Schedule -A NAME OF WORK: Formation of SIPCOT service road from Chainage 75+900 to 77+082 along NH-44 in SIPCOT Industrial Park, Kurubarapalli. **Description of work** Section Amount (Rs.) RCC storm water drain with MS grating from Chainage 75+900 to 77+082 in SIPCOT Ι Industrial Park, Krurubarapalli RCC Culvert (1.0M x 1.0M) at Delta Electronics Company Gate 1,2,3 & 4 approach in II SIPCOT Industrial park, Kurubarapalli PCC Kerb Wall in SIPCOT Industrial park, Kurubarapalli III Formation of SIPCOT service road from Chainage 75+904 to 77+904 to 77+082 & ΙV Providing Road seperator and Road signages in SIPCOT Industrial park, Kurubarapalli ٧ Providing Street Light for SIPCOT service road from Chainage 75+904 to 77+904 to 77+082 in SIPCOT Industrial park, Kurubarapalli Sub Total GST 18% on Sub Total **GRAND TOTAL** (Rupees_ only)

I. RCC storm water drain with MS grating from Chainage 75+900 to 77+082 in SIPCOT Industrial Park, Krurubarapalli

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
1	Hundred and Eighty Nine Cubic metre only)	Earth work excavation and depositing on bank with initial lead of 10m and lift of 2m in hard stiff clay, black cotton, hard red earth, shales, murram, gravel, stoney earth and earth mixed with small size boulders except hard rock requiring blasting etc.,. complete as per relevant standard specification and as directed by SIPCOT Officers.(For Drain)(as per SS20B)			1 Cum (One Cubic metre)	
2	(Two Hundred and Forty Five Cubic	Supplying and filling in foundation with filling stone dust in layers of not more than 15 cm thick well rammed watered and consolidated etc., complete complying with standard specification and as directed by SIPCOT officers.			1 Cum (One Cubic metre)	
3	(Two Hundred and Forty Five Cubic metre only)	Providing and laying of Plain Cement Concrete 1:4:8 (One cement, Four m.sand and eight aggregate) using 40mm size Hard broken granite stone jelly for foundation, flooring bed, dummy columns, mudmat below column footings, Grade beams etc. laid in layers not exceeding 15cm thick including cost and conveyance of all materials and labour to work site, mixing of concrete, laying, compacting, curing with all leads for soft potable water, hire and fuel charges for all tools and plants including all other incidental charges such as bailing out water for forming protective bunds, coffer dams and shoring, strutting etc. complete complying with standard specifications and as directed by "SIPCOT" officers.			1 Cum (One Cubic metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
4		Supplying and erecting centering for sides and soffits including necessary supports and strutting upto 3.29 M height for plane surfaces as detailed below in all floors with all cross bracings using Mild Steel sheets of size 90 x 60 cm and 10 BG stiffened with welded Mild Steel angle of size 25mm x 25mm x 3 mm for boarding laid over silver oak joists of size 10cm x 6.50 cm spaced at abote 90 cm centre to centre and supported by casurina props of 10cm to 13 cm dia spaced at not more than 75 cm centre to centre etc., Complete complying with standard specification and as directed by SIPCOT Officers.				
а	6860.00 Sqm (Six Thousand Eight Hundred and Sixty Square metre only)	For Vertical surfaces			1 Sqm (One Square metre)	
b	1197.00 Sqm (One Thousand One Hundred and Ninety Seven Square metre only)				1 Sqm (One Square metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
5	(One Thousand Eight Hundred and Twenty Cubic metre only)	Reinforced cement concrete 1:1:2 (one cement, one sand and two aggregates) Providing and laying in position, Standardised Concrete Mix M-25 Grade in accordance with IS:456-2000, using 20mm and down graded hard broken granite stone jelly for all RCC items of works with minimum cement content of 350 kg/m³ and maximum water cement ratio of 0.50, including admixture (plasticiser / super plasticiser) in recommended proportions as per IS:9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability with about (5.0 cu.m.) 7730 kg. of 20mm machine crushed stone jelly and with about (3.3 cu.m.) 5156 kg. of 10-12mm machine crushed stone jelly and with about (4.79 cu.m.) 7670 kg. of sand, but excluding cost of reinforcement grill and fabricating charges, centering and shuttering and also including laying, vibrating with mechanical vibrators, finishing, curing, etc. and providing fixtures like fan clamps in the RCC floor/roof slabs wherever necessary without claiming extra. etc. complete complying with standard specifications and as directed by "SIPCOT" officers. (For DRAIN)			1 Cum (One Cubic metre)	
6	numbers only)	Supplying and fixing GI DRAINAGE SPOUTS 100mm dia as per GOI drawing SD/205 with grating arrangements at top as shown in the drawing and 100mm dia drainage spout projecting atleast 300mm beyond the bottom of deck slab as shown in the drawing, including cost and conveyance of Galvanised iron pipes and flats and fixing them in position, etc., complete as per cl 2705 of MORT&H specification and as directed by SIPCOT officers (V Revision). (For DRAIN)			1 No (Each)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
7	1205.00 Qtl (One Thousand Two Hundred and Five Quintal only)	Supplying, fabricating and placing in position of HSD steel rods for reinforcement including the cost of steel and binding wire etc., complete complying with standard specifications and as directed by SIPCOT officers (upto 16mm size of M.S. Rods and RTS rods)			1 Qtl (One Quintal)	
8	Hundred and Twenty	Refilling with excavated soil (other than sand) complying with standard specification for filling including spreading, breaking clods, consolidation by using machineries, loading and unloading charges etc., complete complying with standard specification and as directed by SIPCOT officers.(For Drain)			1 Cum (One Cubic metre)	
		Section I - 08 items (Eight items only)		Sub Total		

