

MD IRSHAD

PIPRA Road to manjhauli

~~XXXXXXXXXXXX~~

M.M.G.S.Y

10.10.19

SRM P.W.D.

E.E. R.W.D. Ayangabad. DIVISION

A.E. Kuthumba — S.D. DIVISION

MEASUREMENT. BOOK

10/26491

Certified That This M.B. Contain (100)
Pages By Printers Machine And Issued
To Sri... Bahar Lam A.E- R.W.D
Work Sub-Div... Kutumbhar

Y. K. Kulkarni
10/17/2020
Executive Engineer
Road Works Division, mt
Work Division, Aurangabad

Schedule XLV - Form No. 134.

E.E. Arbel

DIVISION.

A.E. Kutumbhar

SUB-DIVISION.

MEASUREMENT BOOK.

211187

2649

Name of owner

Date of Form

Situation of work -
 Agency by which work is executed -
 Date of measurement -
 No. and date of agreement

These four lines should be repeated at the commencement of the measurements relating to each work

Particulars	Details of actual measurement				Contents (Area)
	No	L	B	D	
	1.8	on	11C	Bill	
Name of work	Construction of Road from				
	Kerumba Pipra Road to				
	Maghauri's Sanda under				
	Hawar M.M.G.S. 4				
Agency	M.D. IRSHAD				
Agreement No					
Agreement value					
Date of work start	21/08/2020				
Date of completion	20/8/2021				

Work Measurement					
①/3 clearing and Grubbing					
road land - d - B.I					
2x	11x	30m	x	4.0m	= 2640 M ²
2x	5x	30m	x	3.0m	= 900 "
2x	5x	30m	x	3.0m	= 900 "
2x	10x	30m	x	3.50m	= 2100.00 M ²
2x	9x	30m	x	3.50m	= 1890.00 "
2x	1x	30m	x	3.75m	= 225.00 "
2x	1x	10m	x	3.0m	= 60.00 M ²
					8715.00 M ²
					= 0.87 Hectar
②/ E/W Construction					
canal bank with the road					
- do 5m wide P/B - d - B.I					
Qty as per E/W Calculation sheet					

S. No.	Chg m M	Details of actual measurement				Contents of area	
		No.	L	B	D		
		All 1 qm. m M2	Mean 9m. m M2	Mean 9m. m M2	Length m M	Volume in M3	
1	0	1.448					
2	50	1.689	1.589		50	78.425M ³	
3	100	0.555	1.122		50	56.100 "	
4	150	1.034	0.795		50	39.725 "	
5	200	1.606	1.320		50	66.001 "	
6	250	0.965	1.286		50	64.275 "	
7	300	0.568	0.767		50	38.325 "	
8	350	0.514	0.541		50	27.050 "	
9	400	0.443	0.504		50	25.175 "	
10	450	1.055	0.774		50	38.700 "	
11	500	0.873	0.964		50	48.200 "	
12	550	1.016	0.945		50	47.225 "	
13	600	0.514	0.765		50	38.250 "	
14	650	0.832	0.523		50	26.150 M ³	

15	700	0.712	0.622		50	31.10 M ³	
16	750	0.795	0.754		50	37.675 "	
17	800	0.885	0.840		50	42.00 "	
18	850	1.116	1.001		50	50.025 "	
19	900	1.166	1.141		50	57.050 "	
20	950	1.105	1.136		50	56.775 "	
21	1000	1.642	1.374		50	68.675 "	
22	1050	0.623	1.133		50	56.625 "	
23	1100	0.658	0.641		50	32.025 "	
24	1150	0.534	0.596		50	29.800 "	
25	1200	0.590	0.562		50	28.100 "	
26	1240	0.533	0.562		40	22.46 M ³	
						1105.910 M ³	
Lead upto 1000m = 674.61 M ³							
Lead upto 100m = 431.30 M ³							

Continuation

Dr
15/02/21
J.E

Particulars	Details of actual measurement				Contents of area
	No	L	B	D	
<u>Masonry work</u>					
Constructing Gormadiya P. Culvert					
① B.W. in excavation for foundation of Gormadiya P. Culvert					
H.W.	4x2x	3.90x	1.15x	1.50m	53.82 M ³
Below P.W.	4x2x	5.35x	1.14x	0.365m	8.90 M ³
					62.72 M ³
② Laying P.C.C. M15 (1:2:5:3) as landing course in foundation of Gormadiya P. Culvert					
H.W.	4x2x	3.90x	1.15x	1.15m	5.382 M ³
	4x2x	5.31x	1.14x	0.025m	6.055 M ³
					11.437 M ³
③ Laying plain concrete M20 in S.W. - Siphon - do - Fill					
H.W.	4x2x	3.60x	0.70x	2.780m	56.044 M ³
Below P.W.	4x2x	3.60x	0.40x	0.60m	6.912 M ³
					62.956 M ³
Less for P.W.	4x0.7857x	(0.85) ²	0.53m	2.296 M ³	
					60.66 M ³
④ Laying and laying - Rice Pits NP ₂ of Gormadiya P. Culvert					
	4x	3x	2.50m		30.00 M ³
⑤ Laying and laying - Rice Pits at 30mches across the road - do - P.W.					
	3x3x	2.50m			22.50 M ³
⑥ Constructing Subgrade and earthen shoulder - do - do - C.I.					

