

SCHEDULE-B: CONVERSION OF OVERHEAD TO UNDERGROUND

“Site survey including underground utility verification using (GPR & EPL), Engineering, Procurement, Supply, Loading, Transportation, Unloading, Insurance, Delivery at Site, Handling, Storage, Installation, Testing, Commissioning Including Documentation of All Items/Material required to complete works for Turnkey Based Contract For Conversion of Existing LT Line Network Including Consumer Service Lines Into Under Ground Cable Network using FSP/MSP & Ring Main System at Fategunj Sub Division Under Vishwamitri West Division Baroda City under MGVCCL with GIS Mapping / Geo Urja Mapping (Developed by GUVNL) and Asset Tagging under Gujarat Wire Free City Mission ”.

Sr No	Particulars of Item	Unit	SUPPLY PORTION			ERECTION PORTION		
			Quantity	Unit Rate in Rs	Total in Rs	Quantity	Unit Rate in Rs	Total in Rs
1	LT NETWORK(LT XLPE Cable Supply of XLPE (IS:7098) (I) -88 ISI marked Armoured cable multistrand aluminium conductor for 1.1 KV of following Size of Cable)							
A	1C X 400 Sqmm LT Cable (TC TO FSP)	Meter	25425	851.7	21654472.5			0
B	1C X 300 Sqmm LT Cable (TC TO FSP)	Meter	0	670.95	0			0
C	3.5 CX 400 mm2 Aluminium	Meter	0	2097	0			0
D	3.5 CX 300 mm2 Aluminium	Meter	2000	1886.85	3773700			0
E	3.5 CX 240 mm2 Aluminium	Meter	172136	1524.6	262438545.6			0
F	3.5 C X 185 mm2 Aluminium	Meter	4000	1206.45	4825800			0
G	3.5 C X 150 mm2 Aluminium	Meter	183918	978.6	179982154.8			0
H	3.5 C X 120 mm2 Aluminium	Meter	810	827.4	670194			0
I	3.5 C X 95 mm2 Aluminium	Meter	1140	641.55	731367			0
J	3.5 C X 70 mm2 Aluminium	Meter	2610	478.8	1249668			0
K	3.5 C X 50 mm2 Aluminium	Meter	3330	367.5	1223775			0
L	4 C X 25 mm2 Aluminium	Meter	16440	228.9	3763116			0
M	4 C X 16 mm2 Aluminium	Meter	868500	161.7	140436450			0
N	4 C X 10 mm2 Aluminium	Meter	0	124.95	0			0
O	4 C X 6 mm2 Aluminium	Meter	0	99.75	0			0
P	2 Core, 4 Sq.mm	Meter		69	0			0

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2	LT Cable Termination: Supply of Cable Termination on LT Pole, FSP, LT Distribution Trasformer Box of pole mounted trasformer of LT cable grade as pecified below. LT CABLE including cutting,stripping of cable,insulations,providing compression type terminals,suitable cable glands,crimping lugs with necessary connections.Work carried out up to consumer premises with meter shifting, and provide load side cable as per site conditions and as per EIC. All the accessories in the scope of biddier.							
A	1C X 400 Sqmm LT Cable (TC TO FSP)	Nos	3190	1245	3971550	3190	45	143550
B	1C X 300 Sqmm LT Cable (TC TO FSP)	Nos	0	1245	0	0	45	0
C	3.5 CX 400 mm2 Aluminium (FSP TO MSP)	Nos	0	1245	0	0	45	0
D	3.5 CX 300 mm2 Aluminium (FSP TO MSP)	Nos	250	1245	311250	250	45	11250
E	3.5 CX 240 mm2 Aluminium (FSP TO MSP)	Nos	3527	1245	4391115	3527	45	158715
F	3.5 C X 185 mm2 Aluminium (FSP TO MSP)	Nos	400	940	376000	400	45	18000
G	3.5 C X 150 mm2 Aluminium	Nos	9770	940	9183800	9770	45	439650
H	3.5 C X 120 mm2 Aluminium	Nos	27	889	24003	27	45	1215
I	3.5 C X 95 mm2 Aluminium	Nos	38	889	33782	38	45	1710
J	3.5 C X 70 mm2 Aluminium	Nos	87	889	77343	87	45	3915
K	3.5 C X 50 mm2 Aluminium	Nos	110	889	97790	110	45	4950
L	4 C X 25 mm2 Aluminium	Nos	548	804	440592	548	45	24660
M	4 C X 16 mm2 Aluminium	Nos	28900	788	22773200	28900	25	722500
N	4 C X 10 mm2 Aluminium	Nos	0	788	0	0	25	0
O	4 C X 6 mm2 Aluminium	Nos	0	679	0	0	25	0
P	2 Core, 4 Sq.mm	Nos	0	679	0	0	25	0

