



Government of Rajasthan

**Local Self Government
Department**

**RAJASTHAN URBAN INFRASTRUCTURE
DEVELOPMENT PROJECT (RUIDP)**

**INTEGRATED
SCHEDULE OF RATES
2017**

(w.e.f. 01/05/2017)

**Project Management Unit (PMU)
Rajasthan Urban Infrastructure Development Project,
AVS Building, Jawahar Circle, Malviya Nagar, Jaipur-17**

Rs. 1000/-



**GOVERNMENT OF RAJASTHAN
RAJASTHAN URBAN INFRASTRUCTURE DEVELOPMENT
PROJECT
(RUIDP)**

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Issued By

**Project Director
RUIDP
JAIPUR (Raj)**

Price: Rs. 1000/-

FOREWORD

Rajasthan Urban Infrastructure Development Project (RUIDP) has prepared comprehensive integrated SOR for year 2017. The last SOR for RUIDP works was published in 2013. Since, then the department has registered considerable changes in the prices of labour, materials and machineries. Apart from it, the entire engineering community is witnessing a great change, as new idea, items, concepts & technologies are coming up. All these have necessitated revision in the prevailing SOR.

The market rates of the basic material has changed substantially in the past few years particularly in steel and petroleum products, so it became necessary to update the existing SOR- 2013 with incorporation of items required for the estimation and other uses for urban sector works implemented under RUIDP.

Urban sector needs typical nature of infrastructure works, which requires extensive Schedule of Rates catering all the sectors. Engineers of RUIDP through its learning and experience have made an effort by accommodating various items for the different nature of works based on the various works experience related to civil/mechanical/electrical & other works.

Exhaustive list of items of various sectors have been made part of this SOR adopting current market rate of basic material & labour etc. I hope that SOR-2017 would be equally useful in the other departments of the State.

The SOR-2017 has been prepared by M/s Ojasvi Software New Delhi under the supervision and over all guidance of Er. G S Hada, Additional Project Director and chairman Technical Committee. I would like to put on record my appreciation for the dedicated and untiring efforts made by the Team RUIDP associated in preparation of RUIDP Integrated SOR- 2017.

This SOR is approved by the RUIDP and is made effective from 1st May -2017.


(Dr. Preetam B Yashvant, IAS)
Project Director, RUIDP

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Addl. Project Director

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PREFACE

Rajasthan Urban Infrastructure Development Project (RUIDP) has prepared Integrated Schedule of Rates 2017, for the works to be implemented under its umbrella with the intention to accommodate various items related to multi-sector urban infrastructure works considering larger interest of urban sector development works under LSGD. It was also intended that the estimation based on this SOR will provide the updated cost estimates for the benefit of analysis and guidance to different stakeholders in their assessments.

The updating/modification of earlier SOR, 2013 was primarily required due to change in rates of basic material; labour; steel; petroleum products; transportation and other materials. The rates for steel and petroleum products have been decreased and coarse sand etc. have been increased. There had been learnings of RUIDP during the work execution of various sectoral works. Accordingly items have been added/modified based on the execution of such works.

The present basic rates of material/ equipments/ labour etc. have been procured from the various sources i.e. from different vendors, available schedule of rates of different departments i.e. PWD, MORTH, Archeological, CPWD & codes of Bureau of India standard and Delhi Schedule of Rates (DSR) etc. The team of engineers having sectoral experiences were constituted to cross check the market rate by approaching the vendors personally or on phone/mail, receiving quotations, price lists etc. to the maximum possible extent.

The support of Manufacturers/vendors/suppliers has made us comfortable to reach at reasonable rates of the materials by providing their rates/catalogues. Though best efforts have been made to procure the present basic rates of every item; however few vendors were reluctant to provide any written document for the support of rates and accordingly rates of some items could not be directly received from the market. Such items have been arrived on the basis of earlier BSR rates & experience with suitable adjustments. In spite of genuine efforts, suggestion/modifications if any, needed would be highly appreciated.

Regular meetings were held with all RUIDP engineers and consultants working with RUIDP for detailed discussions & to freeze the rates of basic material and nomenclature of the items. The nomenclature of many items have been improved by making more generic and comprehensive detailing. Items of SOR-2013 which have become obsolete over a period of time or not in use have been deleted. Many new items using new material/technology have also been added.

The rates of items have been arrived considering 10% for likely overheads including financial charges for execution and 10% contractor's profit in their rate analysis.

The basic rates have been collected from various sources upto Feb-2017. However the future trend in costs is to be watched by all concern for preparation of their updated estimates.

I am gratified for the input of Shri Banai Singh, Chief Engineer, Shri Om Prakash, Financial Advisor and subject expert consultants working with RUIDP for their valuable suggestions and refinement of SOR. This attempt had been successful only due to the extensive efforts of Engineers of RUIDP working in different sectors by ensuring incorporation of related sectoral items & their proper nomenclature in the SOR namely; Addl. CE. R.S. Gupta, Superintending Engineers - Er. Megh Ram Meena, Er. Sandeep Sharma, Er. K. K. Natani, Er. Praveen Ankodia & Dr. D.R. Jangid and Executive Engineers - Er. S.S. Khiria, Er. D.K. Mittal, Er. Dinesh Verma, Er. K.M. Mandawaria supported by the team of engineers. The task has been completed for its substantial revision in true spirit with the extensive work of supporting colleagues; Er. K C Agrawal, Er. Anil Vijayvargia, Er. Mahesh Garg, Er. Anil Sharma, Er. L. S. Shekhawat, Er. Vijay Chaudhary, Er. Ritu Rathore, Er. Bagdi Vaishali and Er. Tushar Sharma.

M/s Ojasvi Software, New Delhi with its experience of preparation of SOR for different states/departments has also made valuable contribution in understanding of items, rate analysis, market rates for basic materials and designing of the Integrated SOR-2017 for RUIDP.

This Integrated Schedule of Rates -2017 has been prepared to cater the needs of Urban Infrastructure Development to accommodate the various schedules of rates for estimation, evaluation etc. Although every care has been taken, yet in such complex work like this, it is possible that typographical or other error or omissions might have crept in; suggestion for improvement and corrections in this integrated SOR / future modifications will be most welcomed from all quarters.

This Integrated Schedule of Rates 2017 has been prepared successfully under valuable guidance of **Dr. Preetam B Yashvant, Project Director** RUIDP, Jaipur. This work has been made possible due to the earnest efforts of persons who have also helped directly or indirectly to complete this work are also thankfully acknowledged.


(Er. G S Hada)
Chief Engineer cum
Addl. Project Director

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1.0 CARRIAGE OF MATERIALS

CARRIAGE OF MATERIALS (By Mechanical Means)											
Code	Materials	Unit	Rate for lead					Rate beyond initial lead			Remarks
			1 Km	2 Km	3 Km	4 Km	5 Km	Beyond 5 Km upto 10 Km. per Km.	Beyond 10 Km. upto 20 Km. per Km.	Beyond 20 Km. per Km.	
1	2	3	4	5	6	7	8	9	10	11	12
1.1	Carriage of Materials by mechanical transport including loading, unloading and stacking ::										The rates will be applicable to net quantities after deduction of prescribed percentage for voids mentioned in the specification under subhead "Carriage of Materials"
1.1.1	Earth	Cum	106.00	121.00	137.00	151.00	165.00	12.80	10.80	9.00	
1.1.2	Sand, bazri, ballast, kankar	Cum	85.00	97.00	109.00	121.00	132.00	10.30	8.60	7.20	
1.1.3	Stone, boulders, gravelly material	Cum	100.00	114.00	129.00	142.00	156.00	12.10	10.10	8.50	
1.1.4	Bricks	1000 Nos	227.00	259.00	291.00	323.00	353.00	27.40	22.90	19.20	
1.1.5	Brick Tiles	1000 Nos	136.00	155.00	175.00	194.00	212.00	16.40	13.80	11.50	

CARRIAGE OF MATERIALS (By Manual Means)

Code No.	Materials	Unit	Primary Lead	Beyond initial lead	Remarks
			Cost of carriage including loading, unloading & stacking for first 50 m.	Every additional lead of 50 m or part thereof beyond 1st 50 m upto 9 such additional leads	
1	2	3	4		6
1.2	Carriage of materials by manual labour including loading, unloading and stacking for lead less than 0.5 Km :				The rate is applicable to net quantities after deduction of prescribed percentage for voids mentioned in the specifications under sub-head "Carriage of Materials"
1.2.1	Earth	Cum	116.00	25.30	
1.2.2	Sand, bazri, ballast, kankar	Cum	93.00	20.20	
1.2.3	Stone, boulders, gravelly material	Cum	136.00	29.70	
1.2.4	Bricks	1000 Nos	217.00	47.20	
1.2.5	Brick Tiles	1000 Nos	135.00	29.50	

Code No	Description	Unit	Rate Rs.
1.3	Loading and unloading of stone boulder / stone aggregates / sand / canker / moorum by mechanical means.	cum	60.00
1.4	Loading and Unloading of Boulders by Manual Means	cum	67.50
1.5	Loading and Unloading of Cement or Steel by Manual Means and stacking.	tonne	88.50

2.0 SITE CLEARANCE

Code No	Description	Unit	Rate Rs.
2.1	Cutting of trees, including cutting of trunks, branches and removal of stumps, roots, stacking of serviceable material with all lifts and up to a lead of 1000 mtrs and earth filling in the depression/pit to required compaction as per MoRT&H specification clause 201. (Measurment of girth to be done at height of 1 m above ground level)		
2.1.1	Girth from 300 mm to 600 mm	each	284.00
2.1.2	Girth from 600 mm to 900 mm	each	462.00
2.1.3	Girth from 900 mm to 1800 mm	each	968.00
2.1.4	Girth from 1800 mm to 2700 mm	each	1890.00
2.1.5	Girth above 2700 mm	each	3710.00
2.2	Clearing Grass and Removal of Rubbish (Maximum 150mm) by manual means and disposal at a lead of 50 metres as per MoRT&H specification clause 201.	hectare	22100.00
2.3	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to a lead of 50 metres from road boundary including removal and disposal of top organic soil not exceeding 150 mm in thickness as directed by Engineer.		
2.3.1	In area of light jungle	hectare	38600.00
2.3.2	In area of thorny jungle	hectare	51200.00
2.4	Dismantling of existing structures like culverts, bridges, retaining walls, CC road and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 50 metres as directed by Engineer.		
2.4.1	Lime Concrete, cement concrete grade M-10 (1:5:10) and below	cum	264.00
2.4.2	Cement Concrete Grade M-15 and above and PCC blocks	cum	427.00
2.4.3	Prestressed /Reinforced cement concrete with separating, cleaning, straightening and cutting of bars	cum	1060.00
2.4.4	Dismantling Brick / Tile work		
2.4.4.1	In lime mortar	cum	184.00
2.4.4.2	In cement mortar	cum	261.00
2.4.4.3	In mud mortar	cum	159.00
2.4.4.4	Dry brick pitching or brick soling	cum	152.00
2.4.5	Dismantling Stone Masonry		
2.4.5.1	Rubble stone masonry in lime mortar	cum	216.00
2.4.5.2	Rubble stone masonry in cement mortar.	cum	256.00
2.4.5.3	Rubble Stone Masonry in mud mortar.	cum	192.00

Code No	Description	Unit	Rate Rs.
2.4.5.4	Dry rubble masonry	cum	171.00
2.4.5.5	Stone pitching/ dry stone spells.	cum	157.00
2.4.5.6	Boulders laid in wire crates including opening of crates and stacking dismantled materials.	cum	554.00
2.4.6	Wood work wrought framed and fixed in frames of trusses upto a height of 5 m above plinth level	cum	624.00
2.4.7	Steel work in all type sections up to a height of 5 metre above plinth level (Riveted work where rivet are required to be cut shall be measured and paid separately)		
2.4.7.1	Including dismembering	tonne	1810.00
2.4.7.2	Excluding dismembering	tonne	1320.00
2.4.7.3	Extra for cutting rivets in built up steel sections.	each rivet	14.00
2.5	Scraping of bricks dismantled from brick masonry including stacking.		
2.5.1	In lime/Cement mortar	each	1.55
2.5.2	In mud mortar	each	0.55
2.6	Scraping of Stone from dismantled stone masonry		
2.6.1	In cement and lime mortar	cum	622.00
2.6.2	In Mud mortar	cum	132.00
2.7	Scarping plaster in lime or cement mortar from brick/ stone masonry	sqm	18.50
2.8	Removing all type of hume pipes and stacking within a lead of 1000 metres including earthwork and dismantling of masonry works.		
2.8.1	Up to 600 mm dia	metre	230.00
2.8.2	Above 600 mm to 900 mm dia	metre	311.00
2.8.3	Above 900 mm	metre	532.00
2.9	Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 50 metres as directed by Engineer.		
2.9.1	Bituminous courses	cum	296.00
2.9.2	Granular courses	cum	206.00
2.10	Dismantling guard rails by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metres, stacking serviceable materials and unserviceable materials separately as per MoRT&H specification clause 202.	metre	76.50
2.11	Dismantling kerb stone by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metre as per MoRT&H specification clause 202.	metre	11.00
2.12	Dismantling kerb stone channel by manual means and disposal of dismantled material with all lifts and up to a lead of 1000 metre as per MoRT&H specification clause 202.	metre	16.50
2.13	Dismantling of kilometre stone including cutting of earth, foundation and disposal of dismantled material with all lifts and lead upto 1000 m and back filling of pit as per MoRT&H specification clause 202.		
2.13.1	5th KM stone	each	411.00

Code No	Description	Unit	Rate Rs.
2.13.2	Ordinary KM Stone	each	242.00
2.13.3	200m Stone	each	48.50
2.14	Dismantling of barbed wire fencing/ wire mesh fencing including posts, foundation concrete, back filling of pit by manual means including disposal of dismantled material with all lifts and up to a lead of 1000 metres, stacking serviceable material and unserviceable material separately as per MoRT&H specification clause 202.	metre	61.00
2.15	Removal of telephone / Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and up to a lead of 1000 metres and stacking the serviceable and unserviceable material separately as per MoRT&H specification clause 202.	each	200.00

3.0 DISMANTLING

Code No	Description	Unit	Rate Rs.
3.1	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.		
3.1.1	In cement mortar	cum	284.00
3.2	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.		
3.2.1	For thickness of tiles 10 mm to 25 mm	sqm	28.50
3.2.2	For thickness of tiles above 25 mm and upto 40 mm	sqm	45.00
3.3	Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead :		
3.3.1	Of area 3 sq. metres and below	each	151.00
3.3.2	Of area beyond 3 sq. metres	each	206.00
3.4	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead:		
3.4.1	Of area 3 sq. metres and below	each	61.50
3.4.2	Of area beyond 3 sq. metres	each	81.50
3.5	Demolishing dry brick pitching in floors, drains etc. including stacking serviceable material and disposal of unserviceable material within 50 metres lead :	cum	469.00
3.6	Dismantling stone slab flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	102.00
3.7	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	41.50
3.8	Demolishing mud phaska in terracing and disposal of material within 50 metres lead.	cum	331.00
3.9	Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within 50 metres lead of:		
3.9.1	G.S. Sheet	sqm	69.50
3.9.2	Asbestos sheet	sqm	32.00
3.10	Dismantling stone slab roofing over wooden karries or R.C.C. battens (dismantling karries and battens to be paid for separately) including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	cum	1020.00
3.11	Dismantling jack arch roofing and floors including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	94.50
3.12	Dismantling tiled roofing with battens boarding etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	82.50

Code No	Description	Unit	Rate Rs.
3.13	Demolishing thatch roofing including mats, bamboo, jaffari etc. complete including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	sqm	23.00
3.14	Dismantling wooden ballies in posts and struts including stacking within 50 metres lead.	metre	8.00
3.15	Dismantling and stacking within 50 metres lead, fencing posts or struts including all earth work and dismantling of concrete etc. in base of :		
3.15.1	T' or 'L' iron or pipe	each	86.00
3.15.2	R.C.C.	each	89.00
3.16	Cutting ballies or wooden posts of fencing at the point of projection above the concrete or ground and stacking the same within 50 metres lead.	each	5.00
3.17	Dismantling barbed wire or flexible wire rope in fencing including making rolls and stacking within 50 metres lead.	kg	15.00
3.18	Dismantling wooden trellis work excluding frames but including stacking the serviceable material within 50 metres lead.	sqm	24.50
3.19	Dismantling expanded metal or I.R.C. fabrics with necessary battens and beading including stacking the serviceable material within 50 metres lead.	sqm	29.50
3.20	Dismantling wooden boardings in lining of walls and partitions, excluding supporting members but including stacking within 50 metres lead :		
3.20.1	Upto 10 mm thick	sqm	24.00
3.20.2	Thickness above 10 mm upto 25 mm	sqm	30.50
3.20.3	Thickness above 25 mm upto 40 mm	sqm	34.50
3.21	Dismantling precast concrete or stone slabs in walls, partition walls etc. including stacking within 50 metres lead:		
3.21.1	Thickness upto 40 mm	sqm	113.00
3.21.2	Thickness above 40 mm upto 75 mm	sqm	169.00
3.22	Dismantling cement asbestos, Celotax or other hard board ceiling or partition walls including stacking of serviceable materials and disposal of unserviceable materials within 50 metres lead.	sqm	23.50
3.23	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within 50 metres lead :		
3.23.1	75 to 80 mm dia pipe.	metre	28.50
3.23.2	100 mm dia pipe	metre	29.00
3.23.3	150 mm dia pipe	metre	30.00
3.24	Dismantling G.I. pipes (external work) including excavation and refilling trenches after taking out the pipes manually/ by mechanical means including stacking of pipes within 50 metres lead as per direction of Engineer-in-charge :		
3.24.1	15 mm to 40 mm nominal bore	metre	56.50
3.24.2	Above 40 mm nominal bore	metre	60.50

Code No	Description	Unit	Rate Rs.
3.25	Dismantling C.I. pipes including excavation and refilling trenches after taking out the pipes manually/ by mechanical means, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes, lead at site within 50 metre lead as per direction of Engineer-in-charge:		
3.25.1	Upto 150 mm diameter	metre	157.00
3.25.2	Above 150 mm dia upto 300 mm dia.	metre	212.00
3.25.3	Above 300 mm diameter	metre	279.00
3.26	Dismantling asbestos cement pressure pipes including excavation and refilling trenches after taking out the pipes manually/ by mechanical means and stacking the pipes within 50 metres lead as per direction of Engineer-in-charge:		
3.26.1	Upto 150 mm diameter	metre	124.00
3.26.2	Above 150 mm diameter	metre	149.00
3.27	Taking out C.I. cover with frame from R.C.C. top slab of manholes of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 metres lead as per direction of Engineer-in-charge.	each	264.00
3.28	Taking out C.I. cover with frame from R.C.C. top slab of inspection chambers of various sizes including demolishing of R.C.C. work manually/ by mechanical means and stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 metres lead as per direction of Engineer-in-charge.	each	153.00
3.29	Dismantling of R.C.C. spun vent shaft including excavating the cement concrete pit completely, taking out the shaft, refilling the excavated gap, stacking the useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	1750.00
3.30	Dismantling of road gully chamber of various sizes including C.I. grating with frame including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 metres lead including refilling the excavated gap.	each	364.00
3.31	Dismantling of flushing cistern of any size including stacking of useful materials near the site and disposal of unserviceable materials within 50 metres lead.	each	363.00
3.32	Dismantling of C.I. sluice valve including stacking of useful materials within a lead of 50 metres		
3.32.1	Upto 150 mm diameter	each	134.00
3.32.2	Above 150 mm diameter	each	502.00
3.33	Dismantling of spindle fire hydrant including stacking of useful materials within 50 metres lead.	each	309.00
3.34	Dismantling old plaster or skirting raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	sqm	21.00
3.35	Dismantling aluminium/ Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50 meters lead as directed by Engineer-in-charge.	sqm	23.50

4.0 EARTH WORK

Code No	Description	Unit	Rate Rs.
4.1	Dressing of earth work in surface excavation including cutting and filling upto 30cm depth including disposal of excavated earth upto 50m and lift upto 1.5 m.	sqm	27.00
4.2	Earth work in excavation for roadway, including trimming bottom and side slopes in accordance with requirement of line, grades and cross sections, including disposal of surplus material with all lift and lead upto 1000 metre as per MoRT&H specification clause 301.		
4.2.1	In all type of soil	cum	145.00
4.2.2	In ordinary rock	cum	220.00
4.2.3	In Hard Rocks		
4.2.3.1	Using blasting (including blasting material) (considering serviceable material)	cum	420.00
4.2.3.2	Blasting prohibited (considering serviceable material)	cum	637.00
4.3	Earth work in excavation in soil unsuitable for road construction such as marshy soil including pumping out water, removal of the same and disposal with all lift and lead upto 1 km as per MoRT&H specification clause 301.	cum	145.00
4.4	Construction of embankment with approved material obtained from borrow pit with all lifts and leads, transporting to site, spreading, grading to required slope and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 including cost of compensation for earth taken from private land complete as per MoRT&H specification clause 305. (Lead taken upto 5 km)	cum	163.00
4.5	Construction of embankment with approved materials deposited at site available from roadway cutting and excavation from drain and foundation of other structures, graded and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 as per MoRT&H specification clause 305.	cum	64.00
4.6	Construction of subgrade and earthen shoulders with approved material obtained from borrow area with all lifts & leads, transporting to site, spreading, grading to required slope and compacted in layers not exceeding 200mm thickness at OMC, with vibratory roller of 80-100 KN static weight or more to attain a density 97% maximum dry density to meet requirement of table No. 300-2 as per MoRT&H specification clause 305. (Lead taken upto 5 km)	cum	185.00
4.7	Construction of Embankment with Fly ash/Pond ash available from coal or lignite burning Thermal Plants as waste material conforming to table 1 of IRC: SP: 58 - 2001, spread and compacted in layer of 200mm thickness each at OMC, all as specified in IRC: SP: 58-2001 and as per approved plans.	cum	104.00
4.8	Compacting original ground		
4.8.1	Loosening upto a level of 500 mm below the subgrade level watered, graded and compacted in layers by vibratory roller 8-10 tonne to meet requirement of table 300-2 for subgrade construction as per MoRT&H specification clause 305.3.4.	cum	37.00

