Project Name: Manglore Smart City
Grand Summary for Priority Road DPR 4

Sr. No.	Description	Cost In INR
1	Road and Other Works	37,17,84,723
2	Street Lighting	55,22,966
3	Landscape Work	5,31,380
	Construction Cost Sub Total	**37,78,39,069**
	GST @ 12% on SOR Base Items -Constrction Cost	3,08,79,529
	GST @ 18% on Market Rate Items -Constrction Cost	1,75,22,007
	Provision for Third Party Damages and Maintenance at 1 st Year(DLP)	28,13,765
	GST @12% on DLP Cost on SOR Base Items	1,84,846
	GST @18% on DLP Cost on Market Base Items	1,19,560
	Maintenance Cost of 2nd,3rd and 4th Year	1,19,69,865
	GST @12% on Maintenanace Cost of SOR Base Item	9,08,101
	GST @18% on Maintenance Cost on Market Base Items	4,08,122
	Escalation and Tender Premium at 10%	3,77,83,907
	Add 3% Contengency	113,35,172
	Miscellaneous and Rounding off	13,057
	Grand Total	**49,17,77,000**

EXECUTIVE ENGINEER
MSCL MANGALURU

GENERAL MANAGER TECHNICAL
MSCL MANGALURU

MANAGING DIRECTOR
MSCL Mangaluru

Name of the Work :- Mangalore Smart City

1.0 BOQ of Road and Other Work for Priority Road DPR 4

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
1.00	**Taking out existing CC interlocking paver blocks** from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)	Sqm	3735.00	74.98	2,80,050	
2.00	KSRRB M200.**Dismantling of cement concrete pavement by mechanical means** using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Sl No : 18.47)	Cum	3520.22	1001.90	35,26,908	
3.00	KSRRB M200-**Dismantaling of kerb Stone** and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202. (S.I.No.18.49)	Rmt	3589.63	13.20	47,383	
4.00	KSRRB M200-13.1. **Dismantling of existing structures** like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 18-19,S.I.18.20)	Cum	4575.74	429.00	19,62,992	
5.00	KSRRB M200-17.2. **Dismantling of existing structures** like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. **v)Steel work in all types of Sections upto a Height of 5 m above plinth level excluding Cutting of Rivet– B. Excluding dismembering.** (KPWD SOR 18-19,18.33)	MT	10.50	2082.30	21,864	
6.00	KSRRB 300-50. **Scarifying bituminous course** 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Section 5.(KSRRB Sl No.19.56)	Sqm	6466.80	42.90	2,77,426	
7.00	KSRRB 300-46. **Scarifying stone metal crust** 50mm to 100mm thick by road roller with scarifier along with 20mm premix carpet / surface dressing and stacking of old serviceable materials including cost of all labour charges, HOM of machinaries complete as per specifications. MORTH / Section 5. (KSRRB Sl No.19.52)	Sqm	37126.32	42.90	15,92,719	
8.00	KSRRB M200-12.1. **Dismantling of existing structures** like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. **i)Dismantaling Brick/Tile work B.In Cement mortar** (Sl No : 18.23)	Cum	636.18	386.10	2,45,629	
9.00	Removing B.S slab of drain and stackin as directed by engineer in charge.(PWD 18-19,Sl No : 5.32)	Sqm	7968.00	107.80	8,58,950	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
10.00	KSRRB M800-**Permanent type barricade in construction zone** KSRRB M800-44.1. Construction of a permanent type barricade made of steel components, 1.5 m high from road level, fitted with 3 horizontal rails 200 mm wide and 4 m long on 50 x 50 x 5 mm angle iron vertical support, painted with yellow and white strips, 150 mm in width at an angle of 45º, complete as per IRC:SP:55-2014 complete as per specifications . A. With steel components (Sl No : 24.45)	Nos.	250.00	4,211.90	10,52,975	
11.00	KSRRB M300-14. **Excavation for roadwork in all types of soil** with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes,in accordance with requirements of lines and grades and cross sections,and transporting disposal location up to a lead of 5.00Km and complete as per specifications. MORTH specification No.301 (Sl No : 19.14)	Cum	48506.39	56.36	27,33,820	
12.00	KSRB 2-4 : **Refilling available earth** around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 18-19,Sl No.2.11)	Cum	15418.94	132.00	20,35,300	
13.00	KSRRB 300-Compaction KSRRB 300-58. **Compaction of original ground** with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Section 3.(KPWD 18-19,Sl No.19.64)	Sqm	32923.84	6.60	2,17,297	
14.00	KSRB 4-1.6 ; Providing and laying in position **plain cement concrete of mix M15 Grade** with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, **in foundation, plinth and cills**, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (Sl.No. 4.6 of KPWD 18-19)	Cum	1851.60	6,490.00	120,16,867	
15.00	KSRRB 400 **Granular Sub-Base with Coarse Graded Material** (table 400-1) KSRRB M400-7. Construction of granular sub-base by providing Coarse graded crushed stone aggregates of granite / trap / basalt material, speading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MORTH specifications clause 401 and Table 400-1 **Grading VI.** (Sl.No.20.4 of KPWD SR 2018-19)	Cum	1400.85	2,382.60	33,37,668	
16.00	KSRRB M400-6.1. **Construction of granular sub-base by providing close graded** crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with Plate compactor to achieve the desired density, complete as per specifications. A. Plant Mix Method. - Close graded granular sub-base material as per 400-1 For **Grading- II Material (RA Attached)**	Cum	4714.54	2,640.00	1,24,46,386	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
17.00	KSRB 4.2.1 : Providing and laying in position **reiforcement cement concrete of design Mix M25** with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed - 2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications. (Sl No : 4.10 of KPWD 18-19)	Cum	9467.65	6,817.80	6,45,48,555	
18.00	KSRB 4.6.1 Providing and removing **centering, shuttering, strutting, propping** etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2 (Sl No : 4.28 of KPWD 18-19)	Sqm	52421.88	289.30	1,51,65,651	
19.00	KSRB 4.9.2 :**Providing T.M.T steel reinforcement** for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500 (Sl No : 4.46.2 of KPWD 18-19)	MT	747.73	77,860.20	5,82,18,407	
20.00	KSRRB M300-**Construction of Subgrade**. KSRRB M300-55. Construction of sub-grade with approved material Gravel/Murrum with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications (including cost of earth, watering charges & compaction by vibratory rollercompaction by vibratory roller to 97% of proctors density) MORTH Specification No. 305IKPWD 18-19,19.62,17.1 and 17.4)	Cum	1307.27	620.62	8,11,318	
21.00	KSRRB M600-1.Construction of **dry lean cement concrete** mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes double drum vibratory roller,finishing and curing complete as per specifications.Morth specification No.601 (Sl No : 22.1.1 of KPWD 18-19)	Cum	1349.50	4,452.80	60,09,054	
22.00	KSRRB M600-1.Construction of **dry lean cement concrete** mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,**Manually laid and compacting with palte compactor**,finishing and curing complete as per MORTH specifications Clause 601. (RA attached)	Cum	171.98	4,048.00	6,96,167	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
23.00	**Providing and laying cement concrete** using 20mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete for RCC works laid in 15 em thick layers and well compacted including vibrating curing etc., for all super structure works with all lead and lift etc., complete. (exculsive of cost of steel and fabrication charges) Note : The RMC should be obtained only from the plants certified by Quality Council of India as per CE, C&B letter, AE2, 2015-16, Dt. 12-09-2015 **Ready mixed Cement concrete M-25** (KPWD,4.49.2)	Cum	2300.80	6,046.70	139,12,268	
24.00	KSSRRB M600-2.Construction of unreinforced,dowel jointed,**plain cement concrete pavement** over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per MORTH specifications Clause 602.with **M40** @420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Sl No : 22.2.2 of KPWD 18-19)	Cum	2979.61	6,341.50	1,88,95,197	
25.00	Providing and placing **joint sealant compound** of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower and as shown on drawing and as per MORTH specifications clause 602. (Non SOR Item)	Rmt	1,578.02	115.00	1,81,472	
26.00	KSRRB 3000 **Repair of Joint Grooves** with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Sl No : 35.8 of KPWD 18-19)	Rmt	78.90	364.10	,28,728	
27.00	Providing and laying at or near ground level factory made **Median kerb stone of M-20** grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per drawing. (Precast C.C. kerb stone shall be approved by Engineer-in-charge). (RA Attached)	Cum	231.54	19,479.70	4510,330	
28.00	Providin and fixing **pre cast solid concrete Kerb stones** as per the drawing**,**made out of CC M20 and Jointed with CM 1:3 and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Sl No : 5.3 of KPWD 18-19)	Cum	490.00	17,029.77	83,44,587	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
29.00	Providin and fixing **pre cast solid concrete water table(longitudinal gutter)** as per the drawing**,**made out of CC M20 and jointed with CM 1:3 and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Sl No : 5.3 of KPWD 18-19)	Cum	55.76	17,029.77	9,49,651	
30.00	KSRRB 800-1. **Painting two coats** after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per MORTH specifications section 8. (Sl No : 24.1 of KPWD 18-19)	Sqm	3,479.02	88.00	3,06,154	
31.00	**P/F FRP Recess Cover (2.5T) 900mmx600 mm** with frame on Manhole for electrical ducting. (Rate analysis attached)	Nos.	658.00	7,911.54	52,05,793	
32.00	**P/F FRP Recess Cover (2.5T) 600mmx450 mm** with frame at raised footpath on SWD. (Rate analysis attached)	Nos.	766.00	5,276.57	40,41,849	
33.00	**P/F FRP Water gully cover with frame (25T) 600mmx500 mm** at level footpath. (Rate analysis attached)	Nos.	66.00	7,912.28	5,22,210	
34.00	KSRRB M300- Wrought iron and mild steel welded work KSRRB M300-18. Wrought iron and mild steel welded work (using angles, square bars, tees and channel grills, gratings with grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately complete as per specifications.(KPWD,18-19,SI.No.19.97)	Quintal	10.50	7,905.70	83,010	
35.00	KSRB 12-8.2 : Constructing brick masonry inspection chamber **500x700mm, and 450mm depth,** (clear inside dimension) for pipeline with one or two inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C.I cover with frame (light duty) 455x610mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. Specification No. KBS (S.I.No.11.52 of PWD SR 2018-19)	Nos.	37.00	9,125.60	3,37,647	
36.00	**Providing gully pipe lowering,laying of PVC 100 mm dia pipes** to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line.The rate shall include all jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,Item No.7,KUWSDB SOR 2016-17)	Rmt	470.40	301.70	1,41,920	
37.00	KSRB 11-18-17.1 : **Providing and fixing sand cast iron trap of 100mm dia**, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2018-19, SI.No.12.89)	Nos.	784.00	913.00	7,15,792	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
38.00	KSRRB M2200- **Providing Weep Holes** KSRRB M2200-8. Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing foce. Complete as per drawing and Technical Specifications complete as per specifications MORTH Specification No.2706 & 2200 (PWD SR 2018-19, SI.No.28.10)	Nos./M	6,781.00	151.70	10,28,678	
39.00	KSRRB M800-29.3**.Cable Duct Across the road** KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services. (PWD SR 2018-19,SI.No.24.36)	Rmt	919.00	5,524.20	50,76,740	
40.00	**Providing and laying Dia 200mm HDPE Electrical pipe Conduits** with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)	Rmt	26,840.00	1,556.88	4,17,86,659	
41.00	**Providing and laying Dia 160mm HDPE Electrical pipe Conduits** with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	13,784.00	1,068.90	1,47,33,718	
42.00	**Providing and Fixing Spacers for Power Ducts of size 200 mm,** to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	5,092.00	1,003.00	51,07,276	
43.00	**Providing and Fixing Spacers for Power Ducts of size 160 mm,** to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	4,347.00	1,947.00	84,63,609	
44.00	**Supplying 7-way 40mm HDPE pipe Multi-way Duct** Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	5,249.40	601.30	31,56,464	
45.00	**Supplying and Application charges required for stamping** the freshly laid new concrete (Concrete rate is not included in this item) including finishing and colouring the top surface accurately to the required level,shape and size using approved colour shade and staping it using approved stamp pattern and antiquitting it on top with approved colour.Sealing entire area with concrete sealer.	Sqm	22,214.40	624.00	1,38,61,786	
46.00	Cutting of Control joints panels(in Footpath) at suitable required locations using using tools and tackles.	Rmt	7,883.42	59.00	4,65,122	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
47.00	Providing and laying heavy duty **cobble stones 75mm thick,** using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (KPWD SR 2018-19,Sl No : 14.7)	Sqm	1,757.78	1,225.40	21,53,984	
48.00	KSRRB M500-17. Providing and laying **dense graded bituminous macadam** using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications.. MORTH Specification No. 507 -using 100/120 TPH capacity H.M.P. with sensor paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen (KPWD 18-19,S.I.No.21.17.1)	Cum	202.50	8,012.40	16,22,511	
49.00	KSRRB M500-19. Providing and laying **bituminous concrete 40 mm thick** with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects complete as per specifications. MORTH Specification No. 509 - using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 45 mm) with 6 % VG-40 Bitumen(KPWD 18-19,S.I.No.21.22.6)	Cum	54.00	9,637.10	5,20,403	
50.00	KSRRB M800-2. **Retro-Reflectorised Traffic Signs** - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.	Nos.	79.00	3,862.10	3,05,106	
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Equilateral Triangle-TYPE XI (KPWD 18-19,Sl No : 24.2.1)					

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
51.00	KSRRB M800-2. **Retro-Reflectorised Traffic Signs** - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.	Nos.	15.00	5,453.80	,81,807	
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Octagon Stop Board-TYPE XI (KPWD 18-19,Sl No : 24.2.6)					
52.00	KSRRB M800-2. **Retro-Reflectorised Traffic Signs** - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.	Nos.	43.00	3,429.80	1,47,481	
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 600MM Circle-TYPE XI (KPWD 18-19,Sl No : 24.2.3)					

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
53.00	KSRRB M800-3. **Direction and Place Identification Signs upto 0.9 sqm Size Board:**-Manufacturing, supply and installation of retro-reflectorised cautionary, mandatory and informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC :67:2012 specifications & fixed over 4 mm thick aluminium composite panel sheet having minimun 0.30 thick aluminium skin on both sides & fixed over a support frame of 25x25x3 mm MS angle and mounted on 75mm dia OR 75x75x6mm Mild steel angle of total height 2.70m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60 cm below ground level. The sign post should be painted with one coat of red oxide paint and white colour with brands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45 cm x45 cm x 60 cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by engineer in charge. 10 years warranty for retro reflective sheeting from the original sheeting manufacturer as per clause 6.9 in IRC 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered	Sqm	32.40	7619.70	2,46,878	
54.00	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, supply and installation of retro- reflectorised cautionary, mandatory and informatory signboards made out of cube corner micro prismatic grade sheeting confirming to 6**00x800 MM type XI** standards of IRC :67:2012 specifications & fixed over 4 mm thick aluminium composite panel sheet having minimun 0.30 thick aluminium skin on both sides & fixed over a support frame of 25x25x3 mm MS angle and mounted on 75mm dia OR 75x75x6mm Mild steel angle of total height 2.70m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60 cm below ground level. The sign post should be painted with one coat of red oxide paint and white colour with brands of 30 cm height alternatively firmly fixed to the ground by means of foundation with (KPWD18-19,24.2.4)	Nos.	19.00	4453.90	84,624	
	M20 grade cement concrete of 45 cm x45 cm x 60 cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by engineer in charge. 10 years warranty for retro reflective sheeting from the original sheeting manufacturer as per clause 6.9 in IRC 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier.					
55.00	**KSRRB M800 Road markers / Road stud** KSRRB M800-35. Providing and fixing of road stud 100x 100 mm, diecast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded in a suitable bituminous grout or epoxy mortar, all as per BS: 873 part 4:1973 complete as per specifications (KPWD 18-19,Sl No : 24.41)	Nos.	1469.00	317.90	4,66,995	
56.00	**Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface**:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (KPWD 18-19,Sl No : 24.15)	Sqm	6601.14	471.90	31,15,077	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
57.00	**Providing and Fixing of Bus shelter**(on prepared foundation) made of SS 304 frame work with brush steel finish, Galvanised Aluminium powder coated roofing and electronic circuit to control its lighting.The seating shall be made of SS 304 tubular sections for seat and back rest.each unit size of 4500mm x 600mm with a minimum backrest support of 450mm.Bus shelter shall have the Side Display board to have 1100X400mm Electronic display.The electronic display board to be of LED Scrolling type with Oval, 4.3 x 5.1mm dia. Diffused. LED's having Amber colour.Dual bin system should be adopted one for recycle waste & other for dry waste.Each bin shall be with minimum capacity of 70Ltrs.Interactive Information Panel-display equipment with information area of 1400 x 1400 and touch screen LED display panel of area not less than 600-900mm with integrated 8mm toughened glass.Advertisement Area 2 nos of size 4500mm x 1650mm and 2100mm x 2000mm shall be integrated within the design of the Bus Shelter. This shall be backlit type with SS box framing sides and back complete.Provision for installing outdoor WiFi Router.The Foundation slab shall be made in min M25 concrete. The cast iron nuts, bolts shall be rust proof hot deep galvanized powder coated etc.The materials used shall be Nonflammable (NON SOR Item)	Nos.	9.00	1500000.00	1,35,00,000	
58.00	Providing & installing of **E- toilet** with Super structure of the electronic toilet to have asthetic ambience with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of electronic toilet overall size in meters 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess controlled main door and side walls made of SS Grade 304,Toilet floor and closet are to be stainless steel of grade 304.E-Toilet shall have Built-in water tank with minimum 225 Lit capacity and Acess controll using coin validator for entering the unit based on automatic payment collection mechanism exit from the unit should be manual.Automatic lights inside the unit with gloves on opening the door.E-Toilet shall be Automatic flushing system which includes Automatic Pre flush cleaning before use,Automatic closet washing mechanism after use and Automatic platform cleaning mechanism programmed after specific numbers.In addition to these flush switch is to be provided for manual operation.Standard features should include heath faucet,exhaust fan and cloth hanger.	Nos	3.00	5,75,000	17,25,000	
	The E-Toilet shall have Alert to users-different indication on 'ready to use',busy are to be provided in the unit also with Voice guidence in the unit for users. Web enabled support-GPRS based Real time data to be provided from the unit through web for knowing the health status like number of users per day and coins collected.E-toilet shall have Modular and portable design enabling easy assembling and installation at site.Call ceneter and web portal facilities for registering complience and tracking usage,coin collection etc.Status display in LED,Printed instruction stickers are to be provided.For Advertisment purpose space for advertisement dispaly to be povided on the exterior of the unit for income generation and sustainability. Backup power facility like UPS is to be provided to supplement upto 30 Min Base of the unit to be placed on a suitable concrete structure with a ashthetic finish. (Non SOR Item)					
59.00	KSRB 6-2.3 : Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 5.0Newton per sqmm (table moulded) with cement mortar 1:6 for basement and superstructu/re including cost of materials, labour charges, scaffolding, curing complete as per specifications. Specification No. KBS 6.2. (KPWD 18-19,SI.No.6.7)	Cum	30.14	8576.70	2,58,495	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
60.00	KSRB15-3.8 : Providing 18mm thick cement plaster in single coat with cement mortar 1:4, to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.(KPWD 18-19,Sl No.15.16)	Sqm	90.72	288.20	26,146	
61.00	Providing and fixing 450mm wide X 600mmX 20mm thk.RIVERWASHED BLACK GRANITE CLADDING on surface of seating as directed by architect (Non SOR Item)	Sqm	50.40	3527.00	1,77,761	
62.00	Supply and Fixing of **Traffic signal Straight pole** of 6 mtr, inner dia 100 mm from resistant to peeling with base plate size of (LXWXT) 200mm X200mmX6mm painted with redoxide and double coat with synthetic enamel paint of yellow colour assembly G.I., class B, as per technical specification (NON SOR Item)	Nos.	2.00	18,691	37,382	
63.00	Supply and fixing of T**raffic signal Cantilever pole** Class B having inner diameter of 100 mm or more with a height of 6m including extension arm assembly having outer diameter of 75mm with arm span of 4 mtr length and base plate of size 300mm X 300mm with thickness of 6 mm welded at the bottom of the pole base as per technical specification & drawings. (NON SOR Item)	Nos.	2.00	52,850	1,05,700	
64.00	Supply and fixing of 300 mm dia – single source – LED retrofit - **Red (blow)** as per Specification (NON SOR Item)	Nos.	4.00	11,082	44,328	
65.00	Supply and fixing of 300 mm dia – single source – LED retrofit - **Amber (blow) as per** Specification (NON SOR Item)	Nos.	4.00	11,082	44,328	
66.00	Supply and fixing of 300 mm dia – single source – LED retrofit - **Green (arrow/U- Turn)** EN-12368 as per Specification (NON SOR Item)	Nos.	4.00	13,973	55,892	
67.00	Supply and fixing of 300 mm dia – single source – LED retrofit - **Red (ped. standing)** EN-12368 as per Specification (NON SOR Item)	Nos.	4.00	11,082	44,328	
68.00	Supply and fixing of 300 mm dia – single source – LED retrofit - **Green (ped.walking)** EN-12368 as per Specification (NON SOR Item)	Nos.	4.00	13,973	55,892	
69.00	Supply and fixing of 300 mm dia - **No Right Turn/No Left turn/No Straight/No 'U' Turn** aspects by using UV stabilized ink on face plate EN-12368 as per Specification (NON SOR Item)	Nos.	4.00	6,196	24,784	
70.00	Providing and fixing of **S.S. Bollards(SS304**) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	418.00	4,500	18,81,000	
71.00	Providing and fixing of **railing as detail design in MS HOLLOW SECTION and bars** (shop drawing to be approved),with vertical support of 0.9m @2.2mc/c , all complete to the satisfaction of the Landscape architect.(Non SOR Item)	MT	1.04	100,000	1,04,000	
72.00	Providing and Fixing **SS 304 Outdoor Dustbin**(Pivoted Type and Mounted on SS Poles) of 55 liters capacity all complete to the satisfaction of the Engineer in charge. (NON SOR Item)	Nos.	105.00	7,500	7,87,500	
73.00	**Extra Lead for Disposing** off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1-**Earth**	Cum	33,087.45	90.86	30,06,326	
74.00	**Extra Lead for Disposing** off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1-**Debris**	Cum	13,153.88	91.30	12,00,949	
		Total			**37,17,84,723**	

SOR+ RA Items Cost	25,72,53,950
GST @12%	30870474
Market Rate	9,73,44,486
GST @18%	17522007

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work :- Mangalore Smart City

1.1 Measurement Sheet of Road and Other Work for DPR 4

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Road and Junction Pavment and Other Works						
1	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)						
	13b-Hampankatta to PVS Circle	Sqm					
	LHS	Sqm					
	Ch.10.0 to Ch.180.0	Sqm	1	170		3.96	673.20
	RHS	Sqm					
	Ch.1000.0 to Ch.1060.0	Sqm	1	60		2.28	136.80
	13a-PVS Circle to Arya samaj Road	Sqm					
	RHS	Sqm					
	Ch.0.0 to Ch.540.0	Sqm	1	540.00		2.00	1080.00
	Balmatta Road LHS						
	RHS Footpath (Paver Block)						
	Ch. 0.0 to Ch.340.0	Sqm	1	340	1.5		510.00
	Ch.370.0 to Ch.460.0	Sqm	1	90	3.29		296.10
	Ch.470.0 to Ch.530.0	Sqm	1	81	0.86		69.66
	Paver Block on Carriageway						
	Ch.470.0 to Ch.530.0	Sqm	1	81.00	1.55		125.55
	Balmatta Road RHS						
	Ch.0.0 to Ch.370.0	Sqm	1	323.00	2.1		678.30
	Ch.465.0 to Ch.530.0	Sqm	1	65.63	2.52		165.39
		Sqm		**Total Qty.**			**3735.00**
	Consider 60mm Paver Block	**Cum**					**224.10**
2	KSRRB M200.Dismantling of cement concrete pavement by mechanical means using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Sl No : 18.47)						
	7b-Hampankatta to milagres Church						
	LHS						
	Ch.120.0 to Ch.140.0	Cum	1	20	0.471	0.28	9.42
	Ch.150.0 to Ch.215.0	Cum	1	65	0.27	0.28	17.55
	RHS						
	Ch.140.0 to Ch.220.0	Cum	1	80	1.175	0.28	94.00
	13a-PVS Circle to Arya Samaj Road						
	LHS						
	Ch.0.0 to Ch.70.0	Cum	1	70	0.77	0.28	15.09
	Ch.85.0 to Ch.105.0	Cum	1	20	0.67	0.28	3.75
	Ch.120.0 to Ch.480.0	Cum	1	360	0.98	0.28	98.78
	Ch.600.0 to Ch.642.0	Cum	1	42	0.88	0.28	10.35
	Ch.680.0 to Ch.950.0	Cum	1	270	1.5	0.28	113.40
	Ch.1010.0 to Ch.1080.0	Cum	1	70	1.17	0.28	22.93
	RHS						
	Ch.0.0 to 150.0	Cum	1	150	1.93	0.28	81.06
	Ch.165.0 to Ch.480.0	Cum	1	315	1.34	0.28	118.19
	Ch.485.0 to Ch.520.0	Cum	1	35	0.54	0.28	5.29
	Ch.540.0 to Ch.660.0	Cum	1	120	0.775	0.28	26.04
	Ch.690.0 to Ch.858.0	Cum	1	168	2.1	0.28	98.78
	Ch.945.0 to Ch. 1110.0	Cum	1	165	1.28	0.28	59.14
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.478.0	Cum	1	468	1.83	0.28	239.80
	RHS						
	Ch.10.0 to Ch.440.0	Cum	1	430	1.74	0.28	209.50
	Ch.440.0 to Ch.480.0	Cum	1	40	5.18	0.28	58.02
	13b-Hampankatta Junction to PVS Circle						
	LHS						
	Ch.10.0 to Ch.620.0	Cum	1	610	1.89	0.28	322.81
	Ch.620.0 to Ch.670.0	Cum	1	50	0.705	0.28	9.87
	Ch.690.0 to Ch.820.0	Cum	1	130	0.95	0.28	34.58
	Ch.910.0 to ch.970.0	Cum	1	60	1.98	0.28	33.26
	Ch.1030.0 to Ch.1110.0	Cum	1	80	2.34	0.28	52.42
	RHS	Cum					
	Ch.20.0 to Ch.35.0	Cum	1	15	2.8	0.28	11.76
	Ch.80.0 to Ch.300.0	Cum	1	220	1.89	0.28	116.42
	Ch.300.0 to ch.900.0	Cum	1	600	1.045	0.28	175.56
	Ch.910.0 to ch.1090.0	Cum	1	180	1.39	0.28	70.06
	13a-PVS Circle to Arya Samaj Road						
	Ch.0.0 to Ch.680.0 (Consider 5% Pavement Repaire Work)	Cum	0.05	680	14	0.28	133.28
	13b-Hamapankatta to PVS Circle						
	Ch.0.0 to Ch.1120.0 (Consider 5% Pavement Repaire Work)	Cum	0.05	1120	11.6	0.28	181.89
	12-Bunts Hostel Road						
	Ch.0.0 to Ch.478.0 (Consider 5% Pavement Repaire Work)	Cum	0.05	478	10.4	0.28	69.60
	Hampankatta Junction and Balmatta Road	Cum	1	410	6.35	0.3	781.05
	RCC Pipe Crossing-						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Balmatta Road						
	6-						
	7b-Hampankatta to Milagres Cross Road-At Hampankatta Side (Existing BT)	Cum	3	19	1.182	0.28	18.86
	7b-Hampankatta to Milagres Cross Road-At Milagres church Side (Existing CC)	Cum	2	19	1.182	0.28	12.58
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Cum	7	10	1.182	0.28	23.17
	13a-KRR Road-PVS Circle to Arya Samaj Road	Cum	12	20	1.182	0.28	79.43
	13b-KRR Road-PVS Circle to Hampankatta	Cum	12	20	1.182	0.28	79.43
	12-Bunts Hostel Road	Cum	5	20	1.182	0.28	33.10
		Cum		**Total Qty.**			**3520.22**
3	KSRRB M200-Dismantaling of kerb Stone and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202. (S.I.No.18.49)						
	Balmatta Road LHS						
	RHS Footpath (Paver Block)						
	Ch. 0.0 to Ch.340.0	**Rm**	1	340			340.00
	Ch.370.0 to Ch.460.0	**Rm**	1	90			90.00
	Ch.470.0 to Ch.530.0	**Rm**	1	81			81.00
	Balmatta Road RHS						
	Ch.0.0 to Ch.370.0	**Rm**	1	323			323.00
	Ch.465.0 to Ch.530.0	**Rm**	1	65.63			65.63
	7e-Attavar Road-RHS						
	Ch.150.0 to Ch.320.0	Rm	1	170			170.00
	12-Bunts Hostel Road						
	Ch.0.0 to Ch.280.0	Rm	1	280			280.00
	13b-Hampankatta to PVS Circle-RHS						
	Ch.0.0 to Ch.1120.0	Rm	2	1120			2240.00
		Rm		**Total Qty.**			**3589.63**
4	KSRRB M200-13.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 18-19,S.I.18.20)						
	Dismantaling of Existing Concrete Pavement-DLC						
	7b-Hampankatta to milagres Church						
	LHS						
	Ch.120.0 to Ch.140.0	Cum	1	20	0.471	0.20	1.88
	Ch.150.0 to Ch.215.0	Cum	1	65	0.27	0.20	3.51
	RHS						
	Ch.140.0 to Ch.220.0	Cum	1	80	1.175	0.20	18.80
	13a-PVS Circle to Arya Samaj Road						
	LHS						
	Ch.0.0 to Ch.70.0	Cum	1	70	0.77	0.20	10.78
	Ch.85.0 to Ch.105.0	Cum	1	20	0.67	0.20	2.68
	Ch.120.0 to Ch.480.0	Cum	1	360	0.98	0.20	70.56
	Ch.600.0 to Ch.642.0	Cum	1	42	0.88	0.20	7.39
	Ch.680.0 to Ch.950.0	Cum	1	270	1.5	0.20	81.00
	Ch.1010.0 to Ch.1080.0	Cum	1	70	1.17	0.20	16.38
	RHS						
	Ch.0.0 to 150.0	Cum	1	150	1.93	0.20	57.90
	Ch.165.0 to Ch.480.0	Cum	1	315	1.34	0.20	84.42
	Ch.485.0 to Ch.520.0	Cum	1	35	0.54	0.20	3.78
	Ch.540.0 to Ch.660.0	Cum	1	120	0.775	0.20	18.60
	Ch.690.0 to Ch.858.0	Cum	1	168	2.1	0.20	70.56
	Ch.945.0 to Ch. 1110.0	Cum	1	165	1.28	0.20	42.24
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.478.0	Cum	1	468	1.83	0.20	171.29
	RHS						
	Ch.10.0 to Ch.440.0	Cum	1	430	1.74	0.20	149.64
	Ch.440.0 to Ch.480.0	Cum	1	40	5.18	0.20	41.44
	13b-Hampankatta Junction to PVS Circle						
	LHS						
	Ch.10.0 to Ch.620.0	Cum	1	610	1.89	0.20	230.58
	Ch.620.0 to Ch.670.0	Cum	1	50	0.705	0.20	7.05
	Ch.690.0 to Ch.820.0	Cum	1	130	0.95	0.20	24.70
	Ch.910.0 to ch.970.0	Cum	1	60	1.98	0.20	23.76
	Ch.1030.0 to Ch.1110.0	Cum	1	80	2.34	0.20	37.44
	RHS						0.00
	Ch.20.0 to Ch.35.0	Cum	1	15	2.8	0.20	8.40
	Ch.80.0 to Ch.300.0	Cum	1	220	1.89	0.20	83.16
	Ch.300.0 to ch.900.0	Cum	1	600	1.045	0.20	125.40
	Ch.910.0 to ch.1090.0	Cum	1	180	1.39	0.20	50.04
	SWD						
	Balmatta Road						
	RHS						
	SWD-Base						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.0.0 to Ch.531.0	Cum	1	531.00	2.00	0.10	106.20
	SWD-Wall						
	Ch.0.0 to Ch.531.0	Cum	1	531.00	0.15	0.90	71.69
	SWD-Slab						
	Ch.0.0 to Ch.531.0	Cum	1	531.00	1.80	0.15	143.37
	7e-Attavar Road-RHS						
	Ch.150.0 to Ch.320.0						
	Base	Cum	1	170.00	1.20	0.15	30.60
	Wall	Cum	2	170.00	0.20	0.70	47.60
	Slab	Cum	1	170.00	1.00	0.15	25.50
	12-Bunts Hostel Road	Cum					
	Ch.0.0 to Ch.280.0	Cum					
	Base	Cum	1	280	1.10	0.15	46.20
	Wall	Cum	2	280	0.20	1.00	112.00
	Slab	Cum	1	280	0.90	0.15	37.80
	13b-Hampankatta to PVS Circle-RHS	Cum					
	Ch.0.0 to Ch.1120.0	Cum					
	Base	Cum	1	1120.00	1.00	0.15	168.00
	Wall	Cum	2	1120.00	0.20	1.20	537.60
	Slab	Cum	1	1120.00	0.80	0.15	134.40
	13a-Sturrock Road-LHS and RHS	Cum					
	Ch.0.0 to Ch.1110.0	Cum					
	Base	Cum	2	1110.00	1.00	0.15	333.00
	Wall	Cum	4	1110.00	0.20	1.00	888.00
	Slab	Cum	2	1110.00	0.80	0.15	266.40
	Cross Drain	Cum					
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Cum					
	Base and Top Slab	Cum	6	10.00	0.50	0.20	6.00
	Wall	Cum	6	10.00	0.50	0.20	6.00
	13a-KRR Road-PVS Circle to Arya Samaj Road						
	Base and Top Slab	Cum	20	10.00	1.00	0.20	40.00
	Wall	Cum	20	10.00	1.00	0.20	40.00
	13b-KRR Road-PVS Circle to Hampankatta	Cum					
	Base and Top Slab	Cum	20	10.00	1.00	0.20	40.00
	Wall	Cum	20	10.00	1.00	0.20	40.00
	12-Bunts Hostel Road	Cum					
	Base and Top Slab	Cum	6	10.00	0.50	0.20	6.00
	Wall	Cum	6	10.00	0.50	0.20	6.00
		Cum		**Total Qty.**			**4575.74**
5	KSRRB M200-17.2. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. v)Steel work in all types of Sections upto a Height of 5 m above plinth level excluding Cutting of Rivet– B. Excluding dismembering. (KPWD SOR 18-19,18.33)						
	Footpath Railing at 13a-Pvs Circle to Arya Samaj Road		**Rm**	**Kg/Rm**	**Kg**		
			100	50	5000		**5**
			Nos.	Mt/Nos			
	Bus Shelter		5	1.1			**5.5**
		MT				**Total**	**10.5**
6	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Section 5.(KSRRB Sl No.19.56)						
	7b-hampankatta to Milagres Cross Road						
	Ch.20.0 to Ch.120.0	Sqm	1	100		11	1100.00
	7e-Attavar Road						
	Ch.0.0 to Ch.330.0	Sqm	1	330		8.09	2669.70
	13a-Pvs Circle to Arya Samaj Road						
	RHS						
	Ch.100.0 to Ch.580.0	Sqm	1	480		3.69	1771.20
	LHS						
	Ch.145.0 to Ch.550.0	Sqm	1	470		1.97	925.90
		Sqm		**Total Qty.**			**6466.80**
7	KSRRB 300-46. Scarifying stone metal crust 50mm to 100mm thick by road roller with scarifier along with 20mm premix carpet / surface dressing and stacking of old serviceable materials including cost of all labour charges, HOM of machinaries complete as per specifications. MORTH / Section 5. (KSRRB Sl No.19.52)						
	7b-hampankatta to Milagres Cross Road						
	Ch.20.0 to Ch.120.0	Sqm	2	100		11	2200.00
	7e-Attavar Road						
	Ch.0.0 to Ch.330.0	Sqm	2	330		8.09	5339.40
	Hampankatta Junction and Balmatta Road	Sqm	1	410		6.35	2603.50
	13a-Pvs Circle to Arya Samaj Road						
	RHS						
	Ch.100.0 to Ch.580.0	Sqm	2	480		3.69	3542.40
	LHS						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.145.0 to Ch.550.0	Sqm	2	470		1.97	1851.80
	Dismantaling of CC Pavement-GSB						
	7b-Hampankatta to milagres Church						
	LHS						
	Ch.120.0 to Ch.140.0	Sqm	2	20		0.471	18.84
	Ch.150.0 to Ch.215.0	Sqm	2	65		0.27	35.10
	RHS						
	Ch.140.0 to Ch.220.0	Sqm	2	80		1.175	188.00
	13a-PVS Circle to Arya Samaj Road						
	LHS						
	Ch.0.0 to Ch.70.0	Sqm	2	70		0.77	107.80
	Ch.85.0 to Ch.105.0	Sqm	2	20		0.67	26.80
	Ch.120.0 to Ch.480.0	Sqm	2	360		0.98	705.60
	Ch.600.0 to Ch.642.0	Sqm	2	42		0.88	73.92
	Ch.680.0 to Ch.950.0	Sqm	2	270		1.5	810.00
	Ch.1010.0 to Ch.1080.0	Sqm	2	70		1.17	163.80
	RHS						
	Ch.0.0 to 150.0	Sqm	2	150		1.93	579.00
	Ch.165.0 to Ch.480.0	Sqm	2	315		1.34	844.20
	Ch.485.0 to Ch.520.0	Sqm	2	35		0.54	37.80
	Ch.540.0 to Ch.660.0	Sqm	2	120		0.775	186.00
	Ch.690.0 to Ch.858.0	Sqm	2	168		2.1	705.60
	Ch.945.0 to Ch. 1110.0	Sqm	2	165		1.28	422.40
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.478.0	Sqm	2	468		1.83	1712.88
	RHS						
	Ch.10.0 to Ch.440.0	Sqm	2	430		1.74	1496.40
	Ch.440.0 to Ch.480.0	Sqm	2	40		5.18	414.40
	13b-Hampankatta Junction to PVS Circle						
	LHS						
	Ch.10.0 to Ch.620.0	Sqm	2	610		1.89	2305.80
	Ch.620.0 to Ch.670.0	Sqm	2	50		0.705	70.50
	Ch.690.0 to Ch.820.0	Sqm	2	130		0.95	247.00
	Ch.910.0 to ch.970.0	Sqm	2	60		1.98	237.60
	Ch.1030.0 to Ch.1110.0	Sqm	2	80		2.34	374.40
	RHS						
	Ch.20.0 to Ch.35.0	Sqm	2	15		2.8	84.00
	Ch.80.0 to Ch.300.0	Sqm	2	220		1.89	831.60
	Ch.300.0 to ch.900.0	Sqm	2	600		1.045	1254.00
	Ch.910.0 to ch.1090.0	Sqm	2	180		1.39	500.40
	13a-Pvs Circle to Arya Samaj Road						
	RHS						
	Ch.100.0 to Ch.540.0	Sqm	2.00	480		3.69	3542.40
	LHS	Sqm	0.00	0		0	0.00
	Ch.100.0 to Ch.570.0	Sqm	2.00	470		1.97	1851.80
	RCC Pipe Crossing-	Sqm					
	7b-Hampankatta to Milagres Cross Road-At Hampankatta Side (Existing BT)	Sqm	6	19	1.182		134.75
	7b-Hampankatta to Milagres Cross Road-At Milagres church Side (Existing CC)	Sqm	4	19	1.182		89.83
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Sqm	14	10	1.182		165.48
	13a-KRR Road-PVS Circle to Arya Samaj Road	Sqm	24	20	1.182		567.36
	13b-KRR Road-PVS Circle to Hampankatta	Sqm	24	20	1.182		567.36
	12-Bunts Hostel Road	Sqm	10	20	1.182		236.40
		Sqm		**Total Qty.**			**37126.32**
8	KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar (Sl No : 18.23)						
	7e-Attavar Road-LHS						
	Ch.150.0 to Ch.320.0 (Open Drain)						
	Wall	Cum	2	170	0.23	0.3	23.46
	13a-PVS Circle to Arya Samaj Road-LHS-Wall	Cum	2	1110	0.23	0.6	306.36
	13a-PVS Circle to Arya Samaj Road-RHS-Wall	Cum	2	1110	0.23	0.6	306.36
		Cum		**Total Qty.**			**636.18**
9	Removing B.S slab of drain and stacking.(PWD 16-17,5.32,Page No.32)						
	13a-PVS Circle to Arya Samaj Road-LHS	Sqm	2	1100	1.2		2640.00
	13a-PVS Circle to Arya Samaj Road-RHS	Sqm	2	1100	1.2		2640.00
	13b-Hampankatta to PVS Circle-RHS	Sqm	2	1120	1.2		2688.00
		Sqm		**Total Qty.**			**7968.00**

