

Name of work :-Special Repairs Roads of Bhavnagar District Package No.RPC-2/BVN/SR/2023-24/P.07  
Ta.Mahuva,Dist.;Bhavnagar

### BILL OF QUANTITIES

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
1	Clearing and grubbing of road land incl.uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth upto 300mm removal of stumps of trees cut earlier and disposal of unserviceable materials © By mechanical means in area of Light jungle.	1.90	One Hect.	28393.03	53946.76
2	Earthwork for embankment including breaking clods, dressing with all lead and lift (Excluding watering and consolidation) (A) Selected soil should be From borrow area with all lead and lift and should have CBR not less than 6.00%.	3186.40	One Cum	150.38	479170.83
3	Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff and depositing on the road side slopes as directed upto all lead.	621.00	One Cum	104.20	64708.20
4	Earthwork in cutting in all sorts of soil and soft Murrum including conveying and spreading the suff embankment as and where directed within 200 meters from the end of the cutting with all required lead and lift.	3961.00	One Cum	127.74	505978.14
5	Scarifying graveled macadam or Bitumen macadam surface 6cm to 10cm depth including stacking useful materials on road side and disposing off remaining stuff.	5513.00	One Sqm	39.62	218425.06
6	WBM Grading-1 Providing, laying, spreading and compacting stone agg. Of 90mm to 45mm size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 KN in stage to proper grade and camber, applying and brooming, stone screening/binding material to fill-up the intersties of coarse agg., watering and compacting to the required density grading-1 as per Technical Specification Clasue.405 By manual means.	311.00	One Cum	1216.21	378241.31

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
7	WBM Grading-2 Providing, laying, spreading and compacting stone agg. Of 63mm to 45mm size to water bound macadam specification including spreading in uniform thickness, hand packing, rolling with smooth wheel roller 80-100 KN in stage to proper grade and camber, applying and brooming, stone screening/binding material to fill-up the intersties of coarse agg., watering and compacting to the required density grading-2 as per Technical Specification Clause.405 By manual means.	2495.00	One Cum	988.50	2466307.50
8	Stabilized sub base : Providing, laying, spreading and compacting in situ/borrow area soil of CBR>5% with stabilization, Application. (1) Rip and loosen soil with excavator/ tractor operated ripper and scarify with tractor operated rotavator upto depth to achieve desired compacted thickness of 100mm (2) Spread cement 1% by weight of soil and mix throughly with tractor operated ripper and tractor operated rotavator.(3) Apply 0.6kg/cum organosilane nanotechnology/ and 0.6kg/cum of nano acrylic co-polymer mixed in OMC water ((<1000 ppm TDS) on loose soil cement mix scarify the material and compact it. (4) compact the stabilized soil layer with 8 to 10 tonner vibratory roller to achieve the desired density. Rates including all materials, labour, hire charges of machinery etc. complete as per MoRD specification and direction of Engineer in charge.	3234.00	One Cum	828.60	2679692.40
9	Rolling and Watering of earthwork with vibratory roller including filling in depression which occur during the process and as directed.	1796.00	One Cum	22.48	40374.08

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
10	Providing and laying bitumenous grout 37.50mm thick using bulk Emulsion RS1 for tack coat at the rate of 2.50kg/10sqm on Bitumin surfacer and using BT chips for required gradation with the asphalt of grade VG-30 at the rate of 1.99% i.e 19.90kg/MT by weight of mix including heating and mixing in drum mix plant , transporting the mix and spreading the same by paver finisher and consolidation as per MOST specification including cost of all materials fuel, labours, tools and plants etc. using contractor's own drum mix plant etc. complete.	2598.00	One MT	1787.43	4643743.14
11	Providing, laying and rolling of 25mm thick open graded premix bituminous carpet with B.T aggregates as specified and using bulk Emulsion RS1 for tack coat at the rate of 2.50kg/10sqm on B.T.Surface (As per IRC-16) and using bitumen for mixing with aggregate at the rate of 3.36% i.e 33.60kg/MT. of total mix including heating and mixing in drum mix plant, spreading the same with paver finisher and consolidation with vibratory roller including necessary firewood, oil, lubricants, labour charges etc. using equipment tools etc. completed in accordance with the requirement of specification.	1819.00	One MT	2357.45	4288201.55
12	Providing and laying seal coat using Bitumin grade VG-30 with B.T. aggregate as specified using aggregate at the rate of 0.18cum/10sqm. And bitumen for mixing with aggregate at the rate of 4.5% i.e 45.00kg/MT of total mix including heating and mixing in drum mix plant and spreading the same by paver finisher and consolidation with vibratory roller including necessary using contractor's own drum mix plant, machineries and equipment, tools etc. complete in accordance with the requirement of specification.	947.00	One MT	2554.87	2419461.89