Code No	Description	Unit	Rate Rs.
4.8.2	Loosening and recompacting original ground below embankment including Loosening leveling and recompacting original ground supporting embankment to facilitate placement of of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling by vibratory roller 8-10 tonne so as to achieve minimum dry density as given in table 300-2 for embankment construction as per MoRT&H specification clause 305.3.4.	cum	18.50
4.9	Earth work in excavation in open area, STP, WTP, Pumping station with mechanical means including dressing of sides and ramming of bottoms, including getting out the excavated material, disposal of excavated material lead upto 1000m at suitable site as per as per drawing and as per direction of Engineer. (Measurements for payment to be done as per standard drawings).		
4.9.1	In all type of soil		
4.9.1.1	Upto 3.0 m depth	cum	116.00
4.9.1.2	Above 3.0 m and upto 6.0 m depth	cum	135.00
4.9.1.3	Above 6.0 m and upto 9.0 m depth	cum	163.00
4.9.2	In ordinary rock		
4.9.2.1	Upto 3.0 m depth	cum	293.00
4.9.2.2	Above 3.0 m and upto 6.0 m depth	cum	346.00
4.9.2.3	Above 6.0 m and upto 9.0 m depth	cum	383.00
4.9.3	In hard rock		
4.9.3.1	Upto 3.0 m depth	cum	518.00
4.9.3.2	Above 3.0 m and upto 6.0 m depth	cum	594.00
4.9.3.3	Above 6.0 m and upto 9.0 m depth	cum	632.00
4.10	Earth work in excavation in foundation, trenches etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level.		
4.10.1	In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc.		
4.10.1.1	Depth upto 1.5 m	cum	164.00
4.10.1.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.1.1	cum	11.50
4.10.1.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.1.1	cum	26.00
4.10.1.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.1.1	cum	46.00
4.10.1.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.1.1	cum	70.50
4.10.1.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.1.1	cum	98.50

Code No	Description	Unit	Rate Rs.
4.10.2	In ordinary rock.		
4.10.2.1	Depth upto 1.5 m	cum	324.00
4.10.2.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.2.1	cum	22.50
4.10.2.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.2.1	cum	52.00
4.10.2.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.2.1	cum	90.50
4.10.2.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.2.1	cum	139.00
4.10.2.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.2.1	cum	194.00
4.10.3	In hard rock (required blasting) including Blasting materials.		
4.10.3.1	Depth upto 1.5 m	cum	496.00
4.10.3.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.3.1	cum	34.50
4.10.3.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.3.1	cum	79.50
4.10.3.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.3.1	cum	139.00
4.10.3.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.3.1	cum	213.00
4.10.3.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.3.1	cum	298.00
4.10.4	In hard rock (Blasting prohibited)		
4.10.4.1	Depth upto 1.5 m	cum	689.00
4.10.4.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 4.10.4.1	cum	48.00
4.10.4.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 4.10.4.1	cum	110.00
4.10.4.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 4.10.4.1	cum	193.00
4.10.4.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 4.10.4.1	cum	296.00
4.10.4.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 4.10.4.1	cum	413.00
4.11	Add extra over item no 4.10.1, 4.10.2, 4.10.3 and 4.10.4 in RUIDP SOR for excavation in saturated soil, silt and sludge where pumping or bailing out of water is required including shoring strutting where required and dewatering, where width is upto 6 metre.		
4.11.1	Excavation depth from ground level 0.0 to 9.0 m		
4.11.1.1	Excavation from Encountered depth of water table 0.0 to 1.5 m	cum	33.00
4.11.1.2	Excavation from Encountered depth of water table 1.5 to 3.0 m	cum	65.50
4.11.1.3	Excavation from Encountered depth of water table 3.0 to 4.5 m	cum	131.00

Code No	Description	Unit	Rate Rs.
4.11.1.4	Excavation from Encountered depth of water table 4.5 to 6.0 m	cum	197.00
4.11.1.5	Excavation from Encountered depth of water table 6.0 to 7.5 m	cum	262.00
4.11.1.6	Excavation from Encountered depth of water table 7.5 to 9.0 m	cum	525.00
4.12	Filling with locally available river sand at all levels including watering ramming consolidating and dressing complete including cost of sand.	cum	581.00
4.13	Earth filling with available surplus soil excavated from foundations and taken only from outside of building plinth in layers not exceeding 20cm in depth, consolidating each deposited layer including ramming and watering and consolidation with lead up to 50 m and lift upto 1.5 m.	cum	98.00
4.14	Providing and fixing CLOSE timbering in foundation, trenches etc at all depth including strutting, shoring and packing cavities (wherever required) complete. (Measurements to be taken of the face area timbered).	sqm	125.00
4.15	Extra for planking, strutting and packing material for cavities IN CLOSE TIMBERING if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	1020.00
4.16	Providing and fixing OPEN timbering in foundation, trenches etc at all depth including strutting, shoring and packing cavities (wherever required) complete.	sqm	64.00
4.17	Extra for planking, strutting and packing material for cavities IN OPEN TIMBERING if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	430.00
4.18	Compensation for earth, taken from private land with all lead and lift (Land to be arranged by private negotiations by the Contractor) [MOST Specification : Clause 301 to 305]	cum	60.50
4.19	Supplying Chlorpyrifos/ Lindane emulsifiable concentrate of 20% in sealed containers including delivery as specified.	litre	194.00
4.20	Diluting and injecting Chlorpyrifos/ Lindane E.C. 20% with 1% concentration for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) :		
4.20.1	Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sum of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete:	metre	14.00
4.20.2	Along the external wall below concrete or masonry apron using chemical emulsion @ 2.25 litres per linear metre including drilling and plugging holes etc.	sqm	14.00
4.20.3	Treatment of soil under existing floors using chemical emulsion @ one litre per hole, 300 mm apart including drilling 12 mm diameter holes and plugging with cement mortar 1 :2 (1 cement : 2 Coarse sand) to match the existing floor :	sqm	121.00
4.20.4	Treatment of existing masonry using chemical emulsion @ one litre per hole at 300 mm interval including drilling holes at 45 degree and plugging them with cement mortar 1:2 (1 cement : 2 coarse sand) to the full depth of the hole :	metre	15.00

Code No	Description	Unit	Rate Rs.
4.21	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) at points of contact of wood work by chemical emulsion Chlorpyrifos/ Lindane (in oil or kerosene based solution) @ 0.5 litres per hole by drilling 6 mm dia holes at downward angle of 45 degree at 150 mm centre to centre and sealing the same.	metre	44.00
4.22	Diluting and injection Chloropyrifos Emulsifiable concentrate 20% with 1% concentration for PRE-CONSTRUCTIONAL Anti termite treatment as per IS 6313 part III as amended from time to time and creating a continuous chemical barrier under and around the column pits, wall trenches, basement excavation, top surface of plinth filling, junction of wall and floor along the external perimeter of building expansion joints, over the top surface of consolidated earth of which approach is to be laid surrounding of pipes and conduits etc. complete as per specification (Plinth floor area only shall be measured for payment and excluding the cost of chemical emulsion).	sqm	156.00
4.23	Silt clearance of drains, channels and canals with lift 1.5 Mtr and lead up to 50 Mtr.	cum	237.00
4.24	Sludge clearance of drains, channels and canals with lift 1.5 Mtr and lead up to 50 Mtr.	cum	254.00
4.25	Providing Barricading for Trenches using 80 - 100 mm dia Wooden Ballies as vertical post, atleast 1.5m above ground level and atleast 30-45 cm below ground level at a spacing of 3 m. Two rows of PVC Tape (preferably red in colour) strip barricading horizontal strip securely tied by the vertical members. Vertical members shall be painted in red and white colour. Rate is inclusive removal and cleaning of site complete in all respect.	metre	76.50
4.26	Providing and fixing Barricading at site of work for restricting the general public using 80-100 mm dia Wooden Ballies as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing two rows of 80-100 mm Wooden Ballies as horizontal members with jute russies. Both vertical and horizontal members shall be painted in red and white colour strips as per approved pattern as and when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading holes shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	metre	84.00
4.27	Providing and fixing Barricading at site of work for restricting the general public using 80-100 mm dia Wooden Ballies as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing suitably two rows of 100mm wide PVC Tape preferably of red colour. The vertical members shall be painted in red and white colour strips as per approved pattern as and when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading holes shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	sqm	96.50

Code No	Description	Unit	Rate Rs.
4.28	Providing and fixing Barricading at site of work for restricting the general public using 40 mm dia M.S. pipe ("B" class) as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing suitably two rows of 100mm wide PVC Tape preferably of red colour. The M.S. pipe shall be painted in red and white colour strips as per approved pattern as and when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading the hole shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	metre	38.50
4.29	Providing and fixing Barricading at site of work for restricting the general public using 40 mm dia M.S. pipe ("B" class) as vertical post with average spacing of 1.80 meter between two vertical posts, having height at least 1.5 m above road/ ground level and at least 30-45 cm below road/ ground level by making suitable size hole in road/ ground, providing and fixing two rows of 40 mm dia M.S. pipe ("B" class) as horizontal members with nuts & bolts. Both vertical and horizontal members shall be painted in red and white colour strips as per approved pattern as when it becomes shabby but at least after every alternate shifting at new location. After shifting/ removal of barricading holes shall be filled up properly and site is to be cleared in all respect. (Note: measurement is to be done in linear basis)	metre	50.00
4.30	Providing and Fixing Minimum 0.63mm thick GI corrugated sheets (minimum width of each sheet shall be 60 cm) for covering the barricading in one/ two rows one above another and painting in red and white stripes as per the specifications and directions of the Engineer Incharge with proper fixing arrangements with GI limpet washers nuts and bolts complete in all respect.	sqm	101.00

5.0 SURVEY, TESTING, INVESTIGATION AND SITE OFFICE

Code No	Description	Unit	Rate Rs.
5.1	Topographic Survey		
5.1.1	Topographic Survey with a grid area of 15MX15M, includes all features such as structures (bridges, culverts etc.) utilities, existing roads, electric and telephone installations (both O/H as well as underground), huts, buildings, fencing and trees, oil, water and gas lines etc. using Total Station and develop a drawing in AUTO CAD format using the layering system and Geo referencing including supply of detailed drawings in appropriate scale in A-2 size complete in all respect.		
5.1.1.1	For preparation of plans of built-up areas Upto 10 Hectare	hectare	1644.00
5.1.1.2	For preparation of plans of built-up areas beyond 10 hectare	hectare	1380.00
5.1.1.3	For preparation of plans of open areas Upto 10 Hectare	hectare	1226.00
5.1.1.4	For preparation of plans of open areas beyond 10 hectare	hectare	972.00
5.1.2	Topographic Survey by taking longitudinal sections at every 10m interval, cross sections at every 5m interval on either side of centerline of Road including supply of detailed drawings in appropriate scale & size in soft copy & Hard copy complete all respect as per direction of Engineer and detailed alignment plans with covering all features in a width:		
5.1.2.1	Upto 10 mtrs.	km	3288.00
5.1.2.2	From 10mtrs. Upto 20 mtrs.	km	4110.00
5.1.2.3	From 20mtrs. Upto 30 mtrs.	km	4697.00
5.1.2.4	From 30 mtrs. Upto 50 mtrs.	km	5480.00
5.1.3	Fly leveling for transfer level from GTS benchmark to project area by close traverse method for fixing of temporary bench Mark as reference.	km	305.00
5.1.4	Fly leveling from location of temporary bench benchmark along the proposed alignment at minimum 50 m interval & where the abrupt changed of levels including supply of drawing of L-section and levels in tabular form complete all respect as per direction of Engineer. (For disposal point of treated effluent and rising main of pipeline works etc.)	km	797.00
5.1.5	Establish Bench Mark / Reference pillar of size 15 cm X 15 cm X 45 cm shall be cast in RCC of grade M-15 with a nail fixed in the centre of the top surface. The reference pillar shall be embedded in concrete up to a depth of 30 cm with CC M10 (5 cm wide all around). The balance 15 cm above ground shall be painted yellow. The spacing shall be 250m.	each	520.00
5.1.6	Installation of GPS pillar at every 5 km. of size 300 mm x 300 mm x 900 mm in RCC of grade M-15. The pillars shall be embedded 600 mm in ground with CC M-10 grade (50 mm wide all around). The balance 300 mm above ground shall be painted yellow and pillar no marked on it.	each	1626.00

Code No	Description	Unit	Rate Rs.
5.2	Pavement Investigation and Evaluation		
5.2.1	BBD Tests as per IRC: 81-1997 ("Guidelines for Strengthening of Flexible Road Pavements Using Benkelman Beam Deflection Technique") and pavement evaluation	km	4440.00
5.2.2	Test pit to obtain the existing pavement crust details and DCP test for physical characteristics of the sub-grade soil	each	1290.00
5.2.3	Auger Boring (2 m depth) sampling/testing	each	3000.00
5.2.4	Auger Boring (4 m depth) sampling/testing	each	4500.00
5.2.5	Auger Boring (6 m depth) sampling/testing	each	6000.00
5.2.6	California Bearing Ratio test	each	1560.00
5.3	Material survey and Investigation		
5.3.1	Identification of Quarry site, collection of samples of Stone metal/Fine Aggregate/GSB and laboratory testing viz. Flakiness and Elongation Index, Aggregate Impact Value (AIV), Specific Gravity and Water Absorption, Stripping and Coating test, Los Angeles Abrasion Value (LAV), Gradation, Specific Gravity, silt content and Fineness Modulus, Laboratory Compaction Test (Modified Proctor Test), CBR Test from NABL approved laboratory and preparation of report complete in all respect.		
5.3.1.1	Stone metal samples from crushers/quarries	each	3360.00
5.3.1.2	Fine Aggregates from crushers/quarries	each	1680.00
5.3.1.3	GSB from crushers/quarries	each	3360.00
5.3.2	Identification Borrow area, borrow pits sample testing from NABL approved laboratory (Soil Classification, Sieve Analysis, Atterberg Limits, Laboratory Compaction Test (Modified Proctor Test), 4-day soaked CBR, Free swell Index)	each	5880.00
5.4	Traffic Survey-To carry out traffic volume count survey and turning movement count survey. This traffic data will be analyzed to find out daily traffic. Peak Hour traffic volumes, turning movements, patterns etc.		
5.4.1	Traffic Volume counts (3 days count)		
5.4.1.1	Two Lane Road	each	16440.00
5.4.1.2	Four Lane Road	each	20760.00
5.4.2	Traffic Volume counts (7 days count)		
5.4.2.1	Two Lane Road	each	32760.00
5.4.2.2	Four Lane Road	each	42840.00
5.4.3	Axle Load Surveys (one day)		
5.4.3.1	Two Lane Road	each	9720.00
5.4.3.2	Four Lane Road	each	11880.00
5.4.4	Intersection Volume Count and Pedestrian/animal cross count (in Peak Hours)	each	5580.00
5.4.5	OD Survey and Commodity movement characteristics (1 day)		
5.4.5.1	Two Lane Road	each	7320.00

Code No	Description	Unit	Rate Rs.
5.4.5.2	Four Lane Road	each	8760.00
5.5	Water Sample Tests		
5.5.1	Water Quality Analysis– Collecting representative sample and Physical & Chemical testing of Parameter from NABL approved laboratory as per CPHEEO manual: PH, TDS, Taste & Odour, turbidity, magnesium, Total hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, Calcium, Iron, Pesticide, Manganese, Cooper, Aluminum, Residual Chlorine, Zinc, phenolic compound, Arsenic, Cadmium, Chromium, cyanides, lead, selenium, Mercury.	each	6720.00
5.5.2	Collecting representative sample and Bacteriological Parameter testing of water from NABL approved laboratory as per CPHEEO manual: Total coliforms, faecal coliforms	each	1560.00
5.6	Raw Sewage Analysis– Collecting representative sample and Physical & Chemical testing of Parameter from NABL approved laboratory as per CPHEEO manual: PH, Temperature, TSS, TDS, Inorganic dissolved solids, Alkalinity as CaCO ₃ , total hardness as CaCO ₃ , chloride as Cl, sulphate as SO ₄ , Fluoride as F, Phosphate as PO ₄ , Ammonical Nitrogen as N, Sodium as Na, TKN, BOD at 200 C, COD, Silica as SiO ₂ , oil and grease, sulphide as S, phenolic compound and submission of report complete in all respect.	each	6240.00
5.7	Municipal Solid Waste Sample analysis - Collecting representative sample of Municipal Solid Waste (MSW) and analyze physical and chemical Characterization and composition of each component in %age in NABL approved laboratory as per CPHEEO manual: Various parameters for Characterization are moisture content, total solids, volatile solids of total solids, fixed solids percent of total solids, organic carbon, COD and calorific value. Composition of each component in %age viz. Paper, Rubber, Leather & Synthetics, Metals, Inert, Plastics, Organics, Textiles, Wood & Others and submission of report complete in all respect.	each	8400.00
5.8	Ambient Air Quality Monitoring- For parameters – PM-2.5 & PM-10, SO ₂ , NO ₂ , CO from NABL approved laboratory and submission of report complete in all respect.	each	4920.00
5.9	Ambient Noise Quality Monitoring - To Identify sources of noise, Noise due to traffic/transportation of vehicles, Noise due to heavy equipment operations, Duration and variations in noise over time etc. the equivalent noise levels shall be monitored (Lday and Lnight in Leq dBA) from NABL approved laboratory and submission of report complete in all respect.	each	1980.00
5.10	Survey for identify the Existing Underground utilities: Field survey using Geo-radar system & Total Station for GIS mapping, collecting of data and plotting the details on digital map of Existing Underground utilities for a width of 15 m including supply of detailed drawings of lanes in appropriate scale & A-2 size in soft copy & Hard copy complete all respect.		
5.10.1	(a) Water mains: Alignment using appropriate techniques and it's attributes depth of laying, diameter and material and location of pipe/appurtenances/ meters. (b) Location of manholes and alignment of sewers. (c) Road levels at every intersections or 50 meters whichever is		

Code No	Description	Unit	Rate Rs.
	less. (d) Present condition of available services.		
5.10.1.1	Upto 2 Km	km	12180.00
5.10.1.2	Beyond 2 km and upto 5 Km	km	10380.00
5.10.1.3	Beyond 5 km	km	8580.00
5.11	Excavation for taking trial pits along pipe/sewer line -Trenches/pits size 1.0mx1.0mx1.5m - for field verification for location/details of utilities, and refilling of excavated trench/pit as per standard engineering practices:		
5.11.1	Area with Cement Concrete Roads	each	1380.00
5.11.2	Area with Bituminous road Surface	each	1275.00
5.11.3	Area with metal/unmetal surface	each	750.00
5.12	Add extra for extra excavation in trial pits for each and every 0.5 m depth or part their of.	each	258.00
5.13	Surveys for evaluation of discharge, efficiency of pump and head losses in piping within the pump house for centrifugal pumps in existing operating conditions of each pump set.	each	840.00
5.14	Surveys/ Bench Test for evaluation of discharge, efficiency of pump and head losses in piping within the pump house for submersible pumps in existing operating conditions of each pump set.	each	960.00
5.15	Geotechnical Investigations:		
5.15.1	To Analyze the soil conditions by drilling bore holes at different locations to represent soil strata to conduct Standard penetration test (SPT) for determining SBC in hole as per IS-2131 including collection of disturbed and undisturbed soil samples at every 3.0 m or at change of strata analyzing the soil or grain size, atterberg limits, bulk & dry densities, shear parameters and specific gravity. In case of rock, collection of core, calculation of RQD (Rock Quality Designation) and core recovery and comprehensive strength of rock. Geo-tech investigation to be done at different locations complete in all respect as per specifications.		
5.15.1.1	In hard Soil	metre	1500.00
5.15.1.2	In ordinary/soft rock	metre	2250.00
5.15.1.3	In Hard Rock	metre	3000.00
5.15.2	Plate load test for determining SBC at a specified depth and draw load settlement curve as per Indian standard complete in all respect as per specifications.	each	34800.00
5.16	Site clearance, dagbelling and demarcation of land boundary by providing and fixing boundary stone of size 15cmx10cmx120cm (60cm below ground) stone at every 50 m interval & corner of the land and to write the length of the land boundary on corner stones from one corner to another corner by enamel paint.	metre	12.00
5.17	Preparation of detailed plans, elevations, sections of existing buildings.	sqm	31.00
5.18	Socio-economic survey – To collect the information regarding social and economical status of beneficiaries in terms of their livelihood in a prescribed format. The Census cum Socio-economic survey to be conducted by using questionnaire with a battery of questions to address social and economical status.	each	26.00