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount				
1	2	3	4	5	6	7				
II. RCC	II. RCC Culvert (1.0M x 1.0M) at Delta Electronics Company Gate 1,2,3 & 4 approach in SIPCOT Industrial park, Kurubarapalli									
1		Earth work excavation and depositing on bank with initial lead of 10m and lift of 2m in hard stiff clay, black cotton, hard red earth, shales, murram, gravel, stoney earth and earth mixed with small size boulders except hard rock requiring blasting etc.,. and all other incidental charges such as baling out water shoring shrutting, walling & forming protective bunds wherever necessary etc., complete as per relevant standard specification and as directed by SIPCOT Officers.(as per SS20B)			1 Cum (One Cubic metre)					
2		Supplying and filling in foundation with filling stone dust in layers of not more than 15 cm thick well rammed watered and consolidated etc., complete complying with standard specification and as directed by SIPCOT officers.			1 Cum (One Cubic metre)					
3	12.00 Cum (Twelve Cubic metre)	Providing and laying of Plain Cement Concrete 1:4:8 (One cement, Four m.sand and eight aggregate) using 40mm size Hard broken granite stone jelly for foundation, flooring bed, dummy columns, mudmat below column footings, Grade beams etc. laid in layers not exceeding 15cm thick including cost and conveyance of all materials and labour to work site, mixing of concrete, laying, compacting, curing with all leads for soft potable water, hire and fuel charges for all tools and plants including all other incidental charges such as bailing out water for forming protective bunds, coffer dams and shoring, strutting etc. complete complying with standard specifications and as directed by "SIPCOT" officers.(For base course of culvert)			1 Cum (One Cubic metre)					

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
4		Supplying and erecting centering for sides and soffits including necessary supports and strutting upto 3.29 M height for plane surfaces as detailed below in all floors with all cross bracings using Mild Steel sheets of size 90 x 60 cm and 10 BG stiffened with welded Mild Steel angle of size 25mm x 25mm x 3 mm for boarding laid over silver oak joists of size 10cm x 6.50 cm spaced at abote 90 cm centre to centre and supported by casurina props of 10cm to 13 cm dia spaced at not more than 75 cm centre to centre etc., Complete complying with standard specification and as directed by SIPCOT Officers.				
а	275.00 Sqm (Two Hundred and Seventy Five Square metre only)	For Vertical surfaces			1 Sqm (One Square metre)	
b	50.00 Sqm (Fifty Square metre only)	For Plane surfaces			1 Sqm (One Square metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
5	only)	Reinforced cement concrete 1:1:2 (One cement, one sand and two aggregates) Providing and laying in position, Standardised Concrete Mix M-25 Grade in accordance with IS:456-2000, using 20mm and down graded hard broken granite stone jelly for all RCC items of works with minimum cement content of 350 kg/m³ and maximum water cement ratio of 0.50, including admixture (plasticiser / super plasticiser) in recommended proportions as per IS:9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability with about (5.0 cu.m.) 7730 kg. of 20mm machine crushed stone jelly and with about (3.3 cu.m.) 5156 kg. of 10-12mm machine crushed stone jelly and with about (4.79 cu.m.) 7670 kg. of sand, but excluding cost of reinforcement grill and fabricating charges, centering and shuttering and also including laying, vibrating with mechanical vibrators, finishing, curing, etc. and providing fixtures like fan clamps in the RCC floor/roof slabs wherever necessary without claiming extra. etc. complete complying with standard specifications and as directed by "SIPCOT" officers. (For Culvert)			1 Cum (One Cubic metre)	
6		Supplying, fabricating and placing in position of HSD steel rods for reinforcement including the cost of steel and binding wire etc., complete complying with standard specifications and as directed by SIPCOT officers (upto 16mm size of M.S. Rods and RTS rods)			1 Qtl (One Quintal)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
7	20.00 Sqm	Painting the walls with two coats of Plastic Emulsion paint			1 Sqm	
	(Twenty Square	over one coat of primer including preparation of surface			(One Square metre)	
	metre only)	curing and including cost of primer etc. complete				
		complying with standard specifications and as directed by				
		SIPCOT Officers (The colour and shade of the cement paint				
		shall be got approved by the SIPCOT officers before use on				
		work)				
8	70.00 Cum	Refilling with excavated soil (other than sand) complying			1 Cum	
		with standard specification for filling including spreading,			(One Cubic metre)	
	only)	breaking clods, consolidation by using machineries, loading				
		and unloading charges etc., complete complying with				
		standard specification and as directed by SIPCOT				
		officers.(For Culvert)				
		Section II - 08 items (Eight items only)		Sub Total		
III. PCC	Kerb Wall in SIPCO	T Industrial park, Kurubarapalli				
1	45.00 Cum	Earth work excavation and depositing on bank with initial			1 Cum	
	(Forty Five Cubic	lead of 10m and lift of 2m in hard stiff clay, black cotton,			(One Cubic metre)	
	metre only)	hard red earth, shales, murram, gravel, stoney earth and				
		earth mixed with small size boulders except hard rock				
		requiring blasting etc.,. complete as per relevant standard				
		specification and as directed by SIPCOT Officers.				
		(as per SS20B)				
2	8.00 Cum	Supplying and filling in foundation with filling stone dust			1 Cum	
		in layers of not more than 10 cm thick well rammed			(One Cubic metre)	
	only)	watered and consolidated etc., complete complying with				
		standard specification and as directed by SIPCOT officers.				