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3	<u>FSP (FUSE SECTION PILLER): 4 Way</u> Supplying and erecting 120x100x40 cms. Fuse section pillar fabricated from 4 mm Thermosetting Plastic (moulded in a single piece) i.e Glass Reinforced Polyester sheet Moulding Compound (SMC) or metal body(As per Specification and drawings) with cable clamps to be burried in ground to have appropriate erection on look unifrom unit erected with cement concrete foundation and <u>45 cms high brick masonry internal supported</u> on both side with intrnal and outer side locking arrangement with lock and keys in duplicate .Incoming switchgear SFU of 800A TPN and outgoing HRC SMC fuse base and knife type links 32 Amp to 630 Amp capacity fuse base fitted on 630 Amp current capacity copper Busbar with RYB colour coding and insulated strip with all internal connections and entry for incomming up to 1 core 300/400 sq mm 4 nos and outgoing 3 nos. 31/2 core cables of suitable sizes. (As per Technical specification of FSP) (Erection shall be carried out as per approved drawing and site condition)							
A	800 Amp	Nos	0	101860	0	0	3233	0
B	630 Amp	Nos	23	76566	1761018	23	3233	74359
C	400 Amp	Nos	1	67213	67213	1	3233	3233
4	<u>FSP (FUSE SECTION PILLER): 6 Way</u> Supplying and erecting 120x100x40 cms.Fuse section pillar fabricated from 4 mm Thermosetting Plastic (moulded in a single piece) i.e Glass Reinforced Polyester sheet Moulding Compound (SMC) or metal body(As per Specification and drawings) with cable clamps to be burried in ground to have appropriate erection on look unifrom unit erected with cement concrete foundation and 45 cms high brick masonry internal supported on both side with intrnal and outer side locking arrangement with lock and keys in duplicate .Incoming switchgear SFU of Suitable TPN and outgoing HRC SMC fuse base and knife type links 32 Amp to 630 Amp capacity fuse base fitted on 630 Amp current capacity copper Busbar with RYB colour coding and insulated strip with all internal connections and entry for incomming 1 core 300/400 sq mm 4 nos and outgoing 5 nos. 31/2 core cables of suitable sizes. (As per Technical specification of FSP) (Erection shall be carried out as per approved drawing and site condition)(SFU Amp Capcity is as under)							
A	800 Amp	Nos.	17	124269	2112573	17	3233	54961
B	630 Amp	Nos.	248	114850	28482800	248	3233	801784
C	400 Amp	Nos.	50	100820	5041000	50	3233	161650
5	<u>MSP(Mini Section Piller) : 4 Way</u> Supplying and erecting 120x100x40 cms. Mini section pillar fabricated from 4 mm thick Thermosetting Plastic(moulded in a single piece) i.e. Glass Reinforced Polyester Sheet Moulding Compound (SMC) or Metal Body Type Enclouser(As per Specification) with cable clamps to be burried in ground to have appropriate erection on look uniform unit erected with cement concrete foundation and 45 cms high brick masonry internal supported on both side with internal and outer side locking arrangement with lock and keys in duplicate. Incoming HRC SMC fuse base and kinfe type links 32 Amp to 250 Amp. capacity, fuse base fitted on 250 Amp. current capacity copper Busbar with RYB colour coding and insulated strip with all internal connections and entry for incoming up to 3.5 Core 300 Sq.mm 1 Nos. and outgoing 3 nos. 3.5 core cables of suitable sizes.(As per Technical specification of MSP)							
A	400 Amp	Nos.	0	28411	0	0	3233	0

