100 - 2,300	1,700 - 2,000	550 - 700	850 - 900	700 - 850	5,900 - 6,750
Retail malls, high end	2,100 - 2,600	2,000 - 2,400	550 - 700	850 - 1,000	700 - 900	6,200 - 7,600

<u>HOTELS</u>									
Budget hotels - 3-star, mid market	2,000 - 2,300	1,900 - 2,200	600 - 850	550 - 750	1,800 - 2,300	6,850 - 8,400			
Business hotels - 4/5-star	2,200 - 2,500	2,200 - 2,500	600 - 850	550 - 850	2,000 - 2,700	7,550 - 9,400			
Luxury hotels - 5-star	2,200 - 2,500	2,200 - 2,500	600 - 850	550 - 850	2,000 - 2,700	7,550 - 9,400			
<u>INDUSTRIAL</u>									
Owner operated factories, low rise, light weight industry	200 - 300	650 - 850	400 - 500	550 - 750	500 - 650	2,300 - 3,050			
<u>OTHERS</u>									
Underground/basement car parks (<3 levels)	850 - 1,000	650 - 950	350 - 450	350 - 450	400 - 700	2,600 - 3,550			
Multi storey car parks, above ground (<4 levels)	350 - 650	550 - 800	350 - 450	350 - 450	400 - 700	2,000 - 3,050			
Schools (primary and secondary)	750 - 950	1,000 - 1,250	450 - 550	200 - 350	550 - 700	2,950 - 3,800			
Students' residences	750 - 950	1,700 - 1,900	600 - 850	200 - 350	1,400 - 1,700	4,650 - 5,750			
Sports clubs, multi purpose sports/leisure centres (dry sports) with a/c and including FF&E	2,500 - 3,000	1,800 - 2,500	600 - 850	350 - 450	650 - 800	5,900 - 7,600			
General hospitals - public sector	3,200 - 4,000	2,500 - 3,000	700 - 950	400 - 600	1,500 - 2,000	8,300 - 10,550			

The above costs are at 4th Quarter 2020 levels.

ACMV COSTS FOR VARIOUS DESIGNS AND DEVELOPMENTS IN HONG KONG





FIT-OUT COSTS FOR HONG KONG

BUILDING TYPE	HK\$/m ²
HOTELS	
Public Areas (Front of House) :	
3-star Hotel	10,200 - 15,300
4-star Hotel	15,500 - 21,200
5-star Hotel	21,500 up
Guest Rooms :	
3-star Hotel	8,700 - 10,300
4-star Hotel	10,500 - 13,800
5-star Hotel	14,000 up
Notes :	
<ol style="list-style-type: none"> 1. Includes furniture, floor, wall and ceiling finishes, drapery, sanitary fittings and light fittings. 2. Excludes partitioning, M&E works, building shell, chandeliers, operational items and equipment (e.g. cutlery, crockery, linen, television, refrigerator etc.), opening expenses, stage equipment and computer systems. 	
OFFICES	
General office	6,200 - 9,500
Executive office	9,700 - 13,300
Prestige office	13,500 up
Notes :	
<ol style="list-style-type: none"> 1. Local/PRC furniture allowed for general offices. 2. Includes furniture, partitioning, electrical work, minor alteration to air-conditioning, fire services and suspended ceiling to suit layout. 3. Excludes telephones, data cabling, office equipment (e.g. computers, photocopiers, fax machines, UPS, etc). 	

The above costs are at **4th Quarter 2020** levels.

BUILDING TYPE	HK\$/m ²
<p>DEPARTMENT STORES</p> <p>General department store</p> <p>Prestige department store</p> <p>Notes :</p> <ol style="list-style-type: none"> <i>Includes electrical work, additional FCU and minor alteration of fire services to suit layout.</i> <i>Excludes facade modification, data cabling, operational items and equipment (e.g. computers, P.O.S., office equipment) and opening expenses.</i> 	<p>7,700 - 12,300</p> <p>12,500 up</p>
<p>RESTAURANTS</p> <p>General dining restaurant</p> <p>Fine dining restaurant</p> <p>Notes :</p> <ol style="list-style-type: none"> <i>Includes furniture, floor, wall and ceiling finishes, electrical work, minor alteration to air-conditioning and fire services installation to suit layout, exhaust for kitchen.</i> <i>Excludes exhaust flue, operational items (e.g. cutlery, crockery, linen, utensils, etc.).</i> 	<p>11,500 - 19,600</p> <p>23,000 up</p>

The costs per square meter are based on fit-out area measured to the inner face of the perimeter wall.

1 CONSTRUCTION COST DATA

UNIT COSTS FOR ANCILLARY FACILITIES FOR HONG KONG

DESCRIPTION	UNIT	HK\$
SQUASH COURTS Single court with glass backwall including associated mechanical and electrical services but excluding any public facilities (enclosing structure not included).	per court	700,000
TENNIS COURTS Single court on grade with acrylic surfacing and complete with chain link fence.	per court	1,500,000
Single court on grade with artificial turf surfacing and complete with chain link fence.	per court	1,700,000
Extra for lighting.	per court	600,000
SWIMMING POOLS Half Olympic (25m x 10.50m) outdoor swimming pool built on-grade, fully tiled; complete with 5m wide deck and associated pool equipment and ozone system.	per pool	10,000,000
PLAYGROUND EQUIPMENT Outdoor playground equipment comprising various activities.	per set	300,000 to 800,000

The above costs are at **4th Quarter 2020** levels.

DESCRIPTION	UNIT	HK\$
SAUNAS Sauna room for 4-6 people complete with all accessories (enclosing structure not included).	per room	300,000
STEAM BATHS Steam bath for 4-6 people complete with all accessories (enclosing structure not included).	per room	300,000
GOLF COURSES (Based on average cost of an 18-hole golf course) Excluding associated buildings and equipment.	per hole	8,000,000 to 14,000,000
GREEN ROOF Proprietary lightweight green roof system; with automatic irrigation system (roofing and roof structure not included).	per m2	2,000 to 5,000
VERTICAL GREEN Vertical green system; wire frame type, with automatic irrigation system (background supporting wall not included).	per m2	5,000 to 10,000

CONSTRUCTION COSTS FOR SELECTED ASIAN CITIES

BUILDING TYPE	US\$/m ² CFA			
	SHANGHAI +	BEIJING +	GUANGZHOU/ SHENZHEN +	CHONGQING/ CHENGDU +
<u>DOMESTIC</u>				
Apartments, high rise, average standard	740 - 816	652 - 716	627 - 690	603 - 718
Apartments, high rise, high end	1,672 - 1,822	1,579 - 1,798	1,009 - 1,104	976 - 1,231
Terraced houses, average standard	1,023 - 1,114	933 - 1,011	940 - 1,090	833 - 985
Detached houses, high end	1,799 - 1,908	1,793 - 1,871	1,803 - 2,049	1,061 - 1,212
<u>OFFICE / COMMERCIAL</u>				
Medium/high rise offices, average standard	941 - 1,243	912 - 1,228	876 - 976	958 - 1,108
High rise offices, prestige quality	1,220 - 1,669	1,482 - 2,017	1,280 - 1,544	1,210 - 1,629
Out-of-town shopping centre, average standard	N/A	695 - 929	844 - 926	773 - 989
Retail malls, high end	1,294 - 1,669	1,257 - 1,730	1,226 - 1,714	1,152 - 1,613
<u>HOTELS</u>				
Budget hotels - 3-star, mid market	1,039 - 1,267	1,028 - 1,267	1,110 - 1,221	1,038 - 1,281
Business hotels - 4/5-star	1,674 - 2,267	1,719 - 2,269	1,794 - 2,561	1,867 - 2,331
Luxury hotels - 5-star	2,264 - 2,707	2,188 - 2,816	2,439 - 2,688	2,301 - 2,756

INDUSTRIAL							
Industrial units, shell only (Conventional single storey framed units)	293 - 358	287 - 350	327 - 390	471 - 593			
Owner operated factories, low rise, light weight industry	453 - 566	555 - 636	N/A	N/A			
OTHERS							
Underground/basement car parks (<3 levels)	776 - 1,082	794 - 873	579 - 924	457 - 642			
Multi storey car parks, above ground (<4 levels)	398 - 555	478 - 483	413 - 456	363 - 449			
Schools (primary and secondary)	593 - 749	553 - 714	459 - 505	483 - 535			
Students' residences	434 - 592	391 - 553	290 - 320	337 - 490			
Sports clubs, multi purpose sports/leisure centres (dry sports)	1,001 - 1,229	947 - 955	800 - 880	765 - 842			
General hospitals - public sector	1,529 - 1,972	1,245 - 1,559	1,212 - 1,515	1,225 - 1,530			
Exchange Rate Used : US\$1 =	RMB 6.60	RMB 6.60	RMB 6.60	RMB 6.60			

The above costs are at **4th Quarter 2020** levels, inclusive of preliminaries but exclusive of contingencies.

- + Schools (primary and secondary) are of public authority standard, no a/c and complete with basic external works.

(Cont'd)

CONSTRUCTION COSTS FOR SELECTED ASIAN CITIES

CONSTRUCTION COSTS FOR SELECTED ASIAN CITIES (Cont'd)

BUILDING TYPE	US\$/m ² CFA			
	HONG KONG £	MACAU ₮	SINGAPORE *	KUALA LUMPUR
<u>DOMESTIC</u>				
Apartments, high rise, average standard	2,990 - 3,460	2,308 - 2,823	1,360 - 1,505	305 - 590 [▲]
Apartments, high rise, high end	3,870 - 4,520	3,223 - 4,926	2,095 - 3,090	710 - 1,410
Terraced houses, average standard	4,080 - 4,720	3,934 - 4,694	1,765 - 1,950	220 - 350 [▲]
Detached houses, high end	5,970 up	4,798 - 6,242	2,245 - 2,940	740 - 1,000
<u>OFFICE / COMMERCIAL</u>				
Medium/high rise offices, average standard	2,950 - 3,390	2,657 - 3,430	1,765 - 1,950 [*]	580 - 755 [■]
High rise offices, prestige quality	3,540 - 4,080	3,430 - 3,753	1,985 - 2,130 [*]	900 - 1,280 [▼]
Out-of-town shopping centre, average standard	2,930 - 3,430	2,502 - 3,753	1,985 - 2,060	545 - 725
Retail malls, high end	3,790 - 4,520	3,934 - 4,746	2,095 - 2,280	680 - 1,015
<u>HOTELS</u>				
Budget hotels - 3-star, mid market	3,750 - 4,000	3,495 - 3,959	2,205 - 2,390	1,015 - 1,420
Business hotels - 4/5-star	3,880 - 4,530	4,746 - 5,673	2,830 - 3,160	1,340 - 2,210
Luxury hotels - 5-star	4,530 - 5,210	5,673 - 6,706	2,830 - 3,160	1,935 - 2,475

INDUSTRIAL							
Industrial units, shell only (Conventional single storey framed units)	N/A		770 - 940				320 - 440
Owner operated factories, low rise, light weight industry	2,270 - 2,850	N/A	N/A				430 - 530
OTHERS							
Underground/basement car parks (<3 levels)	3,200 - 3,830	2,076 - 3,044	955 - 1,270				310 - 540
Multi storey car parks, above ground (<4 levels)	1,910 - 2,270	1,148 - 1,509	660 - 940	▼			220 - 350
Schools (primary and secondary)	2,490 - 2,680	2,295 - 2,657	N/A				250 - 315
Students' residences	2,850 - 3,210	1,818 - 2,115	1,620 - 1,730				295 - 370
Sports clubs, multi purpose sports/leisure centres (dry sports)	3,740 - 4,270	N/A	2,020 - 2,130				595 - 740
General hospitals - public sector	4,750 - 5,280	N/A	2,830 - 2,940				850 - 1,170
Exchange Rate Used : US\$1 =	HK\$ 7.75	MOP 7.98	S\$ 1.36				RM 4.11

The above costs are at 4th Quarter 2020 levels, inclusive of preliminaries but exclusive of contingencies.

- £ Offices of average standard are built to the following provisions:
- Curtain wall/window wall facade
 - ◆ Tenant areas include screeded floor, painted wall and ceiling
 - ◆ Schools (primary and secondary) are of public authority standard, no a/c and complete with basic external works.
 - ▼ Open on all sides with parapet.
- Rates are exclusive of any management contract fee.
- Rates are net of GST and exclusive of cost impact arising from COVID-19 pandemic.
- Includes raised floor and ceiling to tenanted areas but excludes office carpets (normally under tenant's fit-out).
- Open on all sides with parapet.
- 6 - 12 units per floor, 46m² - 83m² per unit, exclude air-conditioning equipment, kitchen cabinets and home appliances.
- Terraced houses exclude air-conditioning, kitchen cabinets and home appliances.
- Offices exclude tenant fitout and raised floor.
- Offices exclude tenant fitout.
- Schools are standard government provisions.
- ◆ Student hostels to university standard.

(Cont'd)

CONSTRUCTION COSTS FOR SELECTED ASIAN CITIES

CONSTRUCTION COSTS FOR SELECTED ASIAN CITIES (Cont'd)

BUILDING TYPE	US\$/m ² CFA				
	MANILA ^Ω	INDIA ^ϕ	BANGKOK ^œ	HO CHI MINH &	JAKARTA *
DOMESTIC					
Apartments, high rise, average standard	1,009 - 1,422	585 - 665	800 - 947	638 - 791	834 - 944
Apartments, high rise, high end	1,363 - 2,590	880 - 1,060	1,066 - 1,312	812 - 931	1,149 - 1,297
Terraced houses, average standard	983 - 1,203	405 - 425	500 - 614	430 - 505	443 - 576
Detached houses, high end	1,909 - 3,237	530 - 560	866 - 1,046	491 - 599	1,202 - 1,343
OFFICE / COMMERCIAL					
Medium/high rise offices, average standard	999 - 1,236	460 - 500	800 - 947	746 - 864	822 - 912
High rise offices, prestige quality	1,446 - 1,823	580 - 610	999 - 1,279	861 - 1,173	1,295 - 1,434
Out-of-town shopping centre, average standard	849 - 1,058	450 - 490	683 - 880	N/A	708 - 783
Retail malls, high end	1,160 - 1,626	630 - 675	916 - 963	697 - 913	780 - 845
HOTELS					
Budget hotels - 3-star, mid market	1,269 - 1,415	865 - 960	1,249 - 1,378	1,384 - 1,694	1,430 - 1,689
Business hotels - 4/5-star	1,430 - 2,389	1,350 - 1,600	1,599 - 1,827	N/A	1,950 - 2,106
Luxury hotels - 5-star	1,965 - 3,783	1,705 - 1,870	1,866 - 2,159	1,748 - 2,098	2,071 - 2,336

INDUSTRIAL									
Industrial units, shell only (Conventional single storey framed units)	566 - 633	365 - 420	533 - 664	306 - 386	380 - 414				
Owner operated factories, low rise, light weight industry	761 - 951	385 - 450	N/A	347 - 457	413 - 456				
OTHERS									
Underground/basement car parks (<3 levels)	594 - 783	295 - 320	600 - 797	633 - 756	587 - 721				
Multi storey car parks, above ground (<4 levels)	504 - 725	245 - 265	200 - 325	407 - 447	380 - 414				
Schools (primary and secondary)	744 - 1,026	305 - 340	N/A	535 - 584	N/A				
Students' residences	787 - 1,010	335 - 370	N/A	535 - 687	N/A				
Sports clubs, multi purpose sports/leisure centres (dry sports)	1,259 - 1,831	620 - 650	N/A	791 - 846	1,200 - 1,798				
General hospitals - public sector	1,512 - 1,753	675 - 740	N/A	N/A	N/A				
Exchange Rate Used : US\$1 =	PHP 48.94	INR 74.39	BAHT 30.28	VND 23,500	IDR 14,458				

The above costs are at **4th Quarter 2020** levels, inclusive of preliminaries but exclusive of contingencies.

Ω Rates include 12% VAT.

ϕ Rates are based on projects in Bangalore and are nett of GST.

Mumbai costs are generally 8% higher.

The data for India is provided by

Arkind LS Private Limited, an Arcadis Alliance Partner.

& Rates are nett of VAT.

∞ Rates exclude VAT.

* The data for Jakarta is provided by PT Lantera Sejahtera Indonesia.

M&E COSTS FOR SELECTED ASIAN CITIES

M&E COSTS FOR SELECTED ASIAN CITIES

BUILDING TYPE	SHANGHAI		BEIJING		GUANGZHOU/ SHENZHEN		CHONGQING/ CHENGDU	
	RMB/m ² CFA		RMB/m ² CFA		RMB/m ² CFA		RMB/m ² CFA	
<u>MECHANICAL SERVICES</u>								
Offices	822 - 1,045		783 - 1,212		775 - 1,150		758 - 1,030	
Industrial *	182 - 307		172 - 283		155 - 285		146 - 242	
Hotels	1,040 - 1,356		960 - 1,236		1,080 - 1,350		970 - 1,333	
Shopping Centres	1,102 - 1,160		814 - 980		715 - 910		929 - 1,050	
Apartment	330 - 436		144 - 464		152 - 410		157 - 313	
<u>ELECTRICAL SERVICES</u>								
Offices	645 - 728		475 - 859		540 - 795		470 - 687	
Industrial **	323 - 457		329 - 464		320 - 459		273 - 374	
Hotels	703 - 898		726 - 972		715 - 980		606 - 864	
Shopping Centres	561 - 703		495 - 697		500 - 690		530 - 687	
Apartment	272 - 399		261 - 410		285 - 500		237 - 354	
<u>HYDRAULIC SERVICES</u>								
Offices	115 - 171		98 - 144		103 - 184		89 - 126	
Industrial	92 - 135		98 - 144		89 - 124		89 - 126	
Hotels	389 - 535		381 - 495		390 - 500		343 - 470	

Shopping Centres	145 - 195	144 - 206	114 - 168	106 - 157
Apartment	177 - 240	175 - 236	150 - 280	106 - 187
<u>FIRE SERVICES</u>				
Offices	241 - 338	186 - 273	230 - 350	250 - 303
Industrial	167 - 278	155 - 232	143 - 272	136 - 242
Hotels	306 - 412	226 - 387	285 - 425	263 - 364
Shopping Centres	273 - 407	226 - 387	248 - 383	263 - 384
Apartment	58 - 108	72 - 139	72 - 185	61 - 116
<u>LIFTS / ESCALATORS</u>				
Offices	294 - 578	297 - 583	295 - 517	313 - 576
Industrial	142 - 410	146 - 404	150 - 440	157 - 364
Hotels	230 - 520	234 - 525	250 - 480	261 - 449
Shopping Centres	342 - 520	330 - 525	325 - 470	303 - 460
Apartment	173 - 306	177 - 292	130 - 450	146 - 253

The above costs are at **4th Quarter 2020** levels, exclusive of contingencies.