Code No	Description	Unit	Rate Rs.
5.19	Survey of all properties, preparation of GIS based consumer mapping of consumer water connection & consumer sewer connections and database, plotting assets on GIS map etc (Satellite image will be provided by the Department	each property	42.50
5.20	Photography for the CAAP activities	each	33.50
5.21	SITE OFFICE		
5.21.1	Providing, arranging, managing and maintaining 500 sq.ft. well furnished office and well equipped Laboratory with 3 tables, 10 chairs, 2 steel almirah, one computer with printer & operator, sufficient number of display etc. to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has actually rented/constructed the required premises established the office & Laboratory as per requirement. This item shall remain valid only for original contact period; no additional payment shall be made for whatsoever reason even if time extension if provided or date of completion is extended. This office and laboratory including furniture and all other equipment shall be property of contractor after completion of Project.	month	17900.00
5.21.2	Providing, arranging, managing and maintaining minimum 350 sq.ft. office with two tables, 6 chairs, one steel almirah, one computer with printer & operator, sufficient number of display etc. fully furnished office to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has actually rented/constructed the required premises established the office & Laboratory as per requirement. This item shall remain valid only for original contact period; no additional payment shall be made for whatsoever reason even if time extension if provided or date of completion is extended. This office and laboratory including furniture and all other equipment shall be property of contractor after completion of Project as per specification and direction of the Engineer.	month	12200.00
5.21.3	Providing, arranging, managing, and maintaining minimum 250 sq.ft. well equipped Laboratory as per specifications with two tables, 4 chairs, one steel almirah, sufficient number of display etc. to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has actually rented/constructed the required premises established the Laboratory as per requirement. This item shall remain valid only for original contact period; no additional payment shall be made for whatsoever reason even if time extension if provided or date of completion is extended. This laboratory including furniture and all other equipment shall be property of contractor after completion of Project.	month	6530.00
5.21.4	Supply of laboratory equipments like Analytical Balance, Autoclave, Dissolved Oxygen Sampler, Drying Oven, Hot Plates, Incubator, Microscope, Binocular, Membrane Filter Assembly, Muffle Furnace, PH Meter portable, Refrigerator (165 ltr.), Sludge Sampler, Soxhlet extraction unit, Turbidity meter, Vacuum pump, Water bath (thermostat controlled) and Glass wares of approved make including analytical chemicals and commissioning as per technical specification and the direction of the Engineer.	set	228500.00

6.0 MORTARS

Code No	Description	Unit	Rate Rs.
6.1	Cement Mortar 1:1 (1 cement : 1 fine sand)	cum	6050.00
6.2	Cement mortar 1:2 (1 cement : 2 fine sand)	cum	4570.00
6.3	Cement mortar 1:3 (1 cement : 3 fine sand)	cum	3820.00
6.4	Cement mortar 1:4 (1 cement : 4 fine sand)	cum	3170.00
6.5	Cement mortar 1:5 (1 cement : 5 fine sand)	cum	2820.00
6.6	Cement mortar 1:6 (1 cement : 6 fine sand)	cum	2520.00
6.7	Cement mortar 1:2 (1 cement : 2 coarse sand)	cum	4570.00
6.8	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	3820.00
6.9	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	3170.00
6.10	Cement mortar 1:5 (1 cement : 5 coarse sand)	cum	2820.00
6.11	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	2520.00
6.12	Cement mortar 1:2 (1 cement : 2 stone dust)	cum	4140.00
6.13	Cement mortar 1:2 (1 cement : 2 marble dust)	cum	3810.00
6.14	Cement mortar 1:5 (1 cement : 5 marble dust)	cum	1970.00
6.15	White cement mortar 1:2 (1 white cement : 2 marble dust)	cum	9930.00
6.16	White cement mortar 1:3 (1 white cement : 3 marble dust)	cum	7560.00
6.17	White cement mortar 1:5 (1 white cement : 5 marble dust)	cum	4760.00
6.18	Mud mortar	cum	358.00

7.0 ROAD WORKS (Sub-base/ Bases)

Code No	Description	Unit	Rate Rs.
7.1	Providing, laying, spreading and compacting of granular sub-base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
7.1.1	Grading - I Material	cum	1070.00
7.1.2	Grading - II Material	cum	1040.00
7.1.3	Grading - III Material	cum	969.00
7.2	Providing, laying, spreading and compacting of granular sub-base by providing close graded material (Table 400-1), spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
7.2.1	Grading - I Material	cum	916.00
7.2.2	Grading - II Material	cum	887.00
7.2.3	Grading - III Material	cum	813.00
7.3	Providing, laying and spreading of granular sub-base by providing coarse graded Material (Table 400-2), spreading in uniform layers with motor grader on prepared surface, mixing BY MIX IN PLACE METHOD with rotavator at OMC, and compacting with vibratory roller to achieve the desired density, complete as per MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
7.3.1	Grading - I Material	cum	984.00
7.3.2	Grading - II Material	cum	965.00
7.3.3	Grading - III Material	cum	879.00
7.4	Providing laying, spreading and compacting inverted choke by providing, laying, spreading and compacting screening B type/ coarse sand of specified grade in sub base course in uniform layer on a prepared surface with motor grader and compacting with power roller etc complete as per clause 404.3.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion complete.	cum	1370.00
7.5	Providing laying, spreading and compacting stone aggregates of specific sizes as per Table 400-7 to Water Bound Macadam specification including spreading in uniform thickness; hand packing, rolling with power roller 8-10 tonnes, in stages to proper grade and camber, applying and brooming requisite type of screening (Table 400-8) binding materials to fill up the interstices of coarse aggregates, watering (with water browser) and compacting to required density, making necessary earthen bund to protect edges as per clause 404 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion		

Code No	Description	Unit	Rate Rs.
	complete.		
7.5.1	Hand broken - Grade-I (90-45mm)	cum	1230.00
7.5.2	Hand broken - Grade-II (63-45mm)	cum	1250.00
7.5.3	Crusher broken - Grade-II (63-45mm)	cum	1320.00
7.5.4	Crusher broken - Grade-III (53-22.4mm)	cum	1400.00
7.6	Providing, laying, spreading (with paver finisher only) and compacting wet mix macadam (WMM) base course comprising of graded stone aggregate and granular material conforming to MORT&H specifications (Table 400-II) in layers of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	1360.00
7.7	Scarifying existing granular road surface, including picking up scarified material and stacking of old serviceable material within a lead of 1000 meters complete as per clause 305.4.3 of MoRT&H specification including all labour, machinery, lighting, guarding and maintenance of diversion.	sqm	25.50

8.0 ROAD WORKS (Bituminous Bases)

Code No	Description	Unit	Rate Rs.
8.1	Providing and applying primer coat over prepared surface of granular base with bitumen emulsion as per IS : 8887 and approved quality @ 0.6 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface including removing of binding material and other foreign matter with wire brushes and small picks, sweeping with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	20.00
8.2	Extra for additional bitumen emulsion used in above item for every 1 kg per 10 sqm	sqm	3.00
8.3	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS: 8887 and approved quality @ 0.2 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	7.00
8.4	Extra for additional bitumen emulsion used in above item for every 1 kg per 10 sqm	sqm	3.00
8.5	Providing and laying bituminous macadam in 50/75 mm compacted thickness on prepared surface with specified graded crushed stone aggregates as per Table 500-4, Grading-II for base/ binding course, loading of aggregate with F.E. loader, heating and mixing of stone aggregate and bitumen in computerised hot mix plant, transported to site by tippers to paver, laid over a previously prepared surface with paver finisher fitted with electronic sensing device to the required grade, level and alignment and rolling with power roller and vibratory compactor as per clauses 501.6 and 501.7 to achieve the desired compaction complete as per clause 504 of MoRT&H specification and including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of primer/ tack coat.		
8.5.1	With Bitumen VG-grade 30 @ 3.3% (percentage by weight of total mix)	cum	4730.00
8.5.2	With Bitumen VG-grade 30 @ 3.4% (percentage by weight of total mix)	cum	4840.00
8.5.3	With CRMB 60 grade @ 3.3% (percentage by weight of total mix)	cum	4330.00
8.5.4	With CRMB 60 grade @ 3.4% (percentage by weight of total mix)	cum	4420.00
8.5.5	With Bitumen VG-grade 30 @ 3.3% (percentage by weight of total mix)	tonne	2160.00
8.5.6	With Bitumen VG-grade 30 @ 3.4% (percentage by weight of total mix)	tonne	2200.00
8.5.7	With CRMB 60 grade @ 3.3% (percentage by weight of total mix)	tonne	1970.00
8.5.8	With CRMB 60 grade @ 3.4% (percentage by weight of total mix)	tonne	2010.00

Code No	Description	Unit	Rate Rs.
8.6	Providing and laying penetration macadam over prepared surface by providing a layer of compacted crushed coarse aggregate as per Table 500-6 using chips spreader with alternate applications of bituminous binder and key aggregates and rolling with a smooth wheeled steel roller 8-10 tonne capacity to achieve the desired degree of compaction as per clause 505 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.6.1	50 mm compacted thickness with Bitumen VG-grade 30 @ 5 kg/sqm	sqm	297.00
8.6.2	75 mm compacted thickness with Bitumen VG-grade 30 @ 6.8 kg/sqm	sqm	406.00
8.7	Providing, laying and consolidation of crushed stone aggregate as per Table 500-7 on prepared surface as per built-up-spray grout specification, 75mm thick as base coarse in two layer composite construction of crushed stone aggregates using motor grader, chip spreader for key aggregate with application of bituminous binder VG-grade 30 with spray set (including cost of anti-stripping compound wherever required) @ 15 Kg/ 10 Sqm after each layer, and laying key aggregates on top of the second layer and rolling with power roller (8-10 tonne), as per clause 506 of MoRT&H Specification including all labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of primer/ tack coat.	cum	3140.00
8.8	Providing and laying 50-75 mm compacted thick design mix (approved by Engineer) Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates as per Table 500-9, 500-10 with bitumen binder set (including cost of anti-stripping compound wherever required) for base/ binder course including loading of material with F.E. loader, heating and mixing of stone aggregate, filler and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control as per clause 504.3.5 to the required level and grade, compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa to achieve the desired density (approximately 2.3 tonne/cum) complete as per clause 507 of MoRT&H specification but excluding primer/tack coat, including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.8.1	Grade-II with Bitumen VG-grade 30 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	cum	6050.00
8.8.2	Grade-II with Bitumen VG-grade 30 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	cum	6320.00
8.8.3	Grade-II with CRMB-60 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	cum	5500.00
8.8.4	Grade-II with CRMB-60 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	cum	5730.00
8.8.5	Grade-II with Bitumen VG-grade 30 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	tonne	2620.00
8.8.6	Grade-II with Bitumen VG-grade 30 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	tonne	2740.00
8.8.7	Grade-II with CRMB-60 @ 4.25 %, lime filler @ 2% (percent by weight of total mix)	tonne	2380.00

Code No	Description	Unit	Rate Rs.
8.8.8	Grade-II with CRMB-60 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)	tonne	2480.00
8.9	Providing laying and consolidation Semi Dense Bituminous Concrete, as per Design Mix (approved by Engineer), on prepared surface with specified graded crushed aggregates as per table 500-15 for wearing coarse including loading of material with F.E. loader, hot mixing of stone aggregate, filler and bitumen (including cost of anti-stripping compound wherever required) heating and mixing in in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control to the required level and grade, compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa, to achieve the desired density (approximately 2.3 tonne/cum) complete as per clause 508 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding primer/tack coat.		
8.9.1	35-40 mm compacted thickness (Grade-1) using Bitumen VG-grade 30 @ 4.5% (percent by weight of total mix)	cum	6300.00
8.9.2	35-40 mm compacted thickness (Grade-1) using CRMB-60 @ 4.5% (percent by weight of total mix)	cum	5720.00
8.9.3	25-30 mm compacted thickness (Grade-2) using Bitumen VG-grade 30 @ 5% (percent by weight of total mix)	cum	6810.00
8.9.4	25-30 mm compacted thickness (Grade-2) using CRMB-60 @ 5% (percent by weight of total mix)	cum	6160.00
8.9.5	35-40 mm compacted thickness (Grade-1) using Bitumen VG-grade 30 @ 4.5% (percent by weight of total mix)	tonne	2730.00
8.9.6	35-40 mm compacted thickness (Grade-1) using CRMB-60 @ 4.5% (percent by weight of total mix)	tonne	2480.00
8.9.7	25-30 mm compacted thickness (Grade-2) using Bitumen VG-grade 30 @ 5% (percent by weight of total mix)	tonne	2950.00
8.9.8	25-30 mm compacted thickness (Grade-2) using CRMB-60 @ 5% (percent by weight of total mix)	tonne	2670.00
8.10	Providing and laying 30-45 mm compacted thickness Bituminous Concrete as per design mix (approved by Engineer) on prepared surface with specified grade stone aggregate as per Table - 500-18 with bitumen for wearing course including loading of aggregate with F.E. loader and hot mixing of stone aggregate and bitumen (including cost of anti-stripping compound wherever required) in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensing device (as per clause 504-3.5) to the required level and grade and compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa, to achieve the desired density complete as per clause 509 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding primer/tack coat.		
8.10.1	Grade-II with Bitumen VG-grade 30 @ 6% (percent by weight of total mix)	cum	8070.00
8.10.2	Grade-II with bitumen of grade CRMB-60 @ 6% (percent by weight of total mix)	cum	7280.00

Code No	Description	Unit	Rate Rs.
8.10.3	Grade-II with bitumen of grade SBS PMB-40 @ 6% (percent by weight of total mix)	cum	8060.00
8.10.4	Grade-II with Bitumen VG-grade 30 @ 6% (percent by weight of total mix)	tonne	3430.00
8.10.5	Grade-II with bitumen of grade CRMB-60 @ 6% (percent by weight of total mix)	tonne	3090.00
8.10.6	Grade-II with bitumen of grade SBS PMB-40 @ 6% (percent by weight of total mix)	tonne	3420.00
8.11	Providing and laying surface dressing as wearing course consisting of a layer of bituminous binder as per Table 500-20 (including cost of anti-stripping compound wherever required) laid on the prepared surface, followed by a cover of crushed stone chippings of specified size (may be pre coated also) & rolling with power roller all complete as per clause 510 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.11.1	With 19mm crushed stone chipping 0.15 cum and binder 12 Kg per 10 Sqm - Bitumen VG-grade 30	sqm	73.00
8.11.2	With 19mm crushed stone chipping 0.15 cum and binder 12 Kg per 10 Sqm - CRMB-60	sqm	66.50
8.11.3	With 13mm crushed stone chipping 0.10 cum and binder 10 Kg per 10 Sqm - Bitumen VG-grade 30	sqm	58.50
8.11.4	With 13mm crushed stone chipping 0.10 cum and binder 10 Kg per 10 Sqm - CRMB-60	sqm	53.00
8.12	Providing and laying open graded premix carpet 20mm thick (compacted), on prepared surface in a single course as wearing course, composed of specified graded crushed stone aggregate as per Table 500-23, premixed with bituminous binder @ 14.60 kg/ 10sqm (including cost of anti-stripping compound wherever required), including loading of material with F.E. loader, hot mixing of stone aggregate and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control to the required level and grade, compacting smooth wheeled roller 8-10 tonne capacity and finishing to required level to achieve the desired density as per clause 511 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding cost of tack coat/ seal coat.		
8.12.1	With Bitumen VG-grade 30	sqm	94.00
8.12.2	With bitumen of grade CRMB-60	sqm	86.00
8.13	Deduct for using manual paver finisher instead of paver finisher fitted with electronic sensing device for all bituminous work.		
8.13.1	By Volume	cum	68.00
8.13.2	By Weight	tonne	30.00
8.14	Providing and applying liquid seal coat type "A" comprising of a layer of bituminous binder @ 9.8 kg/ 10 Sqm (including cost of anti-stripping compound wherever required) followed by a cover of stone chipping @ 0.09 cum/10 sqm of specified grading and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting,		

Code No	Description	Unit	Rate Rs.
	guarding and maintenance of diversion.		
8.14.1	With Bitumen VG-grade 30	sqm	54.50
8.14.2	With bitumen of grade CRMB-60	sqm	49.00
8.15	Providing and applying premixed seal coat Type "B" comprising of thin application of fine aggregate 0.06 cum/ 10 sqm premix with bitumen binder @ 6.8 Kg/ 10 Sqm (including cost of anti-stripping compound wherever required) laying with paver finisher with electronic sensor control and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.15.1	With Bitumen VG-grade 30	sqm	38.00
8.15.2	With bitumen of grade CRMB-60	sqm	34.00
8.16	Providing and laying premixed seal coat using hot mix plant and paver finisher with aggregate of 6.7mm size defined as 100% passing through 11.20mm sieve and retain on 2.36mm sieve with 0.09 cum per 10 sqm premix with bitumen binder @ 4.5% and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
8.16.1	With Bitumen VG-grade 30	sqm	54.50
8.16.2	With bitumen of grade CRMB-60	sqm	49.00
8.17	Providing and laying 25 mm thick bitumen mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29 (including cost of anti-stripping compound wherever required) @ 14-17% (by weight) as per job mix formula, coarse aggregate as per Table 500-32, fine aggregate as per Table 500-31 and lime stone powder as filler, prepared by using mastic cooker and laid to required level and grade after cleaning the surface, including providing antiskid surface with bitumen precoated fine-grained hard stone chipping of 13.2 mm nominal size @ 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 100 degree Centigrade, protruding 1 mm to 4 mm over mastic surface, all complete including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 515 of MoRT&H specification.	sqm	518.00
8.18	Cost of bitumen to be added or subtracted when it varies from the job mix formula adopted in above item		
8.18.1	Bitumen VG-grade 30	tonne	46800.00
8.18.2	CRMB 60	tonne	41100.00
8.19	Providing and applying low viscosity bitumen emulsion @ 8.25 kg per 10 sqm for sealing cracks less than 3 mm wide or incipient fretting or disintegration in an existing bituminous surfacing including covering with 3mm stone grit as per clause 518 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	66.50
8.20	Scarifying existing bituminous road surface, including picking up scarified material and stacking of old serviceable material within a lead of 1000 meters complete as per clause 305.4.3 of MoRT&H specification including all labour, machinery, lighting, guarding and maintenance of diversion.	sqm	24.50

9.0 CEMENT CONCRETE PAVEMENTS

Code No	Description	Unit	Rate Rs.
9.1	Providing and laying lean cement concrete 1:4:8 in Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per clause 601, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2390.00
9.2	Providing and laying lean cement concrete 1:4:8 in Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid manually, compacting with surface vibrator, finishing and curing complete as per clause 601, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2360.00
9.3	Providing and laying lean cement concrete 1:4:8 in Sub- base over a prepared sub-grade with coarse and fine aggregate conforming to IS: 383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per table 600-1, cement content not to be less than 150 kg/ cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in concrete mixer, laid manually, compacted with surface vibrator, finishing and curing complete as per clause 601, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2300.00
9.4	Providing and laying un-reinforced, dowel jointed, plain cement concrete mix in pavement over a prepared sub base with 43 grade cement, coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades complete as per drawing and as per clause 602, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
9.4.1	PCC M-20	cum	5560.00
9.4.2	PCC M-25	cum	5860.00

Code No	Description	Unit	Rate Rs.
9.4.3	PCC M-30	cum	5930.00
9.4.4	PCC M-40	cum	5990.00
9.5	Providing and laying un-reinforced, dowel jointed, plain cement concrete mix With Concrete Mixer & vibrator pavement over a prepared sub base with 43 grade cement , coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed as per approved mix design, laid, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, admixtures (if required) as approved, curing compound, finishing to lines and grades complete as per drawing and as per clause 602, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
9.5.1	PCC M-20	cum	4700.00
9.5.2	PCC M-25	cum	4990.00
9.5.3	PCC M-30	cum	5060.00
9.5.4	PCC M-40	cum	5120.00
9.6	Providing and laying un-reinforced, plain cement concrete mix with Concrete Mixer & vibrator pavement over a prepared sub base with 43 grade cement , coarse and fine aggregate conforming to IS: 383, maximum size of coarse aggregate not exceeding 25 mm, mixed as per approved mix design, laid, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints etc including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
9.6.1	PCC M-20	cum	4570.00
9.6.2	PCC M-25	cum	4870.00
9.6.3	PCC M-30	cum	4940.00
9.7	Providing and laying rolled cement concrete mix of M-10 base course with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm with minimum aggregate cement ratio 15:1 and minimum cement content of 200 kg/cum, aggregate gradation to be as per table 600-4 after blending, mixing in batching plant at optimum moisture content, transporting to site, laying with a paver with electronic sensor, compacting with 8-10 tonnes smooth wheeled vibratory roller to achieve the designed flexural strength, finishing and curing complete as per clause 603, 112 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2710.00
9.8	Providing and laying Base/sub-base using cement, sand, fly ash and coarse aggregates proportioned as per table 4 of IRC: 74/1979 and with water content ratio, slump and compressive strength as defined in the said table, mix prepared in a batching and mixing plant transported to site, laid with a fixed form or slip form paver, spread, and compacted with a vibratory roller 8-10 tonnes capacity within the time limit laid down vide clause 7.6.3 of IRC: 74-1979, construction joints properly formed at the end of day's work, cured for 14 days, all as specified in IRC: 74-1979 and as per approved plans complete including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	2200.00

Code No	Description	Unit	Rate Rs.
9.9	Providing and laying un-reinforced, dowel jointed, plain cement concrete pavement over a prepared sub base with 43 grade cement, coarse and fine aggregate conforming to IS 383, maximum size of coarse aggregate not exceeding 25 mm, replacing cement by fly ash to the extent of 15% and sand by 10%, mixed in a batching and mixing plant as per approved mix design, transported to site, laid with a fixed form or slip form paver, spread, compacted and finished in a continuous operation including provision of contraction, expansion, construction and longitudinal joints, joint filler, separation membrane, sealant primer, joint sealant, debonding strip, dowel bar, tie rod, admixtures as approved, curing compound, finishing to lines and grades as per drawing complete including all material, labour, machinery, lighting, guarding and maintenance of diversion.	cum	5500.00
9.10	Providing and fixing of precast concrete interlocking tiles of desired shape of M 30 grade manufactured from fully computerized automatic stationery hydraulic vibro pressed machine and fully computerized automatic batching plant of class A1/A2 as per BS 6717:2001. The CC interlocking paving blocks be laid on average 50mm. thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub-base as defined. Complete job is to be executed as per the instruction of Engineer incharge. The rates to be inclusive of all lead & Lifts etc. complete as per specifications. Tensile splitting strength, abrasion and braking load etc. as per BS 6717:2001, Grey cement.		
9.10.1	60mm thick	sqm	516.00
9.10.2	80mm thick	sqm	578.00
9.10.3	100mm thick	sqm	641.00
9.11	Providing and fixing of 60mm thick precast cement concrete interlocking paver block casted with rubber moulds in approved reflective colour and design having minimum compressive strength of 300 kg/ sq cm. The CC paving blocks be laid on average 50mm thick bed of coarse sand and the joint is to be filled with fine sand. Laying procedure on compacted sub-base as defined. Complete job is to be executed as per the instruction of Engineer incharge. The rates to be inclusive of all lead & Lifts etc. complete as per specifications.	sqm	641.00
9.12	Removing & re-fixing of precast cement concrete interlocking paving blocks of all sizes over 50 mm thick coarse sand bedding (duly compacted) including filling of joints with sand complete in all respect.	sqm	383.00
9.13	Flooring with Cobble stone of approx. Size 125x125x75 mm (thick) laid on 25 mm average thick cement mortar 1:3 (1 cement : 3 Coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the stone, laid in approved pattern complete in all respect as per direction of Engineer-in-charge.	sqm	1500.00
9.14	Removing & re-fixing of stone slab flooring set in pattern over 20 mm thick base of cement mortar 1:6 (1 cement : 6 coarse sand) and finished with cement sand mortar 1:3 complete in all respect.	sqm	365.00

