

**BRIHANMUMBAI MUNICIPAL CORPORATION**

**Combined BOQ**

**AW-241:- Resurfacing of Various Roads in Asphalt Macadam / Paver Block in P/South Ward in Zone-IV of Western Suburbs Division.**

Sr. No.	Schedule Item No.	Description	Total Quantity	Rate	Per	Amount
1	R2-RW-7-10	Milling upto 75 mm depth Asphaltic surface by using milling machine including transportation anywhere as directed. (This item should be operated only when the milling in a single pass is required to be done more than 60 mm depth.)	82742.00	82.00	Square Meter	6,784,844.00
2	R2-RW-5-20	Providing and applying <b>PRIME COAT with CATIONIC BITUMEN EMULSION (SS) @ 7 to 12Kg. of 10 Sqmt.</b> over prepared surface to receive bituminous mix by applying PRIMER with mechanical spray bitumen, including cleaning of road surface etc. completed, as directed For Low Porosity surface & the prepared surface shall be allowed to cure for at least 24 hours or any other	82742.00	57.00	Square Meter	4,716,294.00
3	R2-RW-5-23	Providing and applying <b>TACK COAT with CATIONIC BITUMEN EMULSION (RS) @ 0.2 to 0.25Kg. of Sq.mt.</b> over prepared surface to receive bituminous mix by applying TACK COAT with mechanical spray bitumen, including cleaning of road surface etc. completed, as directed For	82742.00	33.00	Square Meter	2,730,486.00
4	R2-RW-5-25	<b>NORMAL BITUMINOUS SURFACES &amp; the tack coat shall be left to cure until all the solvent</b> Providing and applying <b>TACK COAT with CATIONIC BITUMEN EMULSION (RS) @ 0.25 to 0.30 Kg. of Sq.mt.</b> over prepared surface to receive bituminous mix by applying TACK COAT with mechanical spray bitumen, including cleaning of road surface etc. completed, as directed For <b>DRY &amp; HUNGRY BITUMINOUS SURFACES. (As per New Road Specifications Clause No. 10.1)</b>	82742.00	35.00	Square Meter	2,895,970.00
5	R2-RW-5-44	<b>P/L hot Premix Dense bituminous macadam with 4.50% bitumen content of grade VG-40 to the required line, level and camber rolling with 10/12 M.T.power, vibratory roller &amp; sensor paver etc. complete as specified and as directed to thickness of 50 mm. with anti-stripping agent at 1% by weight of bitumen using gradation II of "MORTH" (As per</b>	82742.00	450.00	Square Meter	37,233,900.00
6	R2-RW-5-40	<b>P/L hot premix Bituminous concrete with 6.00% of bitumen grade VG-40, surface coat by mix design as per MORTH1 to the compacted thickness of 40 mm, using new material to the required line, level and camber rolling with power vibratory roller &amp; sensor paver, etc. Complete as specified and as directed to thickness of 40 mm. with anti-stripping agent at 1% by weight of bitumen.</b>	82742.00	450.00	Square Meter	37,233,900.00
7	R2-RW-6-03	<b>Raising or lowering circular manholes</b> to the required level upto 20cm. Including all material, form work etc with 16cm.thick cement concrete M-15 (1:2:4) c.c. coping under frame and cover of manhole, including curing etc. complete as specified and as directed	245.00	1151.00	Each	281,995.00
8	R2-RW-6-04	<b>Raising or lowering water entrances</b> ,hydrant key box/ sluicibox/gully trap chambers to the required level,upto20cm.including all materials,curingetc. complete as specified and as directed.	191.00	801.00	Each	152,991.00
9	R2-RW-6-05	<b>Raising or lowering rectangular manholes</b> to the required level upto 30cm. Including all materials, form work, brick work and with 16 cm.thick M-15 C.C. coping under frame & cover of manhole including curing etc.complete, as specified and as directed.	130.00	2297.00	Each	298,610.00
10	R2-HE-7-2-a	Supplying, providing laying and jointing <b>GI pipes</b> in trenches of following class and diameter by wrapping them by hessian cloth with tar coating and including any nominal pipe length required to be laid above ground level, conveyance from stores to site work, all labour, necessary excavation, backfilling, giving satisfactory hydraulic test etc complete in all respect as directed by Engineer in	1250.00	168.00	Running Meter	210,000.00
11	R2-HE-7-2-b	---Do-----20 mm dia.	1250.00	174.00	Running Meter	217,500.00
