

Contd of High Level RCC Bridge in Bandi Kudi
Arya Village over Kamla River at near Shiv
Mandir

Schedule XLV Form No. 134.

RWD Darrbhanga - 1

DIVISION

RWD Bakshi

SUB-DIVISION

Notbooked.

Measurement Book

S R M Enterprises.

5487

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Name of Work:-	Construction of High Level				
	RCC Bridge in Bandibadi Arga				
	village over Kamla River at				
	Near Shil-Mandir.				
	(Length:- 49.50M)				
Name of Agency:-	SRM Enterprises-Sos.				
	Near Pandasrai, Darbhanga.				
Agreement No.:-	42 SAD/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 BOQ rate.				
DATE OF START:-	31.10.2019.				
Date of Completion:-	20.12.2020.				
Date of entry:-	24.12.2020.				
① Reinforcement in Supers Structure - <u>Bridge</u> IN MAIN GIRDER.					
28 mm ϕ bar	18.440 M	12 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 1.123 t.
28 mm ϕ bar	18.440 M	12 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 1.123 "
28 mm ϕ bar	19.608 M	6 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 0.597 "
28 mm ϕ bar	18.316 M	6 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 0.558 "
28 mm ϕ bar	16.430 M	6 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 0.500 "
28 mm ϕ bar	14.590 M	4 Nos	$\times \frac{1.05}{1000}$	$\times 4.832$	= 0.296 "
16 mm ϕ bar	17.006 M	12 Nos	$\times \frac{1.05}{1000}$	$\times 1.580$	= 0.339 "
6 mm ϕ bar	17.006 M	60 Nos	$\times \frac{1.05}{1000}$	$\times 0.222$	= 0.238 "
10 mm ϕ bar	23.756 M	311 Nos	$\times \frac{1.05}{1000}$	$\times 0.617$	= 1.514 "
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.					Q: 6.288 t.
6mm ϕ Hatch.	1.035M	58 Nos	$\frac{1.05}{1000}$	0.222	0.014 "
6mm ϕ Rev. Y	0.750M	116 Nos	$\frac{1.05}{1000}$	0.222	0.020 "
IN CROSS GIRDER.					
20mm ϕ a,	8.098M	6 Nos	$\frac{1.05}{1000}$	2.469	0.126 "
" b,	3.284M	4 Nos	$\frac{1.05}{1000}$	2.469	0.086 "
25mm ϕ bar c,	8.350M	6 Nos	$\frac{1.05}{1000}$	3.858	0.203 "
" d,	5.350M	3 Nos	$\frac{1.05}{1000}$	3.858	0.101 "
" e,	6.495M	3 Nos	$\frac{1.05}{1000}$	3.858	0.079 "
" e ₂	6.495M	2 Nos	$\frac{1.05}{1000}$	3.858	0.053 "
" f,	8.434M	2 Nos	$\frac{1.05}{1000}$	3.858	0.069 "
10mm ϕ bar k ₁	2x2.786M	66 Nos	$\frac{1.05}{1000}$	0.617	0.238 "
" k ₂	2x3.586M	28 Nos	$\frac{1.05}{1000}$	0.617	0.130 "
6mm ϕ l ₁	5.950M	2 Nos	$\frac{1.05}{1000}$	0.222	0.022 "
" l ₂	5.250M	12 Nos	$\frac{1.05}{1000}$	0.222	0.015 "
16mm ϕ m,	3.836M	18 Nos	$\frac{1.05}{1000}$	1.580	0.119 "
6mm ϕ A	6.780M	12 Nos	$\frac{1.05}{1000}$	0.222	0.019 "
" B	2.938M	16 Nos	$\frac{1.05}{1000}$	0.222	0.011 "
12mm ϕ bar bc	7.604M	4 Nos	$\frac{1.05}{1000}$	0.889	0.028 "
Deck SLAB					
12mm ϕ a	7.252M	72 Nos	$\frac{1.05}{1000}$	0.889	0.487 "
12mm ϕ b	5.300M	78 Nos	$\frac{1.05}{1000}$	0.889	0.386 "
12mm ϕ c	5.300M	74 Nos	$\frac{1.05}{1000}$	0.889	0.366 "
16mm ϕ d	2.325M	156 Nos	$\frac{1.05}{1000}$	0.580	0.602 "
8mm ϕ e	1.850M	138 Nos	$\frac{1.05}{1000}$	0.395	0.106 "
" f	14.240M	24 Nos	$\frac{1.05}{1000}$	0.395	0.172 "
" g	17.262M	24 Nos	$\frac{1.05}{1000}$	0.395	0.172 "
Continuation c.g. Q:					9.923 t.

