

BRIHANMUMBAI MUNICIPAL CORPORATION

OFFICE OF CHIEF ENGINEER (ROADS)



UNIFIED SCHEDULE OF RATES

FOR

ROADS DEPARTMENT

2023

A. LIST OF UNITS USED

Sr. No.	Units	Abbreviation Symbol	Remark
1	Length (Running Meter)	MTR	
2	Weight (Tonne/Metric Tonne)	TO/MT	
3	Weight Kilogram	KG	
4	Time (Shift)	SFT	Shift Refers to a time duration of 8 Hrs
5	Time (Hour)	Hr	
6	Quantity (Numbers)	EA/NOS	Each refers to a single quantity per entity
7	Quantity (Lump sum)	LS	
8	Volume	CUM	
9	Area (Square Meter)	SQM	
10	Litre	LTR	
11	Cubic Centimeter	CUCM	
12	Upto 500 Meters	FHM	
13	Per 100 Meters	HMT	

B. LIST OF ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
ASTM	American Society for Testing and Materials
BS	British Standard published by the British Standards Institution
BOQ	Bill of Quantities forming part of the contract
CBR	California Bearing Ratio
IRC	Indian Road Congress
IS	Indian Standard published by the Bureau of Indian Standards
WC	Water Cement Ratio
CRRI	Central Road Research Institute
UCS	Unconfined Compressive Strength
WBM	Water Bound Macadam
SAM	Stress Absorbing Membrane
SAMI	Stress Absorbing Membrane Interlayer
MoRTH	Ministry of Road Transport and Highways
PCC	Plain cement concrete
RCC	Reinforced cement concrete
PSC	Prestressed concrete
HYSD	High Yield Strength Deformed Bars
EJ	Expansion joints
FBEC	Fusion Bonded Epoxy Coating
RE	Reinforced Earth
ESU	Elastomeric slab unit

C. INDEX

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SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	Chapter-1 (Earth Work Items)		
R3-RW-1-01	Scarifying the existing bituminous road surface to a depth of 150 mm removing, including transportation any where & bringing the existing road to proper grade, level & camber &/ as per super elevation, rolling with 10/12 Tonnes power roller & binding the scarified layer with stone dust/grit/ sand, watering, brushing, rolling, etc. complete as specified and directed by the Engineer.	SQM	201.00
R3-RW-1-02	Removing the humps (including wavy portion of the bituminous surface) by chiselling, picking, or by any means & transporting excavated material anywhere & dressing the same to proper level, grade & camber &/ super elevation complete as specified and directed by the Engineer.	SQM	133.00
R3-RW-1-03	Bringing back the materials excavated from the work site of any kind of any size by any means & when directed upto a distance of 3Km., for filling / refilling in layers not exceeding 30 cm loose thickness as directed & specified (30% will be deducted for voids in earth & 40% for voids in boulders from lorry measurement) as specified and directed by the Engineer.	CUM	631.00
R3-RW-1-04	Levelling, watering & rolling with power roller weighing not less than 3 tonnes & preparing the ground to the required level, grade & camber as specified and as directed by the Engineer.	SQM	7.00
R3-RW-1-05	Levelling, watering and rolling to 95% Standard Proctor Density with a power roller weighing not less than 10 tonnes and preparing the ground to the required grade and camber as specified and as directed by the Engineer.	SQM	10.00
R3-RW-1-06	Levelling, watering and rolling to 95% Standard Proctor Density with a power roller weighing not less than 10 tonnes and preparing the ground to the required grade and camber for rolling in trenches as specified and as directed by the Engineer .	SQM	21.00
R3-RW-1-07	P/L earth work in embankments &/ filling low-lying ground in layers not exceeding 25 cm. in loose thickness & compacting each layer with a 10/12 tonnes power roller including levelling watering etc. complete in conformity with the required lines, grades & cross sections & also cleaning & grubbing the	CUM	1122.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	ground etc. complete as per prevailing MCGM specifications for Roadworks clause no. 151.0		
R3-RW-1-08	P/L earth work in embankments & /or filling low-lying grounds in layers not exceeding 25cm. in loose thickness & compacting each layer with a 10/12 tonnes power roller including levelling watering, etc. complete in conformity with the required lines,grades & cross sections (Lab C.B.R. in soaked conditions shall not be less than 4) etc. including cleaning & grubbing the ground (The contractor should take note of the site conditions pertaining to creek lands under reference & should note that nothing extra whatsoever will be paid like diversion of water, the protective measures that may be necessary to be carried out to protect the embankment from water & settlement of earth. Settlements will not be paid for the earth work and must be retained for consolidations for one season & settlement if any will be ascertained & made up free of cost. The rate includes efforts for diversion of water, protection of embankments & also settlement of earth.etc. complete as per prevailing MCGM specification for Roadworks clause no. 151.0.	CUM	1237.00
R3-RW-1-09	P/L a top layer of 15 cm. compacted thickness of earth , rolling with 10/12 tonne power roller, watering etc. complete in conformity with the lines, grades & cross sections & camber super elevation (Lab C.B.R. in soaked condition shall not be less than 10) including clearing & grubbing the ground etc. complete (including stabilisation if necessary.) as per prevailing MCGM specifications for Roadworks clause no. 151.0	CUM	1265.00
R3-RW-1-10	To carry out earth work in embankment or filling in low lying ground with Municipal earth, debris in layers not exceeding 25 cm.in loose thickness & compacting each layer with 10/12 tonnes power roller, watering etc. in conformity with the lines, grades & cross sections including clearing & grubbing the ground etc. complete as specified and as directed by the Engineer, (Transport of Municipal earth will be paid separately) as per prevailing MCGM specifications for Roadworks clause no. 151.0	CUM	233.00
R3-RW-1-11	Filling in trenches with Municipal earth	CUM	179.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	materials etc. in layers not exceeding 25cm. in loose thickness , watering etc. compacting by means of plate vibrator or a power roller to a depth not exceeding 2m. etc. complete as per prevailing MCGM specification for Roadworks clause no. 151.0.		
R3-RW-1-12	Preparing stabilised soil base 15 cm. compacted thickness including excavation, adding the required sand, lime or other suitable material mixed & laid complete in regular lines to conform with the required grade, camber & cross section, rolling etc. complete as specified & as directed (C.B.R. under soaked condition shall not be less than 10), with soil available on site as per prevailing MCGM specifications for Roadworks clause no. 151.0	SQM	198.00
R3-RW-1-13	Levelling, watering & rolling by vibratory roller weighing not less than 10 tonnes & preparing the ground to the required grade & camber etc. complete as specified as directed by the Engineer as per prevailing MCGM specification for Roadwork	SQM	12.00
R3-RW-1-14	Use of sensor paver for laying as per prevailing MCGM specification for Roadwork	SQM	16.00
R3-RW-1-15	Use of ordinary paver for laying as per prevailing MCGM specification for Roadwork	SQM	11.00
R3-RW-1-16	Extra for using sensor paver instead of ordinary paver as per prevailing MCGM specification for Roadwork	SQM	5.00
R3-RW-1-17	Extra for using vibratory Roller instead of power roller for compaction as per prevailing MCGM specification for Roadwork	SQM	2.00
R3-RW-1-18	Levelling, watering & rolling by vibratory roller IDD-22 weighing not less than 10 tonnes & preparing the ground to the required grade & camber (only to be used for reinstatement of trench in road works)as per prevailing MCGM specification for Roadwork	SQM	24.00
R3-RW-1-19	Extra over for using vibratory roller IDD-22 at time of reinstatement of trench in road work as per prevailing MCGM specifications for Roadworks.	SQM	3.00
	Chapter 2 (Subbase and Base Items)		
R3-RW-2-01	Supplying blue trap stones of approved quality & providing the same in rubble packing of 25 cm thick to the required level & camber, filling in voids with chips & 60 mm metal etc. including spreading over the rubble 60 mm metal 75 mm thick, compacting to the	SQM	584.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	satisfaction of the Engineer by a roller weighing not less than 10 tonnes etc. complete as specified & as directed by the Engineer .		
R3-RW-2-02	Supplying blue trap stones of approved quality & providing the same in rubble packing of 25 cm thick to the required grade, level & camber, filling in voids with chips & 60 mm metal etc.compacting using mechanical vibrating compactor / 8-10 MT Roller etc.complete as specified & as directed by the Engineer .	SQM	402.00
R3-RW-2-03	Laying hand set rubble packing (using municipal rubble) of 25 cm thick to the required grade, level & camber, filling in the voids with chips & 60 mm Municipal metal including spreading over the rubble layer 50 mm to 60 mm size municipal metal for 75 mm thick compacted to the satisfaction of the Engineer by a roller weighing not less than 10 tonnes etc. as specified & as directed by the Engineer .	SQM	124.00
R3-RW-2-04	Laying hand set rubble packing (using municipal rubble) of 25 cm thick to the required level & camber, filling in the voids with new chips & 60 mm metal etc. including spreading over the rubble layer 60 mm. Size new metal 75 mm thick compacting to the satisfaction of the Engineer by a roller weighing not less than 10 tonnes as specified & as directed by the Engineer .	SQM	299.00
R3-RW-2-05	Providing dry rubble packing behind the abutment retaining & wing wall in horizontal layers etc. complete as specified & as directed by the Engineer .	CUM	965.00
R3-RW-2-06	Breaking concrete pieces available on site into 75 mm pieces, spreading the same to a thickness of 15 cm.and compacting to the satisfaction of the Engineer, by a static roller weighing not less than 10 tonnes including watering, binding with stone dust, etc. complete and making the layer water bound as per prevailing MCGM specifications for Roadworks clause no.235	SQM	107.00
R3-RW-2-07	Breaking asphalt cakes available on site into 90 mm pieces and spreading the same to a thickness of 15 cm. and compacting to the satisfaction of the Engineer, by a static roller weighing not less than 10 tonnes. Including binding with stone powder complete as	SQM	94.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	directed.		
R3-RW-2-08	Providing & laying sub base 20 cm compacted (K.T.R.) thick made of metal obtained from rock having AIV of not more than 40% (metal varying in size from 90 mm to 45 mm) and compacting the same to the satisfaction of the Engineer laid complete in two layers to the required level and camber, rolling with 10/12 tonnes roller, interstices being filled with stone dust, watering, rolling and making each layer waterbound as per prevailing MCGM specifications for Roadworks Clause no.220.	SQM	478.00
R3-RW-2-09	Providing and laying sub-base 10 cm.compacted thickness made up of metal obtained from rock having AIV of not more than 40% (metal varying in size from 90 mm to 45 mm) and compacting the same to satisfaction of the engineer, laid complete in one layer to the required level and camber, rolling with 10/12 tonnes roller, interstices being filled in with stone dust, watering, rolling &/ making the layer water bound as per prevailing MCGM specifications for Roadworks Clause no.220.	SQM	240.00
R3-RW-2-10	Spreading Municipal material such as broken concrete, asphalt pieces 90 mm to 45 mm metal in a layer of 10 cm. Compacted thickness and compacting with 10/12 tonnes power roller to the satisfaction of the Engineer, binding with stone dust, watering, rolling and making the layer waterbound as per prevailing MCGM specifications for Roadworks Clause no.220.	SQM	109.00
R3-RW-2-11	Breaking Municipal rubble stone available on site to 90 mm to 45 mm metal & laying the same in a sub-base of 10 cm. thick compacting to the satisfaction of the Engineer, by a 10/12 tonnes power roller, laid complete in ONE layer to the required level & camber, binding with stone dust, watering, rolling & making layer waterbound etc. complete as per prevailing MCGM specifications for Roadworks Clause no.220.	SQM	109.00
R3-RW-2-12	Breaking Municipal rubble stone available on site to 90 mm to 45 mm metal & laying the same in a sub-base compacting to 20cm. in two layers (each 100 mm thick) & to the satisfaction of the Engineer,by a 10/12 tonnes power roller, laid complete in one layer	SQM	216.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	to the required level & camber, binding with stone dust, watering, rolling & making the layer waterbound as per prevailing MCGM specifications for Roadworks Clause no.220.		
R3-RW-2-13	Supplying & spreading 60 mm metal compacting the same to 10 cm. To the satisfaction of the Engineer by a roller weighing not less than 10 tonnes to the required grade, level & camber including binding with grit, sand, stone dust, watering, rolling etc. complete & making the layer waterbound as per prevailing MCGM specifications for Roadworks Clause no.235.2.5.	SQM	208.00
R3-RW-2-14	Supplying & spreading 60 mm metal compacting the same to 7.5 cm. to the satisfaction of the Engineer, by a roller weighing not less than 10 tonnes to the required grade, level and camber including binding with grit, sand, stone dust, watering, rolling etc. complete and making the layer water bound as per prevailing MCGM specifications for Roadworks Clause no.220.	SQM	164.00
R3-RW-2-15	Spreading Municipal 60 mm size metal available on site compacting to 7.5 cm. the same to the satisfaction of the Engineer by roller weighing not less than 10 tonnes to the required grade/ level & camber including binding with sand/ stone dust & grit & watering, levelling, rolling etc. & making the layer waterbound as per prevailing MCGM specifications for Roadworks Clause no.220.	SQM	54.00
R3-RW-2-16	Breaking municipal rubble available on site to form 60 mm size metal & depositing the same in neat stacks as directed (depot or lorry measurement will be considered without deduction for voids) as per prevailing MCGM specifications for Roadworks, Clause no.220.	CUM	433.00
R3-RW-2-17	Breaking municipal rubble available on site into 60 mm size metal spreading the same to the thickness compacting to 10 cm. & to the satisfaction of the Engineer by a roller weighing not less than 10 tonnes to a proper grade, level & camber including binding with sand/stone dust or grit & watering, rolling etc. complete & making the layer waterbound as per prevailing MCGM specifications for Roadworks Clause no.220.	SQM	74.00
R3-RW-2-18	Breaking municipal rubble available on site into 60 mm size metal, spreading the same to	SQM	63.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	the thickness compacting to 7.5 cm & to the satisfaction of the Engineer, by a roller weighing not less than 10 tonnes to a proper grade, level & camber including binding with sand/stone dust or grit & watering, rolling etc. complete & making the layer waterbound as per prevailing MCGM specifications for Roadworks Clause no.220.		
R3-RW-2-19	Ramming & compacting the metal, concrete pieces, asphalt cakes with a heavy rammer weighing not less than 15kg. Or a frog rammer including watering, levelling etc. complete.	SQM	17.00
R3-RW-2-20	Providing & laying, spreading & compacting graded crushed stone aggregate to wet mix macadam to the satisfaction of Engineer including premixing the material with water to OMC in mechanical mix (pug mill) 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 vibratory roller (10 tonne) to achieve desired density including lighting, guarding barricading & maintenance of diversion etc. as directed by the Engineer, (Rebate for not using sensor paver should be taken,(metal gradation from 53 mm to 75 micron as per prevailing MCGM specifications for Roadworks clause no.240).	CUM	3338.00
R3-RW-2-21	Providing & laying, spreading & compacting specified crushed stone in granular subbase course including premixing the material in mechanical mixer (pug mill or approved type), spreading of mixed material in uniform layer of 100 mm to 75 mm (compacted thickness each) with motor grader or paver on prepared murum surface & compacting with 10 tonne vibratory roller to achieve desired density including all material, labour, machinery, lighting, barricading to all lifts & lead, maintenance of diversion etc. complete (metal gradation from 75mm to 75 micron as per prevailing MCGM specifications for Roadworks clause no.210).	CUM	2702.00
R3-RW-2-22	Rebate for not using motor grader / paver for laying of Granular Sub base in R3-RW-2.21.	CUM	-114.00
R3-RW-2-23	Providing and laying sub-base made up of metal obtained from rock having AIV of not more than 40% (metal varying in size from 90	CUM	2342.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	mm to 45 mm) and compacting the same to 7.5 to 10 cm thick & to the satisfaction of the engineer, laid complete in one layer to the required level and camber, rolling with 10/12 tonnes roller, interstices being filled in with stone dust, watering, rolling and/ making the layer water bound as per prevailing MCGM specifications for Roadworks Clause no.220. (VOLUMETRIC MEASUREMENTS TO BE RECORDED BY LEVELS ONLY)		
R3-RW-2-24	Supplying & spreading 60 mm metal compacting the same to 7.5 to 10 cm to the satisfaction of the Engineer by a roller weighing not less than 10 tonnes to the required grade, level & camber including binding with grit, sand stone dust, watering rolling etc. complete & making the layer waterbound as per prevailing MCGM specifications for Roadworks Clause no.220. (VOLUMETRIC MEASUREMENTS TO BE RECORDED BY LEVELS ONLY)	CUM	2851.00
Chapter-3 (Paver Items)			
R3-RW-3-01	P/F shahabad stone pavement 38 mm. to 60 mm. thick of approved quality in traffic islands or wherever directed in City/Subs. Including necessary base of cement concrete M-10 (1:3:6) upto any required depth but not less than 100 mm thick, sand cushioning 25 mm below tiles & finishing joints of the shahabad stone tiles with C.M. 1:2 and including pointing, curing etc. complete as specified & as directed.	SQM	1530.00
R3-RW-3-02	Removing, cleaning off old mortar & Carting away shahabad stone pavement upto a distance of 3 Km. & stacking the same neatly as directed.	SQM	51.00
R3-RW-3-03	Extra over above for an additional distance of every 1Km. Or part thereof.	SQM	1.80
R3-RW-3-04	Removing & resetting blue stone pavement in 1:6 C.M. on a 10 cm. thick M-10 C.C. bedding, including filling in joints with 1:2 C.M. & cement pointing, curing etc.	SQM	902.00
R3-RW-3-05	Removing & resetting blue stone pavement in 1:6 C.M. on a cushion of sand 20 mm to 25 mm thick on 10 cm thick M-10 C.C. bedding, including filling in joints with 1:2 C.M. & cement pointing, curing etc. complete	SQM	889.00
R3-RW-3-06	Removing, cleaning off old mortar & carting away blue stone pavement upto a distance of 3 Km. & stacking the same neatly as directed.	SQM	51.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
R3-RW-3-07	Extra over above for an additional distance of every 1 Km or part thereof.	SQM	1.80
R3-RW-3-08	P/L Precast M-20 plain C.C. slabs,10 cm thick in pavement over 10 cm thick M-10 C.C. bed, including filling in the joints with 1:2 C.M. & pointing, curing etc. complete.	SQM	1646.00
R3-RW-3-09	P/L Precast M-20 reinforced C.C. slabs,10 cm thick over M-10 C.C. bedding 10 cm thick, including filling in the joints with 1:2 C.M. & pointing, curing etc. complete.	SQM	2368.00
R3-RW-3-10	P/L Precast M-20 plain C.C. slabs 5 cm thick, in pavement on M-10 C.C. bedding 10 cm thick including filling in the joints with 1:2 C.M. & pointing, curing etc. complete.	SQM	1204.00
R3-RW-3-11	Providing & fixing 80 mm thick interlocking unishape concrete pavers (monolithic- single layer precast concrete blocks) in grey cement in the carriageway having average crushing strength of not less than 50 N/mm ² as per technical specifications and IS Code 15658:2006, placed on average compacted thickness of 25 mm, well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with the proper level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	816.00
R3-RW-3-12	Providing & fixing 60 mm thick interlocking unishape concrete pavers (monolithic- single layer precast concrete blocks) in grey cement having average crushing strength of not less than 40 N/mm ² as per technical specifications and IS Code 15658:2006, placed on average compacted thickness of 25 mm, well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	701.00
R3-RW-3-13	Removing & refixing interlocking concrete pavers of 80 mm thick, of any size, shape and colour considering 10% breakage area of paver block while removing the same from position and replacing the same by new paver blocks having average crushing strength not less than 50 N/mm ² as per technical specifications and IS Code 15658:2006, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and	SQM	251.00