12	R2-HE-7-2-c	---Do-----25 mm dia.	1250.00	265.00	Running Meter	331,250.00
13	R2-HE-7-2-d	---Do-----32 mm dia.	1250.00	316.00	Running Meter	395,000.00
14	R2-HE-7-2-e	---Do-----40 mm dia.	1250.00	388.00	Running Meter	485,000.00
15	R2-HE-7-2-f	---Do-----50 mm dia.	1250.00	481.00	Running Meter	601,250.00
16	R2-CS-PS-90-a	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc <b>15 mm dia</b>	1250.00	199.00	Running Meter	248,750.00
17	R2-RT-16-07	<b>Arrow marking</b> for Route direction straight or right or left or straight & right or straight or left & lettering as per design in white or traffic yellow as specified and directed for speed limit upto 50 km/hrs.	233.00	1241.00	Nos	289,153.00
18	R2-RT-16-34	Supplying/ fixing of <b>Two Way Raised Pavement Markers</b> made of polycarbonate 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 kg tested in accordance to ASTM D 4280 Type II and conforms to Specifications of Category A of MORTH Circular No. 10.1	11561.00	427.00	Each	4,936,547.00
19	R2-RW-10-37	Providing and fixing of the precast <b>TREE GUARD KERB</b> of M-20 C.C. of height 230mm., width 100mm., Length 400mm., finished neatly, compacting ,curing, formwork etc. including bedding of M-10 C.C.procured from M.C.G.M.approved R.M.C. plant,10cm.thick, filling of joints in C.M. 1:2 and maintaining the prepared surface with 3 coats of road marking paint. Grade I	1083.00	471.07	Running Meter	510,168.81
20	R2-CS-EW-16	<b>Excavation over areas for basements, roads, land/plot development in soft/ disintegrated rock, sand stone, stiff clay, gravel, cobblestone, hard laterite, water bound macadam, wet mix macadam, pitching, soiling, paths and hardore, lime concrete, plain cement concrete, stone masonry and all types of brick, block masonry, hollow masonry, load, rock, boulders, etc. for all</b>	0.00	343.00	Cubic Meter	-
21	R2-RW-2-21	Providing & laying, spreading & compacting specified crushed stone in <b>granular subbase course</b> including premixing the material in mechanical mixer (pugmill or approved type), spreading of mixed material in uniform layer of 100 mm to 75mm (compacted thickness each) with motor grader or paver on prepared mumm surface & compacting with 10 tonne vibrator roller to	766.00	2547.00	Cubic Meter	1,951,002.00
22	R2-RW-2-20	Providing & laying, spreading & compacting graded crushed stone aggregate to <b>wet mix macadam</b> satisfaction including premixing the material with water to OMC in mechanical mix (pugmill) carriage of mix material by tipper to site laying in uniform layer of 75 mm to 100 mm (compacted thickness each) with sensor paver finisher on prepared subbase & compacting with	766.00	2937.00	Cubic Meter	2,249,742.00
23	R2-RW-4-08	Removing existing water tables/cleaning off old mortar & carting away to the distance of 2 K.M. and stacking the same as directed by Engineer.	14838.00	32.00	Running Meter	474,816.00
24	R2-RW-10-51	Providing and fixing of <b>Water Dished Channel</b> size: 600 x 300 x 80 mm, M-40 grade manufactured in vacuum wet press technology plant with excellent finish and sharp edges inclusive of excavation in any soil except rock, laying of leveling course of M15 grade RMC 100 mm thick or required slope (inclusive of form work) jointing in 1:2 cement mortar proportion flush to concrete.	14838.00	799.00	Meter	11,855,562.00
25	R2-RW-3-22	Removing the paver blocks of any thickness, size & colour from carriage way or footpath & transporting the same to ward depot or any where in MCGM limit. The paver blocks shall be stacked neatly at specified locations etc. complete as specified and as directed by the Engineer.	0.00	157.00	Square Meter	-
26	R2-RW-3-11	Providing & fixing 80 mm thick interlocking unishape concrete pavers (monolithic- single layer precast concrete blocks) in grey cement in the carriage way having average crushing strength of not less than 50N/mm2 as per technical specifications and IS Code 15658:2006, placed on average compacted thickness of 75 mm. well graded sand cushioning uniformly compacted with sensor	0.00	871.00	Square Meter	-