Continuation

Particulars	Details of actual measurement				Content of area
	No.	L	B	D	
1x	26x	30m	7.22m	0.30m	$= 1702.58m^3$
1x	1x	20m	7.22m	0.30m	$= 43.66m^3$
					<u>1746.24m³</u>

⑦/ Excavate for road

Way in Soil (Box Culvert)

— d. — d. — d. —

$$2x 14x 30m \times 0.375 \times 0.10m = 31.50m^3$$

$$2x 1x 20m \times 0.375 \times 0.10m = 1.50m^3$$

$$\underline{33.00m^3}$$

⑧/ Construction of embankment

— d. — d. — d. —

Site — d. — d. —

60% of volume —

$$= 33m^3 \times 60\% = 19.80m^3$$

⑨/ Construction of granular

Sub-base — d. — d. —

G.S.B. — d. — d. —

IMB: Part

$$1x 26x 30m \times 4.10m \times 0.20m = 639.60m^3$$

$$1x 1x 20m \times 4.10m \times 0.20m = 16.40m^3$$

$$\underline{656.00m^3}$$

Simple calculation

$$2x 14x 30m \times 0.375 \times 0.10m = 31.50m^3$$

$$2x 1x 20m \times 0.375 \times 0.10m = 1.50m^3$$

$$\underline{33.00m^3}$$

⑩ 9m Profile Correction

$$1x 10.12m \times 1.65m =$$

$$= 16.70m^2$$

$$1x 9.65 \times 1.95 = 18.81m^2$$

$$2x 8.0 \times 2.0 = 32.00m^2$$

$$1x 11.15 \times 1.80 = 20.07m^2$$

$$\underline{70.88m^2}$$

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
		D.F. Qty 70.88 m ³			
1x	10.85	1.92			= 20.83
2x	7.0	2.0			= 28.00
1x	12.3	1.60			= 19.68
1x	9.45	1.95			= 18.42
2x	6.0	2.0			= 24.00
2x	5.0	1.50			= 15.00 m ²
					<u>213.12 m²</u>

$$V_{\text{dunn}} = 213.12 \text{ m}^2 \times 0.10 \text{ m} = 21.31 \text{ m}^3 \text{ (C)}$$

Total G.S.B. Work done = (A) + (B) + (C)

$$\text{①} \text{ Piling and filling - d - } \frac{710.31 \text{ m}^3}{\text{MMSY}} \\ \text{- d - Sign Bond - d - E.I.}$$

$$\text{②} \text{ } 1 \times 2 \text{ m}^2 = 2 \text{ m}^2 \\ \text{5003/24} \\ \text{I.E.}$$

Measurement

① Piling w. Boring
- d - by mechanical means

9m BT - d - d - E.I.

$$\text{Piling - } 1 \times 26 \times 30 \times 3.80 \text{ m} \times 0.075 \text{ m} = 222.30 \text{ m}^3$$

$$1 \times 1 \times 20 \times 3.80 \text{ m} \times 0.075 \text{ m} = 5.70 \text{ m}^3$$

$$\text{9m c. pile - } 1 \times 14 \times 30 \times 3.80 \text{ m} \times 0.075 = 119.70 \text{ m}^3$$

$$1 \times 1 \times 20 \times 3.80 \text{ m} \times 0.075 = 5.70 \text{ m}^3$$

$$\text{② } 353.40 \text{ m}^3 \\ \text{5.70 m}^3$$

$$\text{②/ } \text{Contents of Sub-grade } 347.70 \text{ m}^3$$

and earthwork should be d. E.I.

