



Rural Works Department, Govt of Bihar

**BIHAR RURAL ROAD DEVELOPMENT AGENCY (BRRDA)**  
**DETAILED PROJECT REPORT OF MMGSY ROAD(BRICS)**

**बिहार**



**DISTRICT :- PURBA CHAMPARAN      BLOCK :- CHAURADANO**

**ROAD NAME :- PWD Path Narayan Chowk TO Pakariya Ghat**

**PACKAGE NO. : NEW CONNECTIVITY**

**CNCPL NO. :- 0**  
**LINK No.:- L048**

TOTAL LENGTH	:	6.500	KM
TOTAL CONSTRUCTION LENGTH	:	6.500	KM
LENGTH OF RIGID PAVEMENT	:	1.300	KM
LENGTH OF FLIXIBLE PAVEMENT	:	5.200	KM
TOTAL COST OF PAVEMENT	:	220.443	LAKH
NO. OF C.D.WORKS	:	3.000	NOS
COST OF C.D. WORKS	:	15.293	LAKH
COST OF C.D. / KM	:	2.353	LAKH
MAINTENANCE COST	:	53.726	LAKH
GST @ 12 %	:	34.736	LAKH
LABOUR CESS @ 1 %	:	2.895	LAKH
CONTIGENCY @ 2.25%	:	5.994	LAKH
GRAND TOTAL COST		333.086	LAKH
COST / KM	:	40.982	LAKH

**PREPARED BY**  
**SUPERSTAR DESIGNER PVT. LTD.**

Architects, Engineers, Planners, Designers

Shivpuri, Patna, (Bihar), Pin - 800023

Mobile No :- +918102676495

Email : superstardesigner@yahoo.com

# DETAILED ESTIMATE FOR PAVEMENT

FORM NO. 1

Sl. No.	SDB SL. NO	MORD Ref.No	Description	Unit	NOS	LENGTH	WIDTH	HEIGHT	QUANTITY	RATE	AMOUNT (in Rs.)
9	4.7	405	<b>WBM Grading 3 (By Mechanical Means)</b> (3-A) Providing, laying, spreading and compacting stone aggregates of specific sizes to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 kN in stages to proper grade and camber, applying and brooming, stone screening to fill-up the interstices of coarse aggregate, watering and compacting to the required density Grading 3 as per Technical Specification Clause 405. For Bituminous Pavement (BT) For Cement Concrete Pavement (CC) Add for extra for Profile Correction in pot mesurment (0%) Add for extra widening on curve (1%) Net WBM -3 Qty	Cum	1.00	1,700.00	3.75	0.075	478.13		
				Cum	1.00	0.00	3.75	0.075	0.00		
				Cum	0%	4,000.00			439.86		
									4.78		
									922.77	3,426.69	31,62,047.00
C) SUB TOTAL OF CRUST =											97,84,316.00
SUB HEAD : BITUMINOUS ITEMS											
10	5.1	502	<b>Prime Coat (Low porosity)</b> (1) Providing and applying primer coat with Bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.90- 1.2 kg/sqm using mechanical means as per Technical Specification Clause 502. Prime coat on earthen portion Prime coat on pot Repair Add for extra widening on curve (1%) Net Area	Sqm	1.00	1,700.00	3.75		6,375.00		
				Sqm					5,864.80		
				Sqm					63.75		
				Sqm					12,303.55	41.27	5,07,768.00
11	5.2	503	<b>Tack Coat</b> Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surface treated with Primer and cleaned with hydriloc broom as per technical specification clause 503.  Add for extra widening on curve (1%) Net Area	Sqm	1.00	5,200.00	3.75		19,500.00		
				Sqm					195.00		
				Sqm					19,695.00	11.00	2,17,730.00
12	5.8	508	<b>Mix Seal Surfacing</b> Providing, laying and rolling of close-graded premix surfacing material of 20 mm thickness composed of 13.2 mm to 0.9 mm (Type-B) aggregates using penetration grade bitumen to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 8-10 kN static roller and finishing to required level and grades as per Technical Specification Clause 509.  Add for extra widening on curve (1%) Net Area	Sqm	1.00	5,200.00	3.75		19,500.00		
				Sqm					195.00		
				Sqm					19,695.00	198.68	3,91,400.00
D) SUB TOTAL OF BITUMINOUS ITEM =											45,96,501.00