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
① Cornfield				A.F.	0.3236
② 12.000 M x 10.304 M	12.000	M x 10.304	M	$\frac{1.05}{100} \times 10.304 = 0.0108$	0.163
" 12.000 M x 10.304 M	12.000	M x 10.304	M	$\frac{1.05}{100} \times 10.304 = 0.0108$	0.091
" 12.000 M x 10.304 M	12.000	M x 10.304	M	$\frac{1.05}{100} \times 10.304 = 0.0108$	0.091
" 12.000 M x 10.304 M	12.000	M x 10.304	M	$\frac{1.05}{100} \times 10.304 = 0.0108$	0.011
" 12.000 M x 10.304 M	12.000	M x 10.304	M	$\frac{1.05}{100} \times 10.304 = 0.0108$	0.056
" 12.000 M x 10.304 M	12.000	M x 10.304	M	$\frac{1.05}{100} \times 10.304 = 0.0108$	0.075
					10.3766

② Banding ACCM30 in
Superstructure in Deck
Slab & T-Beam &
Span 16.50 M.
 $\phi = 1761.20 \text{ mm} = 61.20 \text{ mm}$

Reinforcement in Sub-Structure		IN DIRT WALL	
10 mm ϕ Horizontal at 6' Face	$8.530M \times 13 Nos \times \frac{1.05}{1000} \times 0.889 = 0.104 \text{ t.}$		
R Face	$8.530M \times 13 Nos \times \frac{1.05}{1000} \times 0.889 = 0.104 \text{ t.}$		
10 mm ϕ Stirrups E/Face	$3.400M \times 52 Nos \times \frac{1.05}{1000} \times 1.580 = 0.293 \text{ "}$		
10 mm ϕ Stirrups R/Face	$2.694M \times 52 Nos \times \frac{1.05}{1000} \times 1.580 = 0.232 \text{ "}$		
10 mm ϕ Bucket Stirrups	$3.155M \times 43 Nos \times \frac{1.05}{1000} \times 0.889 = 0.127 \text{ "}$		
10 mm ϕ alternate interlayer	$2.180M \times 21 Nos \times \frac{1.05}{1000} \times 0.617 = 0.030 \text{ "$		
10 mm ϕ alternate 10 mm ϕ	$8.350M \times 8 Nos \times \frac{1.05}{1000} \times 0.617 = 0.016 \text{ "$		
10 mm ϕ Horizontal inclined portion	$8.350M \times 2 Nos \times \frac{1.05}{1000} \times 0.617 = 0.011 \text{ "$		
10 mm ϕ at top of D/Wall.	$8.350M \times 2 Nos \times \frac{1.05}{1000} \times 0.617 = 0.011 \text{ "$		
IN RETURN WALL			
10 mm ϕ 45 deg V. bar Cont'd lower portion 10 mm ϕ	$1.297M \times 20 Nos \times \frac{1.05}{1000} \times 0.889 = 0.024 \text{ "$		

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(3) Continued					0.952 t.
Outer face of bar					
Inclined section	1.2971 m	20 mm	1.05	$1.05 \times 0.889 = 0.024$	
12 mm ϕ					
H. Bar section	5.650 m	20 mm	1.05	$1.05 \times 0.889 = 0.105$	
12 mm ϕ					
H. Bar E/Fa Co.					
Inclined	5.650 m	20 mm	1.05	$1.05 \times 2.469 = 0.293$	
20 mm ϕ					
H. Bar Out. face	6.350 m	6 mm	1.05	$1.05 \times 0.889 = 0.036$	
Inclined					
12 mm ϕ					
H. Bar E. Face	6.350 m	6 mm	1.05	$1.05 \times 2.469 = 0.099$	
Inclined Bar					
20 mm ϕ					1.509 t.
(4) Drainage Spout.					6 Nos
(5) Providing RCC M-30					
Substructure					
D/Wall.					
	1 x	8.45 x 0.350 x 1.88			5.56 m ³
Bracket	1 x	8.45 x 0.135	(B x H)		1.14 "
Return Wall					
Rect.	2 x	3.80 x 0.588 x 1.00			4.47 "
"	2 x	3.80 x 0.475 x 2.25			8.14 "
"	1 x	1.50 x 0.475 x 1.75			1.25 "
Cent. Elev.					
"	2 x	1.50 x 0.475 x 0.50			6.71 "
					21.27 m ³
(6) Weep holes					76 Nos.
(7) Strip seal expansion joint					
	4 x	8.45 m			33.80 m
(8) RCC M30 grade railing					118.46 m
(9) Cement Concrete wearing					
Coat.					
	L =	51.50 m.			
	51.50 x 7.50 x 0.075				28.97 m ³
(10) Back filling etc.					
Sandy concrete.					

