

Const. of High Level RCC Bridge in Bardiya
Aaga village over Kankla River at near Shiv
Mandir

Schedule XLV Form No. 134.

RWD Jambhaya-1

DIVISION

RWD Bakersi

SUB-DIVISION

Mohari

Measurement Book

SRM Enterprises

3487

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	

Name of work:- Construction of High Level
RCC Bridge in Bandibuli Arga
village over Kamla River at
Near Shit Mandir.
(Length:- 49.50M)

Name of agency:- SRM Enterprises.
Near Pandasawai, Darbhanga.

Agreement No.:- 42 SAB/2019-20.
(STATE SCHEME)

Estimated Cost:- Rs. 3,83,61,522.00

Agreement Value:- Rs. 3,45,25,369.00

Rate:- 10.00% Below from BQR rate.

DATE OF START:- 31.10.2019.

Date of Completion:- 30.05.2020.

Date of entry:- 24.12.2020.

—————x—————x—————x—————

① Reinforcement in Super
structure ————

IN MAIN GIRDER.

28 mm ϕ bar P_1	18.440 M	12 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 1.1234.
28 mm ϕ bar P_2	18.440 M	12 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 1.123 "
28 mm ϕ bar ϕ	19.608 M	6 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 0.597 "
28 mm ϕ bar γ	18.316 M	6 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 0.558 "
28 mm ϕ bar δ	16.430 M	6 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 0.500 "
28 mm ϕ bar ϵ	14.590 M	4 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 0.296 "
16 mm ϕ bar η	17.006 M	12 Nos	$\times \frac{1.05}{1000}$	$\times 1.580$	= 0.339 "
6 mm ϕ bar ν	17.006 M	60 Nos	$\times \frac{1.05}{1000}$	$\times 0.222$	= 0.238 "
10 mm ϕ bar ω straps	2x3.756 M	311	$\times \frac{1.05}{1000}$	$\times 0.617$	= 1.574 "

Continuation c.o. Q = 6.288 t.

Sch. XLV-Form No. 134

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
① continued.				S.F.	Q = 6.288 t.
6mm ϕ Hatch.		1.035M x 58 Nos	$\times \frac{1.05}{1000}$	0.222	= 0.014 "
6mm ϕ Bar-y		0.750M x 116 Nos	$\times \frac{1.05}{1000}$	0.222	= 0.020 "
<u>IN CROSS BORDER.</u>					
20mm ϕ	a,	8.098M x 6 Nos	$\times \frac{1.05}{1000}$	2.469	= 0.126 "
"	b,	8.284M x 4 Nos	$\times \frac{1.05}{1000}$	2.469	= 0.086 "
25mm ϕ Bar c,		8.350M x 6 Nos	$\times \frac{1.05}{1000}$	3.858	= 0.203 "
"	d,	8.350M x 3 Nos	$\times \frac{1.05}{1000}$	3.858	= 0.101 "
"	e,	6.495M x 3 Nos	$\times \frac{1.05}{1000}$	3.858	= 0.079 "
"	e2	6.495M x 2 Nos	$\times \frac{1.05}{1000}$	3.858	= 0.053 "
"	f,	8.494M x 2 Nos	$\times \frac{1.05}{1000}$	3.858	= 0.069 "
10mm ϕ Bar k,		2x2.786M x 66 Nos	$\times \frac{1.05}{1000}$	0.617	= 0.238 "
"	k2	2x3.586M x 28 Nos	$\times \frac{1.05}{1000}$	0.617	= 0.130 "
6mm ϕ l,		5.950M x 2 Nos	$\times \frac{1.05}{1000}$	0.222	= 0.032 "
"	l2	5.250M x 12 Nos	$\times \frac{1.05}{1000}$	0.222	= 0.015 "
16mm ϕ m,		3.996M x 18.00	$\times \frac{1.05}{1000}$	1.580	= 0.119 "
6mm ϕ A		6.780M x 12 Nos	$\times \frac{1.05}{1000}$	0.222	= 0.019 "
"	B	2.930M x 16 Nos	$\times \frac{1.05}{1000}$	0.222	= 0.011 "
12mm ϕ Bar		7.604M x 4 Nos	$\times \frac{1.05}{1000}$	0.889	= 0.028 "
<u>Deck SLAB</u>					
12mm ϕ a		7.252M x 72	$\times \frac{1.05}{1000}$	0.889	= 0.487 "
12mm ϕ b		5.300M x 78 Nos	$\times \frac{1.05}{1000}$	0.889	= 0.386 "
12mm ϕ c		5.300M x 74 Nos	$\times \frac{1.05}{1000}$	0.889	= 0.366 "
16mm ϕ d		2.325M x 156 Nos	$\times \frac{1.05}{1000}$	0.580	= 0.602 "
8mm ϕ e		1.850M x 138	$\times \frac{1.05}{1000}$	0.395	= 0.106 "
"	f	17.240M x 24	$\times \frac{1.05}{1000}$	0.395	= 0.172 "
"	g	17.262M x 24	$\times \frac{1.05}{1000}$	0.395	= 0.172 "

Continuation c.g. Q = 9.923 t.

