

DETAILED COST ESTIMATE FOR DISMANTLING OF EXISTING 2 LANE LOW HEIGHT ROB AND CONSTRUCTION OF NEW 4 LANE FLYOVER BRIDGE AT SANDIYA BRIDGE(LC-90A AT JAMNAGAR-CIVIL HOSPITAL ROAD IN RAJKOT)

SUMMARY

PART-A		
S.No.	Description	Amount in Rs.
	RMC PORTION	
A	Part-1 :- Dismantling & Utility shifting	1,83,60,779
	Part - 2 : Cost of Foundation	9,42,91,971
	Part - 3 : Cost of Sub-Structure	3,86,20,510
	Part - 4 : Cost of Super-Structure	16,16,44,670
	Part - 5 : Cost of R.E Wall	9,17,14,977
	Sub Total-A	40,46,32,907
B	Part - 6 : Cost of Road Work	2,97,37,567
	Part - 7 : Surface drainage work	4,10,50,773
	Part - 8 : Cost of Electrification	27,04,591
	Sub Total-B	7,34,92,931
	Total Cost for RMC area side	47,81,25,838
C	Railway Portion estimate as per RMC Rate	5,23,07,250
	Total cost of Project	53,04,33,088
	Total amount for Tendering in Rs. 53,04,34,000/-	53,04,34,000

Notes :

1) All work shall be carried out as per the latest specifications of MoRTH, IRC, BIS, Manufacturer manuals or as directed by nominated Engineer In Charge.

2) Contractor must keep the site neat and clean (during construction phase and after completion) remove all debris, surplus material and follow Safety norms and Environmental norms as per direction of Engineer -in charge.

3.) All scrap, unusable material, concrete, excavated earth shall be removed from construction site and dump at site nominated by Engineer-In-Charge out side with all leads, lifts, loading, unloading, supervision, weighment etc. as a complete job.

4) Contractor have to provide site office for Railway and staff of RMC with table, chair, fan, air conditioner and working facility as like computer, Printer, Computer Data entry staff, Camera and stationery as per tender clause. No extra payment shall be payable for this items.

5) Contractor have to submit all Warranty/Gurantee documents of Civil Engineering /Electrical items like bearing, plate girder, Electrical items, Earthing, LED, Control Panel items issued by the suppliers/manufacturer.

6) Star Rate for Cement, Steel and Bitumen are applicable for this project.

7) CAR policy have to purchase and maintained during construction phase by contractor.

8) Detection of underground utility and approval of diversion plan are in the scope of contractor.

9) Contractor have to maintain daily progress, test report, site photo, etc. on Power Play mobile application from day of start till final bill.

ESTIMATE OF APPROCH PORTION

Sr. no.	Quantities	DESCRIPTION OF ITEMS	Unit	Gross Rate	Amount in Rs.
PART - 1		CLEANING AND GARBING , DISMANTLING OF EXISTING STRUCTURES			
1.0	1.00	Marking out the center line of the Bridge and various other component structures and complete lining out and leveling with theodolite/total station/DGPS, level, including constructing necessary masonry pillars for lines and levels and establishing necessary bench marks etc. complete as directed and maintained it till completion of superstructure and final submission of As Build Drawing.	L.S.	42372.88	42372.88
1.1		Felling trees of the girth (measured at a height of 1 m above ground (level), Including cutting of trunks and branches, removing the roots and stumps and stacking of serviceable material and disposal of unserviceable material at dumping yard directed by the Authority of RMC. Beyond 30cm girth	Nos.		
	20.00	i)Beyond 300mm to 600mm girth at 1.2m height	Nos.	489.83	9796.60
	10.00	ii)Beyond 600mm to 900mm girth at 1.2m height	Nos.	653.38	6533.80
	10.00	i)Beyond 900mm to 1800mm girth at 1.2m height	Nos.	783.89	7838.90
	10.00	i)Beyond 1800mm girth at 1.2m height	Nos.	979.66	9796.60
1.2		Dismantling of existing structures like pavements, walls, retaining walls, culverts, bridges, slab,piers, approach slabs by mechanical means including all shifting unusable material to dumping site with all leads,lifts,transportation,loading/unloading to nominated dumping site including weighment of dumper as a complete job.			
1.2(a)	835.00	RCC of All type of concrete Grade	cum	410.00	342350.00
1.2(b)	8086.00	Dismantling bricks, rubble masonry/stone masonry , paver block, tiles workby mechanical means and including all loading/unloading and transportation,weighment of dumper and dumping to nominated dumping site with all leads and lift.	cum	183.05	1480142.30
1.2(c)	45140.00	Excavation of soil by mechanical means including loading in the truck and carrying out of earth with all leads and lift to dumping site(Extra payable) as directed by Engineer in charge of RMC and reuse the same earth in filling of trenches/ foundation as per requirement.	cum	133.00	6003620.00

1.2(d)	1440.00	Dismantling the Guard rail by manual means and stack the same material in proper way for reuse the same Railing at the proposed location including with all leads, lifts, rental, storage , suprvision, security charges, weighthment etc. as a complete job	Rmt	46.00	66240.00
1.2(e)	4680.00	Providing and installation of barricading with retro- reflective paint / film / tapes as specified in the drawing @ 3m high with 50x50x6mm angle , 450mm deep M15 concrete embedment , with vertical angle at 3m c / c spacing , marking Mandatory and information details , Speed limit , Work in Progress etc.along the construction site the construction of bridge , along with necessary diversion arrangement for existing traffic movement in an unobstructed condition , all relevant markings , sign boards and illumination as per relevant MORT & H specification . Rate to be inclusive of all materials , fabrication works , paint works , foundation works , transportation , loading , unloading , installation , removing & relocating and inclusive of all taxes and including the same design for providing openable gates include all safety features . No jextra rental will be given to the contractor in case of any delays from his part for construction or due to any valid time limit extensions . Each barricading sheet is to be numbered with a unique number . The contractor may reuse the same sheet for barricading else where with in the project boundaries , however in such case , he will not been titled for separate rent for reuse . After the completion of project , the owner ship of barricading will remain with the contractor . Blinkers are to be installed on the barricading at critical locations . Barricading is to be cleaned by means of washing with water on a weekly basis or a sand when required as per the instructions of Engineer in charge .	sqm	402.54	1883887.20

