

RE-CONSTRUCTION OF MINOR BRIDGES, SLAB DRAINS, BOX CULVERTS & PIPE CULVERTS AT VARIOUS LOCATIONS IN DEVBHUMI DWARKA DISTRICT (PANCHAYAT) UNDER MMGSY, IN THE STATE OF GUJARAT. (PACKAGE - 2)

BILL OF QUANTITIES (BOQ)

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
1	Clearing and grubbing road land including uprooting rank vegetation grass bushes, shrubs, sapling and trees girth up to 300 mm removal of stumps of trees cut earlier and disposal of unserviceable materials (C) By mechanical means in area of light jungle.	2.24	One Hect.	28,455.09	63,739.41
2	Demarcation of road alignment including marking out road line by providing and fixing wooden pegs or steel rod of required size at every 25 M to 50 M. including excavating trenches on both sides of 0.30 m. x 0.30M. including supplying of labours and all materials for every work etc complete.	0.56	One Km.	2,706.50	1,515.64
3	Portable Barricade in Construction Zone (Installation of a steel portable barricade with horizontal rail 300 mm wide, 2.5 m in length fitted on a 'A' frame made with 45 x 45 x 5 mm angle iron section, 1.5 m in height, horizontal rail painted (2 coats) with yellow and white stripes, 150 mm in width at an angle of 45°, 'A' frame painted with 2 coats of yellow paint, complete as per IRC:SP:55-2001)	204.00	One No.	3,035.05	619,150.20

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
4	Diversion of water course, providing cofferdam and bund or island as may be necessary for foundation and maintaining the same for the period as may be necessary.	18.00	One No.	50,000.00	900,000.00
5	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%.	4436.80	One Cum	160.76	713,263.76
6	Earthwork for embankment including breaking clods, dressing with all lead and lift and including watering rolling and consolidation of subgrade in layers at O.M.C. to required dry density including filling the depression which occur during the process using power roller 8T to 10T.(E) From Borrow area including all lead & lift	13613.00	One Cum	177.91	2,421,893.85
7	Earthwork in cutting including preparing slope and camber staking or utilizing the cutting stuff in bank as directed upto 200 meters from the end of the cutting with all required lead and lift.(iii) hard Rock.	54.00	One Cum	584.59	31,567.86

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
8	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 interstices of coarse agg., watering and compacting to the required density grading-2 as per Technical Specification Clause.405 By manual means.	346.90	One Cum	1,970.49	683,563.85
9	Rolling and Watering of earthwork with vibratory roller including filling in depression which occur during the process and as directed.	4172.80	One Cum	22.95	95,765.76
10	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.	1434.60	One Cum	253.88	364,216.25
11	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	1284.30	One Cum	432.61	555,601.02
12	Excavation for foundation upto 1.5m depth including sorting out and stacking of useful materials and disposing of the excavated stuff upto all lead. (D) Soft Rock	363.80	One Cum	301.84	109,809.39

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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. (E) Hard Rock	248.60	One Cum	627.47	155,989.04
14	Excavation of foundation in Sand gravel clay soft soil and murrum etc. including shoring, strutting dewatering as necessary and disposing of the excavated stuff as directed. Depth upto 3.00mt.	5182.20	One Cum	511.11	2,648,676.25
15	Excavation of foundation in hard murrum and boulders and very stiff or sticky clays and other similar strata including shorting out and strutting and dewatering as necessary and disposing of the excavated stuff as directed.	467.50	One Cum	611.32	285,792.10
16	Excavation in large boulders and soft rock by wedging including shoring, strutting and dewatering as necessary and disposing of the excavated stuff as directed,	3444.50	One Cum	716.55	2,468,170.39
17	Excavation in hard rock by dry-wet blasting and chiselling including dewatering preparing foundation base by proper benching and stepping and disposing of the excavated stuff as directed (B) Blasting prohibited.	1652.60	One Cum	1,675.31	2,768,613.19