Sl. No.	SDB	MORD	Ref.No	Description	Unit	NOS	LENGTH	WIDTH	HEIGHT	QUANTITY	RATE	AMOUNT (IN RS.)
SUB HEAD : CC PAVEMENT												
13	4.1	401	(ii)	Granular Sub-base with Well Graded Material (Table 400.1)								
	(A)			For Grading I Material (By mix in place method)								
				Construction of granular sub-base by providing well graded material, spreading, in uniform layers with tractor mounted grader arrangement on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401.								
				GSB in Earthen Portion	cum	1.00	0.00	3.75	0.100	0.00		
				GSB in Widening	Cum	2.00	500.00	1.875	0.100	187.50		
				POT Measurement	Cum	0.00	4,000.00			0.00		
										1.88		
				Add for extra widening on curve (1%)						189.38		
				Net GSB Qty: Required form Grading I Material						3,101.32		
14	6.4	1500		Cement Concrete Pavement								
				Construction of un-reinforced plain cement thickness as per design, over a prepared sub base with 43 grade cement or any other type as per clause 1501.2.2 M 30 grade coarse and fine aggregate maximum size of aggregate not exceeding 25mm, mixed in a concrete of not less than 0.2cum capacity and appropriate weight batcher using approved mix design laid in approved fixed side formwork ( steel channel, laying and fixing of 125 micron thick plythene film, wedges, steel plates including leveling, the formwork as per drawing ) spreading the concrete with shovels, rakes, compacted using needle, screed and plate vibrators and finished in continuous operation including provision of contraction and expansion, construction joints, applying debonding strips, primer, sealant, dowel bars, near approaches to bridge/ culvert and construction joints, admixtures as approved, curing of concrete slab for 14 days curing compound (where specified) and water finishing to lines and grade as per drawing and Technical specification clause 1501.								
					cum	1.00	500.00	3.75	0.160	300.00		
										3.00		
				Add for extra widening on curve (1%)	cum					303.00		
				Net Qty						7,374.52		
15	4.18	412		Hard Shouldering								
				Laying brick soling layer on prepared sub-grade with brick on end edging according to lines, graded and cross-section shown on the drawing filling joints with sand and earth, spreading 25 mm thick layer of earth over brick soling, watering and rolling the same with three wheel road roller 80-100 kN as per Technical Specification Clause 412								
				Hard Shouldering in Village	sqm	2.00	500.00	0.500		500.00		
				Less	sqm	0%	4,000.00	2.500		0.00		
				New Brick Area						500.00		
										503.13		
										27,34,480.00		
										28,32,000.00		

# DETAILED ESTIMATE FOR PAVEMENT

SL. NO.	SDB	MORD	RefNo	Description	Unit	NOS	LENGTH	WIDTH	HEIGHT	QUANTITY	RATE	AMOUNT (in Rs.)
16	8.29			Irrigation Conduit								
				Cable Duct Across the Road: Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC: 98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum 450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings.	M	23	7.50			172.50	1,642.14	2,83,269.00
E) SUB TOTAL OF CC PAVEMENT = 33,56,792.00												
17	10.1	1700		SUB HEAD : ROAD FURNITURES , KM STONES, TRAFFIC & DIRECTION SIGN , PMGSY LOGO								
				Kilometre stone								
				Reinforced cement concrete M15 grade kilometre local stone of standard design as per IRC:8 fixing in position including painting, and printing, etc as per drawing and technical specification clause 1703.								
				i) 5th km stone	No.	1.00					8,957.06	8,957.06
				ii) Km stone	No.	7.00					2,402.15	16,814.90
				iii) 200 m stone	No.	22.00					653.87	14,385.00
18	10.2	1700		Traffic sign								
				Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of high intensity grade sheeting vide clause 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level, as per approved drawing.								
				i) 600 mm equilateral & triangle,	Nos	23.00					3,502.52	81,864.00
				ii) 600 mm circular,	Nos	14.00					4,828.19	67,594.60
				iii) 800 mm x 600 mm rectangular,	Nos	23.00					6,729.42	1,54,777.00
				iv) 600 mm x 450 mm rectangular,	Nos	14.00					4,702.72	65,838.08
19	8.13	803		Road Marking with Hot Applied Thermoplastic Compound with Reflectorisng Glass Beads on Bituminous Surface								
				Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorisng glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes.								
				i) Road Marking On BT	Sqm	2	5200.00	0.100		1040.00	735.10	76,816.00
				ii) Road Marking On CC	Sqm	2	500.00	0.100		100.00	834.62	83,462.00