10.0 TRAFFIC SIGNS, MARKINGS & OTHER ROAD APPURTENANCES

Code No	Description	Unit	Rate Rs.
10.1	Providing and fixing precast cement concrete M-20 grade (Using mechanical Concrete Mixer) kerb stone top and bottom width 115 and 165 mm respectively, 250 mm high on 150 mm thick PCC M-10 grade foundation as per design, including fixing at site as per clause 408 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	metre	254.00
10.2	Providing and laying cast-in-situ cement concrete M-20 grade kerb stone channel top and bottom width 115 and 165 mm respectively, 250mm high laid with kerb laying machine, on 150 mm thick PCC M-10 grade foundation (laid manually) as per design, including fixing at site as per clause 408 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
10.2.1	Using Concrete Mixer	metre	331.00
10.2.2	Using Concrete Batching and Mixing Plant	metre	320.00
10.3	Providing and fixing in position precast Reinforced Cement Concrete M15 grade Kilometre stone of standard IRC design, including painting and printing letters etc. as per clause 804 of MoRT&H Specification including all material, labour, machinery.		
10.3.1	5th Kilometre stone	each	2890.00
10.3.2	Ordinary Kilometre stone	each	1740.00
10.3.3	200 metre stone	each	490.00
10.4	Providing and fixing in position Reinforced Cement Concrete Boundary pillars of standard IRC - 25 design, including finishing but excluding printing as per clause 806 of MoRT&H Specification including all material, labour, machinery.	each	479.00
10.5	Painting two coats on specified surface with synthetic enamel paint of approved brand and shade, after thorough cleaning and necessary filling to give even shade as per clause 803 of MoRT&H Specification including all material, labour.		
10.5.1	On new plastered concrete surface	sqm	74.00
10.5.2	On steel surface	sqm	62.50
10.6	Painting single coat on specified surface with synthetic enamel paint of approved brand and shade, after thorough cleaning and necessary filling to give even shade including all material, labour.		
10.6.1	On wood/ steel surface	sqm	35.00
10.7	Painting new letters and figures of specified size, of any shade with first quality synthetic enamel paint, black or any other approved colour to give an even shade as per clause 801 of MoRT&H Specification including all material, labour.		
10.7.1	Hindi (Matras, Commas and the like not to be measured and paid for. Half letters shall be counted as half).	cm height per letter	1.05
10.7.2	English and Roman (Hyphens, commas and the like not to be	cm	0.65

Code No	Description	Unit	Rate Rs.
	measured and paid for)	height per letter	
10.8	Providing and laying marking of center line and stop line etc with hot thermoplastic compound 2.5 mm thick on road/ plain surface, including reflectorising glass beads @ 250 gms per sqm area with special applicator machine, as per IRC:35 including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control involved. The finished surface to be level, uniform and free from streaks and holes as per clause 803 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	382.00
10.9	Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on a mild steel angle iron post 3 metre long and size 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.		
10.9.1	90 cm equilateral triangle	each	3820.00
10.9.2	60 cm equilateral triangle	each	2510.00
10.9.3	60 cm circular	each	3370.00
10.9.4	80 mm x 60 mm rectangular	each	4700.00
10.9.5	60 cm x 45 cm rectangular	each	3280.00
10.9.6	60 cm x 60 cm square	each	3890.00
10.9.7	90 cm high octagon	each	5990.00
10.10	Providing and erecting direction and place identification retro-reflectorised sign as per IRC:67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 2 mm thick framed to angle iron 40x40x5mm with area not exceeding 0.9 sqm supported on a mild steel single angle iron post 75 x 75 x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.	sqm	8470.00
10.11	Providing and erecting direction and place identification retro-reflectorised sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting 2 mm thick framed to angle iron 40x40x5mm with area exceeding 0.9 sqm supported on two nos mild steel angle iron post 75 mm x 75 mm x 6 mm, firmly fixed to the ground by means of properly designed foundation with M 15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.	sqm	8980.00
10.12	Supplying and installation of delineators (road way indicators, hazard markers, object markers), 80-100 cm high above ground level, painted black and white in 15 cm wide stripes, fitted with 80 x 100 mm rectangular or 75 mm dia circular reflectorised panels at the top, buried or pressed into the ground and confirming to IRC-79 and the drawings.	each	381.00

Code No	Description	Unit	Rate Rs.
10.13	Providing and erecting overhead signs with retro reflective Type IV sign plate fixed on angle iron frame with vertical and lateral clearance given in clause 802.2 and 802.3 and installed as per clause 802.7 over a designed support system of galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans.		
10.13.1	Truss and Vertical Support	tonne	74900.00
10.13.2	Providing and fixing High Intensity retro reflective Type IV sign plate made out of 2.00 mm thick aluminium sheet face to be fully covered with blue/green high intensity grade retro reflective sheet and logo/matters, boarder made of with similar type of white sheeting after etching treatment of aluminium sheet, the black side is to be painted with epoxy grey paint. The plate is to be fixed on 40X40X5 mm angle iron frame with help of aluminium rivets.	sqm	10400.00
10.14	Providing and erecting direction and place identifications retro-reflectorised sign as per IRC:67 made of high intensity grade sheeting vide clause 807.3, fixed over aluminium sheeting 2 mm thick supported on mild steel angle iron post 75 x 75 x 6 mm firmly fixed to ground by means of properly designed foundation with M15 grade cement concrete 45 x 45 x 60 cm, 60 cm below ground level as per approved drawing.		
10.14.1	Identification sign board of size upto 0.90 sqm	sqm	2650.00
10.14.2	Identification sign board of size above 0.90 sqm	sqm	4820.00
10.15	Supply and fixing sign board upto 4.5 meter height made of the following specifications board base of A.C.P / transparent PVC acrylic sheet 3 mm thick fixed on MS hollow rectangular section size 50mmx25mm, letters made of acrylic material sheet 3 mm thick of any colour fixed with LED lights with all accessories and wiring with copper wire complete as required and as per direction in engineer in charge.	sqm	11100.00
10.16	Supplying and fixing of GI chain link fencing of required width in mesh including strengthening with 2 mm dia GI wire/ G.I. staples/ G.I.U-nails/ nuts bolts with 2.4 m angle iron posts 50 mm x 50 mm x 6 mm placed every 3 metres center to center founded in M15 grade cement concrete 30cmx30cmx60cm, 0.6 metre below ground level, every 15th post, last but one end post and corner post shall be struttred on both sides and end post on one side only etc complete as required and as per direction of Engineer-in-charge.		
10.16.1	Mesh size 50mm x 50mm made of GI wire 3.15mm dia	sqm	609.00
10.16.2	Mesh size 75mm x 75mm made of GI wire 3.15mm dia	sqm	578.00
10.16.3	Mesh size 100mm x 100mm made of GI wire 3.15mm dia	sqm	514.00
10.16.4	Mesh size 150mm x 150mm made of GI wire 3.15mm dia	sqm	501.00
10.17	Providing and fixing 1.2 metres high GI barbed wire fencing with 1.8 m angle iron posts 40 mm x 40 mm x 6 mm placed every 3 metres center to center founded in M15 grade cement concrete, 0.6 metre below ground level, every 15th post, last but one end post and corner post shall be struttred on both sides and end post on one side only and provided with 9 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc complete as per clause 807 of MoRTH specification & type "A" as per IS : 278-	metre	219.00

Code No	Description	Unit	Rate Rs.
10.18	1978 size designation 5 (line wire 2.24, point wire 2.00mm mass 97-106 g/m) including all material, labour. Providing and fixing 1.8 metres high GI barbed wire fencing with 2.4 m angle iron posts 50 mm x 50 mm x 6 mm placed every 3 metres center to center founded in M15 grade cement concrete 30cmx30cmx60cm, 0.6 metre below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on one side only and provided with 12 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc complete as per clause 807 of MoRT&H specification & type "A" as per IS : 278-1978 size designation 5 (line wire 2.24, point wire 2.00mm mass 97-106 g/m) including all material, labour.	metre	350.00
10.19	Providing 1.20 metre high fencing with angle iron posts 50 mm x 50 mm x 6 mm at 3 metre center to center with 0.40 metre embedded in M15 grade cement concrete, corner, end and every 10th post to be strutted, provided with welded steel wire fabric of 75 mm x 50 mm mesh or 75 mm x 25 mm mesh and fixed to iron posts by flat iron 50 x 5 mm and bolts etc. complete in all respects including all material, labour.	metre	622.00
10.20	Providing and fixing 50 mm dia G.I. steel pipe railing in 3 rows duly painted on medium weight steel channels (ISMC series) 100 mm x 50 mm, 1.2 metres high above ground, 2 m centre to centre, complete as per approved drawings including all material, labour.	metre	2040.00
10.21	Providing and fixing Tubular Steel Railing on Precast RCC posts, 1.2 m high above ground level Providing, fencing and erecting 50 mm dia G.I pipe railing in 3 rows on precast M20 grade RCC vertical posts 1.8 metres high (1.2 m above GL) with 3 holes 50 mm dia for pipe, fixed 2 metres centre to, complete as per approved drawing including all material, labour.	metre	1510.00
10.22	Providing and fixing CAT's eye made of aluminium alloy size 75x100x22mm having 21 biconvex lenses embedded in circular disk of AS plastic on each side on road surface complete including all material, labour, and diversion.	each	145.00
10.23	Supplying and fixing of Single Molded twin Shank Raised Pavement Markers made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 16000 kg tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/ NH/33023/ 10-97-DC) III Dt 11.06.1997. The height, width and length shall not exceed 50 mm, 100 mm and 100 mm and with minimum reflective area of 13 Sqcm on each side and the slope to the base shall be 35+/-5 degree. The strength of detachment of the integrated cylindrical shanks, (of diameter not less than 19 +/- 2 mm and height not less than 30+/- 2 mm) from the body is to be a minimum value of 700 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. (manufactured from 3M, Avery or equivalent)	each	182.00
10.24	Supplying and fixing glow studs of size 100 X 20 mm made of heavy duty body shall be moulded ASA (Acrylic styrene Acrylonitrile) of ABS		

Code No	Description	Unit	Rate Rs.
	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 degree to base. The panels on both sides with at least 12 cm of reflective areas up each side. The luminance intensity should be as per the specification and shall be tested as described in ASTM 1: 809 as recommended in BS : 873 part 4 : 1973 as per approval sample & manufactures by the Engineer-in-charge with shunk.	each	230.00
10.25	Providing and fixing "L" type bollard 135cm height made out of 1.25mm thick M.S. sheet welded in conical section having upper dia 15cm and lower dia 20cm with another attachment of 150x150x7mm thick plate and hold fast at bottom, whole body is painted in white stove enamel and red reflective 3 band, each of 7.5cm and one reflective sheet of 15cm dia provided to it complete in all respect including all material, labour, diversion.	each	1340.00
10.26	Providing and fixing "SWISS" type bollard 134cm height made out of 1.25mm thick M.S. sheet welded in conical section having upper dia 15cm and lower dia 20cm with another attachment of mandatory 7mm thick plate and fixed with the help of 7cm long, 30cm dia chrome plated MS tube, this part is fixed on the body with another attachment of a cap 30x7cm, whole body is painted in black stove enamel and mandatory plate in azure blue with one compulsory keep left arrow with 10mm border reflective strip each of 7.5cm on body complete in all respect including all material, labour, diversion.	each	1430.00
10.27	Providing and fixing hazard marker made out of 2mm thick M.S. angle iron 25x25x3mm and fixed on channel posts 75x75x6mm and hold fast at bottom whole body is painted in white stoving enamel and 6 nos 5 cm dia reflective sheet on white reflective background with additional border of 1.25 cm all around it complete in all respect including all material, labour, diversion.	each	484.00
10.28	Providing and fixing SWISS type hazard marker made out of 2mm thick M.S. sheet size of box is 15x15cm with hold fast at bottom whole body is painted in white stoving enamel paint with white/ high intensity grade prismatic type sheeting on all four side complete in all respect including all material, labour, and diversion.	each	650.00
10.29	Earth work in excavation of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom, backfilling the excavation earth to the extent required and utilising the remaining earth locally for road work in all kind of soil.	cum	278.00

11.0 PIPE CULVERTS

Code No	Description	Unit	Rate Rs.
11.1	Plain cement concrete 1:3:6 mix with crushed stone aggregate mechanically mixed, placed in foundation and compacted by vibration including curing as per clause 1000 & 1700 of MoRT&H specification including all material, labour form work, machinery.		
11.1.1	Using stone aggregate 40 mm nominal size	cum	3580.00
11.1.2	Using stone aggregate 20 mm nominal size	cum	3660.00
11.2	Providing and Laying Reinforced cement concrete pipe NP4/ prestressed concrete pipe for culverts including jointing ends and fixing collar with cement mortar 1:2 complete as per clause 1000 & 2900 of MoRT&H specification including all material, labour form work, machinery.		
11.2.1	150 mm internal diameter	metre	428.00
11.2.2	200 mm internal diameter	metre	551.00
11.2.3	250 mm internal diameter	metre	790.00
11.2.4	300 mm internal diameter	metre	1040.00
11.2.5	350 mm internal diameter	metre	1610.00
11.2.6	400 mm internal diameter	metre	1840.00
11.2.7	450 mm internal diameter	metre	2260.00
11.2.8	500 mm internal diameter	metre	2600.00
11.2.9	600 mm internal diameter	metre	3510.00
11.2.10	700 mm internal diameter	metre	4370.00
11.2.11	800 mm internal diameter	metre	4800.00
11.2.12	900 mm internal diameter	metre	5820.00
11.2.13	1000 mm internal diameter	metre	6570.00
11.2.14	1100 mm internal diameter	metre	7780.00
11.2.15	1200 mm internal diameter	metre	10500.00
11.2.16	1400 mm internal diameter	metre	13200.00
11.2.17	1600 mm internal diameter	metre	16600.00
11.3	Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum 450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings.		
11.3.1	Single Row for one utility service	metre	1720.00
11.3.2	Double Row for two utility services	metre	3180.00
11.3.3	Triple Row for three utility services	metre	4670.00

12.0 MAINTENANCE OF ROADS

Code No	Description	Unit	Rate Rs.
12.1	Filling of Pot- holes and patch repairs with Built up Spray Grout in two layers with 53-22.4mm size of aggregate upto 75mm depth and removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 506, compacting with 8-10 tonne power roller, trimming and finishing the surface to form a smooth continuous surface complete using Bitumen VG-grade 30 as per clause 503, 506 & 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	238.00
12.2	Filling of Pot- holes and patch repairs with open graded premix surfacing 20mm thick compacted with bitumen binder VG-grade 30 @ 14.60 kg/10 sqm and aggregate in Hot mix plant, transporting the mixed material with tipper and laying manually to the required level and grade, rolling with power roller, 8-10 tonne, removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 511, compacting, trimming and finishing the surface to form a smooth continuous surface complete as per clause 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.	sqm	105.00
12.3	Filling of Pot holes and patch repairs with surface dressing consisting of a layer of with bitumen binder as per Table 500-2 laid on prepared surface followed by a cover of crushed stone chipping of specified size and rolling with power roller, 8-10 tonne including removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503 and 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
12.3.1	First coat with 0.15 cum crushed stone chipping 19mm nominal size and Bitumen VG-grade 30 @12 kg per 10 sqm	sqm	74.50
12.3.2	Second coat with 0.10 cum crushed stone chipping 13mm nominal size and Bitumen VG-grade 30 @10 kg per 10 sqm	sqm	68.00
12.4	Providing and laying Precast reinforced cement concrete Box culvert section of M-40 grade designed for 'AA' class loading as per IRC specifications including the effect of impact, EQ etc. complete on firm base of 200mm thick lean concrete of M-10 grade with aggregate of size 40mm nominal of following internal sizes. The work includes required safety measures, construction of drain for diversion of flowing water, cost of design of RCC Precast Box and its proof checking from IIT/MNIT Jaipur etc. complete in all respect as per specifications		
12.4.1	Size 0.60 M x 0.60 M	metre	5690.00
12.4.2	Size 0.75 M x 0.75 M	metre	6930.00

Code No	Description	Unit	Rate Rs.
12.4.3	Size 1.00 M x 1.00 M	metre	10400.00
12.4.4	Size 1.00 M x 1.25 M	metre	12800.00
12.4.5	Size 1.25 M x 1.25 M	metre	14400.00
12.4.6	Size 1.25 M x 1.50 M	metre	18400.00
12.4.7	Size 1.50 M x 1.50 M	metre	20000.00
12.4.8	Size 1.75 M x 1.75 M	metre	25300.00
12.4.9	Size 2.00 M x 2.00 M	metre	30300.00
12.5	Providing and fixing of reinforced Ferro-Cement drain covers designed for 'A' class loading duly marked on cover with adequate steel reinforcement having thickness 75mm to 150mm anti corrosive bitumen painted M.S. plate , Rim and M.S. lifting hooks, Admixtures like plasticizer, bond improving compound, shrinkage, resistance compound, abrasion resistant complete as per approved design etc.		
12.5.1	Standard Size 600x800mm (75mm thick) for span 300 to 450mm	sqm	1400.00
12.5.2	Standard Size 1000x800mm (100mm thick) for span 451 to 700mm	sqm	2310.00
12.5.3	Standard Size 1500x600mm (125mm thick) for span 701 to 1200mm	sqm	2630.00
12.5.4	Standard Size 2100x500mm (150mm thick) for span 1201 to 1500mm	sqm	3070.00
12.6	Providing and fixing of reinforced Ferro-Cement drain covers designed for 'AA' class loading duly marked on cover with adequate steel reinforcement having thickness 75mm to 150mm anti corrosive bitumen painted M.S. plate , Rim and M.S. lifting hooks, Admixtures like plasticizer, bond improving compound, shrinkage, resistance compound, abrasion resistant complete as per approved design etc.		
12.6.1	Standard Size 600x800mm (75mm thick) for span 300 to 450mm	sqm	1550.00
12.6.2	Standard Size 1000x800mm (100mm thick) for span 451 to 700mm	sqm	2560.00
12.6.3	Standard Size 1500x600mm (125mm thick) for span 701 to 1200mm	sqm	2910.00
12.6.4	Standard Size 2100x500mm (150mm thick) for span 1201 to 1500mm	sqm	3450.00
12.7	Providing and fixing stone slab covering of required size over drains including filling of joints with cement sand mortar 1:3 complete as per direction of Engineer-in-charge.		
12.7.1	Average thickness 60 to 75 mm	sqm	458.00
12.7.2	Average thickness 40 to 50 mm	sqm	307.00

13.0 FOUNDATIONS

Code No	Description	Unit	Rate Rs.
13.1	Brick masonry work in cement mortar with mechanical mixer with First class bricks (min. 10.5 Mpa) in foundation (at any level) complete as per drawing and technical specification and as per clause 1000 & 1300 of MoRT&H specification including all scaffolding material, labour, machinery but excluding pointing and plastering.		
13.1.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	4500.00
13.1.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4310.00
13.2	Random rubble stone masonry work in cement mortar with mechanical mixer in foundation (at any level) complete as per drawing and technical specification and as per clause 1000 and 1400 of MoRT&H specification including all scaffolding material, labour, machinery but excluding pointing and plastering.		
13.2.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	3770.00
13.2.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	3530.00
13.3	Plain cement concrete 1:3:6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibrator including curing complete as per clause 2100 of MoRT&H specification including all scaffolding, material, labour, machinery.	cum	3550.00
13.4	Providing, laying and compacting plain/ reinforced cement concrete of specified grade in foundation/ leveling course/ pile cap using concrete mixer and vibrator complete including cost of form work, as per drawing and technical specifications and as per clause 1100, 1500,1700,2100 of MoRT&H specification including all scaffolding material, labour, machinery.		
13.4.1	PCC Grade M -15	cum	4080.00
13.4.2	PCC Grade M -20	cum	4550.00
13.4.3	PCC Grade M -25	cum	4900.00
13.4.4	PCC Grade M -30	cum	4920.00
13.4.5	RCC Grade M -20	cum	4580.00
13.4.6	RCC Grade M -25	cum	4940.00
13.4.7	RCC Grade M -30	cum	4950.00
13.4.8	RCC Grade M -35	cum	5020.00
13.5	Providing, laying and compacting design mix plain/ reinforced cement concrete of specified grade in foundation/ leveling course/ pile cap using batching plant, transit mixer and concrete pump and vibrator including cost of form work, complete as per drawing and technical specifications as per clause 1100, 1500,1700,2100 of MoRT&H specification including all material, labour, machinery, and maintenance of diversion.		
13.5.1	PCC Grade M -20	cum	4690.00
13.5.2	PCC Grade M -25	cum	5060.00

