

## Supplementary material

Table A1: Details of divisional and elemental works: Plan A

No.	Item Name	Unit	Quantity	All-in unit rate (CNY)	Cost (CNY)
New strip foundation					
1	Ground-breaking	$m^2$	13.39	14.43	193.22
2	Trenching earthwork	$m^3$	28.52	84.72	2416.21
3	Bedding layer	$m^3$	1.68	726.32	1220.22
4	Brick foundation	$m^3$	7.94	688.93	5470.10
5	Backfill	$m^3$	18.9	54.30	1026.27
6	Remaining earth disposal	$m^3$	9.62	131.23	1262.43
Sub-total of segments					11588.45
Wall reinforcement					
7	Grouting of rowlock cavity wall	$m^3$	27.33	3559.73	97287.42
8	Interface treatment	$m^2$	432.5	22.09	9553.93
9	Wall plastering	$m^2$	432.5	102.85	44482.63
10	Steel mesh	$t$	0.808	10448.03	8442.01
11	Hole perforation	$pcs$	1203	8.70	10466.10
Sub-total of segments					170232.09
Exist column reinforcement					
12	Interface Treatment	$m^2$	16.95	22.09	374.43
13	Shotcrete on column surface	$m^2$	16.95	120.28	2038.75
14	Reinforcing Mesh	$t$	0.029	10448.03	302.99
15	Planting rebar (Diameter: 6 mm)	$pcs$	95	5.03	477.85
Sub-total of segments					3194.02
New column					
16	Structural column	$m^3$	3.03	1005.15	3045.60

17	Reinforcement for cast-in-place elements	<i>t</i>	0.557	8383.48	4669.60
18	Planting rebar (Diameter: 6 mm)	<i>pcs</i>	894	5.03	4496.82
19	Planting rebar (Diameter: 12 mm)	<i>pcs</i>	137	15.32	2098.84
Sub-total of segments					14310.86

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C channel steel

20	Type c steel size: 230 x 22 Q235B	<i>t</i>	0.518	10007.51	5183.89
Sub-total of segments					5183.89

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New Beam

21	Ring beam	<i>m<sup>3</sup></i>	2.71	1204.51	3264.22
22	Reinforcement for post addition of ring beam	<i>t</i>	0.543	7820.85	4246.72
23	Planting rebar (Diameter: 6 mm)	<i>pcs</i>	72	5.03	362.16
Sub-total of segments					7873.10

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Paste carbon fibre cloth (CFC) to reinforce the bottom of the slab

24	Interface treatment	<i>m<sup>2</sup></i>	86.23	103.62	8935.15
25	CFC pasting at the bottom of the slab	<i>m<sup>2</sup></i>	79.07	648.60	51284.80
26	Adhesive steel compression strips	<i>m<sup>2</sup></i>	2.41	1449.86	3494.16
27	Surface protection	<i>m<sup>2</sup></i>	79.07	35.00	2767.45
Sub-total of segments					66481.56

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Demolition works

28	Brickwork wall (rowlock cavity wall)	<i>m<sup>3</sup></i>	14.54	47.16	685.71
29	Brickwork wall	<i>m<sup>2</sup></i>	6.26	191.36	1197.91
30	Concrete elements	<i>m<sup>2</sup></i>	5.54	168.26	932.16
31	Tile roofing	<i>m<sup>2</sup></i>	114.41	7.29	834.05
32	Railing, handrail	<i>m<sup>2</sup></i>	14.85	56.46	838.43

33	Wooden doors	pcs	13	25.89	336.57
34	Wooden windows	pcs	12	25.89	310.68
Sub-total of segments					5135.51
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Restoration works					
35	Brick walls	m <sup>3</sup>	4.06	719.24	2920.11
36	Straight staircase	m <sup>2</sup>	5.79	173.20	1002.83
37	Wooden doors	m <sup>2</sup>	17.71	720.74	12764.31
38	Metal windows	m <sup>2</sup>	16.71	971.65	16236.27
39	Tile roofing	m <sup>2</sup>	101.27	143.34	14516.04
40	Glass roof	m <sup>2</sup>	47.01	878.71	41308.16
41	Flat-panel	m <sup>3</sup>	4.16	781.04	3249.13
42	Hardwood handrail, railing, balustrade	m	13.21	894.68	11818.72
43	Curtain wall with skeleton	m <sup>2</sup>	48.8	987.54	48191.95
44	Wooden columns	m <sup>3</sup>	0.2	3765.74	753.15
45	Wooden beam	m <sup>3</sup>	0.35	3136.76	1097.87
46	Wooden purlin	m <sup>3</sup>	0.09	237.86	21.41
Sub-total of segments					153879.95
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Total					437879.43
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Table A2: Details of divisional and elemental works: Plan B

No.	Item Name	Unit	Quantity	All-in unit rate (CNY)	Cost (CNY)
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New strip foundation •					
1-6	Same As Plan A				
Sub-total of segments					11588.45
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Wall reinforcement					
7	Interface treatment	m <sup>2</sup>	432.5	19.83	8576.48
8	Smear HDC strips	m <sup>2</sup>	234.4	438.98	102896.91

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Sub-total of segments					111473.39
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Exist column reinforcement

9-12 Same As Plan A

Sub-total of segments					3194.02
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New column

13	Structural column	$m^3$	1.79	1005.15	1799.22
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14	Reinforcement for cast-in-place elements	$t$	0.399	8383.48	3345.01
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15	Planting rebar (Diameter: 6 mm)	$pcs$	578	5.03	2907.34
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16	Planting rebar (Diameter: 12 mm)	$pcs$	92	15.32	1409.44
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Sub-total of segments					9461.01
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C channel steel

17 Same As Plan A

Sub-total of segments					5183.89
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New Beam

18	Ring beam	$m^3$	2.66	1220.71	3247.09
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19	Reinforcement for post addition of ring beam	$t$	0.475	7804.89	3707.32
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20	Planting rebar (Diameter: 6 mm)	$pcs$	72	5.03	362.16
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Sub-total of segments					7316.57
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Paste carbon fibre cloth (CFC) to reinforce the bottom of the slab

21-24 Same As Plan A

Sub-total of segments					66481.56
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Demolition works

25-31 Same As Plan A

Sub-total of segments					5135.51
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Restoration works

32-43 Same As Plan A

Sub-total of segments

153879.95

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Total

373714.35

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