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
3	8.00 Cum (Eight Cubic metre only)	Providing and laying of Plain Cement Concrete 1:4:8 (One cement, Four m.sand and eight aggregate) using 40mm size Hard broken granite stone jelly for foundation, flooring bed, dummy columns, mudmat below column footings, Grade beams etc. laid in layers not exceeding 15cm thick including cost and conveyance of all materials and labour to work site, mixing of concrete, laying, compacting, curing with all leads for soft potable water, hire and fuel charges for all tools and plants including all other incidental charges such as bailing out water for forming protective bunds, coffer dams and shoring, strutting etc. complete complying with standard specifications and as directed by "SIPCOT" officers.			1 Cum (One Cubic metre)	
4		Supplying and erecting centering for sides and soffits including necessary supports and strutting upto 3.29 M height for plane surfaces as detailed below in all floors with all cross bracings using Mild Steel sheets of size 90 x 60 cm and 10 BG stiffened with welded Mild Steel angle of size 25mm x 25mm x 3 mm for boarding laid over silver oak joists of size 10cm x 6.50 cm spaced at abote 90 cm centre to centre and supported by casurina props of 10cm to 13 cm dia spaced at not more than 75 cm centre to centre etc., Complete complying with standard specification and as directed by SIPCOT Officers.				
a	210.00 Sqm (Two Hundred and Ten Square metre only)	For Vertical surfaces			1 Sqm (One Square metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
5	20.00 Cum (Twenty Cubic metre only)	Plain Cement Concrete 1:2:4 (one cement, two sand and four aggregates) using 20mm HBGS stone jelly including cost of all materials mixing concrete, placing, vibrating with mechanical vibrator, finishing, curing etc., Complete complying with standard specification and as directed by SIPCOT Officers.			1 Cum (One Cubic metre)	
6	10.00 RM (Ten Running metre only)	Supply, delivery and laying of 140mm dia HDPE Pipes including cost and laying charges into trenches etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1Rm (One Running metre)	
7	115.00 Sqm (One Hundred and Fifteen Square metre only)	Painting the walls with two coats of Plastic Emulsion paint over one coat of priming coat including cost of primer etc. complete complying with standard specifications and as directed by SIPCOT Officers.(The colour and shade of the paint should be got approved by SIPCOT Officer before use on work)			1 Sqm (One Square metre)	
8	15.00 Cum (Fifteen Cubic metre only)	Refilling with excavated soil (other than sand) complying with standard specification for filling including spreading, breaking clods, consolidation by using machineries, loading and unloading charges etc., complete complying with standard specification and as directed by SIPCOT officers.(For Drain)			1 Cum (One Cubic metre)	
		Section III - 08 items (Eight items only)		Sub Total		