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B	250 Amp	Nos.	0	13225	0	0	3233	0
C	125 Amp	Nos.	0	10925	0	0	3233	0
6	<u>MSP(Mini Section Pillar) : 6 Way</u> Supplying and erecting 120x100x40 cms. Mini section pillar fabricated from 4 mm thick Thermosetting Plastic(moulded in a single piece) i.e. Glass Reinforced Polyester Sheet Moulding Compound (SMC) or Metal Body Type Encloser(As per Specification) with cable clamps to be burried in ground to have appropriate erection on look uniform unit erected with cement concrete foundation and 45 cms high brick masonry internal supported on both side with internal and outer side locking arrangement with lock and keys in duplicate. Incoming HRC SMC fuse base and kinfe type links 32 Amp to 250 Amp. capacity, fuse base fitted on 250 Amp. current capacity copper Busbar with RYB colour coding and insulated strip with all internal connections and entry for incoming up to 3.5 Core 300 Sq.mm 1 Nos. and outgoing 5 nos. 3.5 core cables of suitable sizes.(As per Technical specification of MSP)							
A	400 Amp	Nos.	149	42616	6349784	149	3233	481717
B	250 Amp	Nos.	100	19838	1983800	100	3233	323300
C	125 Amp	Nos	100	16388	1638800	100	3233	323300
7	<u>MSP(Mini Section Pillar) : 8 Way</u> Supplying and erecting 120x100x40 cms. Mini section pillar fabricated from 4 mm thick Thermosetting Plastic(moulded in a single piece) i.e. Glass Reinforced Polyester Sheet Moulding Compound (SMC) with cable clamps to be burried in ground to have appropriate erection on look uniform unit erected with cement concrete foundation and 45 cms high brick masonry internal supported on both side with internal and outer side locking arrangement with lock and keys in duplicate. Incoming HRC SMC fuse base and kinfe type links 32 Amp to 250 Amp. capacity, fuse base fitted on 250 Amp. current capacity copper Busbar with RYB colour coding and insulated strip with all internal connections and entry for incoming up to 3.5 Core 300 Sq.mm 1 Nos. and outgoing 7 nos. 3.5 core cables of suitable sizes.(As per Technical specification of MSP)							
A	400 Amp	Nos	654	18400	12033600	654	3233	2114382
B	250 Amp	Nos	0	14950	0	0	3233	0
C	125 Amp	Nos	0	12650	0	0	3233	0
8	SFU							
A	Supply, Instalation, Testing, Commissioning switch fuse unit made by SMC Box and capacity of 125 A, Mostaly used in flat/Socity area. Installation worked caried out with instruction of EIC. And as per the drawing approved by CA- Minimum 16 Nos. of CKT	Nos	500	12087	6043500	500	1150	575000