* Generally without A/C.

** Excludes special power supply.

(Cont'd)

M&E COSTS FOR SELECTED ASIAN CITIES

M&E COSTS FOR SELECTED ASIAN CITIES (Cont'd)

BUILDING TYPE	HONG KONG		MACAU	SINGAPORE *	KUALA LUMPUR
	HK\$/m ² CFA		MOP/m ² CFA	S\$/m ² CFA	RM/m ² CFA
<u>MECHANICAL SERVICES</u>					
Offices	1,900 - 2,600		N/A	153 - 249	330 - 495
Industrial *	200 - 300		N/A	34 - 117	90 - 190
Hotels	2,000 - 2,500		2,590 - 2,990	215 - 278	315 - 595
Shopping Centres	2,100 - 2,600		2,350 - 2,940	147 - 246	310 - 480
Apartment	800 - 2,000 up		900 - 1,200	90 - 170	125 - 210
<u>ELECTRICAL SERVICES</u>					
Offices	1,700 - 2,400		N/A	158 - 258	300 - 465
Industrial **	650 - 850		N/A	55 - 136	155 - 195
Hotels	1,900 - 2,500		2,590 - 3,090	277 - 367	310 - 550
Shopping Centres	1,700 - 2,400		2,590 - 2,940	160 - 304	305 - 465
Apartment	1,000 - 2,100up		1,000 - 1,290	112 - 236	115 - 215
<u>HYDRAULIC SERVICES</u>					
Offices	700 - 850		N/A	26 - 55	45 - 70
Industrial	500 - 650		N/A	18 - 36	45 - 55
Hotels	1,800 - 2,700		1,790 - 2,190	122 - 172	185 - 275

Shopping Centres	700 - 900	600 - 790	46 - 80	35 - 40
Apartment	1,300 - 2,000	1,490 - 1,990	79 - 143	55 - 100
<u>FIRE SERVICES</u>				
Offices	550 - 700	N/A	33 - 56	65 - 85
Industrial	400 - 500	N/A	23 - 51	55 - 70
Hotels	600 - 850	910 - 1,120	28 - 55	65 - 100
Shopping Centres	550 - 700	610 - 810	37 - 56	60 - 80
Apartment	100 - 600	250 - 300	24 - 51	20 - 30
<u>LIFTS / ESCALATORS</u>				
Offices	700 - 1,100	N/A	63 - 162	135 - 355
Industrial	550 - 750	N/A	41 - 104	55 - 180
Hotels	550 - 850	610 - 810	49 - 82	105 - 295
Shopping Centres	850 - 1,000	460 - 710	56 - 90	100 - 120
Apartment	450 - 850	460 - 610	41 - 113	70 - 110

The above costs are at **4th Quarter 2020** levels, exclusive of contingencies.

* Generally without A/C.

** Excludes special power supply.

♣ Rates are nett of GST, excluding BAS and cost impact arising from COVID-19 pandemic.

(Cont'd)

M&E COSTS FOR SELECTED ASIAN CITIES

M&E COSTS FOR SELECTED ASIAN CITIES (Cont'd)

BUILDING TYPE	MANILA [□]	INDIA [Ⓔ]	BANGKOK [Ⓔ]	HO CHI MINH	JAKARTA #
	PHP/m ² CFA	INR/m ² CFA	BAHT/m ² CFA	VND/m ² CFA	IDR/m ² CFA
<u>MECHANICAL SERVICES</u>					
Offices	4,000 - 7,150	5,110 - 6,995	4,400 - 4,800	2,132,000 - 3,035,000	1,013,000 - 1,166,000
Industrial *	800 - 1,600	2,400 - 4,465	1,550 - 1,600	N/A	459,000 - 733,000
Hotels	3,500 - 11,190	5,920 - 7,000	4,600 - 5,200	N/A	1,044,000 - 1,356,000
Shopping Centres	2,890 - 7,070	5,215 - 7,130	4,600 - 4,800	N/A	892,000 - 1,071,000
Apartment	1,390 - 4,450	2,690 - 3,765	4,300 - 4,500	1,601,000 - 2,193,000	997,000 - 1,266,000
<u>ELECTRICAL SERVICES</u>					
Offices	3,500 - 7,690	4,620 - 6,930	3,400 - 3,800	2,204,000 - 2,641,000	890,000 - 1,092,000
Industrial **	2,000 - 3,500	2,720 - 4,925	1,950 - 2,200	N/A	580,000 - 722,000
Hotels	4,900 - 10,200	5,125 - 7,625	3,800 - 4,500	N/A	843,000 - 1,161,000
Shopping Centres	3,060 - 6,600	4,405 - 6,430	2,800 - 3,200	N/A	712,000 - 897,000
Apartment	3,600 - 6,300	2,330 - 3,330	2,800 - 3,350	1,938,000 - 2,443,000	939,000 - 1,097,000
<u>HYDRAULIC SERVICES</u>					
Offices	1,230 - 2,200	800 - 1,345	780 - 900	340,000 - 630,000	216,000 - 311,000
Industrial	800 - 1,400	550 - 1,050	750 - 790	N/A	137,000 - 211,000
Hotels	2,250 - 6,820	4,210 - 6,910	1,400 - 1,650	N/A	986,000 - 1,161,000

Shopping Centres	1,220 - 1,650	1,200 - 2,365	790 - 950	N/A	195,000 - 301,000
Apartment	2,250 - 4,100	1,900 - 2,865	1,200 - 1,400	660,000 - 770,000	997,000 - 1,181,000
<u>FIRE SERVICES</u>					
Offices	980 - 1,720	1,290 - 1,835	780 - 850	734,000 - 1,209,000	296,000 - 411,000
Industrial	1,000 - 2,500	590 - 885	730 - 750	N/A	148,000 - 211,000
Hotels	1,100 - 2,120	1,500 - 2,090	780 - 890	N/A	327,000 - 406,000
Shopping Centres	1,090 - 1,730	1,235 - 1,555	780 - 820	N/A	274,000 - 321,000
Apartment	980 - 1,350	690 - 895	750 - 850	515,000 - 646,000	311,000 - 338,000
<u>LIFTS / ESCALATORS</u>					
Offices	1,800 - 4,930	1,020 - 1,340	1,100 - 1,400	680,000 - 1,300,000	580,000 - 1,171,000
Industrial	0 - 730	680 - 880	N/A	N/A	N/A
Hotels	1,800 - 3,500	1,530 - 2,225	1,100 - 1,400	N/A	697,000 - 1,087,000
Shopping Centres	1,600 - 3,010	1,790 - 2,290	300 - 450	1,390,000 - 1,960,000	321,000 - 865,000
Apartment	850 - 3,440	920 - 1,200	600 - 800	770,000 - 1,120,000	707,000 - 881,000

The above costs are at **4th Quarter 2020** levels, exclusive of contingencies.

* Generally without A/C.

** Excludes special power supply.

Ω Transformer, included in Electrical Services.

⊘ Based upon nett enclosed area and nett of VAT.

The data for Jakarta is provided by PT Lantera Sejahtera Indonesia.

⊘ Rates are based on projects in Bangalore and are nett of GST. Mumbai costs are generally 8% higher.

The data for India is provided by Arkind LS Private Limited, an Arcadis Alliance Partner

(Cont'd)

MAJOR RATES FOR SELECTED ASIAN CITIES

MAJOR RATES FOR SELECTED ASIAN CITIES

DESCRIPTION	UNIT	SHANGHAI		BEIJING		GUANGZHOU/ SHENZHEN		CHONGQING/ CHENGDU	
		RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB
1. Excavating basement ≤ 2.00m deep	m ³	30	33	40	35	40	35	35	35
2. Excavating for footings ≤ 1.50m deep	m ³	30	35	40	35	40	35	35	35
3. Remove excavated materials off site	m ³	190	120	110	120	110	65	65	65
4. Hardcore bed blinded with fine materials	m ³	190	190	190	190	190	180	180	180
5. Mass concrete grade 15	m ³	660	610	740	610	740	530	530	530
6. Reinforced concrete grade 30	m ³	700	650	800	650	800	560	560	560
7. Mild steel rod reinforcement	kg	5.4	5.6	6	5.6	6	5.5	5.5	5.5
8. High tensile rod reinforcement	kg	5.4	5.6	6	5.6	6	5.5	5.5	5.5
9. Sawn formwork to soffits of suspended slabs	m ²	95	90	90	90	90	65	65	65
10. Sawn formwork to columns and walls	m ²	90	85	85	85	85	60	60	60
11. 112.5mm thick brick walls	m ²	100**	80	100	80	100	80	80	80
12. "Kliplok Colorbond" 0.64mm profiled steel sheeting	m ²	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

13. Aluminium casement windows, single glazed	m ²	700	815*	700	670*
14. Structural steelwork - beams, stanchions and the like	kg	10	11	12.5	10
15. Steelwork - angles, channels, flats and the like	kg	8.5	9.5	11.5	9
16. 25mm cement and sand (1:3) paving	m ²	35	32	36	30
17. 20mm cement and sand (1:4) plaster to walls	m ²	35	32	36	30
18. Ceramic tiles bedded to floor screed (measured separately)	m ²	160	145	155	140
19. 12mm fibrous plasterboard ceiling lining	m ²	160	162	165	150
20. Two coats of emulsion paint to plastered surfaces	m ²	40	32	35	35
Average expected preliminaries	%	6 - 12	5 - 12	7 - 10	6 - 12

The above costs are at **4th Quarter 2020** levels and are based on lump sum fixed price contract rates exclusive of preliminaries and contingencies.

* Rates for double glazed window.

** Rate for 120mm thick concrete block walls

(Cont'd)

MAJOR RATES FOR SELECTED ASIAN CITIES

MAJOR RATES FOR SELECTED ASIAN CITIES (Cont'd)

DESCRIPTION	UNIT	HONG KONG				MACAU		SINGAPORE		KUALA LUMPUR	
		HK\$			MOP		S\$		RM		
1. Excavating basement ≤ 2.00m deep	m ³	210			150		20		15 - 26		
2. Excavating for footings ≤ 1.50m deep	m ³	190			180		20		15 - 26		
3. Remove excavated materials off site	m ³	290 ^e			150		15 - 20		18 - 30		
4. Hardcore bed blinded with fine materials	m ³	940			1,300		50		72 - 100		
5. Mass concrete grade 15	m ³	1,050			1,500		177 - 187**		225 - 295		
6. Reinforced concrete grade 30	m ³	1,150			1,400		117 - 122		250 - 300		
7. Mild steel rod reinforcement	kg	9.5			7.5		1.25 - 1.35		3.25 - 3.7		
8. High tensile rod reinforcement	kg	9.5			7.5		1.25 - 1.35		3.25 - 3.7		
9. Sawn formwork to soffits of suspended slabs	m ²	400			280		40		36 - 46		
10. Sawn formwork to columns and walls	m ²	400			280		40		36 - 46		
11. 112.5mm thick brick walls	m ²	390			450		35 - 40		43 - 50		
12. "Kliplok Colorbond" 0.64mm profiled steel sheeting	m ²	1,000			N/A		43		70 - 90		

13. Aluminium casement windows, single glazed	m ²	3,800	4,000	290	380 - 600
14. Structural steelwork - beams, stanchions and the like	kg	35	30	4 - 4.5	6.5 - 9.5
15. Steelwork - angles, channels, flats and the like	kg	42	40	4 - 4.5	6.5 - 9.5
16. 25mm cement and sand (1:3) paving	m ²	155	120	21	17 - 26
17. 20mm cement and sand (1:4) plaster to walls	m ²	160	150	22	18 - 28
18. Ceramic tiles bedded to floor screed (measured separately)	m ²	400	450	74	55 - 80
19. 12mm fibrous plasterboard ceiling lining	m ²	570	650	30	36 - 46
20. Two coats of emulsion paint to plastered surfaces	m ²	90	200	3.5 - 4	3.4 - 5.0
Average expected preliminaries	%	10 - 15	10	12-15	6 - 15

The above costs are at **4th Quarter 2020** levels and are based on lump sum fixed price contract rates exclusive of preliminaries and contingencies.

- ♣ Rates are nett of GST and exclude cost impact arising from COVID-19 pandemic
- ♣♣ Rate for lean concrete blinding.
- ♠ Rates including dumping charges.

(Cont'd)

MAJOR RATES FOR SELECTED ASIAN CITIES

MAJOR RATES FOR SELECTED ASIAN CITIES (Cont'd)

DESCRIPTION	UNIT	MANILA		INDIA ⁶		BANGKOK ^{ce}		HO CHI MINH #		JAKARTA [@]	
		PHP	INR	BAHT	VND	IDR					
1. Excavating basement ≤ 2.00m deep	m ³	270	230	120 - 140	72,400						65,000
2. Excavating for footings ≤ 1.50m deep	m ³	538	215	120 - 140	72,400						100,000
3. Remove excavated materials off site	m ³	350	N/A	120 - 150	84,700						50,000
4. Hardcore bed blinded with fine materials	m ³	1,400 - 1,600	4,570	650 - 750	280,900						650,000
5. Mass concrete grade 15	m ³	4,400	6,180	2,300 - 2,500	1,606,400						950,000
6. Reinforced concrete grade 30	m ³	4,899	7,735	2,800 - 3,200	1,912,291						1,135,000
7. Mild steel rod reinforcement	kg	51 - 55	67	25 - 28	17,864						11,000
8. High tensile rod reinforcement	kg	52 - 55	64	24 - 27	17,988						11,000
9. Sawn formwork to soffits of suspended slabs	m ²	950 - 1,200	700	450 - 500	225,750						200,000
10. Sawn formwork to columns and walls	m ²	1,200	753	450 - 500	257,250						195,000
11. 112.5mm thick brick walls	m ²	N/A	1,140	650 - 750	312,780						250,000
12. "Kliplok Colorbond" 0.64mm profiled steel sheeting	m ²	1,500	1,765	1,200	401,110 - 597,600						300,000

13. Aluminium casement windows, single glazed	m ²	12,500 ^Ω	6,230	7,000	6,315,000	1,650,000
14. Structural steelwork - beams, stanchions and the like	kg	180	130	60 - 75	48,650	26,000
15. Steelwork - angles, channels, flats and the like	kg	160	130	60 - 75	48,650	26,000
16. 25mm cement and sand (1:3) paving	m ²	650	493	200 - 240	94,000	90,000
17. 20mm cement and sand (1:4) plaster to walls	m ²	500 - 700	405	220 - 260	144,000	100,000
18. Ceramic tiles bedded to floor screed (measured separately)	m ²	1,800	1,765	1,200	674,180	200,000
19. 12mm fibrous plasterboard ceiling lining	m ²	1,400 - 1,645	1,400	750 - 850	245,700	215,000
20. Two coats of emulsion paint to plastered surfaces	m ²	500 - 800	220	140 - 180	91,000	35,000
Average expected preliminaries	%	12 - 18	9 - 13	12 - 18	8 - 12	8 - 10

The above costs are at **4th Quarter 2020** levels and are based on lump sum fixed price contract rates exclusive of preliminaries and contingencies.

Ω Rate for aluminium with anodized finish; 6mm thick.

∞ Rates are nett of VAT.

⌘ All rates above are Supply and Fix, based on projects in Bangalore and are nett of GST. Mumbai costs are generally 8% higher.

Rates are nett of VAT.

The data for India is provided by Arkind LS Private Limited, an Arcadis Alliance Partner.

® The data for Jakarta is provided by PT Lantera Sejahtera Indonesia.

CONSTRUCTION COST SPECIFICATION

CONSTRUCTION COST SPECIFICATION

BUILDING TYPE	OUTLINE SPECIFICATION
<u>DOMESTIC</u>	
Apartments, high rise, average standard	Apartment units with fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings and loose furniture
Apartments, high rise, high end	Apartment units with good quality fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings and loose furniture
Terraced houses, average standard	Houses with fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings, loose furniture, garden and parking
Detached houses, high end	Houses with good quality fit-out, including air-conditioning, kitchen cabinets and home appliances, but excluding decorative light fittings, loose furniture, garden and parking
<u>OFFICE / COMMERCIAL</u>	
Medium/high rise offices, average standard	RC structure, curtain wall, including public area fit-out, tenant area with raised floor/ carpet, painted wall and false ceiling
High rise offices, prestige quality	

Out-of-town shopping centre, average standard	Including public area fit-out and M&E, but excluding shop fit-out
Retail malls, high end	
<u>HOTELS</u>	
Budget hotels - 3-star, mid market	1) Including interior decoration, furniture (fixed and movable), and special light fittings (chandeliers, etc.) 2) Excluding Operating Supplies and Equipment (OS&E).
Business hotels - 4/5-star	
Luxury hotels - 5-star	
<u>INDUSTRIAL</u>	
Industrial units, shell only (Conventional single storey framed units)	RC structure with steel roof and M&E to main distribution, but excluding a/c, heating and lighting
Owner operated factories, low rise, light weight industry	RC structure, including small office with simple fit-out and M&E, but excluding a/c and heating

(Cont'd)

CONSTRUCTION COST SPECIFICATION

CONSTRUCTION COST SPECIFICATION (Cont'd)

BUILDING TYPE	OUTLINE SPECIFICATION
<u>OTHERS</u>	
Underground/basement car parks (<3 levels)	RC structure
Multi storey car parks, above ground (<4 levels)	RC structure, natural ventilation, no facade enclosure
Schools (primary and secondary)	Including fit-out and a/c, but excluding educational equipment
Students' residences	Including fit-out, loose furniture and a/c
Sports clubs, multi purpose sports/leisure centres (dry sports)	Dry sports (no swimming pool) and are for 'leisure centre' type schemes including main sports hall, ancillary sports facilities, changing and showers, restaurant / cafe, bar, etc. Costs include a/c, Furniture, Fittings and Equipment (FF&E).
General hospitals - public sector	Excluding medical and operating equipment

Notes:

1. The costs for the respective categories given above are averages based on fixed price competitive tenders. It must be understood that the actual cost of a building will depend upon the design and many other factors and may vary from the figures shown.
2. The costs per square metre are based on Construction Floor Areas (CFA) measured to the outside face of the external walls / external perimeter including lift shafts, stairwells, balconies, plant rooms, water tanks and the like.
3. The costs include foundation and substructure.
4. All buildings are assumed to have no basements (except otherwise stated) and are built on flat ground, with normal soil and site condition. The costs exclude site formation works, external works, land cost, professional fees, finance and legal expenses.
5. The standard for each category of building varies from region to region and do not necessary follow that of each other.
6. All costs are in US\$/m² CFA. Fluctuation in exchange rates may lead to changes in construction costs expressed in U.S. dollars.