Code No	Description	Unit	Rate Rs.
13.5.3	PCC Grade M -30	cum	5080.00
13.5.4	PCC Grade M -35	cum	5210.00
13.5.5	RCC Grade M -20	cum	4730.00
13.5.6	RCC Grade M -25	cum	5100.00
13.5.7	RCC Grade M -30	cum	5110.00
13.5.8	RCC Grade M -35	cum	5190.00
13.5.9	RCC Grade M -40	cum	5240.00
13.6	Providing and constructing temporary island 16 m diameter for construction of well foundation for 8m dia. Well including all material, labour, machinery as per clause 1200 of MoRTH specification.		
13.6.1	Assuming depth of water 1.0 m and height of island to be 1.25m.	each	49200.00
13.6.2	Assuming depth of water 4.0 m and height of island 4.5 m.	each	313200.00
13.6.3	Providing and constructing one span service road to reach island location from one pier location to another pier location	metre	1990.00
13.7	Providing and laying cutting edge of mild steel weighing 40 kg per metre for well foundation complete as per drawing and technical specification complete as per clause 1200 and 1900 of MoRT&H specification including all material, labour, machinery.	tonne	66200.00
13.8	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in well foundation using concrete mixer and vibrator including cost of form work complete as per drawing and technical specifications and as per clause 1200, 1500 and 1700 of MoRT&H specification. including all material, labour, machinery.		
13.8.1	Well Curb		
13.8.1.1	RCC Grade M -20	cum	5290.00
13.8.1.2	RCC Grade M -25	cum	5710.00
13.8.1.3	RCC Grade M -30	cum	5740.00
13.8.1.4	RCC Grade M -35	cum	5850.00
13.8.2	Well Steining		
13.8.2.1	RCC Grade M -20	cum	4850.00
13.8.2.2	RCC Grade M -25	cum	5240.00
13.8.2.3	RCC Grade M -30	cum	5260.00
13.8.2.4	RCC Grade M -35	cum	5360.00
13.8.3	Bottom Plug (including forming sump, protective bund, chiselling etc.)		
13.8.3.1	PCC Grade M -20	cum	4960.00
13.8.3.2	PCC Grade M -25	cum	5170.00
13.8.3.3	PCC Grade M -30	cum	5210.00
13.8.3.4	PCC Grade M -35	cum	5300.00
13.8.4	Intermediate Plug (including extra protective works and dewatering etc)		
13.8.4.1	PCC Grade M -20	cum	4740.00

Code No	Description	Unit	Rate Rs.
13.8.4.2	PCC Grade M -25	cum	4940.00
13.8.4.3	PCC Grade M -30	cum	4980.00
13.8.4.4	PCC Grade M -35	cum	5070.00
13.8.5	Top Plug (including extra protective works and dewatering etc)		
13.8.5.1	PCC Grade M -20	cum	4370.00
13.8.5.2	PCC Grade M -25	cum	4720.00
13.8.5.3	PCC Grade M -30	cum	4760.00
13.8.5.4	PCC Grade M -35	cum	4880.00
13.8.6	Well Cap		
13.8.6.1	RCC Grade M -20	cum	4410.00
13.8.6.2	RCC Grade M -25	cum	4790.00
13.8.6.3	RCC Grade M -30	cum	4810.00
13.8.6.4	RCC Grade M -35	cum	4900.00
13.9	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in well foundation using batching plant, transit mixer and concrete pump, vibrator including cost of form work complete as per drawing and technical specifications and as per clause 1200, 1500 and 1700 of MoRT&H specification. including all material, labour, machinery, lighting, guarding and maintenance of diversion.		
13.9.1	Well Curb		
13.9.1.1	RCC Grade M -20	cum	5460.00
13.9.1.2	RCC Grade M -25	cum	5900.00
13.9.1.3	RCC Grade M -30	cum	5920.00
13.9.1.4	RCC Grade M -35	cum	6040.00
13.9.1.5	RCC Grade M -40	cum	6110.00
13.9.2	Well Steining		
13.9.2.1	RCC Grade M -20	cum	5000.00
13.9.2.2	RCC Grade M -25	cum	5400.00
13.9.2.3	RCC Grade M -30	cum	5430.00
13.9.2.4	RCC Grade M -35	cum	5540.00
13.9.2.5	RCC Grade M -40	cum	5600.00
13.9.3	Bottom Plug (including forming sump, protective bund, chiselling etc.)		
13.9.3.1	PCC Grade M -20	cum	4870.00
13.9.3.2	PCC Grade M -25	cum	5080.00
13.9.3.3	PCC Grade M -30	cum	5120.00
13.9.3.4	PCC Grade M -35	cum	5240.00
13.9.4	Intermediate Plug (including extra protective works and dewatering etc)		
13.9.4.1	PCC Grade M -20	cum	4680.00

Code No	Description	Unit	Rate Rs.
13.9.4.2	PCC Grade M -25	cum	4880.00
13.9.4.3	PCC Grade M -30	cum	4920.00
13.9.5	Top Plug		
13.9.5.1	PCC Grade M -20	cum	4530.00
13.9.5.2	PCC Grade M -25	cum	4870.00
13.9.5.3	PCC Grade M -30	cum	4910.00
13.9.6	Well Cap		
13.9.6.1	RCC Grade M -20	cum	4690.00
13.9.6.2	RCC Grade M -25	cum	5100.00
13.9.6.3	RCC Grade M -30	cum	5110.00
13.9.6.4	RCC Grade M -35	cum	5190.00
13.9.6.5	RCC Grade M -40	cum	5270.00
13.10	Sinking of 6 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.10.1	In sandy soil		
13.10.1.1	Depth below cutting edge upto 3m	metre	4170.00
13.10.1.2	Depth beyond 3 m and upto 10 m	metre	5880.00
13.10.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.10.2	In Clayey soil		
13.10.2.1	Depth below cutting edge upto 3m	metre	5880.00
13.10.2.2	Depth beyond 3 m and upto 10 m	metre	12400.00
13.10.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.10.3	In Soft Rock at all depth	metre	18300.00
13.10.4	In Hard Rock at all depth	metre	18900.00
13.11	Sinking of 7 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.11.1	In sandy soil		
13.11.1.1	Depth below cutting edge upto 3m	metre	6210.00

Code No	Description	Unit	Rate Rs.
13.11.1.2	Depth beyond 3 m and upto 10 m	metre	8250.00
13.11.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.11.2	In Clayey soil		
13.11.2.1	Depth below cutting edge upto 3m	metre	8250.00
13.11.2.2	Depth beyond 3 m and upto 10 m	metre	12000.00
13.11.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.11.3	In Soft Rock at all depth	metre	14600.00
13.11.4	In Hard Rock at all depth	metre	22700.00
13.12	Sinking of 8 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.12.1	In sandy soil		
13.12.1.1	Depth below cutting edge upto 3m	metre	7590.00
13.12.1.2	Depth beyond 3 m and upto 10 m	metre	9320.00
13.12.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.12.2	In Clayey soil		
13.12.2.1	Depth below cutting edge upto 3m	metre	10100.00
13.12.2.2	Depth beyond 3 m and upto 10 m	metre	12600.00
13.12.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.12.3	In Soft Rock at all depth	metre	16500.00
13.12.4	In Hard Rock at all depth	metre	23300.00
13.13	Sinking of 9 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.13.1	In sandy soil		

Code No	Description	Unit	Rate Rs.
13.13.1.1	Depth below cutting edge upto 3m	metre	7710.00
13.13.1.2	Depth beyond 3 m and upto 10 m	metre	10200.00
13.13.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.13.2	In Clayey soil		
13.13.2.1	Depth below cutting edge upto 3m	metre	10700.00
13.13.2.2	Depth beyond 3 m and upto 10 m	metre	13600.00
13.13.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.13.3	In Soft Rock at all depth	metre	19700.00
13.13.4	In Hard Rock at all depth	metre	27000.00
13.14	Sinking of 10 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.14.1	In sandy soil		
13.14.1.1	Depth below cutting edge upto 3m	metre	9170.00
13.14.1.2	Depth beyond 3 m and upto 10 m	metre	10800.00
13.14.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.14.2	In Clayey soil		
13.14.2.1	Depth below cutting edge upto 3m	metre	12000.00
13.14.2.2	Depth beyond 3 m and upto 10 m	metre	13500.00
13.14.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.14.3	In Soft Rock at all depth	metre	21500.00
13.14.4	In Hard Rock at all depth	metre	31100.00
13.15	Sinking of 11 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		

Code No	Description	Unit	Rate Rs.
13.15.1	In sandy soil		
13.15.1.1	Depth below cutting edge upto 3m	metre	20800.00
13.15.1.2	Depth beyond 3 m and upto 10 m	metre	26600.00
13.15.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.15.2	In Clayey soil		
13.15.2.1	Depth below cutting edge upto 3m	metre	19900.00
13.15.2.2	Depth beyond 3 m and upto 10 m	metre	27900.00
13.15.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.15.3	In Soft Rock at all depth	metre	48300.00
13.15.4	In Hard Rock at all depth	metre	69200.00
13.16	Sinking of 12 m external diameter well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 1200 of MoRT&H specification.		
13.16.1	In sandy soil		
13.16.1.1	Depth below cutting edge upto 3m	metre	43500.00
13.16.1.2	Depth beyond 3 m and upto 10 m	metre	49400.00
13.16.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.16.2	In Clayey soil		
13.16.2.1	Depth below cutting edge upto 3m	metre	48400.00
13.16.2.2	Depth beyond 3 m and upto 10 m	metre	69500.00
13.16.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.16.3	In Soft Rock at all depth	metre	112600.00
13.16.4	In Hard Rock at all depth	metre	153600.00
13.17	Sinking of Twin D Type (over all length 12m, over all width 6m) well true to vertical, through all types of soil and rock, as shown against each case, (other than pneumatic method of sinking) complete as per drawing and technical specifications including all material, labour, machinery, lighting, guarding and maintenance of diversion		

Code No	Description	Unit	Rate Rs.
	complete as per clause 1200 of MoRT&H specification.		
13.17.1	In sandy soil		
13.17.1.1	Depth below cutting edge upto 3m	metre	9840.00
13.17.1.2	Depth beyond 3 m and upto 10 m	metre	10600.00
13.17.1.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
13.17.2	In Clayey soil		
13.17.2.1	Depth below cutting edge upto 3m	metre	11600.00
13.17.2.2	Depth beyond 3 m and upto 10 m	metre	14900.00
13.17.2.3	Depth beyond 10 m and upto 20 m		
	1) Add 5% for every additional metre depth of sinking over the rate of sinking for the previous metre.		
	2) If dewatering is required add 5% of cost		
13.17.3	In Soft Rock at all depth	metre	23600.00
13.17.4	In Hard Rock at all depth	metre	32000.00
13.18	Pneumatic sinking of wells with equipment of approved design, drawing and specifications worked by competent and trained personnel and comprising of compression and decompression chambers, reducers, two air locks separately for men and plant & materials, arrangement for supply of fresh air to working chambers, check valves, exhaust valves, shafts made from steel plates of riveted construction not less than 6 mm thick to withstand an air pressure of 0.50 MPa, controlled blasting of hard rock wherever required, staircases and 1 m wide landing plate forms with railing, arrangement for compression and decompression, electric lighting of 50 V maximum, proper rooms for rest and medical examinations and compliance with safety precautions as per IS:4138, all as per clause 1200, 1207.6 of MoRT&H Specifications including all material, labour and machinery.	cum	37000.00
13.19	Providing structural steel liner upto 10mm thickness for curbs, steining for wells and piles including fabricating and setting out as per detailed drawing as per clause 1200 & 1900 of MoRT&H specification including all material, labour and machinery.	tonne	57800.00
13.20	Sand filling with compaction in wells complete as per level on drawing and technical specification as per clause 1209 of MoRT&H specification including all material, labour, machinery.	cum	1360.00
13.21	Bored cast-in-situ R.C.C. pile with design mix concrete using batching plant, transit mixer and concrete pump, excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.		
13.21.1	400 mm dia pile		
13.21.1.1	RCC Grade M -20 (Design mix)	metre	2200.00
13.21.1.2	RCC Grade M -25 (Design mix)	metre	2240.00

Code No	Description	Unit	Rate Rs.
13.21.1.3	RCC Grade M -30 (Design mix)	metre	2250.00
13.21.1.4	RCC Grade M -35 (Design mix)	metre	2260.00
13.21.2	450 mm dia pile		
13.21.2.1	RCC Grade M -20 (Design mix)	metre	2360.00
13.21.2.2	RCC Grade M -25 (Design mix)	metre	2410.00
13.21.2.3	RCC Grade M -30 (Design mix)	metre	2420.00
13.21.2.4	RCC Grade M -35 (Design mix)	metre	2440.00
13.21.3	600 mm dia pile		
13.21.3.1	RCC Grade M -20 (Design mix)	metre	3330.00
13.21.3.2	RCC Grade M -25 (Design mix)	metre	3430.00
13.21.3.3	RCC Grade M -30 (Design mix)	metre	3440.00
13.21.3.4	RCC Grade M -35 (Design mix)	metre	3470.00
13.21.4	750 mm dia pile		
13.21.4.1	RCC Grade M -20 (Design mix)	metre	4460.00
13.21.4.2	RCC Grade M -25 (Design mix)	metre	4620.00
13.21.4.3	RCC Grade M -30 (Design mix)	metre	4630.00
13.21.4.4	RCC Grade M -35 (Design mix)	metre	4690.00
13.21.5	1000 mm dia pile		
13.21.5.1	RCC Grade M -20 (Design mix)	metre	7320.00
13.21.5.2	RCC Grade M -25 (Design mix)	metre	7610.00
13.21.5.3	RCC Grade M -30 (Design mix)	metre	7630.00
13.21.5.4	RCC Grade M -35 (Design mix)	metre	7730.00
13.21.6	1200 mm dia pile		
13.21.6.1	RCC Grade M -20 (Design mix)	metre	9400.00
13.21.6.2	RCC Grade M -25 (Design mix)	metre	9810.00
13.21.6.3	RCC Grade M -30 (Design mix)	metre	9840.00
13.21.6.4	RCC Grade M -35 (Design mix)	metre	9980.00
13.22	Bored cast-in-situ R.C.C. pile with cutting / Drilling for anchoring of pile into rocks wherever firm rocky strata is available, shall be done upto desired depth (minimum 1.50 m) as per drawings, specifications and as directed by Engineer. Bore hole shall be cleaned properly before concreting. No, distinction shall be made for penetration through hard rock or rock socketing with design mix concrete (M-35) using batching plant, transit mixer and concrete pump excluding reinforcement complete as per drawing and technical specifications and removal of excavated earth with all lifts and lead upto 1000 m. as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.		
13.22.1	450mm dia pile	metre	5660.00
13.22.2	600 mm dia pile	metre	6310.00
13.22.3	750 mm dia pile	metre	7140.00
13.22.4	1000 mm dia pile	metre	11500.00

Code No	Description	Unit	Rate Rs.
13.22.5	1200 mm dia pile	metre	14100.00
13.23	Driven cast-in-place true vertical R.C.C. piles excluding reinforcement complete as per drawing and technical specification as per clause 1100, 1600 & 1700 of MoRT&H Specification including all material, labour and machinery.		
13.23.1	450 mm dia pile		
13.23.1.1	RCC Grade M -20 (Design mix)	metre	1830.00
13.23.1.2	RCC Grade M -25 (Design mix)	metre	1890.00
13.23.1.3	RCC Grade M -30 (Design mix)	metre	1900.00
13.23.1.4	RCC Grade M -35 (Design mix)	metre	1920.00
13.23.2	500 mm dia pile		
13.23.2.1	RCC Grade M -20 (Design mix)	metre	2230.00
13.23.2.2	RCC Grade M -25 (Design mix)	metre	2300.00
13.23.2.3	RCC Grade M -30 (Design mix)	metre	2300.00
13.23.2.4	RCC Grade M -35 (Design mix)	metre	2330.00
13.23.3	750 mm dia pile		
13.23.3.1	RCC Grade M -20 (Design mix)	metre	3700.00
13.23.3.2	RCC Grade M -25 (Design mix)	metre	3870.00
13.23.3.3	RCC Grade M -30 (Design mix)	metre	3880.00
13.23.3.4	RCC Grade M -35 (Design mix)	metre	3930.00
13.23.4	1000 mm dia pile		
13.23.4.1	RCC Grade M -20 (Design mix)	metre	5880.00
13.23.4.2	RCC Grade M -25 (Design mix)	metre	6170.00
13.23.4.3	RCC Grade M -30 (Design mix)	metre	6180.00
13.23.4.4	RCC Grade M -35 (Design mix)	metre	6290.00
13.23.5	1200 mm dia pile		
13.23.5.1	RCC Grade M -20 (Design mix)	metre	8600.00
13.23.5.2	RCC Grade M -25 (Design mix)	metre	9020.00
13.23.5.3	RCC Grade M -30 (Design mix)	metre	9040.00
13.23.5.4	RCC Grade M -35 (Design mix)	metre	9190.00
13.24	Providing and laying TMT bar reinforcement at any level in foundation/ pile/ pile cap complete as per drawing and clause 1600 of MoRT&H Specification including all material, labour and machinery.	tonne	51400.00
13.25	Reinforcement with TMT bar in sub structure	tonne	51400.00
13.26	Reinforcement with TMT bar in super structure	tonne	52800.00
13.27	Plie load testing on single vertical piles in accordance with IS 2911 (Part IV) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc. complete as per direction of Engineer and as per clause 1100 of MoRT&H specification including all labour, material, machinery.		

Code No	Description	Unit	Rate Rs.
13.27.1	Initial and routine vertical load test	tonne	303.00
13.27.2	Lateral load test	tonne	6050.00
13.28	Non destructive Integrated testing of cast-in-situ pile using pile deriving analyzer or equivalent as detailed in specification and as approved by Engineer.	each	1650.00
13.29	Providing and arranging dynamic load test for checking the load bearing capacity of pile as detailed in specification and as approved by Engineer as per ASTM D4945 including of analysis and report submission including all labour, material, machinery. This include preparation of hammer, crane, build up of pile head, plywood, steel plates etc.	each	93500.00
13.30	Providing, arranging and conducting sonic logging test on RC bored piles using cross holes sonic logging analyzer and submission of report.	each	8800.00
13.31	Providing and conducting testing of finished PSC girder with simulation system as directed by Engineer excluding cost of girder, including reaction frame all testing equipment and their accessories complete.	per test	110000.00
13.32	Making holes in all types of rock for anchorage etc.for any depth below foundation level 30/40 mm dia. including fixing charges for providing of inserts like anchor bars along the grouting, anchoring etc. true in line & plumb as per approved detailed working drawing including cost of cement grout etc. complete in all respect.(Cement grout 1:1 as per clause no. 2800 & 2806 of MoRTH Specification)(excluding cost of steel) and as per the directed of the Engineer.	metre	131.00

14.0 SUB-STRUCTURE & SUPER-STRUCTURE

Code No	Description	Unit	Rate Rs.
14.1	Brick masonry work with First class FPS bricks (min. 10.5 Mpa) in cement mortar with mechanical mixer in substructure/ super structure at all levels complete as per clause 1300 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.		
14.1.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	4350.00
14.1.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4150.00
14.2	Random rubble masonry work in cement mortar with mechanical mixer in substructure/ super structure at all levels complete as per clause 1400 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.		
14.2.1	In cement mortar 1:3 (1 cement : 3 coarse sand)	cum	3720.00
14.2.2	In cement mortar 1:4 (1 cement : 4 coarse sand)	cum	3440.00
14.3	Coursed rubble masonry (First sort) work in cement mortar 1:3 (1 cement : 3 coarse sand) with mechanical mixer in substructure/ super structure at all levels complete as per clause 1400 and 2200 of MoRT&H specification including all material, labour, scaffolding etc but excluding pointing and plastering.	cum	3970.00
14.4	Pointing of any design with cement mortar (1:3) on Brick work in substructure/ super structure at any height complete as per clause 1312 of MoRT&H specification including all material, labour, scaffolding etc.	sqm	67.00
14.5	Plastering with cement mortar (1:3) on Brick/stone work in substructure/ super structure at any height complete as per clause 1312 of MoRT&H specification including all material, labour, scaffolding etc.		
14.5.1	12 mm plaster on brick work	sqm	120.00
14.5.2	20 mm plaster on stone work	sqm	188.00
14.6	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using concrete mixer and vibrater, including cost of form work, as per drawing and technical specifications complete as per clause 1500, 1700 and 2200 of MoRT&H specification including all material, labour, scaffolding etc.		
14.6.1	PCC Grade M -20	cum	4980.00
14.6.2	PCC Grade M -25	cum	5380.00
14.6.3	PCC Grade M -30	cum	5420.00
14.6.4	RCC Grade M -20	cum	5020.00
14.6.5	RCC Grade M -25	cum	5380.00
14.6.6	RCC Grade M -30	cum	5410.00
14.6.7	RCC Grade M -35	cum	5480.00

