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Measurement Book

Schedule XLV-Form No. 134

EXECUTIVE ENGINEER
PALLIGANJ

DIVISION

NAUBATPURA.

NAME OF A.C. - SR SHAN SIKHAR RAN SUB-DIVISION

NAME OF AGENCY - SR SIKHAR RAN NO. 13 - 6M

Executive Engineer
Rural Works Deptt.
West Division Paliganj

28/9/20

EXECUTIVE ENGINEER
PAU GANT DIVISION

NAUBATPUR SUB-DIVISION

No. 611

Name of Officer _____

Date of first entry _____

Date of last entry _____

Ist & final bill

1

Name of Work -
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 of area
	No.	L.	B.	D.	
Name of Work - Repair & Maintenance of Road from Dhotiya, Kala to Udaipura under new maintenance policy 2018.					
Agency - Sri Mukund Kumar, Vill- Sona, P.O- Piplawan, Maubampur, Patna.					
Agreement No. - 06 MBD/2020-21					
Date of commencement - 22-06-2020					
⑦ Cleaning & Grubbing road					
Land -					
$2 \times 5 \times 30 \times \frac{1.00 + 0.95}{2} = 292.50 \text{ m}^2$					
$2 \times 3 \times 30 \times \frac{0.95 + 1.20}{2} = 193.50 \text{ m}^2$					
$2 \times 2 \times 30 \times \frac{1.20 + 1.00}{2} = 132.00 \text{ m}^2$					
$2 \times 5 \times 30 \times \frac{1.00 + 1.05}{2} = 307.50 \text{ m}^2$					
$2 \times 6 \times 30 \times \frac{1.05 + 1.15}{2} = 396.00 \text{ m}^2$					
$2 \times 4 \times 30 \times \frac{1.15 + 1.10}{2} = 270.00 \text{ m}^2$					
$2 \times 2 \times 30 \times \frac{1.10 + 1.05}{2} = 129.00 \text{ m}^2$					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
2 x 6 x 30 x		$\frac{1.05 + 0.95}{2}$		=	360.00 m ²
2 x 1 x 30 x		$\frac{0.95 + 0.80}{2}$		=	52.50 m ²
2 x 5 x		$\frac{0.80 + 0.50}{2}$		=	6.50 m ²
2 x 4 x 30 x		$\frac{0.80 + 1.20}{2}$		=	240.00 m ²
2 x 3 x 30 x		1.20		=	216.00 m ²
2 x 7 x 30 x		1.20		=	288.00 m ²
					2883.50 m ²
				=	0.2883 hect

② Scarifying existing bitu-
minous surface -

6 x 6.25 x 1.75	=	23.625 m ²
5 x 3.50 x 1.25	=	18.75 m ²
5 x 2.25 x 1.15	=	12.9375 m ²
6 x 1.95 x 2.45	=	28.665 m ²
3 x 1.15 x 1.05	=	3.6225 m ²
5 x 2.50 x 1.25	=	15.625 m ²
6 x 2.76 x 2.23	=	36.93 m ²
3 x 1.15 x 1.05	=	3.6225 m ²
10 x 0.75 x 1.50	=	11.25 m ²
6 x 1.25 x 1.45	=	10.875 m ²
5 x 2.76 x 1.15	=	15.87 m ²
6 x 1.75 x 1.05	=	11.025 m ²

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
8x	2.20	x 1.05		=	18.48 m ²
6x1	1.95	x 2.55		=	29.835 m ²
12x	1.80	x 0.95		=	20.52 m ²
					261.63 m ²

③ Providing & fitting of typical

MMGSY informative sign board

with Logo & Maintenance board

= 3 Nos.

④ Constⁿ of granular sub-

base by providing well gran-
ded material of gr II.