GENERAL CONSTRUCTION DATA

2

2021 Outlook
(China, Hong Kong and Macau)

Building Cost Trends in Hong Kong

Material Prices in Hong Kong

Labour Index in Hong Kong

Labour Wages in Hong Kong

Estimating Rules of Thumb & Design Norms

Construction Activity in Hong Kong

Construction Value in Hong Kong

Hong Kong General Construction Insurance

Specified Forms for Buildings Ordinance or
Regulations for Hong Kong

Summary of Building Regulations for
Hong Kong

Percentage Site Coverage and Plot Ratio for
Hong Kong

Evolving Regulations for Green Building in
China

Procurement Strategies and
Form of Contract

Construction Workdone Forecast

2 GENERAL CONSTRUCTION DATA

2021 OUTLOOK

CHINA

The COVID-19 pandemic dealt a double blow on economic and financial fronts. The international community has largely reached a consensus that the global economy went to recession in 2020.

China experienced around two months of lockdown to prevent the spread of COVID-19 at the beginning of 2020 and continues to take effective precautionary measures. The real estate investment in Mainland China in the first two months of this year has decreased by (-)16.3% YoY. The sales of commercial buildings decreased (-)35.9% YoY. The economic activities began to recover after the completion of lockdown and the real estate market rebounded after March 2020. Up to November 2020, real estate investment and the sales of commercial buildings reached an increase of (+)6.8% and (+)7.2% YoY respectively (according to National Bureau of Statistics (NBS)). The data presented a V-shaped recovery in real estate market.

Despite the impact of the pandemic, China's economy saw GDP growth of (+)0.7% YoY, in the first three quarters of 2020. There is a significant drop compared with the growth of (+)6.2% in Q3 2019. Inflation was stable, with the composite Consumer Price Index (CPI) slightly decreased by (-)0.5% YoY as recorded in November 2020.

The Chinese government recorded annual reduction of (-)3.3% in land sales in the first three quarters of 2020. The completed construction area and new commencement area decreased by (-)9.2% and (-)2.6% respectively.

As recorded in November 2020, construction wages increased by (+)10% ~ (+)15% YoY in the first tier cities, due to the shortage of construction labour. However, the construction wages in second tier cities and other regions of China is remain stable.

Basic construction product costs fluctuated in price with rebar (+) 1.8%, steel (+)8.5%, concrete (+)4.9% and cement (-) 1.7% YoY. Taking Shanghai, Beijing, Shenzhen/Guangzhou and Chengdu/Chongqing as the representative cities of East, North, South and West Regions of China, the tender price recorded an increase of 1% of Shanghai, Beijing and Shenzhen/Guangzhou, while remained stable in Chengdu/Chongqing in 2020.

The growth of construction wages is anticipated to be (+)5% and above in the coming year. Moreover, due to the upward trend of commodities prices (including copper, aluminium and oil, etc.), we anticipate the major material will rise in price. We anticipate that construction costs will increase by 5% in 2021 and 3% in 2022.

(Cont'd)

2 GENERAL CONSTRUCTION DATA

2021 OUTLOOK

HONG KONG

The Hong Kong construction industry experienced a tough year in 2020. Overall, construction activities slowed down due to the global COVID-19 pandemic. Construction output continued to decline in 2020. The GDP growth rate recorded (-)3.5% Year-on-Year (YoY) based on Q3 2020, after four consecutive negative growth rates since Q3 2019 yet slightly rebounded from the trough of (-)9.1% in Q1 2020. Deflation began from July 2020 for the first time since March 2017. Overall, the Consumer Price Index (CPI) fluctuated throughout the year and decreased by 0.2% in November 2020.

Quiet private construction market and increasing public works

Construction activities in private sector became subdued this year. The gross value of construction works declined by 3.3% YoY based on Q3 2020, principally inflicted by a notable drop of (-)21.9% YoY in private sector. The long-term limited operations of the government departments due to the COVID-19 pandemic took a heavy toll on the private construction market. Consent to commence building works issued by the Buildings Department reduced by 21.1% YoY based on the past 12 months up to October 2020. This showed a significant drop compared to the (+)41.2% YoY surge in 2019. Commencement of building works was also adversely affected, with (+)2.8% YoY based on recent 12 months up to October 2020, which is much less than the (+)39.7% growth the year before.

However, the public sector demonstrated an upturn in the second half of the year with a rise in the gross value of performed public works of (+)8.4% YoY based on Q3 2020. Up to the third quarter of financial year of 2020/21, the Hong Kong Legislative Council (LegCo) approved HK\$99 billion Capital Works Reserve Fund for upcoming public works – equivalent to 93% of the total funding in the previous financial year. Such trends indicate that the local construction market will be likely to rely heavily on the public works in the short-term.

Housing and land supply

As addressed in the Long-Term Housing Strategy Annual Progress Report 2020, the total housing supply target for the 10-year period from 2020-21 to 2029-30 is 430,000 units, consisting of 70% public housing units and 30% private housing units. Hence, the public and private housing supply will be 301,000 units and 129,000 units respectively. Although the 2020 Policy Address announced the government has identified 330 hectares of land for providing

316,000 public housing units in the long-term the latest average targeted yearly production is 20,260 units, which is still 9,840 units fewer than the yearly average of the 10-year target. Public housing projects would need to be speed up to keep up the pace to meet the long-term target. The yearly average of the 10-year target regarding private housing supply is low as well.

According to the 2020 Policy Address, to increase land supply, the government has planned to accelerate the development of Northwest New Territories, New Territories North and Tuen Mun West, to provide more public housing on top of the Siu Ho Wan Depot, redevelop three urban squatter areas in Kowloon and maintain the Land Sharing Pilot Scheme to develop private land. Long time frames are required for planning and development of the above projects, the land supply is therefore unlikely to be boosted in the near future.

Cost of materials and labour

The Tender Price Index (TPI) decreased by 3.3% YoY based on Q4 2020. Prices of steel and diesel fuel decreased by 7% and 4% YoY respectively, based on Q3 2020. Portland cement, sand and basic materials remained stable in the same period.

The construction labour wages index remained constant based on Q3 2020 comparing to preceding year. There was slight pay rise in most of the trades when comparing to the previous year, especially for bricklayer and mechanical fitter, while wages of concreter, bar bender and fixer dropped. In October 2020, the Hong Kong Construction Industry Employees General Union recommended continuing the pay freeze covering 15 trades in another 12 months.

Looking forward

Regarding the prospect of 2021, Arcadis anticipates a relatively low level of local construction activities owing to the uncertainty brought by the unabated pandemic and downturn in the private construction sector. Job opportunities are likely to maintain stable due to the ongoing public works, however it is not sustainable to rely solely on public sector in the long-term. Although there is higher level of public construction activities, the yearly completion of public housing is still unlikely to meet the average of government's long-term target soon. Furthermore, the land supply planning involves large area of lands in the New Territories so it will take a long time to practically benefit the construction market and relieve the pressure of housing supply. With all these in mind, it is anticipated that construction costs will drop by 4% in 2021 and 2% in 2022.

2 GENERAL CONSTRUCTION DATA

2021 OUTLOOK

MACAU

In 2020, Macau's overall economy showed a significant drop mainly due to the continuous impact of the global Covid-19 pandemic. With continued travel restrictions, the total number of visitor arrivals in Macau dramatically dropped by 83.9% in the first half of 2020 as reported by the DSEC (Macau Government Statistics and Census Service). According to DICJ (Macau Government Gaming Inspection and Coordination Bureau), the gross gaming revenue for October 2020 was MOP 45.86 Billion, dropping by 81.4% YoY.

The hotel sector was also affected by the decline in visitor arrivals. As reported by the Macau Government Economic Bureau, the number of hotels as at the end of June 2020 has decreased by 6 YoY to 77, providing 34,000 guest rooms. The number of guestrooms dropped by 4,000 YoY. The hotel occupancy rate in the first half of 2020 was 26.7%, which has decreased by 64.9% YoY. The total number of guests was 1.78 million in the first half of the year, representing a decrease of 73.9% YoY.

In respect of Macro View, under the impact of the Covid-19 pandemic, the overall economy of Macau in the first half of 2020 contracted with a significant decline in services exports, private consumption expenditure and gross fixed capital formation as reported by the Macau Government Economic Bureau. In the first half of 2020, the Gross Domestic Product (GDP) of Macau was MOP 91.27 billion, dropping by 58.2% YoY.

The inflation rate indicated a slowdown in 2020 while the unemployment rate was increasing. In the second quarter of 2020, the unemployment rate was 2.5% which has increased by 0.8 % YoY, and the under-employment rate was 3.0 %, which had increased by 3.4% YoY.

Looking into the construction industry in 2020, both the casino and hotel resort projects and Government projects drove the construction market in Macau. However, due to the impact of Covid-19 and the economic downturn, investment appear to be conservative and a number of Hotel and Gaming Alteration and Additions (A&A) projects have slowdown or been suspended.

According to DSEC (Macau Statistics and Census Service), the price of construction materials has increased by 0.8% YoY as of 3rd Quarter 2020, while the construction worker's wages has increased by 3.1% YoY as of Q3 2019. The increased in construction worker's wages is mainly due to the travel restrictions that have forced construction companies to employ a higher proportion of local workers rather than mainland workers.

Looking ahead to 2021, the challenges facing Macau will be multi-factor including uncertainty in the time frame for the tourism industry recovery and relief of travel restriction, China-US economic tension and the slowdown in China's economic growth.

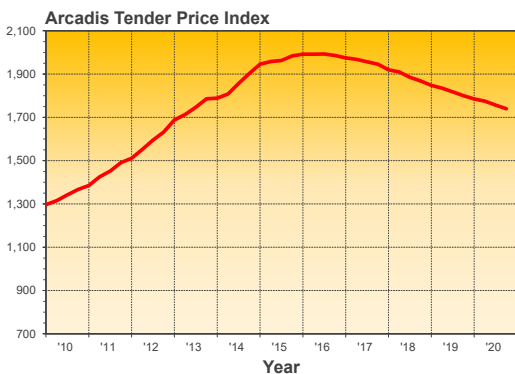
Notwithstanding the above, in order to revitalize the economy and to alleviate the rising unemployment rate, the Macau Government plans to invest MOP 17.7 billion on infrastructure and building projects in 2021. The Macau Government investment measures will certainly help to increase job opportunities and expedite the economy recovery in Macau.

As it is anticipated that the impact of the Covid-19 pandemic on the economy will not be totally diminished in the coming one or two years, we anticipate that the construction costs will drop by 2% in 2021 and 1.5 % in 2022 respectively.

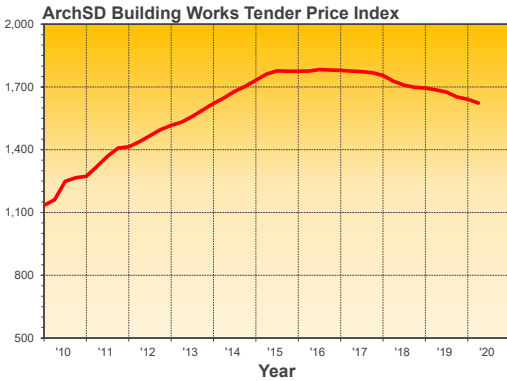
CONSTRUCTION COST TREND PREDICTION			
REGION	2020	2021	2022
China	(+)1%	(+)5%	(+)3%
Hong Kong	(-)3.3%	(-)4%	(-)2%
Macau	(+)3.4%	(-)2%	(-)1.5%

2 GENERAL CONSTRUCTION DATA

BUILDING COST TRENDS IN HONG KONG



YEAR	INDEX (Base = 100, at Year 1970)			
	Q1	Q2	Q3	Q4
2010	1,297	1,315	1,342	1,367
2011	1,385	1,425	1,452	1,491
2012	1,511	1,552	1,595	1,632
2013	1,688	1,713	1,747	1,786
2014	1,789	1,808	1,857	1,903
2015	1,946	1,958	1,963	1,984
2016	1,992	1,992	1,993	1,986
2017	1,975	1,968	1,957	1,946
2018	1,920	1,910	1,885	1,868
2019	1,848	1,835	1,818	1,800
2020	1,785	1,775	1,757	1,740



YEAR	INDEX (Base = 100, at Year 1970)			
	Q1	Q2	Q3	Q4
2010	1,134	1,161	1,249	1,266
2011	1,273	1,320	1,369	1,408
2012	1,414	1,438	1,467	1,496
2013	1,516	1,532	1,559	1,590
2014	1,621	1,648	1,679	1,703
2015	1,732	1,761	1,777	1,775
2016	1,775	1,776	1,783	1,781
2017	1,779	1,776	1,773	1,768
2018	1,755	1,727	1,708	1,698
2019	1,695	1,686	1,675	1,652
2020*	1,641	1,623		

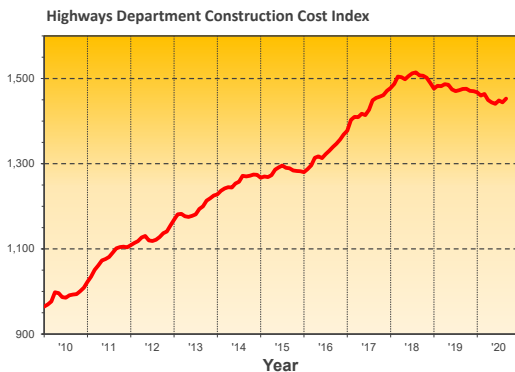
* Up to Q2 only

Source: Architectural Services Department, Hong Kong, SAR
Refer to www.archsd.gov.hk for further information.

(Cont'd)

2 GENERAL CONSTRUCTION DATA

BUILDING COST TRENDS IN HONG KONG

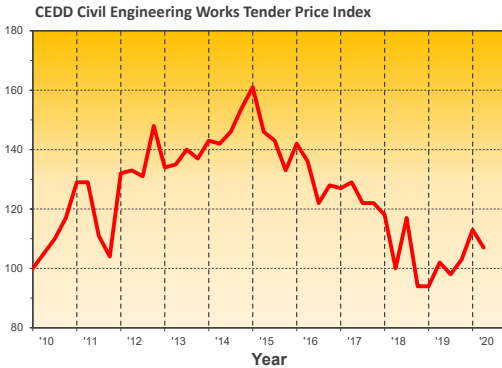


YEAR	HyD CONST. COST INDEX (Nov. 1975 Value = 100)
2010	989
2011	1,075
2012	1,127
2013	1,191
2014	1,256
2015	1,282
2016	1,323
2017	1,429
2018	1,501
2019	1,477
2020*	1,452

* 1/20 to 8/20 only

Source: Civil Engineering and Development Department, Hong Kong, SAR
Refer to www.cedd.gov.hk/eng/publications/standards-spec-handbooks-cost/index.html for further information.

BUILDING COST TRENDS IN HONG KONG



YEAR	CEDD CIVIL ENGINEERING WORKS TENDER PRICE INDEX (2010 Q1 = 100)			
	Q1	Q2	Q3	Q4
2010	100	105	110	117
2011	129	129	111	104
2012	132	133	131	148
2013	134	135	140	137
2014	143	142	146	154
2015	161	146	143	133
2016	142	136	122	128
2017	127	129	122	122
2018	118	100	117	94
2019	94	102	98	103
2020*	113	107#		

* up to Q2 only

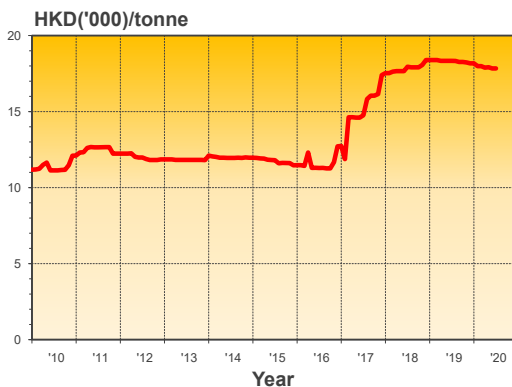
Provisional

Source: *Civil Engineering and Development Department, Hong Kong, SAR*
Refer to www.cedd.gov.hk/eng/publications/standards-spec-handbooks-cost/index.html for further information.

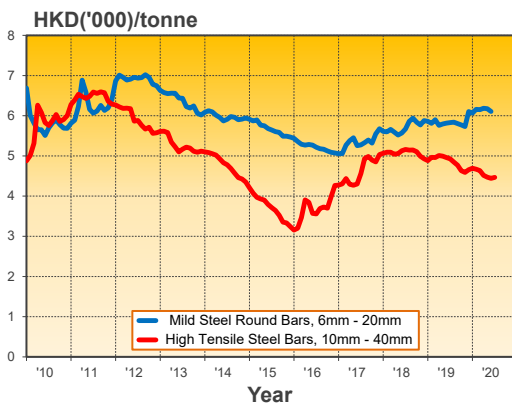
2 GENERAL CONSTRUCTION DATA

MATERIAL PRICES IN HONG KONG

GALVANIZED MILD STEEL ANGLE



REBAR

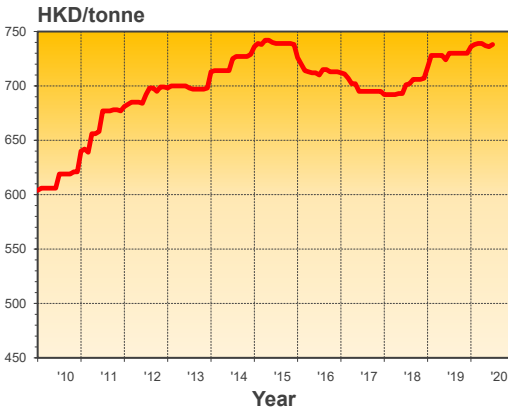


Source: Census and Statistics Department, Hong Kong, SAR
Refer to www.censtatd.gov.hk for further information.

SAND



ORDINARY PORTLAND CEMENT



Source: Census and Statistics Department, Hong Kong, SAR
 Refer to www.censtatd.gov.hk for further information.

(Cont'd)

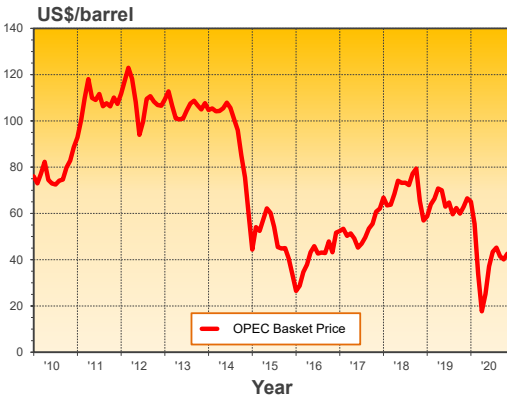
MATERIAL PRICES IN HONG KONG

COPPER GRADE A



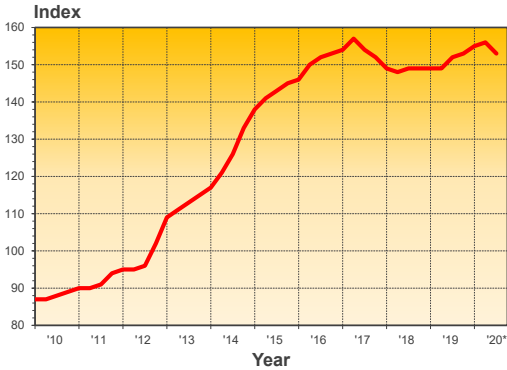
Source: International Monetary Fund
Refer to www.imf.org for further information.