1.2(f)	920.00	Excavation for laying. R.C.C. Hume pipe for cable to be laid 90 cms. below ground across the road crossing or on floor with necessary material in an approved manner and making the ground as per original.Surplus earth must be dumped in dumping area in inclusive in the rate.	Rmt	67.79	62366.80
1.2(g)	30.00	Extra rate for constructing B.B. masonry for every additional depth of 0.1M. or Part thereof over R & B 24008D item No.24.27 (I) for depth from 0.9M to 1.5M.	Each	393.30	11799.00
1.2(h)	15.00	R.C.C. slab M 35 as per size and dimention with all shuttering, centering, labour, cosumable including placement of cover frame,etc as complete job.	Cum	6020.00	90300.00
1.2(i)	15.00	RCC precast frame with supply, fitting, fixing with complete as per specification 10 Ton size 1000/700/90 mm.(with beam)	Nos.	1870.00	28050.00
1.2(j)	15.00	RCC precast frame with jali supply, fitting, fixing with complete as per specification 10 Ton size 550/550/90 mm.	Nos.	1023.00	15345.00
1.2(k)	3.00	Supply, fitting, cutting,and placing TMT FE-500D and above bar reinforcement in all type of structure(All leads and lifts) complete as per drawing, technical specification with all tools, cutting, bending, lifting, binding, fixing with wires as a complete job.	MT	65000.00	195000.00
1.2(l)	3.00	Drainage manhole should be done according to design given with ratio are at the bottom it should be CC1:3:6 with brick masonry 1:4 , plaster 1:3,coping 1:1:2 and also benching around it with 1:2:4 should be done with inishing, curing, manhole frame cover and also with PVC step,(excluding excavation or supply of frame cover) Type-A Round: upto 1.5m depth inside diameter-1200(for drainage line from 150mm to 500mm dia),additional depth upto 1.01 to 1.50m	No.	7461.00	22383.00
1.2(m)	3.00	Drainage manhole should be done according to design given with ratio are at the bottom it should be CC1:3:6 with brick masonry 1:4 , plaster 1:3,coping 1:1:2 and also benching around it with 1:2:4 should be done with inishing, curing, manhole frame cover and also with PVC step,(excluding excavation or supply of frame cover) Type-B Round: for 1.5m to 4.00m depth inside diameter-1500(for drainage line from 150mm to 600mm dia), 1.501m to 4.00m	No.	16003.00	48009.00
1.2(n)	46988.00	Shifting, cleaning,removal of surplus excavated earth from construction site to nominated dumping site including with all leads, lift, loading, unloading, weighment of dumpers, supervision, manpower as per direction of Engineers in	Cum	171.00	8034948.00
SUB TOTAL OF PART-1					18360779.08

PART-2		FOUNDATION			
2.1	4575.00	Excavation for foundation by mechanical means in sand, gravel, clay soft soils and murrum etc. including shoring, strutting dewatering as necessary and disposing of the excavated stuff as directed. and transported/duming within RMC area including dewatering as a complete job .	Cum	133.00	608475.00
		a) 0 to 1.5m			
2.2		Excavation by mechanical means in large boulders and soft rock by wedging including shoring, strutting and dewatering as necessary and disposing of the excavated stuff within RMC area as directed by Engineer in Charge including dewatering as a complete job.			
2.2(a)	4575.00	a) 1.51m to 3.0 m	Cum	343.00	1569225.00
2.2(b)	1525.00	b) 3m to 4.5 m	Cum	420.00	640500.00
2.3		Excavation in hard rock by mechanically chiselling, hammering including dewatering preparing foundation base by proper benching and stepping and disposing of the excavated stuff within RMC area as directed.(B) prohibited Blasting. work.Unsuitable matrial shall be dumped out side city area as directed including dewatering as a complete job..			
	3050.00	a) 3.01 to 4.5 m or upto foundation level	Cum	753.00	2296650.00
2.4	3447.00	Plain/reinforced cement concrete in sub-structure complete as per drawing and technical specifications PCC grade M15(1:2:4) upto any level.	Cum	5535.00	19079145.00
2.5	4330.00	Plain/reinforced cement concrete in open foundation complete as per drawing and technical specifications , shuttering work, RCC grade M35 (using batching plant, transite mixer and concrete pump)	Cum	6020.00	26066600.00
2.6	650.00	Supply, fitting, cutting,and placing TMT FE-500D and above bar reinforcement in all type of structure(All leads and lifts) complete as per drawing, technical specification with all tools, cutting, bending, lifting, binding, fixing with wires as a complete job.	MT	65000.00	42250000.00
2.7	2986.00	Providing and fixing mild steel dowel bars of minimum 32mm dia. for anchoring by drilling holes in foundation strata including necessary bending, hooking of dowel bars and grouting the holes complete as per detailed drawing and as directed.	Rmt	376.64	1124647.04
2.8	5642.00	Filling of Plinth, foundation back filling with using excavated usefull material partly and remaining murrum to be brought from out side in layer of 0.23 m thick including murrum and sprinkling of water,rolling and compaction to achieve MDD etc.as a complete job	Cum	116.40	656728.80
SUB TOTAL OF PART-2					94291970.84

PART - 3		SUB STRUCTURE- Piers, Abutments and Bearings			
3.1	1684.00	Furnishing and placing reinforced concrete in super -structure as per technical specification , RCC grade M35. for all lead and lifts (RCC work in foundation, slab, approach slab, pier, pier cap, abutment, dirt wall, bearing and seismic block including all shuttering, scaffolding, laying , vibrating, curing,and finishing as a complete job)	Cum	6020.00	10137680.00
3.2	161.00	Furnishing and placing reinforced cement concrete (M-40) for construction of bearing pedestal in as per drawing and technical specification.RCC grade M-40 (upto all lead and lift)	Cum	6135.59	987829.99
3.3	423.00	Providing and fixing in position Fe-500D TMT and above for RCC pier cap, seismic arrester, pedestal & super structure as per detailed drawing, including cutting, bending, hooking, tying , wiring and welding with all leads and lifts as complete job and including forming the cage and lowering it in position as per drawing.	MT	65000.00	27495000.00
SUB TOTAL OF PART-3					38620509.99

PART - 4		SUPER STRUCTURE			
4.1	1852.00	Providing and casting in situ or precast controlled Cement Concrete M-45 for Prestressed concrete work in Super structure including centering, shuttering, curing, scaffolding, ramming, vibrating, finishing, launching or shifting complete at location in true level and line for RCC slab . Note: The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transport, curing, vibrating, placing in position, scaffolding, staging, shuttering, formworks, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary, with all lead and lift with contractor's labour, tools & plants, machineries, as required, with F3 type exposed concrete finish and form mark. Any honeycombing / Undulation found shall be rectify to match F3 class finish.	Cu.m	6212.71	11505938.92
4.2	2959.00	Providing and casting in situ or precast controlled Cement Concrete M-45 for Prestressed concrete work in Super structure including centering, shuttering, curing, scaffolding, ramming, vibrating, finishing, launching or shifting complete. (I) Main Girders. (II) Diaphragm or Cross Girder. Note: The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transport, curing, vibrating, placing in position, scaffolding, staging, shuttering, formworks, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary, with all lead and lift with contractor's labour, tools & plants, machineries, as required, with F3 type exposed concrete finish and form mark. Any honeycombing / Undulation found shall be rectify to match F3 class finish.	Cum	6212.71	18383408.89
4.3	125.00	Providing and fixing in position to exact profile as specified nominal dia. High Tensile Prestressing steel strands conforming to low Relaxation Prestressings steel strands-CI. II as per IS 14268 of specified ultimate strength for specified capacity of cables including cutting, cleaning, forming cables etc . and further including providing and laying corrugated HDPE sheathing of specified dia., anchorages, stage wise stressing, grouting with neat cement grout of approved & specified Quality, testing of materials and all enabling work for pretensioning/posttensioning of steel including all leads and lifts etc. complete as per specification and drawing and as directed by Engineer. Note:- Weight will be calculated considering length of strands between faces of Anchorages plus grip length multiplied by unit weight of strand. Dummy cable as required will be measured under this item.	M.T.	114027.34	14253417.50
4.4	6649.72	Loading/unloading of Precast-PSC girders with own cranes of required certified capacity, shifting, transportation from casting yard, launching and placement in position level and line temporary with wooden battens and final placement including manpower with Elastomeric bearing(Paid separately) as a complete job including removal of defects in surface as per direction of Engineer in charge)	MT	1297.16	8625750.80