$$2 \times 26 \times 30 \times 1.39 \text{ m} \times 0.20 \text{ m} = 2433.68 \text{ m}^3$$

$$2 \times 1 \times 20 \times 1.39 \times 0.20 \text{ m} = 11.12 \text{ m}^3$$

$$2 \times 26 \times 30 \times 1.182 \times 0.075 = 135.29 \text{ m}^3$$

$$2 \times 1 \times 20 \times 1.182 \times 0.075 = 3.55 \text{ m}^3$$

Continuation

$$586.64 \text{ m}^3$$

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
					586.64 m ²
Grass - 2x	14x30m	0.375x0.10m			= 31.50 "
2x	1x20x	0.375x0.10			= 1.50 "
2x	14x30x	0.375x0.075m			= 23.63
2x	1x20x	0.375x0.075			= 1.13
					644.40 m ²
③	Bx - 4x 6.0m x 3.50m x 0.70m = 14.70 m ³				
	Cult. 2x 3.50 x 1.30 x 1.80m = 16.38				
	R/land 4x 3.32 x 3.42 x 1.80 = 81.68				
					112.76 m ³
④	Bx Culvert - 4x 6.0m x 2.50m x 0.10m = 1.50 m ³				
	Ret. wall - 4x 3.32 x 2.42 x 0.70m = 6.42 m ³				
					7.92 m ³
					5.4.71
					AE
	1st on A/C R/L				
	Abstract of cost				
	① clearing and grubbing				
	road land - 1-2-1				
	Qty. m ² T.M.B. No. 10				
	= 0.87 m ²				
	② 51/33 = 26/4486 = 0				
②	Qty. m ² T.M.B. No. 10 33.00 m ²				
	24 = 16/m ² - R 2447 = 0				

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
③/ Construction embankment - d. m. l. d. d. d. d. - d. m. l. d. d. d. d. Qty. of T.M.B. No. ④ = 19.80 m ²					
④/ Construction embankment - d. barrow pit - d. d. d. Qty. of T.M.B. No. ② ① Land up to 100m = 674.6 m ² ② 174 = 94/m ² - R. 118016 = 0 ⑤ 116 d. d. to 100m = 431.30 m ² ② 131 = 0.2/m ² - R. 56630 =					
⑥/ Construction Sub grad and shoulder - d. d. d. Qty. of T.M.B. No. ⑥ = 644.40 m ² - R. 113788 = 0 ② 174 = 58/m ² - R.					
⑦/ Construction Sub grad and shoulder Shoulder - d. d. d. Qty. of T.M.B. No. ④ 1702.58 m ² + 176.5 m ² ② 174 = 58/m ² - R. 300642 = 0					
⑧/ Construction Sub base - d. granular - d. d. Qty. of T.M.B. No. ④					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
Qty of T.M.B. No ④					
⑧ 2686 = 21 m ² - R					1790762 = 0 + 718100 = 0
⑨ Lorry loading Spreading and lifting - d - W.B.M.G. (3-d-4)					
Qty of T.M.B. No ④					
⑩ Lorry Qty of T.M.B. No ⑤					
⑪ 3818 = 25 m ² - R					1327606 = 0
⑫ Lorry and Army Hydraulic M.M.G.S.Y Infantry & in band - d - d - d					
Qty of T.M.B. No ⑤					
⑬ 9311 = 58 each R					18623 = 0
Construction of P.C.C. & R.T.					
⑭ B.W. in-ex. work in to a line - d					
Qty of T.M.B. No ③					
⑮ 289 = 22 m ² - R					16870 = 0
⑯ Lorry P.C.C. M.S. in feed - d					
Qty of T.M.B. No ②					
⑰ 5048 = 85 m ² - R					57557 = 0

Particulars	Details of actual measurement				Contents of area
	No	L	B	D	
(12) / Lushy Shrub					
Concave M120					
Height of shrub - 1.217					
Qty. in 1 T.M.B. P.M. (2)					
= 60.66 M ²					
② 5842 = 99 / M ² R - 35442420					
(14) / Lushy and leafy					
R-90 M ² Shrub					
of 60 m x 1.5 - 0.817					
Qty. in 1 T.M.B. P.M. (2)					
= 30.00 M					
② 1032 = 96 / M ² R - 3098920					
(15) / Lushy and leafy					
300 m x 1.5 Shrub					
across of road - 0.817					
Qty. in 1 T.M.B. P.M. (2)					
300 x 2.5 M					
= 22.50 M ²					
② 903 = 65 / M ² R - 2033220					
(16) / G.W. Maxcedun					
for foundation of					
Shrub (G.W. Maxcedun)					
Qty. in 1 T.M.B. P.M. (2)					
112.76 M ² = 644.04 M ²					
② 269 = 32 / M ² R - 3008620					
(17) / Lushy Shrub					
Concave M15 ground					
in a square of 1.217					
Qty. in 1 T.M.B. P.M. (2) = 7.92 M ²					
② 5048 = 85 / M ² R - 3998720					

Continuation

B. 4323762 = 0

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Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
			B.F.R.		4323762=00
Add laborers	1-1	G.S.T. 12-1	HR		562089=00
			THR		4885851=00
Lab 1st. Asst. Agent			HR		488585=00
			HR		4397266=00
<u>05/4/21</u>		<u>5.4.21</u>			C&P
J.E.		A.E.			9/4/21