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
18	Providing and fixing Mild steel dowel bar 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.	636.00	One Rmt.	450.07	286,242.23
19	Providing and laying rubble for apron (Each stone weighting not less than 40kg) including and packing and filling in the interstices with quarry spall.	88.70	One Cum	1,083.81	96,133.95
20	Providing and casting in situ ordinary cement concrete M-150 mix and providing necessary vertical pin headers including formwork, vibrating, ramming and curing complete.	81.40	One Cum	3,715.62	302,451.47
21	Providing and casting in situ ordinary cement concrete M-150 mix and providing necessary pin headers including shuttering, scaffolding, laying vibrating, curing and finishing complete Without V-Grooves For all Height.	3853.10	One Cum	3,921.63	15,110,432.55
22	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.	620.50	One Cum	3,345.58	2,075,932.39
23	Providing and filling in foundation with ordinary cement concrete M-150 mix and providing necessary vertical pin headers incl. Formwork, vibrating, ramming and curing complete.	1013.80	One Cum	3,715.63	3,766,904.38

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
24	Providing & laying rubble soling (hand packing) on prepared surface and filling interstice with sand including all material, spreading ,watering etc completed as directed.	194.00	One Cum	2,259.67	438,375.85
25	Providing and laying Rigid Flooring complete as per drawing and Technical specifications laid over cement concert bedding. (A) Rubble stone laid in cement mortar 1:3	115.00	One Cum	4,635.43	533,074.97
26	Providing & laying 22.5 cm thick dry rubble stone pitching on side slope on existing earthwork on murrum bed 7.50 cm thick & filling interstice with murrum & providing Flush pointing in CM 1:3 etc complete including curing & preparing slope in Earth work as directed.	856.00	One Sqm	745.57	638,210.92
27	Providing parapet of ordinary cement concrete M-200 as per detailed drawing with necessary reinforcement including shuttering laying vibrating and finishing to line and level complete (ii) cast in situ.	107.00	One Rmt.	1,082.18	115,793.26
28	Providing parapet of ordinary cement concrete M-30 as per detailed drawings with necessary reinforcement including, shuttering, laying vibrating and finishing to line and level complete.(ii) Cast in situ.	238.00	One Rmt.	1,217.96	289,874.32

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
29	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	711.10	One Cum	5,198.58	3,696,710.24
30	Providing and casting in situ Controlled cement concrete M-30 for 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	2372.00	One Cum	5,462.90	12,957,995.38
31	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.	92.60	One Cum	4,591.53	425,175.68
32	Providing and casting in situ Ordinary cement concrete M-200 for C.C. Toe Wall and Curtain walls including necessary shuttering laying, vibrating, ramming and curing complete.	330.00	One Cum	4,142.22	1,366,933.22
33	Providing and casting in situ Controlled Cement Concrete M-250 for R.C.C. Raft and cut-off walls including necessary shuttering laying, vibrating ramming of curing complete.	95.20	One Cum	4,697.25	447,178.20

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
34	Providing and casting in situ Controlled Cement Concrete M 30 for R.C.C. Raft and cut-off walls including necessary shuttering laying, vibrating ramming of curing complete.	3064.00	One Cum	4,855.85	14,878,318.12
35	Providing and casting in situ Controlled Cement concrete M 20 mix for R.C.C. works in pier cap, abutment cap, and dirt wall including controlled cement concrete M 25 bed block or pedestals for required size below bearings as per detailed drawings, centering, shuttering, scaffolding wherever necessary laying, vibrating, curing and finishing complete.	20.20	One Cum	5,278.54	106,626.51
36	Providing and casting in situ Controlled Cement concrete M 30 mix for R.C.C. works in pier cap, abutment cap, and dirt wall including controlled cement concrete M 35 bed block or pedestals for required size below bearings as per detailed drawings, centering, shuttering, scaffolding wherever necessary laying, vibrating, curing and finishing complete.	192.00	One Cum	5,542.86	1,064,229.09
37	Providing and casting in situ Controlled cement concrete M 25 for R.C.C. Solid slab including centering, scaffolding, curing and finishing complete.	167.90	One Cum	5,256.06	882,492.47
38	Providing and casting in situ Controlled cement concrete M 30 for R.C.C. Solid slab including centering, scaffolding, curing and finishing complete.	1068.00	One Cum	5,890.42	6,290,969.35