Code No	Description	Unit	Rate Rs.
14.7	Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using batching plant, transit mixer, concrete pump and vibrater including cost of form work complete as per drawing and clause 1500, 1700 and 2200 of MoRT&H specification including all scaffolding, material, labour, machinery etc.		
14.7.1	RCC Grade M -20	cum	5180.00
14.7.2	RCC Grade M -25	cum	5560.00
14.7.3	RCC Grade M -30	cum	5580.00
14.7.4	RCC Grade M -35	cum	5660.00
14.7.5	RCC Grade M -40	cum	5720.00
14.7.6	RCC Grade M -45	cum	5970.00
14.8	Providing weep holes in brick/ stone masonry/ Plain/ Reinforced concrete abutment, wing wall/ return wall with following dia AC pipe, extending through the full width of the structure with slope of 1V : 20H towards drawing face complete as per drawing, technical specifications and clause 2205 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.		
14.8.1	100 mm dia	metre	99.00
14.8.2	150 mm dia	metre	117.00
14.9	Supplying, fitting and fixing in position true to line and level Elastomeric Bearing conforming to IRC:83 (Part-II) section IX and clause 2005 of MoRT&H specification complete including all accessories as per drawing and technical specification and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.	cubic centimetre	0.75
14.10	Supplying, fitting and fixing in position true to line and level POT-PTFE bearing consisting of a metal piston supported by a disc or unreinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel/fabricated structural steel, metal and elastomer elements to be as per IRC: 83 part-I & II respectively and other parts conforming to BS: 5400, section 9.1 & 9.2 and clause 2006 of MoRT&H Specifications complete as per drawing and approved technical specifications and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.	per tonne vertical load	300.00
14.11	Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRT&H specifications with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and technical specification including all material, labour, machinery as per clause 710.1.4 of IRC:78 and clause 2200 of MoRT&H specification.	cum	1310.00
14.12	Back filing in foundation, trench behind abutment, wing wall and return wall etc and below pipe bed in layers not exceeding 20cm in depth, consolidating each deposited layer compacted by mechanical means with all lead and lift as per drawing and technical specification including all material, labour, machinery as per clause		

Code No	Description	Unit	Rate Rs.
	2100 and 2200 of MoRT&H specification including all material, labour, machinery.		
14.12.1	Using selected granular material (as per clause 2200 of MoRT&H).	cum	907.00
14.13	Providing and laying precast cement concrete M-30 Grade interlocking paving blocks of 100mm thick over 50mm coarse sand bedding (duly compacted) including filling of joints with sand suitable for heavy pedestrian traffic/ light vehicle traffic of pattern as approved by Engineer.	sqm	578.00
14.14	Providing and laying precast cement concrete M-30 Grade 100mm thick paving blocks of approved shape and size (not less than 0.20 sqm), over 100mm thick PCC M-10 Grade bedding (duly compacted) including filling of joints with cement sand mortar (1:3) complete as per drawing and specification and as approved by Engineer.	sqm	1050.00
14.15	Providing and laying structural reinforced/ prestressed cement concrete (design mix) of specified grade in superstructure using concrete mixer and vibrator at all levels including cost of steel form work complete as per drawing and clause 1500, 1600 and 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc.		
14.15.1	RCC Grade M -25		
14.15.1.1	For solid slab superstructure	cum	5920.00
14.15.1.2	For T-beam & slab	cum	6160.00
14.15.1.3	For box girder/ voided slab and balanced cantilever	cum	7100.00
14.15.2	RCC Grade M -30		
14.15.2.1	For solid slab superstructure	cum	6010.00
14.15.2.2	For T-beam & slab	cum	6250.00
14.15.2.3	For box girder/ voided slab and balanced cantilever	cum	7220.00
14.15.3	RCC/PSC Grade M -35		
14.15.3.1	For solid slab superstructure	cum	6040.00
14.15.3.2	For T-beam & slab	cum	6280.00
14.15.3.3	For box girder/ voided slab and balanced cantilever	cum	7260.00
14.15.4	RCC/PSC Grade M -40		
14.15.4.1	For solid slab superstructure	cum	6290.00
14.15.4.2	For T-beam & slab	cum	6540.00
14.15.4.3	For box girder/ voided slab and balanced cantilever	cum	7570.00
14.16	"Fabrication, Welding, Riveting, bolting by HSFG bolts wherever required, supply, transportation to site, Assembling, Launching, Erecting of steel girder spans as per drawings and specifications approved by Railway and department for composite construction i.e. (Steel +RCC) of superstructure of the Road Over Bridge with contractor's own mild steel conforming to IS: 2062 Grade 250(B) with all welds, rivets, nuts bolts rivet materials, weld materials, HSFG bolts, service bolts, with other ancillary steel structures fixed to the girder where necessary in proper level and alignment and as per technical specifications. etc. with contractor's own materials,	kg	118.00

Code No	Description	Unit	Rate Rs.
	fabrication, machinery, templates, fixtures, equipments tools and plants, transportation to site, skilled/ unskilled labour, excise duty., Octroi, sales tax and other taxes, all leads and lifts, descent, loading, unloading, crossing one or more Railway track if required etc. complete and as per technical specifications. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before their assembly. The structural steel to be used should be manufactured by SAIL/ RINL/ TISCO/ ESSAR/ JINDAL only. For Painting prior approval for superior brand/ make of the paint should be taken from engineer in charge". "The rate shall be inclusive of supply, erection and dismantling of staging and scaffolding and other temporary arrangements required for the purpose of assembly, erection and launching of girders. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before/after their assembly". "Metalising girder/ girder component such as cross girder, top chord channels, bracing etc of BG new steel girder as directed by engineer with epoxy paint spray not less than two layers after preparing surface by sand/grit blasting as per provision laid in Appendix VI of IRS B-1179 code (latest alteration) including one coat wash primer one coat epoxy zinc crome primer and two coat of epoxy paint with approved paint conforming to IS specification for fabrication & erection of steel girder bridge (RS B 1-79) as corrected up to date with contractor's own materials, tools, plants, labour, handling, re-handling if any including all lead, lifts descents, crossing of track/ obstruction etc. complete in all respectand as per direction of the engineer. Note: 1. The fabrication of girders must be got done from RDSO approved firms only. 2. For Payment purpose, nominal weight of the girder as per drawing will only be considered".		
14.17	Providing and laying structural reinforced/ prestressed cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrater in superstructure at all levels including cost of steel form work complete as per clause 1500, 1600 and 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc.		
14.17.1	RCC Grade M -25		
14.17.1.1	For solid slab superstructure	cum	6110.00
14.17.1.2	For T-beam & slab	cum	6360.00
14.17.1.3	For box girder/ voided slab and balanced cantilever	cum	7340.00
14.17.2	RCC Grade M -30		
14.17.2.1	For solid slab superstructure	cum	6180.00
14.17.2.2	For T-beam & slab	cum	6430.00
14.17.2.3	For box girder/ voided slab and balanced cantilever	cum	7420.00
14.17.3	RCC/PSC Grade M -35		
14.17.3.1	For solid slab superstructure	cum	6200.00
14.17.3.2	For T-beam & slab	cum	6450.00

Code No	Description	Unit	Rate Rs.
14.17.3.3	For box girder/ voided slab and balanced cantilever	cum	7460.00
14.17.4	RCC/PSC Grade M -40		
14.17.4.1	For solid slab superstructure	cum	6270.00
14.17.4.2	For T-beam & slab	cum	6530.00
14.17.4.3	For box girder/ voided slab and balanced cantilever	cum	7550.00
14.17.5	RCC/PSC Grade M -45		
14.17.5.1	For solid slab superstructure	cum	6450.00
14.17.5.2	For T-beam & slab	cum	6710.00
14.17.5.3	For box girder/ voided slab and balanced cantilever	cum	7780.00
14.17.6	RCC/PSC Grade M -50		
14.17.6.1	For solid slab superstructure	cum	6590.00
14.17.6.2	For T-beam & slab	cum	6860.00
14.17.6.3	For box girder/ voided slab and balanced cantilever	cum	7960.00
14.18	Providing, precasting, transportation and placing in position at all level precast pre/post-tensioned specified grade girders complete as per drawing and clause 1800 & 2300 of MoRT&H specifications including all material, labour, machinery including suitable crane etc.		
14.18.1	RCC M-40	cum	20400.00
14.18.2	RCC M-45	cum	20500.00
14.19	Providing, precasting, transportation and placing in position at all level precast pre/post-tensioned specified grade girders as per drawing and clause 1800 & 2300 of MoRT&H specifications (excluding cost of reinforcement, HTS strands and pre-stressing) including all material, labour, machinery (suitable crane).		
14.19.1	RCC M-40	cum	10100.00
14.19.2	RCC M-45	cum	10300.00
14.20	Providing and fixing helical pipes in voided concrete slabs complete as per clause 1700 & 1800 of MoRT&H specifications including all material, labour, machinery etc.		
14.20.1	600mm dia (Hot dip galvnised GI Sheet 0.7mm thick)	metre	8110.00
14.20.2	800mm dia (Hot dip galvnised GI Sheet 0.8mm thick)	metre	10700.00
14.21	Providing and laying structural Reinforced cement concrete (design mix) of specified grade using mechanical concrete mixer and vibrater in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 & 1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc.		
14.21.1	RCC M-30	cum	6250.00
14.21.2	RCC M-35	cum	6280.00
14.22	Providing and laying structural Reinforced cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrater in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 & 1700 of MoRT&H		

Code No	Description	Unit	Rate Rs.
	specification including all scaffolding, material, labour, machinery etc.		
14.22.1	RCC M-30	cum	6430.00
14.22.2	RCC M-35	cum	6450.00
14.22.3	RCC M-40	cum	6530.00
14.23	Designing, providing and erection of Precast RCC fascia panels of minimum thickness 180mm made with M-35 Grade concrete batching plant, transit mixer, concrete pump and vibrator for retaining earth with all elements and accessories including reinforcing element, complete as per approved drawing and clause 3100 of MoRT&H specifications including all material, labour, machinery etc. (Scope of work includes designing, getting approval, casting in yard including reinforcement, curing, storing, transporting, lifting, placing in position, erection with all necessary fasteners etc complete excluding cost of excavation, RCC/CC for foundation, filter media and earth filling in RE portion)	sqm	3640.00
14.24	Providing, placing and compacting to desired density approved backfill material in layers as per approved methodology including testing for reinforced fill portion and random fill portion in the approaches between the Reinforced Soil (RS) Wall panels as per approved drawings as per clause 3103 of MoRT&H specification The soil should be predominately coarse grained not more than 10% of particle should pass 75 micron sieve The item shall be measured and paid for the finished volume of backfill and sub-grade placed in position excluding the volume of filter media at base and behind the RS walls.	cum	363.00
14.25	Supplying, fitting and placing TMT bar reinforcement in sub structure/ superstructure at all level complete as per drawing and clause 1600 & 2200 of MoRT&H Specification including all material, labour, machinery etc.	tonne	52800.00
14.26	Providing and laying High tensile steel wires/ strands at any level including all accessories for stressing, stressing operations and grouting complete as per drawing, technical specification and as per clause 1800 of MoRT&H Specification.	tonne	127100.00
14.27	Providing and laying reinforced cement concrete wearing coat M-30 grade at any level including formwork and reinforcement @ 75kg/cum complete as per drawing and technical specification and as per clause 2702 of MoRT&H Specification including all material, labour, machinery etc.	cum	8970.00
14.28	Providing and laying Precast Reinforced cement concrete slab for footpath and median with approved finish, constructed with specified grade concrete as per dimensions in the approved drawing and at locations directed by the Engineer including form work and excluding reinforcement and complete as per clause 1500 & 1700 of MoRT&H specification including all material, labour, machinery.		
14.28.1	RCC M-20	cum	4910.00
14.28.2	RCC M-25	cum	5300.00
14.28.3	RCC M-30	cum	5330.00
14.29	Construction of precast/ cast-in-situ RCC railing M-30 grade, true to line and grade, center to center spacing between vertical post not to exceed 2000mm leaving adequate space between vertical post for		

Code No	Description	Unit	Rate Rs.
	expansion, complete as per drawing and technical specification and as per clause 1500, 1600, 1700 & 2703 of MoRT&H Specification including all material, labour, machinery etc.	metre	1370.00
14.30	Providing and fixing Mild steel railing including painted, complete as per drawing and technical specification and as per clause 1900 & 2703.2 of MoRT&H Specification including all material, labour, machinery etc.	metre	2280.00
14.31	Providing and laying expansion joint complete as per drawing and technical specification and as per clause 2605 of MoRT&H Specification including all material, labour, machinery etc		
14.31.1	Fillar joint with 20m thick compressible fibre board.	sqm	818.00
14.31.2	Fillar joint with Joint sealing compound with coarse sand and 6 % bitumen by weight.	metre per cm. depth	27.50
14.32	Providing, laying and fixing of strip seal expansion joint catering to maximum horizontal movement upto 70 mm complete as per approved drawings and as per clause 2600 of MoRT&H specifications to be installed by manufacturer's authorized representative ensuring to compliance to manufacturer's instruction for installation including preparing the edges of bridge, welding to exposed reinforcement, concreting with design mix of grade of bridge or M-35 whichever is richer including all material, labour, machinery etc complete.	metre	8800.00
14.33	Providing and erecting Drainage Spouts with 0.15m long GI pipe 150mm dia and GI bolt 10mm dia with Galvanised MS flat clamp complete as per drawing and Technical specification as per clause 2705 of MoRT&H specifications including all material, labour, machinery etc.	each	751.00
14.34	Providing and applying 2 coats of water based cement paint to unplastered concrete surface at all level after cleaning the surface of dirt, dust, oil, grease, efflorescence and applying paint @ of 1 litre for 2 sqm including all material, labour, scaffolding complete as per clause 800 of MoRT&H specifications including all material, labour scaffolding etc.	sqm	50.50
14.35	Providing and constructing of Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with specified grade concrete using mechanical mixer and vibrator with 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design and dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per clause 809 of MoRT&H specification including all material, labour scaffolding etc.		
14.35.1	RCC M-25	cum	5930.00
14.35.2	RCC M-30	cum	6030.00
14.35.3	RCC M-35	cum	6050.00
14.36	Providing and constructing of Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with specified grade concrete using batching plant, transit mixer, concrete pump and vibrator with 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to		

Code No	Description	Unit	Rate Rs.
	the structure on which it is built and installed as per design and dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per clause 809 of MoRT&H specification including all material, labour scaffolding etc.		
14.36.1	RCC M-25	cum	6130.00
14.36.2	RCC M-30	cum	6190.00
14.36.3	RCC M-35	cum	6210.00
14.36.4	RCC M-40	cum	6280.00
14.37	Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810 of MoRT&H specification including all material, labour machinery etc.	metre	2430.00
14.38	Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 810 of MoRT&H specification including all material, labour machinery etc.	metre	3740.00
14.39	Providing and fixing G.I. Pipes railing of 80 mm dia. (Class B) over brackets of 16 mm thick MS plate with 200 mm at bottom & 120 mm at top with 200 mm height welded to 16 mm thick MS Plates of size 200 X 175 anchored with 400 mm long 4-12 mm dia. steel bars at the top of RCC crash barrier @1.0m c/c including fixing arrangement as per the drawing, clause 800 of MoRTH specification and as per the direction of the Engineer	metre	1040.00
14.40	Load testing of one or more spans of bridge as selected by the Engineer as per approved load test procedure following relevant IS/IRC/Railway codes with contractor's labour, deflection measuring instruments, loading materials, recoding and analyzing the load testing results including all lead & lift, etc. complete as required. The rates are all inclusive and will be paid after load test is finished and girder is cleared of the kentledges /loading material etc. The load shall be 1.25 times the stipulated design load Based on Design load & not span (Load = 200 T)		
14.40.1	For span design load upto 100 MT.	per test	220000.00
14.40.2	Extra for increase of 100 MT or part thereof in the span load capacity upto 800 MT.	per 100 t per test	27500.00
14.41	Providing and applying elastic, elastomeric membrane foming system with anti carbonation and breathing properties. The system should be based on solvent free acralyic polymer with selected minerals fillers and should be ultra violet resistant, crack bridging type, carbonation resistant, breethable, environmnet friendly, water		

Code No	Description	Unit	Rate Rs.
	proofing coating. for anti carbonation equivalent air layer thickness denoted as R or SDCO2 $\geq$ 50mm and for breatheability equivalent air layer thickness denoted as SDH2O shall be $\leq$ 4mm for vapour transmitting barrier. The system consist of one coat primer namely PREMIX 250 or equivalent @ 75-100 g/sqm.The consumption of main polymer namely EMCECOLORFLEX or equivalent to give film thickness of 200-225 microns(solid content,70% $\pm$ 3%)should be application (either by roller or brush)and surface smoothness of concrete.The total dry film thickness of the coating should be min. 200 microns for the above system.Polymer coating should be in suitable shades,including cost of materials,clearing,chipping and removing the dirt particles of the concrete slabs with wire brush & water,labour charges for filling the bug holes,cracks,joints etc. with one component polymer modified fine repair and cosmetic mortar,labour for applying above coating, scaffolding charges,all inclusive taxes.	sqm	394.00
14.42	Providing, fixing, maintaining, shifting & refixing, barricading of minimum 2.0 mtr height at stipulated active site of the same project site, made with angle iron frame of 50x50x5mm and GI sheet of 0.63mm thick including primer painted initially, painting, lettering & border with reflective paint at the time of every shifing, traffic diversion arrangement, safety guard, suitable lightning arrangement during night, complete in all respect till completion of the project as per technical specification and direction of Engineer-In-charge and same shall be possessed by the contractor after completion of the Project. Payment under this item will be released (1) 50% At the time of Providing new barricading at the time of start of project at location and plan as approved by the Engineer & certification (2) 50% After completion of project including shifting re-erecting and maintaining the barricading in position, during entire construction tenure with requisite manpower /flagman etc. complete for guiding traffic and safety etc and dismantling after completion of project.	metre	2500.00

15.0 RIVER TRAINING & PROTECTION WORKS

Code No	Description	Unit	Rate Rs.
15.1	Providing and laying specified apron for protection against scour complete as per drawing and technical specification as per clause 2503 of MoRT&H Specification.		
15.1.1	Boulder/Quarry stone, not less than 40 kg each and specific gravity not less than 2.65, without wire crates.	cum	1100.00
15.1.2	Boulder/Quarry stone, not less than 40 kg each in wire crates made with 4mm dia GI wire confirming to IS : 280 & IS : 4826 in 100mmX100mm mesh (weaved diagonally).	cum	1930.00
15.2	Providing and laying Pitching on slopes laid over prepared filter media including boulder apron laid dry in front of toe of embankment complete as per drawing and Technical specifications and as per clause 2504 of MoRT&H Specification.		
15.2.1	With R.R. Stone/ bolder, weighing not less than 40 kg, thickness not less than 150mm, Specific gravity not less than 2.65.	cum	1100.00
15.3	Providing and laying graded stone aggregate Filter Material underneath pitching in slopes complete as per drawing and Technical specifications and as per clause 2504 of MoRT&H Specification.	cum	907.00
15.4	Providing and laying flooring complete as per drawing and Technical specifications and as per clause 2505 of MoRT&H Specification.		
15.4.1	Rubble stone laid in cement mortar 1:3	cum	3320.00
15.5	Construction of dry rubble flooring at cross drainage works complete as per drawing and Technical specifications and as per clause 2506 of MoRT&H Specification.	cum	1150.00
15.6	Constructing curtain wall complete as per drawing and Technical specification per clause 2507.2 of MoRT&H Specification.		
15.6.1	Cement concrete Grade M-15	cum	4080.00
15.7	Providing, constructing coffer dam in river basin / dam storages as per type design including excavation, filling the middle portion with B.C. soil (in gunny bags if required). Providing impervious / semipervious materials on both sides of B.C. soil (in gunny bags if required) including ramming, compacting to the satisfaction of Engineer-in-charge till the completion of work including dismantling coffer dam after completion of works and disposing off the material as directed by the Engineer-in-charge. Note: Maximum top width payable shall be 2 Mtr. and maximum payable side slopes shall be 1.5 horizontal to 1 vertical, if the constructed top width of the side slopes are less, then the measurements at actual are payable. Extra top width or flat slopes are not payable. Contractor is free to use ballies, plastic sheets, piles, pipes, CGI sheets for supporting hearting materials instead of impervious/ semi-pervious hearting materials for which no extra payments shall be payable. 30% payment shall be withheld for dismantling of coffer dam.	cum	353.00
15.8	Supplying & Laying of a geotextile filter between pitching and embankment slopes on which pitching is laid to prevent escape of the embankment material through the voids of the stone pitching/ cement concrete blocks as well as to allow free movement of water without creating any uplift head on the pitching.	sqm	103.00

16.0 REPAIR & REHABILITATION

Code No	Description	Unit	Rate Rs.
16.1	Removal of existing cement concrete wearing coat manually or with the help of jack hammers including its disposal within a lead of 1000 metres, complete as per technical specification without causing any detrimental effect to any part of the bridge structure as per clause 2809, 100 of MoRT&H Specification.	sqm	79.50
16.2	Removal of existing asphaltic wearing coat comprising of 50 mm thick asphaltic concrete laid over 12 mm thick mastic asphalt including disposal with all lift and lead upto 1000 m as per clause 2809, 100 of MoRT&H Specification.	sqm	59.50
16.3	Guniting (Minimum density 2T/Cum.) on concrete/masonry surface with wire mesh size 50x50mm of wire thickness 3mm and cement mortar 1:3, applied with compressor after cleaning surface and applying with epoxy complete as per technical specification as per clause 2807 of MoRT&H Specification.	sqm	1040.00
16.4	Providing and inserting nipples with approved fixing compound after drilling holes for grouting as per technical specification including subsequent cutting/ removal and sealing of the holes as necessary of nipples after completion of grouting with cement/ Epoxy as per clause 2807 of MoRT&H Specification.		
16.4.1	Cement grout as per clause 2800 & 2806 of MoRT&H specification.	each	130.00
16.4.2	Epoxy grout as per clause 2800 & 2803 of MoRT&H specification.	each	130.00
16.5	Sealing of cracks/ porous concrete with following by injection process through nipples including cost of material and labour complete as per drawing and technical specification complete.		
16.5.1	Cement grout as per clause 2800 & 2806 of MoRT&H specification.	kg	162.00
16.5.2	Epoxy grout as per clause 2800 & 2803 of MoRT&H specification.	kg	1060.00
16.5.3	Cement mortar (1:1) grout as per clause 2800 & 2806 of MoRT&H specification.	kg	158.00
16.6	Patching of damaged concrete surface with polymer concrete and curing compounds, initiator and promoter, available in present formulations, to be applied as per instructions of manufacturer and as approved by the Engineer complete as per clause 2800 of MoRT&H specification.	sqm	577.00
16.7	Removal of defective concrete, cleaning the surface thoroughly, applying the shotcrete mixture mechanically with compressed air under pressure, comprising of cement, sand, coarse aggregates, water and quick setting compound in the proportion as per clause 2807.1., sand and coarse aggregates conforming to IS: 383 and table 1 of IS: 9012 respectively, water cement ratio ranging from 0.35 to 0.50, density of gunite not less than 2000 kg/cum, strength not less than 25 Mpa and workmanship conforming to clause 2807.6. complete as per clause 2807 of MoRT&H specification.	sqm	284.00