4.5	1348.00	Supply, fitting, cutting, and placing TMT FE-500D and above bar reinforcement in super structure with all leads and lifts as complete as per drawing, technical specification with all tools, cutting, bending, lifting, binding, fixing with wires as a complete job.	MT	65000.00	87620000.00
4.6	1200.00	Providing and fixing 65 mm dia GI pipe hand rail over the anti crash barrier consisting of MS base plate, embedded fastener and nuts, MS vertical plates and pipes etc, as shown in the drawings, size and dimension (excluding cost of concrete and reinforcement), shuttering as per specifications and painting the same with 3 or more coats of paints. All the railing components as mentioned above to be hot dip galvanised with a zinc coating of at least 175 gm/sqm. Item to include all incidental works required to complete the work as directed by the Engineer-in-charge.	Rmt	768.30	921960.00
4.7	328.00	Providing and laying of a strip seal expansion joint catering to maximum horizontal movement upto 70mm, complete as per approved drawings and standard specifications to be installed by the manufacturer / supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation.	Rmt	6379.90	2092607.20
4.8	5292000.00	Supplying, fitting and fixing in position true to line and level Elastomeric bearing conforming to IRC-83(Part-II) section IX and clauses 2005 of MORTH specifications complete including all accessories as per drawing and technical specifications including lifting, placement as a complete job	Cu.cm	1.03	5450760.00
4.9	378000.00	Supplying and fixing of Elastomeric pad gluid with epoxy etc. complete as directed by engineer In-charge(As per approved design and drawing)	Cu.cm	0.63	238140.00
4.10	68.00	Providing and casting in situ controlled cement concrete M-15 for approach slab including formwork curing and finishing complete.	Cum	5534.74	376362.32
4.11	136.00	Providing and casting in situ controlled cement concrete M-40 for approach slab including form work curing and finishing complete and casting of anti Friction block in RE wall	Cum	6212.71	844928.56
4.12	6852.00	Providing and laying 25mm thick mastic asphalt wearing course with paving grade bitumen VG-40 meeting the requirements given in table 500-39, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated fine-grained hard stone chipping of 13.2 mm nominal size at the rate of 0.005 cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 1000C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 516.	sqm	735.00	5036220.00

4.13	132.00	Providing GI 100 mm diameter water spouts including necessary iron gratings as per drawings.	Nos.	445.80	58845.60
4.14	1271.00	Providing and fixing PVC pipe 150 mm dia Heavy duty with Galvanised M.S. clamps at 1.5m c/c to keep in position with all staging, drilling in Down take pipe as a complete job.	Rmt	314.83	400148.93
4.15	605.00	Road marking with hot applied thermoplastic paints with reflectorising glass beads on bitumin surface providing and laying a hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250gms per sqm area, thickness of 2.5mm is excluding of surface applied glass beds as per IRC:35-2015. The finished surface to be level, uniform and free from streaks and holes. zebra patta /bump patta lane/center line/ edge line/cut patta. The white color marking should provide liminance coefficinet on cemend road shall be min 130 mcd/m2/lux and Asphalt road shall be min 100 mcd/m2/lux during the service life during the day time. The marking should meet the performance criteria for night time reflectivity, wet reflectivity and skid resistance as mentioned in the section-15 of IRC 35-2015. Warranty for the Retro reflectivity should be two years.	sqm	422.00	255310.00
4.16	25554.00	Providing and applying coats 100% Acrylic breathable, Anti-carbonation, Waterproof, Heat insulating, Decorative external coating of Approved Brand or equivalent of approved shade. Mix 1 litre of with 1 L of water and use as priming coat on the surface. Mix 1 l with 400-500 ml water, stir well and apply by brush for subsequent to coats. Acrylic paint shall be spray/brush/roller applied as per approved shede and color as per approved methodology and manufactural manual.	sqm	166.44	4253207.76
4.17	2000.00	Carrying out load test of super structure as directed including all necessary materials plant equipement, instruments, labour and arrangements for test directed.	MT	166.85	333700.00
4.18	162.00	Providing and casting in situ controlled cement concrete M-40 for crash barrier as per approved drawing including form work curing and finishing complete .	Cum	6135.58	993963.96
SUB TOTAL OF PART-4					161644670.44

PART - 5		R.C.C. CONCRETE SOLID FILL WALL PORTION			
5.1	2265.00	Excavation for foundation in sand, gravel, clay soft soils and murrum etc. including shoring, strutting dewatering as necessary and disposing of the excavated stuff as directed.by Engineere out of City area. A) 0 to 1.5 m	Cum	133.00	301245.00
5.2	2265.00	Excavation in large boulders and soft rock by wedging including shoring, strutting and dewatering as necessary and disposing of the excavated stuff within RMC area as directed by Engineer including dewatering as a complete job. A) 0.0 to 1.5 m	cum	299.00	677235.00
5.3	755.00	Excavation in hard rock by mechanically chiselling, hammering including dewatering preparing foundation base by proper benching and stepping and disposing of the excavated stuff within RMC area as directed.(B) prohibited Blasting. work.Unsuitable matrial shall be dumped out side city area as directed including dewatering as a complete job.. Depth 4.5 to 6m	cum	725.00	547375.00
5.4	5175.00	Filling of Plinth with using excavated usefull material partly and remaining murrum to be brought from out side in layer of 0.23 m thick incliding murrum and sprinkling of water ,compaction upto 98% density as a complete job with MDD test report for each layer etc.	Cum	116.40	602370.00
5.5	302.00	Providing and filling in foundation with ordinary Cement concrete M-15 mix and providing necessary vertical pin headers including formwork, vibrating, ramming and curing complete.	Cum	5534.74	1671491.48
5.6	3574.00	Plain/reinforced cement concrete in open foundation and sub structure complete as per drawing and technical specifications RCC grade M35 (using batching plant, transite mixer and concrete pump)	Cum	6019.49	21513657.26
5.7	894.00	Supply, fitting, cutting,and placing TMT FE-500D and above bar reinforcement in super structure with all leads and lifts as complete as per drawing, technical specification with all tools, cutting, bending, lifting, binding, fixing with wires as a complete job.	MT	65000.00	58110000.00
5.8	692.00	Plant mix method Construction of granular sub-base by providing close graded material, mixing in mechanical mix plant at OMC, carriage of mixed material to work site spereading in uniform layers with motor grader on prepared surface and compacting with vibratory roller to achieve the desired density, complete as per clause 401.Grade -I material	Cum	1215.00	840780.00

5.9	692.00	Wet Mix Plant (Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density as per clause 406 of MoRT&H specification.)	Cum	1008.00	697536.00
5.10	2765.00	Prime Coat (Providing and applying primer coat with bitumen emulsion on prepared surface of granular base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means.)	sqm	58.00	160370.00
5.11	856.00	Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonne per hour using crushed aggregates of specified grading, premixed with bituminous binder VG-40 grade @4 percent by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause 505 complete in all respect (MoRT&H 5.6)	MT	3190.00	2730640.00
5.12	2765.00	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom	sqm	10.00	27650.00
5.13	929.00	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder VG-40 @ 5.5 per cent of mix and filler, transporting the hot mix to work site laying with a hydrostatic paver finisher with sensor MoRT&H control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause no. 507 complete in all respect (MoRT&H no. 5.8)	MT	4023.00	3737367.00
5.14	170.00	Road marking with hot applied thermoplastic compound with reflectorising glass bead on bituminous surface (Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising 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.)	sqm	422.00	71740.00
5.15	2.00	Providing and fixing granite stone as per approved size and dimension with required carving and fixing with cement as specified location as a complete job as per direction of Engineer in charge. (Both ends of bridge)	sqm	12760.00	25520.00
SUB TOTAL OF PART-5					91714976.74