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
		rvice road from Chainage 75+904 to 77+904 to 77+082	2 & Providing	Road seperator and Road s	ignages in SIPCOT	Industrial park,
Curubar						
1	One Hundred and	Clearing and removing the light jungle with uprooting as per standard specification and dispose them and clearing the site etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1 Sqm (One Square metre)	
2	610.00 Cum (Six Hundred and Ten Cubic metre only)	Earth work excavation and depositing on bank with initial lead of 10m and lift of 2m in hard stiff clay, black cotton, hard red earth, shales, murram, gravel, stoney earth and earth mixed with small size boulders except hard rock requiring blasting etc.,. complete as per relevant standard specification and as directed by SIPCOT Officers. (as per SS20B)			1 Cum (One Cubic metre)	
3	1144.00 Cum (One Thousand One Hundred and Forty Four Cubic metre only)	Removing hard rock by quarrying, wedging, chiseling and trimming to proper shape where blasting is prohibited and removing them away from site etc., complete as per relevant standard specification and as directed by SIPCOT Officers.			1 Cum (One Cubic metre)	
4	4025.00 Cum (Four Thousand and Twenty Five Cubic metre only)	Forming the embankment/Subgrade with excavated earth with a initial lead of 2Km for road filling portion including conveyance, loading and unloading charges, laying, watering, machinery charges and consolidation for using machineries etc., Complete as directed by SIPCOT Officers as per MORTH Specification clause No.111, 112, 305, 900.			1 Cum (One Cubic metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
5	Hundred and Twenty	Forming the embankment with carted earth with a initial lead of 5Km including conveyance, laying, watering, machinery charges and consolidation with power roller etc., Complete as directed by SIPCOT Officers as per MORTH Specification clause No.111, 112, 305, 900.			1 Cum (One Cubic metre)	
6	(Fifty Running metre only)	Supplying , Laying and fixing of NP2 Class 300mm Dia Pipes including Labour charges for hoisting and placing the pipes and collars in position as directed by the SIPCOT Officials and pointing the joints with cement mortar 1:3 and all incidental charges etc., complete complying with standard specification and as directed by SIPCOT officers (At an interval of 200m)			1Rm (One Running metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
7	Seven Hundred and Sixty Cubic metre only)	Construction of Granular Sub - Base (GSB) to the required compacted thickness (Drainage layer) by providing approved Coarse graded material conforming to Grading- V of Table 400 - 1 and satisfying the physical requirement for material for GSB as per Table 400 - 2 of MORTH Rev5 including screening, spreading in uniform layers with motor grader on prepared surface, watering and premixing by mix in place method with rotavator at OMC, and compacting with Vibratory roller 80 to 100 KN static weight to achieve the desired density and fine dressing to required grade and cross slope as directed by the SIPCOT officers etc., complete including obtaining and transporting all materials from approved quarry site to work site with all lift and lead by mechanical transport, head load or any other mode of transporation including cost and conveyance of all materials, labour charges, hire charges and fuel charges for loader, water tanker with sprinkler, motor grader, vibratory road rollers and all other equipments, tools and plants, safety measures, testing required including all other incidental charges, etc., complete as per the standard specification as per clause 401 of MORTH Rev5 etc., complete complying with standard specification and as directed by SIPCOT officers.			1 Cum (One Cubic metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
8		Providing and laying, spreading and compacting graded stone aggreates to Wet Mix Macadam Base Course of 250mm compcted thick using 0.396 m3 of 45-22.4mm IRC Graded metal ,0.528m3 of 22.40-2.36mmIRC Graded metal, 0.396m3 of 2.36 mm IRC Graded metal for 1m3 of consolidated thiuckness including pre-mixing the materials with water at OMC in mechanical mix plant carriage of mixed matrerial by tipper to site laying in uniform layers with favours in subbase/ base course on well prepared surface and compacting with vibratory roller to achieve the desired density including cost of material, labour charges, rental for machinery, fuel and all other incidental charges etc., complete as per clause 406 of MORTH Rev5, complete complying with standard specification and as directed by SIPCOT officers.			1 Cum (One Cubic metre)	
9	8770.00 Sqm (Eight Thousand Seven Hundred and Seventy Square metre only)	Providing and laying Prime coat over wet mix macadam surface using 7.00 Kg bitumen emulsion SS1 for 10 sqm area including cost and conveyance of bitumen binder including labour charges for preparing the surface and applying the required quantity as tack coat by bitumen sprayer etc.complete as per clause 502 of MORT & H specifications etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1 Sqm (One Square metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
10		Providing and laying Tack coat over treated wet mix macadam surface using 2.50 Kg bitumen emulsion RS1 to cut back for 10 sqm area including cost and conveyance of bitumen binder including labour charges for preparing the surface and applying the required quantity as tack coat by bitumen sprayer and complete as per clause 503 of MORT & H specifications etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1 Sqm (One Square metre)	
11	` -	Providing and laying 100 mm compacted thickness dense bituminous macadam using 0.40 cum of 37.50 -13.20 mm IRC size graded metal 0.35 cum of 13.20 - 2.36mm IRC graded metal and 0.36 cum of 2.36mm and below IRC size HBG metal with 71.30 kg of VG30 bitumen for premixing for 10 Sq.meter including cost and conveyance of all materials to CMP site heating the bitumen and aggregates to required temperature and mixing them in required temperature in central hot mix plant 20-30 tonnes capacity, conveying the mix by tipper trucks to paver site, spreading the mix in required temperature for uniform thickness of 75mm with mechanical paver to the specified grades and cross sections and compaction by vibratory Pneumatic Roller to the required density etc., including labour charges for loading the bitumen in bitumen tank and metal to feeder unit, labour for attending to paver site etc., including hire,fuel charges for 20-30 tonnes capacity CMP unit bitumen boiler, tipper trucks, paver finisher/9 m paver finisher, vibratary/Pneumatic Roller,and al other tools & plants required including fuel and all other incidental charges etc., complete asper specification using CMP as per clause 505 MORTH REV. V Specification and as directed SIPCOT Officers.			1 Cum (One Cubic metre)	
		ľ	lo of corrections:			