17.0 SEWER LINE WORKS

Code No	Description	Unit	Rate Rs.
17.1	Earth work for Sewer line and Manhole in excavation in foundation, trenches manholes, road side chambers etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level including allowances for any additional excavation beyond the drawings (measurement for payment to be as per standard drawings), re-handling of material/earth to complete the task.		
17.1.1	In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc.		
17.1.1.1	Depth upto 1.5 m	cum	197.00
17.1.1.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.1.1	cum	14.00
17.1.1.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.1.1	cum	31.50
17.1.1.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.1.1	cum	55.00
17.1.1.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.1.1	cum	84.50
17.1.1.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.1.1	cum	118.00
17.1.2	In ordinary rock.		
17.1.2.1	Depth upto 1.5 m	cum	388.00
17.1.2.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.2.1	cum	27.00
17.1.2.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.2.1	cum	62.00
17.1.2.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.2.1	cum	109.00
17.1.2.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.2.1	cum	167.00
17.1.2.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.2.1	cum	233.00
17.1.3	In hard rock (required blasting) including Blasting materials.		
17.1.3.1	Depth upto 1.5 m	cum	595.00
17.1.3.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.3.1	cum	41.00
17.1.3.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.3.1	cum	95.00
17.1.3.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.3.1	cum	167.00

Code No	Description	Unit	Rate Rs.
17.1.3.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.3.1	cum	255.00
17.1.3.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.3.1	cum	358.00
17.1.4	In hard rock (Blasting prohibited)		
17.1.4.1	Depth upto 1.5 m	cum	826.00
17.1.4.2	Add extra for over all depth of excavation above 1.5 m and upto 3.0 m over item no 17.1.4.1	cum	58.00
17.1.4.3	Add extra for over all depth of excavation above 3.0 m and upto 4.5 m over item no 17.1.4.1	cum	132.00
17.1.4.4	Add extra for over all depth of excavation above 4.5 m and upto 6.0 m over item no 17.1.4.1	cum	231.00
17.1.4.5	Add extra for over all depth of excavation above 6.0 m and upto 7.5 m over item no 17.1.4.1	cum	355.00
17.1.4.6	Add extra for over all depth of excavation above 7.5 m and upto 9.0 m over item no 17.1.4.1	cum	496.00
17.2	Add extra over item no 17.1.1, 17.1.2, 17.1.3 and 17.1.4 in RUIDP SOR for excavation in saturated soil, silt, rock and sludge where pumping or bailing out of water including well point if required for sewer line and manhole.		
17.2.1	Excavation depth from ground level 0.0 to 9.0 m		
17.2.1.1	Excavation from Encountered depth of water table 0.0 to 1.5 m	cum	39.50
17.2.1.2	Excavation from Encountered depth of water table 1.5 to 3.0 m	cum	79.00
17.2.1.3	Excavation from Encountered depth of water table 3.0 to 4.5 m	cum	158.00
17.2.1.4	Excavation from Encountered depth of water table 4.5 to 6.0 m	cum	236.00
17.2.1.5	Excavation from Encountered depth of water table 6.0 to 7.5 m	cum	315.00
17.2.1.6	Excavation from Encountered depth of water table 7.5 to 9.0 m	cum	630.00
17.3	Providing and fixing CLOSE timbering in trenches of sewer line and manholes including strutting, shoring and packing cavities (wherever required) complete. (Measurements to be taken of the face area timbered) for following depth below NGL.		
17.3.1	Depth upto 3.0 m	sqm	125.00
17.3.2	Depth more than 3.0 m and upto 6.0 m	sqm	126.00
17.3.3	Depth beyond 6.0 m	sqm	128.00
17.4	Extra for planking, strutting and packing material for cavities IN CLOSE TIMBERING of sewer line and manholes if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	1020.00
17.5	Providing and fixing OPEN timbering in trenches of sewer line and manholes including strutting, shoring and packing cavities (wherever required) complete for following depth below NGL.		
17.5.1	Depth upto 3.0 m	sqm	64.00
17.5.2	Depth more than 3.0 m and upto 6.0 m	sqm	64.50
17.5.3	Depth beyond 6.0 m	sqm	65.50

Code No	Description	Unit	Rate Rs.
17.6	Extra for planking, strutting and packing material for cavities IN OPEN TIMBERING of sewer line and manholes if required to be left permanently in position (face area of timber permanently left to be measured)	sqm	430.00
17.7	Providing and fixing close timbiring made of Steel Girder Piling in sewer line and manholes work for support the both side of trenches with ISMB 250 as vertical member at 1.25 m centre to centre, ISMB 250 as horizontal member for tie at two depths, Struts to support the both side of trench of ISMB 250 and face of trench to be covered with 100*100*1235 mm wooden planks and removing Steel Girder piling after laying the sewers etc. complete as per specifications and as directed by Engineer. (Measurements to be taken of the face area timbered)		
17.7.1	Depth more than 3.0 m and upto 6.0 m	sqm	438.00
17.7.2	Depth beyond 6.0 m	sqm	526.00
17.8	Dismantling of flexible pavements for sewer line and manholes and disposal of dismantled materials up to a lead of 50 metres as directed by Engineer including allowances for any additional dismantling beyond the drawings (measurement for payment to be as per standard drawings), re-handling of material/earth to complete the task.		
17.8.1	Bituminous courses	cum	356.00
17.8.2	Granular courses	cum	247.00
17.9	Dismantling of cement concrete pavement for sewer line and manholes by mechanical means using pneumatic tools, cutting the peripheral edge by CC cutter, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 metres including allowances for any additional dismantling beyond the drawings (measurement for payment to be as per standard drawings), re-handling of material/earth to complete the task.	cum	802.00
17.10	Providing and laying in position cement concrete 1:3:6 (1 Cement : 1 graded stone aggregate 20 mm nominal size) in base course complete including all material, labour, machinery, lighting, guarding for road restoration under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.	cum	4500.00
17.11	Providing and laying in position cement concrete of specified grade over prepared base course complete including finishing, curing, all material, labour, machinery, lighting, guarding for road restoration under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.11.1	1:1:2 (1 Cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	5720.00
17.11.2	1:1½:3 (1 Cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size).	cum	5640.00
17.12	Providing laying, spreading and compacting stone aggregates of specific sizes as per Table 400-7 to Water Bound Macadam specification including spreading in uniform thickness; hand packing,		

Code No	Description	Unit	Rate Rs.
	rolling with power roller 8-10 tonnes, in stages to proper grade and camber, applying and brooming requisite type of screening (Table 400-8) binding materials to fill up the interstices of coarse aggregates, watering (with water browser) and compacting to required density, making necessary earthen bund to protect edges as per clause 404 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion under sewer line and manhole work complete including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.12.1	Hand broken - Grade-I (90-45mm)	cum	1470.00
17.12.2	Hand broken - Grade-II (63-45mm)	cum	1500.00
17.12.3	Crusher broken - Grade-II (63-45mm)	cum	1590.00
17.12.4	Crusher broken - Grade-III (53-22.4mm)	cum	1690.00
17.13	Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS: 8887 and approved quality @ 0.2 kg/sqm with the help of spray set fitted on bitumen Container (boiler) after cleaning the surface with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.	sqm	8.50
17.14	Extra for additional bitumen emulsion used in above item for every 1 kg per 10 sqm including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.	sqm	4.00
17.15	Providing and laying open graded premix carpet 20mm thick (compacted), on prepared surface in a single course as wearing course, composed of specified graded crushed stone aggregate as per Table 500-23, premixed with bituminous binder @ 14.60 kg/ 10sqm (including cost of anti-stripping compound wherever required), including loading of material with F.E. loader, hot mixing of stone aggregate and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control to the required level and grade, compacting smooth wheeled roller 8-10 tonne capacity and finishing to required level to achieve the desired density as per clause 511 of MoRT&H specification including all material, labour, machinery, lighting, guarding but excluding cost of tack coat/ seal coat under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.15.1	With Bitumen VG-grade 30	sqm	113.00
17.15.2	With bitumen of grade CRMB-60	sqm	103.00
17.16	Providing and applying liquid seal coat type "A" comprising of a layer of bituminous binder @ 9.8 kg/ 10 Sqm (including cost of anti-stripping compound wherever required) followed by a cover of stone		

Code No	Description	Unit	Rate Rs.
	chipping @ 0.09 Cum/10 sqm of specified grading and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.16.1	With Bitumen VG-grade 30	sqm	65.50
17.16.2	With bitumen of grade CRMB-60	sqm	59.00
17.17	Providing and applying premixed seal coat Type "B" comprising of thin application of fine aggregate 0.06 Cum/ 10 sqm premix with bitumen binder @ 6.8 Kg/ 10 Sqm (including cost of anti-stripping compound wherever required) laying with paver finisher with electronic sensor control and rolling with power roller 8-10 tonne complete as per clause 513 of MoRT&H specification including all material, labour, machinery, lighting, guarding under sewer line and manhole work including allowances for any additional road restoration beyond the drawings (measurement for payment to be as per standard drawings) to complete the task.		
17.17.1	With Bitumen VG-grade 30	sqm	45.50
17.17.2	With bitumen of grade CRMB-60	sqm	41.00
17.18	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP4 class (with s/s ends) IS: 458 - 2003 (amended up to date) marked and pipes from 300 mm and upto 1800 mm manufactured through vertical casting process at all depths with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets, lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as per specification and / or as directed by Engineer.		
	Note : E/w to be measured and paid separately		
17.18.1	150 mm internal diameter	metre	438.00
17.18.2	200 mm internal diameter	metre	562.00
17.18.3	250 mm internal diameter	metre	804.00
17.18.4	300 mm internal diameter	metre	1060.00
17.18.5	350 mm internal diameter	metre	1630.00
17.18.6	400 mm internal diameter	metre	1860.00
17.18.7	450 mm internal diameter	metre	2290.00
17.18.8	500 mm internal diameter	metre	2630.00
17.18.9	600 mm internal diameter	metre	3550.00
17.18.10	700 mm internal diameter	metre	4430.00
17.18.11	800 mm internal diameter	metre	4870.00
17.18.12	900 mm internal diameter	metre	5900.00
17.18.13	1000 mm internal diameter	metre	6680.00
17.18.14	1100 mm internal diameter	metre	7920.00

Code No	Description	Unit	Rate Rs.
17.18.15	1200 mm internal diameter	metre	10700.00
17.18.16	1400 mm internal diameter	metre	13400.00
17.18.17	1600 mm internal diameter	metre	16800.00
17.18.18	1800 mm internal diameter	metre	22000.00
17.18.19	2000 mm internal diameter	metre	29200.00
17.19	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP3 class (with s/s ends) IS: 458 - 1988 (amended up to date) marked and pipes from 300 mm upto 2000 mm manufactured through vertical casting process all levels with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as directed by Engineer. Note : E/w to be measured and paid separately		
17.19.1	150 mm internal diameter	metre	417.00
17.19.2	200 mm internal diameter	metre	521.00
17.19.3	250 mm internal diameter	metre	732.00
17.19.4	300 mm internal diameter	metre	1010.00
17.19.5	350 mm internal diameter	metre	1510.00
17.19.6	400 mm internal diameter	metre	1740.00
17.19.7	450 mm internal diameter	metre	2120.00
17.19.8	500 mm internal diameter	metre	2530.00
17.19.9	600 mm internal diameter	metre	3230.00
17.19.10	700 mm internal diameter	metre	3990.00
17.19.11	800 mm internal diameter	metre	4550.00
17.19.12	900 mm internal diameter	metre	5370.00
17.19.13	1000 mm internal diameter	metre	6270.00
17.19.14	1100 mm internal diameter	metre	7370.00
17.19.15	1200 mm internal diameter	metre	9160.00
17.19.16	1400 mm internal diameter	metre	11400.00
17.19.17	1600 mm internal diameter	metre	14300.00
17.19.18	1800 mm internal diameter	metre	18900.00
17.19.19	2000 mm internal diameter	metre	24700.00
17.20	Providing at site, lowering & laying in trenches, aligning & jointing of RCC pipes NP2 class (with s/s ends IS: 458 - 1988 (amended up to date) marked and manufactured through spun process at all levels with Rubber gaskets (EPDM/SBR) for sewer lines as per IS: 5382 (including cost of Rubber gaskets lubricants) as per drawing, sectional hydro testing of the sewer pipe line (including cost and conveyance of water to site for testing) etc., complete as directed by Engineer. Note : E/w to be measured and paid separately		

Code No	Description	Unit	Rate Rs.
17.20.1	150 mm internal diameter	metre	394.00
17.20.2	200 mm internal diameter	metre	503.00
17.20.3	250 mm internal diameter	metre	584.00
17.20.4	300 mm internal diameter	metre	713.00
17.20.5	350 mm internal diameter	metre	859.00
17.20.6	400 mm internal diameter	metre	1010.00
17.20.7	450 mm internal diameter	metre	1160.00
17.20.8	500 mm internal diameter	metre	1490.00
17.20.9	600 mm internal diameter	metre	1870.00
17.20.10	700 mm internal diameter	metre	2240.00
17.20.11	800 mm internal diameter	metre	2680.00
17.20.12	900 mm internal diameter	metre	3480.00
17.20.13	1000 mm internal diameter	metre	4030.00
17.20.14	1100 mm internal diameter	metre	5060.00
17.20.15	1200 mm internal diameter	metre	5880.00
17.20.16	1400 mm internal diameter	metre	6750.00
17.20.17	1600 mm internal diameter	metre	8200.00
17.20.18	1800 mm internal diameter	metre	10100.00
17.20.19	2000 mm internal diameter	metre	11400.00
17.21	Add extra for manufacturing of RCC pipe with Sulphate Resistant Cement instead of OPC/PPC cement		
17.21.1	NP2 Pipes		
17.21.1.1	150 mm internal diameter	metre	7.50
17.21.1.2	200 mm internal diameter	metre	9.50
17.21.1.3	250 mm internal diameter	metre	12.00
17.21.1.4	300 mm internal diameter	metre	17.00
17.21.1.5	350 mm internal diameter	metre	21.00
17.21.1.6	400 mm internal diameter	metre	23.50
17.21.1.7	450 mm internal diameter	metre	29.00
17.21.1.8	500 mm internal diameter	metre	32.00
17.21.1.9	600 mm internal diameter	metre	49.50
17.21.1.10	700 mm internal diameter	metre	64.00
17.21.1.11	800 mm internal diameter	metre	72.50
17.21.1.12	900 mm internal diameter	metre	90.00
17.21.1.13	1000 mm internal diameter	metre	109.00
17.21.1.14	1100 mm internal diameter	metre	129.00
17.21.1.15	1200 mm internal diameter	metre	152.00
17.21.1.16	1400 mm internal diameter	metre	189.00

Code No	Description	Unit	Rate Rs.
17.21.1.17	1600 mm internal diameter	metre	230.00
17.21.1.18	1800 mm internal diameter	metre	291.00
17.21.1.19	2000 mm internal diameter	metre	359.00
17.21.2	NP3 and NP4 Pipes		
17.21.2.1	150 mm internal diameter	metre	7.50
17.21.2.2	200 mm internal diameter	metre	12.00
17.21.2.3	250 mm internal diameter	metre	14.50
17.21.2.4	300 mm internal diameter	metre	23.50
17.21.2.5	350 mm internal diameter	metre	54.50
17.21.2.6	400 mm internal diameter	metre	61.00
17.21.2.7	450 mm internal diameter	metre	67.50
17.21.2.8	500 mm internal diameter	metre	73.50
17.21.2.9	600 mm internal diameter	metre	99.50
17.21.2.10	700 mm internal diameter	metre	114.00
17.21.2.11	800 mm internal diameter	metre	145.00
17.21.2.12	900 mm internal diameter	metre	171.00
17.21.2.13	1000 mm internal diameter	metre	219.00
17.21.2.14	1100 mm internal diameter	metre	239.00
17.21.2.15	1200 mm internal diameter	metre	271.00
17.21.2.16	1400 mm internal diameter	metre	354.00
17.21.2.17	1600 mm internal diameter	metre	416.00
17.21.2.18	1800 mm internal diameter	metre	500.00
17.21.2.19	2000 mm internal diameter	metre	631.00
17.22	Extra for providing 2.5mm thick HDPE Lining inside RCC pipe (while casting of pipe) as required.		
17.22.1	600 mm internal diameter	metre	680.00
17.22.2	700 mm internal diameter	metre	794.00
17.22.3	800 mm internal diameter	metre	795.00
17.22.4	900 mm internal diameter	metre	1020.00
17.22.5	1000 mm internal diameter	metre	1130.00
17.22.6	1100 mm internal diameter	metre	1250.00
17.22.7	1200 mm internal diameter	metre	1360.00
17.22.8	1400 mm internal diameter	metre	1590.00
17.22.9	1600 mm internal diameter	metre	1810.00
17.22.10	1800 mm internal diameter	metre	2040.00
17.22.11	2000 mm internal diameter	metre	2270.00
17.23	Providing at site, lowering, laying, aligning, fixing in position and jointing in trenches at all level/ depths, ISI marked following class AC (Mazza process) pipes for sewer and drainage application as per IS		

Code No	Description	Unit	Rate Rs.
	6908-1991 (amended upto date) with AC coupler joints sealed with Rubber gaskets (EPDM/SBR) as per IS 5382 complete including cost of all materials, labour, jointing, water, sectional hydro testing (including cost and conveyance of water to site for testing) etc. and commissioning as per Technical Specifications and as per direction of Engineer.		
	Note : E/w to be measured and paid separately.		
17.23.1	Class-1		
17.23.1.1	150mm Nominal dia	metre	435.00
17.23.1.2	200 mm Nominal dia	metre	665.00
17.23.1.3	250 mm Nominal dia	metre	855.00
17.23.1.4	300 mm Nominal Dia	metre	1100.00
17.23.1.5	350 mm Nominal Dia	metre	1380.00
17.23.1.6	400 mm Nominal Dia	metre	1690.00
17.23.1.7	450 mm Nominal Dia	metre	2000.00
17.23.1.8	500 mm Nominal Dia	metre	2500.00
17.23.1.9	600 mm Nominal Dia	metre	3520.00
17.23.1.10	700 mm Nominal Dia	metre	5550.00
17.23.1.11	800 mm Nominal Dia	metre	7170.00
17.23.1.12	900 mm Nominal Dia	metre	9110.00
17.23.1.13	1000 mm Nominal Dia	metre	11100.00
17.23.2	Class-2		
17.23.2.1	150mm Nominal dia	metre	528.00
17.23.2.2	200 mm Nominal dia	metre	850.00
17.23.2.3	250 mm Nominal dia	metre	1070.00
17.23.2.4	300 mm Nominal Dia	metre	1470.00
17.23.2.5	350 mm Nominal Dia	metre	1840.00
17.23.2.6	400 mm Nominal Dia	metre	2370.00
17.23.2.7	450 mm Nominal Dia	metre	2780.00
17.23.2.8	500 mm Nominal Dia	metre	3440.00
17.23.2.9	600 mm Nominal Dia	metre	4970.00
17.23.2.10	700 mm Nominal Dia	metre	6080.00
17.23.2.11	800 mm Nominal Dia	metre	8530.00
17.23.2.12	900 mm Nominal Dia	metre	10800.00
17.23.2.13	1000 mm Nominal Dia	metre	13200.00
17.23.3	Class-3		
17.23.3.1	150mm Nominal dia	metre	643.00
17.23.3.2	200 mm Nominal dia	metre	1060.00
17.23.3.3	250 mm Nominal dia	metre	1350.00
17.23.3.4	300 mm Nominal Dia	metre	1880.00

Code No	Description	Unit	Rate Rs.
17.23.3.5	350 mm Nominal Dia	metre	2370.00
17.23.3.6	400 mm Nominal Dia	metre	3070.00
17.23.3.7	450 mm Nominal Dia	metre	3650.00
17.23.3.8	500 mm Nominal Dia	metre	4480.00
17.23.3.9	600 mm Nominal Dia	metre	6410.00
17.23.3.10	700 mm Nominal Dia	metre	8320.00
17.23.3.11	800 mm Nominal Dia	metre	11300.00
17.23.3.12	900 mm Nominal Dia	metre	14100.00
17.23.3.13	1000 mm Nominal Dia	metre	17400.00
17.24	Providing, lowering & laying in trenches, aligning & jointing of IS marked SW pipes (IS: 651:1980 amended up date) at all depths with rubber gaskets (EPDM/ SBR) for sewer lines and laying as per IS:4127:1983 (amended up to date) including cost of Rubber gaskets, lubricants and sectional hydro testing of the sewer pipe line (including the cost and conveyance of water to site for testing) complete in all respect as per specification and the directed of the Engineer. Note : E/w to be measured and paid separately.		
17.24.1	100 mm Nominal Dia	metre	248.00
17.24.2	150 mm Nominal Dia	metre	437.00
17.24.3	200 mm Nominal Dia	metre	693.00
17.24.4	250 mm Nominal Dia	metre	1010.00
17.24.5	310 mm Nominal Dia	metre	1180.00
17.25	Providing at site, lowering & laying in trenches, aligning & jointing of PVC-U pipes (SN 8) as per IS 15328 (amended up to date) and as per specifications with rubber rings with socket and spigot joint, (EPDM/SBR) for all depths for pipe length as per drawing and specification including hydraulic field testing (including the cost and conveyance of water to site for testing) and commissioning etc complete as directed by Engineer. Note : E/w to be measured and paid separately.		
17.25.1	110 mm Nominal Dia	metre	244.00
17.25.2	160 mm Nominal Dia	metre	510.00
17.25.3	200 mm Nominal Dia	metre	790.00
17.25.4	250 mm Nominal Dia	metre	1210.00
17.25.5	315 mm Nominal Dia	metre	1930.00
17.26	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade and PN 6 for sewer application as per IS 14333-1996 (amended upto date) in trenches in complete including all material, labour, sectional hydro testing (including the cost and conveyance of water to site for testing) and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		

