higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

MARKING GUIDELINE

NATIONAL CERTIFICATE

QUANTITY SURVEYING N5

11 APRIL 2018

This marking guideline consists of 10 pages.

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SECTION A

This section must be done on the dimension, abstract or billing paper.

A DWELLING
(Foundation)

QUESTION 1

1.1 Site clearance

11 660	6 212
2/3 000 = 6 000	6 000
17 660✓	12 212✓

Clear the site of all debris and rubbish.✓

(2)

1.2 Excavations

Excavate in earth for surface trenches not exceeding 2 m deep from NGL. ✓

17,66					
12,21	✓				
40,26					
0,60					
0,70	✓				
11,17					
0,40					
0,70	✓				

450
250
700✓

600	400
- 220	-110
380÷2	290÷2
= 190✓	= 145✓

600 wide trench
2/11 660 = 23 320
2/6212 = 12 424
35 744✓
- 4/220 = 880
ext trench 34 864✓

2/	40,26			
	0,70	✓		
2/	11,17			
	0,70	✓		
2/	0,60			
	0,70	✓		
5.3/	0,40			
	0,70	✓		

Add internal trench
6 212
-2/220 = 440
5 772
-2/190 = 380
5 392✓

Total trench = 34 864
5 392
40 256✓

400 wide trench

3 000
5 772
2/1 890 = 3 780
12 552
- 5/190 = 950
- 3/145 = 435
11 167✓

(6)

1.3 Risk of collapse

Risk of collapse to sides of surface trenches n.e 1,5 m deep from NGL ✓

Ddt
Risk of collapse to sides of surface trenches at intersections ✓

(4)

			1.4 Water				1.6 Hardcore
			Keep excavation trenches				Hardcore layers below
	Item	✓	free of water		6,00		surface bed compacted to
			✓		5,77	✓	a standard degree of 90%
			(2)				MOD
					3,00		✓
			1.5 Backfilling		2,28	✓	
							Area × 0,20 = m³ ✓
			Backfilling with excavated		3,00		
	40,26		material to sides of		3,39	✓	2 376
	0,19		trenches				110
	0,45	✓	✓		2,38		900
					1,89	✓	3 386✓
	11,17						
	0,15				2,28		
	0,45	✓			1,89	✓	
					1,89		
			Ddt		0,90	✓	(3)
			Backfilling at				
	0,22		intersections				
	0,19		✓				
	0,45	✓					
	0,11						
	0,15						**[20]**
	0,45	✓					
	0,11						
	0,19						
	0,45	✓					
			(3)				

QUESTION 2

2.1 600 x 250 mm concrete strip found

15 MPa mass concrete strip footing

40,26
0,60
0,25 ✓

✓ (3)

2.2 400 x 250 mm concrete strip found

15 MPa mass concrete strip footing

11,17
0,40
0,25 ✓

✓ (3)

2.3 100 mm thick concrete surface bed

15 MPa mass concrete surface bed

6,00
5,77 ✓
3,00
2,28 ✓
3,00
3,39 ✓
2,38
1,89 ✓
2,28
1,89 ✓
1,89
0,90 ✓

✓ (4)

[10]

QUESTION 3

3.1 220 mm thick foundation walls

One brick wall in ordinary bricks built in 1 : 4 cement mortar in stretcher bond

34,86
0,75 ✓

450 ✓
200
100
750✓ (3)

3.2 110 mm thick foundation walls

Half-brick wall in ordinary bricks built in 1 : 4 cement mortar in stretcher bond

12,55
0,75 ✓

✓ (3)

3.3 External facing

Extra over brickwork for external facing

35,74
0,37 ✓

✓
200
2/85 = 170
370 ✓ (2)

3.4 Damp-proof Sheet

Damp-proof sheet laid between hardcore and surface bed

6,00
5,77 ✓

3,41
2,28 ✓

3,00
3,39 ✓

2,38
1,89 ✓

2,28
1,89 ✓

1,89
0,90 ✓

✓

(2)

[10]

34,86
0,75 26,15✓

5,77
0,75 4,33✓

30,48✓

12,55
0,75

9,41✓

35,74
0,37

13,22✓

QUESTION 4

(Masonry trade items)

One brick wall in ordinary bricks built in 1 : 4 cement mortar in stretcher bond

450
200
100
750✓

Half-brick wall in ordinary bricks built in 1 : 4 cement mortar in stretcher bond

Extra over brickwork for external facing

200
2/85 = 170✓
370✓

Mark allocation	
Check collections and site cast	(1)
Squaring	(1)
Check squaring	(1)
Transfer items and quantities	(1)
Check transfers	(1)
Run through	(1)
TOTAL	(6)

ABSTRACT PAPER

MASONRY

FOUNDATIONS

M²
One brick wall in ordinary bricks built in 1 : 4 cement mortar in stretcher bond

30,84 ✓ 1

31 m² ✓

M²
Extra over brickwork for external facing.....