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B	Supply, Instalation, Testing, Commissioning switch fuse unit made by SMC box and capacity of 200 A, Mostaly used in flat/Society area. Installation worked caried out with instruction of EIC. And as per the drawing approved by CA - Minimum 16 Nos. Of Circuit	Nos	301	18400	5538400	301	1150	346150
C	Supply, Instalation, Testing, Commissioning switch fuse unit made by SMC box and capacity of 400 A, Mostaly used in flat area. Installation worked caried out with instruction of EIC. And as per the drawing approved by CA- Minimum 16 Nos. Of Circuit	Nos	2634	20700	54523800	2634	1323	3484782
9	EARTHING							
A	EARTHING ELECTRODS: Supplying & erecting of maintained free earthing system comprising of Minimum 17 mm dia 3 mtr Long Earthing Electrode of low carbon steel electrode with 250 microns copper coating + carbon based conductive concrete back fill safe Compound(resistivity of less than 0.10 ohm mtr) & copper clamp. (FSP)	Nos	678	6500	4407000	678	1000	678000
B	EARTHING ELECTRODS: Supplying & erecting of maintained free earthing system comprising of Minimum 17 mm dia 2 mtr Long Earthing Electrode of low carbon steel electrode with 250 microns copper coating + carbon based conductive concrete back fill safe compound(resistivity of less than 0.10 ohm mtr) & copper clamp.(MSP+SFU)	Nos	8876	5500	48818000	8876	1000	8876000
C	EARTHING STRIP: Supply installation & commissioning of earthing conductor 25 x 3mm G.I. strip for pole mounted transformer and up to FSP,RMU as well as connection to be made to the earth pit. Rates inclusive of hot dipped hard wares.	Mtr	95540	91	8694140	95540	52	4968080
10	PRE BONDING TAP: For laying on trench after laying cable on trench to provide indication cable route below land surface in underground trench to protect cable for mechanical injuries.LDPE Material having 250 mm Width (Yellow Color is preferable)	Mtr	627442	14	8784188	627442	7	4392094
11	CABLE TAG: The PVC tag for identification of feeder/PSS/FSP/RMU name of HT/LT cables shall be provided at every 10 MTR LT Feeder : PSS/Transformer/FSP/MSP/SFU	Nos	78117	20	1562340	78117	7	546819
12	CABLE ROUTE MARKER: Providing and erecting RCC cable route marker as per drawing duly marked with "DANGER" mark, "discom POWER CABLE" and arrow of route of cable.	Nos	2508	300	752400	2508	100	250800
13	CABLE TERMINAL FERRULS: The PVC Cable terminal ferruls for identification of phase sequence and feeder/PSS/FSP name of HT/LT cables shall be provided at every termination of all cables stating detail as under. HT Cable :Feeder name/Phase(R/Y/B) LT Cable : TC/FSP name/Phase(R/Y/B/N)	Nos	78117	24	1874808	78117	8	624936

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14	LAYING WORK							
A	Supply of HDPE/DWC pipe confirming to IS 4984:1955 having diameter 110/100mm or appropriate pipe size of cable and minimum thickness 5mm at a minimum depth 1200mm below the road surface by PUSH through method by drilling the road with HDD machine/manually without breaking the road surface and with laying of any size of LT XLPE insulated aluminium armoured cable through the duct as per the instruction of EIC and specifications. (For LT XLPE Cable above 3.5C/4C* 185 SQMM)	Mtr	89068	361	32153548	89068	495	44088660
B	Supply & Laying of HDPE/DWC pipe confirming to IS 4984:1955 having diameter 90mm or appropriate pipe size of cable with laying of various size of LT XLPE (3.5 Core 95 sq. mm to 3.5 core 150 Sq.mm) PUSH through method by drilling the road with HDD machine/manually without breaking the road surface and with laying of any size of LT XLPE insulated aluminium armoured cable through the duct as per the instruction of EIC and specifications (Single/Double/Bunched)	Mtr	92934	224	20817216	92934	495	46002330
C	Supply & Laying of HDPE/DWC pipe confirming to IS 4984:1955 having diameter 50/63 mm with laying of various size of LT XLPE (2C 45Qmm to and upto 3.5/4 core 70 Sq.mm) PUSH through method by drilling the road with HDD machine/manually without breaking the road surface and with laying of any size of LT XLPE insulated aluminium armoured cable through the duct as per the instruction of EIC and specifications insulated Aluminium armoured Cable (Single/Double/Bunched)	Mtr	445440	76	33853440	445440	495	220492800
D	Laying (including installation, testing and commissioning) of various size of LT XLPE insulated Aluminium armoured Cable in ground 1200mm deep, 300mm wide trench, providing sand cushioning below (75mm thick layer of sand) and above (75mm thick layer of sand) of the cable and covering it with RCC half round hum pipe (150mm inner dia with thickness of 30mm, 1meter in legnth) before refilling pre warning tap/bonding tap should provide below 700mm from ground level and back filling the same to make the ground level as original. As per specification and drawing of MGVCCL. (RCC half round hum pipe should be provided throughout on cable without gap).	Mtr	0	0	0	627442	531.3	333359934.6
15	Providing, supplying, laying, fixing and commissioning of Green color Hose Pipe for LT armored service cable protection/saddling work in consumer premises where digging is not possible up to energy meter location, including all accessories such as saddles, clamps, clips, bends, fastening materials etc. complete in all respect as per technical specification.(Saddling with wall and etc, for this work GI type saddle and nail shall be used)							
A	Hose Pipe of Size 40mm/32mm	Mtr	43400	118.64	5149152.542	43400	17.80	772372.8814
B	Hose Pipe of Size 77mm/63mm	Mtr	6200	364.41	2259322.034	6200	17.80	110338.9831
C	Hose Pipe of Size 90mm/75mm	Mtr	6200	406.78	2522033.898	6200	17.80	110338.9831
D	Green color Hose Pipe of Size 120mm/103.5 mm	Mtr	6200	805.08	4991525.424	6200	17.80	110338.9831