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	camber etc. complete as specified and as directed by the Engineer.		
R3-RW-3-14	Removing & refixing interlocking concrete pavers of 60 mm thick, of any size, shape and colour considering 10% breakage area of paver block while removing same from position and replacing the same by new paver blocks having average crushing strength of not less than 40 N/mm ² as per technical specifications and IS Code 15658:2006, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	240.00
R3-RW-3-15	Providing & Fixing 80 mm thick unishape grey cement concrete interlocking pavers in the carriageway (monolithic-single layer precast concrete blocks) in Red (Terra Cotta), Black, Brown or any colour with pigment @ 3% by weight of cement having average crushing strength of not less than 50 N/mm ² as per technical specifications and IS Code 15658:2006, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	816.00
R3-RW-3-16	Providing & Fixing 60 mm thick unishape grey cement concrete interlocking pavers in the footpath with pigment @ 3% by weight of cement (monolithic-single layer precast concrete blocks manufactured in grey cement only) in Red (Terra Cotta), Black, Brown or any colour having average crushing strength not less than 40 N/mm ² as per technical specifications and IS Code 15658:2006, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	701.00
R3-RW-3-17	Providing & fixing in the footpath, 60 mm thick Lacquer coated (Reflective) interlocking grey cement concrete pavers in Red (Terra Cotta), Black, Brown, lemon yellow or any colour with vermeticular or any antiskid	SQM	706.00



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	<p>texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 40 N/mm² manufactured in double layer precast concrete blocks as per technical specifications and IS CODE 15658:2006. The top layer of paver block should be 12 to 15 mm thick and consist of cubical shape stone aggregate 8 mm size sieve 100% passing and retained on 4.75 mm size sieve, silica sand and with pure iron oxide ultra voilette stabilized pigment @ 5% by weight of cement and should be coated with lacquer having hard, high abrasive resistance and water repellent. The bottom layer should be 45 to 48 mm thick having 12 mm size sieve 100% passing aggregate as per technical specifications, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.</p>		
R3-RW-3-18	<p>Providing & fixing in the carriageway 80 mm thick grey cement concrete Lacquer coated (Reflective) interlocking pavers in Red (Terra Cotta), Lemon Yellow, Bright Yellow or any colour with vermeticular or any antiskid texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 50 N/mm² manufactured in double layer precast concrete blocks as per technical specifications and IS CODE 15658:2006. The top layer of paver block should be 12 to 15 mm thick and consisting of cubical shape stone aggregate 8 mm sieve 100% passing and retained on 4.75 mm size sieve, silica sand and with pure iron oxide ultra voilette stabilized pigment @ 5% by weight of white cement and should be coated with lacquer having hard, high abrasive resistance and water repellent. The bottom layer should be 65 to 68 mm thick having 12 mm sieve 100% passing aggregate as per technical specifications, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as</p>	SQM	896.00