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
39	Providing and casting in situ Controlled cement concrete- M 200 for average 75/150mm thick wearing coat laid as directed including. tamping, vibrating, finishing, curing and filling in joints with bitumen complete.	372.70	One Cum	5,271.78	1,964,792.41
40	Providing and casting in situ Controlled cement concrete- M 30 for average 75mm thick wearing coat laid as directed including. tamping, vibrating, finishing, curing and filling in joints with bitumen complete.	168.50	One Cum	5,536.10	932,833.18
41	Providing and casting in situ Controlled cement concrete- M 200 mix for Approach slab including formwork, curing and finishing complete.	23.60	One Cum	5,129.95	121,066.82
42	Providing and casting in situ Controlled cement concrete- M 250 mix for Approach slab including formwork, curing and finishing complete.	15.80	One Cum	5,235.67	82,723.59
43	Providing and casting in situ Controlled cement concrete- M 30 mix for Approach slab including formwork, curing and finishing complete.	199.00	One Cum	5,394.27	1,073,459.50
44	Providing and casting in situ Controlled cement concrete- M 20 mix for kerbs/Kerb blocks including formwork, curing and finishing complete.	9.70	One Cum	4,842.86	46,975.74
45	Providing and casting in situ Controlled cement concrete- M 30 mix for kerbs/Kerb blocks including formwork, curing and finishing complete.	192.00	One Cum	5,107.19	980,580.36

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
46	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.	2056.00	One No	86.70	178,245.61
47	Providing and laying filter media 600mm. thick directed at the back of abutments, returns and wing walls as per detailed specifications.	1424.10	One Sqm	1,239.35	1,764,959.22
48	Providing and filling sand behind abutments and between riding return, square return in layers as directed.	2611.00	One Cum	504.42	1,317,049.43
49	Providing and fixing in position Mild steel dowel bars in pier cap or abutment caps for anchorage in fixed end as per detailed drawings including cutting bending and welding complete.	12.00	One No	341.28	4,095.36
50	Providing and fixing in position Mild steel dowel bars in pier cap or abutment caps for anchorage in free end as per detailed drawings including cutting bending and welding complete.	24.00	One No	424.88	10,197.07
51	Providing and laying in Position FE -500/550D TMT bar reinforcement including cutting, bending, hooking and tying complete as per detailed drawings. For the RCC Raft footing, Open Footing.	29.30	One MT	73,858.69	2,164,059.74

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
52	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.	77.170	One MT	73,858.69	5,699,675.29
53	Providing and laying in Position FE -500D/550D TMT bar reinforcement including cutting, bending, hooking and tying complete as per detailed drawings for the following (A) Pier cap (B) Abutment cap & Dirt walls.	17.900	One MT	73,858.69	1,322,070.61
54	Providing and laying in Position FE -500D/550D TMT bar reinforcement including cutting, bending, hooking and tying complete as per detailed drawings for the following (A) Solid slab	107.700	One MT	73,243.02	7,888,273.13
55	Providing and Fixing in position FE-500/500D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawing (A)RCC kerb (B) RCC Footpath (B) RCC Solid Slab/ App. Slab/ Wearing coat.	75.680	One MT	73,243.01	5,543,031.31
56	Providing and Fixing in position FE-500D/550D TMT bar reinforcement including cutting, bending, hooking, and tying complete as per detailed drawing (A)RCC kerb (B) RCC Footpath (C) RCC App. Slab (D) Wearing coat.	16.000	One MT	73,243.02	1,171,888.29