13,22 ✓ 1

13 m² ✓

M²
Half-brick wall in ordinary bricks built in 1 : 4 cement mortar in stretcher bond .

9,41 ✓ 2

9 m² ✓

Mark allocation	
Correct items transferred	(1)
Trade name	(1)
Unit	(1)
Page reference	(1)
Reducing	(1)
Transfer items	(1)
Run through	(1)
TOTAL	(7)

BILLING PAPER

BILL NO	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R	AMOUNT C
	Bill No 1 **Earthworks** **Foundations**					
1	One brick wall in ordinary bricks built in 1 : 4 cement mortar in stretcher bond	M²	31✓			
2	Half-brick wall in ordinary bricks built in 1 : 4 cement mortar in stretcher bond	M²	9✓			
3	Extra over brickwork for external facing	M²	13✓			
	Carried to summary					
	Bill no 1 **Earthworks**			R	.....	.....

Mark allocation	
Bill no	(1)
Trade	(1)
Item no	(1)
Description	(1)
Unit	(1)
Quantities	(1)
Page summary	(1)
TOTAL	(7)

[20]

TOTAL SECTION A: 60

SECTION B

QUESTION 5

Original accepted tender price	**R1 175 666,43**
Less contingencies	**- R 55 500,00**✓
	R1 120 166,43✓

Less: Savings on provisional bills

1	Foundations✓		
	Omit:	R121 241,33	
	Add:	R 75 978,89	
		= R45 622,44✓	
2	Site works✓		
	Omit:	R132 435,96	
	Add:	R125 440,60	
		= R 6 995,36✓	
			- R52 617,80
			= R1 067 548,63

Add: Extras on provisional bills

1	Plumbing and drainage✓		
	Add:	R105 587,79	
	Omit:	R 89 692,99	
		= R 15 894,80✓	
2	Prime cost and prov. sums✓		
	Add:	R160 000,00	
	Omit:	R135 259,45	
		= R24 740,55✓	
3	Net extra on VO		
	Add:	= R40 678,55✓	
4	Increased costs		
	Add:	= R100 785,35✓	
			+ R182 099,25

TOTAL COST OF CONTRACT	**R1 249 647,88**	
Less previous payment to contractor	- R1 106 345,00	
FULL FINAL PAYMENT TO CONTRACTOR	**R 143 302,88**✓	**[15]**

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QUESTION 6

6.1
- All completed work must be measured up and certified for payment as originally measured.✓✓
- New rates must be agreed on for the work to be demolished and included for payment to the contractor.✓
- New work, if done under similar conditions, must be priced by using bill rates.✓
- In the case where bill rates cannot be used, new rates must be agreed on.✓ (5)

6.2
- All the work must be measured and priced. New rates must be agreed on.✓
- If it is found that some of the work is related to bill items, that work must be priced using bill rates.✓✓
- Work that cannot be measured must be priced according to the daywork method.✓
- The amount allowed for preliminaries must be adjusted for the items added to the contract period.✓ (5)

6.3
- This is usually work that is recorded daily.
- A description of the work will be noted.
- The labour and hours spent must be recorded and agreed on and an agreed percentage be added.
- Materials and plant must be recorded, priced and an agreed percentage be added.
- The architect or clerk of works must agree on the daywork sheet and sign it. (5)

[15]

QUESTION 7

7.1 To act as a financial advisor to the client (1)

7.2
- Financial planning
- Estimating
- Cost control
- Checking priced bill of quantities
- Providing advice to the client regarding design and material costs

(Any 3 × 1) (3)

7.3
- Errors to be corrected
- Contingency sum to be subtracted
- Escalations to be added
- Prime cost for nominated suppliers
- Provisional items, such as earthworks
- Preliminaries in proportion if contract price has changed
- Variation orders (Any 6 × 1) (6)

[10]

TOTAL SECTION B: 40
GRAND TOTAL: 100

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