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	specified and as directed by the Engineer.		
R3-RW-3-19	Providing & fixing in the carriageway 100 mm thick interlocking concrete unishape pavers (monolithic- single layer precast concrete blocks) of grey cement coloured having average crushing strength not less than 50 N/mm ² as per technical specification and IS CODE 15658:2006, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	977.00
R3-RW-3-20	Providing & Fixing in the carriageway interlocking 100 mm thick grey cement concrete unishape pavers in Red (Terra Cotta), Black, Brown or any colour unishape (monolithic-single layer precast concrete blocks) with pigment @ 3% by weight of cement having average crushing strength of not less than 50 N/mm ² as per technical specifications and IS CODE 15658:2006, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	1057.00
R3-RW-3-21	Removing & refixing interlocking concrete pavers of 100 mm thick, of any size, shape and colour considering 10% breakage area of paver block while removing same from position and replacing the same by new paver blocks having average crushing strength not less than 50 N/mm ² as per technical specifications and IS CODE 15658:2006, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	271.00
R3-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 BMC limit. The paver blocks shall be stacked neatly at specified locations etc. complete as specified and as directed by the Engineer.	SQM	193.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
R3-RW-3-23	Transporting & fixing the available municipal paver blocks having any type, size, shape, colour & thickness etc. on roads & footpaths. The paver blocks shall be placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer. (Rate is inclusive of transporting, loading and unloading of paver blocks from ward depot or anywhere in BMC limit to site and fixing the same etc.)	SQM	270.00
R3-RW-3-24	Providing & fixing in the footpath, 60 mm thick Lacquer coated (Reflective) interlocking white cement concrete pavers in red (Terra Cotta) Black, Brown, Lemon Yellow or any colour with vermeticular or any antiskid texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 40 N/mm ² as per technical specifications and IS CODE 15658:2006; manufactured in double layer precast concrete blocks. The top layer of paver block should be 12 to 15 mm thick and consistinf of cubical shape stone aggregate 8 mm size sieve 100% passing and retained on 4.75 mm size sieve, silica sand and with pure iron oxide ultra violet stabilized pigment @ 5% by weight of white cement and should be coated with lacquer having hard, high abrasive resistance and water repellent. The bottom layer in grey cement should be 45 to 48 mm thick having 12 mm size sieve 100% passing aggregates as per technical specifications, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	793.00
R3-RW-3-25	Providing & fixing in the footpath, 80 mm thick Lacquer coated (Reflective) interlocking white cement concrete pavers in red (Terra Cotta) Black, Brown, Lemon Yellow or any colour with vermeticular or any antiskid texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 50 N/mm ² as per technical specifications and IS CODE	SQM	895.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	15658:2006; manufactured in double layer precast concrete blocks. The top layer of paver block should be 12 to 15 mm thick and consisting of cubical shape stone aggregate 8 mm size sieve 100% passing and retained on 4.75 mm size sieve, silica sand and with pure iron oxide ultra violet stabilized pigment @ 5% by weight of white cement and should be coated with lacquer having hard, high abrasive resistance and water repellent. The bottom layer in grey cement should be 65 to 68 mm thick having 12 mm size sieve 100% passing aggregates as per technical specifications, placed on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.		
R3-RW-3-26	Providing & fixing in the footpath Interlocking concrete paver block 60 mm thick Beganit in grey/Black colour with Stone texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 40 N/mm ² as per technical specifications and IS CODE 15658:2006; manufactured in double layer Interlocking concrete paver blocks Beganit 12 to 15 mm thick and consisting of cubical shape Quartz stone aggregate 8 mm sieve 100% passing and retained on 4.75 mm size sieve, silica sand. The bottom layer should be 45 to 48 mm thick in grey cement having 12 mm sieve 100% passing aggregates as per technical specifications, rested on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	850.00
R3-RW-3-27	Providing & fixing in the footpath Concrete Paving Slabs (Flagstone) 400 X400 X60 mm thick or any approved size in grey or any specified colour with shot blasted texture or any approved texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 40 N/mm ² as per technical specifications and IS CODE 15658:2006; manufactured in double	SQM	873.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	layer precast concrete Paving Slabs (Flagstone) 12 to 15 mm thick and consisting of cubical shape Quartz stone aggregate 8 mm sieve 100% passing and retained on 4.75 mm size sieve, silica sand .The bottom layer should be 45 to 48 mm thick in grey cement having 12 mm sieve 100% passing aggregates as per technical specifications, rested on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.		
R3-RW-3-28	Providing & fixing in the footpath Concrete Paver blocks 200 X200 X60 mm thick or any approved size in grey or any specified colour with shot blasted texture or any approved texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 40 N/mm ² as per technical specifications and IS CODE 15658:2006; manufactured in double layer precast concrete Paver blocks 12 to 15 mm thick in top layer and consisting of cubical shape Quartz stone aggregate 8 mm sieve 100% passing and retain on 4.75 mm size sieve, silica sand. The bottom layer should be 45 to 48 mm thick in grey cement having 12 mm sieve 100% passing aggregates as per technical specifications, rested on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	718.00
R3-RW-3-29	Providing & fixing in the footpath Concrete Paver blocks 200 X 200X 80mm thick or any approved size in grey or any specified colour with shot blasted texture or any approved texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 50 N/mm ² as per technical specifications and IS CODE 15658:2006 manufactured in double layer precast concrete Paver blocks 12 to 15 mm thick top layer and consisting of cubical shape Quartz stone aggregate 8 mm sieve 100% passing and retained on 4.75 mm size	SQM	804.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	sieve, silica sand. The bottom layer should be 65 to 68 mm thick in grey cement having 12 mm sieve 100% passing aggregates as per technical specifications, rested on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.		
R3-RW-3-30	Providing & fixing in the footpath Concrete cobbles 100 X100 X60 mm thick or in any approved size in Grey colour or in any specified colour with shot blasted texture or any approved texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 40 N/mm ² as per technical specifications and IS CODE 15658:2006; manufactured in double layer precast concrete Concrete cobbles, 12 to 15 mm thick top layer and consisting of cubical shape Quartz stone aggregate 8 mm sieve 100% passing and retain on 4.75 mm size sieve, silica sand. The bottom layer should be 45 to 48 mm thick in grey cement having 12 mm sieve 100% passing aggregates as per technical specifications, rested on average compacted thickness of 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	833.00
R3-RW-3-31	Providing & fixing in the carriageway/ footpath, 60 mm thick Heritage paver interlocking white cement concrete pavers in red (terra Cotta), black, brown, lemon color with vermeticular or any antiskid texture on top surface of approved pattern/ shape and color, having average crushing strength not less than 40 N/mm ² as per technical specifications and IS CODE15658:2006; manufactured in double layer precast concrete blocks the top layer of paver block should be 12 to 15 mm thick and consist cubical shape stone aggregate 8 mm sieve 100% passing and retain on 4.75 mm size sieve, silica sand and with pure iron oxide ultra violet stabilized pigment @ 5% by weight of cement. The bottom layer should be 45 to	SQM	908.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	48 mm thick in grey cement having 12 mm sieve 100% passing aggregate as per technical specification, rested on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.		
R3-RW-3-32	Providing & fixing in the carriageway, 80 mm thick Heritage paver interlocking white cement concrete pavers in red (terra Cotta), black, brown, lemon color with vermeticular or any antiskid texture on top surface of aproved pattern/shape and color having average crushing strength not less than 50 N/mm ² as per technical specification and IS CODE 15658:2006; manufactured in double layer precast concrete blocks the top layer of paver block should be 12 to 15 mm thick and consist cubical shape stone aggregate 8 mm sieve 100% passing and retain on 4.75 mm size sieve , silica sand and with pure iron oxide ultra violet stabilized pigment @ 5% by weight of cement . The bottom layer should be 65 to 68 mm thick in grey cement having 12 mm sieve 100% passing aggregate as per technical specification rested on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	977.00
R3-RW-3-33	Supply of shot blasted machine cut, coloured Granite of size 200 x 200 x 40mm thick to be fixed on prepared sub-base on a bed of min. 40mm thick cushioning in C.M. 1:4 including neat cement float etc. filling of joints in C.M. 1:2 with grey cement to match the colour of cobble stone in the required pattern, design and as directed by the Engineer incharge, including cleaning, curing etc. complete as specified and as directed by the Engineer.	SQM	2717.00
R3-RW-3-34	Providing & fixing in the carriageway/ footpath Vitrified Ceramic Topping Paver Blocks of size 150 x 150 x 80mm thick in various colour combination having average crushing strength not less than 50 N/mm ² as per technical specification and IS Code 15658:2006 & vitrified topping of 12 to 15	SQM	1448.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	mm.The bottom layer should be 65 to 68 mm thick in grey cement having 12 mm sieve 100% passing aggregate as per technical specification, rested on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.		
R3-RW-3-35	Providing & fixing in the carriageway/ footpath Vitrified Ceramic Topping Paver Blocks of size 150 x 150 x 60mm thick in various colour combination having average crushing strength not less than 40 N/mm ² as per technical specification and IS Code 15658:2006 & vitrified topping of 12 to 15mm.The bottom layer should be 45 to 48 mm thick in grey cement having 12 mm sieve 100% passing aggregate as per technical specification, rested on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	1195.00
R3-RW-3-36	Providing & fixing in the footpath Concrete cobbles 150X150X80mm thick in Grey colour or any approved size in grey or any specified colour with shot blasted texture or any approved texture on top surface of approved pattern/ shape and colour having average crushing strength not less than 50 N/mm ² as per technical specification; manufactured in double layer precast concrete cobbles, 12 to 15 mm thick top layer and consist of cubical shape Quartz stone aggregate 8 mm sieve 100% passing and retain on 4.75 mm size sieve, silica sand .The bottom layer should be 65 to 68 mm thick in grey cement having 12 mm sieve 100% passing aggregate as per technical specification, rested on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	804.00
R3-RW-3-37	Providing and laying RED & BLACK GRANITE cobble stones of 100mm x 100mm x 100mm, 3 line dressing with 12 mm top layer in size of	SQM	3547.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	fine cut and well dressed in Grey colour in paving on a bed of min. 40 mm thick cushioning in C.M. 1:4 including neat cement float etc. filling of joints in C.M. 1:2 with grey cement to match the colour of cobble stone in the required pattern, design and as directed by the Engineer incharge, including cleaning, curing etc. complete.		
R3-RW-3-38	Supply of hand finish top machine cut, 3 line dressing Cobble Stone in size: 100 x 100 x 100mm in grey colour to be fixed on prepared sub-base with cement mortar 1:4 40 mm thick and cement slurry, filling of joints in C.M. 1:2 with grey cement to match the colour of cobble stone in the required pattern, design and as directed by the Engineer incharge, including cleaning, curing etc. complete as specified and as directed by the Engineer. NOTE: THIS ITEM SHOULD BE OPRATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent.	SQM	1090.00
R3-RW-3-39	Providing & fixing in the footpath Combi-Paver having average crushing strength not less than 40 N/mm ² as per technical specifications and IS Code 15658:2006; shot blasted 60mm thick in approved texture and colour and combination size 100 x 200, 125 x 200, 175 x 200, 225 x 200, 275 x 200 to be fixed on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer. NOTE: THIS ITEM SHOULD BE OPRATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent.	SQM	758.00
R3-RW-3-40	Providing and fixing of cement concrete Precast Header of M-50 grade of size: 500 mm length x 325 mm height x 150 mm thick manufactured in wet press vacuum dewatering technology plant or equivalent with colour or any specified colour for Edge Restriction pimple finish for high visibility with excellent quality and finish and edges perfect and sharp. Including excavation in any soil except rock, laying a leveling course of M 15 grade RMC 100 mm. thick, to required slope (inclusive of form work)	MTR	1583.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	jointing in C.M.1:2 proportion flush to concrete surface as directed by engineer. (Header shall be procured from BMC registered agencies). NOTE: THIS ITEM SHOULD BE OPERATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent.		
R3-RW-3-41	Providing and fixing of cement concrete Kerb Stone of M-25 grade in white cement with colour of size: 500mm width x 325 height x 165mm thick (Half Batter, Bull Nose / Full Batter) manufactured in wet press vacuum dewatering technology plant /equivalent with face pimple finish for high visibility with excellent quality and finish and edges perfect and sharp. Including excavation in any soil except rock, laying a leveling course of M 15 grade RMC 100 mm thick, to required slope (inclusive of form work) jointing in C.M.1:2 proportion flush to concrete surface, any shade as directed by engineer. (Kerbstones shall be procured from BMC registered agencies). NOTE: THIS ITEM SHOULD BE OPERATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent.	MTR	1950.00
R3-RW-3-42	Removing & refixing interlocking concrete pavers of 80 mm thick, of any size, shape and colour 200X200X80mm thick in grey colour with shot blasted texture on top surface, 80 mm thick Heritage paver interlocking white cement concrete pavers in red (Terra Cotta) Black, Brown lemon colour with vermeticular or any antiskid texture on top surface,Vitrified Ceramic Topping Paver Blocks of size 150 x 150 x 80mm thick in various colour combination) (RW-3.29,3.32,3.34) considering 10% breakage area of paver block while removing same from position and replacing the same by new paver blocks having average crushing strength not less than 50 N/mm ² as per technical specification and IS code 15658:2006; placed on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	277.00
R3-RW-3-43	Removing & refixing interlocking Concrete Paving Slabs(Flagstone) 400X400X60mm	SQM	257.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	thick in grey colour with shot blasted texture on top surface in various colour combination (RW-3.27) considering 10% breakage area of paver block while removing same from position and replacing the same by new paver blocks having average crushing strength not less than 40 N/mm ² as per technical specification and IS code 15658:2006; placed on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.		
R3-RW-3-44	Removing & refixing interlocking concrete pavers of 60 mm thick of any size, shape and colour (Began it in grey/Black colour with Stone texture on top surface, 200X200X60mm thick in grey colour with shot blasted texture on top surface, Concrete cobbles 100X100X60mm thick in Grey colour with shot blasted texture on top surface,60 mm thick Heritage paver interlocking white cement concrete pavers in red (Terra Cotta) Black, Brown lamen colour with vermeticular or any antiskid texture on top surface, Vitrified Ceramic Topping Paver Blocks of size 150 x 150 x 60mm thick in various colour combination,combi-paver 60 MM) (RW-3.26,3.28,3.30,3.31,3.35,3.39) considering 10% breakage area of paver block while removing same from position and replacing same by new paver blocks having average crushing strength not less than 40 N/mm ² as per technical specification and IS Code 15658:2006; placed on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as directed by the Engineer.	SQM	257.00
	Chapter-4 (Kerb Stone)		
R3-RW-4-01	Providing & Fixing kerb stones 30 cm.to 40 cm. long., 15 cm. wide, 38 cm. deep medium dressed in all exposed surfaces, set in cement mortar 1:2 on a 15 cm. thick and 25 cm. wide RMC M-20 C.C. bed including filling the joints with 1:2 C.M. pointing, curing etc. complete.	MTR	573.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
R3-RW-4-02	Removing & resetting kerb stones in 1:2 C.M. on new R.M.C.M-20 C.C. bed 15 cm, thick including filling the joints with 1:2 C.M. pointing, curing etc. complete.	MTR	343.00
R3-RW-4-03	Removing existing kerb stones, cleaning off old mortar, carting away up to a distance of 2 K.M. and stacking the same as directed by the Engineer.	MTR	42.00
R3-RW-4-04	Extra over above rates of carting for additional distance of every 2 KM. or part thereof .	MTR	6.00
R3-RW-4-05	Cement pointing to existing kerb stones after taking out old mortar to a depth of 20 mm. including filling the joints with cement mortar 1:2 and curing etc. complete.	MTR	25.00
R3-RW-4-06	Providing & fixing water tables of stone of size 30 cm. wide and 10 cm. thick, fairly dressed on a R.M.C. M-20 cement concrete bed 15 cm. thick, including filling in the joints, with cement mortar 1:2 cement pointing, curing etc. complete as specified and as directed by the Engineer.	MTR	435.00
R3-RW-4-07	Removing & resetting water tables 30 cm. wide on a new M-20 cement concrete bed 15 cm .thick including filling in the joints with C.M.1:2 and cement pointing , curing including removing the old cement bed, curing etc. complete.	MTR	381.00
R3-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.	MTR	42.00
R3-RW-4-09	Extra over and above for an additional distance of every 2 K.M. or part thereof.	MTR	3.00
R3-RW-4-10	Providing and fixing single row of setts 15 cm. to 25 cm. long, 10 cm. wide and 15 cm. deep fair dressed on top and medium dressed on other sides on 15 cm. thick and 15 cm. wide R.M.C. M-20 C.C. bed including filling the joints with C.M. 1:2 and cement pointing , curing etc. complete.	MTR	318.00
R3-RW-4-11	Removing and resetting single row of sets on a 15 cm. thick and 15 cm. wide R.M.C. M-20 c.c. bed including filling in the joints with C.M. 1:2 and cement pointing , curing etc. complete.	MTR	216.00