Sr. No.	Description	Unit	No's	L	B	H	Qty.
10	KSRRB M800-Permanent type barricade in construction zone KSRRB M800-44.1. Construction of a permanent type barricade made of steel components, 1.5 m high from road level, fitted with 3 horizontal rails 200 mm wide and 4 m long on 50 x 50 x 5 mm angle iron vertical support, painted with yellow and white strips, 150 mm in width at an angle of 45º, complete as per IRC:SP:55-2014 complete as per specifications . A. With steel components (Sl No : 24.45)						
	Length of Road						
	Considered 500m length at 4 locations work will be in progress	**Rm**	4	250.00			1000.00
						Total Length	**1000.00**
	No. of Barricade = Length of Road / Length of one barricade (4.0m)	**Nos.**		**Total Qty.**			**250.00**
11	KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes,in accordance with requirements of lines and grades and cross sections,and transporting disposal location up to a lead of 5.00Km and complete as per specifications. MORTH specification No.301 (Sl No : 19.14)						
	Pavement						
	7b-Hampankatta to Milagres Cross Road						
	Ch.20.0 to Ch.120.0	Cum	1	100	12.9	0.40	516.00
	Road towards Wenlock Hospital	Cum	1	20	12.5	0.40	100.00
	7e-Milagres Nandigidda Road						
	Ch.0.00 to Ch.330.0	Cum	1	330	5	0.40	660.00
	13a-PVS Circle to Arya Samaj Road						
	RHS						
	Ch.100.0 to Ch.540.0	Cum	1	480	3.69	0.40	708.48
	LHS						
	Ch.100.0 to Ch.570.0	Cum	1	470	1.97	0.40	370.36
	Balmatta Road						
	LHS						
	Ch.0.0 to Ch.40.0	Cum	1	44.86	3.63	0.15	24.43
	LHS						
	Ch.60.0 to ch.320.0	Cum	1	244	2.7	0.15	98.82
	LHS						
	Ch.500.0 to ch.531.0	Cum	1	37.7	0.71	0.15	4.02
	Footpath						
	Balmatta Road-LHS						
	Ch.0.0 to Ch.90.0	Cum	1.0	79.0	2.2	0.38	66.04
	Ch. 90.0 to Ch.190.00	Cum	1.0	100.0	4.4	0.38	168.72
	Landscape Deduction	Cum	-1.0	81.7	1.0	0.38	-31.36
	Compound Wall Side-Ch.100 to Ch.185.0	Cum	1.0	85.0	2.4	0.38	77.07
	Ch.190 to Ch.340	Cum	1.0	150.0	2.6	0.38	149.72
	Ch. 360 to Ch.470	Cum	1.0	151.0	2.2	0.38	126.24
	Ch.470.0 to Ch.530.0	Cum	1.0	80.0	2.2	0.38	66.88
	Balmatta Road-RHS						
	Ch.0.0 to Ch.130	Cum	1.0	130.0	2.7	0.38	130.91
	Ch.135.0 to Ch.205.0	Cum	1.0	70.0	2.3	0.38	62.24
	Ch.200 to Ch.360.0	Cum	1.0	160.0	3.3	0.38	201.86
	Ch.360.0 to Ch.530.0	Cum	1.0	170.0	3.3	0.38	210.60
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Cum	1.00	200.00	2.54	0.15	76.20
	RHS						
	Ch.20.00 to Ch.50.0	Cum	1.00	30.00	5.37	0.15	24.15
	Ch.50.0 to Ch.90.0						
	Ch.110.0 to Ch.220.0	Cum	1.00	110.00	2.56	0.15	42.30
	7e-Milagres Nandigidda Road						
	LHS						
	Ch.25.00 to Ch.45.00	Cum	1.00	20.00	4.35	0.15	13.04
	Ch.155.00 to Ch.330.00	Cum	1.00	175.00	3.83	0.15	100.48
	RHS						
	Ch.170.00 to Ch.330.00	Cum	1.00	160.00	2.68	0.15	64.28
	13a-PVS Circle to Arya Samaj Junction						
	LHS-Paver on Footpath						
	Ch.0.0 to Ch.60.0	Cum	1.00	60.00	2.37	0.15	21.30
	Ch.62.00 to Ch.128.0	Cum	1.00	66.00	2.08	0.15	20.55
	Ch.132.0 to Ch.280.0	Cum	1.00	148.00	2.26	0.15	50.25
	Ch.285.0 to Ch.390.0	Cum	1.00	105.00	2.21	0.15	34.80
	Ch.395.0 to Ch.455.0	Cum	1.00	60.00	1.42	0.15	12.75
	Ch.460.0 to ch.545.0	Cum	1.00	85.00	2.39	0.15	30.45
	Ch.580.0 to Ch.640.0	Cum	1.00	60.00	3.20	0.15	28.80
	Ch.640.0 to Ch.800.0	Cum	1.00	160.00	2.06	0.15	49.50
	Ch.805.0 to Ch.860.0	Cum	1.00	55.00	2.36	0.15	19.50
	Ch.860.0 to Ch.920.0	Cum	1.00	60.00	2.68	0.15	24.15
	Ch.925.0 to ch.960.0	Cum	1.00	35.00	2.86	0.15	15.00
	Ch.960.0 to Ch.1060.0	Cum	1.00	100.00	2.61	0.15	39.15
	Ch.1060 to Ch.1110.0	Cum	1.00	50.00	4.02	0.15	30.15
	LHS-Compound Side Paver						
	Ch.10.00 to Ch.60.00	Cum	1.00	50.00	2.46	0.15	18.45

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.60.00 to Ch.130.0	Cum	1.00	70.00	1.80	0.15	18.90
	Ch.130.0 to Ch.200.0	Cum	1.00	70.00	2.66	0.15	27.90
	Ch.235.0 to Ch.270.0	Cum	1.00	35.00	1.03	0.15	5.40
	Ch.490.0 to Ch.540.0	Cum	1.00	50.00	0.96	0.15	7.20
	Ch.650.0 to Ch.800.0	Cum	1.00	150.00	2.57	0.15	57.90
	Ch.925.00 to Ch.950.0	Cum	1.00	25.00	1.88	0.15	7.05
	Ch.960.0 to Ch.1050.0	Cum	1.00	90.00	6.23	0.15	84.15
	RHS						
	Ch.0.0 to Ch.320.0	Cum	1.00	320.00	2.28	0.15	109.20
	Ch.330.0 to Ch.510.0	Cum	1.00	180.00	2.06	0.15	55.50
	Ch.510.0 to Ch.538.0	Cum	1.00	28.00	2.07	0.15	8.70
	Ch.540.0 to Ch.578.0	Cum	1.00	38.00	1.74	0.15	9.90
	Ch.580.0 to Ch.660.0	Cum	1.00	80.00	3.21	0.15	38.55
	Ch.680.0 to Ch.750.0	Cum	1.00	70.00	3.53	0.15	37.05
	Ch.750.0 to Ch.1020.0	Cum	1.00	270.00	1.60	0.15	64.95
	Ch.1025.0 to Ch.1060.0	Cum	1.00	35.00	1.09	0.15	5.70
	Ch.1070.0 to Ch.1110.0	Cum	1.00	40.00	1.85	0.15	11.10
	RHS-Compound Side Paver						
	Ch.0.0 to Ch.210.0	Cum	1.00	210.00	1.92	0.15	60.60
	Ch.230.0 to Ch.290.0	Cum	1.00	60.00	0.63	0.15	5.70
	Ch.325.0 to Ch.390.0	Cum	1.00	65.00	1.58	0.15	15.45
	Ch.470.0 to Ch.510.0	Cum	1.00	40.00	4.25	0.15	25.50
	Ch.515.0 to Ch.535.0	Cum	1.00	20.00	2.40	0.15	7.20
	CH.540.0 to Ch.575.0	Cum	1.00	35.00	3.23	0.15	16.95
	Ch.830.0 to Ch.970.0	Cum	1.00	140.00	7.20	0.15	151.20
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.10.0 to Ch.180.0	Cum	1.00	170.00	2.10	0.15	53.55
	Ch.255.0 to Ch.345.0	Cum	1.00	90.00	2.62	0.15	35.40
	Ch.350.0 to Ch.440.0	Cum	1.00	90.00	2.30	0.15	31.05
	Ch.590.0 to Ch.680.0	Cum	1.00	90.00	2.24	0.15	30.30
	Ch.680.0 to Ch.845.0	Cum	1.00	165.00	2.13	0.15	52.65
	Ch.840.0 to Ch.880.0	Cum	1.00	40.00	4.58	0.15	27.45
	Ch.880.0 to Ch.900.0	Cum	1.00	20.00	8.25	0.15	24.75
	Ch.900.0 to Ch.965.0	Cum	1.00	65.00	2.42	0.15	23.55
	Ch.965.0 to Ch.1110.0	Cum	1.00	145.00	2.18	0.15	47.40
	Ch.1110.0 to Ch.1120.0	Cum	1.00	10.00	8.13	0.15	12.20
	Compound Wallside Paver Block						
	Ch.70.0 to Ch.180.0	Cum	1.00	110.00	2.96	0.15	48.90
	Ch.255.0 to Ch.340.0	Cum	1.00	85.00	1.89	0.15	24.15
	Ch.355.0 to Ch.410.0	Cum	1.00	55.00	2.82	0.15	23.25
	Ch.590.0 to Ch.680.0	Cum	1.00	90.00	4.15	0.15	55.96
	Ch.680.0 to Ch.730.0	Cum	1.00	50.00	1.32	0.15	9.90
	Ch.820.0 to Ch.840.0	Cum	1.00	20.00	3.75	0.15	11.25
	Ch.840.0 to Ch.880.0	Cum	1.00	40.00	3.83	0.15	22.95
	Ch.880.0 to Ch.900.0	Cum	1.00	20.00	8.25	0.15	24.75
	Ch.900.0 to Ch.935.0	Cum	1.00	35.00	2.91	0.15	15.30
	Ch.900.0 to Ch.930.0	Cum	1.00	30.00	3.40	0.15	15.30
	Ch.970.0 to Ch.1040.0	Cum	1.00	70.00	7.20	0.15	75.60
	Ch.1060 to Ch.1110.0	Cum	1.00	50.00	2.90	0.15	21.75
	RHS						
	Ch.10.0 to Ch.140.0	Cum	1.00	130.00	1.40	0.15	27.26
	Ch.150.0 to Ch.510.0	Cum	1.00	360.00	2.11	0.15	113.70
	Ch.515.0 to Ch.630.0	Cum	1.00	115.00	2.54	0.15	43.80
	Ch.630.0 to Ch.1090.0	Cum	1.00	460.00	1.83	0.15	126.30
	Compound Wallside Paver Block						
	Ch.160.0 to Ch.270.0	Cum	1.00	110.00	0.72	0.15	11.85
	Ch.270.0 to Ch.475.0	Cum	1.00	205.00	2.32	0.15	71.40
	Ch.480.0 to Ch.505.0	Cum	1.00	25.00	0.84	0.15	3.15
	Ch.515.0 to Ch.525.0	Cum	1.00	10.00	0.80	0.15	1.20
	Ch.590.0 to Ch.630.0	Cum	1.00	40.00	3.20	0.15	19.20
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.118.00	Cum	1.00	108.00	3.78	0.15	61.24
	Ch.200.0 to Ch.440.0	Cum	1.00	240.00	2.45	0.15	88.05
	Ch.450.0 to Ch.478.0	Cum	1.00	28.00	3.54	0.15	14.85
	RHS						
	Ch.10.0 to Ch.165.0	Cum	1.00	155.00	3.41	0.15	79.28
	Ch.300.0 to Ch.470.0	Cum	1.00	170.00	3.78	0.15	96.39
	Electrical Trench						
	7b-Hampankatta to Milagres Cross Road						
	RHS	Cum	1	220	1.1	1.00	242.00
	LHS	Cum	1	220	1.1	1.00	242.00
	7e-Attavar Road						
	RHS	Cum	1	330	1.1	1.00	363.00
	LHS	Cum	1	330	1.1	1.00	363.00
	13a-PVS Circle to Arya Samaj Junction						
	RHS	Cum	1	1110	1.1	2.00	2442.00
	LHS	Cum	1	1110	1.1	2.00	2442.00
	13b-Hampankatta to PVS Circle						
	RHS	Cum	1	1120	1.1	1.00	1232.00
	LHS	Cum	1	1120	1.1	1.00	1232.00
	12-Bunts Hostel Road	Cum					
	RHS	Cum	1	480	1.1	1.00	528.00
	LHS	Cum	1	480	1.1	1.00	528.00
							0.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	SWD						
	Balmatta Road						
	Foundation						
	RHS-D12	Cum	1	381	1.7	0.66	427.48
	RHS-D12A	Cum	1	100	2	0.81	162.00
	LHS-D11	Cum	1	481	1.8	1.63	1411.25
	Road 13a			Sides	2.00		
	Node-CO-137						
	Base	Cum	2	97	1.8	1.57	1096.49
	Node-CO-176						
	Base	Cum	2	49.2	2.3	2.63	1190.44
	Node-CO-143						
	Base	Cum	2	69	2.1	0.35	202.86
	Node-CO-144						
	Base	Cum	2	42.3	1.76	0.97	288.86
	Node-CO-145						
	Base	Cum	2	71.1	1.6	0.86	391.33
	Node-CO-162						
	Base	Cum	2	114.4	1.5	1.47	1009.01
	Node-CO-138						
	Base	Cum	2	54.8	1.3	1.06	302.06
	Node-CO-141						
	Base	Cum	2	37.7	1.3	0.99	194.08
	Node-CO-139						
	Base	Cum	2	46.3	1.3	1.08	260.02
	Node-CO-146						
	Base	Cum	2	105.9	1.3	0.92	506.63
	Node-CO-147						
	Base	Cum	2	69.1	1.3	1.07	384.47
	Node-CO-148						
	Base	Cum	2	117.7	1.5	1.35	953.37
	Node-CO-149						
	Base	Cum	2	83.7	1.5	1.7	853.74
	Node-CO-140						
	Base	Cum	2	64.8	1.3	1.03	347.07
	Node-CO-150						
	Base	Cum	2	26.1	1.5	1.94	303.80
	Node-CO-151						
	Base	Cum	2	32	1.5	2.09	401.28
	Road 13b						
	Node-CO-132						
	Base	Cum	2	175.7	2.1	1.735	1280.33
	Node-CO-125						
	Base	Cum	2	74.3	2	1.27	377.44
	Node-CO-152						
	Base	Cum	2	93.8	2	1.245	467.12
	Node-CO-135						
	Base	Cum	2	86.4	2	0.97	335.23
	Node-CO-134						
	Base	Cum	2	81.4	2.1	1.38	471.79
	Node-CO-133						
	Base	Cum	2	71.9	2.1	1.58	477.13
	Node-CO-131						
	Base	Cum	2	94.5	1.7	1.75	562.28
	Node-CO-160						
	Base	Cum	2	36.5	1.7	2.34	290.39
	Node-CO-128						
	Base	Cum	2	121.4	1.7	2.61	1077.30
	Node-CO-178						
	Base	Cum	2	57.3	1.6	1.05	192.53
	Node-CO-154						
	Base	Cum	2	52.8	2	2.84	599.81
	Node-CO-130						
	Base	Cum	2	64	1.8	1.99	458.50
	Node-CO-126						
	Base	Cum	2	81.8	2	1.32	431.90
	Road 12						
	Node-CO-179						
	Base	Cum	2	56.7	1.7	1.465	282.42
	Node-CO-181						
	Base	Cum	2	301.2	1.5	1.96	1771.06
	Node-CO-180						
	Base	Cum	2	114.7	1.5	1.495	514.43
	Road 7e						
	Node-CO-61						
	Base	Cum	1	15	1.7	1.005	25.63
	Node-CO-63						
	Base	Cum	1	43	1.4	1.045	62.91
	Node-CO-62						
	Base	Cum	1	57.8	1.4	1.04	84.16
	Node-CO-60						
	Base	Cum	1	58.7	1.4	0.97	79.71

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Node-CO-59						
	Base	Cum	1	64.3	1.4	0.96	86.42
	Node-CO-52						
	Base	Cum	1	43.1	1.5	1.56	100.85
	Node-CO-54						
	Base	Cum	1	72.6	1.7	1.75	215.99
	Node-CO-53						
	Base	Cum	1	50.2	1.4	1.13	79.42
	Node-CO-58						
	Base	Cum	1	132.1	1.4	0.905	167.37
	Road 7b						
	Node-CO-29						
	Base	Cum	2	159.8	1.7	3.25	1765.79
	Node-CO-87						
	Base	Cum	2	95.4	1.7	3.25	1054.17
	RCC Pipe Crossing-	Cum					0.00
	7b-Hampankatta to Milagres Cross Road-At Hampankatta Side (Existing BT)	Cum	3	19	1.182	0.5	33.69
	7b-Hampankatta to Milagres Cross Road-At Milagres church Side (Existing CC)	Cum	2	19	1.182	0.5	22.46
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Cum	7	10	1.182	0.5	41.37
	13a-KRR Road-PVS Circle to Arya Samaj Road	Cum	12	20	1.182	0.5	141.84
	13b-KRR Road-PVS Circle to Hampankatta	Cum	12	20	1.182	0.5	141.84
	12-Bunts Hostel Road	Cum	5	20	1.182	0.5	59.10
	Electrical Pipe Laying						0.00
	Balmatta Road	Cum	1	1118	0.9	1.8	1811.16
	Electrical Chamber	Cum	292	3.3	2.4	2.4	5550.34
		Cum		**Total Qty.**			**48506.39**
12	KSRB 2-4 : **Refilling available earth** around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.						
	Total Excavation for Electrical Duct	Cum					9614.00
	Pipe Volume-Dia 200mm	Cum		Length	C/s Area		
	7b-Hampankatta to Milagres Cross Road	Cum	-1	1320	0.0314		-41.45
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Cum	-1	2640	0.0314		-82.90
	13a-KRR Road-PVS Circle to Arya Samaj Road	Cum	-1	15540	0.0314		-487.96
	13b-KRR Road-PVS Circle to Hampankatta	Cum	-1	5600	0.0314		-175.84
	12-Bunts Hostel Road	Cum	-1	1440	0.0314		-45.22
	Pipe Volume-Dia 160mm	Cum					
	7b-Hampankatta to Milagres Cross Road	Cum	-1	880	0.020096		-17.68
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Cum	-1	1320	0.020096		-26.53
	13a-KRR Road-PVS Circle to Arya Samaj Road	Cum	-1	6660	0.020096		-133.84
	13b-KRR Road-PVS Circle to Hampankatta	Cum	-1	4480	0.020096		-90.03
	12-Bunts Hostel Road	Cum	-1	1440	0.020096		-28.94
	Electrical Concrete	Cum					
	Elctrical Chamber Volume	Cum	-292	2	0.9		-525.60
	Total Excavation for SWD						21997.59
	Electrical Chamber	Cum					5550.34
	Concrete Volume of SWD	Cum	-1	8166.10			-8166.10
	PCC Volume of SWD	Cum	-1	1678.24			-1678.24
	GSB Volume of SWD	Cum	-1	1132.62			-1132.62
		Cum					
	Void Area of SWD	Cum					
	Road 13a						
	Node-CO-137						
	Base	Cum	-2	97	0.9	1.32	-460.94
	Node-CO-176						
	Base	Cum	-2	49.2	1.4	2.38	-655.74
	Node-CO-143						
	Base	Cum	-2	69	1.2	1.66	-549.79
	Node-CO-144						
	Base	Cum	-2	42.3	1	0.72	-121.82
	Node-CO-145						
	Base	Cum	-2	71.1	0.7	0.61	-121.44
	Node-CO-162						
	Base	Cum	-2	114.4	0.6	1.22	-334.96
	Node-CO-138						
	Base	Cum	-2	54.8	0.4	0.81	-71.02
	Node-CO-141						
	Base	Cum	-2	37.7	0.4	0.74	-44.64
	Node-CO-139						
	Base	Cum	-2	46.3	0.4	0.83	-61.49
	Node-CO-146						
	Base	Cum	-2	105.9	0.4	0.67	-113.52
	Node-CO-147						
	Base	Cum	-2	69.1	0.4	0.82	-90.66
	Node-CO-148						
	Base	Cum	-2	117.7	0.6	1.1	-310.73
	Node-CO-149						
	Base	Cum	-2	83.7	0.6	1.45	-291.28
	Node-CO-140						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Base	Cum	-2	64.8	0.4	0.78	-80.87
	Node-CO-150						
	Base	Cum	-2	26.1	0.6	1.69	-105.86
	Node-CO-151						
	Base	Cum	-2	32	0.6	1.84	-141.31
	Road 13b						
	Node-CO-132						
	Base	Cum	-2	175.7	1.2	1.485	-626.19
	Node-CO-125						
	Base	Cum	-2	74.3	1.1	1.02	-166.73
	Node-CO-152						
	Base	Cum	-2	93.8	1.1	0.995	-205.33
	Node-CO-135						
	Base	Cum	-2	86.4	1.1	0.72	-136.86
	Node-CO-134						
	Base	Cum	-2	81.4	1.2	1.13	-220.76
	Node-CO-133						
	Base	Cum	-2	71.9	1.2	1.33	-229.50
	Node-CO-131						
	Base	Cum	-2	94.5	0.8	1.5	-226.80
	Node-CO-160						
	Base	Cum	-2	36.5	0.8	2.08	-121.47
	Node-CO-128						
	Base	Cum	-2	121.4	0.8	2.36	-458.41
	Node-CO-178						
	Base	Cum	-2	57.3	0.7	0.8	-64.18
	Node-CO-154						
	Base	Cum	-2	52.8	1.1	2.59	-300.85
	Node-CO-130						
	Base	Cum	-2	64	0.9	1.74	-200.45
	Node-CO-126						
	Base	Cum	-2	81.8	1.1	1.07	-192.56
	Road 12						
	Node-CO-179						
	Base	Cum	-2	56.7	0.8	1.215	-110.22
	Node-CO-181						
	Base	Cum	-2	301.2	0.6	1.71	-618.06
	Node-CO-180						
	Base	Cum	-2	114.7	0.6	1.245	-171.36
	Road 7e						
	Node-CO-61						
	Base	Cum	-1	15	0.8	0.755	-9.06
	Node-CO-63						
	Base	Cum	-1	43	0.5	0.795	-17.09
	Node-CO-62						
	Base	Cum	-1	57.8	0.5	0.79	-22.83
	Node-CO-60						
	Base	Cum	-1	58.7	0.5	0.72	-21.13
	Node-CO-59						
	Base	Cum	-1	64.3	0.5	0.71	-22.83
	Node-CO-52						
	Base	Cum	-1	43.1	0.6	1.31	-33.88
	Node-CO-54						
	Base	Cum	-1	72.6	0.8	1.5	-87.12
	Node-CO-53						
	Base	Cum	-1	50.2	0.5	0.88	-22.09
	Node-CO-58						
	Base	Cum	-1	132.1	0.5	0.655	-43.26
	Road 7b						
	Node-CO-29						
	Base	Cum	-2	159.8	0.8	3	-767.04
	Node-CO-87						
	Base	Cum	-2	95.4	0.8	3	-457.92
		Cum		**Total Qty.**			**15418.94**
13	KSRRB 300-Compaction KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3						
	7b-Hampankatta to Milagres Cross Road						
	Ch.20.0 to Ch.120.0	Sqm	1	100.0	12.9		1290.00
	Road towards Wenlock Hospital	Sqm	1	20.0	12.5		250.00
	7e-Milagres Nandigidda Road						
	Ch.0.00 to Ch.330.0	Sqm	1	330.0	5.0		1650.00
	Balmatta Road						
	LHS	Sqm					
	Ch.0.0 to Ch.40.0	Sqm	1	44.9	3.6		162.84
	LHS						
	Ch.60.0 to ch.320.0	Sqm	1	244.0	2.7		658.80
	LHS						
	Ch.500.0 to ch.531.0	Sqm	1	37.7	0.7		26.77