5x4.00 x 1.20 x 0.15 = 3.22 m³

2x6.50 x 1.85 x 0.115 = 2.766 m³

3x3.45 x 1.75 x 0.150 = 2.717 m³

6x5.85 x 1.75 x 0.175 = 10.749 m³

10x4.15 x 1.55 x 0.150 = 9.649 m³

8x4.00 x 1.10 x 0.115 = 4.048 m³

2x4.30 x 1.60 x 0.175 = 2.408 m³

7x5.25 x 1.85 x 0.125 = 8.498 m³

3x3.45 x 1.25 x 0.100 = 1.811 m³

5x4.25 x 1.30 x 0.125 = 4.834 m³

2x6.55 x 1.80 x 0.150 = 3.537 m³

54.737 m³

⑤ Providing, laying, spreading

and compacting stone eggs

of gr. II.

5x4.15 x 1.50 x 0.075 = 2.334 m³

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
	2	6.75	2.0	0.075	= 2.025 m ³
	3	3.75	2.15	0.075	= 1.814 m ³
	6	6.0	2.0	0.075	= 5.40 m ³
	10	4.50	1.75	0.075	= 5.906 m ³
	8	4.25	1.25	0.075	= 3.188 m ³
	2	4.50	1.75	0.075	= 1.181 m ³
	7	5.50	2.0	0.075	= 5.775 m ³
	3	3.65	1.95	0.075	= 1.601 m ³
	5	4.30	1.35	0.075	= 2.177 m ³
	2	6.75	1.90	0.075	= 1.924 m ³
	10	3.0	2.50	0.075	= 5.625 m ³
	6	5.0	2.0	0.075	= 4.80 m ³
	4	6.0	1.75	0.075	= 3.150 m ³
	2	5.05	1.85	0.075	= 1.401 m ³
	3	4.25	1.55	0.075	= 1.482 m ³
	8	4.50	2.10	0.075	= 5.670 m ³
	7	4.0	1.85	0.075	= 3.885 m ³
					59.038 m ³
② Providing, laying, spreading and compacting stone agg. of Gr III material					
	32	8.75 + 5.5 + 4.7 + 3.75 + 3.75		0.075	= 12.768 m ³
	3	30	3.75	0.075	= 25.313 m ³
	23	3.75		0.075	= 6.469 m ³
	15	3.25 + 3.75 + 3.20 + 3.70 + 3.25		0.075	= 3.915 m ³

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
1x30x3.75x0.075					= 8.438 m ³ .
15x3.75x0.075					= 4.219 m ³ .
40x ^{3.75+3.40+3.00+4.25}				x0.075	= 10.80 m ³ .
	9				
55x ^{4.25+5.00+3.65+3.80+3.50+3.25}				x0.075	= 16.466 m ³ .
	6				
8x30x3.75x0.075					= 67.50 m ³ .
20x3.75x0.075					= 5.625 m ³ .
30x ^{3.75+4.50+3.25}				x0.075	= 9.00 m ³ .
	3				
5x30x3.75x0.075					= 42.188 m ³ .
4x30x3.75x0.075					= 33.75 m ³ .
3x30x3.75x0.075					= 25.313 m ³ .
25x3.75x0.075					= 7.031 m ³ .
Unk road.					
35x ^{5.40+5.20+3.60+3.70+3.25}				x0.075	= 11.366 m ³ .
	5				
5x30x3.75x0.075					= 42.188 m ³ .
4x30x3.75x0.075					= 33.75 m ³ .
10x3.75x0.075					= 2.813 m ³ .
15x ^{3.25+3.90+4.50}				x0.075	= 4.556 m ³ .
	3				373.468 m ³ .
Depn. 10/6/21					
⑦ Providing and applying primer coat with SS-1 emulsion.					
Quantity of item ⑤				x0.075	
					= 4979.573 m ²

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
⑧ Providing tack coat with (RS-1) emulsion over CC portion.					
Patch work -					
$5 \times 0.95 \times 0.50$				=	$2.375 m^2$
$8 \times 0.75 \times 0.65$				=	$3.900 m^2$
$6 \times 1.25 \times 1.00$				=	$7.500 m^2$
$5 \times 1.50 \times 0.75$				=	$5.625 m^2$
$3 \times 1.15 \times 0.75$				=	$2.588 m^2$
					$21.988 m^2$
⑨ Providing, laying and rolling of close-graded premix surfacing over					
CC portion Patch work.					
Same as item ⑧				-	$21.988 m^2$
⑩ Providing and applying tack coat with bitumen emulsion (RS-1) &					
same as item ⑨				-	$4979.573 m^2$
over CC Pavement.					
25×3.75				=	$93.75 m^2$
$8 \times \frac{3.25 + 3.40}{2}$				=	$28.6 m^2$
$17 \times \frac{3.40 + 3.70 + 5.70}{3}$				=	$72.533 m^2$
					$5174.456 m^2$
⑪ Providing, laying and rolling of close-graded premix surfacing.					