CRUDE OIL



Source: Organization of the Petroleum Exporting Countries (OPEC)
Refer to www.opec.org for further information.

LABOUR INDEX IN HONG KONG



YEAR	INDEX (Base = 100, at April 2003)			
	Q1	Q2	Q3	Q4
2010	87	87	88	89
2011	90	90	91	94
2012	95	95	96	102
2013	109	111	113	115
2014	117	121	126	133
2015	138	141	143	145
2016	146	150	152	153
2017	154	157	154	152
2018	149	148	149	149
2019	149	149	152	153
2020*	155	156	153	

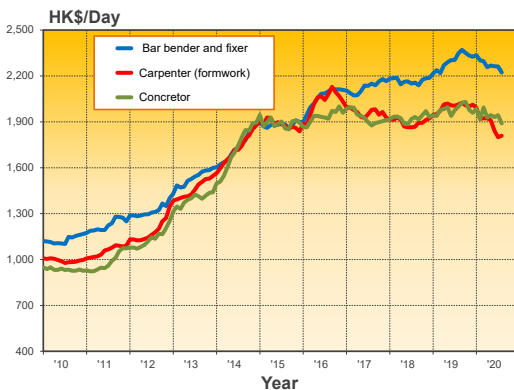
Figures above are the quarterly average of the monthly indices * 1/20 to 9/20 only

Source: Census and Statistics Department, Hong Kong, SAR
Refer to www.censtatd.gov.hk for further information.

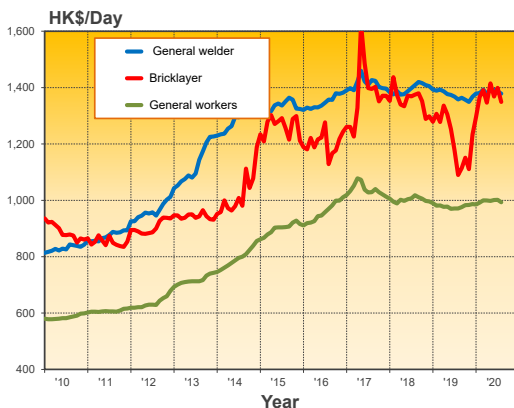
2 GENERAL CONSTRUCTION DATA

LABOUR WAGES IN HONG KONG

STRUCTURAL

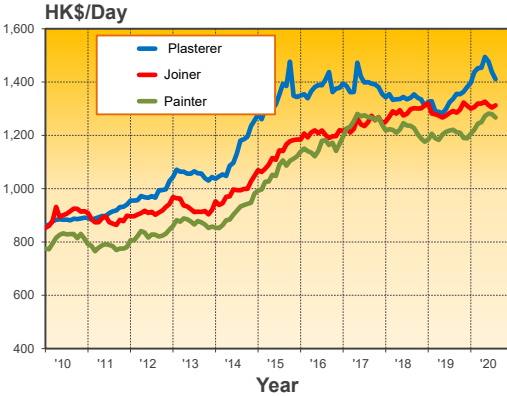


ARCHITECTURAL - BASIC WORKS

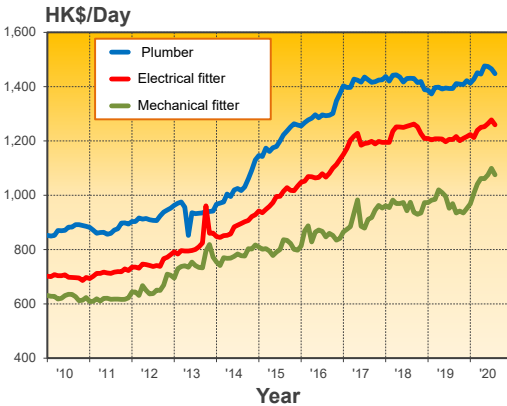


Source: Census and Statistics Department, Hong Kong, SAR
Refer to www.censtatd.gov.hk for further information.

ARCHITECTURAL - DECORATIVE WORKS



M&E



Source: Census and Statistics Department, Hong Kong, SAR
Refer to www.censtatd.gov.hk for further information.

(Cont'd)

2 GENERAL CONSTRUCTION DATA

ESTIMATING RULES OF THUMB AND DESIGN NORMS

HONG KONG

CFA To GFA Ratio

Building Type	CFA : GFA
Residential	1.15 to 1.25 : 1
Office / Commercial	1.15 to 1.25 : 1
Hotel	1.30 to 1.45 : 1

The above ratios do not include any associated car parking area.

Functional Area Distribution in 5-Star Hotels

Functional Area	% of Total Hotel CFA
Front of House	15 - 20%
Guestroom Floors	50 - 60%
Back of House	25 - 30%

Dimensions of Typical Grade A Office Space

Component	Dimension
Distance from curtain wall to core wall	9 - 13 m
Population	9 m ² usable floor area/person
Average waiting interval for lifts	30 - 40 seconds

Density of Basic Materials for Structure

Material	Density
Concrete	2,400 kg/m ³
Cement	1,450 kg/m ³
Sand	1,600 kg/m ³
Aggregate	1,600 kg/m ³
Steel	7,843 kg/m ³

Average Loads Volume

Lorry (24 ton)	10.0 m ³
Concrete truck (24 ton)	5.5 m ³
Barge	200 - 1,450 m ³

HONG KONG (Cont'd)

Average Piling Ratio - Bored Piles

Building Type	m² CFA / m² cross section area of piles
Residential	200 - 330
Office / Commercial	200 - 300
Hotel	200 - 330

Average Piling Ratio - Driven H-Piles

Building Type	m² CFA / No. of piles
Residential	60 - 120
Office / Commercial	60 - 110
Hotel	60 - 120

Average Piling Ratio - Pre-Bored H-Piles

Building Type	m² CFA / No. of piles
Residential	70 - 150
Office / Commercial	70 - 140
Hotel	70 - 150

All pile ratios are for high-rise buildings with normal soil conditions.

Building Structure - Concrete Ratio

Concrete/floor area	0.4 m ³ /m ² to 0.5 m ³ /m ²
Formwork/floor area	2.2 m ² /m ² to 3.0 m ² /m ²
Reinforcement	160 kg/m ³ to 250 kg/m ³

Average External Wall/Floor Ratio

Residential Apartments	1.2 m ² /m ²
Office, Hotel	0.4 m ² /m ²
Industrial	0.4 m ² /m ²

(Cont'd)

2 GENERAL CONSTRUCTION DATA

ESTIMATING RULES OF THUMB AND DESIGN NORMS

HONG KONG (Cont'd)

Average Internal Wall/Floor Ratio

Residential Apartments	1.0 m ² /m ²
Office	0.5 m ² /m ²
Hotel	1.5 m ² /m ²

The above ratios are indicative and for reference purposes only. They do not account for buildings with special shapes, configurations or particularly small foot prints.

Average Lighting Level

Building Type	Lux
Residential	300
Office	500
Retail	400
Hotel	300
School	300 - 500

Average Power Density

Building Type	VA/m ² CFA
Residential	80 - 100
Office	70
Retail	300 - 400
Hotel - Accommodation	30
Hotel - F&B Area	550
School	50

Average Cooling Load

Building Type	m ² Cooling Area/RT
Residential	18 - 23
Office	14 - 18
Retail	12-14
Hotel	23
School	23

HONG KONG (Cont'd)

Dimensions of Parking Spaces

Type of Vehicle	Length	Width	Minimum Headroom
Private Cars and Taxis	5 m	2.5 m	2.4 m
Light Goods Vehicles	7 m	3.5 m	3.6 m
Medium/Heavy Goods Vehicle	11 m	3.5 m	4.7 m
Container Vehicles	16 m	3.5 m	4.7 m
Coaches and Buses	12 m	3.5 m	3.8 m
Light buses	8 m	3 m	3.3 m

Minimum headroom means the clearance between the floor and the lower most projection from the ceiling including any lighting units, ventilation ducts, conduits or similar.

Indicative Dimensions for Sports Grounds

	Length	Width
Tennis Court	40 m	20 m
Squash Court	10 m	6.4 m
Basketball Court	34 m	20 m
Volleyball Court	36 m	20 m
Badminton Court	20 m	10 m
Ice Rink	61 m	26 m
Soccer Pitch	120 m	90 m

The above dimensions are for a single court with appropriate clearance. No spectator seating or support area has been allowed.

(Cont'd)

2 GENERAL CONSTRUCTION DATA

ESTIMATING RULES OF THUMB AND DESIGN NORMS

CHINA & HONG KONG

Minimum Imposed Loads (kPa) for Building Design

Building Type	China [@]	Hong Kong [*]
<u>DOMESTIC</u>		
Apartments	2.0	2.0
<u>OFFICE / COMMERCIAL</u>		
Office	2.0	3.0
Shopping Arcade	3.5	5.0
<u>HOTELS</u>		
Hotel	2.0	2.0
<u>INDUSTRIAL</u>		
Industrial, light duty	4.0	5.0
<u>OTHERS</u>		
Carpark, private cars	2.5	3.0
School	2.5	3.0
Theatre, Sports Hall, etc.	4.0	5.0
Hospital	2.0	2.5

Source :

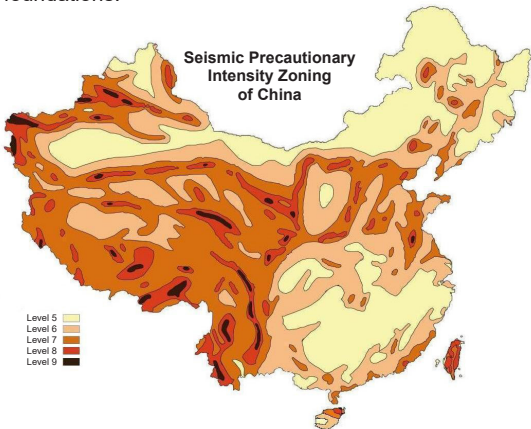
[@] *Load Code for the Design of Building Structures, GB 50009-2012, Ministry of Housing and Urban-Rural Development, PRC*

^{*} *Code of Practice for Dead and Imposed Loads 2011, Buildings Department, HKSAR*

CHINA

Seismic Precautionary Intensity Zoning

As stipulated in PRC National Standard GB 50011-2010 (Code for Seismic Design of Buildings) 2016, geographic regions which are classified as Level 6 or above in Seismic Precautionary Intensity Classification should incorporate seismic measures in the design of the structure and foundations.

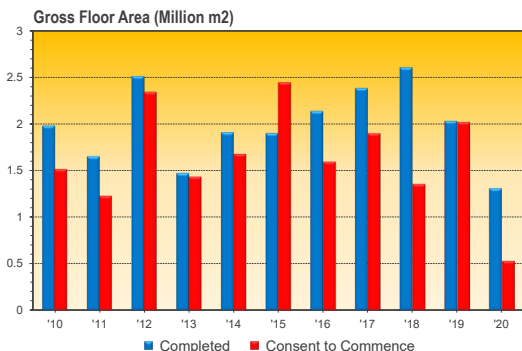


Geographic Regions	Intensity Level	Geographic Regions	Intensity Level
Beijing	7 - 8	Hong Kong	7
Changsha	6	Macau	7
Chengdu	7 - 8	Qingdao	6 - 7
Chongqing	6 - 7	Shanghai	7
Dalian	6 - 8	Shenyang	7
Foshan	7	Shenzhen	6 - 7
Guangzhou	6 - 7	Suzhou	6 - 7
Haikou	8	Tianjin	7 - 8
Hangzhou	6 - 7	Wuhan	6 - 7
Hengqin	7	Xi'an	8

Source : China Earthquake Data Center (data.earthquake.cn)

2 GENERAL CONSTRUCTION DATA

CONSTRUCTION ACTIVITY IN HONG KONG



YEAR	COMPLETED m ²	CONSENT TO COMMENCE m ² #
2010	1,978,000	1,518,000
2011	1,650,000	1,232,000
2012	2,507,000	2,343,000
2013	1,472,000	1,437,000
2014	1,908,000	1,679,000
2015	1,897,000	2,445,000
2016	2,134,000	1,597,000
2017	2,379,000	1,900,000
2018	2,600,000	1,358,000
2019	2,028,000	2,020,000
2020*	1,309,000	535,000

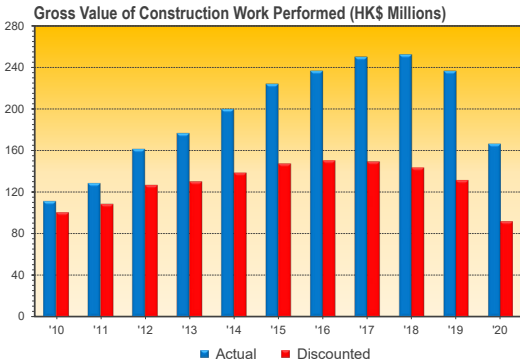
* 1/20 to 8/20 only

First Submission only

Source: Census and Statistics Department, Hong Kong, SAR
Buildings Department, Hong Kong, SAR

Refer to www.censtatd.gov.hk and www.bd.gov.hk for further information.

CONSTRUCTION VALUE IN HONG KONG



YEAR	VALUE IN NOMINAL TERMS HK\$ MILLIONS	VALUE IN CONSTANT (2000) MARKET PRICE HK\$ MILLIONS
2010	111,274	100,278
2011	128,535	108,263
2012	161,449	126,414
2013	176,575	129,868
2014	199,737	138,285
2015	223,947	146,978
2016	236,491	149,973
2017	249,919	148,943
2018	252,176	143,136
2019	236,437	131,111
2020*	166,436	91,700

* Up to Q3 figures and are provisional only

Source: Census and Statistics Department, Hong Kong, SAR
Refer to www.censtatd.gov.hk for further information.

HONG KONG GENERAL CONSTRUCTION INSURANCE

This section provides general information regarding construction insurance arrangements in Hong Kong.

It is common place for Hong Kong construction contracts to contain provisions as to insurances such as Employees Compensation Insurance, Third Party Liability Insurance, Works Insurance and, on occasion, Professional Liability Indemnity Insurance. For employers, the insurance placement ensures that the contractual indemnities are backed by a financial institution that can afford to pay. For contractors, it provides a certain degree of protection to ensure that he has the means to pay in the event of mishaps.

The insurances may be effected by the contractor (Contractor Controlled Insurance Programme or CCIP) or be taken out by the employer (Employer Controlled Insurance Programme or ECIP). CCIP tends to be the most common insurance arrangement in Hong Kong, since the contractor is in control of all site operations and in a better position to manage its own site safety / risk. As a poor safety record will count against the contractor in premiums negotiation in the procurement of insurance, CCIP provides an incentive for better safety / risk management. On the other hand, ECIP placement leaves the control of the insurance programme in the hands of the employer, thereby offering the advantage of providing comprehensive insurance coverage on a project-wide basis and hence minimizing overlaps and gaps in insurance coverage.

Employees Compensation

Section 40(1) of the Employees Compensation Ordinance states that no employer shall employ any employee unless there is a policy of Employees Compensation Insurance in place. The maximum penalty for failing to comply with this provision is two years in jail and a maximum fine of HK\$100,000.

Under the Ordinance, the principal contractor shall take out insurance for his employees and all of the employees of subcontractors with a limit of indemnity of HK\$200 million per event (or HK\$100 million if the number of employees is less than 200).

Since an injured worker could attempt to sue the employer, the employer will want to ensure the contractor has taken out insurance in joint names with the employer.

Contractors' All Risks Insurance

A Contractors' All Risks policy generally comprises (i) Third Party Insurance which covers injury to persons (except the Contractor's own workmen) or damage to property (other than the Works), due to the carrying out of the Works which may or may not be caused by a default of the contractor. The policy is normally subject to a maximum reimbursement per incident but unlimited in the number of incidents, (ii) Contract Works Insurance which covers damage caused to the Works itself by risks not excluded from the policy and (iii) Plant & Equipment Insurance which covers the contractor's plant and equipment used in the Works. Plant & Equipment Insurance is not normally required under the contract conditions and is voluntarily purchased by the contractor.

Professional Indemnity Insurance

For construction contracts involving contractor's design, it is not uncommon for the employer to require the contractor and his design consultants and independent checking engineers to obtain insurance to cover their liability for design. For Government Contracts, the Professional Indemnity Insurance shall cover the contractor's liability for design generally for the construction period and a further 6 years.

SPECIFIED FORMS FOR BUILDINGS ORDINANCE OR REGULATIONS FOR HONG KONG

SPECIFIED FORMS FOR BUILDINGS ORDINANCE OR REGULATIONS

FORM NO.	PURPOSE	RELEVANT SECTION OF REGULATION
BA1	Application for inclusion in the authorized persons' register / structural engineers' register / geotechnical engineers' register / inspector's register.	BOs 3(6)
BA1A	Application for retention of name in the authorized persons' register / structural engineers' register / geotechnical engineers' register / inspectors' register.	BOs 3(9B)
BA1B	Application for restoration of name to the authorized persons' register / structural engineers' register / geotechnical engineers' register / inspectors' register.	BOs 3(12)
BA2	Application for registration as a general building contractor / specialist contractor.	BOs 8B
BA2A	Application for renewal of registration as a registered general building contractor / registered specialist contractor.	BOs 8C(2)
BA2B	Application for restoration of name to the register of general building contractors / specialist contractors.	BOs 8D(2)
BA2C	Application for approval of technical director / other officer / person appointed to act for the purposes of the Buildings Ordinance for a registered general building contractor / registered specialist contractor.	BOs 8B
BA4	Notice of appointment of authorized person and/or registered structural engineer and/or registered geotechnical engineer.	BOs 4, B(A)R 23
BA5	Application for approval of plans of building works and/or street works and certificate of preparation of plans.	BOs 14(1)(a), B(A)R 29 & 18A

BA6	Stability certificate of authorized person and/or registered structural engineer.	B(A)R 18
BA7	Notice of urgent works required as a result of accident or emergency.	BOs 19, B(A)R 28
BA8	Application for consent to the commencement and carrying out of building works or street works.	BOs 14(1)(b), B(A)R 31
BA8A	Application for concurrent consent to the commencement of building works.	BOs 14(1)(b), B(A)R 31
BA9	Application for renewal of consent to the carrying out of building works or street works.	BOs 20
BA10	Notice of appointment of registered contractor, notice of commencement of building works or street works and undertaking by registered contractor.	B(A)R 20, BOs 9
BA11	Notice from a registered contractor on ceasing to be appointed in respect of building works or street works and certificate in respect of that part of the building works or street works carried out by the registered contractor.	B(A)R 24
BA12	Certificate on completion of building works resulting in a new temporary building, a new building or part of a new building and application for temporary occupation permit in respect of such building or part.	B(A)R 25, BOs 21
BA13	Certificate on completion of building works resulting in a new building and application for permit to occupy such building.	B(A)R 25, BOs 21
BA14	Certificate on completion of building works not resulting in a new building or of street works.	B(A)R 25 & 26
BA14A	Certificate on completion of demolition works.	B(A)R 25

(Cont'd)

Source: Buildings Department, Hong Kong, SAR. Refer to www.bd.gov.hk for further information.