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
57	Providing fusion bonded Epoxy coating not less than 175 micron thickness and up to 300 micron to reinforcement bars as per IS-13620-1993/ASTM-775 M including testing of coating at plant.	62.700	One MT	8,729.43	547,335.26
58	Providing 12mm. Thick Pre-moulded asphalt filler joints as per drawings	191.10	One Sqm	703.53	134,443.78
59	Providing G.I. 100mm. Diameter water spouts including necessary iron gratings as per drawings.	156.00	One No	536.03	83,620.07
60	Providing flood gauge marks on sub structure as per design including painting complete	60.30	One Rmt.	167.03	10,072.02
61	Painting Two Coats on New Concrete Surfaces (Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces) - For inner face of Kerb / Crash Barrier	1012.50	One Sqm	81.81	82,832.63
62	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.	3578.70	One Cum	136.91	489,959.82
63	Numbering the CD work with approved paint including all materials for painting etc. complete.	2.00	One No	58.80	117.60

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
64	Supplying and fixing reinforced concrete heavy duty non pressure 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) 600mm Dia.	45.00	One Rmt.	2,364.07	106,383.15
65	Supplying and fixing reinforced concrete heavy duty non pressure 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) 900mm Dia.	217.50	One Rmt.	3,971.70	863,845.05
66	Supplying and fixing reinforced concrete heavy duty non pressure 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. (v) 900mm Dia.	471.00	One Rmt.	3,469.26	1,634,021.46

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
67	Supplying and fixing reinforced concrete heavy duty non pressure 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.	22.50	One Rmt.	6,032.33	135,727.43
68	Supplying and fixing reinforced concrete heavy duty nonpressure pipes with collars for culverts including setting and joining the pipes in C.M. 1:2 watering and laying (To level of slops of I.S. 458 / 1971 Class NP4 of following internal diameter. (vi) 1200 mm dia.	87.00	One Rmt.	6,621.26	576,049.36
69	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. Stone/Rubble masonry.	356.50	One Cum	409.21	145,885.05
70	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. RCC Work.	1168.70	One Cum	930.35	1,087,300.25
71	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. Structural Steel.	2.00	One MT	1,955.71	3,911.43
72	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)	60.00	One Rmt.	76.67	4,600.20

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
73	Removing all type of Hume pipes and stacking including all lead of earthwork and dismantling of masonry works. (A) Up to 600 mm dia	138.00	One Rmt	183.16	25,276.56
74	Removing all type of Hume pipes and stacking including all lead of earthwork and dismantling of masonry works. (A) Above 900 mm dia	34.00	One Rmt	309.21	10,513.19
75	Dismantling the existing structure including removing and stacking the dismantled materials as and where directed. (A) CC Work	742.50	One Cum	630.24	467,953.20
76	Dismantling of Flexible Pavements (Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately) ii) By Mechanical means. A) Bituminous course	145.50	One Cum	403.75	58,745.35
77	Dismantling of Cement Concrete Pavement (Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately).	228.60	One Cum	744.37	170,162.98

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
78	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.	817.00	One Rmt.	1,878.53	1,534,762.76
79	Providing and fixing Flood gauge post mark of 'C' angle size 100mm x 50mm x 6mm thick (in head wall 0.500mt. And 1.50mt. Out side with painting and lettering with radium colour as directed.	8.00	One No	1,140.29	9,122.32

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
80	Regulatory / Mandatory Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 60 cms Dia Circle 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 Micro Prismatic Grade retro reflective sheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 3.6mtr long stand post of 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 best quality epoxy coatings in black and white bends. The details of symbol foreach 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 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 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. (A) Class-C Type-11 Retro Reflective sheeting.	31.00	One No	4,618.73	143,180.63

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
81	Distance Informatory / Destination Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 180x120 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 Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T.Specifications; 4.0mtr long (2 Nos.) stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50 x 50 x 5mm; painted with best quality epoxy coatings in black and white bends. The details of symbol foreach 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 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 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. (A) Class-C Type-11 Retro Reflective sheeting.	12.00	One No	20,918.11	251,017.32