No of overwrittings:

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
12	360.00 Cum	Providing and laying 40mm compacted thickness			1 Cum	
	(Three Hundred and	bituminous concrete using 0.13 cum of 19.0 - 9.5 mm			(One Cubic metre)	
	Sixty Cubic metre)	graded IRC size HBG metal 0.17 cum of 9.5-2.36mm IRC				
		graded metal and 0.26 Cum. of 2.36 mm and below size				
		graded metal with 50.30 kg of bitumen grade VG30				
		confirming to IS 73 for pre mixing for 10 Sq. meter and				
		using materials as per table 500 - 17 and staifying the				
		physical requirement for material for course aggregates for				
		BC as per table 500 - 16 of MORTH REV-V including cost				
ľ		and conveyance of all materials to CMP site , heating the				
		bitumen and aggregates to required temperature and				
		mixing them in required temperature in central hot mix				
		plant 20-30 tonnes capacity, conveying the mix by tipper				
		trucks to paver site spreading the mix in required				
		temperature for uniform thickness of 40mm with				
		mechanical paver to the specified grades and cross				
		sections and consolidation 80-100 KN vibratory/Pneumatic				
		road roller to the required density etc., includinglabour				
		charges for loading the bitumen in bitumen tank and metal				
		to feeder unit, labour for attending to paver site etc.,				
		including hire, fuel charges for 20-30 tonnes capacity CMP				
		unit bitumen boiler, tipper trucks, paver finaisher/9 m				
		paver finisher /Vibratory/Pneumatice road roller , and all				
		other tools and plants requried, including fuel and all other				
		incidental charges etc., complete as perspecification using				
		CMPP as per clause 507 OF MORTH REV. specification and				
		as directed by SIPCOT Officer				

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
13	(Five Hundred Square metre only)	Providing and laying Centreline/Edgeline marking with white hot applied thermoplastic compound 100mm wide of high quality 2.5mm thick including reflectorising glass beads @250 gms per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35 including cost and conveyance of all materials to the work site including labour charges for machinery and all other incidental charges etc. complete as per MORTH specification and as directed by SIPCOT officers. The finished surface to be level, uniform and free from streaks and holes. etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1 Sqm (One Square metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
14	550.00 Nos (Five Hundred and Fifty numbers only)	Providing and fixing reflective road studs of category 'A' Raised pavement markers made out of poly carbonate / methyl methercrylate/ABS moulded body confirming to ASTM D 788 and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face with retro reflectance and chromaticity values conforming to ASTM D4280. The reflective raised pavement markers shall also confirm to the MORTH circular No RW / NH. 33023/10/ 97-DO.III dt 11.06.97. The height, width and length shall not be less than 15 mm, 90 mm and 100 mm and with minimum reflective area of 13 Sq.cm on each side and the slope to the base shall be 35 +/- 5 degree. Each reflector shall have a CIL not less than values specified in Table 2 of said MORTH circular. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2mm and height not less than 30+/- 2 mm) from the body is to be a minimum value of 500 Kgf. Fixing will be by drilling holes on the road for the shanks to go inside, without nails and using epoxy resin based adhesive as per manufacturer's recommendation and complete as directed by the engineer. The marker shall support a load of 13635 Kg tested in accordance with ASTM D4280 and confirming to IRC 35 - 2015 guidelines and MORT&H specification 804 etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1 No (Each)	
15	84.00 Nos (Eighty Four numbers only)	Supplying and installation of delineators (road way indicators, Hazard markers and object markers), 80-100 cm high above ground level, painted at alternatively black and white in 15 cm wide strips, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and conforming to IRC-79 etc., complete (as per MORT&H specification No. 805) complete complying with standard specifications and as directed by SIPCOT Officers.			1 No (Each)	