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16	DRAWING: Preparing complete drawing of entire network as well as individual feeder map showing joints also in AutoCad and providing the same to MGCVCL in AutoCad copy as well as pdf copy and hard copy in six sets. The drawing should be geographical indicating all directions	Per KM			0	122	1000	122000
17	Paint Pointed Letter 2 inchsize (Marking on FSP,MSP,SFU Etc In any place). As per directive of Engineer Incharge) with supply of color	Ea			0	71655	5.175	370814.625
18	DISMENTAL							
A	Dismantalling PSC Pole 8 Mtr with cross arm,insulators,hardwares etc.and return it to MGCVCL store.While dismantalling utmost care shall be taken so that the material so that the same can be reused by MGCVCL.	Nos				0	562	0
B	Dismantalling PSC 10 Mtr/Rail/RSJ pole with cross arm,insulators,hardwares etc.and return it to MGCVCL store.While dismantalling utmost care shall be taken so that the material so that the same can be reused by MGCVCL.	Nos				0	1131	0
C	Dismantalling of existing HT/LT line of 34SQMM to 55SQMM conductor and after making coil and stacking the same at MGCVCL store.Conductor has to dismantal from shackle to shackle pole with minimum nos of cut piece as per instruction of EIC	Per Cond/KM				319.8	715	228657
D	Dismant of of single phase AB Cable(3.5 core) including fittings of All Accessories and stacking the same at MGCVCL store.Cable has to dismantal from shackle to shackle pole with minimum nos of cut piece as per instruction of EIC	KM				35.9	8089	290395.1
E	Dismant of of single phase AB Cable(LT 1P2W) including fittings of All Accessories and stacking the same at MGCVCL store.Cable has to dismantal from shackle to shackle pole with minimum nos of cut piece as per instruction of EIC	KM				0	3235	0
19	COMPREHENSIVE MAINTENANCE WORK FOR LT UNDERGROUND NETWORK AFTER SUCCESSFUL COMPLETION OF PROJECT, For Five years after completion of project,For further detail bidder advice to Read the chapter in STANDARD BIDDING DOCUMENT							
A	Locating Underground Cable Fault of Underground Cable including digging,pin pointing with cable route tracker by using cable fault location equipment like cable fault Van/Vehicle with supportive meters and accessories & doing high pressure testing of cable for checking healthiness of cable with suitable equipment after jointing of the faulty cable (excluding jointing kit) backfilling, and submission of fault location with report of showing distance from main source approx.. Including required manpower.	Per Job				2500	6780	16950000
B	Supply of unskilled/skilled man power to perform day to day activity of maintenance work of LT Under ground Network and all Associated activity etc.These man power deployment meant for activities other than above 19 (A)	MND				16425	650	10676250
	Amount in Rupees (without GST)		964645070			704296693		

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	GST @ 18%		173636113			126773405		
	TOTAL Amount (WITH GST)		1138281182			831070098		
	GRAND TOTAL (WITH GST)					1969351280		
	TOTAL COST IN CR					196.94 Crore		