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
82	<p>Diversion Ahead Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 180x60 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 Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 3.1 mtr long stand post (2 Nos.) of 50 x 50 x 5mm / 50NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 35 x 35 x 3mm; painted with best quality epoxy coatings in black and white bends. The details of symbol foreach 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 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 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. (A) Class-C Type-11 Retro Reflective sheeting.</p>	12.00	One No	10,671.66	128,059.92

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
83	Men at work (2' x 2') sign :-Providing and fixing sign boards made out of 2.0 mm aluminium sheet / 4 mm ACP(Aluminium composite Panel); size 60cm x 60cm square 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 Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 3.3 mtr long stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50 x 50 x 5mm; 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 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 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. (A) Class-C Type-11 Retro Reflective sheeting	12.00	One No	4,962.13	59,545.56

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
84	Sign board per Square Meter :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 1meter x1 meter 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 Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 4 mtr long stand post (2 Nos.) of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50 x 50 x 5mm; 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 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 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. (A) Class-C Type-11 Retro	24.00	One No	12,310.89	295,461.36

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
85	Cautionary Warning Sign :-Providing and fixing sign boards made out of 2mm aluminium sheet / 4mm ACP (Aluminium composite Panel); size 90 x 90 x 90 cms. equilateral triangle 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 Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.6mtr long stand post of 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 best quality epoxy coatings in black and white bends. The details of symbol foreach 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 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 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. (A) Class-C Type-11 Retro Reflective sheeting.	12.00	One No	5,077.27	60,927.24

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
86	Chevron sign :-Providing and fixing sign boards made out of 1.5mm aluminium sheet / 3mm ACP (Aluminium composite Panel); size 60x50 cm 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 Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T.Specifications; 3.3 mtr long stand post of 75 x 75 x 6mm / 65NB Circular MS Pipe as required and frame fabricated from suitable size iron angle of 50 x 50 x 5mm; 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 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 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. (A) Class-C Type-11 Retro Reflective sheeting.	76.00	One No	4,681.35	355,782.60

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
87	Hazard Marker Sign :-Providing and fixing sign boards made out of 1.5mm aluminium sheet / 3mm ACP (Aluminium composite Panel); size 90x30 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 Micro Prismatic Grade retro reflectivesheeting of Type-11 as per ASTM D-4956 and latest M.O.S.T. Specifications; 1.8mtr long stand post of 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 best quality epoxy coatings in black and white bends. The details of symbol foreach 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 60 Cms. for each leg. Including excavation, curing etc. Complete under the supervision of engineer in charge. A warranty for 10 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. (A) Class-C Type-11 Retro Reflective sheeting.	18.00	One No	3,666.30	65,993.40

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
88	Hazard Marker Sign :-Providing and fixing sign boards made out of 2.0 mm aluminium sheet / 4 mm ACP (Aluminium composite Panel); size 90x30 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; 1.8mtr 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 best quality 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 block of 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.	2.00	One No	3,518.68	7,037.36

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
89	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 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 block of size 45x45x60cms. for each leg including excavation curing etc. complete under the supervision of engineer in charge (A) Engineering Grade.	8.00	One No	3,808.65	30,469.20

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
90	MMGSY Project Information Board: Providing and fixing of typical PMGSY Project informatorily sign board with Logo as per 1700 of MORD specifications and drawing. The board will be a composite unit consisting of Three Plates ACM (Aluminium Composite Material), material specifications as per clause 17001.3. The top most plate will be of 3mm ACM in diamond shape of 600x600mm size, riveted with MS angle iron frame of 25mmx25mmx5mm size on back on edges. The middle 4mm ACM plate of will be 1200x150mm size riveted with MS angle iron frame of 25mmx25mmx5mm size on back on edges. The main 4mm ACM lower most plate will be 1500mmx600mm size, riveted with MS angle iron frame of 25mmx25mmx5mm size. Riveting of all the sheets over angle and flat iron frame will be done neatly to have plain surface on one side. The angle iron frame of lower most plate and flat iron frame of the middle plate will be welded to two nos. 75mm x75mm (12 SWG) sheet tubes posts placed at 1125mm apart centre to centre. the top of the middle plate will be flushed with the top of 75mm dia medium steel tube posts and these posts will be embedded in cement concrete M15 grade block of 450x450x600mm	6.00	One No	11,529.15	69,174.90