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27	R2-RT-16-33	Providing and applying hot applied thermoplastic road marking material with glass beads extremely high skid resistance 2.5mm thick without primer coat (tack coat) on asphalt road surface. All labour materials with special aggregates etc, as specified in B.S. part-I & II 1989 and carrying out the markings on any road on center line and other lane markings continuous for intermittent.	14766.00	662.00	Square Meter	9,775,092.00
28	R2-SE-10-3	Supplying and fixing 0.56 M dia C.I. Circular extra heavy duty (EHD) air tight frame and cover weighing minimum 230kg fixed complete to manholes.	90.00	29935.00	Each	2,694,150.00
29	R2-SWD-175-A	Providing & Fixing 0.60m X 0.50m clear internal size of DI hinged type grating and frame (weighing minimum 80 kg) with grade designation of C250 with black bitumen coating to DI gratings & frame conforming to EN124 including testing inspection of material sample and finished product as per IS standard and as per Standard Specification no.SP-SWD/3.	191.00	14786.00	Each	2,824,126.00
30	R2-RW-5-46	P/L hot Premix Dense bituminous macadam with 4.5% bitumen content of grade VG-40 to the required line, level and camber rolling with 10/12 M.T. power vibratory roller & sensor paver etc. complete as specified and as directed with antistripping agent at 1% by weight of bitumen using grade II of "MORTTI" per prevailing MCGM specification for Roadworks clause no.35A.	766.00	9008.00	Cubic Meter	6,900,128.00
31	R2-RW-7-17	Providing applying Yellow & Black road marking paint grade-1 in 3-coats including single coat of approved brand primer after cleaning of old surface of kerbstone with brushing by wire brush as per relevant I.S. codes to the satisfaction of Engineer-in-charge etc. complete.	10945.00	50.00	Running Meter	547,250.00
32	R2-SWD-142	Constructing single water entrance of internal size 0.50m x 0.60m with cast-in-situ coping in M 20 grade, fixing of grating in M -20 as per standard drawings (Dwg No. MCGM/SWD/2013-14), etc complete as specified and as directed by Engineer in Charge. (excluding excavation, excavation and fixing of gratings and frame).	191.00	11641.00	Each	2,223,431.00
33	R2-RW-8-02	P/L 250 mm dia. R.C.C. humepipes, NP2 class, jointing, filletting in 1:1 C.M. including plugging of both the ends with gunny bags, brick masonry in C.M.1:4 with plaster in C.M.1:4 & curing etc. complete, as specified as directed	191.00	640.00	Running Meter	122,240.00
34	R2-RW-10-29	P/L R.M.C. M-20C.C having avg. compressive strength 24Mpa procured from M.C.G.M. approved R.M.C. plant including use of approved makes plasticizer/retarder & transported by transit mixer & placing at work site, compacting, finishing curing etc. by contractor's water & tarring the sides of formwork with hot bitumen as specified & directed by the Engineer	170.00	7055.00	Cubic Meter	1,199,350.00
PROPOSED ESTIMATED COST FOR THE SUBJECTED ROAD WORK			Total			143,370,497.81
			Say			143,370,498.00