Continuation

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Name of work:- Construction of High Level
RCC Bridge in Bandihuli Arga Village
Over Kamla River At Near Ashi
Mandir. (LENGTH- 49.50 Metre)

1

Name of work -

Situation of work - At - Under - Bheri Block.

Agency by which work is executed - SRM Enterprises

Date of measurement - ^{New Pandasrai} Lohariagarai, Dist. Deoria.

No. and date of agreement. 42 SBD/2019-20.

(These four lines should be repeated at the commencement of the measurements relating to each work) (STATE SCHEME)

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Estimated Cost:-	Rs. 3,83,64,522=00.				
Agreement Value:-	Rs. 3,45,25,369=00.				
Rate:-	10.00% Below from B.O.Q. rate.				
Date of start:-	31.10.2019.				
Date of completion:-	30.04.2021.				
Date of entry:-	08.03.2020.				
① Conducting Concreting					
flooring d.d.					
	4x30m				= 120M.
② Service Road.					= 52M.
③ Providing and Constructing					
temporary Island d.d.					2 Nos.
④ Reinforcement.					
in Abutment (A1+A2)					
Vertical main bar.					
25mm ϕ -	(0.500+19.500+0.650)M x 26 Nos x 18				
	= 20.650M x 26 x 18				= 9664.200M
16mm ϕ inner stirrups.	(0.160+3.143+0.160)M x 12 Nos x 18				
	= 3.463M x 12 x 18				= 748.008M.
10mm ϕ stirrups/stng.	(0.100+3.299+0.100)M x 120 x 18				
	= 3.499M x 120 x 18				= 7557.840M
in Pier (P1+P2)					

Continuation

5TH ON A/C BILL

54

Sch. XLV-Form No. 134

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Name of Work:-	Construction of High Level				
	RCC Bridge in Sandibuli Arga				
	Village over Konda River at				
	Near Shiv Mandir.				
	(Length:- 49.50M)				

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

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

Estimated Cost:- Rs. 3,23,61,522.00

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

Rate:- 10.00% Below from BQR rate.

DATE OF START:- 31.10.2019.

Date of completion:- 30.04.2021.

Date of entry:- 24.12.2020.

① Reinforcement in Super

Structure - du du

IN MAIN GIRDER.

28 mm ϕ bar P_1	18.442 M x 12 Nos x $\frac{1.05}{1000}$ x 4.832 = 1.123 t.
28 mm ϕ bar P_2	18.440 M x 12 Nos x $\frac{1.05}{1000}$ x 4.832 = 1.123 t.
28 mm ϕ bar q	13.608 M x 6 Nos x $\frac{1.05}{1000}$ x 4.832 = 0.597 t.
28 mm ϕ bar r	18.316 M x 6 Nos x $\frac{1.05}{1000}$ x 4.832 = 0.558 t.
28 mm ϕ bar s	16.430 M x 6 Nos x $\frac{1.05}{1000}$ x 4.832 = 0.500 t.
28 mm ϕ bar t	14.590 M x 4 Nos x $\frac{1.05}{1000}$ x 4.832 = 0.296 t.
16 mm ϕ bar u	17.006 M x 12 Nos x $\frac{1.05}{1000}$ x 1.580 = 0.339 t.
6 mm ϕ bar v	14.006 M x 60 Nos x $\frac{1.05}{1000}$ x 0.222 = 0.238 t.
10 mm ϕ bar w	23.756 M x 311 x $\frac{1.05}{1000}$ x 0.617 = 1.574 t.

Continuation c. o. Q = 6.288 t

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
	ABSTRACT OF COST.				
①	conducting conformity				
	bearing - do do				
	V.P.	$\frac{49}{1}$	120.00 M.		
			@ Rs. 1000 = 00/m		Rs. 1,20,000.00
②	Service Road.				
	V.P.	$\frac{49}{2}$	51.38 M		
			@ Rs. 3858 = 23/m		Rs. 1,98,043.00
③	Paving & constructing				
	temporary island - do do				
	V.P.	$\frac{49}{3}$	2 Nos		
			@ Rs. 29,672 = 00 each		Rs. 583,344.00
④	Supplying, fitting and				
	placing reinforcement				
	in foundation - do do				
	V.P.	$\frac{49}{4}$	89.920 +		
			@ Rs. 7715 = 85/t		Rs. 69,34,077.00
⑤	Paving steel bar 6mm				
	area - do do				
	V.P.	$\frac{49}{5}$	8.68 +		
			@ Rs. 88,448 = 07/t		Rs. 7,65,419.00
⑥	Bored Cast - in - Situ				
	M35 grade R.C.C.				
	pile - do do				
	V.P.	$\frac{49}{6}$			
			492.00 M.		
			@ Rs. 17,075 = 93/m		
					Rs. 84,01,358.00