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
91	Road marking with hot applied thermoplastic paints with reflectorising glass beads on bitumen 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 colour marking should provide luminance coefficient on cement 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.	421.00	One Sqm	367.72	154,810.41

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
92	Cat Eye / Road Stud / RPM: Supplying of Molded Twin Shanks Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic 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 Specifications of Category A of MORTH Circular No RW/NH/33023/10-97 DO III Dt 11.06. 1997. The height, width and length shall not exceed 20 mm, 130 mm and 130 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35 +/- 5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2 mm and height not less than 30+/- 2 mm) from the body is to be a minimum value of 500 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturers recommendation and The colour of the marker should be as per the IRC 35-2015 and as directed by Engineer-in-charge.	271.00	One No	326.23	88,408.33
93	Providing and applying anti carbonation, anti fading, mold resistant, heat insulating, and 100% acrylic breathable decorative external waterproof coating of approved shade for Pier/Abutment, Riding return, Square return, Protection wall, Pier / Abutment Cap, Dirt wall, Solid slab etc. having Viscosity @ Room Temperature by Ford cup No. B-4 (dilute 2 parts of product with 1 part of water) 18 to 30 sec. pH of 7.00 to 10.00 and Sp. Gravity @ Room Temperature 1.30+0.1, tested for carbon dioxide diffusion resistance properties for coating materials and coating systems for exterior masonry and concrete as per DIN EN 1062-6 (2002-2010) by a NBA Grade "A" accredited institution.	6077.00	One Sqm	120.97	735,121.14

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
94	Carrying out load test of super structure as directed including all necessary materials plant equipment, instruments, labour and arrangements for test directed.	455.00	One MT	169.92	77,314.44
95	Type - B, "THRIE" : Metal Beam Crash Barrier (Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 811)	618.00	One Rmt	4,145.04	2,561,634.72
96	Providing and fixing guard stone as per I.R.C. type design including white washing etc. complete.	1483.00	One No	103.56	153,574.72

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
97	Providing and erecting a "W" metal crash barrier comprising of 3mm thick corrugated sheet metal beam rail, 70cm above Road/Ground level, fixed on ISMC series channel vertical post, 150x75x5mm spaced 2m center to center, 1.8m high, 1.1m below ground/road level, all steel parts and fitments to be galvanized by hot dip process, all fittings to conform to IS:1367 and IS:1364 metal beam rail to be fixed on the vertical post with a spacer of channel section 150x75x5mm, 330mm long complete as per clause 810.	106.00	One Rmt.	3,723.46	394,686.76
98	Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff and deposit it as directed with all lead & lift .	50.00	One Cum	109.24	5,462.08
99	Scarifying bitumen macadam surface 6 cm to 10 cm. depth including stacking useful materials on road side and disposing off remaining stuff (A) On Existing Road	1229.00	One Sqm	41.60	51,126.59

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
100	Construction of Subgrade with approved material obtained from borrow pits with all lifts and leads, transporting to site spreading, grading to required slope and compacting to meet requirement to MoRTH table 300-2 in layers not more than 200 mm thick as directed by engineer in charge.(Effective CBR Minimum 8 %)	500.00	One Cum	357.01	178,506.04
101	Construction of granular sub-base (Grade - 1) by providing coarse graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MoRTH clause 401.	1127.50	One Cum	1,175.46	1,325,336.13
102	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam (in two layers) 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, complete as per MoRTH clause 406.	1163.20	One Cum	1,767.33	2,055,760.85