2 GENERAL CONSTRUCTION DATA

SPECIFIED FORMS FOR BUILDINGS ORDINANCE OR REGULATIONS FOR HONG KONG

SPECIFIED FORMS FOR BUILDINGS ORDINANCE OR REGULATIONS

FORM NO.	PURPOSE	RELEVANT SECTION OF REGULATION
BA15	Notice of intended material change in the use of a building.	BOs 25, B(A)R 47
BA16	Application for modification of and/or exemption from the provisions of the Buildings Ordinance and/or Regulations made thereunder.	BOs 42
BA17	Application for permit to erect a temporary building.	B(P)R 51
BA18	Application for permit to erect a contractor's shed.	B(P)R 53
BA19	Application for permit to erect hoardings, covered walkways or gantries.	B(P)R 64
BA20	Notice of technically competent person or persons appointed to supervise demolition works.	B(DW)R 8
BA21	Notice of nomination by authorized person or registered structural engineer or registered geotechnical engineer to temporary act in his stead.	BOs 4(2), B(A)R 23(2)
BA22	Application for authorization to carry out and/or maintain groundwater drainage works.	BOs 28B(1)
BA23	Application for grant/renewal of licence for an oil storage installation.	B(OS)R 6(1) & 7(3)
BA24	Notification of change of business address / Contact Information.	B(A)R 45

BA25	Application for registration as a registered minor works contractor (company).	B(MW)R 10(1)(B)
BA25A	Application for renewal of registration of registered minor works contractor (company).	B(MW)R 14(1)
BA25B	Application for restoration of name to the register of minor works contractors (company).	B(MW)R 18(1)
BA25C	Application for registration of additional class and /or type of minor works for registered minor works contractor (company).	B(MW)R 21(2)
BA25D	Application for approval of nomination of additional authorized signatory/technical director of registered minor work contractor (company).	B(MW)R 24(1)
BA25E	Application for review of decision of the Building Authority or recommendation of the Minor Works Contractors Registration Committee in respect of registration of minor works contractor (company).	B(MW)R 26
BA26	Application for registration as a registered minor works contractors (individual).	B(MW)R 10(1)(A)
BA26A	Application for renewal of registration of registered minor works contractor (individual).	B(MW)R 14(1)
BA26B	Application for restoration of name to the register of minor works contractor (individual).	B(MW)R 18(1)
BA26C	Application for registration of additional items of Class III minor works for a registered minor works contractor (individual).	B(MW)R 21(1)
BA26D	Application for review of decision of the Building Authority or recommendation of the Minor Works Contractors Registration Committee in respect of registration of minor works contractor (individual).	B(MW)R 26

Source: Buildings Department, Hong Kong, SAR. Refer to www.bd.gov.hk for further information.

2 GENERAL CONSTRUCTION DATA

SUMMARY OF BUILDING REGULATIONS FOR HONG KONG

DESCRIPTION	NUMBER OF REGULATIONS
Administration	48
Appeal	13
Construction	93
Demolition Works	14
Energy Efficiency	5
Minor Works	97
Minor Works (Fees)	20
Inspection and Repair	35
Oil Storage Installations	15
Planning	74
Private Street and Access Roads	28
Refuse Storage and Material Recovery Chambers and Refuse Chutes	30
Standards of Sanitary Fitments, Plumbing, Drainage Works and Latrines	97
Ventilating Systems	8

Source: *Buildings Ordinance, Hong Kong, SAR*
Refer to www.legislation.gov.hk for further information.

PERCENTAGE SITE COVERAGE AND PLOT RATIOS FOR HONG KONG

DEFINITION

Class A Site : Not being a class B or class C site, that abuts on one specified street not less than 4.5 m wide or on more than one such street.

Class B Site : A corner site that abuts on 2 specified streets neither of which is less than 4.5 m wide.

Class C Site : A corner site that abuts on 3 specified streets none of which is less than 4.5 m wide.

OPEN SPACE ABOUT DOMESTIC BUILDINGS		
Item	Class of site	Open space required
1.	Class A site	Not less than one-half of the roofed-over area of the building
2.	Class B site	Not less than one-third of the roofed-over area of the building
3.	Class C site	Not less than one-quarter of the roofed-over area of the building

Source: *Buildings Ordinance, Hong Kong, SAR*
 Refer to www.legislation.gov.hk for further information.

(Cont'd)

2 GENERAL CONSTRUCTION DATA

PERCENTAGE SITE COVERAGE AND PLOT RATIOS FOR HONG KONG

Height of Building in metres	DOMESTIC BUILDINGS					
	Percentage site coverage			Plot Ratio		
	Class A site	Class B site	Class C site	Class A site	Class B site	Class C site
Not over 15 m	66.6	75	80	3.3	3.75	4.0
15 m to 18 m	60	67	72	3.6	4.0	4.3
18 m to 21 m	56	62	67	3.9	4.3	4.7
21 m to 24 m	52	58	63	4.2	4.6	5.0
24 m to 27 m	49	55	59	4.4	4.9	5.3
27 m to 30 m	46	52	55	4.6	5.2	5.5
30 m to 36 m	42	47.5	50	5.0	5.7	6.0
36 m to 43 m	39	44	47	5.4	6.1	6.5
43 m to 49 m	37	41	44	5.9	6.5	7.0
49 m to 55 m	35	39	42	6.3	7.0	7.5
55 m to 61 m	34	38	41	6.8	7.6	8.0
Over 61 m	33.33	37.5	40	8.0	9.0	10.0

Source: Buildings Ordinance, Hong Kong, SAR
Refer to www.legislation.gov.hk for further information.

NON-DOMESTIC BUILDINGS					
Percentage site coverage			Plot Ratio		
Class A site	Class B site	Class C site	Class A site	Class B site	Class C site
100	100	100	5	5	5
97.5	97.5	97.5	5.8	5.8	5.8
95	95	95	6.7	6.7	6.7
92	92	92	7.4	7.4	7.4
89	90	90	8.0	8.1	8.1
85	87	88	8.5	8.7	8.8
80	82.5	85	9.5	9.9	10.2
75	77.5	80	10.5	10.8	11.2
69	72.5	75	11.0	11.6	12.0
64	67.5	70	11.5	12.1	12.6
60	62.5	65	12.2	12.5	13.0
60	62.5	65	15	15	15

EVOLVING REGULATIONS FOR GREEN BUILDINGS IN CHINA

Green Building Certifications

The leading and nationally recognized environmental assessment tool for buildings in China is the Green Building Evaluation Standard published by the Ministry of Housing and Urban-Rural Development (MOHURD). The Green Building Evaluation Standard applies to all types of civil buildings, including residential buildings, commercial buildings, governmental offices and other public facilities. Previously, the Green Building Evaluation Standard grades applicable buildings under a three-star system. It was revised in 2019 and the new version of the Green Building Evaluation Standard (GB-T50378-2019) added a “basic grade” below the “one-star” grade, making it more difficult to receive a star rating. Local administrations may formulate local green building evaluation standards based on the national evaluation standard. Notably, Shanghai revised its local standard in July 2020 and its new Green Building Evaluation Standard (DG/TJ08-2090-2020) became the first local evaluation standard based on the 2019 version of the national Green Building Evaluation Standard. China also has other evaluation standards for other building types, such as evaluation standards for green industrial buildings and green hospital buildings.

There have been various national policies aspiring to make it mandatory to meet the green building standards. For example, compliance with the Green Building Evaluation Standard was made compulsory for certain government-invested buildings, affordable housing in some big cities and public buildings with a gross floor area of over 20,000 square meters under the Green Building Action Plan issued by the National Development and Reform Commission (NDRC) and MOHURD in January 2013. More recently, the Green Building Development Action Plan issued by NDRC, MOHURD and five other authorities in July 2020 requires that basic requirements of green buildings be incorporated in the mandatory construction standards and encourages the local authorities to come up with more stringent mandatory green building standards. However, these national policies do not have the force of law. There is yet to be any national

Provided by :

Mr. Rico Chan
Partner, Baker McKenzie
+852 2846 1971
rico.chan@bakermckenzie.com

**Baker
McKenzie
FenXun.**
奋迅 · 贝克麦坚时

law or regulation that makes it mandatory for new or refurbished buildings to participate in green building certification or meet the green building standards.

Implementation of these national policy mandates currently very much depends on local rules. Local administrations are at different stages in terms of enforcement of the green building standards. For example, in Beijing and Shanghai (except Chongming District), all new buildings are required to meet the one-star requirements except that all new large-scale public buildings (i.e. public buildings with over 20,000 square meters of floor area) are required to meet the two-star requirements. The Chongming District of Shanghai imposes higher standards, which require that, with effect from 1 May 2019, all new public buildings must meet the two-star requirements while all new large-scale public buildings must meet the three-star requirements. Chongming District also requires that at least 70% of the new residential buildings must meet the two-star requirements. According to the Shanghai Green Building Development Report released by the Shanghai Municipal Commission of Housing and Urban-rural Development in 2019, for the period from 2016 to 2019, all new buildings in Shanghai met the green building standards, more than 70% of which achieved a two-star rating. More recently, Guangdong province promulgated the Guangdong Green Building Regulations on 27 November 2020, whereby all new buildings in the province are required to achieve at least the “basic grade” (i.e. the lowest grade in the green building rating system). It is believed that more and more local administrations will follow suit to back up the green building standards with its local rules.

It should be noted that MOHURD circulated the Administrative Measures for Green Building Labels (Draft for Consultation) on 2 November 2020. Among other things, the draft sought to clarify that: MOHURD should be responsible for evaluating a building for a “three-star” rating, while local administrations should be responsible for “two-star” or “one-star” ratings; the national Green Building Evaluation Standard should be applied when evaluating a building for a “three-star” rating, while local Green Building Evaluation Standard may be applied for “two-star” or “one-star” ratings. The consultation period ended on 9 November 2020.

Provided by :

Mr. Rico Chan
Partner, Baker McKenzie
+852 2846 1971
rico.chan@bakermckenzie.com

**Baker
McKenzie
FenXun.**
奋迅 · 贝克麦坚时

(Cont'd)

EVOLVING REGULATIONS FOR GREEN BUILDINGS IN CHINA

There is yet to be any further news on the new rule after the expiration of the consultation period. It is believed that the new rule will help streamline the evaluation process and pave the way for wider implementation of the green building standards.

Regulatory impetus aside, Chinese developers may want to adopt the Green Building Evaluation Standard for residential and commercial projects because there are certain special government funds or other financial awards specifically designated for environment protection purposes.

Buildings and Energy Efficiency

China has established a nationwide civil building energy performance evaluation and labelling system – the Civil Building Energy Performance Evaluation and Labelling scheme – through the Interim Measures for the Administration of Energy Performance Evaluation and Labelling of Civil Buildings 2008 (Interim Measures 2008). The evaluation and labelling are conducted in two stages for a single building: the first stage is based on the theoretical prediction of the building's energy performance and the second stage is based on the evaluation of the building's actual energy use after it has been put to use. There is a rating for each of the two stages. There are five grades under the scheme, with the highest being the "five-star" grade and lowest being the "one-star" grade. However, it should be noted that, although the nationwide civil building energy performance evaluation and labelling system has been established through the Interim Measures 2008, China only launched a pilot of such scheme for certain localities and in respect of certain specific types of projects (e.g. government offices or large-scale public buildings that are conducting comprehensive energy conservation improvements and have applied for government support). Nonetheless, more and more cities that are not part of the pilot program have been voluntarily participating in the scheme. Some provinces and municipalities have introduced their own implementation rules of the Civil Building Energy Performance Evaluation and Labelling scheme.

Provided by :

Mr. Rico Chan
Partner, Baker McKenzie
+852 2846 1971
rico.chan@bakermckenzie.com

**Baker
McKenzie
FenXun.**
奋迅 · 贝克麦坚时

Other than the Civil Building Energy Performance Evaluation and Labelling scheme, China has also adopted various policies addressing the reduction of energy consumption and carbon emission of buildings. The 13th Five-Year Plan published in March 2016 acknowledged the importance of various environmental issues. Following the 13th Five-Year Ecological Environment Protection Plan published in November 2016, we have seen the introduction of new policies encouraging the use of, perfecting, and enlarging the enforcement scope of the Green Building Evaluation Standard described above, as well as policies further implementing the 2013 Green Building Action Plan. The 13th Five-Year Plan for the Development of Building Energy Efficiency and Green Buildings published by MOHURD in February 2017 set various building energy efficiency targets for the period from 2016 to 2020, such as over 50% of the new buildings in urban areas shall be green buildings, at least 500 million square meters of existing residential buildings shall be renovated for energy saving, etc. At the 19th National Congress of the Communist Party of China held in October 2017, further emphasis has been put on the country's agenda on environmental protection and the need to push for "green development" and "market-oriented green technologies innovation". More recently, the 2020 Green Building Development Action Plan sets targets such as 70% of the buildings newly built in urban areas in 2022 shall be green buildings and the energy efficiency of existing buildings shall continue to improve by 2022.

Provided by :

Mr. Rico Chan
Partner, Baker McKenzie
+852 2846 1971
rico.chan@bakermckenzie.com

**Baker
McKenzie
FenXun.**
奋迅 · 贝克麦坚时

EVOLVING REGULATIONS FOR GREEN BUILDINGS IN CHINA

Government Regulatory Measures

As compared to some other countries, at the moment investors and developers in China may not yet be fully motivated by the environmental and social benefits of green buildings. The Chinese government currently mainly seeks to control and regulate the development of green buildings from the zoning/planning and construction angles.

The national policies have long been contemplating that green building requirements be incorporated in planning parameters. For example, the 2013 Green Building Action Plan urged local authorities to incorporate green building requirements in urban planning parameters and make sure such requirements are passed through to apply to construction projects. Local regulations have responded to that policy mandate. For example, the Guangdong Green Building Regulations that came out on 27 November 2020 stipulates that green building development plans shall be incorporated into local urban planning parameters, and more specifically, construction land planning conditions should clearly stipulate the green building rating required for the building to be erected on the land.

It's also been quite some time since the national policies sought to promote green buildings via regulating the construction process (covering both construction permits granting and the actual construction). For example, the 2013 Green Building Action Plan requires local authorities to strengthen the review and examination of a building's design and construction plan to ensure that the building is in compliance with the energy conservation standards. More recently, as mentioned above, the Green Building Development Action Plan issued by NDRC, MOHURD and five other authorities in July 2020 required that basic requirements of green buildings be incorporated in the mandatory construction standards. A number of major cities have published local regulations implementing such policy mandates.

Provided by :

Mr. Rico Chan
Partner, Baker McKenzie
+852 2846 1971
rico.chan@bakermckenzie.com

**Baker
McKenzie
FenXun.**
奋迅 · 贝克麦坚时

For example, under the Measures for Promoting Green Buildings in Shenzhen revised in March 2020, when verifying the project planning, the departments of planning and natural resources shall verify whether the construction project meets the green building standards, and where the construction project does not meet the green building standards, the construction project planning permit shall not be issued.

In addition to the above, the PRC Environmental Protection Tax Law which came into force on 1 January 2018 imposes environmental protection taxes on building owners for carbon emission and waste disposal into the environment. Many building owners have been required to pay such tax. With the implementation of the environmental protection taxes, it is believed that real estate developers will be more keen to develop green buildings in the future.

Provided by :

Mr. Rico Chan
Partner, Baker McKenzie
+852 2846 1971
rico.chan@bakermckenzie.com

**Baker
McKenzie
FenXun.**
奋迅 · 贝克麦坚时

PROCUREMENT STRATEGIES AND FORM OF CONTRACTS

General

A host of contract procurement approaches have emerged in the past decade. Each procurement approach has characteristics, benefits and restrictions peculiar to it. There is no single approach that fits all situations. The key to a successful procurement arrangement lies in marrying the right procurement approach with the particular contract in question. This calls for a systematic identification of client's requirements and evaluation of the decision criteria relating to the procurement strategy.

Common criteria for procurement selection

Speed – Fast-tracking projects generally favor arrangements that offer opportunities to overlap the design and construction processes e.g. design & build contracting and management contracting.

Cost certainty – Reliability of budgets is one of the prime concerns of most clients. Traditional lump sum bills of quantities and design & build contracting offer the highest degree of price certainty.

Complexity – Projects which are technologically advanced or highly serviced generally favor the use of traditional contracting where the design will be well developed prior to the tendering stage. Procurement arrangements such as construction management and management contracting that allow early involvement of management contractor are also considered suitable for complex projects.

Responsibility – For projects using traditional contracting, the contractor is employed to build what the client's design team has documented. Therefore, any dispute as to quality of works has to be resolved into a design or workmanship issue in the very first place. By contrast, design & build contracts offer the clearest division of responsibility where the design & build contractor will be the sole point of responsibility.

Common standard form of contract in Hong Kong

In 2005, the Hong Kong Institute of Architects, the Hong Kong Institute of Construction Managers and the Hong Kong Institute of Surveyors jointly published a new standard form of building contract which is designed particularly for private projects where bills of quantities are provided.

In 2006, the three institutes published another standard form of building contract tailored for private projects without bills of quantities.

For public works, the conditions of contracts are often based on one of the following standard forms: -

The Government of the HKSAR, General Conditions of Contract for Building Works 1999 Edition

The Government of the HKSAR, General Conditions of Contract for Civil Engineering Works 1999 Edition

The Government of the HKSAR, General Conditions of Contract for Electrical and Mechanical Engineering Works 1999 Edition

The Government of the HKSAR, General Conditions of Design and Build Contracts 1999 Edition

New Engineering Contract (NEC)

NEC is the abbreviation for “New Engineering Contract” which is a suite of contracts published by the Institute of Civil Engineers in the United Kingdom. The NEC has become increasingly popular in the public sector of Hong Kong. In a Development Bureau paper for LegCo dated 25 February 2014, it was reported that “Government has been using the NEC form Currently, there are 10 public works projects with construction contracts using NEC form. We will use

(Cont'd)

PROCUREMENT STRATEGIES AND FORM OF CONTRACTS

New Engineering Contract (NEC) (Cont'd)

the NEC form more extensively in different works categories (including building works, civil engineering works etc.), contract types and contracts of different prices.” The NEC family covers not only construction contracts between employers and contractors but also professional services for employers to engage consultants and adjudicators.