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Balmatta Road-LHS						
	Ch.0.0 to Ch.90.0	Sqm	1.00	79.00	2.20		173.80
	Ch. 90.0 to Ch.190.00	Sqm	1.00	100.00	4.44		444.00
	Landscape Deduction	Sqm	-1.00	81.72	1.01		-82.54
	Compound Wall Side-Ch.100 to Ch.185.0	Sqm	1.00	85.00	2.39		202.81
	Ch.190 to Ch.340	Sqm	1.00	150.00	2.63		394.00
	Ch. 360 to Ch.470	Sqm	1.00	151.00	2.20		332.20
	Ch.470.0 to Ch.530.0	Sqm	1.00	80.00	2.20		176.00
	Balmatta Road-RHS						
	Ch.0.0 to Ch.130	Sqm	1.00	130.00	2.65		344.50
	Ch.135.0 to Ch.205.0	Sqm	1.00	70.00	2.34		163.80
	Ch.200 to Ch.360.0	Sqm	1.00	160.00	3.32		531.20
	Ch.360.0 to Ch.530.0	Sqm	1.00	170.00	3.26		554.20
	Sturrock Road						
	Ch.0.0 to Ch.560.0	Sqm	1	560.0	6.7		0.00
	Intermediate Junctions	Sqm	3	10.0	6.7		201.00
	Anand shetty Junctions	Sqm	1	10.0	20.3		203.00
	RHS						
	Ch.100.0 to Ch.540.0	Sqm	1	480	3.69		1771.20
	LHS						
	Ch.100.0 to Ch.570.0	Sqm	1	470	1.97		925.90
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Sqm	1	200.0	2.5		508.00
	RHS						
	Ch.20.00 to Ch.50.0	Sqm	1	30.0	5.4		161.00
	Ch.50.0 to Ch.90.0						
	Ch.110.0 to Ch.220.0	Sqm	1	110.0	2.6		282.00
	7e-Milagres Nandigidda Road						
	LHS						
	Ch.25.00 to Ch.45.00	Sqm	1	20.0	4.3		86.96
	Ch.155.00 to Ch.330.00	Sqm	1	175.0	3.8		669.85
	RHS						
	Ch.170.00 to Ch.330.00	Sqm	1	160.0	2.7		428.50
	13a-PVS Circle to Arya Samaj Junction						
	LHS-Paver on Footpath						
	Ch.0.0 to Ch.60.0	Sqm	1	60.0	2.4		142.00
	Ch.62.00 to Ch.128.0	Sqm	1	66.0	2.1		137.00
	Ch.132.0 to Ch.280.0	Sqm	1	148.0	2.3		335.00
	Ch.285.0 to Ch.390.0	Sqm	1	105.0	2.2		232.00
	Ch.395.0 to Ch.455.0	Sqm	1	60.0	1.4		85.00
	Ch.460.0 to ch.545.0	Sqm	1	85.0	2.4		203.00
	Ch.580.0 to Ch.640.0	Sqm	1	60.0	3.2		192.00
	Ch.640.0 to Ch.800.0	Sqm	1	160.0	2.1		330.00
	Ch.805.0 to Ch.860.0	Sqm	1	55.0	2.4		130.00
	Ch.860.0 to Ch.920.0	Sqm	1	60.0	2.7		161.00
	Ch.925.0 to ch.960.0	Sqm	1	35.0	2.9		100.00
	Ch.960.0 to Ch.1060.0	Sqm	1	100.0	2.6		261.00
	Ch.1060 to Ch.1110.0	Sqm	1	50.0	4.0		201.00
	LHS-Compound Side Paver						
	Ch.10.00 to Ch.60.00	Sqm	1	50.0	2.5		123.00
	Ch.60.00 to Ch.130.0	Sqm	1	70.0	1.8		126.00
	Ch.130.0 to Ch.200.0	Sqm	1	70.0	2.7		186.00
	Ch.235.0 to Ch.270.0	Sqm	1	35.0	1.0		36.00
	Ch.490.0 to Ch.540.0	Sqm	1	50.0	1.0		48.00
	Ch.650.0 to Ch.800.0	Sqm	1	150.0	2.6		386.00
	Ch.925.00 to Ch.950.0	Sqm	1	25.0	1.9		47.00
	Ch.960.0 to Ch.1050.0	Sqm	1	90.0	6.2		561.00
	RHS						
	Ch.0.0 to Ch.320.0	Sqm	1	320.0	2.3		728.00
	Ch.330.0 to Ch.510.0	Sqm	1	180.0	2.1		370.00
	Ch.510.0 to Ch.538.0	Sqm	1	28.0	2.1		58.00
	Ch.540.0 to Ch.578.0	Sqm	1	38.0	1.7		66.00
	Ch.580.0 to Ch.660.0	Sqm	1	80.0	3.2		257.00
	Ch.680.0 to Ch.750.0	Sqm	1	70.0	3.5		247.00
	Ch.750.0 to Ch.1020.0	Sqm	1	270.0	1.6		433.00
	Ch.1025.0 to Ch.1060.0	Sqm	1	35.0	1.1		38.00
	Ch.1070.0 to Ch.1110.0	Sqm	1	40.0	1.9		74.00
	RHS-Compound Side Paver						
	Ch.0.0 to Ch.210.0	Sqm	1	210.0	1.9		404.00
	Ch.230.0 to Ch.290.0	Sqm	1	60.0	0.6		38.00
	Ch.325.0 to Ch.390.0	Sqm	1	65.0	1.6		103.00
	Ch.470.0 to Ch.510.0	Sqm	1	40.0	4.3		170.00
	Ch.515.0 to Ch.535.0	Sqm	1	20.0	2.4		48.00
	CH.540.0 to Ch.575.0	Sqm	1	35.0	3.2		113.00
	Ch.830.0 to Ch.970.0	Sqm	1	140.0	7.2		1008.00
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.10.0 to Ch.180.0	Sqm	1	170.0	2.1		357.00
	Ch.255.0 to Ch.345.0	Sqm	1	90.0	2.6		236.00
	Ch.350.0 to Ch.440.0	Sqm	1	90.0	2.3		207.00
	Ch.590.0 to Ch.680.0	Sqm	1	90.0	2.2		202.00
	Ch.680.0 to Ch.845.0	Sqm	1	165.0	2.1		351.00
	Ch.840.0 to Ch.880.0	Sqm	1	40.0	4.6		183.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.880.0 to Ch.900.0	Sqm	1	20.0	8.3		165.00
	Ch.900.0 to Ch.965.0	Sqm	1	65.0	2.4		157.00
	Ch.965.0 to Ch.1110.0	Sqm	1	145.0	2.2		316.00
	Ch.1110.0 to Ch.1120.0	Sqm	1	10.0	8.1		81.34
	Compound Wallside Paver Block						
	Ch.70.0 to Ch.180.0	Sqm	1	110.0	3.0		326.00
	Ch.255.0 to Ch.340.0	Sqm	1	85.0	1.9		161.00
	Ch.355.0 to Ch.410.0	Sqm	1	55.0	2.8		155.00
	Ch.590.0 to Ch.680.0	Sqm	1	90.0	4.1		373.09
	Ch.680.0 to Ch.730.0	Sqm	1	50.0	1.3		66.00
	Ch.820.0 to Ch.840.0	Sqm	1	20.0	3.8		75.00
	Ch.840.0 to Ch.880.0	Sqm	1	40.0	3.8		153.00
	Ch.880.0 to Ch.900.0	Sqm	1	20.0	8.3		165.00
	Ch.900.0 to Ch.935.0	Sqm	1	35.0	2.9		102.00
	Ch.900.0 to Ch.930.0	Sqm	1	30.0	3.4		102.00
	Ch.970.0 to Ch.1040.0	Sqm	1	70.0	7.2		504.00
	Ch.1060 to Ch.1110.0	Sqm	1	50.0	2.9		145.00
	RHS						
	Ch.10.0 to Ch.140.0	Sqm	1	130.0	1.4		181.73
	Ch.150.0 to Ch.510.0	Sqm	1	360.0	2.1		758.00
	Ch.515.0 to Ch.630.0	Sqm	1	115.0	2.5		292.00
	Ch.630.0 to Ch.1090.0	Sqm	1	460.0	1.8		842.00
	Compound Wallside Paver Block						
	Ch.160.0 to Ch.270.0	Sqm	1	110.0	0.7		79.00
	Ch.270.0 to Ch.475.0	Sqm	1	205.0	2.3		476.00
	Ch.480.0 to Ch.505.0	Sqm	1	25.0	0.8		21.00
	Ch.515.0 to Ch.525.0	Sqm	1	10.0	0.8		8.00
	Ch.590.0 to Ch.630.0	Sqm	1	40.0	3.2		128.00
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.118.00	Sqm	1	108.0	3.8		408.24
	Ch.200.0 to Ch.440.0	Sqm	1	240.0	2.4		587.00
	Ch.450.0 to Ch.478.0	Sqm	1	28.0	3.5		99.00
	RHS						
	Ch.10.0 to Ch.165.0	Sqm	1	155.0	3.4		528.55
	Ch.300.0 to Ch.470.0	Sqm	1	170.0	3.8		642.60
	Humpankatta Junction and Balmatta Road	Sqm	1	410.0	6.4		2603.50
		Sqm		**Total Qty.**			**32923.84**
14	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of mix M15 Grade with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (Sl.No. 4.6 of KPWD 18-19)						
	SWD						
	Road 13a						
	Node-CO-137						
	Base	Cum	2.00	97.00	1.70	0.10	32.98
	Node-CO-176						
	Base	Cum	2.00	49.20	2.20	0.10	21.65
	Node-CO-143						
	Base	Cum	2.00	69.00	2.00	0.10	27.60
	Node-CO-144						
	Base	Cum	2.00	42.30	1.80	0.10	15.23
	Node-CO-145						
	Base	Cum	2.00	71.10	1.50	0.10	21.33
	Node-CO-162						
	Base	Cum	2.00	114.40	1.40	0.10	32.03
	Node-CO-138						
	Base	Cum	2.00	54.80	1.20	0.10	13.15
	Node-CO-141						
	Base	Cum	2.00	37.70	1.20	0.10	9.05
	Node-CO-139						
	Base	Cum	2.00	46.30	1.20	0.10	11.11
	Node-CO-146						
	Base	Cum	2.00	105.90	1.20	0.10	25.42
	Node-CO-147						
	Base	Cum	2.00	69.10	1.20	0.10	16.58
	Node-CO-148						
	Base	Cum	2.00	117.70	1.40	0.10	32.96
	Node-CO-149						
	Base	Cum	2.00	83.70	1.40	0.10	23.44
	Node-CO-140						
	Base	Cum	2.00	64.80	1.20	0.10	15.55
	Node-CO-150						
	Base	Cum	2.00	26.10	1.40	0.10	7.31
	Node-CO-151						
	Base	Cum	2.00	32.00	1.40	0.10	8.96
	Road 13b						
	Node-CO-132						
	Base	Cum	2.00	175.70	2.00	0.10	70.28
	Node-CO-125						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Base	Cum	2.00	74.30	1.90	0.10	28.23
	Node-CO-152						
	Base	Cum	2.00	93.80	1.90	0.10	35.64
	Node-CO-135						
	Base	Cum	2.00	86.40	1.90	0.10	32.83
	Node-CO-134						
	Base	Cum	2.00	81.40	2.00	0.10	32.56
	Node-CO-133						
	Base	Cum	2.00	71.90	2.00	0.10	28.76
	Node-CO-131						
	Base	Cum	2.00	94.50	1.60	0.10	30.24
	Node-CO-160						
	Base	Cum	2.00	36.50	1.60	0.10	11.68
	Node-CO-128						
	Base	Cum	2.00	121.40	1.60	0.10	38.85
	Node-CO-178						
	Base	Cum	2.00	57.30	1.50	0.10	17.19
	Node-CO-154						
	Base	Cum	2.00	52.80	1.90	0.10	20.06
	Node-CO-130						
	Base	Cum	2.00	64.00	1.70	0.10	21.76
	Node-CO-126						
	Base	Cum	2.00	81.80	1.90	0.10	31.08
	Road 12						
	Node-CO-179						
	Base	Cum	2.00	56.70	1.60	0.10	18.14
	Node-CO-181						
	Base	Cum	2.00	301.20	1.40	0.10	84.34
	Node-CO-180						
	Base	Cum	2.00	114.70	1.40	0.10	32.12
	Balmatta Road						
	Foundation						
	RHS-D12	Cum	1.00	381.00	1.20	0.10	45.72
	RHS-D12A	Cum	1.00	100.00	1.60	0.10	16.00
	LHS-D11	Cum	1.00	481.00	1.20	0.10	57.72
	Road 7e						
	Node-CO-61						
	Base	Cum	1.00	15.00	1.60	0.10	2.40
	Node-CO-63						
	Base	Cum	1.00	43.00	1.30	0.10	5.59
	Node-CO-62						
	Base	Cum	1.00	57.80	1.30	0.10	7.51
	Node-CO-60						
	Base	Cum	1.00	58.70	1.30	0.10	7.63
	Wall						
	Slab	Cum	1.00	58.70	1.10	0.10	6.46
	Node-CO-59						
	Base	Cum	1.00	64.30	1.30	0.10	8.36
	Node-CO-52						
	Base	Cum	1.00	43.10	1.40	0.10	6.03
	Node-CO-54						
	Base	Cum	1.00	72.60	1.60	0.10	11.62
	Node-CO-53						
	Base	Cum	1.00	50.20	1.30	0.10	6.53
	Node-CO-58						
	Base	Cum	1.00	132.10	1.30	0.10	17.17
	Road 7b						
	Node-CO-29						
	Base	Cum	2.00	159.80	1.60	0.10	51.14
	Node-CO-87						
	PCC Below Kerb Stone	Cum	1	7875.04	0.47	0.10	366.19
	PCC Below Water Table	Cum	1.00	2126.60	0.50	0.10	106.33
	Box Culvert						
	7b-Hampankatta to Milagres Cross Road						
	Box Culvert-Slab	Cum	2.0	20.0	1.0	0.1	4.00
	7e-Attavar Road-Mother theresa Road to Nandiguda Road						
	Box Culvert-Slab	Cum	4.0	12.0	1.0	0.1	4.80
	13a-KRR Road-PVS Circle to Arya Samaj Road						
	Box Culvert-Slab	Cum	8.0	25.0	1.5	0.1	30.00
	13b-KRR Road-PVS Circle to Hampankatta						
	Box Culvert-Slab	Cum	8.0	25.0	1.5	0.1	30.00
	12-Bunts Hostel Road						
	Box Culvert-Slab	Cum	4.0	14.0	1.5	0.1	8.40
	Base	Cum	2.00	95.40	1.60	0.10	30.53
	Electrical Chamber	Cum	292.00	2.90	2.00	0.10	169.36
	Electrical Poles	Cum	160.00	0.50	0.50	0.10	4.00
		Cum		**Total Qty.**			**1851.60**

Sr. No.	Description	Unit	No's	L	B	H	Qty.
15	KSRRB 400 Granular Sub-Base with Coarse Graded Material (table 400-1) KSRRB M400-7. Construction of granular sub-base by providing Coarse graded crushed stone aggregates of granite / trap / basalt material, speading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MORTH specifications clause 401 and Table 400-1 Grading VI. (Sl.No.20.4 of KPWD SR 2018-19)						
	Pavement						
	7b-Hampankatta to Milagres Cross Road	Cum					
	Ch.20.0 to Ch.120.0	Cum	1	100	12.9	0.15	193.50
	Road towards Wenlock Hospital	Cum	1	20	12.5	0.15	37.50
	7e-Milagres Nandigidda Road						
	Ch.0.00 to Ch.330.0	Cum	1	330	5	0.15	247.50
	RHS						
	Ch.100.0 to Ch.540.0	Cum	1	480	3.69	0.15	265.68
	LHS						
	Ch.100.0 to Ch.570.0	Cum	1	470	1.97	0.15	138.89
	Balmatta Road						0.00
	LHS						0.00
	Ch.0.0 to Ch.40.0	Cum	1	44.86	3.63	0.15	24.43
	LHS						0.00
	Ch.60.0 to ch.320.0	Cum	1	244	2.7	0.15	98.82
	LHS						0.00
	Ch.500.0 to ch.531.0	Cum	1	37.7	0.71	0.15	4.02
	Humpankatta Junction and Balmatta Road	Cum	1	410	6.35	0.15	390.53
		Cum		**Total Qty.**			**1400.85**
16	KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with Plate compactor to achieve the desired density, complete as per specifications. A. Plant Mix Method. - Close graded granular sub-base material as per 400-1 For Grading- II Material (RA Attached)						
	Footpath						
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Cum	1.00	200.00	2.54	0.15	76.20
	RHS						
	Ch.20.00 to Ch.50.0	Cum	1.00	30.00	5.37	0.15	24.15
	Ch.50.0 to Ch.90.0	Cum	1.00	40.00	2.20	0.15	13.20
	Ch.110.0 to Ch.220.0	Cum	1.00	110.00	2.56	0.15	42.30
	7e-Milagres Nandigidda Road						
	LHS						
	Ch.25.00 to Ch.45.00	Cum	1.00	20.00	4.35	0.15	13.04
	Ch.155.00 to Ch.330.00	Cum	1.00	175.00	3.83	0.15	100.48
	RHS						
	Ch.170.00 to Ch.330.00	Cum	1.00	160.00	2.68	0.15	64.28
	13a-PVS Circle to Arya Samaj Junction						
	LHS-Paver on Footpath						
	Ch.0.0 to Ch.60.0	Cum	1.00	60.00	2.37	0.15	21.30
	Ch.62.00 to Ch.128.0	Cum	1.00	66.00	2.08	0.15	20.55
	Ch.132.0 to Ch.280.0	Cum	1.00	148.00	2.26	0.15	50.25
	Ch.285.0 to Ch.390.0	Cum	1.00	105.00	2.21	0.15	34.80
	Ch.395.0 to Ch.455.0	Cum	1.00	60.00	1.42	0.15	12.75
	Ch.460.0 to ch.545.0	Cum	1.00	85.00	2.39	0.15	30.45
	Ch.580.0 to Ch.640.0	Cum	1.00	60.00	3.20	0.15	28.80
	Ch.640.0 to Ch.800.0	Cum	1.00	160.00	2.06	0.15	49.50
	Ch.805.0 to Ch.860.0	Cum	1.00	55.00	2.36	0.15	19.50
	Ch.860.0 to Ch.920.0	Cum	1.00	60.00	2.68	0.15	24.15
	Ch.925.0 to ch.960.0	Cum	1.00	35.00	2.86	0.15	15.00
	Ch.960.0 to Ch.1060.0	Cum	1.00	100.00	2.61	0.15	39.15
	Ch.1060 to Ch.1110.0	Cum	1.00	50.00	4.02	0.15	30.15
	LHS-Compound Side Paver						
	Ch.10.00 to Ch.60.00	Cum	1.00	50.00	2.46	0.15	18.45
	Ch.60.00 to Ch.130.0	Cum	1.00	70.00	1.80	0.15	18.90
	Ch.130.0 to Ch.200.0	Cum	1.00	70.00	2.66	0.15	27.90
	Ch.235.0 to Ch.270.0	Cum	1.00	35.00	1.03	0.15	5.40
	Ch.490.0 to Ch.540.0	Cum	1.00	50.00	0.96	0.15	7.20
	Ch.650.0 to Ch.800.0	Cum	1.00	150.00	2.57	0.15	57.90
	Ch.925.00 to Ch.950.0	Cum	1.00	25.00	1.88	0.15	7.05
	Ch.960.0 to Ch.1050.0	Cum	1.00	90.00	6.23	0.15	84.15
	RHS						
	Ch.0.0 to Ch.320.0	Cum	1.00	320.00	2.28	0.15	109.20
	Ch.330.0 to Ch.510.0	Cum	1.00	180.00	2.06	0.15	55.50
	Ch.510.0 to Ch.538.0	Cum	1.00	28.00	2.07	0.15	8.70
	Ch.540.0 to Ch.578.0	Cum	1.00	38.00	1.74	0.15	9.90
	Ch.580.0 to Ch.660.0	Cum	1.00	80.00	3.21	0.15	38.55
	Ch.680.0 to Ch.750.0	Cum	1.00	70.00	3.53	0.15	37.05
	Ch.750.0 to Ch.1020.0	Cum	1.00	270.00	1.60	0.15	64.95
	Ch.1025.0 to Ch.1060.0	Cum	1.00	35.00	1.09	0.15	5.70
	Ch.1070.0 to Ch.1110.0	Cum	1.00	40.00	1.85	0.15	11.10
	RHS-Compound Side Paver						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.0.0 to Ch.210.0	Cum	1.00	210.00	1.92	0.15	60.60
	Ch.230.0 to Ch.290.0	Cum	1.00	60.00	0.63	0.15	5.70
	Ch.325.0 to Ch.390.0	Cum	1.00	65.00	1.58	0.15	15.45
	Ch.470.0 to Ch.510.0	Cum	1.00	40.00	4.25	0.15	25.50
	Ch.515.0 to Ch.535.0	Cum	1.00	20.00	2.40	0.15	7.20
	CH.540.0 to Ch.575.0	Cum	1.00	35.00	3.23	0.15	16.95
	Ch.830.0 to Ch.970.0	Cum	1.00	140.00	7.20	0.15	151.20
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.10.0 to Ch.180.0	Cum	1.00	170.00	2.10	0.15	53.55
	Ch.255.0 to Ch.345.0	Cum	1.00	90.00	2.62	0.15	35.40
	Ch.350.0 to Ch.440.0	Cum	1.00	90.00	2.30	0.15	31.05
	Ch.590.0 to Ch.680.0	Cum	1.00	90.00	2.24	0.15	30.30
	Ch.680.0 to Ch.845.0	Cum	1.00	165.00	2.13	0.15	52.65
	Ch.840.0 to Ch.880.0	Cum	1.00	40.00	4.58	0.15	27.45
	Ch.880.0 to Ch.900.0	Cum	1.00	20.00	8.25	0.15	24.75
	Ch.900.0 to Ch.965.0	Cum	1.00	65.00	2.42	0.15	23.55
	Ch.965.0 to Ch.1110.0	Cum	1.00	145.00	2.18	0.15	47.40
	Ch.1110.0 to Ch.1120.0	Cum	1.00	10.00	8.13	0.15	12.20
	Compound Wallside Paver Block						
	Ch.70.0 to Ch.180.0	Cum	1.00	110.00	2.96	0.15	48.90
	Ch.255.0 to Ch.340.0	Cum	1.00	85.00	1.89	0.15	24.15
	Ch.355.0 to Ch.410.0	Cum	1.00	55.00	2.82	0.15	23.25
	Ch.590.0 to Ch.680.0	Cum	1.00	90.00	4.15	0.15	55.96
	Ch.680.0 to Ch.730.0	Cum	1.00	50.00	1.32	0.15	9.90
	Ch.820.0 to Ch.840.0	Cum	1.00	20.00	3.75	0.15	11.25
	Ch.840.0 to Ch.880.0	Cum	1.00	40.00	3.83	0.15	22.95
	Ch.880.0 to Ch.900.0	Cum	1.00	20.00	8.25	0.15	24.75
	Ch.900.0 to Ch.935.0	Cum	1.00	35.00	2.91	0.15	15.30
	Ch.900.0 to Ch.930.0	Cum	1.00	30.00	3.40	0.15	15.30
	Ch.970.0 to Ch.1040.0	Cum	1.00	70.00	7.20	0.15	75.60
	Ch.1060 to Ch.1110.0	Cum	1.00	50.00	2.90	0.15	21.75
	RHS						
	Ch.10.0 to Ch.140.0	Cum	1.00	130.00	1.40	0.15	27.26
	Ch.150.0 to Ch.510.0	Cum	1.00	360.00	2.11	0.15	113.70
	Ch.515.0 to Ch.630.0	Cum	1.00	115.00	2.54	0.15	43.80
	Ch.630.0 to Ch.1090.0	Cum	1.00	460.00	1.83	0.15	126.30
	Compound Wall side Paver Block	Cum	0.00	0.00	0.00	0.15	0.00
	Ch.160.0 to Ch.270.0	Cum	1.00	110.00	0.72	0.15	11.85
	Ch.270.0 to Ch.475.0	Cum	1.00	205.00	2.32	0.15	71.40
	Ch.480.0 to Ch.505.0	Cum	1.00	25.00	0.84	0.15	3.15
	Ch.515.0 to Ch.525.0	Cum	1.00	10.00	0.80	0.15	1.20
	Ch.590.0 to Ch.630.0	Cum	1.00	40.00	3.20	0.15	19.20
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.118.00	Cum	1.00	108.00	3.78	0.15	61.24
	Ch.200.0 to Ch.440.0	Cum	1.00	240.00	2.45	0.15	88.05
	Ch.450.0 to Ch.478.0	Cum	1.00	28.00	3.54	0.15	14.85
	RHS						
	Ch.10.0 to Ch.165.0	Cum	1.00	155.00	3.41	0.15	79.28
	Ch.300.0 to Ch.470.0	Cum	1.00	170.00	3.78	0.15	96.39
	Balmatta Road-LHS						
	Ch.0.0 to Ch.90.0	Cum	1	79	2.2	0.15	26.07
	Ch. 90.0 to Ch.190.00	Cum	1	100	4.44	0.15	66.60
	Landscape Deduction	Cum	-1	81.72	1.01	0.15	-12.38
	Compound Wall Side-Ch.100 to Ch.185.0	Cum	1	85	2.386	0.15	30.42
	Ch.190 to Ch.340	Cum	1	150	2.6266667	0.15	59.10
	Ch. 360 to Ch.470	Cum	1	151	2.2	0.15	49.83
	Ch.470.0 to Ch.530.0	Cum	1	80	2.2	0.15	26.40
	Balmatta Road-RHS	Cum					
	Ch.0.0 to Ch.130	Cum	1	130	2.65	0.15	51.68
	Ch.135.0 to Ch.205.0	Cum	1	70	2.34	0.15	24.57
	Ch.200 to Ch.360.0	Cum	1	160	3.32	0.15	79.68
	Ch.360.0 to Ch.530.0	Cum	1	170	3.26	0.15	83.13
		Cum		**Total Qty.**			**4714.54**
17	KSRB 4.2.1 : Providing and laying in position reiforcement cement concrete of design Mix M25 with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications. (Sl No : 4.10 of KPWD 18-19)						
	SWD						
	Road 13a			Sides	2.00		
	Node-CO-137						
	Base	Cum	2	97	1.5	0.10	58.20
	Wall	Cum	4	97	0.2	1.32	204.86
	Slab	Cum	2	97	1.3	0.15	75.66
	Node-CO-176						
	Base	Cum	2	49.2	2	0.10	39.36

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Wall	Cum	4	49.2	0.3	2.38	281.03
	Slab	Cum	2	49.2	1.8	0.15	53.14
	Node-CO-143						
	Base	Cum	2	69	1.8	0.10	49.68
	Wall	Cum	4	69	0.2	1.66	183.26
	Slab	Cum	2	69	1.6	0.15	66.24
	Node-CO-144						
	Base	Cum	2	42.3	1.6	0.10	27.07
	Wall	Cum	4	42.3	0.1	0.72	24.36
	Slab	Cum	2	42.3	1.4	0.15	35.53
	Node-CO-145						
	Base	Cum	2	71.1	1.3	0.10	36.97
	Wall	Cum	4	71.1	0.1	0.61	34.70
	Slab	Cum	2	71.1	1.1	0.15	46.93
	Node-CO-162						
	Base	Cum	2	114.4	1.2	0.10	54.91
	Wall	Cum	4	114.4	0.2	1.22	223.31
	Slab	Cum	2	114.4	1	0.15	68.64
	Node-CO-138						
	Base	Cum	2	54.8	1	0.10	21.92
	Wall	Cum	4	54.8	0.1	0.81	35.51
	Slab	Cum	2	54.8	0.8	0.15	26.30
	Node-CO-141						
	Base	Cum	2	37.7	1	0.10	15.08
	Wall	Cum	4	37.7	0.1	0.74	22.32
	Slab	Cum	2	37.7	0.8	0.15	18.10
	Node-CO-139						
	Base	Cum	2	46.3	1	0.10	18.52
	Wall	Cum	4	46.3	0.1	0.83	30.74
	Slab	Cum	2	46.3	0.8	0.15	22.22
	Node-CO-146						
	Base	Cum	2	105.9	1	0.10	42.36
	Wall	Cum	4	105.9	0.1	0.67	56.76
	Slab	Cum	2	105.9	0.8	0.15	50.83
	Node-CO-147						
	Base	Cum	2	69.1	1	0.10	27.64
	Wall	Cum	4	69.1	0.1	0.82	45.33
	Slab	Cum	2	69.1	0.8	0.15	33.17
	Node-CO-148						
	Base	Cum	2	117.7	1.2	0.10	56.50
	Wall	Cum	4	117.7	0.2	1.10	207.15
	Slab	Cum	2	117.7	1	0.15	70.62
	Node-CO-149						
	Base	Cum	2	83.7	1.2	0.10	40.18
	Wall	Cum	4	83.7	0.2	1.45	194.18
	Slab	Cum	2	83.7	1	0.15	50.22
	Node-CO-140						
	Base	Cum	2	64.8	1	0.10	25.92
	Wall	Cum	4	64.8	0.1	0.78	40.44
	Slab	Cum	2	64.8	0.8	0.15	31.10
	Node-CO-150						
	Base	Cum	2	26.1	1.2	0.10	12.53
	Wall	Cum	4	26.1	0.2	1.69	70.57
	Slab	Cum	2	26.1	1	0.15	15.66
	Node-CO-151						
	Base	Cum	2	32	1.2	0.10	15.36
	Wall	Cum	4	32	0.2	1.84	94.21
	Slab	Cum	2	32	1	0.15	19.20
	Road 13b			Sides	2.00		
	Node-CO-132						
	Base	Cum	2	175.7	1.8	0.10	63.25
	Wall	Cum	4	175.7	0.2	1.49	208.73
	Slab	Cum	2	175.7	1.6	0.15	84.34
	Node-CO-125						
	Base	Cum	2	74.3	1.7	0.10	25.26
	Wall	Cum	4	74.3	0.15	1.02	45.47
	Slab	Cum	2	74.3	1.5	0.15	33.44
	Node-CO-152						
	Base	Cum	2	93.8	1.7	0.10	31.89
	Wall	Cum	4	93.8	0.15	1.00	56.00
	Slab	Cum	2	93.8	1.5	0.15	42.21
	Node-CO-135						
	Base	Cum	2	86.4	1.7	0.10	29.38
	Wall	Cum	4	86.4	0.15	0.72	37.32
	Slab	Cum	2	86.4	1.5	0.15	38.88
	Node-CO-134						
	Base	Cum	2	81.4	1.8	0.10	29.30
	Wall	Cum	4	81.4	0.2	1.13	73.59
	Slab	Cum	2	81.4	1.6	0.15	39.07
	Node-CO-133						
	Base	Cum	2	71.9	1.8	0.10	25.88
	Wall	Cum	4	71.9	0.2	1.33	76.50
	Slab	Cum	2	71.9	1.6	0.15	34.51
	Node-CO-131						
	Base	Cum	2	94.5	1.4	0.10	26.46
	Wall	Cum	4	94.5	0.15	1.50	85.05

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Slab	Cum	2	94.5	1.2	0.15	34.02
	Node-CO-160						
	Base	Cum	2	36.5	1.4	0.10	10.22
	Wall	Cum	4	36.5	0.3	2.08	91.10
	Slab	Cum	2	36.5	1.2	0.15	13.14
	Node-CO-128						
	Base	Cum	2	121.4	1.4	0.10	33.99
	Wall	Cum	4	121.4	0.3	2.36	343.80
	Slab	Cum	2	121.4	1.2	0.15	43.70
	Node-CO-178						
	Base	Cum	2	57.3	1.3	0.10	14.90
	Wall	Cum	4	57.3	0.1	0.80	18.34
	Slab	Cum	2	57.3	1.1	0.15	18.91
	Node-CO-154						
	Base	Cum	2	52.8	1.7	0.10	17.95
	Wall	Cum	4	52.8	0.3	2.59	164.10
	Slab	Cum	2	52.8	1.5	0.15	23.76
	Node-CO-130						
	Base	Cum	2	64	1.5	0.10	19.20
	Wall	Cum	4	64	0.2	1.74	89.09
	Slab	Cum	2	64	1.3	0.15	24.96
	Node-CO-126						
	Base	Cum	2	81.8	1.7	0.10	27.81
	Wall	Cum	4	81.8	0.15	1.07	52.52
	Slab	Cum	2	81.8	1.5	0.15	36.81
	Road 12			Sides	2.00		
	Node-CO-179						
	Base	Cum	2	56.7	1.4	0.10	15.88
	Wall	Cum	4	56.7	0.15	1.22	41.33
	Slab	Cum	2	56.7	1.2	0.20	27.22
	Node-CO-181						
	Base	Cum	2	301.2	1.2	0.10	72.29
	Wall	Cum	4	301.2	0.2	1.71	412.04
	Slab	Cum	2	301.2	1	0.20	120.48
	Node-CO-180						
	Base	Cum	2	114.7	1.2	0.10	27.53
	Wall	Cum	4	114.7	0.2	1.25	114.24
	Slab	Cum	2	114.7	1	0.20	45.88
	Road 7e			Sides	1.00		
	Node-CO-61						
	Base	Cum	1	15	1.4	0.10	2.10
	Wall	Cum	2	15	0.15	0.76	3.40
	Slab	Cum	1	15	1.2	0.20	3.60
	Node-CO-63						
	Base	Cum	1	43	1.1	0.10	4.73
	Wall	Cum	2	43	0.15	0.80	10.26
	Slab	Cum	1	43	0.9	0.20	7.74
	Node-CO-62						
	Base	Cum	1	57.8	1.1	0.10	6.36
	Wall	Cum	2	57.8	0.15	0.79	13.70
	Slab	Cum	1	57.8	0.9	0.20	10.40
	Node-CO-60						
	Base	Cum	1	58.7	1.1	0.10	6.46
	Wall	Cum	2	58.7	0.15	0.72	12.68
	Slab	Cum	1	58.7	0.9	0.20	10.57
	Node-CO-59						
	Base	Cum	1	64.3	1.1	0.10	7.07
	Wall	Cum	2	64.3	0.15	0.71	13.70
	Slab	Cum	1	64.3	0.9	0.20	11.57
	Node-CO-52						
	Base	Cum	1	43.1	1.2	0.10	5.17
	Wall	Cum	2	43.1	0.2	1.31	22.58
	Slab	Cum	1	43.1	1	0.20	8.62
	Node-CO-54						
	Base	Cum	1	72.6	1.4	0.10	10.16
	Wall	Cum	2	72.6	0.15	1.50	32.67
	Slab	Cum	1	72.6	1.2	0.20	17.42
	Node-CO-53						
	Base	Cum	1	50.2	1.1	0.10	5.52
	Wall	Cum	2	50.2	0.15	0.88	13.25
	Slab	Cum	1	50.2	0.9	0.20	9.04
	Node-CO-58						
	Base	Cum	1	132.1	1.1	0.10	14.53
	Wall	Cum	2	132.1	0.15	0.66	25.96
	Slab	Cum	1	132.1	0.9	0.20	23.78
	Balmatta Road-6						
	RHS-D12						
	Base	Cum	1	381	1.1	0.15	62.87
	Wall	Cum	2	381	0.15	0.41	46.86
	Slab	Cum	1	381	0.9	0.20	68.58
	RHS-D12A						
	Base	Cum	1	100	1.4	0.15	21.00
	Wall	Cum	2	100	0.15	0.56	16.80

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Slab	Cum	1	100	1.2	0.20	24.00
	LHS-D11						
	Base	Cum	1	481	1.2	0.15	86.58
	Wall	Cum	2	481	0.2	1.38	265.51
	Slab	Cum	1	481	1	0.20	96.20
	Road 7b			Sides	2.00		
	Node-CO-29						
	Base	Cum	2	159.8	1.4	0.15	67.12
	Wall	Cum	4	159.8	0.3	3.00	575.28
	Slab	Cum	2	159.8	1.2	0.20	76.70
	Node-CO-87						
	Base	Cum	2	95.4	1.4	0.15	40.07
	Wall	Cum	4	95.4	0.3	3.00	343.44
	Slab	Cum	2	95.4	1.2	0.20	45.79
	Ded. Of Covers-0.6m x 0.45m	Cum	-766.00	0.6	0.45	0.15	-31.02
	Ded. Gully Chambers	Cum	-66.00	0.6	0.5	0.20	-3.96
	Box Culvert						
	7b-Hampankatta to Milagres Cross Road						
	Box Culvert-Slab	Cum	2	20	1.00	0.20	8.00
	Box Culvert-Wall	Cum	2	20	1.00	0.20	8.00
	7e-Attavar Road-Mother theresa Road to Nandiguda Road						
	Box Culvert-Slab	Cum	4	12	1.00	0.20	9.60
	Box Culvert-Wall	Cum	4	12	1.00	0.20	9.60
	13a-KRR Road-PVS Circle to Arya Samaj Road						
	Box Culvert-Slab	Cum	8	25	1.50	0.20	60.00
	Box Culvert-Wall	Cum	8	25	1.50	0.20	60.00
	13b-KRR Road-PVS Circle to Hampankatta						
	Box Culvert-Slab	Cum	8	25	1.50	0.20	60.00
	Box Culvert-Wall	Cum	8	25	1.50	0.20	60.00
	12-Bunts Hostel Road						
	Box Culvert-Slab	Cum	4	14	1.50	0.20	16.80
	Box Culvert-Wall	Cum	4	14	1.50	0.20	16.80
	Footpath Beam						
	7b-Hampankatta to Milagres Cross Road	Cum	2	220	0.15	0.15	9.90
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Cum	2	330	0.15	0.15	14.85
	13a-KRR Road-PVS Circle to Arya Samaj Road	Cum	2	1110	0.15	0.15	49.95
	13b-KRR Road-PVS Circle to Hampankatta	Cum	2	1120	0.15	0.15	50.40
	12-Bunts Hostel Road	Cum	2	478	0.15	0.15	21.51
	Electrical Chamber						
	Foundation	Cum	292	2.70	1.80	0.15	212.87
	Long Wall	Cum	584	2.40	0.15	2.10	441.50
	Short Wall	Cum	584	1.10	0.15	2.10	202.36
	Electrical Poles						0.00
	Foundation	Cum	160	0.5	0.5	0.25	10.00
	Pedstal	Cum	160	0.3	0.30	1.00	14.40
		Cum		**Total Qty.**			**9467.65**
18	KSRB 4.6.1 Providing and removing centering, shuttering, strutting, propping etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2 (Sl No : 4.28 of KPWD 18-19)						
	Electrical Pole						
	Foundation	Sqm	640	0.5		0.25	80.00
	Column	Sqm	640	0.3		1.00	192.00
	SWD						
	Road 13a						
	Node-CO-137						
	Base	Sqm	4	97		0.1	38.80
	Wall	Sqm	8	97		1.32	1024.32
	Slab	Sqm	2	97	1.3		252.20
	Node-CO-176						
	Base	Sqm	4	49.2		0.1	19.68
	Wall	Sqm	8	49.2		2.38	936.77
	Slab	Sqm	2	49.2	1.8		177.12
	Node-CO-143						
	Base	Sqm	4	69		0.1	27.60
	Wall	Sqm	8	69		1.66	916.32
	Slab	Sqm	2	69	1.6		220.80
	Node-CO-144						
	Base	Sqm	4	42.3		0.1	16.92
	Wall	Sqm	8	42.3		0.72	243.65
	Slab	Sqm	2	42.3	1.4		118.44
	Node-CO-145						
	Base	Sqm	4	71.1		0.1	28.44
	Wall	Sqm	8	71.1		0.61	346.97
	Slab	Sqm	2	71.1	1.1		156.42
	Node-CO-162						
	Base	Sqm	4	114.4		0.1	45.76
	Wall	Sqm	8	114.4		1.22	1116.54
	Slab	Sqm	2	114.4	1		228.80
	Node-CO-138						
	Base	Sqm	4	54.8		0.1	21.92
	Wall	Sqm	8	54.8		0.81	355.10

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Slab	Sqm	2	54.8	0.8		87.68
	Node-CO-141						
	Base	Sqm	4	37.7		0.1	15.08
	Wall	Sqm	8	37.7		0.74	223.18
	Slab	Sqm	2	37.7	0.8		60.32
	Node-CO-139						
	Base	Sqm	4	46.3		0.1	18.52
	Wall	Sqm	8	46.3		0.83	307.43
	Slab	Sqm	2	46.3	0.8		74.08
	Node-CO-146						
	Base	Sqm	4	105.9		0.1	42.36
	Wall	Sqm	8	105.9		0.67	567.62
	Slab	Sqm	2	105.9	0.8		169.44
	Node-CO-147						
	Base	Sqm	4	69.1		0.1	27.64
	Wall	Sqm	8	69.1		0.82	453.30
	Slab	Sqm	2	69.1	0.8		110.56
	Node-CO-148						
	Base	Sqm	4	117.7		0.1	47.08
	Wall	Sqm	8	117.7		1.1	1035.76
	Slab	Sqm	2	117.7	1		235.40
	Node-CO-149						
	Base	Sqm	4	83.7		0.1	33.48
	Wall	Sqm	8	83.7		1.45	970.92
	Slab	Sqm	2	83.7	1		167.40
	Node-CO-140						
	Base	Sqm	4	64.8		0.1	25.92
	Wall	Sqm	8	64.8		0.78	404.35
	Slab	Sqm	2	64.8	0.8		103.68
	Node-CO-150						
	Base	Sqm	4	26.1		0.1	10.44
	Wall	Sqm	8	26.1		1.69	352.87
	Slab	Sqm	2	26.1	1		52.20
	Node-CO-151						
	Base	Sqm	4	32		0.1	12.80
	Wall	Sqm	8	32		1.84	471.04
	Slab	Sqm	2	32	1		64.00
	Road 13b						
	Node-CO-132						
	Base	Sqm	4	175.7		0.1	70.28
	Wall	Sqm	8	175.7		1.485	2087.32
	Slab	Sqm	2	175.7	1.6		562.24
	Node-CO-125						
	Base	Sqm	4	74.3		0.1	29.72
	Wall	Sqm	8	74.3		1.02	606.29
	Slab	Sqm	2	74.3	1.5		222.90
	Node-CO-152						
	Base	Sqm	4	93.8		0.1	37.52
	Wall	Sqm	8	93.8		0.995	746.65
	Slab	Sqm	2	93.8	1.5		281.40
	Node-CO-135						
	Base	Sqm	4	86.4		0.1	34.56
	Wall	Sqm	8	86.4		0.72	497.66
	Slab	Sqm	2	86.4	1.5		259.20
	Node-CO-134						
	Base	Sqm	4	81.4		0.1	32.56
	Wall	Sqm	8	81.4		1.13	735.86
	Slab	Sqm	2	81.4	1.6		260.48
	Node-CO-133						
	Base	Sqm	4	71.9		0.1	28.76
	Wall	Sqm	8	71.9		1.33	765.02
	Slab	Sqm	2	71.9	1.6		230.08
	Node-CO-131						
	Base	Sqm	4	94.5		0.1	37.80
	Wall	Sqm	8	94.5		1.5	1134.00
	Slab	Sqm	2	94.5	1.2		226.80
	Node-CO-160						
	Base	Sqm	4	36.5		0.1	14.60
	Wall	Sqm	8	36.5		2.08	607.36
	Slab	Sqm	2	36.5	1.2		87.60
	Node-CO-128						
	Base	Sqm	4	121.4		0.1	48.56
	Wall	Sqm	8	121.4		2.36	2292.03
	Slab	Sqm	2	121.4	1.2		291.36
	Node-CO-178						
	Base	Sqm	4	57.3		0.1	22.92
	Wall	Sqm	8	57.3		0.8	366.72
	Slab	Sqm	2	57.3	1.1		126.06
	Node-CO-154						
	Base	Sqm	4	52.8		0.1	21.12
	Wall	Sqm	8	52.8		2.59	1094.02
	Slab	Sqm	2	52.8	1.5		158.40
	Node-CO-130						
	Base	Sqm	4	64		0.1	25.60
	Wall	Sqm	8	64		1.74	890.88
	Slab	Sqm	2	64	1.3		166.40