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
103	Providing and applying Prime coat with Slow Setting Bitumen Emulsion binder (SS- 1) @ rate of 7.5 Kg./10 sq.m. of road surface using Emulsion pressure sprayer etc., cleaning the road surface complete including cost of material labour etc complete as directed by engineer in charge.	5602.50	One Sqm	59.26	331,998.31
104	Providing and applying tack coat with Rapid Setting Bitumen Emulsion binder (RS- 1) @ rate of 2.5 Kg./10 sq.m. of road surface using Emulsion pressure sprayer etc., cleaning the road surface complete including cost of material labour etc complete as directed by engineer in charge.	5603.00	One Sqm	19.22	107,684.61
105	Providing and laying 25 mm thick (Compacted) Semi - dense Bituminous concrete on exiting bituminous surface and using specified graded black trapped machine crushed aggregate with 5% Bitumen Vg-30 - 60/70 grade bitumen by Wt of total mix as per MORTH specification including heating and mixing of asphalt with B.T. chips in continuous batch mix plant and transporting same at site and spreading by sensor paver finisher and consolidation the same with pair of 8 tonnes to 10 tonnes vibratory roller to achieve desire density and including flushing the stone dust @0.03 cum/10smt including cost of required tools , plants, all machineries, equipment fire wood , oil, kerosene, charges etc. complete.	98.65	One MT	3,577.40	352,910.13

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
106	Providing and laying compacted Bituminous concrete using BT aggregate as per MORTH gradation ,specification and asphalt Grade VG 30 mixing @54.00 Kg /MT of total Wt. of mix i.e. (5.40% of total weight mix) including heating and mixing aggregate & asphalt by batch mix plant spreading the same by sensor paver finisher including rolling & consolidation with 10-12 tonne vibratory roller, Tandem Roller ,PTR & providing all materials equipment's tools & plants, fire wood, oil , kerosene, labour charges , using contractor 's own machinery etc. Complete as directed by engineer in charge as per MoRTH Specification	202.20	One MT	3,779.35	764,184.23
107	Providing and laying 20 mm thick mix seal surfacing using specified graded crushed Black Trap stone aggregates as per MORTH gradation using VG-30 bulk bitumen for mixing at the rate of 5.1 % (51.00 Kg./M.T.) by hot mix process and hot laid process using paver finisher to the required camber and grade, including rolling with vibratory roller to achieve desire density including cost of fire wood, oil, Kerosene, labour charges and hire charges of machineries etc. complete.	177.50	One MT	3,547.02	629,596.13

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
108	Construction of 100mm thick dry lean cement concrete Sub-base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600 1, cement content not to be less than 150 kg/ cum, optimum moisture content to be maintain during construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver compacting with 8-10 tonnes vibratory roller, finishing and curing as per MoRTH clause 601.	126.40	One Cum	3,246.66	410,378.45

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
109	Construction of 200mm thick un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with in M-30 grade of concrete with 43 grade cement , coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site and mechanically laid with a fixed form / slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing as per MoRTH clause 602.	170.90	One Cum	7,602.48	1,299,264.05

Sr. No.	Item Description	Quantity	Unit	Rate in Figure	Total Amount (in Rs.)
110	Diversion works for Pipe culvert structure at CH 1/800 to 2/000 is part of agency's scope of work & the work is carried out as per R&B GR No. PRCh/10/2018/15/C and amount is including 70% credit which will be recovered in Final bill of RA.	1.00	One No.	250,000.00	250,000.00
				Total Rs.	134,500,407.67

I/We am/ are willing to carry out the work at% above/ below percent (should be written in figure and words) of the estimated rate mentioned above. Amount of my / our works out as under.

Estimated amount put to tender
Deduct% below
Net
In words

Estimated amount put to tender
Add% above
Net
In words

*** (Please strike out whichever is not applicable)**

Note: Credit Value of Dismantle material & Credit value of Diversion work Rs. 75,40,796.04 shall be recovered from First-3 Consecutive RA Bill of Contractor. (RA-1, RA-2 & RA-3)

**Deputy Executive Engineer
Panchayat (R&B) Sub Division**

**Executive Engineer
Panchayat (R&B) Division
Devbhumi Dwarka**