The Engineering & Construction Contract (ECC) of the NEC family of contracts contains standard options that cover lump sum contracts, target cost contracts, cost reimbursable contracts and management contracts. The ECC contract claims to be radically different to traditional construction contracts in that it facilitates good management and encourages collaborative working. For instance, both the Project Manager and the Contractor are obliged to give early warnings and to hold early warning meetings to mitigate the effects of change in contract scope. Great emphasis is also given to the programme which has to be accepted by the Project Manager and to be kept updated by the Contractor. The Project Manager is to maintain a Risk Register to record risks that have arisen during the contract and the decisions of how to deal with them.

Arcadis was the NEC Advisor for Fuk Man Road Nullah Improvement Works – the very first NEC pilot project in Hong Kong. Our work with the project team for that pilot project reveals that it is not only the letter or the form of the NEC that brings about the advantages of flexibility and promotion of good project management. The success lies in a change in mindset and attitudes and the establishment of mutual trust.

Procurement Strategy Table

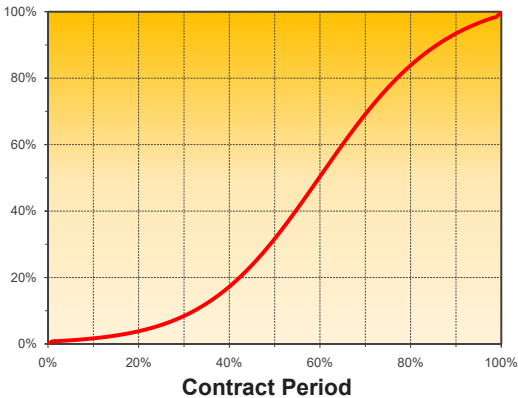
PROJECT CRITERIA		RELATIVE DEGREE OF APPROPRIATENESS			
Parameter	Objectives	Traditional	Management Contracting	Construction Management	Design and Construct
Timing	Early Completion	Low	High	High	High
Cost	Pre construction price certainty	High	Low	Low	High
Quality	Design prestige	High	High	High	Low
Variations	Avoid prohibitive cost of change	High	Moderate	Moderate	Low
Complexity	Technically advance or highly complex building	Moderate	High	High	Low
Responsibility	Single contractual link	Low	Low	Low	High
Professional Responsibility	Need for design team to report to sponsor	High	High	High	Low
Risk Avoidance	Desire to transfer complete risk	Low	Low	Low	High
Damage Recovery	Facility to recover costs direct from contractor	Moderate	Low	Low	High
Buildability	Contractor input to economic construction	Low	High	High	High

CONSTRUCTION WORKDONE FORECAST

The following graph and table are an indication of the rate of expenditure for construction projects.

The rate of expenditure is an average rate and will vary from project to project when specific project circumstances are taken into account.

Construction Workdone Forecast



CONTRACT PERIOD	CUMULATIVE WORKDONE	CONTRACT PERIOD	CUMULATIVE WORKDONE
5%	1%	55%	41%
10%	2%	60%	50%
15%	3%	65%	60%
20%	4%	70%	69%
25%	6%	75%	77%
30%	8%	80%	84%
35%	12%	85%	89%
40%	17%	90%	93%
45%	24%	95%	97%
50%	32%	100%	100%



PROPERTY 3

Property Commentary

Property Indicators

Gross Floor Area (GFA) Calculations
in Hong Kong

Gross Floor Area (GFA) Calculations in PRC

Construction Floor Area (CFA) Definition

PROPERTY COMMENTARY 2020

Economy

The Hong Kong economy has seen its worst performance since the Global Financial Crisis amid the outbreak of COVID-19 in January 2020. After a hard fall in GDP real growth at -9.1% and -9.0% in the first two quarters of the year respectively, GDP contracted 3.5% YoY in Q3. Unemployment rate has risen to 16-year high level at 6.4% as of October 2020. Private consumption went down by 8.2% in Q3 compared with a year ago, despite the improvement from -14.2% in Q2. Although export and import of goods recorded growth of 3.9% and 1.8% YoY in Q3, export and import of services tumbled 34.6% and 36.8% YoY respectively, due to travelling restrictions and the absence of inbound tourists.

With the local social unrest and political situation seeing some clarity after the legislation of National Security Law in Hong Kong, the stock market has been showing some stability, with the Hang Seng Index going up by 5.1% as of early December compared with early July. The prospects of initial public offerings (IPO) has improved since Q3 with deal arrangers reportedly rushing to launch share sales before the year end. There have been fewer but more sizable deals this year, with most of them being Chinese Mainland issuers.

Provided by :



The outbreak of COVID-19 has led to a catastrophe for the retail sector. Total retail sales fell 27% YoY in the first 10 months of 2020. The total number of visitor arrivals to Hong Kong plunged 92.9% YoY during the same period from 50.08 million to 3.56 million. Average hotel occupancy was 55% as of October-end compared to 68% same time last year. It has improved slightly from early 2020 as a result of the emergence of local staycation trend.

Looking ahead, the local economic performance will largely depend on the epidemic situation, as the mounting up infections and associated anti-pandemic measures would continue to discourage economic activities and dampen business sentiment. With the government forecasting a GDP contraction of 6.1% over the year, we expect economic recovery would remain a challenge in the short term.

Provided by :



(Cont'd)

PROPERTY COMMENTARY 2020

Residential

Although the pandemic and economic recession put pressure on the local residential market, the overall purchase sentiment remained positive in 2020, supported by the low interest rates and incentives offered by developers, such as discounted mortgage plans. According to the official statistics, for the first 10 months of the year, the overall residential price stayed flat which edged up 0.4%. During the same period, a total of 47,743 transactions were recorded, merely down 6.1% YoY. The primary market has outperformed the market with some new projects achieving good sales results. This reflects that purchase momentum persisted given that some homebuyers leveraged the volatile market to get on the property ladder or upgrade their properties.

Looking ahead, with economic uncertainties still lingering, large-scale layoffs and pay cuts are expected to gradually emerge. This will weigh on both the mass and luxury residential markets in the short term. We expect the number of repossessed units to pick up, as more owners are unable to repay their mortgages. Mass housing prices are expected to fall by 5% in 2021, while luxury housing prices would have a 0-5% drop. We also expect the ratio of transaction volume of first-hand to second-hand homes to be around 30:70 in 2021, and total residential transaction volume to be around 56,000-58,000 units.

Provided by :



Office

Leasing demand of office market remained subdued in 2020 against the backdrop of global economic recession and COVID-19 pandemic. Rents continued the downward trend: the average rent of Hong Kong Island and Kowloon for the first 11 months of 2020 dropped 16.5% YoY and 12.8% YoY respectively, according to Knight Frank Research. Nonetheless, a significant rental decline has provided golden opportunities for tenants especially those in the professional services sector to upgrade their offices to more premium buildings with attractive packages.

While market conditions have become more uncertain, cost-competitiveness remained a pressing consideration for tenants. Landlords have softened their approach and adopted a more realistic stance in negotiating leasing terms with tenants. They also offered more flexible incentives such as rent-free period to secure long-standing tenants, which are not common before COVID-19.

Affected by the coronavirus-induced recession, companies continued to actively seek for cost-saving and flexible leasing options and became more cautious in their real estate plans. Entering 2021, we therefore expect the decentralisation trend to continue. We also foresee rising demand for co-working space, as more companies, especially small and medium-sized enterprises are requesting for flexible leasing options amid the uncertain environment. The vacancy rate is expected to edge up further and demand for sizable office space to remain weak in the near term.

Provided by :



PROPERTY COMMENTARY 2020

Retail

Hong Kong's retail market was sluggish in 2020, given poor consumer sentiment and the absence of inbound tourism. According to government figures, total retail sales value dropped by 27% YoY in January to October to HK\$266.4 billion. The food and beverage (F&B) sector also faltered. For the first 9 months of 2020, the value of restaurant receipts plunged by 31% YoY to HK\$59.8 billion.

Traditional prime shopping streets such as Queens Road Central and Russell Street have seen the most significant reshuffling of tenant mix in recent history, with more mid-priced brands entering the streets, and luxury brands exiting. Supermarkets and shops selling necessities that previously could afford rents only in neighbourhood or community malls are now showing their presence in prime street locations, given the significant downward rental corrections.

Transactions for retail property dropped significantly in 2020. The number of retail property transactions in the first ten months of 2020 dropped by 9.5% YoY while the total consideration in the same period plunged by 58.7% YoY.

The economic recession, heightened job insecurity, and rising unemployment have all but sealed the fate of the retail sector. Even if the border opens again in 2021, inbound tourism is unlikely to return to its heyday in the short term. We expect the F&B sector to continue to face tremendous challenges under the prevailing social-distancing measures, and restaurant receipts to continue

Provided by :



their downtrend. With declining rental affordability across the board and no silver lining in sight, we expect retail rents to drop further in 2021.

Industrial

Over the first 10 months of 2020, the rent of flatted factory recorded a slight increase of 2% YoY, according to the Rating and Valuation Department. However, slammed by the impact of COVID-19, some tenants have given up their leases, resulting in a soaring vacancy rate.

From January to October 2020, there were 1,618 transactions of flatted factory, decreased by 25.2% YoY. Also, prices of industrial building declined significantly. The total consideration for the first ten months in 2020 was HK\$10.6 billion, plummeted by 35.3% YoY.

New completion of flatted factory in the first 10 months of 2020 was 30,000 sqm, far from the figures estimated by the Rating and Valuation Department, 53,800 sqm, as the construction schedule has been delayed due to the pandemic. Despite that, it could possibly alleviate the high-reaching vacancy rates amid the market downturn.

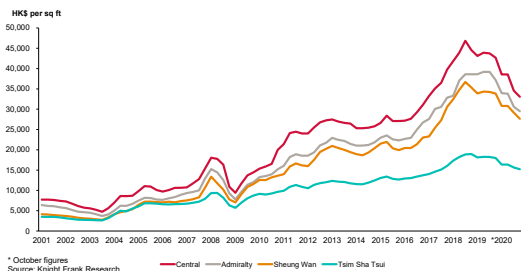
It is expected that the industrial market to remain under pressure in 2021. In the coming years, we expect that more conventional industrial buildings to be redeveloped into data centres or other usages such as cold storage facilities due to shrinking demand for traditional industrial buildings.

Provided by :

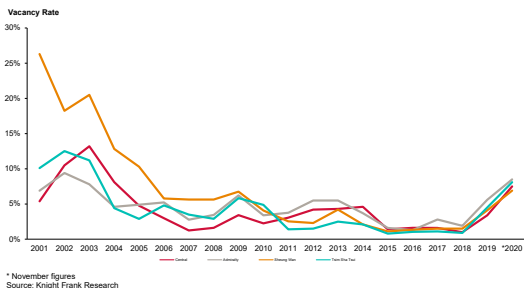


PROPERTY INDICATORS

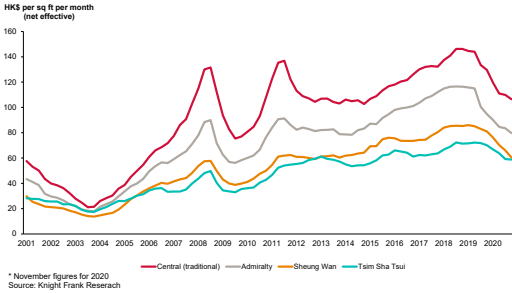
HONG KONG GRADE-A OFFICE PRICE



HONG KONG GRADE-A OFFICE VACANCY RATES



HONG KONG GRADE-A OFFICE RENTAL VALUES



HONG KONG GRADE-A OFFICE SUPPLY



GROSS FLOOR AREA (GFA) CALCULATIONS IN HONG KONG

GROSS FLOOR AREA (GFA) CALCULATIONS IN HONG KONG

FEATURE	BUILDING (PLANNING) REGULATION	REMARKS
General floor area	Accountable	Area within outer surface of external walls.
Basement	Accountable	
Balcony / utility platform *	Accountable	Non-accountable if for residential buildings and with not less than 40% of the perimeter faces into open air, max 50% area can be exempted.
Curtain wall / cladding	Non-accountable	Non-accountable if: 1. The curtain wall system itself does not form part of the structural system of the parent building; 2. The system does not result in any additional floor area at a floor level; 3. The projection of the system from the outer face of the structural elements does not exceed 200mm for a domestic building and 250mm for non-domestic building; 4. The external reflectance of the glass used in the system does not exceed 20%; and 5. Safe access and facilities are provided for cleaning, maintenance and repair of the system.
External wall finishes (including bay windows) *	Non-accountable	Non-structural precast facades may, subject to conditions, be excluded from GFA calculation.
Plant rooms	Non-accountable	Subject to justification with reasonable plant layouts.
Staircases and lift shafts	Accountable	Except staircases and lift shafts solely serving non-accountable areas.
Covered public carparking space	Accountable	Underground public car space can be exempted.
Covered private carparking space	Non-accountable	Applicable only for spaces serving users of the building required under local standard and built below ground. Only 50% area can be exempted if above ground.

Lobby *	Accountable	Concession may be granted for lift lobbies subject to conditions.
Refuge floor	Non-accountable	
Loading and unloading bay	Non-accountable	Applicable if required under local standard/lease and built on ground floor or below ground. Only 50% area can be exempted if above ground.
Refuse storage chambers, refuse storage, refuse chutes, refuse hopper rooms	Non-accountable	
Covered area on roof-tops	Accountable	Non-accountable for plant rooms and staircases serving non-accountable area only.
Recreational facilities *	Accountable	Non-accountable subject to conditions.
Spaces for watchmen and management staff *	Accountable	Non-accountable subject to conditions.
Modular Integrated Construction	Accountable	Concession may be granted to 6% of the MiC floor area upon submission of an application

* Total concessions of these areas are subject to a cap of 10% of the total GFA and prerequisites with sustainability designs.

Disclaimer : *GFA calculations are subject to various legislation and practice notes. All cases of accountable or non-accountable GFA are subject to individual conditions. The above presents a brief summary only and users are advised to seek professional advice from authorized persons. Arcadis herewith disclaims any liability that may arise from unsolicited use of the information given above.*

GROSS FLOOR AREA (GFA) CALCULATIONS IN PRC

GROSS FLOOR AREA (GFA) CALCULATIONS IN PRC

FEATURE	NATIONAL STANDARD -STANDARD MEASUREMENT FOR CONSTRUCTION AREA OF BUILDING (GB/T 50353-2005)	REMARKS FOR BEIJING, SHANGHAI AND GUANGZHOU
General floor area	Accountable	Area within outer surface of external insulation. Shanghai : External insulation is exempted from calculation of plot ratio.
Basement	Accountable	1. Beijing : Non-accountable 2. Shanghai : Non-accountable. 3. Guangzhou : Accountable for GFA except where the floor space is solely for plant rooms or carpark.
Balcony / utility platform	Accountable	
Curtain wall / cladding	Accountable	
External wall finishes (including bay windows)	Non-accountable	Except decorative type of curtain wall.
Plant rooms	Accountable	
Staircases and lift shafts	Accountable	
Covered public carparking space	Accountable	
Covered private carparking space	Accountable	
Lobby	Accountable	

Canopy	Accountable	Non-accountable subject to width of the canopy not exceeding 2.1m.
Refuge floor	Accountable	1. Shanghai : Non-accountable. 2. Guangzhou : Only refuge areas on refuge floor are non-accountable.
Space below elevated ground floor	Accountable	Non-accountable for GFA if for the usage of walkway, green, public amenities or similar public function.
Covered walkways	Accountable	
Loading and unloading bay	Accountable	Non-accountable if not roofed over.
Refuse storage chambers, refuse storage, refuse chutes, refuse hopper rooms	Accountable	Non-accountable if not roofed over.
Floor space inside sloping roof	Accountable	Non-accountable if clear height does not exceed 1.2m.
Covered area on roof-tops	Accountable	1. Shanghai : Non-accountable if the area of the construction on roof-top does not exceed 1/8 of the area of the typical floor. 2. Guangzhou: Staircase, lift lobby and water tank room on roof-tops are exempted from GFA
Recreational facilities	Accountable	
Spaces for watchmen and management staff	Accountable	
External staircases	Accountable	Non-accountable if not roofed over.

Disclaimer : GFA calculations are subject to various legislation and practice notes. All cases of accountable or non-accountable GFA are subject to individual conditions. The above presents a brief summary only and users are advised to seek professional advice from authorized persons. Arcadis herewith disclaims any liability that may arise from unsolicited use of the information given above.

CONSTRUCTION FLOOR AREA (CFA) DEFINITION

The construction floor area measured from drawings is defined as covered floor areas fulfilling the functional requirements of the building measured to the outside face of the external walls or external perimeter.

It includes floor areas occupied by:

- partitions
- columns
- stairwells
- lift shafts
- plant rooms
- water tanks
- balconies
- utilities platforms
- vertical ducts
- service floors higher than 2.2m and the like

But excludes floor areas occupied by:

- bay windows
- planters projecting from the building, and
- the areas covered by canopies, roof eaves and awnings

Sloping surfaces such as staircases, escalators and carpark ramps are to be measured flat on plan.

The measurement of construction floor area is as defined by Arcadis.



OTHER INFORMATION

4

Utility Costs for Selected Asian Cities

Public Holidays

Arcadis Asia Services

International Directory of Offices

Health & Safety Management System

Quality Management System

Environmental Management System

4 OTHER INFORMATION

UTILITY COSTS FOR SELECTED ASIAN CITIES

CITY	EXCHANGE RATE	ELECTRICITY	
		DOMESTIC	COMMERCIAL/ INDUSTRIAL
	US\$1=	US\$/kWh	US\$/kWh
Hong Kong	HK\$ 7.75	0.11	0.13
Macau	MOP7.98	0.17	0.17
Shanghai	RMB 6.60	0.093(peak) / 0.047(normal)	5.155 (Basic Tariff) / 0.089 (Summer) / 0.085 (Non-Summer)
Beijing	RMB 6.60	0.066 - 0.107	0.184 - 0.186 (peak) / 0.114 - 0.116 (normal)
Guangzhou	RMB 6.60	0.084 - 0.143	0.086 - 0.157
Chongqing	RMB 6.60	0.077 - 0.124	0.084 - 0.099

The above costs are at **4th Quarter 2020** levels.