Sl. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
16	Hundred and Sixty	ROAD SEPERATOR: Providing and erecting single sided double guard metal beam crash Barrier system 1.70M High, comprising of 3mm thick wall beams posts and spacers channels shall be made by cold roll forming using HR Conform to IS 5986 Fe-410/360 and dip galvanished having zinc mass of 550 gms/sq.m minimum 95mm above road /ground level fixed on ISMC series channel vertical post 150x75x5 mm spaced 2 m centre 312 mmx83 mm flange width x3mm thick 4318 mm long post directly embaded in the concrete (M15) PIT Size 1000x1000x300 mm for a depth of 300 mm below ground . All fixing bolts and nuts hot dip galvanized conforming to IS: 1367 Clause 4.60 etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1Rm (One Running metre)	
17	120.00 RM (One Hundred and Twenty Running metre only)	Providing & Fixing of AFP sheeting flexible prismatic sheeting shall be of 1ft width and laminated at the back with a 50 micron thick aluminium (AI) foil with sensitive adhesive and liner as per section s2.2 of ASTM, D 4956-09 Type - XI. etc., complete complying with standard specifications and as directed by SIPCOT Officers. (fixing in metal beam crash Barrier)			1Rm (One Running metre)	
18	(Four Hundred and	Supplying and spreading of gravel with a lead of 5Km for side berms including cost and conveyance of the same to work site from approved quarry including stacking the same to departmental gauge for premeasurement including all labour charges for laying, spreading, including all hire and fuel charges for power roller for compaction etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1 Cum (One Cubic metre)	

Sl. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
19		Road Signages: Safety, Caution and Mandatory Sign Boards: Providing and fixing of Digitally Printed Retro-Reflectorized Sign Board using UV Inkjet Printer made out of cube corner micro prismatic grade sheeting of Type-XI standards of IRC 67 - 2012 and ASTM D 4956 - 09 specification, Digitally Printed using UV Inkjet Printer (UVIJ) for traffic colour images/logos/ text and laminated with clear clectro-cuttable film and applied to properly prepared sign substrates, fixed over 2mm thick Aluminium sheet with back supporting frame of size 50mm x 50mm x 6mm MS angle and supported on 2 numbers of 150NB (Nominal Bore) MS pipes of 4.50mm thick with an overall height covering from top of the board to the bottom of foundation. The clear height of the posts from the ground level to the bottom of the sign board shall not be less than 2.10m and the depth below ground -level shall not be less than 1.10m. The sign post should be painted as per IRC 67-2012 and firmly fixed to the ground by means of properly designed foundation with cement concrete M15 grade of size 45cm x 45cm x 110cm including cost and conveyance of all materials, equipment, machinery and labour with all leads and lifts, loading charges and fixing in position for Satisfactory completion of the work as directed by the Engineer-in-charge etc., The micro prismatic grade retro-reflection values as per Table 6.9 of IRC 67 - 2012. The retro-reflective sheeting shall be covered under 10 years warranty issued for field performance as per IRC 67-2012 and a certified copy of 3 years outdoor exposure report shall be obtained. The warranty shall be inclusive of digitally printed images/ logos/ text/ legends and their bonding to the retro-reflective sheeting (as per MoRT&H specification No.801).				

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
а	6.00 Nos (Six numbers only)	Speed Breaker Board: 900mm Equilateral Triangle Shape			1 No (Each)	
b	1.00 No (One number only)	Give Way: 900mm Equilateral			1 No (Each)	
С	1.00 No (One number only)	STOP: 900 MM Octogonal			1 No (Each)	
d	1.00 No (One number only)	Side Road - 600 MM Cirucular			1 No (Each)	
е	1.00 No (One number only)	Bus Stop: 600 MM Circular			1 No (Each)	
f	4.00 Nos (Four numbers only)	No Right Turn - 600 MM Circular			1 No (Each)	
		Section IV - 19 items (Nineteen items only)		Sub Total		•

