

M. S. C. M. S. C.

Bedma to Takhim AS 42
After any

Schedule XLV-Form No.-134

Executive Engineer R.W.D. works DIVISION

Daudnagar

Assistant Engineer R.W.D. works SUB-DIVISION
Indira

MEASUREMENT BOOK

692

27998 → Sri Shailendra K. Singh.

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
<u>Work done:</u> —					
(1) Setting out Pillars...					
Providing & fixing of working bench mark / Reference Pillars					
1 nos Per Km & 4 nos. of reference pillars					
Bench Mark Pillars					3 no
Reference Pillars					4 nos
Per Km					8 nos
S.No. 2. clearing and Grubbing road land ---					
length -					
$72 \times 30 = 2160.00$					
				15.00	
				2175.00	
$2 \times 2175.00 \times 3.50 = 15225.00$					
S.No. 3. Box cutting ---					1.52 ha
Beside of BES for Provision of flexible road.					
$2 \times 275.00 \times 0.525 \times 0.10 = 28.88$					
Beside of BES for Provision of Rigid Road					
width 10 No x 30.00 = 300.00					
$2 \times 300.00 \times 0.38 \times 0.10 = 22.18$					
					51.6 m ³
Sum =				51.38 m ³ .	
S.No. 4. Construction of Embankment with approved material deposited from road way cut up ---					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
S&NO	CH	Fill Area	Mean Area	D's Area	Fill Volume
1	0	0.171			
2	50	0.210	0.191	50	9.525
3	100	0.320	0.265	50	13.250
4	150	0.520	0.420	50	21.000
5	200	0.215	0.368	50	18.375
6	250	0.310	0.263	50	13.125
7	300	0.430	0.380	50	19.000
8	350	1.133	0.891	50	44.525
9	400	0.771	1.051	50	52.550
10	450	0.555	0.663	50	33.150
11	500	0.425	0.490	50	24.500
12	550	1.207	0.816	50	40.800
13	600	1.496	1.352	50	67.575
14	650	1.113	1.305	50	65.125
15	700	1.251	1.182	50	59.100
16	750	0.583	0.917	50	45.850
17	800	0.683	0.633	50	31.650
18	850	0.944	0.814	50	40.675
19	900	1.395	1.170	50	58.475
20	950	0.659	1.027	50	51.350
21	1000	0.945	0.802	50	40.100
22	1050	1.249	1.097	50	54.850
23	1100	1.785	1.517	50	75.810
24	1150	1.669	1.727	50	86.350
25	1200	1.047	1.358	50	67.900
26	1250	0.868	0.958	50	47.875
27	1300	1.726	1.297	50	64.850

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
S. No	Ch	Fill Area	Mea Area	4's Face	Fill Volume
1350	1.616	1.671	50		8
28	1350	1.616	1.671	50	83.550
29	1400	1.812	1.714	50	85.700
30	1450	1.846	1.429	50	71.450
31	1500	0.623	0.835	50	41.725
32	1550	0.273	0.448	50	22.400
33	1600	0.552	0.413	50	20.625
34	1650	0.976	0.764	50	38.200
35	1700	0.604	0.790	50	39.500
36	1750	1.763	1.184	50	59.175
37	1800	2.086	1.925	50	96.225
38	1850	1.145	1.616	50	80.975
39	1900	1.675	1.410	50	70.500
40	1950	1.509	1.592	50	79.600
41	2000	0.451	0.980	50	49.1000
42	2050	0.230	0.341	50	17.025
43	2100	0.887	0.559	50	29.325
44	2175	0.765	0.826	75	61.950
					2092.800
					M3
	For 100m lead				600.10 M ³
	For 100m lead				1492.80 M ³

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
S.No-6 Construction of Sub grade and Earthen Slope					
	53 times	x 30	= 1590.00		
				10.00	
				1600.00	
	20 times	x 30.00 x	6.85 + 7.75		
			3		4380.00
	20 times	x 30.00 x	6.80 + 7.80		
			3		4380.00
	10 times				
	10 times	x 30.00 x	6.70 + 7.90		
			2		2190.00
					730.00
	1 x 100.00	x 6	1.70 + 7.90		
			2		219.00
					1169.00

As 1169.00 x 0.30 = 11680.00	
11680 x 0.30 = 3504.00	
Limit — 3492.8	m ³

S.No-7 Gravel Sub base with well graded material.