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Node-CO-126						
	Base	Sqm	4	81.8		0.1	32.72
	Wall	Sqm	8	81.8		1.07	700.21
	Slab	Sqm	2	81.8	1.5		245.40
	Road 12						
	Node-CO-179						
	Base	Sqm	4	56.7		0.1	22.68
	Wall	Sqm	8	56.7		1.215	551.12
	Slab	Sqm	2	56.7	1.2		136.08
	Node-CO-181						
	Base	Sqm	4	301.2		0.1	120.48
	Wall	Sqm	8	301.2		1.71	4120.42
	Slab	Sqm	2	301.2	1		602.40
	Node-CO-180						
	Base	Sqm	4	114.7		0.1	45.88
	Wall	Sqm	8	114.7		1.245	1142.41
	Slab	Sqm	2	114.7	1		229.40
	Road 7e						
	Node-CO-61						
	Base	Sqm	2	15		0.1	3.00
	Wall	Sqm	4	15		0.755	45.30
	Slab	Sqm	1	15	1.2		18.00
	Node-CO-63						
	Base	Sqm	2	43		0.1	8.60
	Wall	Sqm	4	43		0.795	136.74
	Slab	Sqm	1	43	0.9		38.70
	Node-CO-62						
	Base	Sqm	2	57.8		0.1	11.56
	Wall	Sqm	4	57.8		0.79	182.65
	Slab	Sqm	1	57.8	0.9		52.02
	Node-CO-60						
	Base	Sqm	2	58.7		0.1	11.74
	Wall	Sqm	4	58.7		0.72	169.06
	Slab	Sqm	1	58.7	0.9		52.83
	Node-CO-59						
	Base	Sqm	2	64.3		0.1	12.86
	Wall	Sqm	4	64.3		0.71	182.61
	Slab	Sqm	1	64.3	0.9		57.87
	Node-CO-52						
	Base	Sqm	2	43.1		0.1	8.62
	Wall	Sqm	4	43.1		1.31	225.84
	Slab	Sqm	1	43.1	1		43.10
	Node-CO-54						
	Base	Sqm	2	72.6		0.1	14.52
	Wall	Sqm	4	72.6		1.5	435.60
	Slab	Sqm	1	72.6	1.2		87.12
	Node-CO-53						
	Base	Sqm	2	50.2		0.1	10.04
	Wall	Sqm	4	50.2		0.88	176.70
	Slab	Sqm	1	50.2	0.9		45.18
	Node-CO-58						
	Base	Sqm	2	132.1		0.1	26.42
	Wall	Sqm	4	132.1		0.655	346.10
	Slab	Sqm	1	132.1	0.9		118.89
	Road 7b						
	Node-CO-29						
	Base	Sqm	4	159.8		0.15	95.88
	Wall	Sqm	8	159.8		3	3835.20
	Slab	Sqm	2	159.8	1.2		383.52
	Node-CO-87						
	Base	Sqm	4	95.4		0.15	57.24
	Wall	Sqm	8	95.4		3	2289.60
	Slab	Sqm	2	95.4	1.2		228.96
	Balmatta Road						
	Foundation						
	RHS-D12	Sqm	2	381	0.2		152.40
	RHS-D12A	Sqm	2	100	0.2		40.00
	LHS-D11	Sqm	2	481	0.2		192.40
	Wall						
	RHS-D12	Sqm	4	381		0.41	624.84
	RHS-D12A	Sqm	4	100		0.56	224.00
	LHS-D11	Sqm	4	481		1.38	2655.12
	Top Slab-Bottom						
	RHS-D12	Sqm	1	381	1		381.00
	RHS-D12A	Sqm	1	100	1.4		140.00
	LHS-D11	Sqm	1	481	1		481.00
	Top Slab-Sides						
	RHS-D12	Sqm	2	381		0.2	152.40
	RHS-D12A	Sqm	2	100		0.2	40.00
	LHS-D11	Sqm	2	481		0.2	192.40
	Box Culvert						
	7b-Hampankatta to Milagres Cross Road						
	Box Culvert-Slab	Sqm	2	20	1		40.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Box Culvert-Wall	Sqm	4	20	1		80.00
	Sides	Sqm	4	4	0.20		3.20
	7e-Attavar Road-Mother theresa Road to Nandiguda Road						
	Box Culvert-Slab	Sqm	4	12	1		48.00
	Box Culvert-Wall	Sqm	8	12	1		96.00
		Sqm	8	4	0.20		6.40
	13a-KRR Road-PVS Circle to Arya Samaj Road						
	Box Culvert-Slab	Sqm	8	25	1.5		300.00
	Box Culvert-Wall	Sqm	16	25	1.5		600.00
		Sqm	16	6	0.20		19.20
	13b-KRR Road-PVS Circle to Hampankatta						
	Box Culvert-Slab	Sqm	8	25	1.5		300.00
	Box Culvert-Wall	Sqm	8	25	1.5		300.00
		Sqm	8	6	0.20		9.60
	12-Bunts Hostel Road						
	Box Culvert-Slab	Sqm	4	14	1.5		84.00
	Box Culvert-Wall	Sqm	4	14	1.5		84.00
		Sqm	4	6	0.20		4.80
		Sqm		**Total Qty.**			**52421.88**
19	KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500 (Sl No : 4.46.2 of KPWD 18-19)			**Cum**	**Kg/Cum**	**Kg**	**MT**
	Electrical Pole-Pedstal-Footing	MT	1	10.00	50.00	500.00	0.50
	Electrical Pole-Pedstal-Column	MT	1	14.40	50.00	720.00	0.72
	SWD	MT	1	8131.11	80.00	650489.09	650.49
	Electrical Chamber	MT	1	856.73	80.00	68538.24	68.54
	Footpath Beam	MT	1	146.61	40.00	5864.40	5.86
	Box Culvert	MT	1	308.80	70.00	21616.00	21.62
		MT		**9467.65**	0.00	**Total**	**747.73**
	Concrete Pavement Layer						
20	KSRRB M300-Construction of Subgrade. KSRRB M300-55. Construction of sub-grade with approved material Gravel/Murrum with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications (including cost of earth, watering charges & compaction by vibratory rollercompaction by vibratory roller to 97% of proctors density) MORTH Specification No. 305IKPWD 18-19,19.62,17.1 and 17.4)						
	Pavement						
	7b-Hampankatta to Milagres Cross Road						
	Ch.20.0 to Ch.120.0	Cum	1	100	12.9	0.15	193.50
	Road towards Wenlock Hospital	Cum	1	20	12.5	0.15	37.50
	7e-Milagres Nandigidda Road						
	Ch.0.00 to Ch.330.0	Cum	1	330	5	0.15	247.50
	Balmatta Road						
	LHS						
	Ch.0.0 to Ch.40.0	Cum	1	44.86	3.63	0.5	81.42
	LHS						
	Ch.60.0 to ch.320.0	Cum	1	244	2.7	0.5	329.40
	LHS						
	Ch.500.0 to ch.531.0	Cum	1	37.7	0.71	0.5	13.38
	13a-PVS Circle to Arya Samaj Road						
	RHS						
	Ch.100.0 to Ch.540.0	Cum	1	480	3.69	0.15	265.68
	LHS						
	Ch.100.0 to Ch.570.0	Cum	1	470	1.97	0.15	138.89
		Cum				**Total**	**1307.27**
21	KSRRB M600-1.Construction of dry lean cement concrete mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes double drum vibratory roller,finishing and curing complete as per specifications.Morth specification No.601 (Sl No : 22.1.1 of KPWD 18-19)						
	7b-Hampankatta to Milagres Cross Road						
	Ch.20.0 to Ch.120.0	Cum	1	100	12.9	0.10	129.00
	Road towards Wenlock Hospital	Cum	1	20	12.5	0.10	25.00
	7e-Milagres Nandigidda Road						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.0.00 to Ch.330.0	Cum	1	330	5	0.10	165.00
	Balmatta Road						
	LHS						
	Ch.0.0 to Ch.40.0	Cum	1	44.86	3.63	0.10	16.28
	LHS						
	Ch.60.0 to ch.320.0	Cum	1	244	2.7	0.10	65.88
	LHS						
	Ch.500.0 to ch.531.0	Cum	1	37.7	0.71	0.10	2.68
	Humpankatta Junction and Balmatta Road	Cum	1	410	6.35	0.10	260.35
	13a-PVS Circle to Arya Samaj Road						
	RHS						
	Ch.100.0 to Ch.540.0	Cum	1	480	3.69	0.10	177.12
	LHS						
	Ch.100.0 to Ch.570.0	Cum	1	470	1.97	0.10	92.59
		Cum		**Total Qty.**			**1349.50**
22	KSRRB M600-1.Construction of dry lean cement concrete mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,Manually laid and compacting with palte compactor,finishing and curing complete as per MORTH specifications Clause 601. (RA attached)						
	Flush Footpath with Carriageway						
	7e-Milagres Nandigudda Road						
	RHS						
	Ch.20.00 to Ch.70.00	Cum	1.00	50.00	0.57	0.10	2.85
	Ch.70.00 to Ch.142.00	Cum	1.00	72.00	0.79	0.10	5.70
	Ch.147.00 to Ch.172.00	Cum	1.00	25.00	0.75	0.10	1.87
	LHS						
	Ch.40.00 to Ch.150.00	Cum	1.00	110.00	0.74	0.10	8.10
	Bunts Hostel Road						
	LHS						
	Ch.120.0 to Ch.200.0	Cum	1.00	80.00	1.08	0.10	8.60
	RHS						
	Ch.168.0 to Ch. 290.0	Cum	1.00	122.00	2.49	0.10	30.38
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.185.0 to Ch.250.0	Cum	1.00	65.00	1.88	0.10	12.22
	Ch.450.0 to Ch.590.0	Cum	1.00	140.00	1.79	0.10	25.06
	Box Culvert						
	7b-Hampankatta to Milagres Cross Road						
	Box Culvert-Slab	Cum	2	20	1	0.10	4.00
	7e-Attavar Road-Mother theresa Road to Nandiguda Road						
	Box Culvert-Slab	Cum	4	12	1	0.10	4.80
	13a-KRR Road-PVS Circle to Arya Samaj Road						
	Box Culvert-Slab	Cum	8	25	1.5	0.10	30.00
	13b-KRR Road-PVS Circle to Hampankatta						
	Box Culvert-Slab	Cum	8	25	1.5	0.10	30.00
	12-Bunts Hostel Road						
	Box Culvert-Slab	Cum	4	14	1.5	0.10	8.40
						Total	**171.98**
23	Providing and laying cement concrete using 20mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete for RCC works laid in 15 em thick layers and well compacted including vibrating curing etc., for all super structure works with all lead and lift etc., complete. (exculsive of cost of steel and fabrication charges) Note : The RMC should be obtained only from the plants certified by Quality Council of India as per CE, C&B letter, AE2, 2015-16, Dt. 12-09-2015 Ready mixed Cement concrete M-25 (KPWD,4.49.2)						
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Cum	1.00	200.00	2.54	0.10	50.80
	RHS						
	Ch.20.00 to Ch.50.0	Cum	1.00	30.00	5.37	0.10	16.10
	Ch.50.0 to Ch.90.0						
	Ch.110.0 to Ch.220.0	Cum	1.00	110.00	2.56	0.10	28.20
	7e-Milagres Nandigidda Road						
	LHS						
	Ch.25.00 to Ch.45.00	Cum	1.00	20.00	4.35	0.10	8.70
	Ch.155.00 to Ch.330.00	Cum	1.00	175.00	3.83	0.10	66.99
	RHS						
	Ch.170.00 to Ch.330.00	Cum	1.00	160.00	2.68	0.10	42.85
	13a-PVS Circle to Arya Samaj Junction						
	LHS-Paver on Footpath						
	Ch.0.0 to Ch.60.0	Cum	1.00	60.00	2.37	0.10	14.20
	Ch.62.00 to Ch.128.0	Cum	1.00	66.00	2.08	0.10	13.70
	Ch.132.0 to Ch.280.0	Cum	1.00	148.00	2.26	0.10	33.50

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.285.0 to Ch.390.0	Cum	1.00	105.00	2.21	0.10	23.20
	Ch.395.0 to Ch.455.0	Cum	1.00	60.00	1.42	0.10	8.50
	Ch.460.0 to ch.545.0	Cum	1.00	85.00	2.39	0.10	20.30
	Ch.580.0 to Ch.640.0	Cum	1.00	60.00	3.20	0.10	19.20
	Ch.640.0 to Ch.800.0	Cum	1.00	160.00	2.06	0.10	33.00
	Ch.805.0 to Ch.860.0	Cum	1.00	55.00	2.36	0.10	13.00
	Ch.860.0 to Ch.920.0	Cum	1.00	60.00	2.68	0.10	16.10
	Ch.925.0 to ch.960.0	Cum	1.00	35.00	2.86	0.10	10.00
	Ch.960.0 to Ch.1060.0	Cum	1.00	100.00	2.61	0.10	26.10
	Ch.1060 to Ch.1110.0	Cum	1.00	50.00	4.02	0.10	20.10
	LHS-Compound Side Paver						
	Ch.10.00 to Ch.60.00	Cum	1.00	50.00	2.46	0.10	12.30
	Ch.60.00 to Ch.130.0	Cum	1.00	70.00	1.80	0.10	12.60
	Ch.130.0 to Ch.200.0	Cum	1.00	70.00	2.66	0.10	18.60
	Ch.235.0 to Ch.270.0	Cum	1.00	35.00	1.03	0.10	3.60
	Ch.490.0 to Ch.540.0	Cum	1.00	50.00	0.96	0.10	4.80
	Ch.650.0 to Ch.800.0	Cum	1.00	150.00	2.57	0.10	38.60
	Ch.925.00 to Ch.950.0	Cum	1.00	25.00	1.88	0.10	4.70
	Ch.960.0 to Ch.1050.0	Cum	1.00	90.00	6.23	0.10	56.10
	RHS						
	Ch.0.0 to Ch.320.0	Cum	1.00	320.00	2.28	0.10	72.80
	Ch.330.0 to Ch.510.0	Cum	1.00	180.00	2.06	0.10	37.00
	Ch.510.0 to Ch.538.0	Cum	1.00	28.00	2.07	0.10	5.80
	Ch.540.0 to Ch.578.0	Cum	1.00	38.00	1.74	0.10	6.60
	Ch.580.0 to Ch.660.0	Cum	1.00	80.00	3.21	0.10	25.70
	Ch.680.0 to Ch.750.0	Cum	1.00	70.00	3.53	0.10	24.70
	Ch.750.0 to Ch.1020.0	Cum	1.00	270.00	1.60	0.10	43.30
	Ch.1025.0 to Ch.1060.0	Cum	1.00	35.00	1.09	0.10	3.80
	Ch.1070.0 to Ch.1110.0	Cum	1.00	40.00	1.85	0.10	7.40
	RHS-Compound Side Paver						
	Ch.0.0 to Ch.210.0	Cum	1.00	210.00	1.92	0.10	40.40
	Ch.230.0 to Ch.290.0	Cum	1.00	60.00	0.63	0.10	3.80
	Ch.325.0 to Ch.390.0	Cum	1.00	65.00	1.58	0.10	10.30
	Ch.470.0 to Ch.510.0	Cum	1.00	40.00	4.25	0.10	17.00
	Ch.515.0 to Ch.535.0	Cum	1.00	20.00	2.40	0.10	4.80
	CH.540.0 to Ch.575.0	Cum	1.00	35.00	3.23	0.10	11.30
	Ch.830.0 to Ch.970.0	Cum	1.00	140.00	7.20	0.10	100.80
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.10.0 to Ch.180.0	Cum	1.00	170.00	2.10	0.10	35.70
	Ch.255.0 to Ch.345.0	Cum	1.00	90.00	2.62	0.10	23.60
	Ch.350.0 to Ch.440.0	Cum	1.00	90.00	2.30	0.10	20.70
	Ch.590.0 to Ch.680.0	Cum	1.00	90.00	2.24	0.10	20.20
	Ch.680.0 to Ch.845.0	Cum	1.00	165.00	2.13	0.10	35.10
	Ch.840.0 to Ch.880.0	Cum	1.00	40.00	4.58	0.10	18.30
	Ch.880.0 to Ch.900.0	Cum	1.00	20.00	8.25	0.10	16.50
	Ch.900.0 to Ch.965.0	Cum	1.00	65.00	2.42	0.10	15.70
	Ch.965.0 to Ch.1110.0	Cum	1.00	145.00	2.18	0.10	31.60
	Ch.1110.0 to Ch.1120.0	Cum	1.00	10.00	8.13	0.10	8.13
	Compound Wallside Paver Block						
	Ch.70.0 to Ch.180.0	Cum	1.00	110.00	2.96	0.10	32.60
	Ch.255.0 to Ch.340.0	Cum	1.00	85.00	1.89	0.10	16.10
	Ch.355.0 to Ch.410.0	Cum	1.00	55.00	2.82	0.10	15.50
	Ch.590.0 to Ch.680.0	Cum	1.00	90.00	4.15	0.10	37.31
	Ch.680.0 to Ch.730.0	Cum	1.00	50.00	1.32	0.10	6.60
	Ch.820.0 to Ch.840.0	Cum	1.00	20.00	3.75	0.10	7.50
	Ch.840.0 to Ch.880.0	Cum	1.00	40.00	3.83	0.10	15.30
	Ch.880.0 to Ch.900.0	Cum	1.00	20.00	8.25	0.10	16.50
	Ch.900.0 to Ch.935.0	Cum	1.00	35.00	2.91	0.10	10.20
	Ch.900.0 to Ch.930.0	Cum	1.00	30.00	3.40	0.10	10.20
	Ch.970.0 to Ch.1040.0	Cum	1.00	70.00	7.20	0.10	50.40
	Ch.1060 to Ch.1110.0	Cum	1.00	50.00	2.90	0.10	14.50
	RHS						
	Ch.10.0 to Ch.140.0	Cum	1.00	130.00	1.40	0.10	18.17
	Ch.150.0 to Ch.510.0	Cum	1.00	360.00	2.11	0.10	75.80
	Ch.515.0 to Ch.630.0	Cum	1.00	115.00	2.54	0.10	29.20
	Ch.630.0 to Ch.1090.0	Cum	1.00	460.00	1.83	0.10	84.20
	Compound Wallside Paver Block						
	Ch.160.0 to Ch.270.0	Cum	1.00	110.00	0.72	0.10	7.90
	Ch.270.0 to Ch.475.0	Cum	1.00	205.00	2.32	0.10	47.60
	Ch.480.0 to Ch.505.0	Cum	1.00	25.00	0.84	0.10	2.10
	Ch.515.0 to Ch.525.0	Cum	1.00	10.00	0.80	0.10	0.80
	Ch.590.0 to Ch.630.0	Cum	1.00	40.00	3.20	0.10	12.80
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.118.00	Cum	1.00	108.00	3.78	0.10	40.82
	Ch.200.0 to Ch.440.0	Cum	1.00	240.00	2.45	0.10	58.70
	Ch.450.0 to Ch.478.0	Cum	1.00	28.00	3.54	0.10	9.90
	RHS						
	Ch.10.0 to Ch.165.0	Cum	1.00	155.00	3.41	0.10	52.86
	Ch.300.0 to Ch.470.0	Cum	1.00	170.00	3.78	0.10	64.26
	Balmatta Road-LHS						
	Ch.0.0 to Ch.90.0	Sqm	1.00	79.00	2.20	0.10	17.38
	Ch. 90.0 to Ch.190.00	Sqm	1.00	100.00	4.44	0.10	44.40
	Landscape Deduction	Sqm	-1.00	81.72	1.01	0.10	-8.25
	Compound Wall Side-Ch.100 to Ch.185.0	Sqm	1.00	85.00	2.39	0.10	20.28
	Ch.190 to Ch.340	Sqm	1.00	150.00	2.63	0.10	39.40

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch. 360 to Ch.470	Sqm	1.00	151.00	2.20	0.10	33.22
	Ch.470.0 to Ch.530.0	Sqm	1.00	80.00	2.20	0.10	17.60
	Balmatta Road-RHS						
	Ch.0.0 to Ch.130	Sqm	1.00	130.00	2.65	0.10	34.45
	Ch.135.0 to Ch.205.0	Sqm	1.00	70.00	2.34	0.10	16.38
	Ch.200 to Ch.360.0	Sqm	1.00	160.00	3.32	0.10	53.12
	Ch.360.0 to Ch.530.0	Sqm	1.00	170.00	3.26	0.10	55.42
	Deduction of Manhole Cover	Sqm	-640.00	0.60	0.45	0.10	-17.28
						Total	**2300.80**
24	KSSRRB M600-2.Construction of unreinforced,dowel jointed,plain cement concrete pavement over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per MORTH specifications Clause 602.with M40 @420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Sl No : 22.2.2 of KPWD 18-19)						
	7b-Hampankatta to Milagres Cross Road						
	Ch.20.0 to Ch.120.0	Cum	1	100	12.9	0.27	348.30
	Road towards Wenlock Hospital	Cum	1	20	12.5	0.27	67.50
	7e-Milagres Nandigidda Road						
	Ch.0.00 to Ch.330.0	Cum	1	330	5	0.26	429.00
	13a-PVS Circle to Arya Samaj Road						
	Ch.0.0 to Ch.680.0 (Consider 5% Pavement Repaire Work)	Cum	0.05	680	14	0.27	128.52
	13a-Pvs Circle to Arya Samaj Road						
	RHS						
	Ch.100.0 to Ch.540.0	Cum	1	480	3.69	0.27	478.22
	LHS						
	Ch.100.0 to Ch.570.0	Cum	1	470	1.97	0.27	249.99
	13b-Hamapankatta to PVS Circle						
	Ch.0.0 to Ch.1120.0 (Consider 5% Pavement Repaire Work)	Cum	0.05	1120	11.6	0.27	175.39
	12-Bunts Hostel Road						
	Ch.0.0 to Ch.478.0 (Consider 5% Pavement Repaire Work)	Cum	0.05	478	10.4	0.27	67.11
	Humpankatta Junction and Balmatta Road	Cum	1	410	6.35	0.30	781.05
	Balmatta Road						
	LHS						
	Ch.0.0 to Ch.40.0	Cum	1	44.86	3.63	0.30	48.85
	LHS						
	Ch.60.0 to ch.320.0	Cum	1	244	2.7	0.30	197.64
	LHS						
	Ch.500.0 to ch.531.0	Cum	1	37.7	0.71	0.30	8.03
		Cum				**Total**	**2979.61**
25	Providing and placing joint sealant compound of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower and as shown on drawing and as per MORTH specifications clause 602. (Non SOR Item)						
	13a-PVS Circle to Arya Samaj Road						
	Ch.0.0 to Ch.680.0						
	Along the Road	Rmt	4	680			2720.00
	Across the Road	Rmt	136	14			1904.00
	13b-Hamapankatta to PVS Circle						
	Ch.0.0 to Ch.1120.0						
	Along the Road	Rmt	4	1120			4480.00
	Across the Road	Rmt	280	11.6			3248.00
	Balmatta Road						
	LHS						
	Ch.0.0 to Ch.40.0	Rmt	10	3.63			36.30
		Rmt	1	44.86			44.86
	LHS						
	Ch.60.0 to ch.320.0	Rmt	55	2.7			148.50
		Rmt	1	244			244.00
	LHS						
	Ch.500.0 to ch.531.0	Rmt	9	0.71			6.39
		Rmt	1	37.7			37.70
	12-Bunts Hostel Road						
	Ch.0.0 to Ch.478.0						
	Along the Road	Rmt	4	478			1912.00
	Across the Road	Rmt	96	10.4			998.40
				Total Qty.			15780.15
		Rmt		Consider 10% Qty of Total			**1578.02**

Sr. No.	Description	Unit	No's	L	B	H	Qty.
26	KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Sl No : 35.8 of KPWD 18-19)						
	Consider Same Qty of Joint Filling@5% of Joint Filler	**Rmt**		**Total Qty.**			**78.90**
27	Providing and laying at or near ground level factory made Median kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per drawing. (Precast C.C. kerb stone shall be approved by Engineer-in-charge). (RA Attached)						
	Balmatta Road						
	Ch.30.0 to Ch.136	Rmt	2	106			212.00
	Ch.140.0 to 220.00	Rmt	2	80			160.00
	Ch.230.0 to 340.00	Rmt	2	110			220.00
	Ch.380.0 to Ch.528.0	Rmt	2	148			296.00
	Consider Provisional Qty.	Rmt	20				20.00
		Rmt				**Sub Total**	**908.00**
		No's		**Total Qty.**			**2270**
	Vol of one kerb stone=0.102cum,Total vol of kerb=	**Cum**					**232**
28	Providin and fixing pre cast solid concrete Kerb stones as per the drawing,made out of CC M20 and Jointed with CM 1:3 and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Sl No : 5.3 of KPWD 18-19)						
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Rm	1	200			200.00
	RHS						
	Ch.20.00 to Ch.50.0	Rm	1	30			30.00
	Ch.50.0 to Ch.90.0	Rm	1	40			40.00
	Ch.110.0 to Ch.220.0	Rm	1	110			110.00
	7e-Milagres Nandigidda Road						
	LHS						
	Ch.25.00 to Ch.45.00	Rm	1	20			20.00
	Ch.155.00 to Ch.330.00	Rm	1	175			175.00
	RHS						
	Ch.170.00 to Ch.330.00	Rm	1	160			160.00
	13a-PVS Circle to Arya Samaj Junction						
	LHS-Paver on Footpath						
	Ch.0.0 to Ch.60.0	Rm	1	60			60.00
	Ch.62.00 to Ch.128.0	Rm	1	66			66.00
	Ch.132.0 to Ch.280.0	Rm	1	148			148.00
	Ch.285.0 to Ch.390.0	Rm	1	105			105.00
	Ch.395.0 to Ch.455.0	Rm	1	60			60.00
	Ch.460.0 to ch.545.0	Rm	1	85			85.00
	Ch.580.0 to Ch.640.0	Rm	1	60			60.00
	Ch.640.0 to Ch.800.0	Rm	1	160			160.00
	Ch.805.0 to Ch.860.0	Rm	1	55			55.00
	Ch.860.0 to Ch.920.0	Rm	1	60			60.00
	Ch.925.0 to ch.960.0	Rm	1	35			35.00
	Ch.960.0 to Ch.1060.0	Rm	1	100			100.00
	Ch.1060 to Ch.1110.0	Rm	1	50			50.00
	RHS						
	Ch.0.0 to Ch.320.0	Rm	1	320			320.00
	Ch.330.0 to Ch.510.0	Rm	1	180			180.00
	Ch.510.0 to Ch.538.0	Rm	1	28			28.00
	Ch.540.0 to Ch.578.0	Rm	1	38			38.00
	Ch.580.0 to Ch.660.0	Rm	1	80			80.00
	Ch.680.0 to Ch.750.0	Rm	1	70			70.00
	Ch.750.0 to Ch.1020.0	Rm	1	270			270.00
	Ch.1025.0 to Ch.1060.0	Rm	1	35			35.00
	Ch.1070.0 to Ch.1110.0	Rm	1	40			40.00
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.10.0 to Ch.180.0	Rm	1	170			170.00
	Ch.255.0 to Ch.345.0	Rm	1	90			90.00
	Ch.350.0 to Ch.440.0	Rm	1	90			90.00
	Ch.590.0 to Ch.680.0	Rm	1	90			90.00
	Ch.680.0 to Ch.845.0	Rm	1	165			165.00
	Ch.840.0 to Ch.880.0	Rm	1	40			40.00
	Ch.880.0 to Ch.900.0	Rm	1	20			20.00
	Ch.900.0 to Ch.965.0	Rm	1	65			65.00
	Ch.965.0 to Ch.1110.0	Rm	1	145			145.00
	Ch.1110.0 to Ch.1120.0	Rm	1	10			10.00
	RHS						
	Ch.10.0 to Ch.140.0	Rm	1	130			130.00
	Ch.150.0 to Ch.510.0	Rm	1	360			360.00
	Ch.515.0 to Ch.630.0	Rm	1	115			115.00
	Ch.630.0 to Ch.1090.0	Rm	1	460			460.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.118.00	Rm	1	108			108.00
	Ch.200.0 to Ch.440.0	Rm	1	240			240.00
	Ch.450.0 to Ch.478.0	Rm	1	28			28.00
	RHS						
	Ch.10.0 to Ch.165.0	Rm	1	155			155.00
	Ch.300.0 to Ch.470.0	Rm	1	170			170.00
	Flush Footpath with Carriageway						
	7e-Milagres Nandigudda Road						
	RHS						
	Ch.20.00 to Ch.70.00	Rm	1	50.00			50.00
	Ch.70.00 to Ch.142.00	Rm	1	72.00			72.00
	Ch.147.00 to Ch.172.00	Rm	1	25.00			25.00
	LHS	Rm	0	0.00			0.00
	Ch.40.00 to Ch.150.00	Rm	1	110.00			110.00
	Bunts Hostel Road						
	LHS						
	Ch.120.0 to Ch.200.0	Rm	1	80.00			80.00
	RHS						
	Ch.168.0 to Ch. 290.0	Rm	1	122.00			122.00
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.185.0 to Ch.250.0	Rm	1	65.00			65.00
	Ch.450.0 to Ch.590.0	Rm	1	140.00			140.00
	Balmatta Road-LHS						
	Ch.0.0 to Ch.90.0	Rm	1	79.00			79.00
	Ch. 90.0 to Ch.190.00	Rm	1	100.00			100.00
	Landscape	Rm	2	81.72			163.44
	Compound Wall Side-Ch.100 to Ch.185.0	Rm	1	85.00			85.00
	Ch.190 to Ch.340	Rm	1	150.00			150.00
	Ch. 360 to Ch.470	Rm	1	151.00			151.00
	Ch.470.0 to Ch.530.0	Rm	1	80.00			80.00
	Balmatta Road-RHS						
	Ch.0.0 to Ch.130	Rm	1	130.00			130.00
	Ch.135.0 to Ch.205.0	Rm	1	70.00			70.00
	Ch.200 to Ch.360.0	Rm	1	160.00			160.00
	Ch.360.0 to Ch.530.0	Rm	1	170.00			170.00
	Table Top paver Block						
	7b-Hampankatta to Milagres Cross Road	Rm	2	13.40			26.80
	7e-Attavar Road-Mother theresa Road to Nandiguda Road						
	9-Sturrock Road						
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rm	6	14.80			88.80
	13b-KRR Road-PVS Circle to Hampankatta	Rm	5	14.80			74.00
	12-Bunts Hostel Road	Rm	2	14.50			29.00
	Traffic Island opp. Ocean Pearl Hotel	Rm	1	42.00			42.00
	PVS Circle -Traffic Island	Rm	1	12.00			12.00
	Bunts Hostel-Traffic Island	Rm	1	26.00			26.00
	Bunts Hostel-Traffic Island	Rm	1	26.00			26.00
	13a-PVS Circle to Arya Samaj Road-Traffic Island @Ch.1060.0	Rm	1	57.00			57.00
						Total=	**7875.04**
	C= A+B/0.45m(length of one Kerb Stone)	**Nos**				**Total(C)**	**17500.00**
	Vol of 1 Kerb=0.028 cum, Total Vol.=	**Cum**					**490.00**
29	Providin and fixing pre cast solid concrete water table(longitudinal gutter) as per the drawing,made out of CC M20 and jointed with CM 1:3 and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Sl No : 5.3 of KPWD 18-19)						
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Rm	1	200			200.00
	RHS		0	0			0.00
	Ch.20.00 to Ch.50.0	Rm	1	30			30.00
	Ch.50.0 to Ch.90.0	Rm	1	40			40.00
	Ch.110.0 to Ch.220.0	Rm	1	110			110.00
	12-Bunts Hostel Road		0	0			0.00
	LHS		0	0			0.00
	Ch.10.0 to Ch.118.00	Rm	1	108			108.00
	Ch.200.0 to Ch.440.0	Rm	1	240			240.00
	Ch.450.0 to Ch.478.0	Rm	1	28			28.00
	RHS		0	0			0.00
	Ch.10.0 to Ch.165.0	Rm	1	155			155.00
	Ch.300.0 to Ch.470.0	Rm	1	170			170.00
	Flush Footpath with Carriageway		0	0			0.00
	7e-Milagres Nandigudda Road		0	0			0.00
	RHS		0	0			0.00
	Ch.20.00 to Ch.70.00	Rm	1	50			50.00
	Ch.70.00 to Ch.142.00	Rm	1	72			72.00
	Ch.147.00 to Ch.172.00	Rm	1	25			25.00
	LHS	Rm	0	0			0.00
	Ch.40.00 to Ch.150.00	Rm	1	110			110.00
	Bunts Hostel Road		0	0			0.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	LHS		0	0			0.00
	Ch.120.0 to Ch.200.0	Rm	1	80			80.00
	RHS		0	0			0.00
	Ch.168.0 to Ch. 290.0	Rm	1	122			122.00
	13b-Hampankatta to PVS Circle		0	0			0.00
	LHS		0	0			0.00
	Ch.185.0 to Ch.250.0	Rm	1	65			65.00
	Ch.450.0 to Ch.590.0	Rm	1	140			140.00
	Table Top paver Block		0	0			0.00
	7b-Hampankatta to Milagres Cross Road	Rm	2	13.4			26.80
	7e-Attavar Road-Mother theresa Road to Nandiguda Road						
	9-Sturrock Road						
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rm	6	14.8			88.80
	13b-KRR Road-PVS Circle to Hampankatta	Rm	5	14.8			74.00
	12-Bunts Hostel Road	Rm	2	14.5			29.00
			0	0			0.00
	Traffic Island opp. Ocean Pearl Hotel	Rm	1	42			42.00
	PVS Circle -Traffic Island	Rm	1	12			12.00
	Bunts Hostel-Traffic Island	Rm	1	26			26.00
	Bunts Hostel-Traffic Island	Rm	1	26			26.00
	13a-PVS Circle to Arya Samaj Road-Traffic Island @Ch.1060.0	Rm	1	57			57.00
							2127
	Total Qty.	**Rm**					**2127**
	C= A+B/0.45m(length of one Kerb Stone)	**Nos.**					**4726**
	Total Vol.= 0.0118	**Cum**					**56**
30	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per MORTH specifications section 8. (Sl No : 24.1 of KPWD 18-19)						
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Sqm	1	200		0.27	53.00
	RHS						
	Ch.20.00 to Ch.50.0	Sqm	1	30		0.27	7.95
	Ch.50.0 to Ch.90.0	Sqm	1	40		0.27	10.60
	Ch.110.0 to Ch.220.0	Sqm	1	110		0.27	29.15
	7e-Milagres Nandigidda Road						
	LHS						
	Ch.25.00 to Ch.45.00	Sqm	1	20		0.27	5.30
	Ch.155.00 to Ch.330.00	Sqm	1	175		0.27	46.38
	RHS						
	Ch.170.00 to Ch.330.00	Sqm	1	160		0.27	42.40
	13a-PVS Circle to Arya Samaj Junction						
	LHS-Paver on Footpath						
	Ch.0.0 to Ch.60.0	Sqm	1	60		0.27	15.90
	Ch.62.00 to Ch.128.0	Sqm	1	66		0.27	17.49
	Ch.132.0 to Ch.280.0	Sqm	1	148		0.27	39.22
	Ch.285.0 to Ch.390.0	Sqm	1	105		0.27	27.83
	Ch.395.0 to Ch.455.0	Sqm	1	60		0.27	15.90
	Ch.460.0 to ch.545.0	Sqm	1	85		0.27	22.53
	Ch.580.0 to Ch.640.0	Sqm	1	60		0.27	15.90
	Ch.640.0 to Ch.800.0	Sqm	1	160		0.27	42.40
	Ch.805.0 to Ch.860.0	Sqm	1	55		0.27	14.58
	Ch.860.0 to Ch.920.0	Sqm	1	60		0.27	15.90
	Ch.925.0 to ch.960.0	Sqm	1	35		0.27	9.28
	Ch.960.0 to Ch.1060.0	Sqm	1	100		0.27	26.50
	Ch.1060 to Ch.1110.0	Sqm	1	50		0.27	13.25
	RHS						
	Ch.0.0 to Ch.320.0	Sqm	1	320		0.27	84.80
	Ch.330.0 to Ch.510.0	Sqm	1	180		0.27	47.70
	Ch.510.0 to Ch.538.0	Sqm	1	28		0.27	7.42
	Ch.540.0 to Ch.578.0	Sqm	1	38		0.27	10.07
	Ch.580.0 to Ch.660.0	Sqm	1	80		0.27	21.20
	Ch.680.0 to Ch.750.0	Sqm	1	70		0.27	18.55
	Ch.750.0 to Ch.1020.0	Sqm	1	270		0.27	71.55
	Ch.1025.0 to Ch.1060.0	Sqm	1	35		0.27	9.28
	Ch.1070.0 to Ch.1110.0	Sqm	1	40		0.27	10.60
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.10.0 to Ch.180.0	Sqm	1	170		0.27	45.05
	Ch.255.0 to Ch.345.0	Sqm	1	90		0.27	23.85
	Ch.350.0 to Ch.440.0	Sqm	1	90		0.27	23.85
	Ch.590.0 to Ch.680.0	Sqm	1	90		0.27	23.85
	Ch.680.0 to Ch.845.0	Sqm	1	165		0.27	43.73
	Ch.840.0 to Ch.880.0	Sqm	1	40		0.27	10.60
	Ch.880.0 to Ch.900.0	Sqm	1	20		0.27	5.30
	Ch.900.0 to Ch.965.0	Sqm	1	65		0.27	17.23
	Ch.965.0 to Ch.1110.0	Sqm	1	145		0.27	38.43
	Ch.1110.0 to Ch.1120.0	Sqm	1	10		0.27	2.65
	RHS						
	Ch.10.0 to Ch.140.0	Sqm	1	130		0.27	34.45
	Ch.150.0 to Ch.510.0	Sqm	1	360		0.27	95.40
	Ch.515.0 to Ch.630.0	Sqm	1	115		0.27	30.48
	Ch.630.0 to Ch.1090.0	Sqm	1	460		0.27	121.90