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
Provi	ding Street Light fo	r SIPCOT service road from Chainage 75+904 to 77+9	04 to 77+082	in SIPCOT Industrial park, k	(urubarapalli	
1		Supply, delivery and erection of 10 metre height Hot Dip Galvanized Octogonal Poles with 150 mm bottom A/F & 70 mm top A/F made upto of 3 mm thick HT sheet along with base plate of size 275 x 275 x 16 mm thick and 4Nos of M24 x 750mm heigh 'J' type EN8 grade foundation bolts along with template, supply of 1m long hot dip galvanised single arm bracket made upto 40 NB dia GI pipe suitable to mount on pole having top 70mm A/F, supply of bakellite sheet with 1 No. 6A SP MCB and stud tupe connector suitable for 4C x 16Sqm cable etc.,.complete complying with standard specifications and as directed by SIPCOT Officers.				
а	40.00 Nos (Forty numbers only)	For Single collar pole:			1 No (Each)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
2		Supply, installation, testing and commissioning of following capacity of LED street lights (Make like Heavells, crompton, Bajaj , Philips or equivalent) consisting of separate optical and control gear, having IP 65 or better rating, enclosure made of pressure die casting aluminum having toughned glass, Input voltage range of 90 to 270 V AC and Input frequency range of 47 to 63 HZ, PF > 0.9 (lag), external surge protection up to 10 K.V. It shall have CRI > 70 and color temperature range between 3000 - 6000 deg K.LED chips shall be high power 1 W CREE/ NICHIA OR equivalent having efficiency of not less than 100 lumens / watt and junction temp. not exceeding 85 Deg celsius with life of 50000 hours having warranty not less than 5 years. LEDs should be arranged in combination of series and parallel connections: power electronic circuits shall have protection for short circuit , over voltage, over current and over temperature. Thickness of the fixtures not to exceed 70mm, weight shall not exceed 8 kg etc., the fixtures shall be conforming to Indian standards or International standards CE / UL etc., and all materials used in manufacture shall be RoHS compliant etc., complete complying with standard specifications and as directed by SIPCOT Officers.				
a	40.00 Nos (Forty numbers only)	90 W LED Fittings			1 No (Each)	
3		Providing foundation arrangements to the street light poles as per following specifications.				
		<u>l</u>	o of corrections:			

No of overwrittings:

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
a	30.00 Cum (Thirty Cubic metre only)	Earth work excavation and depositing on bank with initial lead of 10m and lift of 2m in hard stiff clay, black cotton, hard red earth, shales, murram, gravel, stoney earth and earth mixed with small size boulders except hard rock requiring blasting etc.,. complete as per relevant standard specification and as directed by SIPCOT Officers. (as per SS20B)			1 Cum (One Cubic metre)	
b	3.00 Cum (Three Cubic metre only)	Supplying and filling in foundation with filling stone dust in layers of not more than 15 cm thick well rammed watered and consolidated etc., complete complying with standard specification and as directed by SIPCOT officers.			1 Cum (One Cubic metre)	
С	3.00 Cum (Three Cubic metre only)	Providing and laying of Plain Cement Concrete 1:4:8 (One cement, Four m.sand and eight aggregate) using 40mm size Hard broken granite stone jelly for foundation, flooring bed, dummy columns, mudmat below column footings, Grade beams etc. laid in layers not exceeding 15cm thick including cost and conveyance of all materials and labour to work site, mixing of concrete, laying, compacting, curing with all leads for soft potable water, hire and fuel charges for all tools and plants including all other incidental charges such as bailing out water for forming protective bunds, coffer dams and shoring, strutting etc. complete complying with standard specifications and as directed by "SIPCOT" officers.			1 Cum (One Cubic metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
d	28.00 Cum (Twenty Eight Cubic metre only)	Providing Reinforced Cement Concrete 1: 1 1/2: 3 (One cement, One and a half M-sand and three jelly) for pedestal concrete using Machine crushed 20mm size Hard Broken granite ISS stone Jelly for all "REINFORCED CEMENT CONCRETE WORKS" including cost and conveyance of all materials and labour to work site excluding cost of centering, shuttering, strutting and cost of MS / RTS Reinforcement grills placed in position but including machine mixing of concrete, laying, vibrating with mechanical vibrators, finishing, curing, including cost of soft potable water treatment of bearing, smooth with cement mortar 1:3 (One cement and Three M-sand) and kraft paper laid over it without claim for extra and and all labour charges for mixing concrete, laying, curing, vibrating charges, hire charges for all tools and plants and all other incidental charges etc., complete complying with standard specifications and as directed by SIPCOT officers.			1 Cum (One Cubic metre)	
е	1 3	Supplying and erecting centering for sides and soffits including necessary supports and strutting upto 3.90 M height for vertical surfaces with all cross bracings using Mild Steel sheets of size 90 x 60 cm and 10 BG stiffened with welded Mild Steel angle of size 25mm x 25mm x 3 mm for boarding laid over silver oak joists of size 10cm x 6.50 cm spaced at about 90 cm centre to centre and supported by casurina props of 10cm to 13 cm dia spaced at not more than 75 cm centre to centre etc., Complete complying with standard specification and as directed by SIPCOT Officers.(For Vertical Surfaces)			1 Sqm (One Square metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
f	34.00 Qtl (Thirty Four Quintal only)	Supplying, Fabricating and placing in position steel reinforcement grills using M.S. / R.T.S. rods of all sizes of reinforcement for all Reinforced cement concrete works (for pedestal pillar concrete) including cost and conveyance of steel, binding wire, spacer bars, cover blocks, labour charges for unbending of rods, straighteing, cutting, fabricating, tying, lifting, placing in position, overlaping to the required length whereever necessary cover blocks and all other incidental charges etc., complete complying with standard specifications and as directed by SIPCOT officers.			1 Qlt (One Quintal)	
4	2.00 Nos (Two Numbers only)	Fabrication, supply, installation, of out -door street lighting service pillar box of size 900 mm x 900 mm x 300 mm made by 16 SWG sheet steel metal fitted with required size of wooden plank board, 1 No. 100 Amps main switch, 3 Nos. of 100A fuse unit, suitable copper bus bars for neutral line, etc., complete. The pillar box fabricated with front double door arrangements with locking facility painted with one coat of primer and 2 coats of aluminium finish. The pillar to be erected with suitable angle iron frame pedestal with concrete grouting etc. complete including cost and conveyance of all materials and labour including pedestal concrete and angle iron frame pedestal etc., complete complying with standard specifications and as directed by SIPCOT officers.			1 No (Each)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
5	2.00 Nos (Two Numbers only)	Fabrication, supply and installation of TNEB power distribution pillar box outdoor type of size 1250 mm x 900 mm x 300 mm made out of 16 SWG MS sheet steel with lockable door, with 1 No. 100 A TPN rewirable fuse switch and 32 A 4 way fuse DB with 12 Nos. 63A porcelain fuse cut-outs with 1No. copper earth link and neutral link and 1 No. of 63 A TP Contactor with 230 V Coil and 1 No. of 24 Hours Timer of L & T make or equivalent with its contorl wiring, power interconnection with 7/16 copper wire from main switch to contactor and contactor to fuse DB etc., complete. The pillar painted with one coat of red-oxide and 2 coats of aluminium finish as required by TNEB etc., The pillar to be installed in angle iron frame pedestal with concrete grouting including cost and conveyance of all materials and labour charges etc., complete complying with standard specification and as directed by SIPCOT Officers			1 No (Each)	
6		Supply , laying and jointing of following size of PVC armoured LTUG Aluminium cable with ISI mark in a trench to be excavated at a depth of 0.75 m, and routing the cable into the 90 mm dia. HDPE Pipes laid completely and refilling the earth to make good and as per standard specification. (Excluding the cost of HDPE Pipes and laying the same into trenches will be extra) etc., complete complying with standard specification and as directed by SIPCOT Officers				
a	180.00 RM (One Hundred and Eighty Running metre only)	3 1/2 Core x 50 Sq.mm. PVC Armoured LT UG Aluminium Cable			1Rm (One Running metre)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
b	1600.00 RM (One Thousand Six Hundred Running metre only)	4 Core x 16 Sq.mm. PVC Armoured LT UG Aluminium Cable			1Rm (One Running metre)	
7	500.00 RM (Five Hundred Running metre only)	Supply, laying and testing of 2 x 1.50 sq.mm PVC insulated SC unsheathed Cu.cable conductor cable of 1100 V grade on 7/20 GI bearer wire for service with necessary jointing materials etc., complete including cost and conveyance of cable and labour charges for laying the cable etc. complete complying with standard specification and as directed by SIPCOT Officers.			1Rm (One Running metre)	
8	4.00 No (Four numbers only)	Earthing as per ISI specification with an earth elctrode of 2.10 m class "B" GI Pipe of dia not less than 40 mm with copper earth plate of size 125 mm x 50 mm x 6 mm with necessary funneling arrangements with necessary masonry work and with 38 mm RCC cover slab for the brick masonry etc., complete complying with standard specification and as directed by SIPCOT Officers			1 No (Each)	
9	40.00 Nos (Forty numbers only)	Coil earth to Street light poles with 8 SWG GI wire of 11.50 mtrs of length in which 10 metres of total length compressed into a coil of one metre length connected suitable with hexagonal earth bolt of Size 8 mm x 25mm welded on the pole at one end with a coil position fixed on the earth etc., complete complying with standard specification and as directed by SIPCOT Officers.			1 No (Each)	

SI. No.	Qty	Description of item	TNBP No.	Rate both in figure and in words	Unit	Amount
1	2	3	4	5	6	7
10	(One Thousand Two Hundred and Twenty	Supply, delivery and laying of 90mm dia HDPE Pipes including cost and laying charges into trenches etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1Rm (One Running metre)	
11	(Ninety Five Running	Supply, delivery and laying of 50 mm OD - 4 Kg/cm2 PVC Rigid Pipes including cost and laying charges into Pole pillars for connecting cable into Poles etc., complete complying with standard specifications and as directed by SIPCOT Officers.			1Rm (One Running metre)	
		Section V - 11 items (Eleven items only)		Sub Total		