PART - 6		SERVICE ROAD/SLIP ROAD AND UNDER BRIDGE PARKING			
6.1	16528.00	Excavation for foundation by mechanical means in sand, gravel, clay soft soils and murrum etc. including shoring, strutting dewatering as necessary and disposing of the excavated stuff as directed.(A) Depth upto 1.5 M. and dump the excavated material out side the area marked by Authority of RMC.	Cum	133.00	2198224.00
6.2	3935.00	Plant Mix Method (Construction of granular sub-base by providing close graded material, mixing in a mechanical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory roller to achieve the desired density, complete as per clause 401.for grading-I material	Cum	1215.00	4781025.00
6.3	3935.00	Wet Mix Macadam with batching plant (Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed material by tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density.)	Cum	1008.00	3966480.00
6.4	7232.00	Providing and applying primer coat with bitumen emulsion on prepared surface of granular base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means as per clause 502 of MoRT&H specification.	Sqm	58.00	419456.00
6.5	2485.00	Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonne per hour using crushed aggregates of specified grade, premixed with bituminous binder VG-40 grade @4 percent by weight of total mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MoRT&H specification clause 505 complete in all respect (MoRT&H 5.6)	MT	3190.00	7927150.00

6.6	7232.00	Providing and applying tack coat with bitumen VG-10 using Bitumen pressure distributor at the rate of 0.25 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom as per clause 503 of MoRT&h specification.	Sqm	28.00	202496.00
6.7	637.00	Providing and laying bituminous concrete with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder VG-40 @ 5.5 per cent of mix and filler, transporting the hot mix to work site laying with a hydrostatic pver finisher with sensor MoRT&H control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause no. 507 complete in all respect (MoRT&H no. 5.8)	MT	4023.00	2562651.00
6.8	3056.00	Supply and fixing of Kerb stone of Grade M-25 of size 330x250x180 with Excavation to required size, laying PCC 75mm thick, 300mm wide and jointing with Cement mortar of 1:6 with all labour, tools, equipment -true level and alignment .	Rmt	424.00	1295744.00
6.9	1444.00	Supply and painting on Kerb stone-Black and white alternate with Enamel paint of approved brand -Two coat with prime coat	Sqm	136.00	196384.00
6.10	8217.00	Supply and fixing of paver block of 80mm M-30 grade of cement concrete rubber mould paving inter locking (Approved colour/shade) as per ISI marke after bedding of crusher dust/sand and confined the edges with CC of 1:2:4 as a complete job with true line and level.	Sqm	581.00	4774077.00
6.11	8.00	Facility Informatory Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminum composite Panel); size 80 x 60 cms. rectangular as per design of IRC-67-2012. Pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with High Intensity Prismatic Grade retro reflectivesheeting of Type-4 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.6mtr long stand post of Iron Angle 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with bestquality epoxy coatings in black and white bends. The details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC blockof size 45 x 45 x 60 Cms. for each leg including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 7 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (B) Class-B Type-4 Retro Reflective sheeting.	Each	7521.00	60168.00

6.12	8.00	Cautionary Warning Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminum composite Panel); size 90 x 90 x 90 cms. equilateral triangle as per design of IRC-67-2012. Pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with High Intensity Prismatic Grade retro reflectivesheeting of Type-4 as per ASTM D- 4956 and latest M.O.S.T.Specifications; 3.6mtr long stand post of Iron Angle 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with bestquality epoxy coatings in black and white bends. The details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC blockof size 45 x 45 x 60 Cms. for each leg including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 7 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (B) Class-B Type-4 Retro Reflective sheeting.	Each	7521.00	60168.00
6.13	2.00	Gantry mounted variable message sign board(Providing & erecting gantry mounted sign board fixing Gantry over a designed support system, galvanised as per standard design, drawing with lateral clearance including foundation, display board, electrical connection, earthing with 5 years defect liability period as a complete job.	Each	530672.03	1061344.06
6.14	600.00	Supplying and Fixing Cat Eye (Stimsonite) made out from Acrilo beaultile sterine injuction high compressed molding with reflector made of MMC (Prismetic type of size 12cm*6cm*2.5cm) Provided with Bituminous adhesive 100.0 g with each unit for fixing. (High Intensity Grade)	Each	274.00	164400.00

6.15	4.00	Village name Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminum composite Panel); size 90x60 cms. rectangular as per design of IRC-67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with High Intensity Prismatic Grade retro reflectivesheeting of Type-4 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.3mtr long stand post of Iron Angle 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with bestquality epoxy coatings in black and white bends. the details of symbol or inscription / numerals for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC blockof size 45 x 45 x 60 Cms. for each leg including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 7 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (B) Class-B Type-4 Retro Reflective sheeting.	Each	7897.00	31588.00
6.16	2.00	Railway crossing sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminum composite Panel); size 90 x 90 x 90 cms. equilateral triangle plus 90x30cm additional plate as per design of IRC 67-2012. Pre treated with phosphating process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint ; reflectorised with High Intensity Prismatic Grade retro reflectivesheeting of Type-4 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.6mtr long stand post of Iron Angle 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with bestquality epoxy coatings in black and white bends. The details of symbol for each board shall be as per the instruction of engineer in charge. The fixing at site shall be in 1:2:4 CC blockof size 45 x 45 x 60 Cms. for each leg including excavation, curing etc.complete under the supervision of engineer in charge. A warranty for 7 years for the Retro reflective sheeting from original manufacturer & a certified copy of 3 year outdoor exposure test report from third party test lab for the product offered shall be submitted by contractor. (B) Class-B Type-4 Retro Reflective sheeting.	Each	10189.00	20378.00
6.17	6.00	Speed Breaker Boards 0.60 x 0.60 m and another lower bard 0.60 x 0.30 m in MS Black Sheet with 75x75x5 mm angle frame with 3 mtr high new pole pasted in earth hole of size 30x30 60 cm and filling it with CC 1:3:6 with required painting in 0.60x0.60 size with oil paint etc. complete.	Each	2639.00	15834.00
SUB TOTAL OF PART-6					29737567.06