9 times	x 30.00 = 270.00	
	5.00	
	275.00	
G.S.B. width in		
2 x 275.00 x 0.53 x 0.10 =		291.5
G.S.B. for overlay		
9 to 30.00 = 270.00 + 5 = 275.00		
2 x 275.00 x 4.05 x 0.10 =		111.37
G.S.B. in Earthen Portion		
53 times	x 30.00 = 1590.00	
	10.00	
	1600.00	
1600.00 x 4.05 x 0.12 =		1296.00

Continuation

1436.52
m³

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
S.No-17. Providing and fixing logo of Project					2 Nos.
H.P. Cement. 60mm					
① Best work of excavation for foundation of structures - -					
H.W.					
$2 \times 3.90 \times 1.15 \times 1.50 = 13.45$					
Below pipe.					
$1 \times 5.35 \times 1.13 \times 0.365 = 2.1207$					
				15.660	m ³
for 8 nos,					
$8 \times 15.660 =$					125.8
Limit - 125.23 m ³					m ³

S.No-2. Providing M15					
(1:2:5:15) as Reinforcing Course					
in foundation -					
H.W.					
$2 \times 3.90 \times 1.15 \times 0.15 = 1.3455$					
Below pipe.					
$1 \times 5.311 \times 1.13 \times 0.250$					
				= 1.50	
				2.185	
for 8 nos, 8×2.185					
				=	220.8
					m ³
S.No-3. Plain/reinforced					
cement concrete in Substme					
(in)					

Continuation

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
13.8 Mtr @ 0.162 Kgl/mtr					
8mm ϕ bars					
8 x 12 x 1.30 = 31.20					
31.20 @ 0.39 Kgl/mtr					
					12.17
8mm ϕ					
1120 x 5.20 = 58120					
58120 Mtr x					
0.139 — 22.31 Kgl					
for 2 nos of culvert need					43.04 Kgl
2 x 43.04 = 86.08					
Bottom scale for					
10mm ϕ bars					
18205 x 5.90 = 106.20					
106.20 M @ 0.162 Kgl					65.84
					Kgl
					151.88 Kgl
Substructure —					
1) plain reinforced concrete					
in substructure					
PCC-M-20 Grade.					
4 x 2.92 x 0.78 x 1.178 = 16.24 m ³					
5) Providing weep holes					
					36 nos
S.M.C. plain/reinforced					
concrete in substructure					
work complete					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Bottom slab C.					
$6 \times 2.50 \times 0.25 = 3.75$					
Side wall					
$6.10 \times 2.50 \times 0.25 = 6.10$					
Launch					
$4 \times 6.10 \times 0.00 = 0.00$					
					10.27
2 (No.) Supplying fill pad					
Placing HK 34 bar reinforcement					
well - in substructure					
12mm ϕ bar					
$49 \text{ Nos} \times 2.40 = 117.60$					
					mtr
$117.60 \times 0.87 \text{ kg/mtr}$					
m					104.66
					kg
10mm ϕ					
Side wall - $2 \times 43 \times 2.750$					
					$= 236.50$
					mtr
$236.5 \text{ mtr} @ 0.62$					146.63
					kg/mtr kg
12mm dia.					
$2 \times 43 \times 2.75 = 236.50$					
$236.50 @ 0.89 \text{ kg} = 210.49$					
					kg
8mm ϕ bar.					
$2 \times 17 \times 12.30 = 418.20$					
					m
$418.20 \text{ M} @ 0.39 \text{ kg/mtr}$					163.10
					kg