R3-RW-4-12	Providing and fixing double row of sett stones 15 cm. to 25 cm. long, 10 cm. wide and 15 cm. deep fair dressed on top and medium dressed on other sides on 15 cm. thick and	MTR	592.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	25 cm. wide on R.M.C. M-20 C.C. bed, including filling the joints with C.M. 1:2 and cement pointing and removing old concrete bed, curing etc. complete.		
R3-RW-4-13	Removing & resetting double row of sett stones on R.M.C. M-20 C.C. bed, 15 cm. thick and 25 cm. wide including filling the joints with C.M. 1:2 and cement pointing and removing old concrete bed, curing etc. complete.	MTR	368.00
R3-RW-4-14	Removing existing sets, cleaning off old mortar and carting away to a distance of 2 KM and stacking the same as directed by the Engineer.	MTR	65.00
R3-RW-4-15	Extra over above rate for a lead of every additional 2 KM or part thereof	HMT	149.00
	Chapter 5 (Bituminous Items)		
R3-RW-5-01	Supplying & spreading of one or more layers of compacted crushed coarse agg. with alternate application of bituminous binder & key aggregate with the requirements of MORTH, Rolling with 10/12 MT roller using VG-30 grade bitumen (1% Antistripping agent) to serve as base course and in conformity with the line, level and cross sections shown on the drawings or as directed by the Egg., thickness of individual course shall not exceed 75 mm. (As per prevailing MCGM specification for Roadwork Clause No. 352)	SQM	615.00
R3-RW-5-02	Supplying & spreading of one or more layers of compacted crushed coarse agg. with alternate application of bituminous binder & key aggregate with the requirements of MORTH, Rolling with 10/12 mt roller using VG-30 grade bitumen (1% Antistripping agent) to serve as base course and in conformity with the line, level and cross sections shown on the drawings or as directed by the Egg., thickness of individual course shall not exceed 50 mm. (As per prevailing MCGM specification for Roadwork Clause No. 352)	SQM	475.00
R3-RW-5-03	P/L premix hot mix Bituminous concrete with 6.00% of VG-30 bitumen content by weight of mix surface coat to compacted thickness of 40 mm. using new material to the required grade, level and camber rolling with vibratory roller , power roller, pneumatic roller & using sensor paver etc. complete as	SQM	778.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	specified and as directed with addition of lime filler 2% by weight of mix and anti stripping agent @ 1% of bitumen etc.(As per prevailing MCGM specification for Roadwork Clause No. 364)		
R3-RW-5-04	P/L MINIMUM 30 mm hot Premix Bituminous concrete with 6.00% of VG-30 grade bitumen using new material any where as directed including Rolling with 10 MT Pneumatic, power & vibratory roller & using sensor paver to the required grades, level, camber with line filler of 2% by weight & antistripping agent @ 1% of bitumen content by weight etc. complete.(As per prevailing MCGM specification for Roadwork clause no.364)	SQM	579.00
R3-RW-5-05	P/L Premix hot mixed Bituminous macadam with minimum 3.30% (with tolerance of +/-0.3) of VG-30 Bitumen by weight of mix to the required grade, level & camber, rolling with 10/12 tonnes power roller, vibratory roller & sensor paver complete & as specified & as directed, to thickness of 65 mm. With antistripping agent 1% by weight of bitumen (using 30% reconditioned milling material).(As per prevailing MCGM specification for Roadwork Clause No. 380)	SQM	648.00
R3-RW-5-06	P/L hot mixed graded Bituminous macadam with 3.30% (with tolerance of +/-0.3) of VG-30 Bitumen by weight of mix to the required grade, level & camber, rolling with 10/12 tonnes power roller, vibratory roller & sensor paver etc. complete as specified & as directed using grading II of MORTH & adding antistripping agent at the rate of 1% of bitumen by weight to a thickness of 65 mm.(using new materials).(As per prevailing MCGM specification for Roadwork Clause No.351)	SQM	706.00
R3-RW-5-07	P/L hot mixed graded Bituminous macadam with 3.30% (with tolerance of +/-0.3) of VG-30 Bitumen by weight of mix using reconditioned milling material and adding antistripping agent at the rate of 1% of bitumen, by weight to the required thickness, to bring the road to proper level, & camber rolling with power roller, Vibratory roller & sensor paver etc.(This item will be paid on volumetric basis by computing its dimensions by actual measurements).(Using	CUM	10402.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	reconditioned milling material 30%)(As per prevailing MCGM specification for Roadwork Clause No. 380)		
R3-RW-5-08	P/L hot mixed graded Bituminous Macadam with 3.30% (with tolerance of +/-0.3) of VG-30 Bitumen by weight of mix using reconditioned milling material to the required grade, level & camber, rolling with 10/12 tonnes power roller ,vibratory roller & sensor paver complete as specified & as directed to thickness of 75 mm with antistripping agent at the rate of 1% by weight of bitumen. (Using reconditioned milling material 30%)(As per prevailing MCGM specification for Roadwork Clause No. 380)	SQM	780.00
R3-RW-5-09	P/L hot mixed graded Bituminous macadam with 3.30% (with tolerance of +/-0.3) of VG-30 Bitumen by weight of mix to the required grade, level and camber, rolling with 10/12 tones power roller, vibratory roller & sensor paver etc. complete as specified and as directed, using grading of II 'MoRTH" and adding anti stripping agent at the rate of 1% of weight of bitumen) to thickness of 75 mm. (using new material) (As per prevailing MCGM specification for Roadwork Clause No. 351)	SQM	815.00
R3-RW-5-10	P/L hot mixed graded Bituminous macadam with 3.30% (with tolerance of +/-0.3) of VG-30 Bitumen by weight of mix to the required grade, level and camber, rolling with 10/12 tones power roller, vibratory roller & sensor paver etc. complete as specified and as directed, using grading of II 'MoRTH" and adding anti stripping agent 1% of by weight of bitumen)do--do-- to thickness of 50mm.(using new material).(As per prevailing MCGM specification for Roadwork Clause No. 351)	SQM	543.00
R3-RW-5-11	P/L hot mixed graded Bituminous Macadam with 3.30% (with tolerance of +/-0.3) of VG-30. Bitumen by weight of mix using new material and adding antistripping agent at the rate of 1% of bitumen by weight, to the required thickness to bring the road to proper grade, level & camber, rolling with 10/12 tonnes power roller, vibratory roller & using sensor paver, etc. complete as specified & as directed. (This item will be used as levelling coarse & will be paid on volumetric basis by	CUM	10862.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	computing its unit Cu.M. dimensions by actual measurements.) (using new material).(As per prevailing MCGM specification for Roadwork Clause No. 351)		
R3-RW-5-12	P/L hot mixed graded Bituminous Macadam with 3.30% (with tolerance of +/-0.3) of VG-30 Bitumen by weight of mix to the required grade, level & camber,& rolling with 3 tonnes roller etc. complete as specified & as directed, using grading II of 'MoRTH' to a required thickness of 50 mm.(to be used in the case of footpath only). (As per prevailing MCGM specification for Roadwork Clause No. 351)	SQM	527.00
R3-RW-5-13	Supplying & laying of BITUMINOUS COLD MIXES work by using new material Rolling with power roller, vibratory roller & using sensor paver. (CUTBACK BITUMEN Grade-MC) As per Mix design Morth 5th Revision April 2013 & as per prevailing MCGM specification for Roadwork Clause no.317	CUM	23346.00
R3-RW-5-14	Supplying & laying of BITUMINOUS COLD MIXES work by using new material Rolling with power roller, vibratory roller & using sensor paver. (Bitumen - CATTIONIC EMULSION Grade-MS) As per Mix design Morth 5th Revision April 2013 & as per prevailing MCGM specification for Roadwork Clause no.317	CUM	21262.00
R3-RW-5-15	P/L hot mixed premix seal coat 10mm. thick with 5.65% (with tolerance of + 0.3) of VG-30 Bitumen by weight of mix bitumen content including rolling by 8-10T Vibratory Rolleretc. complete.	SQM	197.00
R3-RW-5-16	P/L TYPE A Seal Coat using Bitumen - VG-30 Grade including rolling by 8-10T Vibratory Roller. As per Mix design Morth 5th revision April 2013 & as per prevailing MCGM specification for Roadwork Clause no.370	SQM	202.00
R3-RW-5-17	P/L hot mixed premix seal coat 10mm. thick with 5.65% (with tolerance of + 0.3) of VG-30 Bitumen by weight of mix bitumen content including rolling with 3 tone roller etc. complete as directed (to be used for footpath only) with antistripping agent 1% by weight of bitumen. (As per prevailing MCGM specification for Roadwork Clause No. 370)	SQM	194.00
R3-RW-5-18	P/L compacting Open Graded Premix Carpet of 20 mm thickness in a single coarse composed suitable small size aggregate Pre-	SQM	286.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	mixed with a bituminous binder content of 14.60 Kg/10sqmt. on a previously prepared based in accordance with a requirement of Morth 5th Revision 2013.(As per prevailing MCGM specification for Roadwork clause no.360). Seal coat to be paid separately.		
R3-RW-5-19	Providing and applying PRIME COAT with CATIONIC BITUMEN EMULSION (SS) @ 7 to 12 Kg. of 10Sqmt. 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 primed surface shall be allowed to cure for at least 24 hours or any other higher period, as is found to be necessary to allow all the moisture or volatiles to evaporate before any subsequent bituminous surface treatment or mix is laid (As per prevailing MCGM specification for Roadwork Clause No. 313, curing as per 313.5)	SQM	79.00
R3-RW-5-20	Providing and applying PRIME COAT with CATIONIC BITUMEN EMULSION (SS) @ 9 to 12 Kg. of 10Sqmt. over prepared surface to receive bituminous mix by applying PRIMER with mechanical spray bitumen, including cleaning of road surface etc. completed, as directed For Medium Porosity surface & the primed surface shall be allowed to cure for at least 24 hours or any other higher period, as is found to be necessary to allow all the moisture or volatiles to evaporate before any subsequent bituminous surface treatment or mix is laid. (As per prevailing MCGM specification for Roadwork Clause No. 313,curing as per 313.5)	SQM	85.00
R3-RW-5-21	Providing and applying PRIME COAT with CATIONIC BITUMEN EMULSION (SS) @ 12 to 15 Kg. of 10Sqmt. over prepared surface to receive bituminous mix by applying PRIMER with mechanical spray bitumen, including cleaning of road surface etc. completed, as directed For High Porosity surface & the primed surface shall be allowed to cure for at least 24 hours or any other higher period, as is found to be necessary to allow all the moisture or volatiles to evaporate before any subsequent bituminous surface treatment or mix is laid (As per prevailing MCGM specification for Roadwork Clause No.	SQM	101.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	313,curing as per 313.5)		
R3-RW-5-22	Providing and applying TACK COAT with CATIONIC BITUMEN EMULSION (RS) @ 0.2 to 0.25 Kg. of Sq.mt. 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 NORMAL BITUMINOUS SURFACES & the tack coat shall be left to cure until all the volatiles have evaporated before any subsequent construction is started, which is indicated by change in colour from brown to black (As per prevailing MCGM specification for Roadwork Clause No. 314, curing as per 314.3.4)	SQM	39.00
R3-RW-5-23	Providing and applying TACK COAT with CATIONIC BITUMEN EMULSION (RS) @ 0.25 to 0.30 Kg. of Sq.mt. 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 DRY & HUNGRY BITUMINOUS SURFACES (As per prevailing MCGM specification for Roadwork Clause No. 314)	SQM	41.00
R3-RW-5-24	Providing and applying TACK COAT with CATIONIC BITUMEN EMULSION (RS) @ 0.25 to 0.30 Kg. of Sq.mt. 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 GRANULAR SURFACES Treated with PRIMER (As per prevailing MCGM specification for Roadwork Clause No. 314)	SQM	41.00
R3-RW-5-25	Providing and applying TACK COAT with CATIONIC BITUMEN EMULSION (RS) @ 0.30 to 0.35 Kg. of Sq.mt. 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 NON BITUMINOUS SURFACES CEMENT CONCRETE PAVEMENT (As per prevailing MCGM specification for Roadwork Clause No. 314)	SQM	44.00
R3-RW-5-26	Providing and applying TACK COAT with bitumen VG-30 bitumen @ 0.20 to 0.25 Kg. of Sq.mt. over prepared surface to receive bituminous mix by applying TACK COAT with	SQM	40.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	mechanical spray bitumen, including cleaning of road surface etc. completed, as directed For NORMAL BITUMINOUS SURFACES (As per prevailing MCGM specification for Roadwork Clause No. 314)		
R3-RW-5-27	Providing and applying TACK COAT with bitumen VG-30 bitumen @ 0.25 to 0.30 Kg. of Sq.mt. 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 DRY & HUNGRY BITUMINOUS SURFACES (As per prevailing MCGM specification for Roadwork Clause No. 314)	SQM	43.00
R3-RW-5-28	Providing and applying TACK COAT with bitumen VG-30 bitumen @ 0.25 to 0.30 Kg. of Sq.mt. 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 GRANULAR SURFACES Treated with PRIMER (As per prevailing MCGM specification for Roadwork Clause No. 314)	SQM	43.00
R3-RW-5-29	Providing and applying TACK COAT with bitumen VG-30 bitumen @ 0.30 to 0.35 Kg. of Sq.mt. 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 NON BITUMINOUS SURFACES CEMENT CONCRETE PAVEMENT (As per prevailing MCGM specification for Roadwork Clause No. 314)	SQM	46.00
R3-RW-5-30	P/L Mastic Asphalt 25mm. thick having bitumen content 10% by weight as per I.S. code No. 5317/2002.(As per prevailing MCGM specification for Roadwork Clause No. 365)	SQM	1439.00
R3-RW-5-31	P/L Mastic Asphalt 40 mm. thick having bitumen content 10% by weight as per I.S. code No. 5317/2002.(As per prevailing MCGM specification for Roadwork Clause No. 365)	SQM	2303.00
R3-RW-5-32	P/L Mastic Asphalt 50 mm. thick having bitumen content 10% by weight as per I.S. code No. 5317/2002.(As per prevailing MCGM specification for Roadwork Clause No. 365)	SQM	2879.00
R3-RW-5-33	P/L Premix Bituminous concrete with 6.00% content by weight of mix with polymer modified bitumen (surface coat to thickness of about 40mm(compacted thickness) using	SQM	905.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	new material to the required grade, level & camber rolling with vibratory roller & power roller, pneumatic roller & using sensor paver etc. complete as specified as directed with addition of lime filler etc. complete. (bitumen of grade PMB-40). (As per prevailing MCGM specification for Roadwork clause no.364)		
R3-RW-5-34	P/L Minimum 30 mm Thick Bituminous concrete with 6.00% content by weight of mix polymer modified bitumen (PMB - 40 of grade VG-30) surface coat (compacted thickness) using new material to the required grade, level & camber rolling with power roller, vibratory roller, pneumatic roller & using sensor paver etc. complete as specified as directed with addition of lime filler etc. complete. (As per prevailing MCGM specification for Roadwork clause no.364)	SQM	679.00
R3-RW-5-35	P/L Premix Bituminous concrete with 6.00% rubberised modified bitumen surface coat to thickness of 40mm (compacted thickness) using new material to the required grade, level & camber rolling with vibratory roller, power roller, & pneumatic roller as specified as directed with addition of lime filler etc. Complete. (bitumen of grade CRMB-60 of grade VG-30) (As per prevailing MCGM specification for Roadwork clause no.364)	SQM	817.00
R3-RW-5-36	P/L MINIMUM 30 mm thick Bituminous concrete with 6.00% content by weight of mix rubberised modified bitumen (CRMB-60 of grade VG-30) surface coat using new material to the required grade, level & camber using vibratory roller, power roller, pneumatic roller & using sensor paver, etc. complete as specified as directed with addition of lime filler etc. Complete. (As per prevailing MCGM specification for Roadwork clause no.364)	SQM	612.00
R3-RW-5-37	P/L hot premix Bituminous concrete with 6.00% of bitumen grade VG-40, surface coat by mix design as per MORTH to the compacted thickness of 40 mm, using new material to the required line, level and camber rolling with power vibratory roller & sensor paver, etc. Complete as specified and as directed with lime filler 2% by weight and antistripping agent @ 1% of bitumen by weight etc. complete (As per prevailing MCGM specification for Roadwork clause no.364)	SQM	794.00
R3-RW-5-38	P/L MINIMUM 30 mm compacted thick hot	SQM	596.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	Premix Bituminous concrete with 6.00% of VG-40 grade bitumen using new material any where as directed including Rolling with 10/12 MT power ,vibratory roller & sensor paver to the required line, level, camber with line filler of 2% by weight & antistripping agent @ 1% of bitumen content by weight etc. complete.(As per prevailing MCGM specification for Roadwork clause no.364)		
R3-RW-5-39	P/L hot Premix seal coat 10 mm thick including rolling etc. complete as specified & directed bitumen of VG-40 grade content average 5.65% by weight.	SQM	206.00
R3-RW-5-40	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 & sensor paver etc. complete as specified and as directed to thickness of 65 mm. with antistripping agent at 1%by weight of bitumen using grading II of "MORTH"(As per prevailing MCGM specification for Roadwork clause no.354)	SQM	1034.00
R3-RW-5-41	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 & sensor paver etc. complete as specified and as directed to thickness of 50 mm. with antistripping agent at 1%by weight of bitumen using grading II of "MORTH"(As per prevailing MCGM specification for Roadwork clause no.354)	SQM	795.00
R3-RW-5-42	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 & sensor paver etc. complete as specified and as directed to thickness of 75 mm. with antistripping agent at 1% by weight of bitumen using grading II of "MORTH"(As per prevailing MCGM specification for Roadwork clause no.354)	SQM	1193.00
R3-RW-5-43	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 & sensor paver etc. complete as specified and as directed with antistripping agent at 1%by weight of bitumen using grading II of	CUM	15903.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	"MORTH"(As per prevailing MCGM specification for Roadwork clause no.354)		
R3-RW-5-44	P/L hot Premix Dense bituminous macadam with 4.50% bitumen content of grade VG-30 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 to thickness of 65 mm. with antistripping agent at 1%by weight of bitumen using grading II of "MORTH"(As per prevailing MCGM specification for Roadwork clause no.354)	SQM	1007.00
R3-RW-5-45	P/L hot Premix Dense bituminous macadam with 4.50% bitumen content of grade VG-30 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 to thickness of 50 mm. with antistripping agent at 1% by weight of bitumen using grading II of "MORTH"(As per prevailing MCGM specification for Roadwork clause no.354)	SQM	775.00
R3-RW-5-46	P/L hot Premix Dense bituminous macadam with 4.50% bitumen content of grade VG-30 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 to thickness of 75 mm. with antistripping agent at 1% by weight of bitumen using grading II of "MORTH"(As per prevailing MCGM specification for Roadwork clause no.354)	SQM	1162.00
R3-RW-5-47	P/L hot Premix Dense bituminous macadam with 4.50% bitumen content of grade VG-30 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 grading II of "MORTH"(As per prevailing MCGM specification for Roadwork clause no.354)	CUM	15497.00