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Same as item ⑩	⑩				5144.456m ²
Depth 150372 J.E.					
⑫ Const ⁿ of Subgrade & Barthen shoulders with approved material -					
2x2x30x1.15x0.30 =					41.40m ³
2x2x30x1.125x0.30 =					40.50m ³
2x4x30x1.115x0.28 =					74.928m ³
2x5x30x1.025x0.29 =					108.75m ³
2x4x30x1.20x0.28 =					80.64m ³
2x3x30x1.05x0.30 =					56.70m ³
2x5x30x1.00x0.29 =					87.00m ³
2x4x30x0.90x0.30 =					97.20m ³
2x5x30x1.15x0.30 =					103.50m ³
2x2x30x1.01x0.28 =					33.936m ³
					724.554m ³
⑬ Reinforced cement concrete					
M15 grade Kilometer long					
stone					
(i) 1cm stone					3 Nos.
(ii) 200mm stone					6 Nos.
⑭ Providing and fixing of					
retro-reflectorised cautionary,					
mandatory and informatory					
sign -					
(i) 600 mm equilateral Δ					10 Nos.
(ii) 600 mm Circular -					2 Nos.

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(iii) 600 mm x 450 mm $\square$ -					4 Nos.
(15) Brick masonry in CM (1:3)					
in parapet -					
for 3 H.P. culvert.					
$3 \times 2 \times 6.00 \times 0.40 \times 0.60$ -					8.64 m^3
for 2 Slab culvert.					
$2 \times 2 \times 5.00 \times 0.60 \times 0.50$ -					6.00 m^3
					14.64 m^3
(16) Plastering with cement					
mortar (1:4) on brick work.					
for 5 H.P. culvert					
F/w - $5 \times 2 \times 6.00 \times 2.00$ -					120 m^2
side face - $5 \times 4 \times 6.00 \times 0.60$ -					72.00 m^2
Top - $5 \times 2 \times 6.00 \times 0.40$ -					24.00 m^2
Front face - $5 \times 4 \times 0.40 \times 0.60$ -					4.80 m^2
					220.80 m^2
for 2 Slab culvert.					
Parapet - $2 \times 4 \times 5.00 \times 0.60$ -					24.00 m^2
Top - $2 \times 2 \times 5.00 \times 0.50$ -					10.00 m^2
End face - $2 \times 4 \times 0.60 \times 0.50$ -					2.40 m^2
					36.40 m^2
					257.20 m^2
(17) Painting new letters and					
figures of any shade with					
synthetic enamel -					
Same as item (16) -					257.20 m^2
(18) Planting of trees by the road side					
(19) Providing & laying of wet applied plaster					60 Nos.
Plastic compound $2 \times 4 \times 36 \times 0.100$ -					204.00 m^2
Deep 9.					1.00 m^2
22/03/2022					66.00 m^2
J.E.					271.00 m^2

