

CONSTRUCTION - I DIVISION
Schudled B

Name of Work: Up-Gradation jof Road From Junction of Tuna Jetty Road To Take Off Point At Tuna Tekra

Sr.No.	Description	QTY	Unit	Amount
	<u>PART - A</u>			
1	<i>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 kind of soil</i>			
		2250.00	m3	
2	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete			
		1050.00	m3	
3	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 : 8 graded stone aggregate 40 mm nominal size).			
		1050.00	m3	
4	Providing and laying in position machine batched and machine mixed design mix M-30grade 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.“(Note :- Cement content considered in this item is @ 340 kg/cum.“Excess/ less cement used as per design mix is payable/recoverable separately)			
		3450.00	m3	
5	Steel reinforcement for R.C.C. work including straightening, cutting,bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe- 500D or more.			
		544500.00	kg	

Sr.No.	Description	QTY	Unit	Amount
6	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 paverfinisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	10800.00	m3	
7	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 W.B.M / W.M.M./ DBM/BC @ 0.4kg/sqm	288000.00	m2	
8	Providing embankment for approach road with quarry spall / granular material material including cost of excavation, royalty, loading, unloading, transportation, spreading in layers, comaction with truck in first layer of 1mt from existing ground to required level, levelling, dressing side slopes , watering over the layers as desired by EIC etc., along with spreading of dust over the surface complete with all labour and materials complete including settlement etc., as directed by the engineer in charge.	75000.00	m3	
9	Providing embankment for approach road with quarry spall / granular material material including cost of excavation, royalty, loading, unloading, transportation, spreading in layers, comaction with road roller 8 to 10 t capacity for remaining layers to achive the omc from existing ground to required level, levelling, dressing side slopes , watering over the layers as desired by EIC etc., along with spreading of dust over the surface complete with all labour and materials complete including settlement etc., as directed by the engineer in charge.	468000.00	m3	
10	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.			

Sr.No.	Description	QTY	Unit	Amount
11	<p>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.</p> <p>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 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.</p>	5760.00	m3	
12	<p>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 electronicsensor 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 direction of EIC</p> <p>40/50 mm compacted thickness with bitumen of grade PMB-40 @ 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.</p>	7200.00	m3	
13	<p>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.</p>	2880.00	m3	
		1800.00	m2	

Sr.No.	Description	QTY	Unit	Amount
14	Providing, hoisting and fixing above plinth level up to floor five level precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, RCC barrier, plain window sills and the like, including the cost of required centering, shuttering but, excluding cost of reinforcement, with 1:1.5:3 (1 cement : 1.5 coarse sand 3 graded stone aggregate 20 mm nominal size) up to the the lead of 3KM	290.00	m3	
15	Supplying and stacking and laying of hard stone (for stone pitching) 22.5 cm thick at site Dry stone pitching 22.5 cm thick laid in courses and required profile with hammer dressed stones having no side less than 15 cm, with minimum depth of 20 cm cement and sand bed (1:6) including preparing the bedding surface etc. all complete. .	23400.00	m3	
16	Providing and fixing Glow studs of size 100x20mm 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 EIC	1200.00	no	

Sr.No.	Description	QTY	Unit	Amount
17	Manufacturing, supplying and fixing retro reflective overhead signage boards madeup of 2 mm thick aluminium sheet, face to be fully covered with high intensity and encapsulated lens type heat activated retro reflective sheeting conforming to type III of ASTM-D-4956-01 as approved by Engineer-in-charge, letters, borders etc. as per IRC 67-2001 in silver white with blue colour back ground and with high intensity grade, pasted on substrate by pressure sensitive adhesive backing which shall be activated by applying pressure conforming to class II of ASTM-D-4956-01 and fixing the same to the plate of structural frame work by means of suitable sized aluminium alloys, rivets or bolts & nuts @ 300 mm centre to centre all along the periphery as well as in two vertical rows along with theft resistant measures, including the cost of painting with two or more coats of epoxy paint in grey colour on the back side of aluminium sheet including appropriate priming coat. The rate includes the cost of rounding off the 186 corners, owering down the structural frame work from the gantry, fixing and erecting the same in position all complete as per drawings, specification and direction of the engineer-in charge.(Structural frame work including M.S. plate to be provided separately. Rectangular area of the sheet only shall be measured for payment).	45.00	m2	
18	Structural steel work riveted, bolted or welded in built up sections,trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete. (for sign board including all structural members)	60000.00	kg	
19	Providing and erecting "W" metal beam crash barrier comprising of 3mm thick corrugated sheet metal beam rail 70 cm above toad/ground level, fixed on ISMC seires channel vertical post, 150x75x5mm spaced 2mt center to centre 1.8m high, 1.1 below ground/road level, all steel parts and getments to galvanised by hot dip ptocess, all fittings to confirm to IS 1367 and 1364 metal beam rail to fixed on the vertical post with a spacer of cannel section 150x75x5mm, 330mm long complete as per caluse 810 of MORTH	5700.0000	RMT	
20	Painting with higloss sunthethic enamel paint two coats to give an even and smooth surface for protection of exposed concrete/masonry portion of paratet, kerb painting and repairing wherever necessary complete as approval of Engineer in Charge	19800.00	m2	
21	20 mm cement plaster of mix : 1:4 (1 cement: 4 fine sand)	12000.00	m2	