R3-RW-5-48	P/L premix hot mix Bituminous concrete with 6.00% of VG-30 bitumen content by weight of mix surface coat to compacted to required thickness using new material to the required grade, level and camber rolling with power, vibratory roller pneumatic roller & sensor paver, etc. complete as specified and as directed with addition of lime filler 2% and anti stripping agent @ 1% by weight of	CUM	19309.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	bitumen etc.(As per prevailing MCGM specification for Roadwork clause no. 364)		
R3-RW-5-49	P/L premix hot mix Bituminous concrete with 6.00% of polymer modified bitumen (PMB-40) (VG-30) content by weight of mix surface coat to compacted to required thickness using new material to the required grade, level and camber rolling with power roller, vibratory roller,pnumatic roller & sensor paver,etc. complete as specified and as directed with addition of lime filler 2% and anti stripping agent @ 1% by weight of bitumen etc.(As per prevailing MCGM specification for Roadwork clause no.364)	CUM	22621.00
R3-RW-5-50	P/L premix hot mix Bituminous concrete with 6.00% of rubberised modified bitumen (CRMB-60) (VG-30)content by weight of mix surface coat to compacted to required thickness using new material to the required grade, level and camber rolling with power roller, vibratory roller pneumatic roller & sensor paver etc. complete as specified and as directed with addition of lime filler 2% and anti stripping agent @ 1% by weight of bitumen etc.(As per prevailing MCGM specification for Roadwork clause no.364)	CUM	20413.00
R3-RW-5-51	P/L premix hot mix Bituminous concrete with 6.00% of VG-40 grade bitumen content by weight of mix surface coat to compacted to required thickness using new material to the required grade, level and camber rolling with power roller, vibratory roller pneumatic roller & sensor paver etc. complete as specified and as directed with addition of lime filler 2% and anti stripping agent @ 1% by weight of bitumen etc.(As per prevailing MCGM specification for Roadwork clause no.364)	CUM	19861.00
R3-RW-5-52	P/L premix hot mix for SEMI- DENSE BITUMINOUS CONCRETE having bitumen content 5% by weight work by using new material Rolling with power roller, vibratory roller, pneumatic roller, using sensor paver. (Bitumen – VG-30 Grade) As per Mix design Morth 5th Revision 2013 & prevailing MCGM specification for Roadwork Clause no.363	CUM	18459.00
R3-RW-5-53	P/L CLOSE graded PREMIX CARPET with Cationic Bitumen Emulsion Grade(MS) compacted thickness of 20 mm.Rolling with power roller & sensor paver . As per Mix	SQM	299.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	design Morth 5th Revision 2013 (As per prevailing MCGM specification for Roadwork (TYPE A) Clause no.362)		
R3-RW-5-54	P/L for CLOSE GRADED PREMIX CARPET (TYPE A)(MSS) with Bitumen Grade VG-30 compacted thickness of 20 mm. Rolling with power roller & using sensor paver. As per Mix design Morth 5th Revision 2013 & as per prevailing MCGM specification for Roadwork Clause no.363	SQM	309.00
R3-RW-5-55	P/L for Open Graded Premix Carpet having bitumen content 5% to 6% by weigh20 mm thick using Paving Grade Bitumen VG-30 Rolling with power roller, vibratory roller, & sensor paver. As per Mix design Morth 5th Revision 2013 & prevailing MCGM specification for Roadwork clause no.361.	SQM	217.00
R3-RW-5-56	P/L Dense Bituminous macadam having bitumen content 4.5% by weight using Recycled material Rolling with power roller, vibratory roller ,using sensor paver. (Bitumen – VG-30 Grade). As per Mix design Morth 5th Revision 2013 & prevailing MCGM specification for Roadwork clause no.380.	CUM	14354.00
R3-RW-5-57	Extra over for use of PNUEMATIC ROLLER for compacting Bituminous Concrete as specified & as directed	SQM	29.00
R3-RW-5-58	P/L, mastic asphalt 40mm thick having bitumen content 10% by weight with 10/20 grade bitumen including producing the same at computerised batch mix plant, transporting the same to site by means of mastic cookers, laying the same with mastic paver and including all necessary tools, labours & barricading, spreading of aggregates as antiskid measures by means over newly laid mastic asphalt as per MCGM specification clause no. 365 of 'Roadwork' as directed by Engineer in charge (Note: The material specifications / gradation & content shall be as specified in the relevant I.S. Codes.)	SQM	2323.00
R3-RW-5-59	P/L, mastic asphalt 40mm thick having bitumen content 10% by weight with 10/20 grade bitumen including producing the same at computerised batch mix plant, transporting the same to site by means of mastic cookers, laying the same without mastic paver and including all necessary tools, labours & barricading, spreading of	SQM	2233.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	aggregates as antiskid measures by means over newly laid mastic asphalt as per prevailing MCGM specification clause no. 365 of 'Road work' as directed by Engineer in charge (Note: The material specifications / gradation & content shall be as specified in the relevant I.S. Codes.)		
R3-RW-5-60	P/L, mastic asphalt 25mm thick having bitumen content 10% by weight with 10/20 grade bitumen including producing the same at computerised batch mix plant, transporting the same to site by means of mastic cookers, laying the same with mastic paver and including all necessary tools, labours & barricading, spreading of aggregates as antiskid measures by means over newly laid mastic asphalt as per prevailing MCGM specification clause no. 365 of 'Roadwork' as directed by Engineer in charge (Note: The material specifications / gradation & content shall be as specified in the relevant I.S. Codes.)	SQM	1456.00
R3-RW-5-61	Rebate for not using PNEUMATIC TYRE ROLLER INSTEAD OF POWER ROLLER USED for compaction of BITUMINOUS MIXES	SQM	-14.00
R3-RW-5-62	Rebate for not using VIBRATORY ROLLER INSTEAD OF POWER ROLLER used for compaction of BITUMINOUS MIXES	SQM	-2.00
R3-RW-5-63	Rebate for not using SENSOR PAVER INSTEAD OF ORDINARY PAVER USED for Laying of BITUMINOUS MIXES	SQM	-6.00
R3-RW-5-64	Rebate for not using PNEUMATIC TYRE ROLLER INSTEAD OF VIBRATORY ROLLER USED for compaction of BITUMINOUS MIXES	SQM	-14.00
R3-RW-5-65	P/L hot premix Bituminous concrete with 5 to 6 % of bitumen grade VG 40,surface coat by mix design as per MORTH, having gradation of aggregates of grading 1, to the compacted thickness of 50 mm ,using new material to the required line,level and camber rolling with power vibratory roller &sensor paver, etc.complete as specified and as directed with lime filler 2%by weight and antistripping agent @ 1% of bitumen by weight etc.complete.As per new Road Specification clause no.364)	SQM	993.00
R3-RW-5-66	Supplying & laying of BITUMINOUS COLD MIXES work by using new material Rolling with power roller, vibratory roller & using sensor paver for repairing a pothole having	SQM	401.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	depth upto 20 mm. (Bitumen – CATIONIC EMULSION Grade-MS) As per Mix design Morth 5th Revision April 2013 & prevailing MCGM specification for Roadwork Clause no.317		
R3-RW-5-67	Supplying & laying of BITUMINOUS COLD MIXES work by using new material Rolling with power roller, vibratory roller & using sensor paver for repairing a pothole having depth above 20 to 40 mm. (Bitumen – CATIONIC EMULSION Grade-MS) As per Mix design Morth 5th Revision April 2013 & prevailing MCGM specification for Roadwork Clause no.317	SQM	802.00
R3-RW-5-68	Supplying & laying of BITUMINOUS COLD MIXES work by using new material Rolling with power roller, vibratory roller for repair to pothole having depth above 40 mm and upto 100 mm.(Bitumen – CATIONIC EMULSION Grade-MS). As per Mix design Morth 5th Revision April 2013 & as per prevailing MCGM specification for Roadwork Clause no.317. Minimum depth of cold mix should be 40mm, applying tack coat / emulsion and remaining depth of pothole to be filled with sand, metal, Gravely sand corresponding to Class II/III Grading of table 100.1 of new Road Specifications for Roadworks and watering, ramming etc as complete as directed by the Engineer in charge	SQM	920.00
R3-RW-5-69	Supplying & laying of BITUMINOUS COLD MIXES work by using new material Rolling with power roller, vibratory roller for repair to pothole having depth above 100mm and upto 150 mm.(Bitumen – CATIONIC EMULSION Grade-MS). As per Mix design Morth 5th Revision April 2013 & as per prevailing MCGM specification for Roadwork Clause no.317. Minimum depth of cold mix should be 40mm, applying tack coat / emulsion and remaining depth of pothole to be filled with sand, metal, Gravely sand corresponding to Class II/III Grading of table 100.1 of new Road Specifications for Roadworks and watering, ramming etc as complete as directed by the Engineer in charge	SQM	1018.00
R3-RW-5-70	P/L premix hot mix Bituminous concrete with 6.00% of VG-30 + waste plastic (the waste plastic to be used shall be as per the types of plastics given in IRC:SP:98-2013 &	SQM	761.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	shall be in the proportion of 8 % by weight of bitumen) bitumen content by weight of mix surface coat to compacted thickness of 40 mm. using new material to the required grade, level and camber rolling with vibratory roller , power roller,pnumatic roller & using sensor paver etc. complete as specified and as directed with addition of lime filler 2% by weight of mix and anti stripping agent @ 1% of bitumen etc.(As per prevailing MCGM specification for Roadwork Clause No. 364)		
R3-RW-5-71	P/L MINIMUM 30 mm hot Premix Bituminous concrete with 6.00% of VG-30 grade bitumen + waste plastic (the waste plastic to be used shall be as per the types of plastics given in IRC:SP:98-2013 & shall be in the proportion of 8 % by weight of bitumen) using new material any where as directed including Rolling with 10 MT Pneumatic, power & vibratory roller & using sensor paver to the required grades, level, camber with line filler of 2% by weight & antistripping agent @ 1% of bitumen content by weight etc. complete.(As per prevailing MCGM specification for Roadwork clause no.364)	SQM	571.00
R3-RW-5-72	P/L hot premix Bituminous concrete with 6.00% of bitumen grade VG-40 +waste plastic (the waste plastic to be used shall be as per the types of plastics given in IRC:SP:98-2013 & shall be in the proportion of 8 % by weight of bitumen),surface coat by mix design as per MORTH to the compacted thickness of 40 mm ,using new material to the required line, level and camber rolling with power vibratory roller & sensor paver, etc. Complete as specified and as directed with lime filler 2%by weight and antistripping agent @ 1% of bitumen by weight etc.complete (As per prevailing MCGM specification for Roadwork clause no.364)	SQM	772.00
R3-RW-5-73	P/L MINIMUM 30 mm compacted thick hot Premix Bituminous concrete with 6.00% of VG-40 grade bitumen +waste plastic (the waste plastic to be used shall be as per the types of plastics given in IRC:SP:98-2013 & shall be in the proportion of 8 % by weight of bitumen) using new material any where as directed including Rolling with 10/12 MT power ,vibratory roller & sensor paver to the required line, level, camber with line filler of	SQM	579.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	2% by weight & antistripping agent @ 1% of bitumen content by weight etc. complete.(As per prevailing MCGM specification for Roadwork clause no.364)		
R3-RW-5-74	Deleted		
R3-RW-5-75	P/L premix hot mix Bituminous concrete with 6.00% of VG-40 grade bitumen +waste plastic (the waste plastic to be used shall be as per the types of plastics given in IRC:SP:98-2013 & shall be in the proportion of 8 % by weight of bitumen) bitumen content by weight of mix surface coat to compacted to required thickness using new material to the required grade, level and camber rolling with power roller, vibratory roller pneumatic roller & sensor paver etc. complete as specified and as directed with addition of lime filler 2% and anti stripping agent @ 1% by weight of bitumen etc.(As per prevailing MCGM specification for Roadwork clause no.364)	CUM	19305.00
R3-RW-5-76	P/L hot premix Bituminous concrete with 5 to 6 % of bitumen grade VG 40 +waste plastic (the waste plastic to be used shall be as per the types of plastics given in IRC:SP:98-2013 & shall be in the proportion of 8 % by weight of bitumen),surface coat by mix design as per MORTH, having gradation of aggregates of grading 1, to the compacted thickness of 50 mm ,using new material to the required line,level and camber rolling with power vibratory roller &sensor paver, etc.complete as specified and as directed with lime filler 2%by weight and antistripping agent @ 1% of bitumen by weight etc.complete.As per new Road Specification clause no.364)	SQM	965.00
R3-RW-5-77	P/L hot premix Bituminous Concrete using Waste Plastic having with 6.00% "bitumen (VG-40) + waste plastic" (8 % by weight of bitumen), surface coat by mix design as per IRC:SP:98-2013 and MORTH to the compacted thickness of 40 mm, to required layer, using new material to the required line, level and camber rolling with power vibratory roller & sensor paver, etc. Complete as specified and as directed with lime filler 2% by weight and antistripping agent @ 1% of bitumen by weight etc. complete (As per prevailing MCGM specification for Roadwork clause no.364)	SQM	780.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
R3-RW-5-78	P/L premix hot mix Bituminous concrete with 6.00% of VG-30 bitumen +waste plastic (the waste plastic to be used shall be as per the types of plastics given in IRC:SP:98-2013 & shall be in the proportion of 8 % by weight of bitumen) bitumen content by weight of mix surface coat to compacted to required thickness using new material to the required grade, level and camber rolling with power, vibratory roller pneumatic roller & sensor paver, etc. complete as specified and as directed with addition of lime filler 2% and anti stripping agent @ 1% by weight of bitumen etc.(As per prevailing MCGM specification for Roadwork clause no. 364)	CUM	19029.00
Chapter-6 (Masonry)			
R3-RW-6-01	Providing UCR in cement mortar 1:5 using municipal rubble etc. complete as specified including providing necessary expansion joint wherever required and as directed.	CUM	2560.00
R3-RW-6-02	Providing tuck/ bush in cement mortar 1:1 cement pointing to stone masonry after racking out old mortar of the masonry joint to a minimum depth equivalent to a width of the joint including neat cement rendering curing etc. Complete.	SQM	168.00
R3-RW-6-03	Raising or lowering circular manholes to the required level upto 20 cm including all material, form work etc. with 16 cm thick cement concrete M-15 (1:2:4) coping under frame and cover of manhole, including curing etc. complete as specified and as directed	EA	1435.00
R3-RW-6-04	Raising or lowering water entrances, hydrant key box/ sluice box/ gully trap chambers to the required level upto 20 cm including all materials, curing etc. complete as specified and as directed.	EA	945.00
R3-RW-6-05	Raising or lowering rectangular manholes to the required level upto 30 cm including all materials, form work, brick work and with 16 cm thick M-15 cement concrete coping under frame & cover of manhole including curing etc. complete, as specified and as directed.	EA	2803.00
R3-RW-6-06	Removing the old C.I. circular frame & cover & delivering the same to any municipal depot or workshop, as directed.	EA	181.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	Chapter-7 (Miscellaneous Items)		
R3-RW-7-01	Removing & refixing traffic regulatory boards/busstop boards/street name boards etc. in M-10 cement concrete, complete as directed.	EA	1017.00
R3-RW-7-02	Removing traffic regulatory boards/busstop boards with brackets etc., to Ward Chowky complete, as directed.	EA	247.00
R3-RW-7-03	Removing & refixing wooden/concrete benches as directed.	EA	2972.00
R3-RW-7-04	Demolishing existing masonry, structures,(above & below G.L.) & carting away serviceable materials, to Ward Chowky & stacking the same, separately, as directed (Actual Volume of the masonry will be paid.)	CUM	876.00
R3-RW-7-05	Cutting down existing stone/ brick masonry compound walls, abutments,piers,wing-walls etc. including stacking the rubble,khandkies etc. in stack, as directed(Actual volume of structure will be paid.)	CUM	245.00
R3-RW-7-06	Demolishing existing C.G.I./asbestos sheet structures & carting away serviceable materials, to Ward Chowky & stacking the same, separately, as directed (Actual Volume of the structure will be paid.)	CUM	82.00
R3-RW-7-07	Removing existing barbed wire fencing/pipe railing of any height, including posts & carting away the same to Ward Chowky & stacking the same neatly as directed.	MTR	25.00
R3-RW-7-08	Breaking & removing existing cement concrete slab over culvert copping etc., by any means etc. complete as directed	CUM	1722.00
R3-RW-7-09	Milling upto 60mm. Depth Asphaltic surface by using milling machine including transportation anywhere as directed. NOTE: For further passes of 60mm. Or part thereof, same rate will be applicable.	SQM	85.00
R3-RW-7-10	Milling upto 75mm. 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 60mm. Depth.)	SQM	106.00
R3-RW-7-11	Spreading the milled material available on site,11cm. Thick, compacting the same by a roller not less than 10tonnes,with required grade, level & camber.	SQM	31.00
R3-RW-7-12	Spreading & rolling the Milled material available on site,in footpath,with a 3tonnes	SQM	26.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	roller anywhere,levelling the same to proper thickness, upto 50mm.with directed grade, & camber.		
R3-RW-7-13	Supply of excavator-cum-loader machine on hire chargers, inclusive of diesel, lube oil, Cleaner, Driver etc.	SFT	9775.00
R3-RW-7-14	Supply of dumper on hire charges inclusive of diesel,lube oil,Cleaner,Driver etc. without labourers.	SFT	5175.00
R3-RW-7-15	Supply of Road Roller 8 to 10 M.T. Capacity inclusive of diesel,lube oil,Cleaner,Driver etc.	SFT	9660.00
R3-RW-7-16	Supply of Road Roller 3 M.T. Capacity inclusive of diesel,lube oil,Cleaner,Driver etc.	SFT	6383.00
R3-RW-7-17	Providing applying Yellow & Black road marking paint grade -I in 3- coats including single coat of approved brand primer after cleaning of old surface of kerb stone with brushing by wire brush as per relevant I. S. codes to satisfaction of Engineer in charge etc. complete.	MTR	59.00
R3-RW-7-18	Providing applying Yellow & Black road marking paint grade -I in 3- coats including single coat of approved brand primer after cleaning of old surface of any type divider with brushing by wire brush as per relevant I. S. codes to satisfaction of Engineer in charge etc. complete.	SQM	170.00
R3-RW-7-19	Transplantation of existing trees of girth of all dia. Including uprooting and shifting of the tree and placing inpits of suitable size and after transplanting, removal of excavated earth to desired location, filling the pit with red earth, manuare, watering etc. complete with all leads, lifts, including maintenance for 3 years. The item also includes back filling of the trench taken for exposing the root system of the tree proposed to be transplanted etc. complete as directed by Engineer-in-charge.	NOS	7242.00
R3-RW-7-20	Cutting down of tree having diameter above 50 mm & Upto 150 mm	EA	587.00
R3-RW-7-21	Cutting down of tree having diameter above 150 mm & Upto 300 mm	EA	4117.00
R3-RW-7-22	Cutting down of tree having diameter above 300 mm & Upto 450 mm	EA	7852.00
R3-RW-7-23	Cutting down of tree having diameter above 450 mm & Upto 600 mm	EA	10902.00
R3-RW-7-24	Cutting down of tree having diameter above 600 mm & Upto 900 mm	EA	15477.00
R3-RW-7-25	Cutting down of tree having diameter above	EA	20279.00