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.118.00	Sqm	1	108		0.27	28.62
	Ch.200.0 to Ch.440.0	Sqm	1	240		0.27	63.60
	Ch.450.0 to Ch.478.0	Sqm	1	28		0.27	7.42
	RHS						
	Ch.10.0 to Ch.165.0	Sqm	1	155		0.27	41.08
	Ch.300.0 to Ch.470.0	Sqm	1	170		0.27	45.05
	Balmatta Road-LHS						
	Ch.0.0 to Ch.90.0	Sqm	1	79		0.26	20.86
	Ch. 90.0 to Ch.190.00	Sqm	1	100		0.26	26.40
	Landscape	Sqm	2	81.72		0.26	43.15
	Compound Wall Side-Ch.100 to Ch.185.0	Sqm	1	85		0.26	22.44
	Ch.190 to Ch.340	Sqm	1	150		0.26	39.60
	Ch. 360 to Ch.470	Sqm	1	151		0.26	39.86
	Ch.470.0 to Ch.530.0	Sqm	1	80		0.26	21.12
	Balmatta Road-RHS						
	Ch.0.0 to Ch.130	Sqm	1	130		0.26	34.32
	Ch.135.0 to Ch.205.0	Sqm	1	70		0.26	18.48
	Ch.200 to Ch.360.0	Sqm	1	160		0.26	42.24
	Ch.360.0 to Ch.530.0	Sqm	1	170		0.26	44.88
	Flush Footpath with Carriageway						
	7e-Milagres Nandigudda Road						
	RHS						
	Ch.20.00 to Ch.70.00	Sqm	1	50		0.27	13.25
	Ch.70.00 to Ch.142.00	Sqm	1	72		0.27	19.08
	Ch.147.00 to Ch.172.00	Sqm	1	25		0.27	6.63
	LHS						
	Ch.40.00 to Ch.150.00	Sqm	1	110		0.27	29.15
	Bunts Hostel Road						
	LHS						
	Ch.120.0 to Ch.200.0	Sqm	1	80		0.27	21.20
	RHS						
	Ch.168.0 to Ch. 290.0	Sqm	1	122		0.27	32.33
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.185.0 to Ch.250.0	Sqm	1	65		0.27	17.23
	Ch.450.0 to Ch.590.0	Sqm	1	140		0.27	37.10
	Traffic Island opp. Ocean Pearl Hotel	Sqm	1	42		0.27	11.13
	PVS Circle -Traffic Island	Sqm	1	12		0.27	3.18
	Bunts Hostel-Traffic Island	Sqm	1	26		0.27	6.89
	Bunts Hostel-Traffic Island	Sqm	1	26		0.27	6.89
	13a-PVS Circle to Arya Samaj Road-Traffic Island @Ch.1060.0	Sqm	1	57		0.27	15.11
	Bunts Hostel-Road Median Kerb	Sqm	2	450		0.27	238.50
	13b-Hampankatta to PVS Circle						
	Existing Median Kerb Stone(500mm wide x 400mm high)						
	Ch.15.00 to Ch.245.00	Sqm	1.00	230.00		1.30	299.00
	Ch.260.0 to Ch.500.0	Sqm	1.00	240.00		1.30	312.00
	Ch.515.0 to Ch.665.0	Sqm	1.00	150.00		1.30	195.00
	Ch.690.0 to Ch.833.0	Sqm	1.00	143.00		1.30	185.90
	Ch.915.0 to Ch.1085.0	Sqm	1.00	170.00		1.30	221.00
		Sqm		**Total Qty.**			**3479.02**
31	P/F FRP Recess Cover (2.5T) 900mmx600 mm with frame on Manhole for electrical ducting.						
	Power Duct Chambers	Nos.	2	292			584.00
	Balmatta Road	Nos.	2	37			74.00
		Nos.		**Total Qty.**			**658.00**
32	P/F FRP Recess Cover (2.5T) 600mmx450 mm with frame at raised footpath on SWD. (Rate analysis attached)						
	SWD						
	Road 13a						
	Node-CO-137						
	Base	Rm	2.00	97.00			194.00
	Node-CO-176						
	Base	Rm	2.00	49.20			98.40
	Node-CO-143						
	Base	Rm	2.00	69.00			138.00
	Node-CO-144						
	Base	Rm	2.00	42.30			84.60
	Node-CO-145						
	Base	Rm	2.00	71.10			142.20
	Node-CO-162						
	Base	Rm	2.00	114.40			228.80
	Node-CO-138						
	Base	Rm	2.00	54.80			109.60
	Node-CO-141						
	Base	Rm	2.00	37.70			75.40
	Node-CO-139						
	Base	Rm	2.00	46.30			92.60
	Node-CO-146						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Base	Rm	2.00	105.90			211.80
	Node-CO-147						
	Base	Rm	2.00	69.10			138.20
	Node-CO-148						
	Base	Rm	2.00	117.70			235.40
	Node-CO-149						
	Base	Rm	2.00	83.70			167.40
	Node-CO-140						
	Base	Rm	2.00	64.80			129.60
	Node-CO-150						
	Base	Rm	2.00	26.10			52.20
	Node-CO-151						
	Base	Rm	2.00	32.00			64.00
	Road 13b						
	Node-CO-132						
	Base	Rm	2.00	175.70			351.40
	Node-CO-125						
	Base	Rm	2.00	74.30			148.60
	Node-CO-152						
	Base	Rm	2.00	93.80			187.60
	Node-CO-135						
	Base	Rm	2.00	86.40			172.80
	Node-CO-134						
	Base	Rm	2.00	81.40			162.80
	Node-CO-133						
	Base	Rm	2.00	71.90			143.80
	Node-CO-131						
	Base	Rm	2.00	94.50			189.00
	Node-CO-160						
	Base	Rm	2.00	36.50			73.00
	Node-CO-128						
	Base	Rm	2.00	121.40			242.80
	Node-CO-178						
	Base	Rm	2.00	57.30			114.60
	Node-CO-154						
	Base	Rm	2.00	52.80			105.60
	Node-CO-130						
	Base	Rm	2.00	64.00			128.00
	Node-CO-126						
	Base	Rm	2.00	81.80			163.60
	Road 12						
	Node-CO-179						
	Base	Rm	2.00	56.70			113.40
	Node-CO-181						
	Base	Rm	2.00	301.20			602.40
	Node-CO-180						
	Base	Rm	2.00	114.70			229.40
	Road 7e						
	Node-CO-61						
	Base	Rm	1.00	15.00			15.00
	Node-CO-63						
	Base	Rm	1.00	43.00			43.00
	Node-CO-62						
	Base	Rm	1.00	57.80			57.80
	Node-CO-60						
	Base	Rm	1.00	58.70			58.70
	Wall						
	Slab	Rm	1.00	58.70			58.70
	Node-CO-59						
	Base	Rm	1.00	64.30			64.30
	Node-CO-52						
	Base	Rm	1.00	43.10			43.10
	Node-CO-54						
	Base	Rm	1.00	72.60			72.60
	Node-CO-53						
	Base	Rm	1.00	50.20			50.20
	Node-CO-58						
	Base	Rm	1.00	132.10			132.10
	Road 7b						
	Node-CO-29						
	Base	Rm	2.00	159.80			319.60
	Node-CO-87						
	Base	Rm	2.00	95.40			190.80
		Nos.					6396.90
	Consider Chamber @10m C/C distance	**Nos.**					**640.00**
	Balmatta Road						
	Foundation						
	RHS-D12	Nos.	76.00				76.00
	RHS-D12A	Nos.	20.00				20.00
	LHS-D11	Nos.	96.00				96.00
	Ded. No. Of Manhole covers on Level footpath	**Nos.**					**-66.00**
	Total no. Of covers	**Nos.**		**Total Qty.**			**766.00**

Sr. No.	Description	Unit	No's	L	B	H	Qty.
34	KSRRB M300- Wrought iron and mild steel welded work KSRRB M300-18. Wrought iron and mild steel welded work (using angles, square bars, tees and channel grills, gratings with grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately complete as per specifications.(KPWD,18-19,Sl.No.19.97)						
	Flush Footpath with Carriageway						
	7e-Milagres Nandigudda Road						
	RHS						
	Ch.20.00 to Ch.70.00	**Rm**	1	50			50.00
	Ch.70.00 to Ch.142.00	**Rm**	1	72			72.00
	Ch.147.00 to Ch.172.00	**Rm**	1	25			25.00
	LHS						
	Ch.40.00 to Ch.150.00	**Rm**	1	110			110.00
	Bunts Hostel Road						
	LHS						
	Ch.120.0 to Ch.200.0	**Rm**	1	80			80.00
	RHS						
	Ch.168.0 to Ch. 290.0	**Rm**	1	122			122.00
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.185.0 to Ch.250.0	**Rm**	1	65			65.00
	Ch.450.0 to Ch.590.0	**Rm**	1	140			140.00
							664.00
	Total No. Of Gratings	**Nos.**					**133.00**
		Nos.		**Total Qty.**			
			Nos.	**Kg/No.**	**Kg**		**Quintal**
	Consider 5% of Qty		7.00	150	1050		**10.5**
33	P/F FRP Water gully cover with frame (25T) 600mmx500 mm at level footpath. (Rate analysis attached)						
	Flush Footpath with Carriageway						
	7e-Milagres Nandigudda Road						
	RHS						
	Ch.20.00 to Ch.70.00	**Rm**	1	50			50.00
	Ch.70.00 to Ch.142.00	**Rm**	1	72			72.00
	Ch.147.00 to Ch.172.00	**Rm**	1	25			25.00
	LHS						
	Ch.40.00 to Ch.150.00	**Rm**	1	110			110.00
	Bunts Hostel Road						
	LHS						
	Ch.120.0 to Ch.200.0	**Rm**	1	80			80.00
	RHS						
	Ch.168.0 to Ch. 290.0	**Rm**	1	122			122.00
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.185.0 to Ch.250.0	**Rm**	1	65			65.00
	Ch.450.0 to Ch.590.0	**Rm**	1	140			140.00
							664.00
	Consider @10m C/C distance of M.H.Cover	**Nos.**					**66.00**
35	KSRB 12-8.2 : Constructing brick masonry inspection chamber **500x700mm, and 450mm depth,** (clear inside dimension) for pipeline with one or two inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C.I cover with frame (light duty) 455x610mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. Specification No. KBS (P.No. 74/ I.No.11.52 of PWD SR 2015-16)						
	Water Pipe and OFC Pipe						
	7b-Hampankatta to Milagres Cross Road	Nos.	6				6.00
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Nos.	8				8.00
	13a-KRR Road-PVS Circle to Arya Samaj Road	Nos.	24				24.00
	Balmatta Road	Nos.	75				75.00
	13b-KRR Road-PVS Circle to Hampankatta	Nos.	24				24.00
	12-Bunts Hostel Road	Nos.	11				11.00
							148.00
	Consider 25% qty of Total	**Nos.**					**37.00**
36	Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line.The rate shall include all jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,Item No.7,KUWSDB SOR 2016-17)						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Rmt	1	200			200.00
	RHS						
	Ch.20.00 to Ch.50.0	Rmt	1	30			30.00
	Ch.50.0 to Ch.90.0	Rmt	1	40			40.00
	Ch.110.0 to Ch.220.0	Rmt	1	110			110.00
	7e-Milagres Nandigidda Road						
	LHS						
	Ch.25.00 to Ch.45.00	Rmt	1	20			20.00
	Ch.155.00 to Ch.330.00	Rmt	1	175			175.00
	RHS						
	Ch.170.00 to Ch.330.00	Rmt	1	160			160.00
	13a-PVS Circle to Arya Samaj Junction						
	LHS-Paver on Footpath						
	Ch.0.0 to Ch.60.0	Rmt	1	60			60.00
	Ch.62.00 to Ch.128.0	Rmt	1	66			66.00
	Ch.132.0 to Ch.280.0	Rmt	1	148			148.00
	Ch.285.0 to Ch.390.0	Rmt	1	105			105.00
	Ch.395.0 to Ch.455.0	Rmt	1	60			60.00
	Ch.460.0 to ch.545.0	Rmt	1	85			85.00
	Ch.580.0 to Ch.640.0	Rmt	1	60			60.00
	Ch.640.0 to Ch.800.0	Rmt	1	160			160.00
	Ch.805.0 to Ch.860.0	Rmt	1	55			55.00
	Ch.860.0 to Ch.920.0	Rmt	1	60			60.00
	Ch.925.0 to ch.960.0	Rmt	1	35			35.00
	Ch.960.0 to Ch.1060.0	Rmt	1	100			100.00
	Ch.1060 to Ch.1110.0	Rmt	1	50			50.00
	LHS-Compound Side Paver						
	Ch.10.00 to Ch.60.00	Rmt	1	50			50.00
	Ch.60.00 to Ch.130.0	Rmt	1	70			70.00
	Ch.130.0 to Ch.200.0	Rmt	1	70			70.00
	Ch.235.0 to Ch.270.0	Rmt	1	35			35.00
	Ch.490.0 to Ch.540.0	Rmt	1	50			50.00
	Ch.650.0 to Ch.800.0	Rmt	1	150			150.00
	Ch.925.00 to Ch.950.0	Rmt	1	25			25.00
	Ch.960.0 to Ch.1050.0	Rmt	1	90			90.00
	RHS						
	Ch.0.0 to Ch.320.0	Rmt	1	320			320.00
	Ch.330.0 to Ch.510.0	Rmt	1	180			180.00
	Ch.510.0 to Ch.538.0	Rmt	1	28			28.00
	Ch.540.0 to Ch.578.0	Rmt	1	38			38.00
	Ch.580.0 to Ch.660.0	Rmt	1	80			80.00
	Ch.680.0 to Ch.750.0	Rmt	1	70			70.00
	Ch.750.0 to Ch.1020.0	Rmt	1	270			270.00
	Ch.1025.0 to Ch.1060.0	Rmt	1	35			35.00
	Ch.1070.0 to Ch.1110.0	Rmt	1	40			40.00
	RHS-Compound Side Paver						
	Ch.0.0 to Ch.210.0	Rmt	1	210			210.00
	Ch.230.0 to Ch.290.0	Rmt	1	60			60.00
	Ch.325.0 to Ch.390.0	Rmt	1	65			65.00
	Ch.470.0 to Ch.510.0	Rmt	1	40			40.00
	Ch.515.0 to Ch.535.0	Rmt	1	20			20.00
	CH.540.0 to Ch.575.0	Rmt	1	35			35.00
	Ch.830.0 to Ch.970.0	Rmt	1	140			140.00
	Balmatta Road						
	Foundation						
	RHS-D12	Rmt	76	1			76.00
	RHS-D12A	Rmt	20	1			20.00
	LHS-D11	Rmt	96	1			96.00
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.10.0 to Ch.180.0	Rmt	1	170			170.00
	Ch.255.0 to Ch.345.0	Rmt	1	90			90.00
	Ch.350.0 to Ch.440.0	Rmt	1	90			90.00
	Ch.590.0 to Ch.680.0	Rmt	1	90			90.00
	Ch.680.0 to Ch.845.0	Rmt	1	165			165.00
	Ch.840.0 to Ch.880.0	Rmt	1	40			40.00
	Ch.880.0 to Ch.900.0	Rmt	1	20			20.00
	Ch.900.0 to Ch.965.0	Rmt	1	65			65.00
	Ch.965.0 to Ch.1110.0	Rmt	1	145			145.00
	Ch.1110.0 to Ch.1120.0	Rmt	1	10			10.00
	Compound Wallside Paver Block						
	Ch.70.0 to Ch.180.0	Rmt	1	110			110.00
	Ch.255.0 to Ch.340.0	Rmt	1	85			85.00
	Ch.355.0 to Ch.410.0	Rmt	1	55			55.00
	Ch.590.0 to Ch.680.0	Rmt	1	90			90.00
	Ch.680.0 to Ch.730.0	Rmt	1	50			50.00
	Ch.820.0 to Ch.840.0	Rmt	1	20			20.00
	Ch.840.0 to Ch.880.0	Rmt	1	40			40.00
	Ch.880.0 to Ch.900.0	Rmt	1	20			20.00
	Ch.900.0 to Ch.935.0	Rmt	1	35			35.00
	Ch.900.0 to Ch.930.0	Rmt	1	30			30.00
	Ch.970.0 to Ch.1040.0	Rmt	1	70			70.00
	Ch.1060 to Ch.1110.0	Rmt	1	50			50.00
	RHS						
	Ch.10.0 to Ch.140.0	Rmt	1	130			130.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.150.0 to Ch.510.0	Rmt	1	360			360.00
	Ch.515.0 to Ch.630.0	Rmt	1	115			115.00
	Ch.630.0 to Ch.1090.0	Rmt	1	460			460.00
	Compound Wallside Paver Block						
	Ch.160.0 to Ch.270.0	Rmt	1	110			110.00
	Ch.270.0 to Ch.475.0	Rmt	1	205			205.00
	Ch.480.0 to Ch.505.0	Rmt	1	25			25.00
	Ch.515.0 to Ch.525.0	Rmt	1	10			10.00
	Ch.590.0 to Ch.630.0	Rmt	1	40			40.00
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.118.00	Rmt	1	108			108.00
	Ch.200.0 to Ch.440.0	Rmt	1	240			240.00
	Ch.450.0 to Ch.478.0	Rmt	1	28			28.00
	RHS						
	Ch.10.0 to Ch.165.0	Rmt	1	155			155.00
	Ch.300.0 to Ch.470.0	Rmt	1	170			170.00
							7838.00
			Nos.	Rm			
	Nos. Of Pipes		784	0.6			470.40
	Total length of pipe=	**Rmt**		**Total Qty.**			**470.40**
37	KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2018-19, Sl.No.12.89)						
	SWD						
	Same qty as pipe	Nos.	784.00				784.00
		Nos.		**Total Qty.**			**784.00**
38	KSRRB M2200- Providing Weep Holes KSRRB M2200-8. Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing foce. Complete as per drawing and Technical Specifications complete as per specifications MORTH Specification No.2706 & 2200 (PWD SR 2018-19, Sl.No.28.10)						
	Total Length of SWD	**Rm**	1	**6780.90**			6780.90
	Weep Holes at 1m c/c	**Nos/Rm**					**6781.00**
39	KSRRB M800-29.3.Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services. (PWD SR 2018-19,Sl.No.24.36)						
	7b-Hampankatta to Milagres Cross Road-At Hampankatta Side (Existing BT)	Rmt	3	19			57
	7b-Hampankatta to Milagres Cross Road-At Milagres church Side (Existing CC)	Rmt	2	19			38
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Rmt	7	10			70
	9-Sturrock Road	Rmt	11	19			
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rmt	12	20			240
	Balmatta Road	Rmt	6	29			174
	13b-KRR Road-PVS Circle to Hampankatta	Rmt	12	20			240
	12-Bunts Hostel Road	Rmt	5	20			100
		Rmt		**Total Qty.**			**919.00**
40	Providing and laying Dia 200mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)		**Nos.**	**RHS**	**Nos.**	**LHS**	
	7b-Hampankatta to Milagres Cross Road	Rmt	4	220	2	220	1320
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Rmt	4	330	4	330	2640
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rmt	4	1110	10	1110	15540
	Balmatta Road	Rmt	2	525	2	593	2236
	13b-KRR Road-PVS Circle to Hampankatta	Rmt	1	1120	4	1120	5600
	12-Bunts Hostel Road	Rmt	2	480	1	480	1440
	Deduction of Chambers length		No. Of Pipes	No. Of Chambers	No. Of Pipes	No. Of Chambers	

Sr. No.	Description	Unit	No's	L	B	H	Qty.
			A	B	C	D	E=(A*B+C*D) *2m chamber length
	7b-Hampankatta to Milagres Cross Road	Rmt	4	8	2	8	-96
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Rmt	4	11	4	11	-176
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rmt	4	37	10	37	-1036
	Balmatta Road	Rmt	2	18	2	20	-152
	13b-KRR Road-PVS Circle to Hampankatta	Rmt	1	38	4	38	-380
	12-Bunts Hostel Road	Rmt	2	16	1	16	-96
		Rmt		**Total Qty.**			**26840.00**
41	Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life		**Nos.**	**RHS**	**Nos.**	**LHS**	
	7b-Hampankatta to Milagres Cross Road	Rmt	2	220	2	220	880
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Rmt	2	330	2	330	1320
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rmt	2	1110	4	1110	6660
	13b-KRR Road-PVS Circle to Hampankatta	Rmt	2	1120	2	1120	4480
	12-Bunts Hostel Road	Rmt	2	480	1	480	1440
	Balmatta Road	Rmt	0	29	0	0	0
	Deduction of Chambers length		No. Of Pipes	No. Of Chambers	No. Of Pipes	No. Of Chambers	
			A	B	C	D	E=(A*B+C*D) *2m chamber length
	7b-Hampankatta to Milagres Cross Road	Rmt	2	8	2	8	-64
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Rmt	2	11	2	11	-88
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rmt	2	37	4	37	-444
	13b-KRR Road-PVS Circle to Hampankatta	Rmt	2	38	2	38	-304
	12-Bunts Hostel Road	Rmt	2	16	1	16	-96
	Balmatta Road	Rmt	0	18	0	20	0
		Rmt		**Total Qty.**			**13784.00**
42	Providing and Fixing Spacers for Power Ducts of size 200 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)			**RHS**	**LHS**		
	7b-Hampankatta to Milagres Cross Road	Rmt	1	220	220		440
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Rmt	1	330	330		660
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rmt	1	1110	1110		2220
	13b-KRR Road-PVS Circle to Hampankatta	Rmt	1	1120	1120		2240
	Balmatta Road	Rmt	1	525	593		1118
	12-Bunts Hostel Road	Rmt	1	480	480		960
							7638.00
	No. of Spacer=Total Length of Pipe / 1.5m	**Nos.**		**Total Qty.**			**5092.00**
43	Providing and Fixing Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)			**RHS**	**LHS**		
	7b-Hampankatta to Milagres Cross Road	Rmt	1	220	220		440
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Rmt	1	330	330		660
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rmt	1	1110	1110		2220
	13b-KRR Road-PVS Circle to Hampankatta	Rmt	1	1120	1120		2240
	Balmatta Road	Rmt	1	0	0		0
	12-Bunts Hostel Road	Rmt	1	480	480		960
							6520.00
	No. of Spacer=Total Length of Pipe / 1.5m	**Nos.**		**Total Qty.**			**4347.00**
44	Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)			**RHS**	**LHS**		
	7b-Hampankatta to Milagres Cross Road	Rmt	1	220	220		440
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Rmt	1	330	330		660
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rmt	1	1110	1110		2220
	Balmatta Road	Rmt	1	525	593		1118
	13b-KRR Road-PVS Circle to Hampankatta	Rmt	1	1120	1120		2240
	12-Bunts Hostel Road	Rmt	1	480	480		960
	Deduction of Chambers length		No. Of Pipes	No. Of Chambers	No. Of Pipes	No. Of Chambers	
			A	B	C	D	E=(A*B+C*D) *0.6m chamber length
	7b-Hampankatta to Milagres Cross Road	Rmt	1	8	1	220	-136.8
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Rmt	1	11	1	330	-204.6
	13a-KRR Road-PVS Circle to Arya Samaj Road	Rmt	1	37	1	1110	-688.2
	Balmatta Road	Rmt	1	18	1	593	-366.6
	13b-KRR Road-PVS Circle to Hampankatta	Rmt	1	38	1	1120	-694.8

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	12-Bunts Hostel Road	Rmt	1	16	1	480	-297.6
		Rmt		**Total Qty.**			**5249.40**
45	Supplying and Application charges required for stamping the freshly laid new concrete (Concrete rate is not included in this item) including finishing and colouring the top surface accurately to the required level,shape and size using approved colour shade and staping it using approved stamp pattern and antiquitting it on top with approved colour.Sealing entire area with concrete sealer.						
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Sqm	1	200.00	2.54		508.00
	RHS						
	Ch.20.00 to Ch.50.0	Sqm	1	30.00	5.37		161.00
	Ch.50.0 to Ch.90.0	Sqm	1	40.00	2.80		112.00
	Ch.110.0 to Ch.220.0	Sqm	1	110.00	2.56		282.00
	7e-Milagres Nandigidda Road						
	LHS						
	Ch.25.00 to Ch.45.00	Sqm	1	20.00	4.35		86.96
	Ch.155.00 to Ch.330.00	Sqm	1	175.00	3.83		669.85
	RHS						
	Ch.170.00 to Ch.330.00	Sqm	1	160.00	2.68		428.50
	13a-PVS Circle to Arya Samaj Junction						
	LHS-Paver on Footpath						
	Ch.0.0 to Ch.60.0	Sqm	1	60.00	2.37		142.00
	Ch.62.00 to Ch.128.0	Sqm	1	66.00	2.08		137.00
	Ch.132.0 to Ch.280.0	Sqm	1	148.00	2.26		335.00
	Ch.285.0 to Ch.390.0	Sqm	1	105.00	2.21		232.00
	Ch.395.0 to Ch.455.0	Sqm	1	60.00	1.42		85.00
	Ch.460.0 to ch.545.0	Sqm	1	85.00	2.39		203.00
	Ch.580.0 to Ch.640.0	Sqm	1	60	3.20		192.00
	Ch.640.0 to Ch.800.0	Sqm	1	160.00	2.06		330.00
	Ch.805.0 to Ch.860.0	Sqm	1	55	2.36		130.00
	Ch.860.0 to Ch.920.0	Sqm	1	60.00	2.68		161.00
	Ch.925.0 to ch.960.0	Sqm	1	35	2.86		100.00
	Ch.960.0 to Ch.1060.0	Sqm	1	100.00	2.61		261.00
	Ch.1060 to Ch.1110.0	Sqm	1	50.00	4.02		201.00
	LHS-Compound Side Paver						
	Ch.10.00 to Ch.60.00	Sqm	1	50	2.46		123.00
	Ch.60.00 to Ch.130.0	Sqm	1	70	1.80		126.00
	Ch.130.0 to Ch.200.0	Sqm	1	70.00	2.66		186.00
	Ch.235.0 to Ch.270.0	Sqm	1	35.00	1.03		36.00
	Ch.490.0 to Ch.540.0	Sqm	1	50.00	0.96		48.00
	Ch.650.0 to Ch.800.0	Sqm	1	150.00	2.57		386.00
	Ch.925.00 to Ch.950.0	Sqm	1	25.00	1.88		47.00
	Ch.960.0 to Ch.1050.0	Sqm	1	90.00	6.23		561.00
	RHS						
	Ch.0.0 to Ch.320.0	Sqm	1	320.00	2.28		728.00
	Ch.330.0 to Ch.510.0	Sqm	1	180.00	2.06		370.00
	Ch.510.0 to Ch.538.0	Sqm	1	28.00	2.07		58.00
	Ch.540.0 to Ch.578.0	Sqm	1	38.00	1.74		66.00
	Ch.580.0 to Ch.660.0	Sqm	1	80.00	3.21		257.00
	Ch.680.0 to Ch.750.0	Sqm	1	70	3.53		247.00
	Ch.750.0 to Ch.1020.0	Sqm	1	270	1.60		433.00
	Ch.1025.0 to Ch.1060.0	Sqm	1	35	1.09		38.00
	Ch.1070.0 to Ch.1110.0	Sqm	1	40	1.85		74.00
	RHS-Compound Side Paver						
	Ch.0.0 to Ch.210.0	Sqm	1	210	1.92		404.00
	Ch.230.0 to Ch.290.0	Sqm	1	60	0.63		38.00
	Ch.325.0 to Ch.390.0	Sqm	1	65	1.58		103.00
	Ch.470.0 to Ch.510.0	Sqm	1	40	4.25		170.00
	Ch.515.0 to Ch.535.0	Sqm	1	20	2.40		48.00
	CH.540.0 to Ch.575.0	Sqm	1	35	3.23		113.00
	Ch.830.0 to Ch.970.0	Sqm	1	140	7.20		1008.00
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.10.0 to Ch.180.0	Sqm	1	170	2.10		357.00
	Ch.255.0 to Ch.345.0	Sqm	1	90	2.62		236.00
	Ch.350.0 to Ch.440.0	Sqm	1	90	2.30		207.00
	Ch.590.0 to Ch.680.0	Sqm	1	90	2.24		202.00
	Ch.680.0 to Ch.845.0	Sqm	1	165	2.13		351.00
	Ch.840.0 to Ch.880.0	Sqm	1	40	4.58		183.00
	Ch.880.0 to Ch.900.0	Sqm	1	20	8.25		165.00
	Ch.900.0 to Ch.965.0	Sqm	1	65	2.42		157.00
	Ch.965.0 to Ch.1110.0	Sqm	1	145	2.18		316.00
	Ch.1110.0 to Ch.1120.0	Sqm	1	10	8.13		81.34
	Compound Wallside Paver Block						
	Ch.70.0 to Ch.180.0	Sqm	1	110	2.96		326.00
	Ch.255.0 to Ch.340.0	Sqm	1	85	1.89		161.00
	Ch.355.0 to Ch.410.0	Sqm	1	55	2.82		155.00
	Ch.590.0 to Ch.680.0	Sqm	1	90	4.15		373.09
	Ch.680.0 to Ch.730.0	Sqm	1	50	1.32		66.00
	Ch.820.0 to Ch.840.0	Sqm	1	20	3.75		75.00
	Ch.840.0 to Ch.880.0	Sqm	1	40	3.83		153.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.880.0 to Ch.900.0	Sqm	1	20	8.25		165.00
	Ch.900.0 to Ch.935.0	Sqm	1	35	2.91		102.00
	Ch.900.0 to Ch.930.0	Sqm	1	30	3.40		102.00
	Ch.970.0 to Ch.1040.0	Sqm	1	70	7.20		504.00
	Ch.1060 to Ch.1110.0	Sqm	1	50	2.90		145.00
	RHS						
	Ch.10.0 to Ch.140.0	Sqm	1	130	1.40		181.73
	Ch.150.0 to Ch.510.0	Sqm	1	360	2.11		758.00
	Ch.515.0 to Ch.630.0	Sqm	1	115	2.54		292.00
	Ch.630.0 to Ch.1090.0	Sqm	1	460	1.83		842.00
	Compound Wallside Paver Block						
	Ch.160.0 to Ch.270.0	Sqm	1	110	0.72		79.00
	Ch.270.0 to Ch.475.0	Sqm	1	205	2.32		476.00
	Ch.480.0 to Ch.505.0	Sqm	1	25	0.84		21.00
	Ch.515.0 to Ch.525.0	Sqm	1	10	0.80		8.00
	Ch.590.0 to Ch.630.0	Sqm	1	40	3.20		128.00
	12-Bunts Hostel Road	Sqm					0.00
	LHS	Sqm					0.00
	Ch.10.0 to Ch.118.00	Sqm	1	108	3.78		408.24
	Ch.200.0 to Ch.440.0	Sqm	1	240	2.4		587.00
	Ch.450.0 to Ch.478.0	Sqm	1	28	3.54		99.00
	RHS	Sqm					0.00
	Ch.10.0 to Ch.165.0	Sqm	1	155	3.41		528.55
	Ch.300.0 to Ch.470.0	Sqm	1	170	3.78		642.60
	Deduct Kerb Stone Area	Sqm	-1	7875.04	0.115		-905.63
	Recess Cover	Sqm	-640.00	0.6	0.45		-172.80
	Balmatta Road-LHS						0.00
	Ch.0.0 to Ch.90.0	Sqm	1	79	2.2		173.80
	Ch. 90.0 to Ch.190.00	Sqm	1	100	4.44		444.00
	Landscape Deduction	Sqm	-1	81.72	1.01		-82.54
	Compound Wall Side-Ch.100 to Ch.185.0	Sqm	1	85	2.4		202.81
	Ch.190 to Ch.340	Sqm	1	150	2.6		394.00
	Ch. 360 to Ch.470	Sqm	1	151	2.2		332.20
	Ch.470.0 to Ch.530.0	Sqm	1	80	2.2		176.00
							0.00
	Balmatta Road-RHS						0.00
	Ch.0.0 to Ch.130	Sqm	1	130	2.65		344.50
	Ch.135.0 to Ch.205.0	Sqm	1	70	2.34		163.80
	Ch.200 to Ch.360.0	Sqm	1	160	3.32		531.20
	Ch.360.0 to Ch.530.0	Sqm	1	170	3.26		554.20
	Tactile Tile area	Sqm	-1	0.00			0.00
		Sqm		**Total Qty.**			**22214.40**
46.00	Cutting of Control joints panels(in Footpath) at suitable required locations using using tools and tackles.						
	Road-7b-Hampankatta to Milagres 1st Cross Lane						
	LHS						
	Ch.20.00 to Ch.220.0	Rmt	1	58	2.54		147.32
	RHS						0.00
	Ch.20.00 to Ch.50.0	Rmt	1	9	5.37		48.30
	Ch.50.0 to Ch.90.0	Rmt	1	12	2.80		33.60
	Ch.110.0 to Ch.220.0	Rmt	1	32	2.56		82.04
	7e-Milagres Nandigidda Road						
	LHS						
	Ch.25.00 to Ch.45.00	Rmt	1	6	4.35		26.09
	Ch.155.00 to Ch.330.00	Rmt	1	50	3.83		191.39
	RHS						
	Ch.170.00 to Ch.330.00	Rmt	1	46	2.68		123.19
	13a-PVS Circle to Arya Samaj Junction						
	LHS-Paver on Footpath						
	Ch.0.0 to Ch.60.0	Rmt	1	18	2.37		42.60
	Ch.62.00 to Ch.128.0	Rmt	1	19	2.08		39.44
	Ch.132.0 to Ch.280.0	Rmt	1	43	2.26		97.33
	Ch.285.0 to Ch.390.0	Rmt	1	30	2.21		66.29
	Ch.395.0 to Ch.455.0	Rmt	1	18	1.42		25.50
	Ch.460.0 to ch.545.0	Rmt	1	25	2.39		59.71
	Ch.580.0 to Ch.640.0	Rmt	1	18	3.20		57.60
	Ch.640.0 to Ch.800.0	Rmt	1	46	2.06		94.88
	Ch.805.0 to Ch.860.0	Rmt	1	16	2.36		37.82
	Ch.860.0 to Ch.920.0	Rmt	1	18	2.68		48.30
	Ch.925.0 to ch.960.0	Rmt	1	10	2.86		28.57
	Ch.960.0 to Ch.1060.0	Rmt	1	29	2.61		75.69
	Ch.1060 to Ch.1110.0	Rmt	1	15	4.02		60.30
	LHS-Compound Side Paver						
	Ch.10.00 to Ch.60.00	Rmt	1	15	2.46		36.90
	Ch.60.00 to Ch.130.0	Rmt	1	20	1.80		36.00
	Ch.130.0 to Ch.200.0	Rmt	1	20	2.66		53.14
	Ch.235.0 to Ch.270.0	Rmt	1	10	1.03		10.29
	Ch.490.0 to Ch.540.0	Rmt	1	15	0.96		14.40
	Ch.650.0 to Ch.800.0	Rmt	1	43	2.57		110.65
	Ch.925.00 to Ch.950.0	Rmt	1	8	1.88		15.04
	Ch.960.0 to Ch.1050.0	Rmt	1	26	6.23		162.07
	RHS						
	Ch.0.0 to Ch.320.0	Rmt	1	92	2.28		209.30
	Ch.330.0 to Ch.510.0	Rmt	1	52	2.06		106.89
	Ch.510.0 to Ch.538.0	Rmt	1	8	2.07		16.57
	Ch.540.0 to Ch.578.0	Rmt	1	11	1.74		19.11