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
13	Excavation for foundation upto 1.5m depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto all lead. (B) Dense or hard soil.	122.00	One Cum	241.79	29498.38
14	Excavation for foundation upto 1.5m depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto all lead. (C) Hard Murrum	75.00	One Cum	412.00	30900.00
15	Excavation of foundation in Sand gravel caly soft soil and murrum etc. including shoring, struting dewatering as necessary and disposing of the excavated stuff as directed. Depth upto 3.00mt.	342.00	One Cum	486.76	166471.92
16	Excavation of foundation in hard murrum and boulders and very stiff or sticky clays and other similar strata including shorting out and struting and dewatering as necessary and disposing of the excavated stuff as directed.	152.00	One Cum	582.21	88495.92
17	Providing and laying rubble for apron (Each stone weighting not less than 40kg) including and packing and filling in the interstices with quarry spall.	43.00	One Cum	1041.04	44764.72
18	Providing and casting in situ ordinary cement concrete M-150 mix and providing necessary pin headers including shuttering, scafilding, laying vibrating, curing and finishing complete Without V-Grooves For all Hieght.	188.00	One Cum	3818.54	717885.52
19	Providing and filling in foundation with ordinary cement concrete M-100 mix and providing necessary vertical pin headers incl. Formwork, vibrating, ramming and curing complete.	421.00	One Cum	3245.56	1366380.76
20	Providing parapet of ordinary cement concrete M-200 as per detailed drawing with necessary reqinforcement including shuttering laying vibrating and finishing to line and level complete (ii) cast in situ.	41.50	One Rmt.	1057.87	43901.61

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
21	Construction of concrete road using tremix system with 20cm/15cm thick controlled M-250 concrete mixing conplast P-211 water reduction admixture @ 100ml/bag of cement and hardner 62.50ml. /bag using fixing and removing "C" channels of required road depth levelling if placed concrete with surface vibrator, finishing the surface with power floater and towel tight brooming as directed with providing expansion joints 20x200mm and contraction joints 20x20mm using concrete cutter machine etc. complete.	583.00	One Cum	6099.64	3556090.12
22	Providing and casting in situ Controlled cement concrete M-200 for R.C.C. work in Piers, abutment, returns and riding returns as per drawing including centering, shuttering, scaffolding where necessary laying, vibrating curing and finishing complete (A) For all Height	227.90	One Cum	5078.31	1157346.85
23	Providing and casting in situ Controlled Cement Concrete M-200 for R.C.C. Raft and cut-off walls including necessary shuttering laying, vibrating ramming of curing complete.	94.00	One Cum	4507.16	423673.04
24	Providing and casting in situ Controlled cement concrete M 250 for R.C.C. Solid slab including centering, scaffolding, curing and finishing complete.	53.00	One Cum	5130.68	271926.04
25	Providing and casting in situ Controlled cement concrete- M-200 for average 75/150/200mm thick wearing coat laid as directed including tamping, vibrating, finishing, curing and filling in joints with bitumen complete.	312.00	One Cum	5187.83	1618602.96
26	Providing and casting in situ Controlled cement concrete- M-200 mix for Approach slab including formwork, curing and finishing complete.	7.50	One Cum	5046.00	37845.00
27	Providing and casting in situ Controlled cement concrete- M-200 mix for kerbs/Kerb blocks including formwork, curing and finishing complete.	3.40	One Cum	4766.55	16206.27