SCHEDULE OF ROAD WORKS 2023

ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	900 mm & Upto 1200 mm		
R3-RW-7-26	Deposit with concerned authorities for cutting and transplanting of trees as per Government norms etc. complete as directed by Engineer in charge.	NOS	7242.00
R3-RW-7-27	Supplying, stacking & Planting of approved trees of at least 1.0 m , height above GL in excavated pit of size 1.2 m x 1.2m x 1.2m, at the site shown by the Engineer, backfilling the pit by putting the manure & soil and watering & maintaining for 3 years, including disposing the excavated earth etc. complete as directed by Engineer-in-charge.	NOS	2588.00
R3-RW-7-28	Excavation and dismantling of structures on roadway, dismantling the existing Bus shelters including sorting out the dismantled material, disposal of unserviceable material with all lift and leads etc. complete as directed by Engineer-in- charge.	NOS	7783.00
R3-RW-7-29	Excavation and dismantling of structures on roadway, shifting and relocating of essential utilities, street poles, signals road sign boards including taking necessary permission from the service providers/ authorities including payment of necessary deposits and supervision charges, shifting charges etc. complete as directed by Engineer-in- charge. a) Street Poles	NOS	1403.00
R3-RW-7-30	Excavation and dismantling of structures on roadway, shifting and relocating of essential utilities, street poles, signals road sign boards including taking necessary permission from the service providers/ authorities including payment of necessary deposits and supervision charges, shifting charges etc. complete as directed by Engineer-in- charge. b) Traffic Signals	NOS	1403.00
R3-RW-7-31	Excavation and dismantling of structures on roadway, shifting and relocating of essential utilities, street poles, signals road sign boards including taking necessary permission from the service providers/ authorities including payment of necessary deposits and supervision charges, shifting charges etc. complete as directed by Engineer-in- charge. c) Road Sign Boards	NOS	387.00
R3-RW-7-32	Providing placing in position, levelling, fixing M 25 Grade R.C.C. pre-cast frame of size 1150 x 1150 x 150 mm and cover(2 Nos) of size 1000x500x75mm in line , level over	SET	3658.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	storm water drain as per design procured from approved manufacturer etc.. Complete		
R3-RW-7-33	Providing placing in position, levelling, fixing M 25 Grade R.C.C. pre-cast frame of size 1150 x 900 x 150 mm and cover(1 Nos) of size 1000x750x75mm in line , level over storm water drain as per design procured from approved manufacturer etc.. Complete.	SET	2697.00
R3-RW-7-34	Supply of M - 25 CC steel fiber reinforced precast cover of size 1000 mm x 500 mm 75 mm as per design, procured from approved manufacturers etc. complete.	SET	864.00
R3-RW-7-35	Supply of M - 25 CC steel fiber reinforced precast cover of size 1000 mm x 750 mmx 75 mm as per design, procured from approved manufacturers etc. complete.	SET	1138.00
R3-RW-7-36	Barricading the trenches on traffic flow side with 1.60 mtr. Height M.S. Angle post of 50 x 50 x 5 mm. buried in half the depth in drum of 20 ltrs. Capacit by 1:3:6 concrete spaced at 2.25 m centre to centre with 22 guage G.I. corrugated sheet of size 2.40 x 0.75 m. bolted to the M.S. Angle post and painted in yellow and black band with synthetic enamel paint as per traffic norms and as directed by the Engineers.	MTR	271.00
R3-RW-7-37	To carry out total station survey of the road with reference to existing co-ordinate system by establishing control stations by establishing temporary bench mark from permanent bench mark, marking centre line of the road by nails, carrying out detailed levelling, plotting cross sections longitudinally at 20 mtr. intervals with levels at every 4 mtr. cross distance, preparing drawings on Auto cad to the scale of 1:500 and supplying 2 hard copies and 1 soft copy in C.D. form.. etc. complete upto 18.3 mtr wide road.	FHM	12000.00
R3-RW-7-38	To carry out total station survey of the road with reference to existing co-ordinate system by establishing control stations by establishing temporary bench mark from permanent bench mark, marking centre line of the road by nails, carrying out detailed levelling, plotting cross sections longitudinally at 20 mtr. intervals with levels at every 4 mtr. cross distance, preparing drawings on Auto cad to the scale of 1:500 and supplying 2 hard copies and 1 soft copy in C.D. form.. etc. complete upto 18.3 mtr wide road. ,Extra over	HMT	2000.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	and above for every 100 mtrs. And part thereof.		
R3-RW-7-39	To carry out total station survey of the road with reference to existing co-ordinate system by establishing control stations by establishing temporary bench mark from permanent bench mark, marking centre line of the road by nails, carrying out detailed levelling, plotting cross sections longitudinally at 10 mtr. intervals with levels at every 2 mtr. cross distance, preparing drawings on Auto cad to the scale of 1:500 and supplying 2 hard copies and 1 soft copy in C.D. form.. etc. complete from 18.30 to 27.45 mtr. wide road.	FHM	18000.00
R3-RW-7-40	To carry out total station survey of the road with reference to existing co-ordinate system by establishing control stations by establishing temporary bench mark from permanent bench mark, marking centre line of the road by nails, carrying out detailed levelling, plotting cross sections longitudinally at 10 mtr. intervals with levels at every 2 mtr. cross distance, preparing drawings on Auto cad to the scale of 1:500 and supplying 2 hard copies and 1 soft copy in C.D. form.. etc. complete from 18.30 to 27.45 mtr. wide road - Extra over and above for every 100 m & part thereof.	HMT	3000.00
R3-RW-7-41	To carry out total station survey of the road with reference to existing co-ordinate system by establishing control stations by establishing temporary bench mark from permanent bench mark, marking centre line of the road by nails, carrying out detailed levelling, plotting cross sections longitudinally at 10 mtr. intervals with levels at every 2 mtr. cross distance, preparing drawings on Auto cad to the scale of 1:500 and supplying 2 hard copies and 1 soft copy in C.D. form.. etc. complete from 27.45 mtr. to 36.60 mtr wide road.	FHM	20000.00
R3-RW-7-42	To carry out total station survey of the road with reference to existing co-ordinate system by establishing control stations by establishing temporary bench mark from permanent bench mark, marking centre line of the road by nails, carrying out detailed levelling, plotting cross sections longitudinally at 10 mtr. intervals with levels at every 2 mtr. cross distance, preparing drawings on Auto	HMT	4000.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	cad to the scale of 1:500 and supplying 2 hard copies and 1 soft copy in C.D. form.. etc. complete from 27.45 mtr. to 36.60 mtr wide road. Extra over and above for every 100 mtrs. And part thereof.		
R3-RW-7-43	To carry out total station survey of the road with reference to existing co-ordinate system by establishing control stations by establishing temporary bench mark from permanent bench mark, marking centre line of the road by nails, carrying out detailed levelling, plotting cross sections longitudinally at 10 mtr. intervals with levels at every 2 mtr. cross distance, preparing drawings on Auto cad to the scale of 1:500 and supplying 2 hard copies and 1 soft copy in C.D. form.. etc. complete for roads wider than 36.6 mtr.	FHM	23000.00
R3-RW-7-44	To carry out total station survey of the road with reference to existing co-ordinate system by establishing control stations by establishing temporary bench mark from permanent bench mark, marking centre line of the road by nails, carrying out detailed levelling, plotting cross sections longitudinally at 10 mtr. intervals with levels at every 2 mtr. cross distance, preparing drawings on Auto cad to the scale of 1:500 and supplying 2 hard copies and 1 soft copy in C.D. form.. etc. complete for roads wider than 36.6 mtr., Extra over and above for every 100 mtrs. And part thereof.	HMT	4500.00
R3-RW-7-45	Providing and fixing the barricading in double row with G.I. Sheets of 22 guage manufactured by TATA Co. and JINDAL Co. fixed on 3 inch dia. (75mm.) wooden bullies which will be buried in existing road sufficeintly. Embossing of TATA/JINDAL Brand on G.I. Sheet shall be ensured before painting with yellow and black bands of Synthetic enamel paint as per the traffic norms and as directed by the Engineer.	MTR	887.00
R3-RW-7-46	Supplying and fixing 600 mm x900 mm clear opening composite resin manhole cover of single cover design, of approved brand with 12.5 ton load capacity, as per EN-124 standard.Covers & frame shall have SS nut bolt locking arrangement and top abrasion resistant layer of decorative granite finish. Abrasion resistance shall be conforming to IS-15658:2006 and permissible permanent	NOS	14065.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	set value of 6mm after the application of 2/3 test load in five continuous applications as per EN-124. The testing shall be performed in fully equipped and NABL certified test lab with random batch test (2% of lot size) as per testing procedure stated in EN-124 standard, including testing ,inspection of material sample and finished product in presence of Engineers (2nos.) at Manufacturer's work , etc. complete as specified and as directed by Engineer-in-Charge. (Inspection shall be as per guidelines of IS and EN-124 standard specifications.)		
R3-RW-7-47	Supplying and fixing 900 mm x 900 mm clear opening composite resin manhole cover with two cover design, of approved brand with 12.5 ton load capacity, as per EN-124 standard. Covers & frame shall have SS Nut bolt locking arrangement and top abrasion resistant layer of decorative granite finish. Abrasion resistance shall be conforming to IS-15658:2006 and permissible permanent set value of 6mm for each cover, after application of 2/3 test load in five continuous applications as per EN-124. The testing shall be performed in fully equipped and NABL certified test lab with random batch test (2% of lot size) as per testing procedure stated in EN-124 standard, including testing ,inspection of material sample and finished product in presence of Engineers (2nos.) at Manufacturer's works, etc. complete as specified and as directed by Engineer-in-Charge. (Inspection shall be as per guidelines of EN-124-2015 standard specifications.	NOS	8961.00
R3-RW-7-48	Supplying 600 mm x 900 mm clear opening composite resin manhole cover with two cover design, of approved brand with 12.5 ton load capacity, as per EN-124 standard. Covers & frame shall have SS Nut bolt locking arrangement and top abrasion resistant layer of decorative granite finish. Abrasion resistance shall be conforming to IS-15658:2006 and permissible permanent set value of 6mm for each cover, after application of 2/3 test load in five continuous applications as per EN-124. The testing shall be performed in fully equipped and NABL certified test lab with random batch test (2% of lot size) as per testing procedure	NOS	13800.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	stated in EN-124 standard, including testing ,inspection of material sample and finished product in presence of Engineers (2nos.) at Manufacturer's works, etc. complete as specified and as directed by Engineer-in-Charge. (Inspection shall be as per guidelines of EN-124-2015 standard specifications.		
R3-RW-7-49	Supplying 900 mm x900 mm clear opening composite resin manhole cover with two cover design, of approved brand with 12.5 ton load capacity, as per EN-124 standard. Covers & frame shall have SS Nut bolt locking arrangement and top abrasion resistant layer of decorative granite finish. Abrasion resistance shall be conforming to IS-15658:2006 and permissible permanent set value of 6mm for each cover, after application of 2/3 test load in five continuous applications as per EN-124. The testing shall be performed in fully equipped and NABL certified test lab with random batch test (2% of lot size) as per testing procedure stated in EN-124 standard, including testing ,inspection of material sample and finished product in presence of Engineers (2nos.) at Manufacturer's works, etc. complete as specified and as directed by Engineer-in-Charge. (Inspection shall be as per guidelines of EN-124-2015 standard specifications.	NOS	8625.00
R3-RW-7-50	P/f Polyethylene plastic water/sand fillable Metro Barricades having approx. size 1840 mm X 440 mm X 1900 mm, (LxWxD), 32-35 Kgs empty wt. and tank capacity 100-120 lits., manufactured by ISO Certified Company having minimum experience of 3 years in manufacturing and supplying to the Govt./Semi Govt./Other reputed organisations alongwith necessary fixing arrangement as specified and directed by the Engineer Incharge	MTR	321.00
R3-RW-7-51	P/f Polyethylene plastic water/sand fillable Barricades having approx. size 2000 mm X 560 mm X 1000 mm, (LxWxD), 20-23 Kgs empty wt. and tank capacity 80-100 lits., manufactured by ISO Certified Company having minimum experience of 3 years in manufacturing and supplying to the Govt./Semi Govt./Other reputed organisations alongwith necessary fixing and interlocking arrangement as specified and	MTR	349.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	directed by the Engineer Incharge.		
R3-RW-7-52	P/f Polyethylene plastic water/sand fillable Metro Barricades having approx. size 1840 mm X 440 mm X 1900 mm, (LxWxD), 32-35 Kgs empty wt. and tank capacity 100-120 lits., manufactured by ISO Certified Company having minimum experience of 3 years in manufacturing and supplying to the Govt./Semi Govt./Other reputed organisations alongwith necessary fixing arrangement as specified and directed by the Engineer Incharge.(Temporary Barricades) (Rate RMT per 10 days)	MTR	85.00
R3-RW-7-53	P/f Polyethylene plastic water/sand fillable Barricades having approx. size 2000 mm X 560 mm X 1000 mm, (LxWxD), 20-23 Kgs empty wt. and tank capacity 80-100 lits., manufactured by ISO Certified Company having minimum experience of 3 years in manufacturing and supplying to the Govt./Semi Govt./Other reputed organisations alongwith necessary fixing and interlocking arrangement as specified and directed by the Engineer Incharge. (Temporary Barricades) (Rate RMT per 10 days)	MTR	63.00
R3-RW-7-54	Providing and fabricating the structural steel barricade made out of 1.25 mm thk MS plates of size 2.5 m x 2 m , M. S. Angles ISA 40 mm x40 mmx 5 mm., MS flat 40 mm x5 .mm thk and ISLB 250 mm x 125 mm as per IS 1161- I RHS/SHS rolled angle plates etc. (material as per IS 4923 Grade YST 241) of TATA Steel, Lloyd Steel, SAIL, Essar Steel approved in straight profile of all sizes, shapes and for all works including stiffeners, bolts and nuts, fillet/butt welding, splicing, machine grinding of all member joints wherever required to give neat appearance, fabricating to a curved or bent profile like arch or semi circular shape, fixing at site as directed etc. complete. Rate is including the entire logistics of transporting and other related activities for completing this item.	TO	1916.00
	Chapter-8 (Ducts and Pipes)		
R3-RW-8-01	P/L 150 mm dia. R.C.C. hume pipes, NP2 class, jointing, filling 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	MTR	674.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	as directed.		
R3-RW-8-02	P/L 250 mm dia. R.C.C. hume pipes, NP2 class, jointing, filling 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	MTR	868.00
R3-RW-8-03	P/L 300 mm dia. R.C.C. hume pipes, NP2 class, jointing, filling 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	MTR	1033.00
R3-RW-8-04	Providing & fixing in position M-20 cement concrete precast slab, 50 cm x 50 cm & 8 cm thick with the word "DUCT" inscribed over it including making good, the damaged surrounding surface etc. complete.	NOS	432.00
	Chapter-10 (Cement Concrete Road Items)		
R3-RW-10-01	Providing & laying M-40 cement concrete including form work, mixing in non-tilting mechanical mixer (with Weigh Batcher), compacting by internal & surface vibrator, finishing, curing & tarring the sides of slabs with hot bitumen/ black Japan Paint as specified and as directed (cement mortar vata will be paid separately). Contractors have to make their own arrangement for potable water for construction/ curing, etc. & will be not paid separately.	CUM	5928.00
R3-RW-10-02	Providing & laying M-15 cement concrete for foundation/ encasement/ pavement/ saddle including form work, mixing in non-tilting mechanical mixer (with Weigh Batcher), placing, compacting by internal & surface vibrator, finishing, curing etc. complete as specified and as directed (cement mortar vata will be paid separately). Contractors have to make their own arrangement of potable water for construction/ curing with hessain cloth, etc. & will be not paid separately for it.	CUM	5029.00
R3-RW-10-03	Providing & laying M-10 cement concrete for foundation/ encasement/ pavements with or without chequered design including form work, mixing in non-tilting mechanical mixer (with Weigh Batcher), placing, vibrating with plate vibrator, needle vibrator, finishing, curing etc. complete as	CUM	4652.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	specified and as directed (cement mortar vata will be paid separately). Contractors have to make their own arrangement for potable water for construction/ curing with hessian cloth, etc. & will be not paid separately for it.		