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.580.0 to Ch.660.0	Rmt	1	23	3.21		73.89
	Ch.680.0 to Ch.750.0	Rmt	1	20	3.53		70.57
	Ch.750.0 to Ch.1020.0	Rmt	1	78	1.60		125.09
	Ch.1025.0 to Ch.1060.0	Rmt	1	10	1.09		10.86
	Ch.1070.0 to Ch.1110.0	Rmt	1	12	1.85		22.20
	RHS-Compound Side Paver						
	Ch.0.0 to Ch.210.0	Rmt	1	60	1.92		115.43
	Ch.230.0 to Ch.290.0	Rmt	1	18	0.63		11.40
	Ch.325.0 to Ch.390.0	Rmt	1	19	1.58		30.11
	Ch.470.0 to Ch.510.0	Rmt	1	12	4.25		51.00
	Ch.515.0 to Ch.535.0	Rmt	1	6	2.40		14.40
	CH.540.0 to Ch.575.0	Rmt	1	10	3.23		32.29
	Ch.830.0 to Ch.970.0	Rmt	1	40	7.20		288.00
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.10.0 to Ch.180.0	Rmt	1	49	2.10		102.90
	Ch.255.0 to Ch.345.0	Rmt	1	26	2.62		68.18
	Ch.350.0 to Ch.440.0	Rmt	1	26	2.30		59.80
	Ch.590.0 to Ch.680.0	Rmt	1	26	2.24		58.36
	Ch.680.0 to Ch.845.0	Rmt	1	48	2.13		102.11
	Ch.840.0 to Ch.880.0	Rmt	1	12	4.58		54.90
	Ch.880.0 to Ch.900.0	Rmt	1	6	8.25		49.50
	Ch.900.0 to Ch.965.0	Rmt	1	19	2.42		45.89
	Ch.965.0 to Ch.1110.0	Rmt	1	42	2.18		91.53
	Ch.1110.0 to Ch.1120.0	Rmt	1	3	8.13		24.40
	Compound Wallside Paver Block						
	Ch.70.0 to Ch.180.0	Rmt	1	32	2.96		94.84
	Ch.255.0 to Ch.340.0	Rmt	1	25	1.89		47.35
	Ch.355.0 to Ch.410.0	Rmt	1	16	2.82		45.09
	Ch.590.0 to Ch.680.0	Rmt	1	26	4.15		107.78
	Ch.680.0 to Ch.730.0	Rmt	1	15	1.32		19.80
	Ch.820.0 to Ch.840.0	Rmt	1	6	3.75		22.50
	Ch.840.0 to Ch.880.0	Rmt	1	12	3.83		45.90
	Ch.880.0 to Ch.900.0	Rmt	1	6	8.25		49.50
	Ch.900.0 to Ch.935.0	Rmt	1	10	2.91		29.14
	Ch.900.0 to Ch.930.0	Rmt	1	9	3.40		30.60
	Ch.970.0 to Ch.1040.0	Rmt	1	20	7.20		144.00
	Ch.1060 to Ch.1110.0	Rmt	1	15	2.90		43.50
	RHS						
	Ch.10.0 to Ch.140.0	Rmt	1	38	1.40		53.12
	Ch.150.0 to Ch.510.0	Rmt	1	103	2.11		216.87
	Ch.515.0 to Ch.630.0	Rmt	1	33	2.54		83.79
	Ch.630.0 to Ch.1090.0	Rmt	1	132	1.83		241.62
	Compound Wallside Paver Block						
	Ch.160.0 to Ch.270.0	Rmt	1	32	0.72		22.98
	Ch.270.0 to Ch.475.0	Rmt	1	59	2.32		137.00
	Ch.480.0 to Ch.505.0	Rmt	1	8	0.84		6.72
	Ch.515.0 to Ch.525.0	Rmt	1	3	0.80		2.40
	Ch.590.0 to Ch.630.0	Rmt	1	12	3.20		38.40
	Balmatta Road-LHS	Rmt					
	Ch.0.0 to Ch.90.0	Rmt	1	22.57	2.20		49.65
	Ch. 90.0 to Ch.190.00	Rmt	1	28.57	4.44		126.85
	Landscape Deduction	Rmt	-1	23.35	1.01		-23.58
	Compound Wall Side-Ch.100 to Ch.185.0	Rmt	1	24.29	2.39		57.96
	Ch.190 to Ch.340	Rmt	1	42.86	2.63		112.58
	Ch. 360 to Ch.470	Rmt	1	43.14	2.20		94.91
	Ch.470.0 to Ch.530.0	Rmt	1	22.86	2.20		50.29
		Rmt					
	Balmatta Road-RHS	Rmt					
	Ch.0.0 to Ch.130	Rmt	1	37.14	2.65		98.42
	Ch.135.0 to Ch.205.0	Rmt	1	20	2.34		46.80
	Ch.200 to Ch.360.0	Rmt	1	45.71	3.32		151.76
	Ch.360.0 to Ch.530.0	Rmt	1	48.57	3.26		158.34
	12-Bunts Hostel Road						
	LHS						
	Ch.10.0 to Ch.118.00	Rmt	1	31	3.78		117.18
	Ch.200.0 to Ch.440.0	Rmt	1	69	2.45		168.76
	Ch.450.0 to Ch.478.0	Rmt	1	8	3.54		28.29
	RHS						
	Ch.10.0 to Ch.165.0	Rmt	1	45	3.41		153.45
	Ch.300.0 to Ch.470.0	Rmt	1	49	3.78		185.22
						Total	**7883.42**
47	Providing and laying heavy duty cobble stones 75mm thick, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (KPWD SR 2018-19,Sl No : 14.7)						
	Flush Footpath with Carriageway						
	7e-Milagres Nandigudda Road						
	RHS						
	Ch.20.00 to Ch.70.00	Sqm	1	50	0.57		28.45
	Ch.70.00 to Ch.142.00	Sqm	1	72	0.79		57.03

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.147.00 to Ch.172.00	Sqm	1	25	0.75		18.70
	LHS						0.00
	Ch.40.00 to Ch.150.00	Sqm	1	110	0.74		81.02
	Bunts Hostel Road	Sqm					0.00
	LHS	Sqm					0.00
	Ch.120.0 to Ch.200.0	Sqm	1	80.00	1.075		86.00
	RHS	Sqm					0.00
	Ch.168.0 to Ch. 290.0	Sqm	1	122	2.49		303.78
	13b-Hampankatta to PVS Circle						
	LHS						
	Ch.185.0 to Ch.250.0	Sqm	1	65	1.88		122.20
	Ch.450.0 to Ch.590.0	Sqm	1	140	1.79		250.60
	Table Top paver Block						
	7b-Hampankatta to Milagres Cross Road	Sqm	2	13.4	3		80.40
	9-Sturrock Road	Sqm	0	0	0		0.00
	13a-KRR Road-PVS Circle to Arya Samaj Road	Sqm	6	14.8	3		266.40
	Balmatta road	Sqm	2	14.5	3		87.00
	Balmatta road	Sqm	1	12.7	3		38.10
	Balmatta road	Sqm	1	9.7	3		29.10
	13b-KRR Road-PVS Circle to Hampankatta	Sqm	5	14.8	3		222.00
	12-Bunts Hostel Road	Sqm	2	14.5	3		87.00
		Sqm		**Total Qty.**			**1757.78**
48	KSRRB M500-17. Providing and laying **dense graded bituminous macadam** using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications.. MORTH Specification No. 507 -using 100/120 TPH capacity H.M.P. with sensor paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen(KPWD 16-17,S.I.No.21.17.1,Page No.163)						
	Table Top paver Block						
	7b-Hampankatta to Milagres Cross Road	Cum	2	13.4	5	0.15	20.10
	13a-KRR Road-PVS Circle to Arya Samaj Road	Cum	6	14.8	5	0.15	66.60
	Balmatta road	Cum	2	14.5	5	0.15	21.75
	Balmatta road	Cum	1	12.7	5	0.15	9.53
	Balmatta road	Cum	1	9.7	5	0.15	7.28
	13b-KRR Road-PVS Circle to Hampankatta	Cum	5	14.8	5	0.15	55.50
	12-Bunts Hostel Road	Cum	2	14.5	5	0.15	21.75
		Cum		**Total Qty.**			**202.50**
49	KSRRB M500-19. Providing and laying bituminous concrete 40 mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects complete as per specifications. MORTH Specification No. 509 - using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 45 mm) with 6 % VG-40 Bitumen(KPWD 18-19,Sl No : 24.22.2)						
	Table Top paver Block						
	7b-Hampankatta to Milagres Cross Road	Cum	2	13.4	5	0.04	5.36
	13a-KRR Road-PVS Circle to Arya Samaj Road	Cum	6	14.8	5	0.04	17.76
	Balmatta road	Cum	2	14.5	5	0.04	5.80
	Balmatta road	Cum	1	12.7	5	0.04	2.54
	Balmatta road	Cum	1	9.7	5	0.04	1.94
	13b-KRR Road-PVS Circle to Hampankatta	Cum	5	14.8	5	0.04	14.80
	12-Bunts Hostel Road	Cum	2	14.5	5	0.04	5.80
		Cum		**Total Qty.**			**54.00**
	Sinages						
50	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.						
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Equilateral Triangle-TYPE XI (KPWD 18-19,Sl No : 24.2.1)						
	7b-Hampankatta to Milagres Cross Road	Nos.	6				6.00

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Nos.	6				6.00
	13a-KRR Road-PVS Circle to Arya Samaj Road	Nos.	11				11.00
	Balmatta Road	Nos.	25				25.00
	13b-KRR Road-PVS Circle to Hampankatta	Nos.	20				20.00
	12-Bunts Hostel Road	Nos.	11				11.00
		Nos.		**Total Qty.**			**79.00**
51	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.						
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Octagon Stop Board-TYPE XI (KPWD 18-19,Sl No : 24.2.6)						
	7b-Hampankatta to Milagres Cross Road	Nos.	1				1.00
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Nos.	1				1.00
	13a-KRR Road-PVS Circle to Arya Samaj Road	Nos.	5				5.00
	Balmatta Road	Nos.	1				1.00
	13b-KRR Road-PVS Circle to Hampankatta	Nos.	5				5.00
	12-Bunts Hostel Road	Nos.	2				2.00
		Nos.		**Total Qty.**			**15.00**
52	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.						
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 600MM Circle-TYPE XI (KPWD 18-19,Sl No : 24.2.3)						
	7b-Hampankatta to Milagres Cross Road	Nos.	2				2.00
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Nos.	4				4.00
	Balmatta Road	Nos.	6				6.00
	13a-KRR Road-PVS Circle to Arya Samaj Road	Nos.	6				6.00
	13b-KRR Road-PVS Circle to Hampankatta	Nos.	7				7.00
	12-Bunts Hostel Road	Nos.	6				6.00
		Nos.		**Total Qty.**			**43.00**
54	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, supply and installation of retro- reflectorised cautionary, mandatory and informatory signboards made out of cube corner micro prismatic grade sheeting confirming to 600x800 MM type XI standards of IRC :67:2012 specifications & fixed over 4 mm thick aluminium composite panel sheet having minimun 0.30 thick aluminium skin on both sides & fixed over a support frame of 25x25x3 mm MS angle and mounted on 75mm dia OR 75x75x6mm Mild steel angle of total height 2.70m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60 cm below ground level. The sign post should be painted with one coat of red oxide paint and white colour with brands of 30 cm height alternatively firmly fixed to the ground by means of foundation with (KPWD18-19,24.2.4)						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	M20 grade cement concrete of 45 cm x45 cm x 60 cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by engineer in charge. 10 years warranty for retro reflective sheeting from the original sheeting manufacturer as per clause 6.9 in IRC 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier.						
	7b-Hampankatta to Milagres Cross Road	Nos.	2				2.00
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Nos.	2				2.00
	13a-KRR Road-PVS Circle to Arya Samaj Road	Nos.	5				5.00
	13b-KRR Road-PVS Circle to Hampankatta	Nos.	5				5.00
	12-Bunts Hostel Road	Nos.	2				2.00
		Nos.		**Total Qty.**			**19.00**
53.00	KSRRB M800-3. Direction and Place Identification Signs upto 0.9 sqm Size Board:-Manufacturing, supply and installation of retro- reflectorised cautionary, mandatory and informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC :67:2012 specifications & fixed over 4 mm thick aluminium composite panel sheet having minimun 0.30 thick aluminium skin on both sides & fixed over a support frame of 25x25x3 mm MS angle and mounted on 75mm dia OR 75x75x6mm Mild steel angle of total height 2.70m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60 cm below ground level. The sign post should be painted with one coat of red oxide paint and white colour with brands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45 cm x45 cm x 60 cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by engineer in charge. 10 years warranty for retro reflective sheeting from the original sheeting manufacturer as per clause 6.9 in IRC 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. (KPWD 18-19,Sl No : 24.3)			**Area**			
	7b-Hampankatta to Milagres Cross Road	Sqm	5	**0.9**			4.50
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Sqm	4	**0.9**			3.60
	9-Sturrock Road	Sqm	6	**0.9**			5.40
	13a-KRR Road-PVS Circle to Arya Samaj Road	Sqm	6	**0.9**			5.40
	Balmatta Road	Sqm	5	**0.9**			4.50
	13b-KRR Road-PVS Circle to Hampankatta	Sqm	6	**0.9**			5.40
	12-Bunts Hostel Road	Sqm	4	**0.9**			3.60
		Sqm		**Total Qty.**			**32.40**
55	KSRRB M800 Road markers / Road stud KSRRB M800-35. Providing and fixing of road stud 100x 100 mm, diecast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded in a suitable bituminous grout or epoxy mortar, all as per BS: 873 part 4:1973 complete as per specifications (KPWD 18-19,Sl No : 24.41)						
	7b-Hampankatta to Milagres Cross Road	Nos	92				92.00
	7e-Attavar Road-Mother theresa Road to Nandiguda Road	Nos	74				74.00
	13a-KRR Road-PVS Circle to Arya Samaj Road	Nos	366				366.00
	Balmatta Road	Nos	399				399.00
	13b-KRR Road-PVS Circle to Hampankatta	Nos	388				388.00
	12-Bunts Hostel Road	Nos	150				150.00
		Nos.		**Total Qty.**			**1469.00**
56	Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (KPWD 18-19,Sl No : 24.15)						
	7b-Hampankatta to Milagres Cross Road						
	Ch.0 to Ch.220.0						
	Continuos Line-at Edge	Sqm	2	220	0.1		44.00
	Continuos Line-at Median	Sqm	2	90	0.1		18.00
	Dash Lines	Sqm	2	132	0.1		26.40
	Arrow	Sqm	20	0.76	Area/Rm		15.20
	Pedstrian Crossing	Sqm	3	12.4	1.4		52.08
	Table Top Crossing	Sqm	2	13.4	16.82		450.78
	7e-Attavar Road-Mother theresa Road to Nandiguda Road						
	Ch.0 to Ch.330.0						
	Continuos Line-at Edge	Sqm	2	330	0.1		66.00
	Arrow	Sqm	14	0.76	Area/Rm		10.64
	Pedstrian Crossing	Sqm	6	6.2	1.4		52.08
	Table Top Crossing	Sqm	0	13.4	16.82		0.00
	13a-KRR Road-PVS Circle to Arya Samaj Road						

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	Ch.0 to Ch.1110.0						
	Continuos Line-at Edge	Sqm	2	1110	0.1		222.00
	Dash Lines	Sqm	2	666	0.1		133.20
	Arrow	Sqm	80	0.76	Area/Rm		60.80
	Pedstrian Crossing	Sqm	8	14	1.4		156.80
	Table Top Crossing	Sqm	6	14.8	16.82		1493.62
	Balmatta Road						
	Ch.0.0 to Ch.530.0						
	Continuos Line	Sqm	4	530	0.1		212.00
	Dash Lines	Sqm	2	318	0.1		63.60
	Arrow	Sqm	48	0.76	Area		36.48
	Pedstrian Crossing	Sqm	9	12.9	1.4	Area/Rm	162.54
	Table Top Crossing	Sqm	2	12.9	16.82	Area/Rm	433.96
	13b-KRR Road-PVS Circle to Hampankatta						
	Ch.0 to Ch.1120.0						
	Continuos Line-at Edge	Sqm	2	1120	0.1		224.00
	Continuos Line-at Median	Sqm	2	933	0.1		186.60
	Dash Lines	Sqm	2	672	0.1		134.40
	Arrow	Sqm	120	0.76	Area/Rm		91.20
	Pedstrian Crossing	Sqm	9	12.5	1.4		157.50
	Table Top Crossing	Sqm	5	14.5	16.82		1219.45
	12-Bunts Hostel Road						
	Ch.0 to Ch.478.0						
	Continuos Line-at Edge	Sqm	2	478	0.1		95.60
	Continuos Line-at Median	Sqm	2	478	0.1		95.60
	Dash Lines	Sqm	2	286.8	0.1		57.36
	Arrow	Sqm	48	0.76	Area/Rm		36.48
	Pedstrian Crossing	Sqm	6	12.5	1.4		105.00
	Table Top Crossing	Sqm	2	14.5	16.82		487.78
		Sqm		**Total Qty.**			**6601.14**
57	Providing and Fixing of Bus shelter(on prepared foundation) made of SS 304 frame work with brush steel finish, Galvanised Aluminium powder coated roofing and electronic circuit to control its lighting.The seating shall be made of SS 304 tubular sections for seat and back rest.each unit size of 4500mm x 600mm with a minimum backrest support of 450mm.Bus shelter shall have the Side Display board to have 1100X400mm Electronic display.The electronic display board to be of LED Scrolling type with Oval, 4.3 x 5.1mm dia. Diffused. LED's having Amber colour.Dual bin system should be adopted one for recycle waste & other for dry waste.Each bin shall be with minimum capacity of 70Ltrs.Interactive Information Panel-display equipment with information area of 1400 x 1400 and touch screen LED display panel of area not less than 600-900mm with integrated 8mm toughened glass.Advertisement Area 2 nos of size 4500mm x 1650mm and 2100mm x 2000mm shall be integrated within the design of the Bus Shelter. This shall be backlit type with SS box framing sides and back complete.Provision for installing outdoor WiFi Router.The Foundation slab shall be made in min M25 concrete. The cast iron nuts, bolts shall be rust proof hot deep galvanized powder coated etc.The materials used shall be Nonflammable (NON SOR Item)						
	7b-Hampankatta to Milagres Cross Road	Nos.	1				1.00
	7e-Attavar Road	Nos.	0				0.00
	12-Bunts Hostel Road	Nos.	2				2.00
	13b-PVS Circle to Arya samaj Road	Nos.	6				6.00
	13a-Hampankatta to PVS Circle	Nos.	0				0.00
		Nos.		**Total Qty.**			**9.00**
58	Providing & installing of E- toilet with Super structure of the electronic toilet to have asthetic ambience with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of electronic toilet overall size in meters 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess controlled main door and side walls made of SS Grade 304,Toilet floor and closet are to be stainless steel of grade 304.E-Toilet shall have Built-in water tank with minimum 225 Lit capacity and Acess controll using coin validator for entering the unit based on automatic payment collection mechanism exit from the unit should be manual.Automatic lights inside the unit with gloves on opening the door.E-Toilet shall be Automatic flushing system which includes Automatic Pre flush cleaning before use,Automatic closet washing mechanism after use and Automatic platform cleaning mechanism programmed after specific numbers.In addition to these flush switch is to be provided for manual operation.Standard features should include heath faucet,exhaust fan and cloth hanger.	**Nos.**	3				**3.00**

Sr. No.	Description	Unit	No's	L	B	H	Qty.
	The E-Toilet shall have Alert to users-different indication on 'ready to use',busy are to be provided in the unit also with Voice guidence in the unit for users. Web enabled support-GPRS based Real time data to be provided from the unit through web for knowing the health status like number of users per day and coins collected.E-toilet shall have Modular and portable design enabling easy assembling and installation at site.Call ceneter and web portal facilities for registering complience and tracking usage,coin collection etc.Status display in LED,Printed instruction stickers are to be provided.For Advertisment purpose space for advertisement dispaly to be povided on the exterior of the unit for income generation and sustainability. Backup power facility like UPS is to be provided to supplement upto 30 Min Base of the unit to be placed on a suitable concrete structure with a ashthetic finish. (Non SOR Item)						
59	KSRB 6-2.3 : Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 5.0Newton per sqmm (table moulded) with cement mortar 1:6 for basement and superstructu/re including cost of materials, labour charges, scaffolding, curing complete as per specifications. Specification No. KBS 6.2. (KPWD 18-19,Sl.No.6.7)						
	7b-Hampankatta to Milagres Cross Road						
	Long Wall	Cum	4.00	3.00	0.23	0.65	1.79
	Short Wall	Cum	4.00	0.60	0.23	0.65	0.36
	7e-Attavar Road						
	Long Wall	Cum	4.00	3.00	0.23	0.65	1.79
	Short Wall	Cum	4.00	0.60	0.23	0.65	0.36
	12-Bunts Hostel Road						
	Long Wall	Cum	8.00	3.00	0.23	0.65	3.59
	Short Wall	Cum	8.00	0.60	0.23	0.65	0.72
	Balmatta Road						
	Long Wall	Cum	8.00	3.00	0.23	0.65	3.59
	Short Wall	Cum	8.00	0.60	0.23	0.65	0.72
	13b-PVS Circle to Arya samaj Road						
	Long Wall	Cum	16.00	3.00	0.23	0.65	7.18
	Short Wall	Cum	16.00	0.60	0.23	0.65	1.44
	13a-Hampankatta to PVS Circle						
	Long Wall	Cum	16.00	3.00	0.23	0.65	7.18
	Short Wall	Cum	16.00	0.60	0.23	0.65	1.44
		Cum		**Total Qty.**			**30.14**
60	KSRB15-3.8 : Providing 18mm thick cement plaster in single coat with cement mortar 1:4, to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.(KPWD 18-19,Sl No.15.16)						
	7b-Hampankatta to Milagres Cross Road						
	Long Wall	Sqm	4.00	3.00		0.45	5.40
	Short Wall	Sqm	4.00	0.60		0.45	1.08
	7e-Attavar Road						
	Long Wall	Sqm	4.00	3.00		0.45	5.40
	Short Wall	Sqm	4.00	0.60		0.45	1.08
	12-Bunts Hostel Road						
	Long Wall	Sqm	8.00	3.00		0.45	10.80
	Short Wall	Sqm	8.00	0.60		0.45	2.16
	Balmatta Road						
	Long Wall	Sqm	8.00	3.00		0.45	10.80
	Short Wall	Sqm	8.00	0.60		0.45	2.16
	13b-PVS Circle to Arya samaj Road						
	Long Wall	Sqm	16.00	3.00		0.45	21.60
	Short Wall	Sqm	16.00	0.60		0.45	4.32
	13a-Hampankatta to PVS Circle						
	Long Wall	Sqm	16.00	3.00		0.45	21.60
	Short Wall	Sqm	16.00	0.60		0.45	4.32
		Sqm		**Total Qty.**			**90.72**
61	Providing and fixing 450mm wide X 600mmX 20mm thk.RIVERWASHED BLACK GRANITE CLADDING on surface of seating as directed by architect (Non SOR Item)						
	7b-Hampankatta to Milagres Cross Road						
	Bench	Sqm	2.00	3.00		0.60	3.60
	7e-Attavar Road						
	Bench	Sqm	2.00	3.00		0.60	3.60
	12-Bunts Hostel Road						
	Bench	Sqm	4.00	3.00		0.60	7.20
	13b-PVS Circle to Arya samaj Road						
	Bench	Sqm	8.00	3.00		0.60	14.40
	Balmatta Road						
	Bench	Sqm	4.00	3.00		0.60	7.20
	13a-Hampankatta to PVS Circle						
	Bench	Sqm	8.00	3.00		0.60	14.40
		Sqm		**Total Qty.**			**50.40**

Sr. No.	Description	Unit	No's	L	B	H	Qty.
62	Supply and Fixing of Traffic signal Straight pole of 6 mtr, inner dia 100 mm from resistant to peeling with base plate size of (LXWXT) 200mm X200mmX6mm painted with redoxide and double coat with synthetic enamel paint of yellow colour assembly G.I., class B, as per technical specification	**Nos.**	2				**2.00**
63	Supply and fixing of Traffic signal Cantilever pole Class B having inner diameter of 100 mm or more with a height of 6m including extension arm assembly having outer diameter of 75mm with arm span of 4 mtr length and base plate of size 300mm X 300mm with thickness of 6 mm welded at the bottom of the pole base as per technical specification & drawings. (NON SOR Item)	**Nos.**	2				**2.00**
64	Supply and fixing of 300 mm dia – single source – LED retrofit - Red (blow) as per Specification (NON SOR Item)	**Nos.**	4				**4.00**
65	Supply and fixing of 300 mm dia – single source – LED retrofit - Amber (blow) as per Specification (NON SOR Item)	**Nos.**	4				**4.00**
66	Supply and fixing of 300 mm dia – single source – LED retrofit - Green (arrow/U- Turn) EN-12368 as per Specification (NON SOR Item)	**Nos.**	4				**4.00**
67	Supply and fixing of 300 mm dia – single source – LED retrofit - Red (ped. standing) EN-12368 as per Specification (NON SOR Item)	**Nos.**	4				**4.00**
68	Supply and fixing of 300 mm dia – single source – LED retrofit - Green (ped.walking) EN-12368 as per Specification (NON SOR Item)	**Nos.**	4				**4.00**
69	Supply and fixing of 300 mm dia - No Right Turn/No Left turn/No Straight/No 'U' Turn aspects by using UV stabilized ink on face plate EN-12368 as per Specification (NON SOR Item)	**Nos.**	4				**4.00**
70	Providing and fixing of S.S. Bollards(SS304) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	**Nos.**	418				**418.00**
71	Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars (shop drawing to be approved),with vertical support of 0.9m @2.2mc/c , all complete to the satisfaction of the Landscape architect.(Non SOR Item)						
	Handrail						
	Road						
	RHS	Rm	1	25			25.00
	LHS	Rm	1	25			25.00
		Rm				**A=**	**50.00**
	Hand Rail of length2.4 meter Steel Qty.					**Wt/Rm**	
	Horizontal Member-M.S.Box 25x25x3.2mm thk.	KG		3	2.4	4.536	32.66
	Vertical Member-M.S. Box 50x25x3.2mm thk.	KG		1	1.375	7.368	10.13
	Verical Bar-Dia 16mm	KG		20	0.475	0.7493296	7.12
					Area	Thk	
	Logo Plate	KG		1	0.07065	0.001	0.000071
		KG				Total Wight for 2.4 m Railing (A)	49.91
	Railing per 1m Weight(A / 2.4 m)	KG				**B=**	**20.8**
	Total Railing Weight (A x B)	**MT**					**1.04**
72	Providing and Fixing SS 304 Outdoor Dustbin(Pivoted Type and Mounted on SS Poles) of 55 liters capacity all complete to the satisfaction of the Engineer in charge.	**Nos.**	105				**105.00**
73	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1-Earth	**Cum**	1.00	33087.45			**33087.45**
74	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1-Debris	**Cum**	1.00	13153.88			**13153.88**

Assistant Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

1	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)			
	Basic rate		68.16	
	Add 10% For area weightage (Mangalore City)		6.82	
		Rate	**74.98**	**Sqm**
2	KSRRB M200.Dismantling of cement concrete pavement by mechanical means using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Sl No : 18.47)			
	Basic rate		899	
	Initial Lead of 5km		13	
	Add 10% For area weightage (Mangalore City)		89.9	
		Rate	**1001.90**	**Cum**
3	KSRRB M200-Dismantaling of kerb Stone and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications. MORTH Specification No.202. (Page No.139,S.I.No.18.49)			
	Basic rate		**12.00**	
	Add 10% For area weightage (Mangalore City)		1.2	
		Rate	**13.20**	**Rmt**
4	KSRRB M200-13.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 18-19,S.I.18.20)			
	Basic rate		390	
	Add 10% For area weightage (Mangalore City)		39	
		Rate	**429.00**	**Cum**
5	KSRRB M200-17.2. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. v)Steel work in all types of Sections upto a Height of 5 m above plinth level excluding Cutting of Rivet– B. Excluding dismembering. (KPWD SOR 18-19,18.33)			
	Basic rate		1893	
	Add 10% For area weightage (Mangalore City)		189.3	
		Rate	**2082.30**	**MT**
6	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Section 5.(KSRRB Sl No.19.56)			
	Basic rate		39	
	Add 10% For area weightage (Mangalore City)		3.9	

		Rate	**42.90**	**Sqm**
7	KSRRB 300-46. Scarifying stone metal crust 50mm to 100mm thick by road roller with scarifier along with 20mm premix carpet / surface dressing and stacking of old serviceable materials including cost of all labour charges, HOM of machinaries complete as per specifications. MORTH / Section 5. (KSRRB Sl No.19.52)			
	Basic rate		39	
	Add 10% For area weightage (Mangalore City)		3.9	
		Rate	**42.90**	**Sqm**
8	KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar (Sl No : 18.23)			
	Basic rate		351	
	Add 10% For area weightage (Mangalore City)		35.1	
		Rate	**386.10**	**Cum**
9	Removing B.S slab of drain and stackin as directed by engineer in charge.(PWD 18-19,Sl No : 5.32)			
	Basic rate		98	
	Add 10% For area weightage (Mangalore City)		9.8	
		Rate	**107.80**	**Sqm**
10	KSRRB M800-Permanent type barricade in construction zone KSRRB M800-44.1. Construction of a permanent type barricade made of steel components, 1.5 m high from road level, fitted with 3 horizontal rails 200 mm wide and 4 m long on 50 x 50 x 5 mm angle iron vertical support, painted with yellow and white strips, 150 mm in width at an angle of 45º, complete as per IRC:SP:55-2014 complete as per specifications . A. With steel components (Sl No : 24.45)			
	Basic rate		3829	
	Add 10% For area weightage (Mangalore City)		382.9	
		Rate	**4211.90**	**Each**
11	KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes,in accordance with requirements of lines and grades and cross sections,and transporting disposal location up to a lead of 5.00Km and complete as per specifications. MORTH specification No.301 (Sl No : 19.14)			
	Basic rate for 1KM		41	
	Extra for carriage beyond 1km and upto 5km		10.24	
	Add 10% For area weightage (Mangalore City)		5.12	
		Rate	**56.36**	**Cum**
12	KSRB 2-4 : Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 18-19,Sl No.2.11)			
	Basic rate		120	
	Add 10% For area weightage (Mangalore City)		12	
		Rate	**132.00**	**Cum**

13	KSRRB 300-Compaction KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3			
	Basic rate		6	
	Add 10% For area weightage (Mangalore City)		0.6	
		Rate	**6.60**	**Sqm**
14	KSRB 4-1.6 ; Providing and laying in position plain cement concrete of mix M15 Grade with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (SI.No. 4.6 of KPWD 18-19)			
	Basic Rate		5900	
	Add 10% For area weightage (Mangalore City)		590	
		Rate	**6490.00**	**Cum**
15	KSRRB 400 Granular Sub-Base with Coarse Graded Material (table 400-1) KSRRB M400-7. Construction of granular sub-base by providing Coarse graded crushed stone aggregates of granite / trap / basalt material, speading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MORTH specifications clause 401 and Table 400-1 Grading VI. (SI.No.20.4 of KPWD SR 2018-19)			
	Basic Rate		2166	
	Add 10% For area weightage (Mangalore City)		216.6	
		Rate	**2382.60**	**Cum**
16	KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with Plate compactor to achieve the desired density, complete as per specifications. A. Plant Mix Method. - Close graded granular sub-base material as per 400-1 For Grading- II Material (RA Attached)			
	Basic Rate		2400	
	Add 10% For area weightage (Mangalore City)		240	
		Rate	**2640.00**	**Cum**
17	KSRB 4.2.1 : Providing and laying in position reiforcement cement concrete of design Mix M25 with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications. (Sl No : 4.10 of KPWD 18-19)			
	Basic Rate		6198	
	Add 10% For area weightage (Mangalore City)		619.8	
		Rate	**6817.80**	**Cum**
18	KSRB 4.6.1 Providing and removing centering, shuttering, strutting, propping etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2 (Sl No : 4.28 of KPWD 18-19)			
	Basic Rate		263	
	Add 10% For area weightage (Mangalore City)		26.3	
		Rate	**289.30**	**Sqm**