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
12 mm					
2 x 15 nos x 1.420 =				42.60	
					m ²
42.60 m ² @ 0.89 kg/m					
					37.91
(c) 8 mm					
2 x 15 nos x 1.420 =				42.60	
4 x 14 nos x 1.150 =				64.40	
					107.00
107.00 @ 0.39 kg/m					
					41.72 kg
18 mm ϕ					
2 x 18 x 12.50 =				200	
					m ²
200 m ² @ 0.62 kg/m					
					124.00
12 mm					
2 x 5 x 12.50 =				125.00	
					m ²
125 m ² @ 0.89 kg/m					
					111.25 kg
12 mm dia.					
2 x 4 x 12.50 =				100.00	
					m ²
100.00 x 0.89 =				89.00	
					kg
					1028.22
1028.22					
1000					
					1.028
					m ³

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
SINO-8: Backfill behind abutment, wing wall, return wall.					
Behind Abutment and return wall					
	2x2.92	5.20			
				$\times 0.20 = 6.07$	
2x2.92	4.61	1.48			48.03
Deduct for filter media				19.82	
					34.287
SINO-9: Provide and Layup					
Layup Filter media					

Behind Box

cell wall -

$$2 \times 4.61 \times 0.60 \times 1.70$$

$$= 9.40$$

Behind re-
turn wall.

$$4 \times 2.32 \times 0.60$$

$$\times 1.87 = 10.42$$

$$19.82$$

Superstructure

(1) Provide and Layup
reinforced cement concrete
in Superstructure

$$\text{Top Slab} - 2.50 \times 6.00$$

$$\times 0.25 = 3.75$$

$$\text{Kerb} - 2 \times 2.50 \times 0.25$$

$$\times 0.50 = 6.69$$

$$4.38$$

m³

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
3 nos 12" Supply & fitting and placing HRS - 12 nos					
12 mm ϕ bars					
Bent up - 24 nos $\times$ 2.75 =				66.00	
Straight - 25 nos $\times$ 2.55 =				63.75	
				129.75 m	
129.75 m @ 2.89 kg/m					
					= 115.48 kg
Longitudinal bars					
20 Nos $\times$ 5.90 =				118.00	
118.00 m @ 0.62 kg/m					73.16 kg
Top bars					

41 Nos $\times$ 2.55 =	104.55		
18 Nos $\times$ 5.90 =	106.20		
	210.75 m		
210.75 m @ 0.62 kg/m			
			130.67 kg
Chair -			
8 Nos $\times$ 0.95 =	7.60		
7.60 @ 0.62 kg/m			4.71 kg
Top bars			
10 nos $\times$ 1.10 =	10.00		
10.00 $\times$ 0.62 =	6.2		6.2 kg
12 Nos $\times$ 2.50 =	30.00		
30.00 $\times$ 0.62 kg/m			18.6

Continuation

348.82

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
<u>Steps Paving Construction</u>					
Reinforced Cement Concrete in Substructure - - -					
2 x 8.34	x 0.60	x 0.40	=	4.10	
<u>SEN-15. Drainage Spout.</u>					
					4 NOS
Provide and Lay in					
A reinforced cast					
concrete pipe dia					
300 mm Dia					
<u>SEN-24. Irrigation pipe</u>					
(300 mm Dia)					
6 x 3 x	2.50				45
					MTS.
<u>SEN-12. Granular Subbase</u>					
10 ftms x 30" = 300					
M ³					
2 x 300.00	x 0.38	x 0.10	=	2.28	m ³ .
<u>As per</u>					
1/2/2021.					
J.E.					