Basis of Charges in Hong Kong, China

- **Electricity** (Based on tariff scheme of CLP Holdings Limited)

Domestic (bi-monthly consumption) :

0 - 400kWh = US\$ 0.11/kWh; 400 - 1,000kWh = US\$ 0.13/kWh;
 1,000 - 1,800kWh = US\$ 0.15/kWh; 1,800 - 2,600kWh = US\$ 0.19/kWh;
 2,600 - 3,400kWh = US\$ 0.22/kWh; 3,400 - 4,200kWh = US\$ 0.23/kWh;
 Above 4,200kWh = US\$ 0.23/kWh

- **Water - Domestic** :

0 - 12m³ = Free of charge; 12 - 43m³ = US\$ 0.54/m³;
 43 - 62m³ = US\$ 0.83/m³; Above 62m³ = US\$ 1.17/m³

Basis of Charges in Macau, China

- **Electricity**

Electricity tariffs are a composition of demand charges, consumption charges, fuel clause adjustment and government tax.

- **Water - Domestic** :

Consumption charge = US\$ 0.56/m³ for 28m³ or below; US\$0.64/m³ for 29m³ to 60m³; US\$0.75/m³ for 61m³ to 79m³ and US\$0.90/m³ for 80m³ or above.

Other charges (Depending on meter size 15mm - 200mm) :

Meter rental = US\$0.34 - 57.64/month

- **Water - Commercial/Industrial** :

Charges for ordinary users (e.g. Business, government buildings, schools, associations, hospitals and others) only. Special users (e.g. gaming industries, hotels, saunas, golf courses, construction, public infrastructure and other temporary consumption) are excluded.

Basis of Charges in Chongqing, China

- **Unleaded Fuel** 92# = US\$0.813/litre; 95# = US\$0.859/litre

WATER		FUEL		
DOMESTIC	COMMERCIAL/ INDUSTRIAL	DIESEL	LEADED	UNLEADED
US\$/m ³	US\$/m ³	US\$/litre	US\$/litre	US\$/litre
0.83	0.59	1.89	N/A	2.28
0.56 - 0.91	0.76	1.45	N/A	1.28
0.523 - 0.883	0.76	0.78	N/A	0.89
0.673 - 1.213	1.213 - 1.279	0.77	N/A	0.88
0.283 - 0.566	0.49	0.79	N/A	0.85
0.504 - 0.850	0.66	0.76	N/A	0.859

Basis of Charges in Shanghai, China

- **Electricity - Domestic** (Charge on yearly consumption) :
 - 0 - 3,120kWh = US\$ 0.093/kWh (peak) / US\$ 0.047/kWh (normal);
 - 3,120 - 4,800kWh = US\$ 0.103/kWh (peak) / US\$ 0.051/kWh (normal);
 - Above 4,800kWh = US\$ 0.148/kWh (peak) / US\$ 0.074/kWh (normal)
- **Electricity - Commercial/Industrial** (Charge on yearly consumption):
In dual tariff system; and in rate of 10 kVa
- **Water - Domestic** :
 - 0 - 220m³ = US\$ 0.523/m³; 220 - 300m³ = US\$ 0.732/m³;
 - Above 300m³ = US\$ 0.883/m³
- **Unleaded Fuel** = Unleaded fuel rate is for Unleaded 95#

Basis of Charges in Beijing, China

- **Electricity - Domestic** (below 1kV) :
 - 1 - 240kWh = US\$0.066/kWh; 241 - 400 kWh = US\$0.073/kWh;
 - Above 400kWh = US\$0.107 / kWh
- **Electricity - Commercial/Industrial** (1-10kV) :
 - Central Districts: US\$0.186/kWh(peak); US\$0.116/kWh(normal)
 - Other Districts= US\$0.184/kWh(peak); US\$0.114/kWh(normal)
- **Water - Domestic**: (Charge on yearly consumption) :
 - 1 - 180m³ = US\$0.673/m³; 181 - 260m³ = US\$0.943/m³
 - Above 261m³ = US\$1.213/m³
- **Water - Commercial/Industrial** :
 - Central Districts: US\$1.279/m³; Other Districts= US\$1.213/m³

Basis of Charges in Guangzhou, China

- **Unleaded Fuel** = Unleaded fuel rate is for Unleaded gasoline 97#

(Cont'd)

4 OTHER INFORMATION

UTILITY COSTS FOR SELECTED ASIAN CITIES

CITY	EXCHANGE RATE	ELECTRICITY	
		DOMESTIC	COMMERCIAL/ INDUSTRIAL
	US\$1=	US\$/kWh	US\$/kWh
Singapore	S\$ 1.36	0.16	0.16
Kuala Lumpur	RM 4.11	0.053 - 0.139	0.092 - 0.124
Bangkok	BAHT 30.275	0.078 - 0.146	0.103 - 0.105
Manila	PHP 48.94	0.184	0.172
Ho Chi Minh	VND 23,500	0.12	0.11/0.06
Bangalore	INR 74.39	0.075 - 0.107	0.092 - 0.135
New Delhi*	INR 74.39	0.021 - 0.118	0.107
Jakarta#	IDR 14,155	0.102	0.102

The above costs are at **4th Quarter 2020** levels.

* The data is provided by Arkind LS Private Limited, an Arcadis Alliance partner.

The data is provided by PT Lantera Sejahtera Indonesia.

Basis of Charges in Singapore (All rates are nett of GST)

- Electricity tariff is based on low tension power supply.
- ¹Domestic water tariff effective from 1 July 2018.
Rate includes water conservation tax, water-borne fee, sanitary appliance fee and is an average for the 1st 40m³
- ²Domestic water tariff effective from 1 July 2018. Rate includes water conservation tax, water borne fee, sanitary appliance fee and is an average for the usage after the 1st 40m³
- Non-domestic water tariff effective from 1 July 2018.
Rate includes water conservation tax, water-borne fee, and sanitary appliance fee
- Diesel fuel = as at 17 November 2020.
- Unleaded Fuel = 98 Unleaded petrol as at 17 November 2020.

Basis of Charges in Kuala Lumpur, Malaysia

- Fuel = Rates for 14-20 November 2020. Unleaded petrol Ron 95.
- Water (Domestic): Rates for residential with individual meter.
- Electricity (Commercial/Industrial): Low voltage

Basis of Charges in Bangkok, Thailand

- Unleaded Fuel = Gasohol 95
- For normal tariff with consumption not exceeding 150 kWh per month

WATER		FUEL		
DOMESTIC	COMMERCIAL/ INDUSTRIAL	DIESEL	LEADED	UNLEADED
US\$/m ³	US\$/m ³	US\$/litre	US\$/litre	US\$/litre
2.01 ² /2.71 ³	2.01	1.19	N/A	1.82
0.139 - 0.487	0.504 - 0.555	0.423	N/A	0.394
0.281 - 0.477	0.314 - 0.522	0.687	N/A	0.738
0.508 - 0.740	2.15	0.732	N/A	0.992
0.27	0.86/0.49	0.49	N/A	0.64
0.590 - 0.738	1.48	1.061	N/A	1.17
0.37 - 1.11	1.475 - 2.590	1.024	N/A	1.13
0.074 - 0.527	0.483 - 1.035	0.664	N/A	0.636

Basis of Charges in Ho Chi Minh, Vietnam (All rates are VAT inclusive)

Basis of Charges in Manila, Philippines

- **Electricity**
 - Domestic : 231kWh - 2,677kWh
 - Commercial/Industrial : 185,404kWh
- **Water**
 - Domestic : 36m³ - 101m³
 - Commercial/Industrial : 3,750m³

Basis of Charges in Jakarta, Indonesia

- Domestic group in Indonesia covers residence, religious building, non-profit organization building and government hospital
- Commercial group in Indonesia covers luxury residence, apartment, offices, hotel, commercial building and factories.

4 OTHER INFORMATION

PUBLIC HOLIDAYS

	2021
HONG KONG	
New Year's Day	01 Jan
Lunar New Year (Day 1)	12 Feb
Lunar New Year (Day 2)	13 Feb
Lunar New Year (Day 4)	15 Feb*
Good Friday	02 Apr
The day following Good Friday	03 Apr
The day following Ching Ming Festival	05 Apr*
The day following Easter Monday	06 Apr*
Labour Day	01 May
Birthday of the Buddha	19 May
Tuen Ng / Dragon Boat Festival	14 Jun
HKSAR Establishment Day	01 Jul
The day following Chinese Mid-Autum Festival	22 Sep
National Day	01 Oct
Chung Yeung Festival	14 Oct
Christmas Day	25 Dec
The 1st weekday after Christmas Day	27 Dec*

* *As the festivals in 2021 falls on Sunday, the day following it is designated as a general holiday in substitution*

2021	
CHINA	
New Year's Day	01 Jan
	02 Jan
	03 Jan
Chinese New Year's Eve	11 Feb
Chinese New Year [§]	12 Feb
	17 Feb
	03 Apr
Ching Ming Festival	04 Apr
	05 Apr
	01 May
Labour Day*	05 May
	12 Jun
Tuen Ng / Dragon Boat Festival	13 Jun
	14 Jun
	19 Sep
Mid-Autumn Festival	20 Sep
	21 Sep
	01 Oct
National Day [#]	07 Oct

[§] 12-17 February 2021 are holidays

* 01-05 May 2021 are holidays

01-07 October 2021 are holidays

(Cont'd)

4 OTHER INFORMATION

PUBLIC HOLIDAYS

2021	
MACAU	
New Year's Day	01 Jan
Lunar New Year's Eve (Afternoon)	11 Feb*
Lunar New Year's Day	12 Feb
The 2nd day of Lunar New Year	13 Feb
The 3rd day of Lunar New Year	14 Feb
The rest day for 2nd day of Lunar New Year	15 Feb@
The rest day for 3rd day of Lunar New Year	16 Feb@
Good Friday	02 Apr
The day before Easter	03 Apr
Ching Ming Festival	04 Apr
The rest day for The day before Easter	05 Apr@
The rest day for Ching Ming Festival	06 Apr@
Labour Day	01 May
The rest day for Labour Day	03 May@
Birthday of the Buddha	19 May
Tuen Ng / Dragon Boat Festival	14 Jun
The day following Chinese Mid-Autumn Festival	22 Sep
National Day	01 Oct
The rest day for National Day	04 Oct
Chung Yeung Festival	14 Oct
All Soul's Day	02 Nov
Feast of Immaculate Conception	08 Dec
Macao S.A.R. Establishment Day	20 Dec
Winter Solstice	21 Dec
Christmas Eve	24 Dec
Christmas Day	25 Dec
The rest day of Christmas Day	27 Dec@
New Year's Eve (Afternoon)	31 Dec*

* *Special Holiday Granted by Chief Executive for staff in Public Administration*

@ *As the festivals in 2021 falls on Saturday / Sunday, the day following it is designated as a general holiday in substitution*

2021	
INDIA	
New Year's Day	01 Jan
Chandrama Ugadi	13 Apr
May day	01 May
Ramzan	14 May
Ganesh Chaturthi	10 Sep
Gandhi Jayanti	02 Oct
Vijay Dashmi	15 Oct
Diwali	04 Nov
Christmas Day	25 Dec
INDONESIA	
New Year's Day	01 Jan
Chinese New Year's (Imlek)	12 Feb
Ascension of Prophet Muhammad	11 Mar
Hindu Day of Quiet (Nyepi)	14 Mar
International Labour Day	01 May
Good Friday	02 May
Ascension Day of Jesus Christ	13 May
Idul Fitri	15 May
	16 May
Waisak Day	26 May
Pancasila Day	01 Jun
Idul Adha Day	20 Jul
Hijriyah New Year	10 Aug
National Independence Day	17 Aug
Prophet Muhammad's Birthday	18 Oct
Christmas Day	25 Dec

(Cont'd)

4 OTHER INFORMATION

PUBLIC HOLIDAYS

2021	
MALAYSIA	
New Year's Day *	01 Jan
Chinese New Year	12 Feb
	13 Feb [#]
Labour Day	01 May
Hari Raya Aidilfitri**	13 May
	14 May
Wesak Day	26 May
King/Agong's Birthday	07 Jun
Hari Raya Qurban**	20 Jul
Awal Muharam (Islamic New Year)	10 Aug
National Day	31 Aug
Malaysia Day	16 Sep
Prophet Muhammad's Birthday	19 Oct
Deepavali**	4 Nov ^{##}
Christmas Day	25 Dec
* <i>Except Johor, Kelantan, Kedah, Perlis & Terengganu</i>	
** <i>Subject to change</i>	
[#] <i>Except Kelantan & Terengganu</i>	
^{##} <i>Except Sarawak</i>	

2021	
PHILIPPINES	
New Year's Day	01 Jan*
Chinese New Year	12 Feb#
EDSA People Power Revolution	25 Feb#
Maundy Thursday	01 Apr*
Good Friday	02 Apr*
Black Saturday	03 Apr#
Araw ng Kagitingan	09 Apr*
Labor Day	01 May*
End of Eid-ul-Fitre (Feast of Ramadhan)	12/13 May*
Independence Day	12 Jun*
Eid-ul-Adha	19/20 Jul*
Ninoy Aquino Day	21 Aug#
National Heroes Day	30 Aug*
All Saint's Day	01 Nov#
All Souls Day	02 Nov#
Bonifacio Day	30 Nov*
Feast of the Immaculate Conception of Mary	08 Dec#
Christmas Eve	24 Dec#
Christmas Day	25 Dec*
Rizal Day	30 Dec*
Last Day of the Year	31 Dec#
* <i>Regular Holidays</i>	
# <i>Special Non-Working Days</i>	

(Cont'd)

4 OTHER INFORMATION

PUBLIC HOLIDAYS

2021	
SINGAPORE	
New Year's Day	01 Jan
Chinese New Year	12 Feb
	13 Feb
Good Friday	02 Apr
Labour Day	01 May
Vesak Day	26 May
Hari Raya Puasa	13 May
National Day	09 Aug
Hari Raya Haji	20 Jul
Deepavali	04 Nov
Christmas Day	25 Dec
VIETNAM	
New Year's Day	01 Jan
Lunar New Year	10-14 Feb
	15-16 Jan [#]
Liberation Day of Saigon	30 Apr
International Labour Day	01 May
National Day	2 Sep
Hung Vuong King Celeration	21 Apr
Christmas Day	24-25 Dec
[#] Substitute	

2021	
THAILAND	
New Year	01 Jan
Makha Bucha Day	26 Feb
Chakri Memorial Day	06 Apr
Songkran Festival	13 Apr
Songkran Festival	14 Apr
Songkran Festival	15 Apr
Labour Day	03 May ¹
Coronation Day	04 May
Wisakha Bucha Day	26 May
H.M. Queen Suthida Bajrasudhabimalalakshana's Birthday	03 June
H.M. King Maha Vajiralongkorn's Birthday	26 Jul ²
H.M. Queen Sirikit The Queen Mother's Birthday / Mother's Day	12 Aug
H. M. King Bhumibol Adulyadej Memorial Day	13 Oct
Chulalongkorn Day	25 Oct ³
H.M. King Bhumibol Adulyadej's Birthday / Father's Day	6 Dec ⁴
Constitution Day	10 Dec
New Year's Eve	31 Dec
<p><i>1 - As National Labour Day falls on Saturday (01 May) , Monday is designated as a general holiday in substitution</i></p> <p><i>2 - As H.M. King Maha Vajiralongkorn's Birthday falls on Saturday (24 July) ; Monday is designated as a general holidays in substitution</i></p> <p><i>3 - As Chulalongkorn Day falls on Saturday (23 October) ; Monday is designated as a general holidays in substitution</i></p> <p><i>4 - As H.M. King Bhumibol Adulyadej's Birthday falls on Sunday (5 Dec) , Monday is designated as a general holiday in substitution</i></p>	

(Cont'd)

ARCADIS ASIA SERVICES

BUSINESS ADVISORY

From rapid urbanization and pressure on natural resources, to tighter regulation and market consolidation, we live in an increasingly complex world. We understand your business challenges and have first-hand experience of the assets you own and operate. We partner with you and bring unique insights to support you in getting better results, with more certainty from strategy, optimizing performance, enhancing resiliency or transformation of your asset- Arcadis has helped clients globally deliver success.

COST MANAGEMENT

Be it a high-rise office building, a state-of-the-art rail station or a large scale industrial development, the need to achieve value for money is central to every investment strategy. Our people understand the need to accurately advise on costs and procurement at planning stage, ensuring a development or program is both economically and environmentally viable for many years to come.

DESIGN & ENGINEERING

From tall buildings to the busy airports; from underground tunnels to iconic bridges, engineering feats help to improve the quality of life for us all. Our specialist engineers use their expertise and knowledge to deliver exceptional and sustainable outcomes for clients through working on some of the world's most impressive and well-known buildings and structures.

ENVIRONMENT

We all deserve a clean, safe environment in which to live. Now more than ever, businesses and governments recognize the need to incorporate environmental concerns into their decision making. Arcadis is a global leader in inventive technical and financial approaches, helping some of the world's leading corporates and governments understand their impact on the natural world.

PROJECT & PROGRAMME MANAGEMENT

Organizing the creation of the world's largest, most complex and iconic programs of work in the built and natural environment today is no easy task. Budgets, supply chains, health and safety, time-frames and the large number of parties involved can be daunting. We work alongside our clients to create the right strategy, manage and mitigate risk, and assure the outcomes to meet our clients' business objectives and create exceptional value. As construction programs grow more complex, often with multi-geography delivery and faster paced schedules, the risks are getting.

WATER

From source to tap and then back to nature, the planet's most precious resource should be cherished. Thanks to over a century of experience in the water sector, Arcadis' specialist teams around the globe are uniquely positioned to provide safe and secure water technology that is built to withstand the demands of a rapidly changing world.

DIRECTORY OF OFFICES

CHINA

HONG KONG

ARCADIS HONG KONG LIMITED

17/F, Two Harbour Square,
180 Wai Yip Street, Kwun Tong,
Kowloon, Hong Kong

GPS : 22.310065, 114.221216

Tel : (852) 2911 2000

Fax : (852) 2911 2002

Email : info-hk@arcadis.com

Contact : Francis Au / Katherine Chan

BAODING

BEIJING ARCADIS CONSTRUCTION CONSULTANTS CO. LTD.
BAODING BRANCH

Suite 808-811,
Tower B, Shanggu Plaza Huibo,
No. 2238 Chaoyang North Street,
Baoding, Hebei Province 071000, China

GPS : 38.918742, 115.467576

Tel : (86 312) 588 1301

Fax : -

Email : chinacomms@arcadis.com

Contact : Kenn Ng / Hu Ping

BEIJING

BEIJING ARCADIS CONSTRUCTION CONSULTANTS CO.
LTD.

