SCHEDULE OF QUANTITIES - CIVIL

Name of Work: Re-carpeting of existing road in Indian Institute of Soil Science(IISS) Campus at Navi Bagh, Bhopal (M.P.).

SLNo	Description	Qty	Unit	Rate	Amount (Rs.)	DSR No.	
1	**EARTH WORK**					**2**	
1.1	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, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					2.8	
1.1.1	All kinds of soil.	85	cum	260.30	22126.00	2.8.1	SR
1.2	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m 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 soils as directed, within a lead of 50 m.					2.9	
1.2.1	Ordinary rock	20	cum	632.95	12659.00	2.9.1	SR
1.3	Excavating trenches by mechinical / manual means of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, for all depth, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m:					2.1	
1.3.1	All kinds of soil					2.10.1	
1.3.1.1	Pipes, cables etc. exceeding 80 mm dia. but not exceeding 300 mm dia	30	metre	352.15	10565.00	2.10.1.2	SR
1.4	Excavating trenches of required width for pipes, cables, etc, including excavation for sockets, depth upto 1.5 m, including getting out the excavated materials, returning the soil as required in layers not exceeding 20 cm in depth, including consolidating each deposited layers by ramming, watering etc., stacking serviceable material for measurements and disposal of unserviceable material as directed, within a lead of 50 m :					2.13	
1.4.1	Ordinary rock:					2.13.1	
1.4.1.1	Pipes, cables etc. exceeding 80 mm dia but not exceeding 300 mm dia	30	metre	998.65	29960.00	2.13.1.2	SR
1.5	Excavating, supplying, stacking and filling of local earth (including royalty) by mechanical transport upto a lead of 5km also including ramming and watering of the earth in layers not exceeding 20 cm in foundation trenches, plinth, sides of foundation etc. complete for all lift.	320	cum	700.50	224160.00	2.25A	SR
	Sub-Total				**299470.00**		
2	**CEMENT CONCRETE (CAST IN SITU)**					**4**	
2.1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level :					4.1	
2.1.1	1:5:10 (1 cement : 5 coarse sand (zone-lll) derived from natural sources : 10 graded stone aggregate 40 mm nominal size derived from natural sources)	20	cum	6518.60	130372.00	4.1.10	SR
	Sub-Total				**130372.00**		
3	**REINFORCED CEMENT CONCRETE**					**5**	
3.1	Centering and shuttering including strutting, propping etc. and removal of form for					5.9	
3.1.1	Foundations, footings, bases of columns, etc. for mass concrete	18	sqm	392.15	7059.00	5.9.1	SR
3.1.2	Walls (any thickness) including attached pilasters, butteresses, plinth and string courses etc.	100	sqm	842.50	84250.00	5.9.2	SR

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3.2	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.					5.22A	
3.2.1	Low Alloy Steel reinforcement bar of minimum Fe-550D grade.	1530	kg	107.85	165011.00	5.22A.6	SR
3.3	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge, for the following grades of concrete.: Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.					5.33	
3.3.1	All works upto plinth level					5.33.1	
3.3.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	17	cum	9504.75	161581.00	5.33.1.1	SR
3.4	Add for using extra cement in the items of design mix over and above the specified cement content therein.	1.7	quintal	733.50	1247.00	5.35	SR
	Sub-Total				**419148.00**		
4	**ROAD WORK**					**16**	
4.1	Providing and applying tack coat using bitumen emulsion conforming to IS:8887, using emulsion pressure distributer including preparing the surface & cleaning with mechanical broom.					16.31	
4.1.1	With medium setting bitumen emulsion					16.31.2	
4.1.1.1	On W.B.M / W.M.M. @ 0.4kg/sqm	1050	sqm	21.20	22260.00	16.31.2.1	SR
4.1.1.2	On bituminous surface @ 0.25kg/sqm	11700	sqm	14.05	164385.00	16.31.2.2	SR
4.2	Providing and fixing Glow studs of size 100x20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acryloretrite) or HIP (High impact polystyrene) or ABS having electronically welded micro- prismatic lens with abrasion resistant coating as approved by Engineer in charge. The glow stud shall support a load of 13635 kg tested in accordance with ASTM D4280. The slope of retro- reflective surface shall be 35 (+/- 5) degress to base .The reflective panels on both sides with at least 12 cm of reflective area up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM I: 809 as recommended in BS: 873 part 4 : 1973. The studs shall be fixed to the Road surface using the adhesive conforming to IS, as per procedure recommended by the manufacturer complete and as per direction of Engineer-in-charge.	600	each	206.30	123780.00	16.5	SR

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SLNo	Description	Qty	Unit	Rate	Amount (Rs.)	DSR No.	
4.3	Providing and laying bituminous macadam using crushed stone aggregates of specified grading premixed with bituminous binder, transported to site by tippers, laid over 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 specificatons and directions of Engineer-in-Charge.					16.55	
4.3.1	50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 3.50% (percentage by weight of total mix) prepared in Drum Type Hot Mix Plant of 60-90 TPH capacity.	890	cum	8413.00	7487570.00	16.55.2	SR
4.4	Providing and laying semi- dense 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.					16.56	
4.4.1	25 mm 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.	12700	sqm	275.30	3496310.00	16.56.2	SR
4.5	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-in-charge and accordance with applicable specifications.	1020	sqm	747.80	762756.00	16.62	SR
4.6	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer- in-Charge.					16.78	
4.6.1	With material conforming to Grade-I (size range 75 mm to 0.075 mm) having CBR Value-30	250	cum	2784.00	696000.00	16.78.1	SR
4.7	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paver finisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achievethe desired density, complete as per specifications and directions of Engineer-in-Charge.	235	cum	2914.30	684861.00	16.79	SR

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SLNo	Description	Qty	Unit	Rate	Amount (Rs.)	DSR No.	
4.8	Providing and laying factory made chamfered edge Cement Concrete paver blocks in footpath, parks, lawns, drive ways 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 50 mm thick compacted bed of 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. complete all as per direction of Engineer-in-Charge.					16.91	
4.8.1	80 mm thick C.C. paver block of M-35 grade with approved colour design and pattern.	1255	sqm	1091.50	1369833.00	16.91.2	SR
	Sub-Total				**14807755.00**		
5	**DRAINAGE**					**19**	
5.1	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :					19.6	
5.1.1	300 mm dia. R.C.C. pipe	84	metre	994.30	83521.00	19.6.4	SR
	Sub-Total				**83521.00**		
	Total				**15740266.00**		
	Modified Estimated Cost after using correction factor on DSR 2023 on account of GST @ 0.973 * 15740266 = 15315279				**15315279.00**		
	Cost Index				0.00		
	Total				**15315279.00**		
6	**NON SCHEDULE ITEMS**					**NS**	
6.1	Providing and fixing Polycarbonate Solar road studs of approved brand and manufacturer. Constructed with robust Polycarbonate bodies as per following specifications: (1) Size : 120 - 130 mm dia. (2)Thickness: 20-25 mm thickness with load carrying capacity 14.00 Tonne. (3) Solar Powered LED 360 degree illumination with retro reflection lens. (4) Active blinking rate 1.25 Hertz (min.) with IP -68 water proofing rating. Complete and as per direction of Engineer - in - Charge.	55	Each	2214.84	121816.00	NS	
	Sub-Total				**121816.00**		
	Total				**15437095.00**		