Continuation

408198 = 00
Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
S.No-6: Construction of Subgrade and Earthwork Shoulders -					
(vide Page 6 of this M.B.)					
3452.45 M ³ @					
10000 Rs @					
Ad 10000					
1047.74 M ³ @					
					176 = 58
					Rs 185010 = 64
for 100 m lead					
2444.74 M ³ @					
					171 = 17
					Rs 345123 = 38
S.No-7: Granular Subbase with well graded material					
1436.52 M ³ @					
					2322 = 62
					Rs 3336490 = 08
S.No-8/2: Granular Subbase with well graded material (vide Page 6 of this M.B.)					
2.28 M ³ @					
					2322.62
					Rs 5295.57
S.No-17: Providing and fixing Logo of Project					
(vide Page 6 of this M.B.)					
2 Nos @					
					9212 = 72
					Rs 18425.44

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
21 NO-24. Providing and Laying of a reinforced concrete pipe duct 300mm dia. under passage					
45RM @ 898 = 92					
		Rs	4045	1.4	
flume pipe.					
25) Earthwork in excavation for foundation of structure					
(vide Page 6 of this M.B.)					
125.28 M ³ @ 269 = 32					
		Rs	33740	= 41	
26) Providing M15 (PCC 1:2:5) as levelling course in foundation. (vide Page 6 of this M.B.)					
22.8 M ³ @ 4656 = 56					
		Rs	106169	= 57	
27) Reinforced Cement Concrete in Substructure (vide Page 7 of this M.B.)					
125.6 M ³ @ 509 5161					
✓		Rs			
121.36 @ 5395 = 61					
		Rs	6548	11.23	
28 NO-28. Providing and Laying of a reinforced concrete pipe 1000mm dia. (vide Page 7 of this M.B.)					
60RM @ 1021 = 41					
		Rs	61284	260	

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Box culvert (2x2m)					
Foundation.					
30) Earth work in excavation for foundation of Structures (vide page 7 of this M.B)					
111.71 M ³ @ 269 = 32					
31					
② Providing Concrete for plain reinforced concrete in open foundation (vide page 8 of this M.B)					
7.92 M ³ @ 4658 = 36					
32					
③ Providing concrete for plain reinforced concrete in open foundation (vide page 8 of this M.B)					
38.14 M ³ @ 5205 = 51					
33) Supplying, bittig and placing 1450 bars (vide page 9 of this M.B)					
0.15 M.T @ 4559 = 8.83					
34) plain Cement concrete in Substructure (vide page 9 of this M.B)					
16.24 M ³ @ 5395.61 = 87678.66					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
<u>S.No. 35. Provision of</u>					
<u>holes</u>					
(vide page 7 of this M.B)					
36 Nos @ 109 = 81					
					R 3953 = 16
<u>36) plain/reinforced</u>					
<u>cement concrete in</u>					
<u>Sub structure</u>					
(vide page 10 of this					
M.B)					
10.02 M ³ @ 5982 = 26					
					R 59942 = 45
<u>S.No. 37. Supply of</u>					

and placing HXS4 bars
(vide page 11 of this M.B)
1.01 @ 45739.83
R 46197.23

S.No. 38. Back filling
behind Abutment
vide page 12 of this M.B)
34.28 M³ @ 702.96
R 24080.32

S.No. 39. Provision of
Laying filter media
(vide page 12 of this M.B)
19.82 M³ @ 2789.86
R 55295.02

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Superstructure.					
40) Providing and laying reinforced Cement Concrete in Superstructure (vide Range 12 of 116 MIB)					
4.38 m ³ (9)	6523	=	99		
				R	28575=08
41) Supplying and placing HYSD Bars (vide Range 13 of 116 MIB)					
0.348 MT (9)	46789	=	82		
				R	16282.85
42) Parapet construction plain/reinforced (vide Range 14 of 116 MIB)					
4 m ³ (9)	5395	=	61		
				R	21582.44
Add 10% for Add 1% LC				R	57862.47=0
Less 10% for Add 1% LC				R	6943.49=44
				R	57862.47=0
				R	538459=11
				R	653845=91
				R	5207622.3
And 4.59 m ³	58,84,613	=	20		
As per 11/2/2021					
J.P.					

Continuation