R3-RW-10-04	Providing & laying cement concrete 1:5:10 (M8, ordinary concrete) for foundation/ encasement etc. (using metal No. I,II,III, in proportion as directed) with or without chequered design including form work wherever necessary, mixing in non-tilting mechanical mixer (with Weigh Batcher), placing, compacting by needle, plate vibrator & finishing curing as specified and as directed. Contractors have to make their own arrangement for potable water for construction/ curing with hessian cloth, etc. & will be not paid separately for it. (Minimum cement content 150 kg/m ³)	CUM	3799.00
R3-RW-10-05	Providing & laying R.C.C. running beam in M-40 cement concrete including required formwork mixing, compacting & curing, etc. complete reinforced with 12mm dia. (Minimum 4 Nos.) M.S. main bars & 6 mm Dia M.S. rings at 15cm c/c to be anchored in slipper slab properly with M.S. reinforcement as per drawing etc. complete as specified (Steel will not be paid separately). Contractor has to make his own arrangement for potable water for construction/ curing with hessian cloth etc. & will not be paid separately. Beam Size a) 23 cm x 27.50 cm.	MTR	862.00
R3-RW-10-06	Providing & laying R.C.C. running beam in M-40 cement concrete including required formwork mixing, compacting & curing, etc. complete reinforced with 12mm dia.(Minimum 4 Nos.)M.S. main bars & 6mm Dia M.S. rings at 15cm c/c to be anchored in slipper slab properly with M.S. reinforcement as per drawing etc. complete as specified(Steel will not be paid separately).Contractor has to make his own arrangement for potable water for construction/curing with hessian cloth, etc. & will not be paid separately. Beam Size: b) 23 cm. x 30 cm.	MTR	901.00
R3-RW-10-07	Cutting of construction & dummy joints of M-	MTR	84.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	35 C.C.& above slab by mechanical means within 10 to 16 hrs of casting of bay/slab as directed. A) transverse dummy joints 100 mm deep or 1/3 thickness of concrete pavement & 6 mm wide.		
R3-RW-10-08	Cutting of construction & dummy joints of M-35 C.C.& above slab by mechanical means within 10 to 16 hrs of casting of bay/slab as directed. B) Longitudinal construction joints 100mm deep or 1/3rd thickness of slab & 6 mm wide	MTR	84.00
R3-RW-10-09	Providing & fixing in position premoulded asphalt filler 12 mm thick conforming to I.S. 1838 of 1983 for placing of the expansion joint, around manholes & water entrances, etc. put to the required depth & 25 mm below the camber, etc. complete as directed.	SQM	364.00
R3-RW-10-10	Providing & placing 5mm thick thermocol in dummy & construction joints immediately after cutting of joints & removing the same before dressing of dummy & construction joints etc. complete, as directed.	SQM	88.00
R3-RW-10-11	Providing & fixing high density polythene pipe of approved quality to fit around the dowel bars of 32mm dia at the end of expansion joints, fully greased inside, cotton waste in the pipe around the dowel bars & the pipe duly capped at the end as directed. (H.D.P. pipe shall be 30cm in length). As shown in the drawing.	EA	31.00
R3-RW-10-12	Providing & fixing in position mild steel tie bars of 12mm dia 55cm long & 45cm C/C whenever directed including handling , wrapping with paper for half length, fixing, straightening, wastage etc. complete in all respect as directed.	TO	70944.00
R3-RW-10-13	Providing & fixing in position M.S. dowel bars of 32mm dia 55cm long & 30cm C/C whenever directed including handling, fixing, etc. complete (no extra payment will be made for applying bitumen & grease to dowel bars)	TO	99657.00
R3-RW-10-14	Providing & laying waterproof paper of 40 GSM including overlap (to be not less than 10cm) etc. complete as specified as directed.	SQM	41.00
R3-RW-10-15	Providing & constructing cement vatas in c/m 1:10 at 0.6mx0.6m c/c admeasuring 0.09m at bottom, 0.04m at top & 0.075m	SQM	75.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	deep & maintaining the same throughout 14 days curing & removing the same thereafter, as directed.		
R3-RW-10-16	Resealing of joints of M-35 & above C.C. old pavement with hot applied sealing compounds conforming to IS-1834-1984 including cutting & removing existing damaged sealing compound by racking tool or mechanical means & clearing of joints with compressed air, application of primer for receiving hot sealing compound & providing layer of lime powder over hot sealing compound etc. complete as directed. A) Resealing 6mm-10mm wide transverse / longitudinal joints with Avg.depth of 40mm.	MTR	77.00
R3-RW-10-17	Resealing of joints of M-35 & above C.C. old pavement with hot applied sealing compounds confirming to IS-1834-1984 including cutting & removing existing damaged sealing compound by raking tool or mechanical means & clearing of joints with compressed air, application of primer for receiving hot sealing compound & providing layer of lime powder over hot sealing compound etc. complete as directed. B) Resealing 11-15mm wide transverse / longitudinal joints with average depth of 40mm.	MTR	96.00
R3-RW-10-18	Resealing of joints of M-35 & above C.C. old pavement with hot applied sealing compounds conforming to IS-1834-1984 including cutting & removing existing damaged sealing compound by raking tool or mechanical means & clearing of joints with compressed air, application of primer for receiving hot sealing compound & providing layer of lime powder over hot sealing compound etc. complete as directed. C) Resealing of 12-25mm wide expansion joints with avg. depth of 25mm.	MTR	83.00
R3-RW-10-19	Dressing of M-35 & above new C.C.pavement, dummy, transverse, longitudinal & expansion joints with hot rubberised sealing compound confirming to IS 1834-1984 after proper cleaning with compressed air, applying required primer & providing a layer of lime powder over hot	MTR	108.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	sealing compound etc. complete as directed. A) Sealing 6mm wide dummy/transverse joints with a depth of 100mm or 1/3rd thickness of concrete pavement.		
R3-RW-10-20	Dressing of M-35 & above new C.C. pavement, dummy, transverse, longitudinal & expansion joints with hot rubberised sealing compound conforming to IS 1834-1984 after proper cleaning with compressed air, applying required primer & providing a layer of lime powder over hot sealing compound etc. complete as directed. B) Sealing of 6mm wide longitudinal joint with depth of 100mm or 1/3rd thickness of concrete pavement.	MTR	108.00
R3-RW-10-21	Dressing of M-35 & above new C.C.pavement, dummy, transverse, longitudinal & expansion joints with hot rubberised sealing compound conforming to IS 1834-1984 after proper cleaning with compressed air, applying required primer & providing a layer of lime powder over hot sealing compound etc. complete as directed. C) Sealing of 25mm wide expansion joints with avg. depth of 12mm.	MTR	73.00
R3-RW-10-22	P/L ready mix cement concrete of grade M-15 for foundation/ encasement/ pavement/ cradle including formwork, mixing in batching plant, compacting by internal & surface vibrator, curing, finishing etc. complete as specified & as directed by the Engineer. Contractor has to make his own arrangement for water for curing etc.& will not be paid separately for it. (MINIMUM CEMENT CONTENT 240 Kg/m ³ .)	CUM	6017.00
R3-RW-10-23	P/L R.M.C. M-10 C.C. in foundation/ encasement/ pavement with or without chequered design including formwork, mixing in batching plant, placing, vibrating with plate or needle vibrator, curing etc. complete as directed by the Engineer. Contractors has to make his own arrangement of water for curing with Hessian cloth etc. & will not be paid separately. (MINIMUM CEMENT CONTENT 220 Kg/m ³ .)	CUM	5703.00
R3-RW-10-24	Supply & filling sand metal, GRAVELLY SAND, corresponded to CLASS II/ CLASS III GRADING of TABLE 100.1 of BMC road specifications for roadworks in trenches	CUM	2251.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	upto required depth & watering, ramming etc. complete as directed.		
R3-RW-10-25	P/L R.M.C.M-20 C.C. procured from B.M.C. approved R.M.C. plant including use of approved makes of plasticizer/retarder & transported by transit mixer & placing at worksite, compacting, finishing curing etc. by contractor's water & tarring the sides of form work with hot bitumen as specified & directed by the Engineer. (MINIMUM CEMENT CONTENT 260 Kg/m ³ .)	CUM	6489.00
R3-RW-10-26	Providing & fixing pre-cast Beam in M 40 CC of size 23 cm x 23 cm x 35 cm in length set in 15 cm M15 C.C. filling of joints in 1:2, including excavation, form work, mixing compacting , curing etc. complete as specified and as directed.	NOS	479.00
R3-RW-10-27	Providing and laying Dry Lean Concrete base including providing coarse and fine aggregate to the specified gradation using minimum cement content 150 kg/cum of concrete with OPC 43 grade cement, mixing of concrete as per approved design mix using mechanised batch mix plant of appropriate capacity, transporting and laying and compacting with vibratory roller of minimum 80- 100 KN static weight to give desired compacted density and average compressive strength of 10 MPa at 7 days and curing with liquid curing compound and sprinkling water and covering with moist hessian cloth or ponding of water for 7 days including providing construction joints, including all material, labour, machinery with all leads and lifts etc. complete as specified and as directed by the Engineer. A) Laying by manually.	CUM	3513.00
R3-RW-10-28	Providing and laying Dry Lean Concrete base including providing coarse and fine aggregate to the specified gradation using minimum cement content 150 kg/cum of concrete with OPC 43 grade cement, mixing of concrete as per approved design mix using mechanised batch mix plant of appropriate capacity, transporting and laying with self propelled paver with electronic sensor device and compacting with vibratory roller of minimum 80- 100 KN static weight to give desired compacted density and average compressive strength of	CUM	5183.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	10 MPa at 7 days and curing with liquid curing compound and sprinkling water and covering with moist hessian cloth or ponding of water for 7 days including providing construction joints, including all material, labour, machinery with all leads and lifts etc. complete as specified and as directed by the Engineer. B) Laying by paver with electronic sensor device		
R3-RW-10-29	Providing & laying M-40 C.C.avg. compressive strength (As per IRC 15-2002.N.1.6) procured from B.M.C. approved R.M.C. plant including use of approved make of plasticizer/ retarder & Contractor's water with ice flakes (if required) and transported by transit mixer and placing at work site. Compacting, finishing, initial curing by approved curing compound & Contractor's water and tarring the sides of slab with hot bitumen as specified and directed (w/c ratio 0.4 maximum)(vata for curring will be paid separately.) (MINIMUM CEMENT CONTENT 350 kg/m ³)	CUM	7962.00
R3-RW-10-30	P/L R.M.C. M-25 C.C. procured from B.M.C. approved R.M.C. plant including use of approved makes of plasticizer/ retarder & transported by transit mixer & placing at worksite, compacting, finishing, curing etc. by contractor's water & tarring the sides of form work with hot bitumen as specified & directed by the Engineer. (MINIMUM CEMENT CONTENT 300 kg/m ³)	CUM	7007.00
R3-RW-10-31	Providing and laying Dry Lean Concrete base including providing coarse and fine aggregate (with no fines i.e. 2.36 mm passing 0% to 5%) to the specified gradation using minimum cement content 150 kg/ cum of concrete with OPC 43 grade cement mixing of concreete as per approved design mix using mechanised batch mix plant of appropriate capacity, transporting and laying and compacting with vibratory roller of mimimum 80-100 KN static weight to give desired compacted density and average compressive strength of 10 MPa at 7 days and curing with liquid curing compound and sprinkling water and covering with moist hessian cloth or ponding of water for 7 days including	CUM	5328.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	providing construction joints, including all material, labour, machinery with all leads and lifts etc. complete as specified and as directed by the Engineer. NOTE: This ITEM Should be OPERATED after obtaining prior SPECIFIC TECHNICAL SANCTION of DIR(E.S.& P.) or Equivalent . A) Laying by manually .		
R3-RW-10-32	Providing and laying Dry Lean Concrete base including providing coarse and fine aggregate (with no fines i.e. 2.36 mm passing 0% to 5%) to the specified gradation using minimum cement content 150 kg/ cum of concrete with OPC 43 grade cement mixing of concrete as per approved design mix using mechanised batch mix plant of appropriate capacity, transporting and laying with self propelled paver with electronic sensor device and compacting with vibratory roller of minimum 80-100 KN static weight to give desired compacted density and average compressive strength of 10 MPa at 7 days and curing with liquid curing compound and sprinkling water and covering with moist hessian cloth or ponding of water for 7 days including providing construction joints, including all material, labour, machinery with all leads and lifts etc. complete as specified and as directed by the Engineer. NOTE: This ITEM Should be OPERATED after obtaining prior SPECIFIC TECHNICAL SANCTION of DIR(E.S.& P.) or Equivalent. B) Laying by paver with electronic sensor device.	CUM	5228.00
R3-RW-10-33	Providing and fixing of the precast TREE GUARD KERB 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 B.M.C. approved R.M.C. plant,10cm.thick, filling of jointing in C.M. 1:2 and painting the exposed surface with 3 coats of road marking paint, Grade I of approved colours and quality including single coat of approved brand primer including excavation in C.C, asphalt etc. as specified and as directed.	MTR	501.00
R3-RW-10-34	Proving & placing sand drain blanket layer etc. complete, grading of sand to be	CUM	2188.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	used for sand blanket layers as filter material to act as a sand drain having grading requirement as per cl. No. 120, table no. 100.1, class-I in BMC road specification for roadworks & refer cl. no. 133 for material requirement.		
R3-RW-10-35	Extra & over for providing and using special admixtures/ plasticizers to achieve required crushing & average flexural strength 5.0 Mpa of M40 grade concrete in 7 days. NOTE :THIS ITEM SHOULD BE OPERATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent. NOTE: FOR SPECIAL ADMIXTURES ITEMS SUCH AS ELKEM MICROSILICA, POLYPROPYLENE FIBER, BSF GLANIUM SKY,EARLY STRENGTH SUPER PLASTICIZER, STEEL FIBER REINFORCEMENT ETC. ORIGINAL CHALLAN SHOULD BE PRODUCED, FAILING WHICH NO PAYMENT TO BE MADE.	CUM	623.00
R3-RW-10-36	Extra over above for mixing polypropylene fibers 300 e3 Multi-Dimensional Graded Fibrillated 100% Virgin as per ASTM C 1116 III Type 4.1.3 Std. at the rate of 125 gms per bag of 50 Kgs of cement etc. NOTE :THIS ITEM SHOULD BE OPERATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent. NOTE: FOR SPECIAL ADMIXTURES ITEMS SUCH AS ELKEM MICROSILICA, POLYPROPYLENE FIBER, BSF GLANIUM SKY,EARLY STRENGTH SUPER PLASTICIZER, STEEL FIBER REINFORCEMENT ETC. ORIGINAL CHALLAN SHOULD BE PRODUCED, FAILING WHICH NO PAYMENT TO BE MADE.	CUM	215.00
R3-RW-10-37	Providing & Fixing of the Ferrocete precast slab (concrete grade M-25 with medium duty slab) of size 1050 mm X 500 mm X 50 mm Red, & Grey colour finish to be used as footpath over SWD in cement mortar 1:4, 12mm thk to the required level including carrying out necessary load tests @ Municipal testing laboratory @ 2 nos. per 100 nos. of slabs to be fixed.	NOS	1525.00
R3-RW-10-38	P/L Controlled Low Strength Material (CLSM) having avg. compressive strength 5.0 Mpa procured from B.M.C.	CUM	4505.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	approved R.M.C. plant including use of approved makes plasticizer/ retarder & transported by transit mixer & placing at worksite, compacting, finishing, curing etc. as specified & directed by the Engineer. (MINIMUM CEMENT CONTENT 200 kg/m ³)		
R3-RW-10-39	Providing & laying M-60 C.C. and having avg. flextural strength of 5.0 MPa in 3 days procured from B.M.C. approved R.M.C. plant including use of Microsilica approved make of superplasticizer and transported by transit mixer and placing at work site. Compacting, finishing, initial curing by approved curing compound & Contractor's water and tarring the sides of slab with hot bitumen as specified and directed (w/c ratio 0.35 maximum)(vata for curring will be paid separately.) NOTE: THIS ITEM SHOULD BE OPERATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent. NOTE: FOR SPECIAL ADMIXTURES ITEMS SUCH AS ELKEM MICROSILICA, POLYPROPELYNE FIBER, BSF GLANIUM SKY,EARLY STRENGTH SUPER PLASTYSIZER, STEEL FIBER REINFORCEMENT ETC. ORIGINAL CHALLAN SHOULD BE PRODUCED, FAILING WHICH NO PAYMENT TO BE MADE.	CUM	8980.00