PART -7		DRAINAGE WORK (BOX CULVERT)			
7.1	3166.00	Excavation for foundation by mechanical means in sand, gravel, clay soft soils and murrum etc. including shoring, strutting dewatering as necessary and disposing of the excavated stuff as directed. and transported/duming within RMC area including dewatering as a complete job . 0 to 1.5m	Cum	133.00	421078.00
7.2	3209.00	Excavation of foundtion in hard morrum from 1.51m to 3.0m depth including deatering,probing, loading in dumpers and dumping at the nominated dumping area directed by Engineer Incharge as a complete work.	Cum	159.00	510231.00
7.3	442.00	Plain/reinforced cement concrete in sub-structure complete as per drawing and technical specifications PCC grade M15	Cum	5534.74	2446355.08
7.4	1705.00	Plain/reinforced cement concrete in open foundation complete as per drawing and technical specifications RCC grade M35 (using batching plant, transite mixer and concrete pump)	Cum	6020.00	10264100.00
7.5	239.00	Supply, fitting, cutting,and placing TMT FE-500D and above bar with all leads and lifts reinforcement in structure complete as per drawing, technical specification with all tools, cutting, bending, lifting, binding, fixing with wires as a complete job.	MT	65000.00	15535000.00
7.6	800.00	Supply, excavation and placement of 900 mm Dia. RCC Spun NP-3 PIPE (Socket Spigot with Rubber Ring) including backfilling, compaction-ISI marked including lowering, alignment, jointing, testing as a complete job as per direction of Engineers incharge.	Rmt	5560.00	4448000.00
7.7	500.00	Supply,excavation and placement of 1200 mm Dia. RCC Spun NP-3 PIPE (Socket Spigot with Rubber Ring) with backfilling, compaction -ISI marked including lowering, alignment, jointing, testing as a complete job as per direction of Engineers incharge.	Rmt	8915.00	4457500.00
7.8	83.00	Providing and fixing 150dia pvc pipe of required length-Heavy Duty for surface water outlet with steel grating , RCC chamber of 100mm thick wall and bottum of M25 grade concrete, PCC-100mm -M15 and with steel frame of angle 75x75x6 and ms bar 30 mm dia at 50mm C/C - 300mm x 300mmx450mm size (inside) including cost of reinforcement and plaster inside with 1:6 add water proofing compound , 100mm PCC -M15 including excavation, back filling,compaction as a complete job.Steel cover at top of chamber with proper 200mm long 10mm dia welded hook at 100mm c/c as per approved drawing.	Each	2270.33	188437.39

7.9	83.00	Construction of RCC chamber for surface drainage collection chamber @20m c/c between RCC drainage pipe of size 1.20m x1.2m inside to 1.75x1.75m with variable depth as per slope, wall thickness 150mm and bottom foundation 150mm with concrete grade M25and 100mm PCC M15, including reinforcement material,RCC slab as per approved drawing,shuttering, cut out for pipe, inside complete plaster 12mm thick with 1:6 -add water proofing compound including silt collection chamber and provide manhole cover as approved by RMC as a complete job.RCC pipe IN/OUT must be minimum 300 above the bottom most part of chamber foundation.	Each	27186.98	2256519.34
7.10	80.00	900 mm Dia. RCC Spun NP-3 PIPE (Socket Spigot with Rubber Ring) with ISI marked	Rmt	5560.00	444800.00
7.11	4.00	Drainage manhole should be done according to design given with ratio are at the bottom it should be CC1:3:6 with brick masonry 1:4 , plaster 1:3,coping 1:1:2 and also benching around it with 1:2:4 should be done with inishing, curing, manhole frame cover and also with PVC step,(excluding excavation or supply of frame cover) Type-A Round: upto 1.5m depth inside diameter-1200(for drainage line from 150mm to 500mm dia),additional depth upto 1.01 to 1.50m	Each	7461.00	29844.00
7.12	4.00	Drainage manhole should be done according to design given with ratio are at the bottom it should be CC1:3:6 with brick masonry 1:4 , plaster 1:3,coping 1:1:2 and also benching around it with 1:2:4 should be done with inishing, curing, manhole frame cover and also with PVC step,(excluding excavation or supply of frame cover) Type-B Round: for 1.5m to 4.00m depth inside diameter-1500(for drainage line from 150mm to 600mm dia), 1.501m to 4.00m	Each	12227.00	48908.00
SUB TOTAL OF PART-7					41050772.81
GRAND TOTAL					475421246.96

ESTIMATE OF RAILWAY PORTION

Sr. no.	Quantities	DESCRIPTION OF ITEMS	Unit	Gross Rate	Amount in Rs.
PART - 8		CLEANING AND GARBING , DISMANTLING OF EXISTING STRUCTURES			
8.1	1.00	Marking out the center line of the Bridge and various other component structures and complete lining out and leveling with theodolite, levels, including constructing necessary masonry pillars for lines and levels and establishing necessary bench marks etc. complete as directed and maintained it till completion of superstructure.	L.S.	12711.86	12712
8.2		Dismantling of structures(Dismantling of existing structures like pavements,walls,retaining walls, culverts,bridges including T & P and scaffolding wherever necessary, sorting the same dismantled material, disposal of unservicable material and stacking the servicable material with all leads upto 1000m , lifts as a complete job.			
8.2(a)	2953.00	RCC of All Grade	cum	483.80	1428661
8.2(b)	1125.00	B) Dismantling stone masonry, brick masonry in cement mortar	cum	183.05	205931
8.3	6720.00	Excavation of Foundation in Soft Murrum, Soil or Sand from 0.0 mtr. to 1.50 mtr depth including dewatering with lifting and laying in RMC limit as instructed	cum	133.00	893760
8.4	80.00	Dismantling the Guard rail by manual means and stack the same material in proper way for reuse the same Railing at the proposed location with all leads, lifts, rental, storage , supervision, security charges as a complete job	Rmt	46.00	3680
8.5		Provision of barricading with contractor's bamboos /ballies vertical post of 100mm dia. planted at every 2m interval, projecting at least 1.5m above ground level and driven firmly (minimum 0.5m) inside ground and including painting verticals & horizontal with red luminous paints / strips at alternative bay on barricade. Barricades shall be maintained through out the execution of the work and shall be removed in workman like manner on completion of the work only after instruction of Engineer in-Charge. Note: (1) 60% payment shall be made on provision of barricading at work-site and balance 40% payment after removal of barricades. (2) The released bamboos / ballies shall be the property of the Contractor.			
8.5(a)	200.00	With 3 horizontal bamboo / balli members of minimum 50mm dia. spaced equally	Rmt	376.92	75384
8.5(b)	200.00	Joining with strong nylon rope in one cross and one horizontal pattern of minimum 5mm dia.	Rmt	96.39	19278
SUB TOTAL OF PART-8					2639407

Sr. no.	Quantities	DESCRIPTION OF ITEMS	Unit	Gross Rate	Amount in Rs.
PART-9		FOUNDATION			
9.1		Excavation for foundation by mechanical means in sand, gravel, clay soft soils and murrum etc. including shoring, strutting dewatering as necessary and disposing of the excavated stuff as directed. and transported/duming within RMC area including dewatering as a complete job .			
9.1(a)	542.00	a) 0 to 1.5m	Cum	133.00	72086
9.2(b)	181.00	b) 1.5m to 3.0 m	Cum	144.00	26064
9.2		Excavation in large boulders and soft rock by wedging including shoring, strutting and dewatering as necessary and disposing of the excavated stuff within RMC area as directed by Engineer in Charge including dewatering as a complete job.			
9.2(a)	362.00	a) 1.5m to 3.0 m	Cum	343.00	124166
9.2(b)	542.00	b) 3m to 4.5 m	Cum	420.00	227640
9.3		Excavation in hard rock by mechanically chiselling, hammering including dewatering preparing foundation base by proper benching and stepping and disposing of the excavated stuff upto 2 to 6 m depth within RMC area as directed.(B) prohibited Blasting. work.Unsuitable matrial shall be dumped out side city area as directed including dewatering as a complete job..			
9.3(a)	190.00	a) 3.01 to 4.5 m	Cum	753.00	143070
9.3(b)	190.00	b) 4.5 to 6.0 m	Cum	840.00	159600
9.4	73.00	Plain/reinforced cement concrete in sub-structure complete as per drawing and technical specifications PCC grade M20 for Railway portion only	Cum	5500.00	401500
9.5	518.00	Plain/reinforced cement concrete in open foundation complete as per drawing and technical specifications RCC grade M35 (using batching plant, transite mixer and concrete pump)	Cum	6020.00	3118360
9.6	78.00	Supply,fitting, placing TMT-500D and above bar reinforcement in sturcture with all leads and lifts as complete as per drawing and technical specifications with all material, consumables, cutting, bending, tying, lowering, line and level as a complete job.	MT	65000.00	5070000