Suite 1225 - 1240, South Wing
Central Tower, Junefield Plaza,
10 Xuan Wu Men Wai Street
Beijing 100052, China

GPS : 39.896738, 116.375676

Tel : (86 10) 6310 1136

Fax : -

Email : chinacomms@arcadis.com

Contact : Kenn Ng / Hu Ping

CHANGSHA

ARCADIS CONSULTANCY (SHANGHAI) CO. LTD. CHANGSHA BRANCH

Room 2307, 2315-2317,
HUAYUAN International Center,
No.36 Section 2, Xiangjiang Middle Road,
Tianxin District,
Changsha, Hunan Province,
410002, China

GPS : 28.195233,112.976893
Tel : (86 731) 8277 2500
Fax : -
Email : chinacomms@arcadis.com
Contact : Chen Yong

CHENGDU

ARCADIS CONSULTANCY (CHENGDU) CO., LTD

Room11-11, Block2,
West Financial International Center,
258 Lower East Street East Street,
Jinjiang District, Chengdu 610011, China

GPS : 30.652994, 104.078937
Tel : (86 28) 8671 8373
Fax : (86 28) 8671 8535
Email : chinacomms@arcadis.com
Contact : Marco Foo

CHONGQING

ARCADIS CONSULTANCY (CHENGDU) CO., LTD. CHONGQING BRANCH

Room 3409-3410, International Trade Centre
38 Qing Nian Road, Central District
Chongqing 400010, China

GPS : 29.556331,106.574332
Tel : (86 23) 8655 1333
Fax : (86 23) 8655 1616
Email : chinacomms@arcadis.com
Contact : Gary Lin

(Cont'd)

DIRECTORY OF OFFICES

DALIAN

BEIJING ARCADIS CONSTRUCTION CONSULTANTS CO.
LTD. DALIAN BRANCH

Room 3401A, ETON International Tower, 280 Changjiang
Road, Zhongshan District,
Dalian, Liaoning Province
116001, China

GPS : 38.918263, 121.630256
Tel : (86 411) 8800 8018
Fax : -
Email : chinacomms@arcadis.com
Contact : Kenn Ng / Pan Jing

FOSHAN

ARCADIS CONSULTANCY (SHENZHEN) CO.,
LTD. FOSHAN BRANCH

RM. 1002-1004, 10/F, Lingnan Tiandi,
Zu Miao Road, Foshan
Guangdong Province
528000, China

GPS : 23.031224, 113.11278
Tel : (86 757) 8203 0028
Fax : (86 757) 8203 0029
Email : chinacomms@arcadis.com
Contact : Stanley Wan / Brandon Wan

GUANGZHOU

ARCADIS CONSULTANCY (SHENZHEN) CO.,
LTD. GUANGZHOU BRANCH

3A10-18 Unit, 3A/F
Bank of America Plaza
555 Ren Min Zhong Road
Guangzhou, Guangdong Province, 510 145, China

GPS : 23.123148, 113.253628
Tel : (86 20) 8130 3813
Fax : (86 20) 8130 3812
Email : chinacomms@arcadis.com
Contact : Xu Wei Bin / Stanley Wan

HAIKOU

ARCADIS CONSULTANCY (SHENZHEN) CO.,
LTD. HAIKOU BRANCH
Unit C 10/F Times Square
2 Guomao Road, Haikou
Hainan Province
570100, China

GPS : 20.029509,110.326235
Tel : (86 898) 6652 7808
Fax : (86 898) 6652 7809
Email : chinacomms@arcadis.com
Contact : Kenneth Lo / Yi Zheng Gang

HANGZHOU

ARCADIS CONSULTANCY (SHANGHAI) CO. LTD. HANG-
ZHOU BRANCH
Room 1306 WinNing International
100 Min Xin Road
Hangzhou, Zhejiang Province
310016, China

GPS : 30.251755,120.218913
Tel : (86 571) 2829 7766
Fax : -
Email : chinacomms@arcadis.com
Contact : Alex Zou / Lu Wei

HENGQIN

ARCADIS CONSULTANCY ZHUHAI HENGQIN
CO., LTD.
7/F, 156 Nan Shan Ju Road,
Hengqin, Zhuhai,
Guangdong Province 519031, China

GPS : 22.142774, 113.544438
Tel : (86 756) 868 8986
Fax : (86 756) 868 8969
Email : chinacomms@arcadis.com
Contact : Stanley Wan

MACAU

ARCADIS MACAU LIMITED
Avenida da Praia Grande, No. 594
Edificio BCM, 12th Floor,
Macau

GPS : 22.192210,113.541252
Tel : (853) 2833 1710
Fax : (853) 2833 1532
Email : info-mo@arcadis.com
Contact : Winnie Wong

(Cont'd)

DIRECTORY OF OFFICES

NANJING

ARCADIS CONSULTANCY (SHANGHAI) CO. LTD. NANJING BRANCH

1104 South Tower Jinmao Plaza,
201 Zhong Yang Road, Nanjing
Jiangsu Province 210009, China

GPS : 32.071984, 118.783443
Tel : (86 25) 57911860
Fax : (86 25) 6698 1860
Email : chinacomms@arcadis.com
Contact : Wu Tao/Jia Xiao E

QINGDAO

ARCADIS CONSULTANCY (SHANGHAI) CO. LTD. QINGDAO BRANCH

Room 2701, Office Tower, Shangri-la Centre, No.9 Xianggang Middle Road, Shinan District,
Qingdao, Shangdong Province
266071, China

GPS : 36.064884, 120.378583
Tel : (86 532) 8280 1818
Fax : -
Email : chinacomms@arcadis.com
Contact : Lu Mei Hua / Andy Feng

SHANGHAI

ARCADIS CONSULTANCY (SHANGHAI) CO. LTD.

11th Floor, Building C, The Place,
No. 150 Zunyi Road
Changning District
Shanghai 200051 China

GPS : 31.207363, 121.407984
Tel : (86 21) 6026 1300
Fax : -
Email : chinacomms@arcadis.com
Contact : Joe Chan / David Choy

SHENYANG

BEIJING ARCADIS CONSTRUCTION CONSULTANTS CO. LTD. SHENYANG BRANCH

Room 3013-3015, Office Tower 1,
Forum66, 1-1 Qingnian Avenue,
Shenhe District, Shenyang 110063
Liaoning, China

GPS : 41.799603, 123.433787
Tel : (86 24) 3195 8880
Fax : -
Email : chinacomms@arcadis.com
Contact : Kenn Ng / Simon Chow

SHENZHEN

ARCADIS CONSULTANCY (SHENZHEN) CO. LTD.

Room 1001, AVIC Centre,
1018 Huafu Road, Shenzhen

Guangdong Province 518031, China

GPS : 22.543241, 114.082051

Tel : (86 755) 3635 0688

Fax : (86 755) 2598 1854

Email : chinacomms@arcadis.com

Contact : Kenneth Lo / Ricky Ho

SUZHOUARCADIS CONSULTANCY (SHANGHAI) CO. LTD. SUZHOU
BRANCHRoom 906 The Summit,
118 Suzhou Avenue West,
Suzhou, Jiangsu Province
215021 China

GPS : 31.315966, 120.669099

Tel : (86 512) 8777 5599

Fax : (86 512) 8777 5600

Email : chinacomms@arcadis.com

Contact : David Choy / Zhang Rui

TIANJINBEIJING ARCADIS CONSTRUCTION CONSULTANTS CO.
LTD. TIANJIN BRANCH

4003, 40/F

Tianjin World Financial Centre Office Tower
2 Dagubei Road,

He Ping District, Tianjin 300020, China

GPS : 39.129619, 117.202758

Tel : (86 22) 2329 8611

Fax : -

Email : chinacomms@arcadis.com

Contact : Kenn Ng / Sun Ying

WUHANARCADIS CONSULTANCY (SHANGHAI) CO. LTD. WUHAN
BRANCHRM.1703, Citic Pacific Mansion,
No.1627 Zhongshan Avenue, Jiangan District,
Wuhan, Hubei Province 430010, China

GPS : 30.616813, 114.317276

Tel : (86 27) 5920 9299

Fax : (86 27) 5920 9298

Email : chinacomms@arcadis.com

Contact : Gary Lin / Guang Rong

(Cont'd)

DIRECTORY OF OFFICES

XI'AN

ARCADIS CONSULTANCY (SHENZHEN) CO., LTD. XI'AN
BRANCH

Room 1606, CapitaMall Office Building

64 South Second Ring Western

Xi'an, Shaanxi Province

710065, China

GPS : 34.230397, 108.934893

Tel : (86 29) 8866 9711

Fax : (86 29) 8866 9760

Email : chinacomms@arcadis.com

Contact : Gary Lin / Wang Zhu Zhu

INDIA

BANGALORE

ARCADIS INDIA PRIVATE LIMITED
135, 4th Floor, RMZ Titanium
Old Airport Road, Kodihalli
Bangalore 560 017, India
GPS : 12.9591527 / 77.6481456
Tel : (00 91 80) 4123 9141
Email : IndiaBD@arcadis.com
Contact : Mainak Hazra

DELHI

ARCADIS INDIA PRIVATE LIMITED
3rd Floor, Tower B,
Logix Techno Park,
Plot No.5, Sector 127,
Noida 201 304, Uttar Pradesh
GPS : 28.5359691 / 77.34585591
Tel : (00 91 120) 436 8400
Fax : (00 91 120) 436 8401
Email : IndiaBD@arcadis.com
Contact : Mainak Hazra

MUMBAI

ARCADIS INDIA PRIVATE LIMITED
#1001, 10th Floor, Vishwaroop Infotech Park
Plot No. 34, 35, 38, Sector 30A,
Vashi, Navi Mumbai – 400 705
Maharashtra
GPS : 19.0644562 / 72.9965259
Tel : (00 91 22) 4125 6060
Fax : (00 91 22) 4125 6050
Email : IndiaBD@arcadis.com
Contact : Mainak Hazra

BANGALORE

ARKIND LS PRIVATE LIMITED*
91Springboard, 5th Floor, Trifecta Adatto,
21 ITPL Main Road, Mahadevapura,
Bengaluru, India 560048
GPS : 12.994070 / 77.699310
Tel : (00 91) 98453 40499
Email : BD@arkindls.com
Contact : Pradeep Menon

**Arcadis affiliate to provide Cost Management Services in India*

(Cont'd)

DIRECTORY OF OFFICES

MALAYSIA

SELANGOR

JUBM SDN BHD
ARCADIS (MALAYSIA) SDN BHD
ARCADIS PROJEKS SDN BHD
Level 5, Menara TSR
12 Jalan PJU 7/3, Mutiara Damansara
47810 Petaling Jaya
Selangor Darul Ehsan, Malaysia
GPS : 3.1616, 101.6129
Tel : (60 3) 2106 8000
Fax : (60 3) 2106 9090
Email : info-my@arcadis.com
Contact : Justin Teoh / Syed Mahadzir Syed Ahmad /
Rozila Abdul Rahman / Yap Sai Hoe / Jeffrey Lim

JOHOR

47, Jalan Setia Tropika 1/30
Taman Setia Tropika
81200 Johor Bahru
Johor Darul Takzim, Malaysia
GPS : 1.5422, 103.7111
Tel : (60 7) 232 8300
Fax : (60 7) 232 8232
Email : info-my@arcadis.com
Contact : Syed Mahadzir Syed Ahmad /
Tan Pei Ling

PENANG

Suite 3A-3, Level 3A
Wisma Great Eastern
No.25, Lebuh Light
10200 Penang, Malaysia
GPS : 5.4201, 100.3408
Tel : (60 4) 264 2071 / 264 2072 / 264 2073
Fax : (60 4) 264 2068
Email : info-my@arcadis.com
Contact : Yap Sai Hoe

SABAH

Lot No. H-06-07 & H-06-08, Level 6, Block H
Aeropod Commercial Square, Tanjung Aru
Jalan Aeropod Off Jalan Kepayan
88100 Kota Kinabalu, Sabah, Malaysia
GPS : 5.9492, 116.0596
Tel : (60 88) 215 530 / 215 531
Fax : (60 88) 215 570
Email : info-my@arcadis.com
Contact : Jeffrey Lim / VK Wong

SARAWAK

JUBM SDN BHD
No.2 (3rdFloor), Jalan Song Thian Cheok
93100 Kuching
Sarawak, Malaysia
GPS : 1.5532, 110.3532
Tel : (60 82) 232 212
Fax : (60 82) 232 198
Email : info-my@arcadis.com
Contact : Nor Azman Bin Baharum

(Cont'd)

DIRECTORY OF OFFICES

PHILIPPINES

MANILA

ARCADIS PHILIPPINES INC

12th Floor Quadrants B&C, 8 Rockwell Hidalgo Drive, Rockwell Center, Brgy. Poblacion,

Makati City 1210

Philippines

GPS : 14.56357, 121.03680

Tel : (00 63 2) 7908 2888

Email : info-ph@arcadis.com

Contact : Ross McKenzie / Darneil Perez / Brian Parsons /
Nam Le / Monina Munsayac / Carla Cruz /
Paul Magbanua

CEBU

12Floor, 2Quad Building, Cardinal Rosales Avenue, corner Sumilon Road, Cebu Business Park, Cebu City 6000

Philippines

GPS : 10.3142574, 123.9053502

Tel : (00 63 32) 2322 200

Fax : (00 63 32) 2603 699

Email : info-ph@arcadis.com

Contact : Ross McKenzie / Darneil Perez / Brian Parsons /
Nam Le / Monina Munsayac / Carla Cruz /
Paul Magbanua / Philip Balingit

SINGAPORE

ARCADIS SINGAPORE PTE LTD
1 Magazine Road,
#05-01 Central Mall
Singapore 059567
GPS : 1.288526,103.842085
Tel : (65) 6222 3888
Fax : (65) 6224 7089
Email : ArcadisSG@arcadis.com
Contact : Josephine Lee / Jenny Ku

ARCADIS PTE LTD
1 Magazine Road, #05-01 Central Mall
Singapore 059567
GPS : 1.288526,103.842085
Tel : (65) 6222 3888
Fax : (65) 6224 7089
Email : ArcadisSG@arcadis.com
Contact : Amos Cheong

THAILAND

BANGKOK
ARCADIS (THAILAND) LTD
6th Floor, Kian Gwan II Building
140/1 Wireless Road, Lumpini, Pratumwan
Bangkok 10330, Thailand
GPS : 13.734969, 100.545448
Tel : (66 2) 123 3400
Fax : (66 2) 253 4977
Email : info-th@arcadis.com
Contact : Seth W.W. Leong

(Cont'd)

4 OTHER INFORMATION

DIRECTORY OF OFFICES

VIETNAM

HO CHI MINH CITY
L12-03, Level 12, Vincom Center B
72 Le Thanh Ton Street
Ben Nghe ward,
District 01, Ho Chi Minh City, Vietnam
GPS : 10.778068, 106.702063
Tel : (84 28) 3823 8297
Fax : (84 28) 3823 8197
Email : info-vn@arcadis.com
Contact : Truong Minh Tri

ARCADIS ASIA HEADQUARTERS

HONG KONG

ARCADIS ASIA LIMITED
ARCADIS ASIA REGIONAL HEADQUARTERS LIMITED
17/F, Two Harbour Square,
180 Wai Yip Street, Kwun Tong,
Kowloon, Hong Kong

GPS : 22.310065, 114.221216

Tel : (852) 2911 2000

Fax : (852) 2911 2002

Email : asiainfo@arcadis.com

Contact : Glenn Lutz, CEO, Asia

ARCADIS HEADQUARTERS

AMSTERDAM

ARCADIS NV
"Symphony"
Gustav Mahlerplein 97-103
1082 MS Amsterdam
P.O. Box 7895
1008 AB Amsterdam
The Netherlands

Tel : (31 20) 201 1011

Fax : (31 20) 201 1002

Email : info@arcadis.com

Website : www.arcadis.com

Contact : Peter Oosterveer, Global CEO

(Cont'd)

HEALTH & SAFETY MANAGEMENT SYSTEM

Based on the recognized international standards of OHSAS 18001, We have implemented a Health and Safety Management System which is part of our Arcadis Asia Health, Safety and Environmental Management System. Following the success of our Health & Safety accreditation in Hong

Kong in 2012, we had rolled out the system across China and Macau, where an H&S coordinator is assigned in each of our Arcadis offices to assist in planning, implementing, monitoring and reporting health and safety issues.

Positive decision making and the right behavioural outcomes underpin our approach to Health & Safety, an ethos which is promoted and reinforced across all levels of our organisation as a priority. Being aware of the role as a good steward, our staff are encouraged to proactively identify and address any hazard found in the work-related activities.

Committed to making our business a safe, healthy and sustainable place to work, Arcadis strives to achieve zero incidents in everything we do ensuring the health, safety and well-being of our staff and stakeholders. Based on strong H&S culture within the ARCADIS group companies, we continue to ensure processes, procedures and systems of work are maintained to achieve the highest standards, and continual improvement, in our health and safety performance.



QUALITY MANAGEMENT SYSTEM

The Quality Management System was launched in our Hong Kong office in 1993, and have completed our conversion to the ISO 9001:2015 Standard in 2018. The System and the accreditation of ISO 9001 has also been extended to Macau as well as our eighteen China offices.



Arcadis has set annual objectives to ensure client's expectations to be met or exceeded. Performance against these objectives is reviewed while carrying out audits quarterly. The quality management documents are also reviewed regularly and shall be updated as necessary to achieve the ongoing effectiveness of the system. To fit for the new version of the ISO9001, the focus of our internal audits has already adopted the holistic approach that covers all functions of the Company.

Nowadays an effective Quality Management System is one of the core elements in any kind of business. Arcadis makes every effort to provide not merely quantity surveying services but also the highest quality services to meet our clients' requirements.

ENVIRONMENTAL MANAGEMENT SYSTEM

As a socially responsible company, we have been formally implementing our Environmental Management System in Hong Kong since 2012, when HKQAA certified us to ISO 14001 (Environmental). Over the past few years, we have completed a gradual roll-out of the same standards from Macau to all our China offices. Besides, we have been successful in upgrading our system to the latest version in 2018.



With work-related environmental protection measures, we are able to reduce the impact of our activities on the environment and to improve our operating efficiency. Environmental messages have been regularly released via newsletters and training to increase staff's awareness of assuming responsibility towards the working conditions and environment. Green corners are also established in every office to inspire our staff to take environmental actions. Following the introduction of the Document Management System (DMS) in 2013, we strive to establish a desirable green office by applying the concept of green practice management such as potted plant areas and digital collaboration platforms with the Microsoft Hubs to our new premises in 2018.

For Arcadis, environmental protection and resource conservation are our high-priority corporate goals. To help transform our workplace into a green office, we continue to measure and record our carbon footprint in order to devise more environment friendly standards and practices.



ARCADIS ASIA LIMITED

ARCADIS HONG KONG LIMITED

17/F Two Harbour Square

180 Wai Yip Street

Kwun Tong, Kowloon, Hong Kong

Tel: (852)2911 2000 Fax: (852) 2911 2002

Email: info-hk@arcadis.com

chinacomms@arcadis.com

info-mo@arcadis.com

Follow us on:

 **LinkedIn - Arcadis Asia**

 **WeChat - 凯谛思 Arcadis**

 **Twitter - ArcadisAS**

 **Instagram - ArcadisAsia**

www.arcadis.com/asia