Continuation - Rs. 1,70,22,24/20

60
Sch. XLV-Form No. 134

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
				D.F.	Rs 1,70,72,241.00
(7) Vertical pile load testing					
initial pile load test.					
V.P.	50		2 Nos.		
	(7)				
@ Rs 1,20,000.00 each.					Rs 2,40,000.00
(8) Vertical pile load testing					
Routine Pile load test					
V.P.	50		3 Nos.		
	(8)				
@ Rs 90,000.00 each					Rs 2,70,000.00
(9) Earthwork excavation					
in found ⁿ trenches etc.					
Up to 3M. Depth.					
V.P.	50		737.56 m ³		
	(9)				
@ Rs 125.24/m ³					Rs 92,872.00
(10) Earthwork excavation					
in found ⁿ trenches up to					
3.00m to 6.00m Depth.					
V.P.	50		21.05 m ³		
	(10)				
@ Rs 160.59/m ³					Rs 4,986.00
(11) Providing R.C.C. m/s 1m					
levelling course etc.					
V.P.	50		33.05 m ²		
	(11)				
@ Rs 6677.05/m ²					Rs 2,20,676.00
(12) Providing R.C.C. m/s 0.1m					
pile cap etc.					
V.P.	50		366.12 m ²		
	(12)				
@ Rs 8070.69/m ²					Rs 29,54,041.00

Continuation c.o. Rs 2,00,05,116.00

Sch. XLV-Form No. 134

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
				B.F.	
					Rs. 2,08,05,116.00
(13) Supplying filling and placing reinforcement in substructure and					
	V.P.	$\frac{51}{13}$	2.175 t.		
	V.P.	$\frac{57}{3}$	1.509 t.		
			22.684 t.		
			Unit to 22.833 t.		
			@ Rs. 77,263 = 33/m ²		Rs. 17,64,154.00
(14) Providing RCC M30 in abutment shaft and					
	V.P.	$\frac{51}{13}$	17.078 m ³		
			@ Rs. 8316 = 12/m ³		Rs. 14,73,602.00
(15) Providing RCC M30 in sub-structure upto 5m to 10m height.					
	V.P.	$\frac{51}{15}$	50.14 m ³		
	V.P.	$\frac{57}{5}$	21.27 m ³		
			71.41 m ³		
			@ Rs. 8466 = 6/m ³		Rs. 6,04,601.00
(16) Providing Deep holes - shaft					
	V.P.	$\frac{51}{16}$	80 Nos.		
	V.P.	$\frac{57}{6}$	76 "		
			156 Nos.		
			@ Rs. 129 = 63 each		Rs. 20,222.00
(17) Backfilling for Abutment wall - pp.					
	V.P.	$\frac{51}{13}$	116.56 m ³		
	V.P.	$\frac{57}{10}$	263.40 m ³		
			380.26 m ³		
			Unit to 348.18 m ³		
			@ Rs. 747.76/m ³		Rs. 3,60,355.00
			Continuation c.o. Rs. 2,49,27,050.00		

62
Sch. XLV-Form No. 134

Particulars	Details of area measurement				Contents of area
	No	L	B	D	
				Δ 5	Rs 49,24,050.00
(18) Laying R.C.C. Pipe N ^o 3					
on 1st class bedding					
V.P. 52	18	20.00 M.			
@ Rs. 136.35/M					Rs. 2,72,700.00
(19) Construction of embankment					
lead upto 100m.					
V.L. 52	19	1350.00 m ²			
V.L. 53	20	1050.00 m ²			
		5400.00 m ²			
@ Rs. 187.51/m ²					Rs. 10,12,554.00
(20) Bearing and S.S. pipe					
V.L. 54	20	12162.00 m ²			
@ Rs. 101/cm ²					Rs. 1,23,705.00
(21) Supplying, fitting and placing reinforcement in super structure					
V.P. 52	21	20.752 t.			
V.P. 55	22	10.376 t.			
		31.128 t.			
Limit to 31.118 t.					
@ Rs. 78,435.84/t.					Rs. 24,40,848.00
(22) Providing R.C.C. base grade in super structure in deck					
Sub with T. Deck					
V.P.					

Continuation
C.O. Rs. 2,86,16,884.00

Continuation
C.O. Rs. 3,7,74,754=00

Material Statement.		
①	E/W.	4050.00
②	Sand.	377.85
③	Stone aggregates, metal or stone chips	214.71

~~24/12/2020~~
25/12/2020

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