Sr. no.	Quantities	DESCRIPTION OF ITEMS	Unit	Gross Rate	Amount in Rs.
9.7	940.00	Filling of Plinth, foundation back filling with using excavated usefull material partly and remaining murrum to be brought from out side in layer of 0.23 m thick including all leads and lifts,level and sprinkling of water,rolling and compaction to achieve MDD etc.as a complete job	Cum	185.00	173900
SUB TOTAL OF PART-9					9516386

Sr. no.	Quantities	DESCRIPTION OF ITEMS	Unit	Gross Rate	Amount in Rs.
PART -10		SUB STRUCTURE- Piers, Abutments and Bearings			
10.1	150.00	Furnishing and placing reinforced concrete in super -structure as per technical specification , RCC grade M35. Upto 5 to 10m height. (RCC work in foundation, slab, approach slab, pier, pier cap, abutment, dirt wall, bearing and seismic block including all shuttering, scaffolding, laying , vibrating, curing,and finishing as a complete job)	Cum	6020.00	903000
10.2	18.00	Furnishing and placing reinforced cement concrete (M-40) for construction of bearing pedestal in as per drawing and technical specification.RCC grade M-40 (height upto 10m)	Cum	6135.59	110440.62
10.3	23.00	Providing and fixing in position Fe-500D (T.M.T) and above for RCC structure with all leads and lifts in pier cap, seismic arrester, pedestal & super structure as per detailed drawing, including cutting, bending, hooking, tying , wiring and welding complete and including forming the cage and lowering it in position as per drawing.	MT	65000.00	1495000.00
SUB TOTAL OF PART-10					2508441

Sr. no.	Quantities	DESCRIPTION OF ITEMS	Unit	Gross Rate	Amount in Rs.
PART - 11		SUPER STRUCTURE			
11.1	240.00	<p>Providing and casting in situ or precast controlled Cement Concrete M-45 for Prestressed concrete work in Super structure , RCC slab including centering, shuttering, curing, scaffolding, ramming, vibrating, finishing, launching or shifting complete.</p> <p>Note: The rate is inclusive of all materials, including necessary mixing in fully automatic batch mix plant, transport, curing, vibrating, placing in position, scaffolding, staging, shuttering, formworks, deshuttering carefully, making good the damages, fixing embedment, inserts, pockets, wherever necessary, with all lead and lift with contractor's labour, tools & plants, machineries, as required, with F3 type exposed concrete finish and form mark. Any honeycombing / Undulation found shall be rectify to match F3 class finish.</p>	Cu.m	6212.71	1491050.40
11.2	37.00	Supply, fitting, cutting, and placing TMT FE-500D and above bar reinforcement in super structure complete as per drawing, technical specification with all tools, cutting, bending, lifting, binding, fixing with wires as a complete job.	MT	65000.00	2405000
11.3	225.00	<p>Providing, fabrication, trial assembly, assembly, transportation, launching in position on piers as per drawing-duly applied protective coating on all parts of structural steel of bridge structure complete with contractor own steel (IS-2062-B Grade) all materials, labour, machineries, tools & tackles, consumables, energy/power, all leads and lifts, labour etc. complete in all respect as per approved drawing, specifications, relevant codes, RDSO guidelines. Fabrications, erection, stiffeners, packing, diaphragm, T & F bolts, HSFG bolts, DTI washers, steel drifts, shop welds, filed rivets/bolts, templates, jigs, fixtures, back supports, accessories, preparation of workshop drawings, fabrication drawings, fabrication of steel girder, erection, launching in position, launching methodology submission, approval, metalizing as per latest RSDO guidelines, surface preparation by compressed air/balasting with suitable abrasive (Clause-39.2.1 of RDSO, B1) metalizing shall be followed by one coat of Etch primer to IS-5666 and one coat of zinc primer-IS-104. This shall be followed by Two coat of Aluminium paint-IS-2339, one coat applied before fabrication steel work leave the workshop. After steel work is erected at site, positioned to true level, alignment, 2nd coat shall be applied after touching up the primer and finishing coat if damaged in transshipment. The painting, metalizing is brief outline but these shall be guided by all provision of RDSO along with relevant appendices and other codes. (Payment against the Bank Guarantee upto 65% (Sixty five in Two Stage) i.e. 25% on Material unloaded in the RDSO approved work shop with submission of Original bill/MTR and 40% after joint inspection of fabricated structure elements. Rest of payment after erection, alignment, bearing placement, repairing work and final inspection.</p>	M.T.	136550.00	30723750

Sr. no.	Quantities	DESCRIPTION OF ITEMS	Unit	Gross Rate	Amount in Rs.
11.4	74.00	Providing and fixing 65 mm dia GI pipe hand rail over the anti crash barrier consisting of MS base plate, embedded fastener and nuts, MS vertical plates and pipes etc, as shown in the drawings , size and dimension (excluding cost of concrete and reinforcement), shuttering as per specifications and painting the same with 3 or more coats of paints. All the railling components as mentioned above to be hot dip galvanised with a zinc coating of at least 175 gm/sqm. Item to include all incidental works required to complete the work as directed by the Engineer-in-charge.	Rmt	768.30	56854
11.5	33.00	Providing and laying of a strip seal expansion joint catering to maximum horizontal movement upto 70mm, complete as per approved drawings and standard specifications to be installed by the manufacturer / supplier or their authorised representative ensuring compliance to the manufacturer's instructions for installation.	Rmt	6379.91	210537
11.6	14.00	Supplying, fitting and fixing in position true to line and level POT-PTFE bearing (as per approved design and drawing and approval third party- Longitudinal slide, transverse slide, free bearing, fixed bearing)consisting of a metal piston supported by a disc or unreinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless stell mating surface, complete assembly to be of cast steel/fabricated structural steel, metal and elastomer elements to be as per IRC:83 parts I&II respectively and other parts conforming to BS:5400, as a complete job with transportation, testing, erection, placeent as per sections 9.1 & 9.2 and clause 2006 of MoRT&H specifications complete as per drawing and approved technical specification.	Each	61900.00	866600
11.7	586.00	Providing and laying 25mm thick mastic asphalt wearing course with paving grade bitumen VG-40 meeting the requirements given in table 500-39, prepared by using mastic cooker and laid to required level and slope after cleaning the surface, including providing antiskid surface with bitumen precoated fine-grained hard stone chipping of 13.2 mm nominal size at the rate of 0.005 cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 1000C, protruding 1 mm to 4 mm over mastic surface, all complete as per clause 516.	sqm	735.00	430710
11.8	18.00	Provdng GI 100 mm diameter water spouts including necessary iron gratings as per drawings. (upto 10 ton)	Nos.	445.81	8025