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
28	Providing and laying weep hole in Abutment and returns by using A.C pipe of 100mm. Incl. fixing in proper grade and jointing the complete as per detailed specification.	107.00	One No	58.53	6262.71
29	Providing and laying filter media 600mm. thick directed at the back of abutments, returns and wing walls as per detailed specifications.	21.00	One Sqm	1180.33	24786.93
30	Providing and laying in Position FE -500/500D TMT bar reinforcement including cutting, bending, hooking and tying complete as per detailed drawings for the following (A) Piers (B) Abutments (C) Returns (D) Walls etc.	2.010	One MT	73217.52	147167.22
31	Providing and Fixing in position FE-500/500D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawaing (A)RCC kerb (B) RCC Footpath (B) RCC Solid Slab/ App. Slab / Wearing coat.	22.730	One MT	72601.86	1650240.28
32	Providing 12mm. Thick Pre-moulded asphalt filler joints as per drawings	15.00	One Sqm	702.12	10531.80
33	Providing G.I. 100mm. Diameter water spouts including necessary iron gratings as per drawings.	16.00	One No	536.02	8576.32
34	Providing flood gauge marks on sub structure as per design including painting complete	4.00	One Rmt.	148.89	595.56
35	Filling available excavated earth (excluding rock ) in trenches plinth sides of foundation etc. in layers not exceeding 20cm in depth consolidating each deposited layer by ramming and watering.	1287.00	One Cum	130.39	167811.93
36	Supplying and fixing reinforced concrete heavy duty non presure pipes with collars for culverts carrying heavy traffic as per IS 458-1991 specification including setting and joining the pipes in C.M. 1:2 watering and laying (to level or slope) of I.S. Class NP-3 of following internal diameter with all lead and lift. (i) 1200mm Dia.	40.00	One Rmt.	5530.94	221237.60

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
37	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. Stone/Rubble masonry.	115.20	One Cum	389.73	44896.90
38	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. RCC Work.	187.10	One Cum	886.05	165779.96
39	Dismantling G.I. Pipes G.S.W. Pipes and A.C Rain water pipes with fitting and clamps including stacking the materials with all lead and lift (for any of pipe)	30.00	One Rmt.	73.02	2190.60
40	Providing temporary all weather and fair weather diversion suitable for traffic during the construction period of the bridge / Slab drain including providing necessary drains and all safety measures including red lamps / signals at night for traffic etc. complete..	90.00	One Rmt.	1378.69	124082.10
41	Providing and fixing Precast cement concrete Hectometer as per IRC type design incl. painting, lettering etc. fixing in C.C. 1:5:10.	28.00	One No	356.49	9981.72
42	Providing and fixing Precast cement concrete Guard stone as per I.R.C. type design including white washing etc. complete. Fixing in C.C.1:5:10.	480.00	One No	327.69	157291.20
43	Providing and fixing ordinary Kilometer stone of pre-cast C.C. 1:2:4 including necessary reinforcement as per I.R.C. type design in C.C. 1:4:8 including painting lettering etc. complete.(For VR, ODR)	9.00	One No	704.33	6338.97
44	Providing and fixing Indicator stone of approve stone as per I.R.C. type design in C.C. 1:4:8 including white washing etc. complete Fixing in Earth	323.00	One No	102.84	33217.32
45	Supplying and fixing Junction Boards of M.S. plates and angles as per I.R.C. design incl;. Fixing in C.C. 1:4:8 with necessary excavation painting, figuring, lettering on boards etc. complete.	4.00	One No	5236.69	20946.76
46	Providing and fixing Village name Boards as per standard I.R.C. type design of steel plate incl. painting, lettering etc. complete with fixing in C.C. 1:4:8 block with necessary excavation etc. complete	4.00	One No	3437.59	13750.36

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
47	Providing and fixing Flood guage post mark of 'C' angle size 100mm x 50mm x 6mm thick of length 2.00mt. Height fixed in head wall 0.500mt. And 1.50mt. Out side with painting and lettering with redeum color as directed.	12.00	One No	1134.23	13610.76
48	Village/Bump Ahead sing : Providing and fixing sign boards made out of 2mm Aluminium sheet size 90x60 cms. Rectangle as per the design of IRC-67-1977 pre treated with phospheting process and acid etching coated with one coat of apoxy primer and two coats of best quality epoxy paint reflectorised with retro reflective sheeting as per latest MOST specification letter and numbers should be as per IRC:30-1968, 3.1 Mt. long (2 nos) stand post and frame fabricated from suitable size iron angle of 50x50x5mm, painted with best quality epoxy coating in black and white bends, the details of symbole on inscription/ numerals for each board shall be as per the instruction of the Engineer in charge. The fixing at site shall be in C.C 1:2:4 block of size 45x45x60cms. for each leg including excavation curring etc. complete under the supervision of engineer in charge (A) Engineer Grade.	16.00	One No	5045.36	80725.76
49	Sign Board per square Meter :-Providing and fixing sing boards made out of 2mm aluminium sheet; size 1 Meter x 1 Meter as as per the design given by engineer in charge pre treated with phospheting process & acid etching; coated with one coat of epoxy primer and two coats of best quality epoxy paint; reflectorised with retro refiective sheeting as per latest M.O.S.T. Specifications; Letters and numerals should be as per IRC-30-1968, 3.1m long (2 nos) stand post and frame may be fabricated either from suitable size iron angle of 35 x 35x 3mm & 50 x 50 x 5mm & 75 x 75 x 6mm as required painted with best quality 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 block of size 45 x 45 x 60cms. for each leg. including excavation curing etc. complete under the supervision of engineer in charge.(A) Engineer Grade(VR)...	16.00	One No	7615.37	121845.92



Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
50	Cautionary Warning Sign : Providing and fixing sign boards made out of 2mm Aluminium sheet size 90x90x90 cms. Equilateral triangle as per the design of IRC-67-1977 pre treated with phosphating process and acid etching coated with one coat of epoxy primer and two coats of best quality epoxy paint reflectorised with retro reflective sheeting as per latest MOST specification 3.1 Mt. long stand post and frame fabricated from suitable size iron angle of 35x35x3mm, 75x75x6mm. as required painted with best quality epoxy coating in black and white bends the details of symbole for each board shall be as per the instruction of Engineer in charge the fixing at site shall be in 1:2:4 CC block of size 45x45x60cms. for each leg including excavation curring etc. complete under the supervision of engineer in charge (A) Engineering Grade.	12.00	One No	3808.65	45703.80
51	Road Marking with Hot Applied paints with reflectorising glass beads on bitumin surface providing and laying a hot applied thermoplasting compund 2.5mm thick including reflectorising glass beads @250 gm per sq.mtr area, thickness of 2.5mm is excluding of surface applied glass beads as per IRC:35-2015 the finished surface to be level, uniform and free from streaks and holes, zebra patta/bump/centerline/edge line/ cut patta. the while color marking should provide liminance coefficient on cement road shall be min. 130 mcd/m2/lux and asphalt road shall be min 100 mcd/m2/lux during the survice life during the date the marking should meet the performanace criteria for night time reflectivity, wet reflectivity and skid resistance as mentioned in the section-15 of IRC 35-2015 warranty for retrorreflectivity shall be two years.	987.00	One Sqm	367.72	362939.64

Item No.	Description of Item (With brief specification and reference to book of Specification)	Quantity	Unit	Rate	Amount
52	Cate eye / road stud/ RPM : Supplying Raised Pavement markers of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens (No glass bead lens) capable of providing total internal reflection of the light entering the lens face and shall support a load of 13635 kgs. tested in accordance to ASTM D 4280 type H and complying to specification of category A of MORTH circular No RW/NH/33023/10-97-DO III Dt. 11-06-1997. the height, width and length shall be exceed 20mm, 130mm and 130mm and with minimum reflective area of 13sqcm on each side and the slope to the base shall be 35+/-5 degree. the body of the marker should having finger grip for easy and accurate placement and application with epoxy /bituminous adhesive as recommended by the manufacturer of the marker. the colour of the marker should be as per the IRC:35-2015 and as directed by Engineer-in-charge.	160.00	One No	326.23	52196.80
Rupees Three Crore Thirteen Lakh(s) Nine Hundred Forty Eight And Paise Eighty Seven Only					31300948.87

I \ We am \ are willing to carry out the work at ..... % above \ bellow percent ( Should be written in figures and words ) of the estimated rate mentioned above. Amount of My \ Our tender works put as under.

\* Estimated Amount

Put to tender **Rs**.....

Deduct.....%

Net **Rs**.....

In words.....

\* Estimated Amount

Put to tender **Rs**.....

Add.....%

Total **Rs**.....

In words.....

1.The Contractor shall exhibit a board with detailed specification and details of work as directed by the Engineer-In-Charge for which no extra payment shall be made.

2.The labour cess will be deducted as per prevailing rules i.e. 1% of the work done.

3.GST and Income tax TDS will be deducted at a source while making payments of bills

4.In all R.C.C. Items in Rate Analysis Standard Cement Consumption has been taken as per Govt. G.R.: PRC-10/2017 Cement Consumption/16/C Date:11/05/2017 as stated in

S.O.R. therefore in R.C.C. items where there is a change as per actual mix design the cost of difference of cement consumption have been deducted from the rate of original item at the rate of input rate mentioned in all the tender.

**NOTE: Amount Rs.57252.92 Of Dismantalled materials shall be recovered from 1st R.A. bill of Contractor at once.**

Signature of Contractor.

Deputy Executive Engineer  
Panchayat R&B Sub Division  
Mahuva

Executive Engineer  
Panchayat R&B Division  
Bhavnagar