19	KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500 (Sl No : 4.46.2 of KPWD 18-19)			
	Basic Rate		70782	
	Add 10% For area weightage (Mangalore City)		7078.2	
		Rate	**77860.20**	**MT**
20	KSRRB M300-Construction of Subgrade. KSRRB M300-55. Construction of sub-grade with approved material Gravel/Murrum with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications (including cost of earth, watering charges & compaction by vibratory rollercompaction by vibratory roller to 97% of proctors density) MORTH Specification No. 305IKPWD 18-19,19.62,17.1 and 17.4)			
	Basic Rate		513	
	Add 20km lead (17.4 KSRRB M100-4.1-Cost of haulage excluding loading and unloading MORTH-100/Chapter 1-case 1-Surface Road)=2.0Rs/ Tkm x 1.28 T x 20km		51.2	
	Sub Total		564.2	
	Add 10% For area weightage (Mangalore City)		56.42	
		Rate	**620.62**	**Cum**
21	KSRRB M600-1.Construction of dry lean cement concrete mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes double drum vibratory roller,finishing and curing complete as per specifications.Morth specification No.601 (Sl No : 22.1.1 of KPWD 18-19)			
	Basic Rate		4048	
	Add 10% For area weightage (Mangalore City)		404.8	
		Rate	**4452.80**	**Cum**
22	KSRRB M600-1.Construction of dry lean cement concrete mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,Manually laid and compacting with palte compactor,finishing and curing complete as per MORTH specifications Clause 601. (RA attached)			
	Basic Rate		3680	
	Add 10% For area weightage (Mangalore City)		368	
		Rate	**4048.00**	**Cum**
23	Providing and laying cement concrete using 20mm and down size granite coarse aggregates and fine aggregates of ready mixed concrete for RCC works laid in 15 em thick layers and well compacted including vibrating curing etc., for all super structure works with all lead and lift etc., complete. (exculsive of cost of steel and fabrication charges) Note : The RMC should be obtained only from the plants certified by Quality Council of India as per CE, C&B letter, AE2, 2015-16, Dt. 12-09-2015 Ready mixed Cement concrete M-25 (KPWD 1.40.3)			
	Basic Rate		5497	
	Add 10% For area weightage (Mangalore City)		549.7	

		Rate	**6046.70**	**Cum**
24	KSSRRB M600-2.Construction of unreinforced,dowel jointed,plain cement concrete pavement over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per MORTH specifications Clause 602.with M40 @420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Sl No : 22.2.2 of KPWD 18-19)			
	Basic Rate		5765	
	Add 10% For area weightage (Mangalore City)		576.5	
		Rate	**6341.50**	**Cum**
25	Providing and placing joint sealant compound of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower and as shown on drawing and as per MORTH specifications clause 602. (Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.2	**Rate**	**115**	**Rmt**
26	KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Sl No : 35.8 of KPWD 18-19)			
	Basic Rate		331	
	Add 10% For area weightage (Mangalore City)		33.1	
		Rate	**364.10**	**Rmt**
27	Providing and laying at or near ground level factory made Median kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per drawing. (Precast C.C. kerb stone shall be approved by Engineer-in-charge). (RA Attached)			
	Rate Arrived as per Rate analysis			
	Basic Rate		17708.82	
	Add 10% For area weightage (Mangalore City)		1770.88	
		Rate	**19479.70**	**Cum**
28	Providin and fixing pre cast solid concrete Kerb stones as per the drawing,made out of CC M20 and Jointed with CM 1:3 and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Sl No : 5.3 of KPWD 18-19)			
	Basic Rate of one kerb stone of M15 Grade =0.0279 cum	Rate	421	
	Rate for 1 cum of Kerb stone		15089.61	
	Add diferance in cement content of M15 to M20 Grade		392	
	Total Rate		15481.61	
	Add 10% For area weightage (Mangalore City)		1548.16	
		Rate	**17029.77**	**Cum**

29	Providin and fixing pre cast solid concrete water table(longitudinal gutter) as per the drawing,made out of CC M20 and jointed with CM 1:3 and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Sl No : 5.3 of KPWD 18-19)			
	Basic Rate of one kerb stone of M15 Grade =0.0279 cum	Rate	421	
	Rate for 1 cum of Water Table		15089.61	
	Add diferance in cement content of M15 to M20 Grade		392	
	Total Rate		15481.61	
	Add 10% For area weightage (Mangalore City)		1548.16	
		Rate	**17029.77**	**Cum**
30	KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per MORTH specifications section 8. (Sl No : 24.1 of KPWD 18-19)			
	Basic Rate		80	
	Add 10% For area weightage (Mangalore City)		8	
		Rate	**88**	**Sqm**
31	P/F FRP Recess Cover (2.5T) 900mmx600 mm with frame on Manhole for electrical ducting. (Rate analysis attached)			
	Rate Arrived as per Rate analysis			
	Basic Rate		10764	
	Discount 30%		-3229.2	
	Sub Total		7534.8	
	Fixing Charges @5%		376.74	
		Rate	**7911.54**	**Nos.**
32	P/F FRP Recess Cover (2.5T) 600mmx450 mm with frame at raised footpath on SWD. (Rate analysis attached)			
	Basic Rate		7179	
	Discount 30%		-2153.7	
	Sub Total		5025.3	
	Fixing Charges @5%		251.265	
		Rate	**5276.565**	**Nos.**
33	P/F FRP Water gully cover with frame (25T) 600mmx500 mm at level footpath. (Rate analysis attached)			
	Basic Rate		10765	
	Discount 30%		-3229.5	
	Sub Total		7535.5	
	Fixing Charges @5%		376.775	
		Rate	**7912.28**	**Nos.**
34	KSRRB M300- Wrought iron and mild steel welded work KSRRB M300-18. Wrought iron and mild steel welded work (using angles, square bars, tees and channel grills, gratings with grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately complete as per specifications.(KPWD,18-19,Sl.No.19.97)			
	Basic Rate		7187	
	Add 10% For area weightage (Mangalore City)		718.7	
		Rate	**7905.7**	**Quintal**

35	KSRB 12-8.2 : Constructing brick masonry inspection chamber 500x700mm, and 450mm depth, (clear inside dimension) for pipeline with one or two inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C.I cover with frame (light duty) 455x610mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23kg and weight of frame 15 kg) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. Specification No. KBS (P.No. 74/ I.No.11.52 of PWD SR 2015-16)			
	Basic Rate		8296	
	Add 10% For area weightage (Mangalore City)		829.6	
		Rate	**9125.6**	**Nos.**
36	Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line.The rate shall include all jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,Item No.7,KUWSDB SOR 2016-17)			
	Basic Rate		297	
	Add 10% on Labor Charges=Rs.47,For area weightage (Mangalore City)		4.7	
		Rate	**301.7**	**Rm**
37	KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2018-19, SI.No.12.89)			
	Basic Rate		830	
	Add 10% For area weightage (Mangalore City)		83	
		Rate	**913**	**Nos.**
42	KSRRB M2200- Providing Weep Holes KSRRB M2200-8. Providing weep holes in Brick masonry / Plain / Reinforced concrete abutment, wing wall / return wall with 100 mm dia AC pipe, extending through the full width of the structure with slope of 1V :20H towards drawing foce. Complete as per drawing and Technical Specifications complete as per specifications MORTH Specification No.2706 & 2200 (PWD SR 2018-19, SI.No.28.10)			
	Basic Rate		147	
	Add 10% For area weightage (Mangalore City)		4.7	
		Rate	**151.7**	**Nos.**
39	KSRRB M800-29.3.Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services. (PWD SR 2018-19,SI.No.24.36)			
	Basic Rate		5022	
	Add 10% For area weightage (Mangalore City)		502.2	
		Rate	**5524.20**	**Rm**

40	Providing and laying Dia 200mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)			
	Basic Rate		1794	
	Deduct GST @18%		-322.92	
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)		78	
	Add 10% For area weightage (Mangalore City)		7.8	
		Rate	**1556.88**	**Rm**
41	Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)			
	Basic Rate		1215	
	Deduct GST @18%		-218.7	
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)		66	
	Add 10% For area weightage (Mangalore City)		6.6	
		Rate	**1068.90**	**Rm**
42	Providing and Fixing Spacers for Power Ducts of size 200 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)			
	Basic Rate (without GST@18%)		1003	
		Rate	**1003.00**	**Nos.**
43	Providing and Fixing Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)			
	Basic Rate (without GST@18%)		1947	
		Rate	**1947.00**	**Nos.**
44	Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)			
	Basic Rate		685	
	Deduct GST @18%		-123.3	
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)		36	
	Add 10% For area weightage (Mangalore City)		3.6	
		Rate	**601.30**	**Rm**
45	Supplying and Application charges required for stamping the freshly laid new concrete (Concrete rate is not included in this item) including finishing and colouring the top surface accurately to the required level,shape and size using approved colour shade and staping it using approved stamp pattern and antiquitting it on top with approved colour.Sealing entire area with concrete sealer.			
	Basic rate		624.00	
		Rate	**624.00**	**Sqm**
46	Cutting of Control joints panels(in Footpath) at suitable required locations using using tools and tackles.			
	Basic rate		59.00	
		Rate	**59.00**	**Sqm**

47	Providing and laying heavy duty cobble stones 75mm thick, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (KPWD SR 2018-19,Sl No : 14.7)			
	Basic rate		1114	
	Add 10% For area weightage (Mangalore City)		111.4	
		Rate	**1225.40**	**Sqm**
48	KSRRB M500-17. Providing and laying dense graded bituminous macadam using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications.. MORTH Specification No. 507 -using 100/120 TPH capacity H.M.P. with sensor paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen(KPWD 16-17,S.I.No.21.17.1,Page No.163)			
	Basic rate		7284	
	Add 10% For area weightage (Mangalore City)		728.4	
		Rate	**8012.40**	**Cum**
49	KSRRB M500-19. Providing and laying bituminous concrete 40 mm thick with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects complete as per specifications. MORTH Specification No. 509 - using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 45 mm) with 6 % VG-30 Bitumen			
	Basic rate		8761	
	Add 10% For area weightage (Mangalore City)		876.1	
		Rate	**9637.10**	**Cum**
50	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.			
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Equilateral Triangle-TYPE XI (KPWD 18-19,Sl No : 24.2.1)			
	Basic Rate		3511	
	Add 10% For area weightage (Mangalore City)		351.1	
		Rate	**3862.10**	**Nos**

51	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.			
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Octagon Stop Board-TYPE XI (KPWD 18-19,Sl No : 24.2.6)			
	Basic Rate		4958	
	Add 10% For area weightage (Mangalore City)		495.8	
		Rate	**5453.80**	**Nos**
52	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.			
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 600MM Circle-TYPE XI (KPWD 18-19,Sl No : 24.2.3)			
	Basic Rate		3118	
	Add 10% For area weightage (Mangalore City)		311.8	
		Rate	**3429.80**	**Nos**
	KSRRB M800-3. Direction and Place Identification Signs upto 0.9 sqm Size Board:-Manufacturing, supply and installation of retro- reflectorised cautionary, mandatory and informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC :67:2012 specifications & fixed over 4 mm thick aluminium composite panel sheet having minimun 0.30 thick aluminium skin on both sides & fixed over a support frame of 25x25x3 mm MS angle and mounted on 75mm dia OR 75x75x6mm Mild steel angle of total height 2.70m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60 cm below ground level. The sign post should be painted with one coat of red oxide paint and white colour with brands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45 cm x45 cm x 60 cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by engineer in charge. 10 years warranty for retro reflective sheeting from the original sheeting manufacturer as per clause 6.9 in IRC 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. (KPWD 18-19,Sl No : 24.3)			

	Basic Rate		6927	
	Add 10% For area weightage (Mangalore City)		692.7	
		Rate	**7619.70**	**Sqm**
54	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, supply and installation of retro-reflectorised cautionary, mandatory and informatory signboards made out of cube corner micro prismatic grade sheeting confirming to 600x800 MM type XI standards of IRC :67:2012 specifications & fixed over 4 mm thick aluminium composite panel sheet having minimun 0.30 thick aluminium skin on both sides & fixed over a support frame of 25x25x3 mm MS angle and mounted on 75mm dia OR 75x75x6mm Mild steel angle of total height 2.70m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60 cm below ground level. The sign post should be painted with one coat of red oxide paint and white colour with brands of 30 cm height alternatively firmly fixed to the ground by means of foundation with (KPWD18-19,24.2.4)			
	M20 grade cement concrete of 45 cm x45 cm x 60 cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the work as directed by engineer in charge. 10 years warranty for retro reflective sheeting from the original sheeting manufacturer as per clause 6.9 in IRC 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier.			
	Basic Rate		4049	
	Add 10% For area weightage (Mangalore City)		404.9	
		Rate	**4453.90**	**Nos**
55	KSRRB M800 Road markers / Road stud KSRRB M800-35. Providing and fixing of road stud 100x 100 mm, diecast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded in a suitable bituminous grout or epoxy mortar, all as per BS: 873 part 4:1973 complete as per specifications (KPWD 18-19,Sl No : 24.41)			
	Basic Rate		289	
	Add 10% For area weightage (Mangalore City)		28.9	
		Rate	**317.90**	**Nos.**
56	Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (KPWD 18-19,Sl No : 24.15)			
	Basic Rate		429	
	Add 10% For area weightage (Mangalore City)		42.9	
		Rate	**471.90**	**Sqm**

57	Providing and Fixing of Bus shelter(on prepared foundation) made of SS 304 frame work with brush steel finish, Galvanised Aluminium powder coated roofing and electronic circuit to control its lighting.The seating shall be made of SS 304 tubular sections for seat and back rest.each unit size of 4500mm x 600mm with a minimum backrest support of 450mm.Bus shelter shall have the Side Display board to have 1100X400mm Electronic display.The electronic display board to be of LED Scrolling type with Oval, 4.3 x 5.1mm dia. Diffused. LED's having Amber colour.Dual bin system should be adopted one for recycle waste & other for dry waste.Each bin shall be with minimum capacity of 70Ltrs.Interactive Information Panel-display equipment with information area of 1400 x 1400 and touch screen LED display panel of area not less than 600-900mm with integrated 8mm toughened glass.Advertisement Area 2 nos of size 4500mm x 1650mm and 2100mm x 2000mm shall be integrated within the design of the Bus Shelter. This shall be backlit type with SS box framing sides and back complete.Provision for installing outdoor WiFi Router.The Foundation slab shall be made in min M25 concrete. The cast iron nuts, bolts shall be rust proof hot deep galvanized powder coated etc.The materials used shall be Nonflammable (NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer	**Rate**	**1500000**	**Nos.**
58	Providing & installing of E- toilet with Super structure of the electronic toilet to have asthetic ambience with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of electronic toilet overall size in meters 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess controlled main door and side walls made of SS Grade 304,Toilet floor and closet are to be stainless steel of grade 304.E-Toilet shall have Built-in water tank with minimum 225 Lit capacity and Acess controll using coin validator for entering the unit based on automatic payment collection mechanism exit from the unit should be manual.Automatic lights inside the unit with gloves on opening the door.E-Toilet shall be Automatic flushing system which includes Automatic Pre flush cleaning before use,Automatic closet washing mechanism after use and Automatic platform cleaning mechanism programmed after specific numbers.In addition to these flush switch is to be provided for manual operation.Standard features should include heath faucet,exhaust fan and cloth hanger.The E-Toilet shall have Alert to users-different indication on 'ready to use',busy are to be provided in the unit also with Voice guidence in the unit for users. Web enabled support-GPRS based Real time data to be provided from the unit through web for knowing the health status like number of users per day and coins collected.			
	E-toilet shall have Modular and portable design enabling easy assembling and installation at site.Call ceneter and web portal facilities for registering complience and tracking usage,coin collection etc.Status display in LED,Printed instruction stickers are to be provided.For Advertisment purpose space for advertisement dispaly to be povided on the exterior of the unit for income generation and sustainability. Backup power facility like UPS is to be provided to supplement upto 30 Min Base of the unit to be placed on a suitable concrete structure with a ashthetic finish. (Non SOR Item)			
	Baisc rate		575000	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.1	**Rate**	**575000**	**Nos.**
59	KSRB 6-2.3 : Providing and constructing burnt brick masonry with approved quality of non-modular bricks of standard size of class designation 5.0Newton per sqmm (table moulded) with cement mortar 1:6 for basement and superstructu/re including cost of materials, labour charges, scaffolding, curing complete as per specifications. Specification No. KBS 6.2. (KPWD 18-19,SI.No.6.7)			
	Basic rate		7797	
	Add 10% For area wightage		779.7	
		Rate	**8576.70**	**Cum**
60	KSRB15-3.8 : Providing 18mm thick cement plaster in single coat with cement mortar 1:4, to brick masonry including rounding off corners wherever required smooth rendering, : Providing and removing scaffolding, including cost of materials, labour, curing complete as per specifications.(KPWD 18-19,SI No.15.16)			
	Basic rate		262	
	Add 10% For area wightage		26.2	
		Rate	**288.2**	**Sqm**

	Providing and fixing 450mm wide X 600mmX 20mm thk.RIVERWASHED BLACK GRANITE CLADDING on surface of seating as directed by architect (Non SOR Item)			
	Basic Rate		3527	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer	**Rate**	**3527.00**	**Sqm**
62	Supply and Fixing of Traffic signal Straight pole of 6 mtr, inner dia 100 mm from resistant to peeling with base plate size of (LXWXT) 200mm X200mmX6mm painted with redoxide and double coat with synthetic enamel paint of yellow colour assembly G.I., class B, as per technical specification (NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.5	**Rate**	**18691**	**Nos.**
63	Supply and fixing of Traffic signal Cantilever pole Class B having inner diameter of 100 mm or more with a height of 6m including extension arm assembly having outer diameter of 75mm with arm span of 4 mtr length and base plate of size 300mm X 300mm with thickness of 6 mm welded at the bottom of the pole base as per technical specification & drawings. (NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.6	**Rate**	**52850**	**Nos.**
64	Supply and fixing of 300 mm dia – single source – LED retrofit - Red (blow) as per Specification (NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.7	**Rate**	**11082**	**Nos.**
65	Supply and fixing of 300 mm dia – single source – LED retrofit - Amber (blow) as per Specification (NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.7	**Rate**	**11082**	**Nos.**
66	Supply and fixing of 300 mm dia – single source – LED retrofit - Green (arrow/U- Turn) EN-12368 as per Specification (NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.8	**Rate**	**13973**	**Nos.**
67	Supply and fixing of 300 mm dia – single source – LED retrofit - Red (ped. standing) EN-12368 as per Specification (NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.9	**Rate**	**11082**	**Nos.**
68	Supply and fixing of 300 mm dia – single source – LED retrofit - Green (ped.walking) EN-12368 as per Specification (NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.10	**Rate**	**13973**	**Nos.**
69	Supply and fixing of 300 mm dia - No Right Turn/No Left turn/No Straight/No ‘U’ Turn aspects by using UV stabilized ink on face plate EN-12368 as per Specification (NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.11	**Rate**	**6196**	**Nos.**

70	Providing and fixing of S.S. Bollards(SS304) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)			
	Basic Rate		4500	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.13	**Rate**	**4500.00**	**Nos.**
71	Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars (shop drawing to be approved),with vertical support of 0.9m @2.2mc/c , all complete to the satisfaction of the Landscape architect.(Non SOR Item)			
	Basic Rate		100000.00	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.26	**Rate**	**100000.00**	**MT**
72	Providing and Fixing SS 304 Outdoor Dustbin(Pivoted Type and Mounted on SS Poles) of 55 liters capacity all complete to the satisfaction of the Engineer in charge. (NON SOR Item)			
	Basic Rate		7500	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.14	**Rate**	**7500.00**	**Nos.**
73	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1-Earth			
	Earth	2.0x1.28x10km		
	Baisc rate		25.60	
	Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)		57.00	
	Sub Total		82.60	
	Add 10% For area weightage (Mangalore City)		8.26	
		Rate	**90.86**	**Cum**
74	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1-Debris			
	Debris	2.0x1.30x10Km		
	Baisc rate		26.00	
	Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)		57.00	
	Sub Total		83.00	
	Add 10% For area weightage (Mangalore City)		8.3	
		Rate	**91.30**	**Cum**

Assistant Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work :- Mangalore Smart City

2.1 BOQ of Electrical lighting Works for DPR-4 Roads

Sr.No.	Specification	Unit	Quantity	Rate	Amount	Remarks
1	**Lighting Poles**					
1.1	Dismantling of pole/ street light standard/ strut embedded in cement concrete foundation etc. as required	Nos.	83	1,681	139,494	
1.2	Erection of metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. Above 6.5 meter and upto 8.0 meter Existing poles (As per RA)	Nos.	82	4,057	332,674	
1.2a	Erection of metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. Above 8 meter and upto 11 meter Existing poles (RA attached)	Nos.	9	4,807	43,264	
1.2b	Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No. 5.14.7)	Nos.	19	17,118	325,242	
1.3	Lighting Pole, 7 m Fabrication, supply and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top	Nos.	64	12,420	794,880	

Sr.No.	Specification	Unit	Quantity	Rate	Amount	Remarks
1.4	Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No.5.14.2)	Nos.	81	7,398	599,238	
1.5	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR Sl No.5.18.5)	Nos.	69	3,540	244,260	
1.6	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR Sl No.5.18.2)	Nos.	166	2,400	398,400	
1.7	Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole.-8mtr and above street light pole (Ref Electrical SOR Sl No.16.28.3)	Nos.	9	700	6,300	
1.7a	Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole.-above 5.5 mtr to 7.5 mtr (Ref Electrical SOR Sl No.16.28.2)	Nos	80	620	49,600	
2	**Out door box and switch gear**					
2.1	Supply, installation, testing and commissioning of outdoor junction box for mounting MCB/Contactors with all required accessories and componenets	No.	32	11,783	377,053	
2.2	Supply and fixing of miniature circuit breaker on exisiting board using necessasary fixing material and 'C' type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10 KA complete wiring as required confirming to IEC 60898 5- 32A TPN Electrical SOR- 6.16.5)	No	32	1,547	49,504	
3	**LT Cable**					
3.1	Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR Sl No.7.5,7.5.4)	m	11470	117	1,341,990	

Sr.No.	Specification	Unit	Quantity	Rate	Amount	Remarks
3.2	Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	2928	81.60	238,925	
3.3	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR Sl No.7.21,7.21.6)	Nos	1880	11.31	21,263	
3.4	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR Sl No.7.21.2)	Nos	1410	3.12	4,399	
4	**Earthing system**					
4.1	Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,Sl No.7.23.6)	Kit	64	5,500.00	352,000	
4.2	Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR Sl No.7.22.3)	Rmt	10119	19.50	197,321	
5	Dismantling of 7 mtr high mast pole/ strut embedded in cement concrete foundation etc. as required RA attached	Nos.	1	1,683.34	1,683	
6	Erection of 7 mtr high mast metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation,refilling,components, accessories etc. as required. Above 6.5 meter and upto 8.0 meter Existing poles (As per RA)	Nos.	1	5,476.00	5,476	
		TOTAL			**55,22,966**	

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work :- Mangalore Smart City
2.2 M.S.of Electrical Lighting Works

Sr.No.	Specification	Unit	No.	L	B	H	Quantity
1	**Lighting Poles**						
1.1	Dismantling of pole/ street light standard/ strut embedded in cement concrete foundation etc. as required	Nos.					0.00
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.	14				14.00
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	0				0.00
	Balmatta road	Nos.	10				10.00
	Road no 12 (Bunts road to jyoti circle)	Nos.	17				17.00
	KRR Road (Road no 13a)	Nos.	16				16.00
	KRR Road (Road no 13b)	Nos.	24				24.00
	Total						83.00
1.2	Erection of metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. Above 6.5 meter and upto 8.0 meter Existing poles (As per RA)	Nos.					
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.	14				14.00
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	0				0.00
	Balmatta road	Nos.	9				9.00
	Road no 12 (Bunts road to jyoti circle)	Nos.	17				17.00
	KRR Road (Road no 13a)	Nos.	16				16.00
	KRR Road (Road no 13b)	Nos.	24				24.00
	Total						82.00
1.2a	Erection of metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. Above 8 meter and upto 11 meter Existing poles (RA attached)						
	Balmatta road	Nos.	9				9.00
1.2b	Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No. 5.14.7)						
	Balmatta Road (Double Arm)- 9 mtrs	Nos.	19		**Total**		19.00

Sr.No.	Specification	Unit	No.	L	B	H	Quantity
1.3	Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No. 5.14.5)						
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.					0.00
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	12				12.00
	Road no 12 (Bunts road to jyoti circle)	Nos.					0.00
	KRR Road (Road no 13a)	Nos.	43				43.00
	KRR Road (Road no 13b)	Nos.	9				9.00
	Total						
					Total		**64**
1.4	Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No.5.14.2)						
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.	0				0.00
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	0				0.00
	Road no 12 (Bunts road to jyoti circle)	Nos.	2				2.00
	Balmatta road	Nos.	22				22.00
	KRR Road (Road no 13a)	Nos.	31				31.00
	KRR Road (Road no 13b)	Nos.	26				26.00
	Total						81.00
1.5	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR Sl No.5.18.5)						
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.	3				3.00
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	0				0.00
	Road no 12 (Bunts road to jyoti circle)	Nos.	0				0.00
	Balmatta road	Nos.	18				18.00
	KRR Road (Road no 13a)	Nos.	15				15.00
	KRR Road (Road no 13b)	Nos.	33				33.00

Sr.No.	Specification	Unit	No.	L	B	H	Quantity
	Total						69.00
1.6	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR Sl No.5.18.2)						
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.	6				6.00
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	12				12.00
	Road no 12 (Bunts road to jyoti circle)	Nos.	15				15.00
	Balmatta road	Nos.	32				32.00
	KRR Road (Road no 13a)	Nos.	75				75.00
	KRR Road (Road no 13b)	Nos.	26				26.00
	Total						
					Total		**166**
1.7	Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole.-8mtr and above street light pole (Ref Electrical SOR Sl No.16.28.3)						
	Balmatta road	Nos.	9				9.00
					Total		**9**
1.7a	Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole.-above 5.5 mtr to 7.5 mtr (Ref Electrical SOR Sl No.16.28.2)						
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.	14				14.00
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	0				0.00
	Road no 12 (Bunts road to jyoti circle)	Nos.	17				17.00
	Balmatta road	Nos.	9				9.00
	KRR Road (Road no 13a)	Nos.	16				16.00
	KRR Road (Road no 13b)	Nos.	24				24.00
	Total						80.00
2	**Lighting Panel**						
2.1	Supply, installation, testing and commissioning of outdoor junction box for mounting MCB/Contactors with all required accessories and componenets						
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.	1				1.00
	Balmatta road	Nos.	1				1.00
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	1				1.00
	Road no 12 (Bunts road to jyoti circle)	Nos.	2				2.00
	KRR Road (Road no 13a)	Nos.	17				17.00
	KRR Road (Road no 13b)	Nos.	10				10.00
					Total		**32**
2.2	Supply and fixing of miniature circuit breaker on exisiting board using necessasary fixing material and 'C' type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10 KA complete wiring as required confirming to IEC 60898 5- 32A TPN Electrical SOR- 6.16.5)						
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.	1				1.00

Sr.No.	Specification	Unit	No.	L	B	H	Quantity
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	1				1.00
	Road no 12 (Bunts road to jyoti circle)	Nos.	2				2.00
	Balmatta road	Nos.	1				1.00
	KRR Road (Road no 13a)	Nos.	17				17.00
	KRR Road (Road no 13b)	Nos.	10				10.00
					Total		**32**
3	**LT Cable**						
3.1	Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR Sl No.7.5,7.5.4)						
	Hampankatta Signal (Loop Road) (Road no 7b) (Considering 25% more length for looping)	m	2	280			560
	Hampankatta Signal (Loop Road) (Road no 7e) (Considering 25% more length for looping)	m	2	404			808
	Balmatta Road (Double Arm) (Consider 25% more length for looping)	m	2	663			1325
	Balmata Road (Single Arm - KMC Markra Trunk Road) (Consider 25% more length for looping)	m	2	875			1750
	Road no 12 (Bunts road to jyoti circle) (Considering 25% more length for looping)	m	2	599			1198
	KRR Road (Road no 13a) (Considering 25% more length for looping)	m	2	1455			2910
	KRR Road (Road no 13b) (Considering 25% more length for looping)	m	2	1460			2920
					Total		**11470**
3.2	Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)						
	Hampankatta Signal (Loop Road) (Road no 7b)						
	7 mtr high pole	m	9	14			126.00
	Hampankatta Signal (Loop Road) (Road no 7e)						
	7m high pole	m	12	14			168.00
	Road no 12 (Bunts road to jyoti circle)						
	7 mtr high pole	m	15	14			210.00
	Balmatta road						
	9 mtr high pole	m	28	18			504.00
	4 mtr high pole	m	22	8			176.00
	KRR Road (Road no 13a)						
	7m high pole	m	59	14			826.00
	4m high pole	m	31	8			248.00
	KRR Road (Road no 13b)						
	7 mtr road	m	33	14			462.00
	4m high pole	m	26	8			208.00
					Total		**2928**

Sr.No.	Specification	Unit	No.	L	B	H	Quantity
3.3	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR Sl No.7.21,7.21.6)		No.of Poles	No.of Lugs			
	Hampankatta Signal (Loop Road) (Road no 7b)						
	7 mtr high pole	Nos.	9	8			72.00
	Hampankatta Signal (Loop Road) (Road no 7e)						
	7m high pole	Nos.	12	8			96.00
	Road no 12 (Bunts road to jyoti circle)						
	7 mtr high pole	Nos.	15	8			120.00
	Balmatta road						
	9 mtr high pole	Nos.	28	8			224.00
	4 mtr high pole	Nos.	22	8			176.00
	KRR Road (Road no 13a)						
	7m high pole	Nos.	59	8			472.00
	4m high pole	Nos.	31	8			248.00
	KRR Road (Road no 13b)						
	7m high pole	Nos.	33	8			264.00
	4m high pole	Nos.	26	8			208.00
					Total		**1880**
3.4	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR Sl No.7.21.2)						
	Hampankatta Signal (Loop Road) (Road no 7b)						
	7 mtr high pole	Nos.	9	6			54.00
	Hampankatta Signal (Loop Road) (Road no 7e)						
	7m high pole	Nos.	12	6			72.00
	Road no 12 (Bunts road to jyoti circle)						
	7 mtr high pole	Nos.	15	6			90.00
	Balmatta road						
	9 mtr high pole	Nos.	28	6			168.00
	4 mtr high pole	Nos.	22	6			132.00
	KRR Road (Road no 13a)						
	7 mtr high pole	Nos.	59	6			354.00
	4 mtr high pole	Nos.	31	6			186.00
	KRR Road (Road no 13b)						
	7 mtr high pole	Nos.	33	6			198.00
	4 mtr high pole	Nos.	26	6			156.00
					Total		**1410**
4.1	Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,Sl No.7.23.6)						
	Hampankatta Signal (Loop Road) (Road no 7b)	Nos.	1	2			2.00
	Hampankatta Signal (Loop Road) (Road no 7e)	Nos.	1	2			2.00
	Road no 12 (Bunts road to jyoti circle)	Nos.	2	2			4.00
	Balmatta road	Nos.	1	2			2.00
	KRR Road (Road no 13a)	Nos.	17	2			34.00
	KRR Road (Road no 13b)	Nos.	10	2			20.00
					Total		**64**

Sr.No.	Specification	Unit	No.	L	B	H	Quantity
4.2	Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR Sl No.7.22.3)						
	Hampankatta Signal (Loop Road) (Road no 7b)	m	2	246			492.80
	Hampankatta Signal (Loop Road) (Road no 7e)	m	2	355			710.60
	Balmatta Road (Double Arm) (Consider 10% more length for looping)	m	2	583			1166.00
	Balmata Road (Single Arm - KMC Markra Trunk Road) (Consider 10% more length for looping)	m	2	770			1540.00
	Road no 12 (Bunts road to jyoti circle)	m	2	527			1053.80
	KRR Road (Road no 13a)	m	2	1287			2574.00
	KRR Road (Road no 13b)	m	2	1291			2582.00
					Total		**10119**
5	Dismantling of 7 mtr high mast pole/ strut embedded in cement concrete foundation etc. as required RA attached	No	1				1.00
6	Erection of 7 mtr high mast metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation,refilling,components, accessories etc. as required. Above 6.5 meter and upto 8.0 meter Existing poles (As per RA)	No	1				1.00

Assistant Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work :- Mangalore Smart City
2.3 Rate Analysis of Electrical Lighting works

1	**Lighting Poles**			
1.1	Dismantling of pole/ street light standard/ strut embedded in cement concrete foundation etc. as required			
		Rate	**1,680.65**	**Nos.**
1.2	Erection of metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. Above 6.5 meter and upto 8.0 meter Existing poles (As per RA)			
		Rate	**4,057**	**Nos.**
1.2a	Erection of metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. Above 8 meter and upto 11 meter Existing poles (RA attached)			
		Rate	**4,807**	**Nos.**
1.2b	Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No. 5.14.7)			
	Basic rate		17118	
		Rate	**17,118**	**Nos.**

1.3	Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No. 5.14.5)			
	Basic rate		12420	
		Rate	**12420**	**Nos.**
1.4	Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No.5.14.2)			
	Basic rate		7398	
		Rate	**7,398**	**Nos.**
1.5	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR Sl No.5.18.5)			
	Basic rate		3540	
		Rate	**3,540**	**Nos.**
1.6	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR Sl No.5.18.2)			
	Basic rate		2400	
		Rate	**2,400**	**Nos.**
1.7	Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole.-8mtr and above street light pole (Ref Electrical SOR Sl No.16.28.3)			
	Basic rate		700	
		Rate	**700**	**Nos.**

1.7a	Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole.-above 5.5 mtr to 7.5 mtr (Ref Electrical SOR Sl No.16.28.2)			
	Basic rate		620	
		Rate	**620**	**Nos.**
2	**Out door box and switch gear**			
2.1	Supply, installation, testing and commissioning of outdoor junction box for mounting MCB/Contactors with all required accessories and componenets			
	Price list (Considering 30% discount , 18% GST & 10% profit)	**Rate**	**11,783**	**Nos.**
2.2	Supply and fixing of miniature circuit breaker on exisiting board using necessasary fixing material and 'C' type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10 KA complete wiring as required confirming to IEC 60898 5- 32A TPN Electrical SOR- 6.16.5)			
	Basic rate		1547	
		Rate	**1,547**	**Nos.**
3	**LT Cable**			
3.1	Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR Sl No.7.5,7.5.4)			
	Basic rate		117	
		Rate	**117**	**Rm**
3.2	Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)			
	Basic rate		81.6	
		Rate	**81.60**	**Rm**
3.3	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR Sl No.7.21,7.21.6)			
	Basic rate		11.31	
		Rate	**11.31**	**Nos.**
3.4	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR Sl No.7.21.2)			
	Basic rate		3.12	

		Rate	**3.12**	**Nos.**
4.1	Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,Sl No.7.23.6)			
	Basic rate		5500	
		Rate	**5500.00**	**Kit**
4.2	Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR Sl No.7.22.3)			
	Basic rate		19.5	
		Rate	**19.50**	**Rmt**
5	Dismantling of 7 mtr high mast pole/ strut embedded in cement concrete foundation etc. as required RA attached			
		Rate	**1,683**	**Nos.**
6	Erection of 7 mtr high mast metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation,refilling,components, accessories etc. as required. Above 6.5 meter and upto 8.0 meter Existing poles (As per RA)			
		Rate	**5,476**	**Nos.**

Assistant Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

GM Technical
MSCL Mangaluru

Name of the Work :- Mangalore Smart City
2.4 Rate Analysis of Electrical Lighting works