Sr. no.	Quantities	DESCRIPTION OF ITEMS	Unit	Gross Rate	Amount in Rs.
11.9	117.00	Providing and fixing PVC pipe 150 mm dia Heavy duty with Galvanised M.S. clamps at 1.5m c/c to keep in position with all staging, drilling in Down take pipe as a complete job.	Rmt	314.84	36836
11.10	26.00	Road marking with hot applied thermoplastic compound with reflectorising glass bead on bituminous surface (Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising 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.)	sqm	422.00	10972
11.11	36.00	Providing and casting in situ controlled cement concrete M-40 for crash barrier as per approved drawing including form work curing and finishing complete .	Cum	6135.59	220881

Sr. no.	Quantities	DESCRIPTION OF ITEMS	Unit	Gross Rate	Amount in Rs.
11.12	18.00	Providing and fixing of Protective screen on the Steel bridge girder over running of 25000Volts catenary wire on both side with GI sheet as per the approved RDSO drawing No. ETI/C/0068-sheet 1 of 1Latest complete including supply,transportation, taxes, labour charges, erection,welding,nutbolting ,painting, Danger board as a complete job to the entire satisfaction of Railway safety norms.	Sq.m	2707.63	48737
11.13	206.00	Supply and painting on Kerb stone/crash barrier-Black and white alternate with Enamel paint of approved brand -Two coat with prime coat	Sq.m	137.00	28222
11.14	603.00	Providing and applying coats 100% Acrylic breathable,Anti-carbonation,Waterproof,Heat insulating,Decorative external coating "SUNEXT-8"of M/S Sunanda Speciality Coating Pvt.Ltd.or equivalent of approved shade.Mix 1 litre of "SUNEXT-8" with 1 L of water and use as priming coat on the surface.Mix 1 l of Sunext-8 with 400-500 ml water, stir well and apply by brush for subsequent to coats.Acrylic paint shall be spray/brush/roller applied	Sq.m	166.44	100364
11.15	592.00	Providing and laying roof insulation with 40 mm thick impervious sprayed, closed cell free Rigid Polyurethane foam over deck insulation conforming to IS - 12432 Pt. III (density of foam being 40-45 kg/ cum), over a coat of polyurethane primer applied @ 6-8 sqm per litre, laying 400 G polythene sheet over PUF spray and providing a wearing course of 40 mm thick cement screed 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 20 mm nominal size) in chequered rough finish, in panels of 2.5 m x 2.5 m and embedding with 24 G wire netting and sealing the joints with polymerized mastic, all complete as per direction of Engineer-in-Charge.	Sq.m	1155.89	684287
11.16		Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works,including applying priming coat of approved steel primer.			
	750.00	G.I. pipes/Angle/channel for inspection platform	Kg	154.41	115805
11.17	2.00	Supplying fabricating and erecting welded and/or bolted and/or riveted steel work in built up sections, trusses and framed work, staging, racks, Height Gauge etc. for Steel Structures other than bridge girders, using RSJ, tees, angles and hannels/flats, plates, gussets, round or square bars, cleats, bolts etc., with contractors own steel including cutting, bending, straightening, drilling, riveting, hoisting, fixing, erecting, welding, bolting etc. with Providing stiffeners wherever required as per approved drawing including applying a priming coat of a approved steel primer with all contractor's materials, labour, tools & plants, lead & lift incl. crossing of tracks if required etc., complete as per specification and as directed by Engineer-in-charge. Note: The payment shall be made on the theoretical weight of main components and gusset plates only.	MT	102193.22	204386
SUB TOTAL OF PART-11					37643017
		TOTAL			52307250

	SOR ITEM NO. 3-10-4-(a)- cat-III	4.00	No	572.03	577.75	2311.00
12.7	Supplying & erecting earth pit of minimum bore dia.150mm size approved make Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free G.I.Pipes having Outer pipe dia of 50mm having 80-200 Micron galvanising, Inner pipe dia of 25 mm having 200-250 Micron galvanising, connection terminal dia of 12mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications.					
	(c) For Electrical Installation covering Transformer Neutrals, Lightning arrester Earthing, A.C.Plant & Sensitive Computer System(like Automation, SCADA) i.e independent Earthing in normal soil. Length of Pipe : 3.00 mtrs Back filling Compound :2 nos Bags of 25 Kg.					
	SOR ITEM NO. 3-14-10-[C]	2.00	No	10487.29	10592.16	21184.32
12.8	Providing & erecting weather proof, dust & vermin proof, floor mounted front operated outdoor type double door cubical panel board necessary IP-54 and above protection as per approval from engineer incharge made from 14 SWG thick CRC M.S. sheet for outer body & doors, 16 SWG thick CRC M.S.sheet for internal partitions with necessary accessories , supporting angles/ flats channel including cutting, bending, drilling, welding, riveting with internal partitions & cable alley as per requirements & instruction of engineer-in-charge with erection of					
	supplied switch gears, BUSBARS, suitable size of inter connecting PVC copper wire / copper-aluminium strips, rubber grommets, rib, bakelite control fuses/MCB for measuring instruments, earth bus & earth bolts, foundation flange - bolts-base Plates, sufficient nos. of hinged doors, handles with locking arrangement and rubber gasket,heavy duty end terminal connection,danger notice board,necessary ventilation,earthing strip complete. The Panel shall be painted with epoxy powder coating.					
	(The rates excludes the cost of switchgears, bus bars, inter connecting mains & Copper Aluminium strips, meters, Fuses etc. The dimension shall be measured excluding base beams) The panel shall be supplied with following approved manufacturers with following size.					
	(B) The standard companies switch gear shall be used and only manufacturers at CPRI approved factory					
	(i) with 350 mm depth					
	SOR ITEM NO. 3-16-9-(B)-(i)	1.00	Sq. Mtrs.	16161.02	16322.63	16322.63
12.9	Supplying & erecting XLPE (IS:709) (I)-88 ISI unarmoured copper cable 1.1 KV grade to be erected as directed of following size.					
	(E) 3 core 1.5 Sq. mm					
	R.M.C. APPROVED RATE	1410.00	Mtrs.	21.19	21.40	30174.00
12.10	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Copper conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe at road crossing or floor of following size of cables.					
	(B) 4 core 4 Sq. mm					
	SOR ITEM NO. 4-4-4 & 4-4-5	2200.00	Mtrs.	357.63	361.20	794640.00
12.11	Making trench in soft soil of suitable width of 90 cms deep for laying cable or locating the fault all over the run and backfilling the same and making the surface as normal ground.					
	SOR ITEM NO. 4-5-1	100.00	Mtrs.	45.76	46.22	4622.00