R3-RW-10-40	Providing and fixing pre-cast Central Median divider Type-I of R.M.C. in M-20 C.C. on Road as per drawing, finished neatly, compacting, curing, with form work, etc, including bedding of R.M.C. of M-10 C.C, 15 cm thick, filling of joints in C.M. 1:2 & painting the exposed surface with 3 coat of road marking paint, Grade-I of approved colour and quality including required excavation in C.C., asphalt etc, and removing the same any where in City & Sub limit, levelling the same as specified and as directed by the Engineer. (Note:-Every 10 dividers shall have 40 mm. dia. hole along the center line of divider at formation level of road to drain off rain water / excess water.)	MTR	1807.00
R3-RW-10-41	Providing and fixing pre-cast Central Median divider Type C TREE PLANTER (in	MTR	4989.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	<p>pair as per drawing) of R.M.C, M-25 C.C. on Road as per drawing, finished neatly, compacting, curing, with form work, etc, including Reinforcement as per drawing, bedding R.M.C, M-10 C.C, 15 cm thick, filling of joints in C.M. 1:2 & painting the exposed surface with 3 coat of road marking paint, Grade-I of approved colour and quality including required excavation in C.C, asphalt etc. and removing the same any where in City & Sub limit, levelling the same as specified and as directed by the Engineer. (Note:-Every 10 dividers shall have 40 mm. dia. hole along the center line of divider at formation level of road to drain off rain water/ excess water.)</p>		
R3-RW-10-42	<p>Providing and fixing pre-cast Central Median divider Type NPD-1 of R.M.C, M-25 C.C. on Road as per drawing, finished neatly, compacting, curing, form work, etc, including Reinforcement as per drawing, bedding R.M.C, M-10 C.C, 15 cm thick, filling of joints in C.M. 1:2 & painting the exposed surface with 3 coat of road marking paint, Grade-I of approved colour and quality including required excavation in C.C, asphalt etc. and removing the same any where in City & Sub limit, levelling the same as specified and as directed by the Engineer.</p>	MTR	6078.00
R3-RW-10-43	<p>Providing and fixing pre-cast Central Median divider Type- II of R.M.C, M-20 C.C. on Road as per drawing, finished neatly, compacting, curing, form work, etc, including bedding R.M.C, M-10 C.C, 15 cm thick, filling of joints in C.M. 1:2 & painting the exposed surface with 3 coat of road marking paint, Grade-I of approved colour and quality including required excavation in C.C., asphalt etc. and removing the same any where in City & Sub limit, levelling the same as specified and as directed by the Engineer.(Note:-Every 10 dividers shall have 400 mm. dia. hole along the center line of divider at formation level of road to drain off rain water / excess water.)</p>	MTR	1107.00
R3-RW-10-44	<p>Providing and fixing of cement concrete Kerb Stone of various grades of size: 500mm width x 325 height x 165mm thick (Half</p>	MTR	1123.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	Batter, Bull Nose/ Full Batter) manufactured in wet press vacuum dewatering technology plant / equivalent with face pimple finish for high visibility with excellent quality and finish and edges perfect and sharp. Grade – M-25 including excavation in any soil except rock, laying a leveling course of M 15 grade RMC 100mm thick to required slope (inclusive of form work), jointing in C.M. 1:2 proportion flush to concrete surface, painting exposed surface with one coat of primer and two coats of 1st grade road marking paint in the yellow/ white/ black or any shade as directed. (Kerbstones shall be procured from BMC registered agencies).		
R3-RW-10-45	Providing and fixing of Water Dished Channel size : 600 x 300 x 80mm, 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 M-15 grade RMC 100 mm thick to required slope (inclusive of form work) jointing in 1:2 C:M. prop. flush to concrete surfaces as directed (Watertables shall be procured from BMC registered agencies).	MTR	805.00
R3-RW-10-46	Providing & fixing pre-cast concrete header for Paver Blocks on road M-50 grade pimple finish one edge chamfer size 500mm x 325mm x 150mm for joint of paver and asphalt road manufactured in wet press vacuum technology plant with excellent finish and sharp edge, fixing in R.M.C. M-15, C.C, 10 cm thk filling of joints in C.M 1:2, including excavation, form work, mixing compacting, curing etc. complete as specified and as directed.	MTR	1062.00
R3-RW-10-47	Green cutting of construction & dummy joints of M-40 C.C.& above (Ultra thin white topping) slab by mechanical means within period of concrete strength @ 80 to 100 kg/ cm ² or earlier, casting of bay/ slab as directed. Transverse dummy & Longitudinal construction joints 1/2 thickness of concrete pavement & 3 to 4 mm wide.	MTR	75.00
R3-RW-10-48	Providing and fixing pre-cast Central Median divider Type NPD-1A of R.M.C, M-25 C.C. on road as per drawing, finished	MTR	4307.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	neatly, compacting, curing, form work, etc, including Reinforcement as per drawing, bedding RMC M-10 C.C, 15 cm thick, filling of joints in C.M. 1:2 & painting the exposed surface with 3 coat of road marking paint, Grade-I of approved colour and quality including required excavation in C.C., asphalt etc. and removing the same any where in City & Sub limit, levelling the same as specified and as directed by the Engineer.		
R3-RW-10-49	Excavation in reinforced OR pavement grade concrete M-20 & above by using modern machinery (poclain with rock breaker, etc.) including with stacking of excavated material within 150 m radius etc. complete upto any depth as specified & as directed, by the Engineer.	CUM	1663.00
R3-RW-10-50	Extra over to use sleep form paver to lay Pavement Quality Concrete as per Morth specifications & as directed by the Engineer. NOTE: THIS ITEM SHOULD BE OPERATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent.	CUM	395.00
R3-RW-10-51	Extra over above R3-RW-10-29, M-40 C.C. and avg. flextural strength of 5.0 MPa in 7 days procured from B.M.C. approved R.M.C. plant including use of Microsilica, (BMC Registration manufacturer) superplastisizer and fiber, transported by transit mixer and placing at work site. Compacting, finishing, initial curing by approved curing compound Contractor's water and tarring the sides of slab with hot bitumen as specified and directed (w/c ratio 0.30 maximum) (vata for curring & fibre will be paid separately.) NOTE: 1)THIS ITEM SHOULD BE OPERATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent. 2) FOR SPECIAL ADMIXTUERES ITEMS SUCH AS ELKEM MICROSILICA, POLYPROPELYNE FIBER, BSF GLANIUM SKY,EARLY STRENGTH SUPER PLASTYSIZER, STEEL FIBER REINFORCEMENT ETC. ORIGINAL CHALLAN SHOULD BE PRODUCED , FAILING WHICH NO PAYMENT TO BE MADE.	CUM	2571.00
R3-RW-10-52	Extra over above R3-RW-10-29 for mixing	CUM	2214.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	<p>Dramix fiber manufactured by BEKAERT to be used in Steel Fiber Reinforcement Concrete Pavement shall be produced from high tensile steel cold drawn wires & conform to ASTM A820 STANDARD & low carbon confirming to 10016 2-C9D. The length of fibre shall be 60mm & dia. 0.75mm making a wire network of 280m/kg. Aspect ratio (Length/Diameter) shall be 80 & Fibre Tensile Strength (Rm)>1225 n/mm².</p> <p>NOTE :1)THIS ITEM SHOULD BE OPERATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.& P.) or Equivalent and applicable only SFRC Designed Pavement.</p> <p>2) FOR SPECIAL ADMIXTURES ITEMS SUCH AS ELKEM MICROSILICA, POLYPROPYLENE FIBER, BSF GLANIUM SKY,EARLY STRENGTH SUPER PLASTYSIZER, STEEL FIBER REINFORCEMENT ETC. ORIGINAL CHALLAN SHOULD BE PRODUCED, FAILING WHICH NO PAYMENT TO BE MADE.</p>		
R3-RW-10-53	<p>P/L in position hot poured rubberized asphalt (sealing compound) for contraction joints spaced at every 4.0 m intervals using Backer Rod. The Diameter of Backer Rod Should be approximately 25 percent greater than the width of joint to ensure a tight fit. The dimension recommended for the sealent width (W), depth (D) and reces (R) are respectively 10-12 mm, 8-10 mm and 6 mm.</p>	MTR	40.00
R3-RW-10-54	<p>Providing and fixing of the precast kerb stone of height 325mm, base width 165mm, top width 115mm in M20 grade RMC supplied through BMC approved plant or concrete mixed with use of weigh batch mixers as detailed in drawing u/No.Dy.Ch.E./Rds/93 /E.S. of 17 / 8 / 2005 , excavation in any soil except rock, laying a levelling course of M 15 grade RMC 100mm thick, to required slope (inclusive of form work) jointing in C.M.1:2 proportion flush to concrete surface, painting exposed surface with one coat of primer and two coats of 1st grade road marking paint in the yellow/ white/ black or any shade as directed. (Kerbstones shall be procured from BMC registered agencies).</p>	MTR	549.00
R3-RW-10-55	<p>Providing and fixing of the precast</p>	MTR	414.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	tapered water table of thickness varying from 105 to 125 mm, 300mm width in M-20 grade RMC (Supplied through BMC approved plant) or concrete mixed with use of weigh batch mixers as detailed in drawing No.DyChE/Rds/94/E.S. dated 17.8.2005 inclusive of excavation in any soil except rock, laying of leveling course of M-15 grade RMC 100mm thick to the required slope, (inclusive of form work) jointing in 1:2 cement mortar prop. flush to concrete surfaces as directed (Water tables shall be procured from BMC registered agencies).		
R3-RW-10-56	Extra Rate over and above all respective controlled concrete items for using Ready Mix Concrete (for a lead of 25 Km.) where batching plant cannot be erected.	CUM	667.00
R3-RW-10-57	Extra Over item of stencil concrete above M20 in footpath. Providing, applying and finishing the topsurface of M-20 concrete with stamp/ stencil of approved pattern and colour, in accordance with manufacturer's specification of any approved brand of colour hardener @ of 3.5 kgs/m ² ; including floating of colour hardened over concrete surface with different types of floaters; including application of release agent @ of 0.15 kgs/m ² , stamping over the concrete surface with stamping tools; including cleaning of surface with water and cutting of finished concrete; including application of two coats of acrylic based sealer for finishing. Colour hardener and release agent shall be tested for abrasion resistance for a depth of wear, should not be more than 0.025 mm. Coverage of sealer should not be more than 6.5 sq.m per one litre coat; including cost of skilled manpower, cutting machine, sprayer and all tools tackles for all activities; complete smooth & finish as per direction of Engineer-In-Charge.	SQM	265.00
R3-RW-10-58	Extra Over item of marble chip finish above M-20 in footpath. Providing, applying and finishing the topsurface of M 20 concrete with natural coloured or plain marble chips of any colour, texture, pattern of average size ranging from 12 mm to 18 mm and free from dust including cleaning of surface with water and cutting of finished concrete. Coverage of marble chips should range between 75%	SQM	176.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	to 85% of the area to be treated including cost of skilled manpower, cutting machine and all tools tackles for all activities: Complete finish/ polishing etc as per direction of Engineer-In-Charge.		
	Chapter-11 (Geosynthetics And Reinforced Earth)		
R3-RW-11-01	Construction of sub surface drain 200 mm dia using geotextiles treated with carbon black with physical properties as given in Clause 702 (MoRTH) formed in to a stable network and a planar geocomposite structure, joints wrapped with geotextile to prevent ingress of soil, all as per Clause 702 (MoRTH) and approved drawings including excavation and backfilling (Note:- Relevant revised MoRTH clauses ammended upto date)	MTR	2766.00
R3-RW-11-02	Construction of a narrow filter sub-surface drain consisting of porous or perforated pipe laid in narrow trench surrounded by a geotextile filter fabric, with a minimum of 450 mm overlap of fabric and installed as per Morth Clause 702.3 and 309.3.5 including excavation and backfilling (Note:- Relevant revised MoRTH clauses ammended upto date)	MTR	1093.00
R3-RW-11-03	Providing and laying paving fabric with physical requirements as per clause 708.2.1 (MoRTH) over a tack coat of paving grade Bitumen VG 10, laid at the rate of 1 kg per sqm over thoroughly cleaned and repaired surface to provide a water resistant membrane and crack retarding layer. Paving fabric to be free of wrinkling and folding and to be laid before cooling of tack coat, brooming and rolling of surface with pneumatic roller to maximize paving fabric contact with pavement surface (Note:- Relevant revised MoRTH clauses ammended upto date.)	SQM	128.00
	Chapter -12 (Maintenance Of Roads)		
R3-RW-12-01	Restoration of Rain Cuts (Restoration of rain cuts with soil, murum, gravel or a mixture of these, clearing the loose soil, benching for 300 mm width, laying fresh material in layers not exceeding 250 mm and compacting with plate compactor or power rammers to restore the original alignment, levels and slopes)	CUM	299.00
R3-RW-12-02	Maintenance of Earthen Shoulder (filling	SQM	66.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	with fresh soil) (Making up loss of material/ irregularities on shoulder to the design level by adding fresh approved soil and compacting it with appropriate equipment.)		
R3-RW-12-03	Maintenance of Earth Shoulder (stripping excess soil) (Stripping excess soil from the shoulder surface to achieve the approved level and compacting with plate compactor)	SQM	19.00
R3-RW-12-04	Filling Pot-holes and Patch Repairs with open-Graded Premix surfacing, 20mm (Removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 511, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2 as per MORTH 5th revision 2013)	SQM	173.00
R3-RW-12-05-a	for grading I Material	SQM	417.00
R3-RW-12-05-b	for grading II Material	SQM	416.00
R3-RW-12-06	Crack Filling (Filling of crack using slow - curing bitumen emulsion and applying crusher dust in case crack are wider than 3mm.)	MTR	5.00
R3-RW-12-07	Dusting (Applying crusher dust to areas of road where bleeding of excess bitumen has occurred.)	SQM	3.00
R3-RW-12-08	Fog Seal	SQM	41.00
R3-RW-12-09-a	Providing and laying of a stress absorbing membrane over a cracked road surface, with crack width below 6 mm after cleaning with a mechanical broom, using modified binder complying with clause 521, sprayed at the rate of 9 kg per 10 sqm and spreading 5.6 mm crushed stone aggregates @ 0.11 cum per 10 sqm with hydraulic chip spreader, sweeping the surface for uniform spread of aggregates and surface finished to conform to clause 902.as per MORTH 5th revision 2013	SQM	92.00
R3-RW-12-09-b	Providing and laying of a stress absorbing membrane over a cracked road surface, with crack width 6 to 9 mm after cleaning with a mechanical broom, using modified binder complying with clause 521, sprayed at the rate of 11 kg per 10 sqm and spreading 11.2 mm crushed stone	SQM	107.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
	aggregates @ 0.12 cum per 10 sqm, sweeping the surface for uniform spread of aggregates and surface finished to conform to clause 902. as per MORTH 5th revision 2013		
R3-RW-12-09-c	Providing and laying a single coat of a stress absorbing membrane over a cracked road surface, with crack width above 9 mm and cracked area above 50 % after cleaning with a mechanical broom, using modified binder complying with clause 521, sprayed at the rate of 15 kg per 10 sqm and spreading 11.2 mm crushed stone aggregates @ 0.12 cum per 10 sqm, sweeping the surface for uniform spread of aggregates and surface finished to conform to clause 902. as per MORTH 5th revision 2013	SQM	140.00
R3-RW-12-09-d	Providing and laying a bitumen impregnated geotextile layer after cleaning the road surface, geotextile conforming to requirements of clause 704.3, laid over a tack coat with 1.05 kg per sqm of paving grade bitumen 80 - 100 penetration and constructed to the requirement of clause 704.4.5 as per MORTH 5th revision 2013	SQM	722.00
R3-RW-12-10-a	5 mm thickness	SQM	72.00
R3-RW-12-10-b	3 mm thickness	SQM	51.00
R3-RW-12-10-c	1.5 mm thickness	SQM	34.00
R3-RW-12-11-a	19 mm nominal chipping size	SQM	41.00
R3-RW-12-11-b	13 mm nominal size chipping	SQM	80.00
R3-RW-12-12	Repair of joint Grooves with Epoxy Mortar Repair of spalled joint grooves of contraction joints, longitudinal joints and expansion joints in concrete pavements using epoxy mortar or epoxy concrete.	MTR	1406.00
R3-RW-12-13	Repair of old Joints Sealant (Removal of existing sealant and re sealing of contraction, longitudinal or expansion joints in concrete pavement with fresh sealant material)	MTR	58.00
R3-RW-12-14	Hill Side Drain Clearance (Removal of earth from the choked hill side drain and disposing it on the valley side manually)	MTR	46.00
R3-RW-12-15	Land Slide Clearance in soil (Clearance of land slides in soil and ordinary rock by a bull-dozer D 80 A-12, 180 HP and disposal of the same on the valley side)	CUM	94.00



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ITEM CODE	ITEM DESCRIPTION	UNIT	RATE (Excluding GST)
R3-RW-12-16	Land slide Clearance in Hard Rock Requiring Blasting (Clearing of land slide in hard rock requiring blasting for 50% of the boulders and disposal of the same on the valley side.)	CUM	189.00