	Description	Unit	qty	Rate	Amount	Remark
1.1	Dismantling of pole/ street light standard/ strut embedded in cement concrete foundation etc. as required (Delhi analysis of rates E & M 2016, item 12.42, pg 395))					
	Line man	day	0.33	486.20	160.446	PWD SOR 2018-19, LVIII, Sl. No 38
	Khasasi	day	2.66	466.20	1240.092	PWD SOR 2018-19, LXIV, Sl. No 148
	Total				1400.538	
	Contracto's profit @10%				140.0538	
	Contractor's over head @ 10%				140.0538	
					1680.6456	
	Erection of metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. Above 6.5 meter and upto 8.0 meter Existing poles (Delhi analysis of rates E & M 2016, item 11.3.2, pg 372))					
	LABOUR					
	Mason, Grade 2	day	0.33	456.20	150.546	PWD SOR 2018-19, LVI, Sl. No 13
	Lineman	day	0.33	486.20	160.446	PWD SOR 2018-19, LVIII, Sl. No 38
	Khasasi	day	3.33	466.20	1552.446	PWD SOR 2018-19, LXIV, Sl. No 148
	TOTAL				1863.438	
	Contracto's profit @10%				186.3438	
	Contractor's over head @ 10%				186.3438	
	TOTAL				2236.1256	
	Excavation including refilling as required	cum	0.87	328.90	286.143	PWD SOR 2018-19, pg-6, Sl. No 2.3
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)	cum	0.29	6279.9	1821.171	PWD SOR 2018-19, pg-13, Sl. No 4.1
	TOTAL				4057.2966	
	say				**4057**	

1.3	Erection of metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. Above 8 meter and upto 11 meter Existing poles (CPWD RA- E & M 2016, item 11.3.3, pg 373))					
	LABOUR					
	Mason, Grade 2	day	0.33	456.2	150.55	PWD SOR 2018-19, LVI, Sl. No 13
	Lineman	day	0.33	486.2	160.45	PWD SOR 2018-19, LVIII, Sl. No 38
	Khasasi	day	3.66	466.2	1706.29	PWD SOR 2018-19, LXIV, Sl. No 148
	TOTAL				2017.29	
	Contracto's profit @10%				201.73	
	Contractor's over head @ 10%				201.73	
	TOTAL				**2420.75**	

	Description	Unit	qty	Rate	Amount	Remark
	Excavation including refilling as required	cum	1.06	328.90	348.634	PWD SOR 2018-19, pg-6, Sl. No 2.3
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)	cum	0.38	6279.9	2386.362	PWD SOR 2018-19, pg-13, Sl. No 4.1
	TOTAL				**4807.112**	
	say				**4807**	

5	Dismantling of 7 mtr high mast pole/ strut embedded in cement concrete foundation etc. as required					
	Line man	day	1.00	486.2	486.20	PWD SOR 2018-19, LVIII, Sl. No 38
	Khasasi	day	3.50	261.88	916.58	PWD SOR 2018-19, LXIV, Sl. No 148
	Total				**1402.78**	
	Contracto's profit @10%				140.278	
	Contractor's over head @ 10%				140.278	
					1683.336	
6	Erection of metallic pole of following length in cement concrete 1 :3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required. Above 6.5 meter and upto 8.0 meter Existing high mast poles (Delhi analysis of rates E & M 2016, item 11.3.2, pg 372))					
	LABOUR					
	Mason, Grade 2	day	0.5	456.2	228.10	PWD SOR 2018-19, LVI, Sl. No 13
	Lineman	day	1	486.2	486.20	PWD SOR 2018-19, LVIII, Sl. No 38
	Khasasi	day	5	466.2	2331.00	PWD SOR 2018-19, LXIV, Sl. No 148
	TOTAL				3045.3	
	Contracto's profit @10%				304.53	
	Contractor's over head @ 10%				304.53	
	TOTAL				3654.36	
	Excavation including refilling as required	cum	0.87	328.90	286.143	PWD SOR 2018-19, pg-6, Sl. No 2.3
	Cement concrete 1:3:6 (1 cement: 3 coarse sand : 6 graded stone aggregate 40 mm nominal size)	cum	0.29	6279.90	1821.171	PWD SOR 2018-19, pg-13, Sl. No 4.1
	TOTAL				5475.531	
	say				**5476**	

Assistant Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work :- Manglore Smart City

3.1 BOQ OF SOFTSCAPE for DPR 4

Sr.No.	Specifications	Unit	Quantity	Rate	Amount	Remarks
1.1	**SOIL MIXES and Ground Preparation**					
1.1.1	Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	232.75	140.00	32,585	
1.1.2	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)	Cum	114.64	224.40	25,726	
1.1.3	KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)	Cum	347.40	113.30	39,360	
1.1.4	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	347.40	23.91	8,306	
1.1.5	**Soil preparation of Lawn**					
	KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)	Sqm	579.00	17.92	10,376	

Sr.No.	Specifications	Unit	Quantity	Rate	Amount	Remarks
1.2	**TURF**					
1.2.1	ZOYSIA JAPONICA (MAT) (Non SOR Item)	Sqm	579.00	156.80	90,787	
1.2	**IRRIGATION**					
1.2.1	supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees , sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	579.00	560.00	324,240	
				Total	**5,31,380**	

SOR+ RA Items Cost	75,462
GST @ 12 % of SOR and RA Items	9055

Executive Engineer
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General Manager Technical
MSCL Mangaluru

Name of the Work :- Manglore Smart City
3.2 Measurement Sheet of softscape for DPR 4

Sr.No.	Item	Unit	No.	L	B	H	Qty.
1.1	**SOIL MIXES and Ground Preparation**						
1.1.1	Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)						
	13b-Hampankatta to PVS Circle-Island @ Ch.870.0	Cum	0.67	104.00	Area	0.60	41.81
	13b-Hampankatta to PVS Circle-Island @Ch.1120.0	Cum	0.67	5.00	Area	0.60	2.01
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.670	Cum	0.67	31.00	Area	0.60	12.46
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.680	Cum	0.67	12.00	Area	0.60	4.82
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.1080	Cum	0.67	166.00	Area	0.60	66.73
	Bunts Hostel Road Median Ch.20.0 to Ch.455.0	Cum	0.67	435.00	0.60	0.60	104.92
	Consider 2/3rd Qty of Item No.1.1.7	**Cum**					**232.75**
1.1.2	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)						
	13b-Hampankatta to PVS Circle-Island @ Ch.870.0	Cum	0.33	104	Area	0.6	20.59
	13b-Hampankatta to PVS Circle-Island @Ch.1120.0	Cum	0.33	5	Area	0.6	0.99
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.670	Cum	0.33	31	Area	0.6	6.14
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.680	Cum	0.33	12	Area	0.6	2.38
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.1080	Cum	0.33	166	Area	0.6	32.87
	Bunts Hostel Road Median Ch.20.0 to Ch.455.0	Cum	0.33	435	0.6	0.6	51.68
	Consider 1/3rd Qty of Item No.1.1.7	**Cum**					**114.64**
1.1.3	KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)						
	13b-Hampankatta to PVS Circle-Island @ Ch.870.0	**Cum**	1	104	Area	0.6	62.40

Sr.No.	Item	Unit	No.	L	B	H	Qty.
	13b-Hampankatta to PVS Circle-Island @Ch.1120.0	**Cum**	1	5	Area	0.6	3.00
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.670	**Cum**	1	31	Area	0.6	18.60
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.680	**Cum**	1	12	Area	0.6	7.20
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.1080	**Cum**	1	166	Area	0.6	99.60
	Bunts Hostel Road Median Ch.20.0 to Ch.455.0	**Cum**	1	435	0.6	0.6	156.60
						Total	**347.40**
1.1.4	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)						
	Consider Same Qty. of 1.1.7	**Cum**					**347.40**
1.1.5	**Soil preparation of Lawn**						
	KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)						
	In rows 5 cm apart in both directions						
	13b-Hampankatta to PVS Circle-Island @ Ch.870.0	**Sqm**	1	104.00			104.00
	13b-Hampankatta to PVS Circle-Island @Ch.1120.0	**Sqm**	1	5.00			5.00
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.670	**Sqm**	1	31			31.00
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.680	**Sqm**	1	12			12.00
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.1080	**Sqm**	1	166.00			166.00
	Bunts Hostel Road Median Ch.20.0 to Ch.455.0	**Sqm**	1	435.00	0.6		261.00
						Total	**579.00**
1.1.6	ZOYSIA JAPONICA (MAT) (Non SOR Item)						
	13b-Hampankatta to PVS Circle-Island @	**Sqm**	1	104	Area		104.00
	13b-Hampankatta to PVS Circle-Island	**Sqm**	1	5	Area		5.00
	13a-Pvs Circle to Arya Samaj Road-Island @	**Sqm**	1	31	Area		31.00
	13a-Pvs Circle to Arya Samaj Road-Island @	**Sqm**	1	12	Area		12.00
	13a-Pvs Circle to Arya Samaj Road-Island @	**Sqm**	1	166	Area		166.00
	Bunts Hostel Road Median Ch.20.0 to Ch.455.0	**Sqm**	1	435	0.6		261.00
						Total	**579.00**

Sr.No.	Item	Unit	No.	L	B	H	Qty.
1.2	**IRRIGATION**						
1.2.1	supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees , sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Consider Same Qty. of 1.1.6) (Non SOR Item)						
	13b-Hampankatta to PVS Circle-Island @ Ch.870.0	Sqm	1	104	Area		104.00
	13b-Hampankatta to PVS Circle-Island @Ch.1120.0	Sqm	1	5	Area		5.00
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.670	Sqm	1	31	Area		31.00
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.680	Sqm	1	12	Area		12.00
	13a-Pvs Circle to Arya Samaj Road-Island @ Ch.1080	Sqm	1	166	Area		166.00
	Bunts Hostel Road Median Ch.20.0 to Ch.455.0	Sqm	1	435	0.6		261.00
						Total	**579.00**

Assistant Engineer
MSCL Mangaluru

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru

Name of the Work :- Manglore Smart City
3.3 Rate Analysis of SOFTSCAPE for DPR 4

RATE ANALYSIS - SOFTSCAPE

1.1.1	Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.27	**Rate**	**140.00**	**Cum**
1.1.2	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)			
	Basic rate		204	
	Add 10% For area weightage		20.4	
		Rate	**224.40**	**Cum**
1.1.3	KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)			
	Basic rate		103	
	Add 10% For area wightage		10.3	
		Rate	**113.30**	**Cum**
1.1.4	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28	**Rate**	**23.91**	**Cum**
1.1.5	**Soil preparation of Lawn** KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)			
	Basic rate		16	
	Add 10% For area wightage		1.92	
		Rate	**17.92**	**Sqm**

1.2	**TURF**			
1.2.1	ZOYSIA JAPONICA (MAT) (Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.32	**Rate**	**156.80**	**Sqm**
1.2	**IRRIGATION**			
1.2.1	supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees , sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.34	**Rate**	**560.00**	**Sqm**

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Executive Engineer
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General Manager
Technical
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Manglore Smart City
4.0 Rate Analysis for Kerb Stone

Sr.No.	Description	Unit	Qty	Rate/Unit	Amount	Remarks
1	Providing and laying at or near ground level factory made kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).					
	Kerb Dimension= Top Width=0.114m, Bottom Width=0.165 m, Height =0.4 m Details of cost 100 metre i.e. No. of kerb stones = 100/0.45=223 Nos. width of kerb stone =0.45m Precast C.C. Kerb stone M - 20 = 223x(((0.114+0.165)/2)*0.15+0.25*0.165))*0.45=6.23cum					
	Material					
	Precast C.C. Kerb stone M - 20	Cum	6.230	11874.13	73975.86	Rate attached
	Shuttering Work					
	Mortar 1:3 for fixing joints = 223x1x [((0.114+0.165)/2)*0.4*0.005] + (0.25x0.165x0.005) = 0.062cum. Cement mortar 1:3 (1 cement : 3 coarse sand)	Cum	0.032	5666.00	181.31	KSRB 1.3 Pg No 2
	Mason (brick layer) 1st class	day	2.500	466.20	1165.50	KSRB Pg No LIV
	Mason (brick layer) 2nd class	day	2.500	456.20	1140.50	
	Beldar	day	2.500	446.20	1115.50	
	Coolie	day	1.650	446.20	736.23	
	Total				78314.90	
	Add 1 % Water charges				783.15	
					79098.05	
	Add 10 % Contractor's profit				7909.81	
	Add 10% Contractor Overhead				7909.81	
	Cost of 6.22cum				**94917.66**	
	cost for 1 cum.				**15260.07**	A
	Cost per Kerb of width 0.45m =A X 0.0279cum (Vol of one Kerb)				**426**	Per No

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4.0 Rate Analysis for Water Table (Longitudinal Gutter)

Sr.No.	Description	Unit	Qty	Rate/Unit	Amount	Remarks
1	Providing and laying at or near ground level factory made kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).					
	Kerb Dimension= Top Width=0.075m, Bottom Width=0.1 m, Height =0.3 m Details of cost 100 metre i.e. No. of water table stones = 100/0.45=223 Nos. width =0.45m Precast C.C. Kerb stone M - 20 = 223x(((0.075+0.1)/2)*0.3)*0.45=2.63cum					
	Material					
	Precast C.C. Kerb stone M - 20	Cum	2.630	14622.97	38458.42	Rate attached
	Shuttering Work					
	Mortar 1:3 for fixing joints = 223x1x [((0.075+0.1)/2)*0.3*0.005] = 0.029cum. Cement mortar 1:3 (1 cement : 3 coarse sand)	Cum	0.029	6996.00	202.88	KSRB 1.3 Pg No 2
	Mason (brick layer) 1st class	day	2.000	466.20	932.40	KSRB Pg No LIV
	Mason (brick layer) 2nd class	day	2.000	456.20	912.40	
	Beldar	day	2.000	446.20	892.40	
	Coolie	day	1.650	446.20	736.23	
	Total				42134.73	
	Add 1 % Water charges				421.35	
					42556.08	
	Add 10 % Contractor's profit				4255.61	
	Add 10% Contractor Overhead				4255.61	
	Cost of 2.63cum				**51067.30**	
	cost for 1 cum.				**19417.22**	A
	Cost per Kerb of width 0.45m =A X 0.0118cum (Vol of one Kerb)				**229**	Per No

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4.0 Rate Analysis for Kerb Stone 900 mm High

Sr.No.	Description	Unit	Qty	Rate/Unit	Amount	Remarks
1	Providing and laying at or near ground level factory made kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).					
	Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m Details of cost 100 metre i.e. No. of kerb stones = 100/0.405=247 Nos. width of kerb stone =0.4m Precast C.C. Kerb stone M - 20 = 247x(((0.25+0.3)/2)*0.6+0.3*0.3))*0.405=25.5cum					
	Material					
	Precast C.C. Kerb stone M - 20	Cum	25.500	14381.53	366729.05	Rate attached
	Mortar 1:3 for fixing joints = 246x1x [((0.250+0.30)/2)*0.60*0.005] + (0.30x0.30x0.005) = 0.313cum. Cement mortar 1:3 (1 cement : 3 coarse sand)	Cum	0.300	5666.00	1699.80	KSRB 1.3 Pg No 2
	Mason (brick layer) 1st class	day	2.500	466.20	1165.50	KSRB Pg No LIV
	Mason (brick layer) 2nd class	day	2.500	456.20	1140.50	
	Beldar	day	2.500	446.20	1115.50	
	Coolie	day	1.650	446.20	736.23	
	Total				372586.58	
	Add 1 % Water charges				3725.87	
					376312.45	
	Add 10 % Contractor's profit				37631.24	
	Add 10% Contractor Overhead				37631.24	
	Cost of 25.5 cum				**451574.93**	
	cost for 1 cum.				**17708.82**	A
	Cost per Kerb of width 0.405m =A X 0.102cum (Vol of one Kerb)				**1806**	Per No

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5.0 Rate Analysis of Dry Lean Concrete - Footpath

	Description	Unit	Quantity	Rate Rs	Cost Rs	Remarks/ Input ref.
	Dry Lean Cement Concrete Sub- base					
	KSRRB M600-1.Construction of dry lean cement concrete mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,**Manually laid and compacting with palte compactor**,finishing and curing complete as per specifications.Morth specification No.601 (RA attached)					
	Unit = cum					
	Taking output = 450 cum (990 tonne)					
	a) Labour					
	Mate	day	1.120	446.200	499.74	Sl.No.12,Page No.LIV,
	Mazdoor skilled	day	6.000	446.200	2677.20	Sl.No.6,Page No.LIV,
	Mazdoor	day	22.000	446.200	9816.40	Sl.No.6,Page No.LIV,
	b) Machinery					
	Front end loader 1 cum bucket capacity	hour	6.000	593.00	3558.00	Sl.No.26,Page No.XXXXVII
	Cement concrete batch mix plant @ 75 cum per hour	hour	6.000	1525.00	9150.00	Sl.No.104,Page No.L
	Electric generator 100 KVA	hour	6.000	534.00	3204.00	Sl.No.92,Page No.XXXXIX
	Plate Compactor	Day	1.000	254.00	254.00	Sl.No.65,Page No.XXXXVIII
	Water tanker6 KL capacity	hour	8.000	550.00	4400.00	
	Tipper	tonne.km	990 x L	4.00	39600.00	
	Add 10 per cent of cost of carriage to cover cost of loading and unloading				3960.00	
	c) Material					
	Crushed stone coarse aggregate of 25 mm and 12.5 mm nominal sizes graded as per table 600-1 @ 0.90 cum/cum of concrete conforming to clause 602.2.4.	cum	405.000	1460.00	591300.00	800.00
	Coarse Sand as per IS: 383 @ 0.45 cum/cum of concrete	cum	203.000	1700.00	345100.00	800.00
	Cement @ 160 kg/cum of concrete	tonne	72.000	4906.00	353232.00	84.00
	Cost of water	KL	48.000	40.00	1920.00	818.00
	d) Overhead charges @ 10 % on (a+b+c)				136867.13	
	e) Contractor's profit @ 10 % on (a+b+c+d)				150553.85	
	Cost for 450 cum = a+b+c+d+e				1656092.33	
	Rate per cum = (a+b+c+d+e)/450				3680.21	
				say	***3680.00***	
Note	Quantity provided for aggregate is for estimating purpose. Exact quantity shall be as per mix design.					

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5.1 Rate Analysis for Granular Sub Base Under Footpath

Sr No	Ref. to MoRTH Spec.		Description	Unit	Quantity	Rate Rs	Cost Rs	Remarks/ Input ref.
4.1	**401**		**Granular Sub-Base with Close Graded Material (Table:- 400-1)**					
		A	**Plant Mix Method**					
			Construction of granular sub-base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per clause 401					
			Unit = cum					
			Taking output = 225 cum (450 tonne)					
			a) Labour					
			Mate	day	0.4	395	158	Sl.No.12,Page No.LIV,
			Mazdoor skilled	day	2	446.2	892.4	Sl.No.6,Page No.LIV,
			Mazdoor	day	8	446.2	3569.6	Sl.No.6,Page No.LIV,
			b) Machinery					
			Wet mix plant @ 60 tonne capacity per hour	hour	3	960	2880	1028
			Electric generator 100KVA	hour	6	534	3204	1321
			Water tanker 6 KL capacity 5 km lead with one trip per hour	hour	4.5	51.5	231.75	1032
			Front end loader 1 cum bucket capacity	hour	6	593	3558	1012
			Tipper 10 tonne	tonne.km	450 x L	4	28800	
			Add 10 per cent of cost of carriage to cover loading and unloading				2880	
			Motor Grader 110 HP	hour	6	2125	12750	
			Plate Compactor	Day	1	254	254	Sl.No.65,Page No.XXXXVIII
			c) Material					
			Close graded Granular sub-base Material as per table 400-1					
			For Grading-II Material					
			53 mm to 9.5 mm @ 50 per cent	cum	144	1460	210240	M-013
			9.5 mm to 2.36 mm @ 20 per cent	cum	57	1340	76380	M-017
			2.36 mm below @ 30 per cent	cum	86.4	1150	99360	M-020
			Cost of water	KL	27	40	1080	Page No.V,Sl.No.758
4.1A		**(i)**	**Rate per cum for grading-II Material**					
			d) Overhead charges @ 10% on (a+b+c)				44623.78	
			e) Contractor's profit @ 10% on (a+b+c+d)				49086.15	
			Cost for 225 cum = a+b+c+d+e				539947.7	
			Rate per cum = (a+b+c+d+e)/225				2399.767	
						say	***2400***	

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6.0 Rate Analysis of taking out paver block

Sr.No.	Description	Unit	Quantity	Rate	Amount	Reference
1	**Taking out existing CC interlocking paver blocks** from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.					
	Details of cost for 10 sqm.					
a	Labour					
b	Beldar	Day	0.25	446.2	111.55	KPWD 16-17 SOR, Pg No.LIV Sl No.5
c	Collie	Day	1	446.2	446.2	KPWD16-17 SOR, Pg No.LIV,Sl No.6
d	Sundries	LS	2.7	1.73	4.67	CPWD Pg No 29,
	Total				562.42	
e	Add 1% Water Charges				5.62	
	Total				568.04	
f	Add 10 % Contractor's profit				56.8	
g	Add 10 % Contractor's overheads				56.804	
	Cost of 10 sqm				681.644	
	Cost of 1 sqm				**68.16**	

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8.0 Summary for Maintenance		
Sr.No.	**description**	**Total Amount Rs.**
1	2nd year Maintenance	3,839,432.00
2	3rd year Maintenance	4,014,226.00
3	4th year Maintenance	4,116,207.00
	Total Maintenance Amount	**11,969,865.00**
	GST @12% for Maintenance Period on SOR Base Items	908,101.00
	GST @18% for Maintenance Period on Market Base Items	408,122.00
	Total	**13,286,088.00**

Note: Maintenance cost is approved by KUIDFC

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Name of the Work :- Mangalore Smart City

8.1.0 Abstract for Maintenance of Road and Other Work for DPR 4-1st Year

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
	Civil Works				
1.00	**Maintenance for 1st Year:** **Taking out existing CC interlocking paver blocks** from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)	Sqm	14.00	77.98	1092
2.00	**Maintenance for 1st Year:** KSRRB M200.**Dismantling of cement concrete pavement by mechanical means** using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Page No 138,Sl No : 18.47)	Cum	18.38	1028.46	18,903
3.00	**Maintenance for 1st Year:** KSRRB M200-**Dismantaling of kerb Stone** and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202. (Page No.139,S.I.No.18.49)	Rmt	20.00	13.73	275
4.00	**Maintenance for 1st Year:** KSRRB M200-13.1. **Dismantling of existing structures** like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 16-17,18.20,Page No.137)	Cum	20.00	446.16	8,923
5.00	**Maintenance for 1st Year:** KSRRB M200-12.1. **Dismantling of existing structures** like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. **i)Dismantaling Brick/Tile work B.In Cement mortar** (Page No 137,Sl No : 18.23)	Cum	3.45	401.54	1385
6.00	**Maintenance for 1st Year:** KSRRB M300-14. **Excavation for roadwork in all types of soil** with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes,in accordance with requirements of lines and grades and cross sections,and transporting disposal location up to a lead of 1.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km) (Page No 143,Sl No : 19.14)	Cum	250.00	57.60	14,400
7.00	**Maintenance for 1st Year:** KSRB 2-4 : **Refilling available earth** around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 16-17,SI No.2.11,Pg. No.6)	Cum	75.00	137.28	10,296
8.00	**Maintenance for 1st Year:** KSRRB 300-Compaction KSRRB 300-58. **Compaction of original ground** with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 16-17,SI No.19.64,Pg. No.149)	Sqm	500.00	6.86	3,430

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
9.00	**Maintenance for 1st Year:** KSRB 4-1.6 ; Providing and laying in position **plain cement concrete of mix M15 Grade** with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, **in foundation, plinth and cills**, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2. (P.No.12, I.No. 4.6 of PWD SR 2015-16)	Cum	7.50	6749.60	50,622
10.00	**Maintenance for 1st Year:** KSRRB M400-6.1. Construction of granular sub-base by providing close graded crushed stone aggregates of granite / trap / basalt material, mixing in a mechaical mix plant at OMC, carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with Plate compactor to achieve the desired density, complete as per specifications. A. Plant Mix Method. - Close graded granular sub-base material as per 400-1 For Grading- II Material	Cum	18.75	2477.90	,46,461
11.00	**Maintenance for 1st Year:** KSRB 4.2.1 : Providing and laying in position **reiforcement cement concrete of design Mix M25** with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications. (Page No 13,Sl No : 4.10)	Cum	48.00	7090.51	3,40,344
12.00	**Maintenance for 1st Year:** KSRB 4.6.1 Providing and removing **centering, shuttering, strutting, propping** etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2 (Page No 15,Sl No : 4.28)	Sqm	360.00	300.87	108,313
13.00	**Maintenance for 1st Year:** KSRB 4.9.2 :**Providing T.M.T steel reinforcement** for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	MT	3.84	80974.61	3,10,943
14.00	**Maintenance for 1st Year:** KSRRB M300-**Construction of Subgrade**. KSRRB M300-55. Construction of sub-grade with approved material Gravel/Murrum with all lifts & leads, transporting to site, spreading, grading to required slope and compacted to meet requirement of Table No. 300-2 complete as per specifications (including cost of earth, watering charges & compaction by vibratory rollercompaction by vibratory roller to 97% of proctors density) MORTH Specification No. 305	Cum	36.75	643.19	23,637
15.00	**Maintenance for 1st Year:** KSRRB M600-1.Construction of **dry lean cement concrete** mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes double drum vibratory roller,finishing and curing complete as per specifications.Morth specification No.601 (Page No 176,Sl No : 22.1)	Cum	7.35	4630.91	34,037

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
16.00	**Maintenance for 1st Year:** KSRRB M600-1.Construction of **dry lean cement concrete** mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,**Manually laid and compacting with palte compactor**,finishing and curing complete as per specifications.Morth specification No.601 (RA attached)	Cum	20.00	4209.92	84,198
17.00	**Maintenance for 1st Year:** KSSRRB M600-2.Construction of unreinforced,dowel jointed,**plain cement concrete pavement** over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with **M40** (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,Sl No : 22.2.2)	Cum	16.91	6595.16	1,11,524
18.00	**Maintenance for 1st Year:** Providing and placing **joint sealant compound** of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower (Non SOR Item)	Rmt	35.00	119.60	4,186
19.00	**Maintenance for 1st Year:** KSRRB 3000 **Repair of Joint Grooves** with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Page No 257,Sl No : 35.8)	Rmt	50.00	378.66	18,933
20.00	**Maintenance for 1st Year:** Providing and laying at or near ground level factory made **kerb stone of M-20** grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). (RA Attached)	Cum	0.10	20258.89	2,026
21.00	**Maintenance for 1st Year:** Providin and fixing **pre cast solid concrete Kerb stones** as per the drawing**,**made out of CC 1:2:4 and Jointed with CM 1:3 and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,Sl No : 5.3)	Cum	2.51	17710.96	44,455

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
22.00	**Maintenance for 1st Year:** Providin and fixing **pre cast solid concrete water table(longitudinal gutter)** as per the drawing**,**made out of CC 1:2:4 and jointed with CM 1:3 and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,Sl No : 5.3)	Cum	0.30	17710.96	5,313
23.00	**Maintenance for 1st Year:** Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	m	100.00	27.46	2,746
24.00	**Maintenance for 1st Year:** KSRRB 800-1. **Painting two coats** after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 (Page No 182,Sl No : 24.1)	Sqm	11.55	91.52	1057
25.00	**Maintenance for 1st Year:** P/F FRP Recess Cover (2.5T) 900mmx600 mm with frame on Manhole for electrical ducting.	Nos.	3.00	8395.92	25,188
26.00	**Maintenance for 1st Year:** P/F FRP Recess Cover (2.5T) 600mmx450 mm with frame at raised footpath on SWD. (Rate analysis attached)	Nos.	8.00	5487.63	43,901
27.00	**Maintenance for 1st Year:** P/F FRP Water gully cover with frame (25T) 600mmx500 mm at level footpath. (Rate analysis attached)	Nos.	1.00	6048.15	6,048
28.00	**Maintenance for 1st Year:** **Providing gully pipe lowering,laying of PVC 100 mm dia pipes** to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line.The rate shall include all jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,Item No.7,KUWSDB SOR 2016-17)	Rmt	6.00	313.58	1,881
29.00	**Maintenance for 1st Year:** KSRB 11-18-17.1 : **Providing and fixing sand cast iron trap of 100mm dia**, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, Sl.No.12.89)	Nos.	10.00	949.52	9,495
30.00	**Maintenance for 1st Year:** KSRRB M800-29.3.Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services. (PWD SR 2015-16,Sl.No.24.36)	Rmt	4.00	5745.17	22,981
31.00	**Maintenance for 1st Year:** **Providing and laying Dia 200mm HDPE Electrical pipe Conduits** with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)	Rmt	150.00	1619.16	2,42,874

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
32.00	**Maintenance for 1st Year:** **Providing and laying Dia 160mm HDPE Electrical pipe Conduits** with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	100.00	1111.66	1,11,166
33.00	**Maintenance for 1st Year:** **Providing and Fixing Spacers for Power Ducts of size 200 mm,** to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	20.00	1143.42	22,868
34.00	**Maintenance for 1st Year:** **Providing and Fixixng Spacers for Power Ducts of size 160 mm,** to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	20.00	2219.58	44,392
35.00	**Maintenance for 1st Year:** **Supplying 7-way 40mm HDPE pipe Multi-way Duct** Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	40.00	625.35	25,014
36.00	**Maintenance for 1st Year:** **Supplying and Application charges required for stamping** the freshly laid new concrete (Concrete rate is not included in this item) including finishing and colouring the top surface accurately to the required level,shape and size using approved colour shade and staping it using approved stamp pattern and antiquitting it on top with approved colour.Sealing entire area with concrete sealer.	Sqm	200.00	713.86	1,42,772
37.00	**Maintenance for 1st Year:** Providing and laying heavy duty **cobble stones 75mm thick,** using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Page No 101,Sl No : 14.7)	Sqm	30.00	1274.42	38,233
38.00	**Maintenance for 1st Year:** KSRRB M500-17. Providing and laying **dense graded bituminous macadam** using crushed aggregates of specified grading, premixed with VG30 grade bituminous binder and, transporting the hot mix to work site, laying to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH table 500-10 complete in all respects complete as per specifications.. MORTH Specification No. 507 -using 100/120 TPH capacity H.M.P. with sensor paver Gr-II (50 mm to 75 mm) with 4.5 % VG-30 Bitumen(KPWD 16-17,S.I.No.21.17.1,Page No.163)	Cum	12.00	8332.90	99,995
39.00	**Maintenance for 1st Year:** KSRRB M500-19. Providing and laying **bituminous concrete 40 mm thick** with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects complete as per specifications. MORTH Specification No. 509 -using40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 45 mm) with 6 % VG-40 Bitumen	Cum	3.20	10022.58	32,072

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
40.00	**Maintenance for 1st Year:** **KSRRB M800 Road markers / Road stud** KSRRB M800-35. Providing and fixing of road stud 100x 100 mm, diecast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded in a suitable bituminous grout or epoxy mortar, all as per BS: 873 part 4:1973 complete as per specifications	Nos.	10.00	330.62	3,306
41.00	**Maintenance for 1st Year:** **Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface**:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (Page No 192,Sl No : 24.57)	Sqm	30.00	490.78	14,723
42.00	**Maintenance for 1st Year:** Operation and Maintenance for **eToilets** Stainless Steel Public Model as specified in Road and Other works BOQ Item No.45.	Nos	3.00	63648.00	1,90,944
43.00	**Maintenance for 1st Year:** Providing and fixing of **S.S. Bollards(SS304**) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	2.00	4680.00	9,360
44.00	**Maintenance for 1st Year:** Providing and fixing of **railing as detail design in MS HOLLOW SECTION and bars** (shop drawing to be approved),with vertical support of 0.9m @2.2mc/c , all complete to the satisfaction of the Landscape architect.(Non SOR Item)	MT	0.30	104000.00	31,200
45.00	**Maintenance for 1st Year:** Excavation and removal of silt and silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts. For Desilting of drains and grit chambers including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Cum	1015.00	186.16	1,88,952
46.00	**Maintenance for 1st Year:** **Extra Lead for Disposing** off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-**Earth**	Cum	200.00	107.08	21,416
47.00	**Maintenance for 1st Year:** **Extra Lead for Disposing** off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-**Debris**	Cum	70.00	107.54	7,528
	Electrical Works				
48.00	**Maintenance for 1st Year**: Dismantling of pole/ street light standard/ strut embedded in cement concrete foundation etc. as required (Delhi analysis of rates E & M 2016, item 12.42, pg 395))	Nos.	1.00	1747.88	1748
49.00	**Maintenance for 1st Year:** Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No. 5.14.5)	Nos.	1.00	12916.80	12,917

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
50.00	**Maintenance for 1st Year:** Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR Sl No.5.14.2)	Nos.	1.00	7693.92	7,694
51.00	**Maintenance for 1st Year:** Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR Sl No.5.18.5)	Nos.	1.00	3681.60	3,682
52.00	**Maintenance for 1st Year:** Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR Sl No.5.18.2)	Nos.	1.00	2496.00	2,496
53.00	**Maintenance for 1st Year:** Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole.-8mtr and above street light pole (Ref Electrical SOR Sl No.16.28.3)	Nos.	145.00	644.80	93,496
54.00	**Maintenance for 1st Year:** Supply, installation, testing and commissioning of outdoor junction box for mounting MCB/Contactors with all required accessories and componenets	Nos.	1.00	12254.24	12,254
55.00	**Maintenance for 1st Year:** Supply and fixing of miniature circuit breaker on exisiting board using necessasary fixing material and 'C' type curve, indicator ON/OFF, energy cross-3 with short circuit breaking capacity of 10 KA complete wiring as required confirming to IEC 60898 5- 32A TPN Electrical SOR- 6.16.5)	Nos.	1.00	1608.88	1,609
	LT Cable				
56.00	**Maintenance for 1st Year**: Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR Sl No.7.5,7.5.4)	m	60.00	121.68	7,301
57.00	**Maintenance for 1st Year:** Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	10.00	84.86	849
58.00	**Maintenance for 1st Year:** Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR Sl No.7.21,7.21.6)	Nos	10.00	11.76	118
59.00	**Maintenance for 1st Year:** Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR Sl No.7.21.2)	Nos	8.00	3.24	26
	Earthing system				

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
60.00	**Maintenance for 1st Year:** Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,Sl No.7.23.6)	Kit	1.00	5720.00	5,720
61.00	**Maintenance for 1st Year:** Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR Sl No.7.22.3)	Rmt	50.00	20.28	1,014
	Landcaping Works				
	SOIL MIXES and Ground Preparation				
62.00	**Maintenance for 1st Year:** Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	1.50	145.60	218
63.00	**Maintenance for 1st Year:** KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)	Cum	0.75	233.38	175
64.00	**Maintenance for 1st Year:** KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)	Cum	2.00	117.83	236
65.00	**Maintenance for 1st Year:** Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	2.00	24.87	50
	Soil preparation of Lawn				
66.00	**Maintenance for 2nd Year:** Maintenance of lawns or Turfing of slopes (rough grassing) for a period of one year including watering etc complete including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Sqm	382.19	117.83	45,033
	TURF				
67.00	**Maintenance for 1st Year:** ZOYSIA JAPONICA (MAT) (Non SOR Item)	Sqm	3.00	163.07	489
	IRRIGATION				
68.00	**Maintenance for 1st Year:** Watering with tanker to landscape area and plants for one year	Year	1.00	31085.11	31,085
69.00	**Maintenance for 1st Year:** supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees , sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	3.00	582.40	1,747
				Total	**28,13,765**

Executive Engineer
MSCL Mangaluru

General Manager Technical
MSCL Mangaluru