12.12	Providing & laying approved make ISI marked Rigid PVC pipe having 6Kg / cm ² (Class-3) to be erected at road crossing on or floor as directed for laying of cable. The pipes as following size of dia & weight per 6 mtr.					
	(C) 63 mm inner Dia. (4 Kg / 6RMT)					
	SOR ITEM NO. 4-5-9 (C)	125.00	Mtrs.	233.05	235.38	29422.50
12.13	Supplying following size of Light duty "A" Class G.I. Pipe & erecting as directed by Engineer-in-charge.					
	(C) 80 mm dia	100.00	Mtrs.	466.10	470.76	47076.00
	SOR ITEM NO. 4-5-6 (B)					
12.14	Providing and fixing heavy duty flanged type brass cable gland with rubber ring for PVC insulated armoured cable complete without going tails, insulating tape etc. for following size of cables.					
	(a) 2 to 4 core 2.5 Sq. mm	29.00	No	31.36	31.67	918.43
	(b) 2 to 4 core 4 Sq. mm	80.00	No	31.36	31.67	2533.60
	(c) 2 to 4 core 6 Sq. mm	10.00	No	36.44	36.81	368.10
	(d) 2 to 4 core 10 Sq. mm	2.00	No	36.44	36.81	73.62
	SOR ITEM NO. 4-6-1					
12.15	Solderless crimping type Copper lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner.					
	(A) 1.5/2.5 to 6 Sq.mm	800.00	NO	7.63	7.70	6160.00
	(B) 10 Sq.mm	4.00	NO	9.32	9.42	37.68
	SOR ITEM NO. 4-7-2					
12.16	Providing and fixing approved make Octagonal poles. Made from HR sheet steel. The pole should be made as per IS. and shall be coated with hot dip galvanizing as per IS 2629/4759. with required base plate suitable suspend local wind speed to be erected on suitable foundation (Including) with necessary nut - bolts.					
	(G) 8 Mtr. Long 70 mm Top X 155 mm bottom dia, 3 mm thickness.	29.00	No	13871.19	14009.90	406287.10
	7.12	1.00	No	12344.92	12468.36	12468.36
	6.19	1.00	No	10733.05	10840.38	10840.38
	5.67	1.00	No	9830.51	9928.81	9928.81
	5.25	1.00	No	9103.39	9194.42	9194.42
	4.25	1.00	No	7368.64	7442.33	7442.33
	3.74	1.00	No	6484.75	6549.59	6549.59
	3.58	1.00	No	6207.63	6269.70	6269.70
	2.71	1.00	No	4699.15	4746.14	4746.14
	1.84	1.00	No	3190.68	3222.58	3222.58
	1.81	1.00	No	3138.14	3169.52	3169.52
	1.25	1.00	No	2167.80	2189.47	2189.47
	0.97	1.00	No	1682.20	1699.03	1699.03
	SOR ITEM NO. 6-1-4 (G)					
12.17	Providing street light pole bracket consisting of Light Class MS.pipe of 4.2 cms. outside dia. complete with suitable M.S. sleeve tubing of approximate 45 cms. and length suitable for 76.5 mm / 80mm. / require size pole top having sufficient fastners for fixing the brackets and having spread of 1 mtr. length with suitable rise as per site condition & suitable welded stiffener reducer and nipple with check nut complete painted with one coat of Red oxide / PU base primer and two coats of Aluminium / PU paint. paint with following nos of arms					

	[A] Single Arm bracket 1 Mtr	32.00	No	555.08	560.64	17940.48
	[B] Double Arm Bracket 1 Mtr	32.00	No	724.58	731.82	23418.24
	SOR ITEM NO. 6-5-3-(A) & (B)					
12.18	Supplying & erecting approved make IP 55 grade Company fabricated Timer Panel of following capacity for switch On-Off street lights on time scheduling basis made from 16G CRCA sheet duly epoxy power painted inside and outside with hinged doors and locking arrangement consisting of suitable size of 4 Pole MCB and 4 pole contactor (cat-III)with analog time switch, auto manual switch of same make and suitable input and output Bakelite terminals and with double door earthing approved by Engineer in charge. (C) 63 AMP					
	SOR ITEM NO. 6-7-6	1.00	No	16889.83	17058.73	17058.73
12.19	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 1Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses with company mark/name engraved or embossed 120 to 300 V,Power Factor more than 0.95, THD < 10 %, CCT 5000 K to 5700K, Uniformity ratio >0.45, Luminaire efficacy> 85 lumens/watt . LED driver efficiency > 85 %. CREE / OSRAM / PHILIPS Lumileds / NICHIA / SEOUL/ BridgeLux (U.S.A.) make LED used for luminaire. (Each fittings required LM-79 & LM-80 certificates)					
	(A) Street Light (IP-65), Surge -4KV					
	(g) above 60 to 90 watts- (70 watts) CAT-III	141.00	No	6555.08	6620.64	933510.24
	SOR ITEM NO. 2-17- 2 (III) CAT-III					
12.20	Supplying , Fabricating and Installation of various sizes aluminium PVC junction boxes / clamps / Hangers for light fixture / for Cable Trays etc. made out from 14 Gauge sheet / angle /flat / rod / channel / box section etc. with all necessary accessories like bend , junction boxes , coupler , supporting clamps , elbows hardware , anchor fasteners etc. all the necessary fabrication required will be included in the scope of contractor , scope also included two coat of primer and two coat of painting of each items on all the sides complete in all respect					
	R.M.C. APPROVED RATE	350.00	K.G.	611.02	617.13	215995.50
12.21	LIAISING CHARGE FOR OBTAINING NECESSARY PERMISSION FROM LOCAL ELECTRICAL SUPPLY COMPANY FOR REQUIED ELECTRIC CONNECTION , UNDER GROUND CABLING , TRANSFORMER ETC. AS REQUIRED					
	R.M.C. APPROVED RATE	1.00	JOB	423.73	427.97	427.97
12.22	RUNNING EARTHING WIRE AT 8 SWG TO CONNECT ALL POLES					
	R.M.C. APPROVED RATE	1200.00	NO.	7.63	7.70	9240.00
12.23	Providing and erecting required size HOT deep Galvanised iron strip for earthing of H.T. , OCB/ ACB/ Transformer LT panel board, Motors etc. using proper clamp.					
	SOR ITEM NO. 3-14-2	25.00	KG.	76.27	77.03	1925.75
	Sub Total-A					2704591.20
	SAY Rs.					2704591.00



**NAME OF WORK: - DISMANTLING OF EXISTING 2 LANE LOW HEIGHT ROB AND BRIDGE
CONSTRUCTION OF NEW 4 LANE FLYOVER BRIDGE AT SANDHIYA
BRIDGE AT SANDHIYA BRIDGE(LC-90A) AT JAMNAGAR-CIVIL
HOSPITALROAD IN RAJKOT**

SCHEDULE - B

RECAPITULATION SHEET

SECTION NO.	DESCRIPTION	AMOUNT (Rs.)
SECTION-A	DISMANTLING OF EXISTING BRIDGE AND CONSTRUCTION AT BOTH SIDE APPROACHES WITH CULVERTS	40,46,32,907.00
SECTION-B	COST OF ROAD WORK,SURFACE DRAINAGE & ELECTRICAL WORKS	7,34,92,931.00
SECTION-C	RAILWAY PORTION 36M OBLIGATORY SAPN	5,23,07,250.00
	Total Amount	53,04,33,088.00
	Say Total Amount put to Tender Rs. =	53,04,34,000.00
In word: Rupees Fifty Three Crore Four Lacs Thirty Four Thousand Only.		

I/We am/are willing to carry out the above said work at TO BE QUOTED ONLINE ONLY At par / Above / Below _____
% to the amount put to tender.

(should be quoted in figures and words below/above the estimated rates mentioned above.) Amount of my/our
tender works out as under:

Notes:

- 1) % above / below/At Par is to be submitted online only.
- 2) All work shall be carried out as per the specifications-MoRTH, Railway latest codes and manual or as directed.
- 3) Rates quoted include cleaning of site (prior to commencement of work and at its close) in all respects and hold for work under all conditions, site moisture, weather, etc.

Signature of Contractor

Signature of City Engineer