Sr.No.	Description	QTY	Unit	Amount
		<u>TOTAL PART - A</u>		
	Part B			
	<u>(PILING WORK)</u>			
1	Shift and set up piling plants and equipments at each pile location including all materials as directed by EIC	20.00	No.	
2	Supply, fabricate mild steel liners plates with shoe including transport, alignment,welding, placing in position and driving up to any depth.	153.91	MT	
3	Boring through all type of soil strata including stiff clay and dense sand (I) upto -22.00	540.00	Rmt.	
	(II) From level -22.00 to Founding Level.	120.00	Rmt.	
4	Supply and place in position design mix cement controlled concrete of grade M-40 in pile shaft by means of tremmie or any other approved method using 20 mm MSA including cost of all labour and materials but excluding the cost of steel reinforcement.	932.84	M ³	
5	Supplying, cutting, bending tying with 1.5mm dia annealed binding wire and placing in position reinforcement cages for insitu reinforced cement concrete piles including cleaning,wire shing,straightening tack/lap/butt welding with approved electrodes etc., with all labour and materials complete. Thermo-mechanically treated corrosion resistant FE 500D	167911.20	KG	
6	Cut and dress each pile head to required lines and levels.	20.00	No.	
7	Providing and casting, lifting, shifting and placing in position of precast units of design mix controlled concrete grade M- 40 including weigh batching, mixing, vibrating, curing etc., complete with all labour, material, plants, equipments etc. as directed by engineer in charge. (Rate shall be inclusive of providing, fixing and stripping of formwork but exclusive of steel reinforcement bars.)			
	Total Precast Qty	575.65	M ³	

Sr.No.	Description	QTY	Unit	Amount
8	Supply and place in position to lines and levels cast-in-situ design mix cement controlled concrete of grade M-40 using cement sand, 20mm MSA including providing form work, shuttering, machine mixing, compacting, curing of concrete, centering including providing pockets, opening, recesses, chamfering wherever required and rendering if required to give smooth and even surface in all shape etc.complete as directed withall labour and materials but excluding the cost of steel reinforcement for pile muff, pile caps, deck beams, slab,kerbs, parapets etc.	678.00	M ³	
9	Supply and place in position to lines and levels cast-in-situ design mix cement concrete of grade M-30 using cement, 20 mm MSA for wearing coat of average thickness of 80mm including providing of form work,weigh batching machine mixing, placing in panels, forming slopes, compacting curing etc. complete with all labour and materials .(a) Wearing coat 80mm thick	1320.00	M ²	
10	Supplying, cutting, bending, tying with 1.50 mm dia annealed binding wire and placing in position reinforcement cages for precast, cast in situ concrete etc. including cleaning, wire brushing,straightening tack/lap/butt welding with approved electrodes etc.with all labour and materials complete. Thermo-mechanically treated corrosion resistant steel of grade equivalent to Fe-500D	250730.00	KG	
11	Providing and fixing in position approved quality shalifax board 50mm thick and 230 mm wide at expansion joints.	142.00	Rmt	
<u>PART- C : - Maintenance of Road and other structures for 2 and 3rd year</u>				

Sr.No.	Description	QTY	Unit	Amount
1	<p>Providing and laying Bitumen Penetration Macadam with hard stone aggregate of quality, size and grading as specified, with bitumen of suitable penetration grade, including required key aggregate as specified, spreading coarse aggregate with the help of self propelled/tipper tail mounted aggregate spreader and applying bitumen by a pressure distributor and then spreading key aggregate with the help of aggregate spreader complete, including consolidation with road roller of minimum 8 to 10 tonne capacity to achieve specified values of compaction and surface accuracy:</p> <p>For 75 mm compacted thickness in two layers using stone aggregate of size 63-41 mm graded @ 0.90 cum per 10 sqm key aggregate of size 20.0 mm graded @ 0.18 cum per 10 sqm. With paving asphalt grade VG-10 @ 68 kg/10 sqm.</p>	6000.00	m2	
2	Providing treatment and repair to pot holes/patch repair of all types of bitumen pavement by using instant patch repair cold readymix material complete as technical specificaion as directed EIC			
a	Filling potholes and patch repair having depth more than 50 mm with instant patch repair cold ready mix material after remocl of all fialed material trimming of comlete excavation to provide firm vrtical faces, cleaning of surface painting of tach coat on the sides and base of excation as per clause 503 of morth back filling the patch/potholes with instant patch repair cold ready mix material. Compacting trimming and finishing the surface to form a smooth continous surfaces	6000.00	m2	
3	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.	1800.000	m2	
4	Painting with higloss sunthethic enamel paint two coats to give an even and smooth surface for protection of exposed concrete/masonry portion of paratet, kerb painting and repairing wherever necessary complete as approval of Engineer in Charge	19800.00	m2	
		Total		
CONTRACTOR		EXECUTIVE ENGINEER (C-I)		