Abstract of Cost-

9

Sch. XLV-Form No. 134

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(1/1) Clearing & Grubbing road.					
Canal -					
0.2883 Lect. Qty. vide TMBP (2)					
item (1) @ Rs. 49524.68/lect. - Rs. 14283=00					
(2/2) Scarifying existing bituminous surface -					
261.63 m ² Qty. vide TMBP (2-3)					
item (2) @ Rs. 15.40/m ² - Rs. 4029.200					
(3/4) Providing & fixing of typical MMSI informative sign -					
board with Logo -					
3 Nos. Qty. vide TMBP (3) item (3)					
@ Rs. 9206.28/No - Rs. 27619=00					
(4/4) Const ⁿ of granular Sub-base.					
by providing well graded material of grit.					
54.737 m ³ Qty. vide TMBP (3)					
item (4) @ Rs. 1927.61/m ³ - Rs. 105512=00					
(5/5) Providing, laying, spreading and compacting stone agg -					
59.038 m ³ Qty. vide TMBP (3-4)					
item (5) @ Rs. 3621.47/m ³ - Rs. 213804=00					
(6/6) Providing, laying, spreading and compacting stone agg of grit material.					
373.468 m ³ Qty. vide TMBP (4-5)					
item (6) @ Rs. 3359.21/m ³ - Rs. 1254557=00					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(7/7) Providing and applying. primer coat with (SS-1) emulsion -					
4979.573 m ² Qty vide TMBP (5)					
Item (7) @ Rs. 41.32/m ²					Rs. 205756.20
(8/9) Providing Tack Coat with (RS-1) emulsion over CC portions					
Batch work -					
21.988 m ² Qty vide TMBP (8) item					
(8) @ Rs. 11.75/m ²					Rs. 258200
(9/10) Providing, laying and rolling of close graded prime surfacing on					
5166.444 m ² Qty vide TMBP (9) & (10)					
Item (9) & (10) @ Rs. 188.53/m ²					Rs. 974030.20
(10/8) Providing & applying. tack coat with bitumen emulsion (RS-1) -					
5174.456 m ² Qty vide TMBP (6)					
Item (10) @ Rs. 14.01/m ²					Rs. 72494.20
(11/3) Const ⁿ of Subgrade & Earthen shoulder with approved material -					
124.554 m ³ Qty vide TMBP (7)					
Item (11) @ Rs. 161.45/m ³					Rs. 116979.20
(12) Reinforced cement concrete M15 grade kilometer local stone.					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(i/11) 10cm Stone - 3 Nos. qty.					
vide TMBP (5) item 13(i).					
@ Rs. 2156.05/No —					Rs. 6470.20
(ii/12) 250 mm Stone - 6 Nos. qty.					
vide TMBP (5) item 13(ii) -					
@ Rs. 605.86/No —					Rs. 3635.20
(13) Providing & fixing of					
retro-reflectorisised cautionary					
mandatory and informative					
sign.					
(i/13) 600 mm equilateral Δ.					
10 Nos. qty vide TMBP (7)					

Item 14 ix @ Rs. 3355.52/No Rs. 3355.52					
(ii/14) 600 mm circular					
2 Nos. qty vide TMBP (7)					
Item 14 ii @ Rs. 4480.20 —					Rs. 8961.20
(iii/15) 600 mm x 450 mm □					
4 Nos. qty vide TMBP (8) item					
14 iii @ Rs. 4365.13/No —					Rs. 17461.20
(14/22) Brick masonry in C.M (1:3)					
in parapet.					
14.64 m ³ qty vide TMBP (8) item					
(15) @ Rs. 6359.08/m ³ —					Rs. 93097.20
(15/23) Plastering with cement					
mortar (1:4) on brick work.					
257.20 m ² qty vide TMBP (8)					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
item (6) @ Rs. 158.69/m ² - Rs. 40815.00					
16/17 Painting new letters and figures of any shade with synthetic enamel -					
257.20 m ² Qty vide TMBP (8)					
item (5) @ Rs. 95.68/m ² - Rs. 24596.00					
17/18 Planting of trees by the road side (Avenue trees) in 0.50 m dia -					
60 Nos. Qty vide TMBP (8)					
item (18) @ Rs. 799.22/m - 47953.20					
					3265864.00
Add 12% GST (+)					391904.00
					Add 1% L/C (+) 32659.20
					3690427.20
Less 0.5% below as per agg. (-)					19190.00
					Rs. 3671237.20
Deep 20/03/2022 J.E.					
18/20 Providing & laying of hot applied thermoplastic on					
271.00 m ² Qty vide TMBP (8)					
item (19) @ Rs. 735.75/m ² - 199388.00					
					34,65,252.00
Add 12% GST (+)					4,15,830.00
Add 1% L/C (+)					34,653.00
					39,15,735.00
Less 0.5% below as per agg. (-)					20,362.00
					38,95,373.00

Deep
20/03/2022
J.E.

Continuation