

## BILL OF QUANTITY

**Name of work : Construction of Road at SIPC Location 2 (Kandla) Stage 2 for Development of Smart Industrial Port City(SIPC) at Kandla-Gandhidham-Adipur Complex (3 years Maintenance period)**

TI NO	Description Of Item	Qty	Rate		Unit		Amount
			In Fig	In Words	In Fig	In Words	
	<b>PART -A</b>						
1	Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom						
	On bituminous surface @ 0.25kg/sqm	<b>48000.00</b>				<b>M2</b>	
2	Providing and laying bituminous macadam using crushedstone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laidover a previously prepared surface with paver finisher equiped with electronic sensor to the required grade,level and alignment and rolling with smooth wheeled,vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifcations and directions of Engineer-in-Charge.						
	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weightof total mix) prepared in Batch Type Hot Mix Plant of 60-90 TPH capacity.	<b>4594.00</b>				<b>MT</b>	

<b>3</b>	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-inCharge.						
	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	<b>8460.00</b>				<b>MT</b>	
<b>4</b>	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.						

	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity	<b>2880.00</b>				<b>MT</b>	
<b>5</b>	Earth work in excavation by mechanical means (Hydraulic excavator) /manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.						
	All kinds of soil.	<b>1848.00</b>				<b>M3</b>	
<b>6</b>	Filling available excavated earth(excluding rock) in trenches, plinth,sides of foundations etc. in layersnot exceeding 20cm in depth,consolidating each deposited layerby ramming and watering, lead up to50 m and lift upto 1.5 m.	<b>554.00</b>				<b>M3</b>	
<b>7</b>	Disposal of unsuitable material up to 1 km leads & lift including levelling & dressing as directed by engineer- In- charge	<b>1294.00</b>				<b>M3</b>	
<b>8</b>	Supplying and filling in plinth with sand under floors,including watering, ramming, consolidating and dressing complete.	<b>555.00</b>				<b>M3</b>	

<b>9</b>	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level : 1:4:8 (1 Cement : 4 coarse sand :	<b>555.00</b>				<b>M3</b>	
<b>10</b>	Centering and shuttering including strutting, propping etc. and removal of form for all heights :						
<b>a</b>	Foundations, footings, bases of columns, etc. for mass concrete	<b>1548.00</b>				<b>M2</b>	
<b>b</b>	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	<b>6449.00</b>				<b>M2</b>	
<b>11</b>	Providing and laying in position machine batched and machine mixed design mix M-30 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge.						
<b>a</b>	Footing	<b>606.00</b>				<b>M3</b>	
<b>b</b>	Walls	<b>746.00</b>				<b>M3</b>	

<b>12</b>	Steel reinforcement for R.C.C.work including straightening,cutting,bending, placing in position and binding all complete , Thermo-Mechanically treated bars of grade Fe 500 D or more.	<b>148720.00</b>				<b>KG</b>	
<b>13</b>	12 mm cement plaster of mix :						
	1:4 (1 cement: 4 fine sand)	<b>12164.00</b>				<b>M2</b>	
<b>14</b>	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade : Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	<b>1895.00</b>				<b>M2</b>	
<b>15</b>	Providing and laying factory made chamfered edge Cement Concrete paver blocks In foot path, park & lawns driveway or light & traffic parking etc. of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of course sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand, all complete as per manufacturer's specifications & direction of Engineer-in-Charge	<b>2900.00</b>				<b>M2</b>	

<b>16</b>	Providing and applying 2.5 mm thick road marking strips (retro-reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per direction of Engineer-incharge and accordance with applicable specifications.	<b>1203.00</b>				<b>M2</b>	
<b>17</b>	Providing and fixing 15x15x90 cm boundary stone of hard stone with top 30 cm chisel dressed on all four sides including top (cost of excavation, refilling and concrete etc. to be paid for separately).	<b>32.00</b>				<b>Each</b>	
<b>18</b>	Providing embankment for road with quarry spall material including cost of excavation, royalty, loading, unloading, transportation and spreading in uniform layers of specified thickness with motor grader on prepared surface with wattering and compacting with vibratory power roller to achive the desired densitey, complete as per specifications and directions of Engineer -In-Charge.	<b>10842.00</b>				<b>M3</b>	
	<b>PART - B</b>						
	Maintenance of Road and other structures for 2nd and 3rd year						

1	Providing and applying tack coat using bitumen emulsion conforming to IS: 8887, using emulsion pressure distributor including preparing the surface & cleaning with mechanical broom						
	On bituminous surface @ 0.25kg/sqm	<b>2400.00</b>				<b>M2</b>	
2	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-inCharge.						
	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	<b>423.00</b>				<b>MT</b>	

3	Providing and laying Bituminous concrete using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equiped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction and density as per specification, complete and as per directions of Engineer-in-Charge.						
	40/50 mm compacted thickness with bitumen of grade VG-30 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) prepared in drum Type Hot Mix Plant of 60-90 TPH capacity	144.00				MT	
	<b>CONTRACTOR</b>			<b>EXECUTIVE ENGINEER ( C )</b>			