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
① <u>Continued.</u>				$\frac{A.F.}{Q}$	9.923 t.
8 mm ϕ " 17.020 M x 24 x $\frac{1.05}{1000}$				$\times 0.395 = 0.163$	"
" " 17.020 M x 10 x $\frac{1.05}{1000}$				$\times 0.395 = 0.071$	"
" " 17.020 M x 10 x $\frac{1.05}{1000}$				$\times 0.395 = 0.071$	"
" " 17.000 M x 16 Nos x $\frac{1.05}{1000}$				$\times 0.395 = 0.011$	"
" " 17.020 M x 8 Nos x $\frac{1.05}{1000}$				$\times 0.395 = 0.056$	"
" " 1.556 M x 116 Nos x $\frac{1.05}{1000}$				$\times 0.395 = 0.075$	"
					10.376 t.

② Reinforcing RCC M30 in

Superstructure in Deck

S/C to T-Beam &

Span 16.50 M.

$$Q = 1 \times 61.20 \text{ m}^2 = 61.20 \text{ m}^2$$

③ Reinforcement in S/C

Structure

IN DIRT WALL12 mm ϕ Horizontal
Dr & Face. $8.550 \text{ M} \times 13 \text{ Nos} \times \frac{1.05}{1000} \times 0.889 = 0.104 \text{ t.}$ " R Face. $8.550 \text{ M} \times 13 \text{ Nos} \times \frac{1.05}{1000} \times 0.889 = 0.104 \text{ t.}$ 16 mm ϕ Stirrups
E/Face $3.400 \text{ M} \times 52 \text{ Nos} \times \frac{1.05}{1000} \times 1.580 = 0.293$ 16 mm ϕ Stirrups
R/Face $2.694 \text{ M} \times 52 \text{ Nos} \times \frac{1.05}{1000} \times 1.580 = 0.232$ IN Bucket.
12 mm ϕ
Stirrups. $3.155 \text{ M} \times 43 \text{ Nos} \times \frac{1.05}{1000} \times 0.889 = 0.127$ Bracket alternate
St. interlayer
10 mm ϕ $2.180 \text{ M} \times 2 \text{ Nos} \times \frac{1.05}{1000} \times 0.617 = 0.030$ Bracket Top Hor.
Dev. 10 mm ϕ $8.350 \text{ M} \times 3 \text{ Nos} \times \frac{1.05}{1000} \times 0.617 = 0.016$ Br. Hor. bar
inclined portion
10 mm ϕ $8.350 \text{ M} \times 2 \text{ Nos} \times \frac{1.05}{1000} \times 0.617 = 0.011$ 10 mm ϕ at
Top of D/Wall. $8.350 \text{ M} \times 2 \text{ Nos} \times \frac{1.05}{1000} \times 0.617 = 0.011$ IN RETURN WALL5 Crth. & Ce V. bar
IN Cent. layer
12 mm ϕ $1.297 \text{ M} \times 20 \text{ Nos} \times \frac{1.05}{1000} \times 0.889 = 0.024$

Continuation C.O. Q = 0.952 t.

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
③ continued				B.F. D = 0.952 t.	
Outer face of inclined bar 12 mm ϕ	1.297 m	20 N	$\frac{1.05}{1000} \times 0.889$		= 0.024 "
H. bar outer face 12 mm ϕ	5.650 m	20 N	$\frac{1.05}{1000} \times 0.889$		= 0.105 "
H. bar E. face inclined 20 mm ϕ	5.650 m	20 N	$\frac{1.05}{1000} \times 2.469$		= 0.293 "
H. bar Out. face inclined 12 mm ϕ	6.350 m	6 N	$\frac{1.05}{1000} \times 0.889$		= 0.036 "
H. bar E. face inclined 20 mm ϕ	6.350 m	6 N	$\frac{1.05}{1000} \times 2.469$		= 0.099 "
					1.509 t.

④ Drainage Spout. 6 Nos

⑤ Providing RCC M-30 in

Substructure. 5m to 10m

D/Wall.	1x	8.45x0.350x1.88	= 5.56 m ³
Bracket.	1x	8.45x0.135 (Bxm)	= 1.14 "

Return Wall	Rect.	2x	3.80x0.588x1.00	= 4.97 "
"	"	2x	3.80x0.475x2.255	= 8.14 "
"	Centileur	1x	1.50x0.475x1.755	= 1.25 "
"	"	2x	1.50x0.475x0.500	= 0.71 "
				21.27 m ³

⑥ Weep holes 76 Nos.

⑦ Strip seal expansion joint.
4x 8.45 m = 33.80 m

⑧ RCC M30 grade railing 118.46 m

⑨ Cement Concrete wearing
M-30
coat. L = 51.50 m.

51.50x7.50x0.075 = 28.97 m³

⑩ Back filling etc

Sandy material.

24/12/2020
 24/12/2020
 ME