Code No	Description	Unit	Rate Rs.
17.26.1	200mm Nominal dia	metre	1620.00
17.26.2	250 mm Nominal dia	metre	2510.00
17.26.3	315 mm Nominal dia	metre	3970.00
17.26.4	400 mm Nominal Dia	metre	6530.00
17.26.5	450 mm Nominal Dia	metre	8260.00
17.26.6	500 mm Nominal Dia	metre	10200.00
17.26.7	800 mm Nominal Dia	metre	26000.00
17.26.8	900 mm Nominal Dia	metre	32900.00
17.26.9	1000 mm Nominal Dia	metre	40700.00
17.27	Providing, lowering, laying, aligning, fixing in position and jointing at all level/ depths full round HDPE DWC (double wall corrugated) pipes of SN8 grade as per IS 16098 (Part 2) amended upto date in trenches in complete including all material, labour, sectional hydro testing (including the cost and conveyance of water to site for testing) and commissioning as per Technical Specifications, drawings and as per direction of Engineer. Note : E/w to be measured and paid separately.		
17.27.1	150 mm ID	metre	394.00
17.27.2	200 mm ID	metre	577.00
17.27.3	250 mm ID	metre	968.00
17.27.4	300 mm ID	metre	1410.00
17.27.5	400 mm ID	metre	2180.00
17.27.6	500 mm ID	metre	3400.00
17.27.7	600 mm ID	metre	5220.00
17.27.8	800 mm ID	metre	8790.00
17.27.9	1000 mm ID	metre	13600.00
17.28	Providing granular bedding having width = outer dia of pipe (Bc) + 500mm, thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.5Bc, with graded hard crusher broken stone of 100% passing through 20mm sheive, 20 to 50 % passing through 10mm sheive and 100 % retain on 6.3mm sheive, laying in layers of thickness 10/15cm including ramming, consolidation etc complete for all type of pipes of following sizes as per drawing and or as directed by Engineer.		
17.28.1	100 mm internal diameter	metre	100.00
17.28.2	150 mm internal diameter	metre	115.00
17.28.3	200 mm internal diameter	metre	133.00
17.28.4	250 mm internal diameter	metre	149.00
17.28.5	300 mm internal diameter	metre	170.00
17.28.6	350 mm internal diameter	metre	227.00
17.28.7	400 mm internal diameter	metre	257.00
17.28.8	450 mm internal diameter	metre	289.00

Code No	Description	Unit	Rate Rs.
17.28.9	500 mm internal diameter	metre	321.00
17.28.10	600 mm internal diameter	metre	404.00
17.28.11	700 mm internal diameter	metre	477.00
17.28.12	800 mm internal diameter	metre	568.00
17.28.13	900 mm internal diameter	metre	663.00
17.28.14	1000 mm internal diameter	metre	777.00
17.28.15	1100 mm internal diameter	metre	872.00
17.28.16	1200 mm internal diameter	metre	982.00
17.28.17	1400 mm internal diameter	metre	1230.00
17.28.18	1600 mm internal diameter	metre	1480.00
17.28.19	1800 mm internal diameter	metre	1770.00
17.28.20	2000 mm internal diameter	metre	2120.00
17.29	Providing granular bedding having width = outer dia of pipe (Bc) + 500mm, thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.5Bc, with graded hard crusher broken stone of 100% passing through 20mm sheive, 20 to 50 % passing through 10mm sheive and 100 % retain on 6.3mm sheive, laying in layers of thickness 10/15cm including ramming, consolidation etc complete for PVC/HDPE pipes of following sizes as per drawing and or as directed by Engineer.		
17.29.1	110mm nominal dia	metre	89.50
17.29.2	160mm nominal dia	metre	103.00
17.29.3	200mm nominal dia	metre	116.00
17.29.4	250mm nominal dia	metre	131.00
17.29.5	315mm nominal dia	metre	150.00
17.30	Providing and laying plain cement concrete M15 grade (using mechanical concrete mixer) using 20mm graded hard crusher broken stone aggregate, laying in layers of not more than 15cm thick, for bedding having width = outer dia of pipe (Bc) + 200mm or 1.25Bc (whichever is higher), thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.25Bc, for all type of pipes of following sizes, including compaction, curing, form work, etc complete as per drawing and/ or as directed by Engineer.		
17.30.1	150 mm internal diameter	metre	221.00
17.30.2	200 mm internal diameter	metre	270.00
17.30.3	250 mm internal diameter	metre	313.00
17.30.4	300 mm internal diameter	metre	377.00
17.30.5	350 mm internal diameter	metre	567.00
17.30.6	400 mm internal diameter	metre	663.00
17.30.7	450 mm internal diameter	metre	767.00
17.30.8	500 mm internal diameter	metre	878.00
17.30.9	600 mm internal diameter	metre	1170.00

Code No	Description	Unit	Rate Rs.
17.30.10	700 mm internal diameter	metre	1480.00
17.30.11	800 mm internal diameter	metre	1920.00
17.30.12	900 mm internal diameter	metre	2370.00
17.30.13	1000 mm internal diameter	metre	2970.00
17.30.14	1100 mm internal diameter	metre	3470.00
17.30.15	1200 mm internal diameter	metre	4070.00
17.30.16	1400 mm internal diameter	metre	5470.00
17.30.17	1600 mm internal diameter	metre	6930.00
17.30.18	1800 mm internal diameter	metre	8650.00
17.30.19	2000 mm internal diameter	metre	10700.00
17.31	Providing and laying reinforced cement concrete M15 grade (using mechanical concrete mixer) with 0.4% steel reinforcement) using 20mm graded hard crusher broken stone aggregate, laying in layers of not more than 15cm thick, for bedding having width = outer dia of pipe (Bc) + 200mm or 1.25Bc (whichever is higher), thickness below pipe = 0.25Bc or 100mm (whichever is higher) and haunching = 0.25Bc, for all type of pipes of following sizes, including reinforcement, compaction, curing, form work, etc complete as per drawing and/ or as directed by Engineer.		
17.31.1	150 mm internal diameter	metre	309.00
17.31.2	200 mm internal diameter	metre	377.00
17.31.3	250 mm internal diameter	metre	436.00
17.31.4	300 mm internal diameter	metre	525.00
17.31.5	350 mm internal diameter	metre	791.00
17.31.6	400 mm internal diameter	metre	926.00
17.31.7	450 mm internal diameter	metre	1070.00
17.31.8	500 mm internal diameter	metre	1230.00
17.31.9	600 mm internal diameter	metre	1640.00
17.31.10	700 mm internal diameter	metre	2070.00
17.31.11	800 mm internal diameter	metre	2680.00
17.31.12	900 mm internal diameter	metre	3310.00
17.31.13	1000 mm internal diameter	metre	4140.00
17.31.14	1100 mm internal diameter	metre	4840.00
17.31.15	1200 mm internal diameter	metre	5670.00
17.31.16	1400 mm internal diameter	metre	7630.00
17.31.17	1600 mm internal diameter	metre	9670.00
17.31.18	1800 mm internal diameter	metre	12100.00
17.31.19	2000 mm internal diameter	metre	15000.00
17.32	Providing and laying granular bedding in layers of not more than 15cm thick, for bedding having width = outer dia of pipe (Bc) + 500mm, thickness below pipe = 0.25Bc or 100mm (whichever is		

Code No	Description	Unit	Rate Rs.
	higher), haunching = 0.5Bc and reinforced cement concrete M15 grade (using mechanical concrete mixer) with 1% steel reinforcement) using 20mm graded hard crusher broken stone aggregate to cover pipe having width = outer dia of pipe (Bc) + 200mm or 1.25Bc (whichever is higher), thickness over pipe = 0.25Bc or 100mm (whichever is higher) for all type of pipes of following sizes, including reinforcement, compaction, curing, form work, etc complete as per drawing and/ or as directed by Engineer.		
17.32.1	150 mm internal diameter	metre	636.00
17.32.2	200 mm internal diameter	metre	776.00
17.32.3	250 mm internal diameter	metre	898.00
17.32.4	300 mm internal diameter	metre	1070.00
17.32.5	350 mm internal diameter	metre	1560.00
17.32.6	400 mm internal diameter	metre	1800.00
17.32.7	450 mm internal diameter	metre	2060.00
17.32.8	500 mm internal diameter	metre	2340.00
17.32.9	600 mm internal diameter	metre	3060.00
17.32.10	700 mm internal diameter	metre	3820.00
17.32.11	800 mm internal diameter	metre	4900.00
17.32.12	900 mm internal diameter	metre	6010.00
17.32.13	1000 mm internal diameter	metre	7460.00
17.32.14	1100 mm internal diameter	metre	8690.00
17.32.15	1200 mm internal diameter	metre	10100.00
17.32.16	1400 mm internal diameter	metre	13600.00
17.32.17	1600 mm internal diameter	metre	17100.00
17.32.18	1800 mm internal diameter	metre	21200.00
17.32.19	2000 mm internal diameter	metre	26300.00
17.33	Providing arranging and Hydraulic testing of following RCC sewer pipe line as per IS: 783 code of practice and / or as directed by Engineer-in-charge complete including cost of water.		
17.33.1	150 mm Nominal Inside dia	metre	45.00
17.33.2	200 mm Nominal Inside dia	metre	54.50
17.33.3	250 mm Nominal Inside dia	metre	57.00
17.33.4	300 mm Nominal Inside dia	metre	62.00
17.33.5	350 mm Nominal Inside dia	metre	87.00
17.33.6	400 mm Nominal Inside dia	metre	91.00
17.33.7	450 mm Nominal Inside dia	metre	105.00
17.33.8	500 mm Nominal Inside dia	metre	110.00
17.33.9	600 mm Nominal Inside dia	metre	158.00
17.33.10	700 mm Nominal Inside dia	metre	189.00
17.33.11	800 mm Nominal Inside dia	metre	215.00

Code No	Description	Unit	Rate Rs.
17.33.12	900 mm Nominal Inside dia	metre	244.00
17.33.13	1000 mm Nominal Inside dia	metre	274.00
17.33.14	1100 mm Nominal Inside dia	metre	307.00
17.33.15	1200 mm Nominal Inside dia	metre	353.00
17.34	Providing and constructing of SEWER-BRICK masonry circular manholes of "Type-A" with internal dia 0.90m and depth upto 1.65m having 230mm thick sewer brick masonry wall in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.34.1	Manhole "Type-A" of depth 0.90 m	each manhole	11500.00
17.34.2	Providing and constructing extra depth of manhole "Type-A" for depth beyond 0.90 m and upto 1.65 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	5800.00
17.35	Providing and constructing of SEWER-BRICK masonry circular manholes of "Type-B" with internal dia 1.20m and depth upto 2.50m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.35.1	Manhole "Type-B" of depth 1.70 m	each	22900.00

Code No	Description	Unit	Rate Rs.
		manhole	
17.35.2	Providing and constructing extra depth of manhole "Type-B" for depth beyond 1.70 m and upto 2.50 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	10100.00
17.36	Providing and constructing of SEWER-BRICK masonry circular manholes of "Type-C" with internal dia 1.50m and depth upto 5.0m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m and 460mm from 2.50 to 5.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.36.1	Manhole "Type-C" of depth 2.60 m	each manhole	40600.00
17.36.2	Providing and constructing extra depth of manhole "Type-C" for depth beyond 2.60 m and upto 5.0 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	15900.00
17.37	Providing and constructing of SEWER-BRICK masonry circular manholes of "Type-D" with internal dia 1.50m and depth upto 9.0m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m, 460mm from 2.50 to 5.0m and 575mm from 5.0 to 9.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		

Code No	Description	Unit	Rate Rs.
17.37.1	Manhole "Type-D" of depth 5.10m	each manhole	81400.00
17.37.2	Providing and constructing extra depth of manhole "Type-D" for depth beyond 5.10 m and upto 9.0 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	19800.00
17.38	Providing and constructing of SEWER-BRICK masonry circular manholes of "Type-E" with internal dia 1.80m and depth upto 14.0m having sewer brick masonry wall 230mm thick upto 1.5m, 345mm thick from 1.50m to 2.50m, 460mm from 2.50 to 5.0m, 575mm from 5.0 to 9.0m and 690mm from 9.0 to 14.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.38.1	Manhole "Type-E" of depth 9.10m	each manhole	189900.00
17.38.2	Providing and constructing extra depth of manhole "Type-E" for depth beyond 9.10 m and upto 14.0 m with SEWER-BRICK masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	27500.00
17.39	Providing and constructing of RR stone masonry circular manholes of "Type-A" with internal dia 0.90m and depth upto 1.65m having 300mm thick RR stone masonry wall in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be		

Code No	Description	Unit	Rate Rs.
	measured and paid separately.		
17.39.1	Manhole "Type-A" of depth 0.90 m	each manhole	12500.00
17.39.2	Providing and constructing extra depth of manhole "Type-A" for depth beyond 0.90 m and upto 1.65 m with RR stone masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	6430.00
17.40	Providing and constructing of RR stone masonry circular manholes of "Type-B" with internal dia 1.20m and depth upto 2.50m having RR stone masonry wall 300 thick upto 1.5m, 450mm thick from 1.50m to 2.50m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.40.1	Manhole "Type-B" of depth 1.70 m	each manhole	23500.00
17.40.2	Providing and constructing extra depth of manhole "Type-B" for depth beyond 1.70 m and upto 2.50 m with RR stone masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	9020.00
17.41	Providing and constructing of RR stone masonry circular manholes of "Type-C" with internal dia 1.50m and depth upto 5.0m having RR stone masonry wall 300mm thick upto 1.5m, 450mm thick from 1.50m to 2.50m and 600mm from 2.50 to 5.0m in cement sand mortar 1:4, including concreting PCC M-10 grade (1:4:8) for 225mm thick foundation including curing compaction and form work etc complete, PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab including reinforcement, PCC M20 for fixing the manhole frame and cover using stone aggregate 20mm nominal size, 20mm thick inside and outside plaster in C. M. 1:3, inside plaster finished with floating coat of neat cement, vata in CM1:1 around pipe entering and leaving the manhole and also at the junction of masonry and concrete slab, providing and fixing of SFRC foot steps of approved make at every 0.30m height fixed in CM 1:3, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including refilling of Jhiri, including curing, watering, ramming, hydro testing of manhole, conveyance & cost of water, and dewatering complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		

Code No	Description	Unit	Rate Rs.
17.41.1	Manhole "Type-C" of depth 2.60 m	each manhole	40300.00
17.41.2	Providing and constructing extra depth of manhole "Type-C" for depth beyond 2.60 m and upto 5.0 m with RR stone masonry including 20mm plaster inside and outside as per drawing and direction of Engineer.	metre	13500.00
17.42	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.40m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.42.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	32700.00
17.42.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	8500.00
17.43	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.50m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.43.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	35000.00
17.43.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	8970.00
17.44	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.55m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1		

Code No	Description	Unit	Rate Rs.
	around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.44.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	35800.00
17.44.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	9210.00
17.45	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 1.75m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.45.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	41800.00
17.45.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	10200.00
17.46	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 2.00m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.46.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	45600.00
17.46.2	Providing and constructing extra depth of manhole for depth beyond	metre	11500.00

Code No	Description	Unit	Rate Rs.
	1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.		
17.47	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-E" with internal dia 2.20m and depth upto 3.50m having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, RCC M20 for 200mm thick cover slab, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.47.1	Manhole of depth 1.8m as per drawing and direction of Engineer.	each manhole	53100.00
17.47.2	Providing and constructing extra depth of manhole for depth beyond 1.8 m and upto 3.5 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	12500.00
17.48	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.4m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.48.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	38500.00
17.48.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	9290.00
17.49	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.5m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole,		

Code No	Description	Unit	Rate Rs.
	conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.49.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	40300.00
17.49.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	9780.00
17.50	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.55m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.50.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	40700.00
17.50.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	10100.00
17.51	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 1.75m and depth upto 8.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.51.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	45300.00
17.51.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	11100.00
17.52	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 2.0m and depth upto 12.0m		

Code No	Description	Unit	Rate Rs.
	(2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.52.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	53400.00
17.52.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	12800.00
17.52.3	Providing and constructing extra depth of manhole for depth beyond 8.0 m and upto 12.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	14700.00
17.53	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 2.2m and depth upto 12.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 350 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC foot steps of approved make at every 0.30m height, supplying and fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 560mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.53.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each manhole	60400.00
17.53.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	13800.00
17.53.3	Providing and constructing extra depth of manhole for depth beyond 8.0 m and upto 12.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	16000.00
17.54	Providing and constructing of RCC M-20 grade cast-in-situ circular manholes of "Type-F" with internal dia 2.4m and depth upto 12.0m (2.0 in conical shape) having 150 mm thick RCC M-20 wall, including 360 mm thick RCC M-20 grade base slab (foundation), PCC M15 for benching and channel portion, PCC M20 250mm thick for fixing the manhole frame and cover, vata in CM1:1 around pipe entering and leaving the manhole, providing and fixing of SFRC footsteps of approved make at every 0.34m height, supplying and		

Code No	Description	Unit	Rate Rs.
	fixing heavy duty SFRC manhole frame and cover as per IS 12592 (Part I and II) having clear opening of 330mm, including form work, reinforcement, curing, watering, hydro testing of manhole, conveyance & cost of water, dewatering etc. complete as directed by the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.54.1	Manhole of depth 3.6m as per drawing and direction of Engineer.	each	67900.00
17.54.2	Providing and constructing extra depth of manhole for depth beyond 3.6 m and upto 8.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	14900.00
17.54.3	Providing and constructing extra depth of manhole for depth beyond 8.0 m and upto 12.0 with 150mm thick RCC M-20 wall as per drawing and direction of Engineer.	metre	16900.00
17.55	Providing, fixing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 1.0m and up to specified depth having pre-cast RCC M-40 grade circular manhole cover frame (ID 0.56m, OD 0.86m, height 0.20m), conical piece (top ID 0.56m, bottom ID 1.0m, vertical height 0.605m, wall thickness 125mm), and circular rings of required heights (ID 1.0m, height 150 / 300 mm, wall thickness 125mm) below conical piece as per required depth of manhole and having steel reinforcement in all pieces of manhole @ not less than 80 kg per cum of concrete, including cast-in-situ PCC M-10 grade (1:3:6) foundation of 1.625m dia and 150mm thickness, PCC M15 grade circular wall ID 0.925m, wall thickness 200mm, height equal to OD of sewer pipe + 50 mm, PCC M15 grade benching and channel portion and up to top level of sewer pipe etc complete with curing compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II), supplying and fixing plastic encapsulated CI/MS foot steps, including cost of shuttering, steel reinforcement, testing for water tightness etc complete in all respect as per drawing, as per specification and the direction of the Engineer.		
	Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.55.1	Pre-cast RCC M-40 grade circular manholes 1.055 m deep to invert with pre-cast manhole cover frame (height 0.20), conical piece (height 0.605), cast-in-situ PCC M-10 grade foundation, PCC M15 grade circular wall ID 0.925m, wall thickness 200mm height equal to OD of sewer pipe + 50mm, PCC M15 grade benching and channel portion.	each manhole	12200.00
17.55.2	Providing and fixing pre-cast RCC M-40 grade circular ring of ID 1.0m, wall thickness 125mm, height 150 / 300 mm for constructing extra depth of manhole for depth beyond 1.055m as per drawing.	metre	6160.00
17.56	Providing, fixing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 1.2m and up to specified depth having pre-cast RCC M-40 grade circular manhole cover frame (ID 0.56m, OD 0.86m, height 0.20m), conical piece (top ID 0.56m, bottom ID 1.2m, vertical height 0.805m, wall thickness 125mm), and circular rings of required heights (ID 1.2m, height 150/ 300/ 600/ 900mm, wall thickness 125mm) below conical piece as per required depth of manhole and having steel reinforcement in all pieces of manhole @ not less than 80 kg per cum of concrete, including cast-		

Code No	Description	Unit	Rate Rs.
	in-situ PCC M-10 grade (1:3:6) foundation of 1.825m dia and 150mm thickness, PCC M15 grade circular wall ID 1.125m, wall thickness 200mm, height equal to OD of sewer pipe +50mm, PCC M15 grade benching and channel portion and up to top level of sewer pipe etc complete with curing compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II), supplying and fixing plastic encapsulated CI/MS foot steps, including cost of shuttering, steel reinforcement, testing for water tightness etc complete in all respect as per drawing, as per specification and the direction of the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.56.1	Pre-cast RCC M-40 grade circular manholes 1.255 m deep to invert with pre-cast manhole cover frame (height 0.20), conical piece (height 0.805), cast-in-situ PCC M-10 grade foundation, PCC M15 grade circular wall ID 1.125m, wall thickness 200mm height equal to OD of sewer pipe +50 mm, PCC M15 grade benching and channel portion.	each manhole	15300.00
17.56.2	Providing and fixing pre-cast RCC M-40 grade circular ring of ID 1.2m, wall thickness 125mm, height 150 /300/600/900mm for constructing extra depth of manhole for depth beyond 1.255m as per drawing.	metre	6910.00
17.57	Providing, fixing and constructing of pre-cast RCC M-40 grade circular manholes with internal dia 1.5m and up to specified depth having pre-cast RCC M-40 grade circular manhole cover frame (ID 0.56m, OD 0.86m, height 0.20m), conical piece (top ID 0.56m, bottom ID 1.5m, vertical height 1.105m, wall thickness 125mm), and circular rings of required heights (ID 1.5m, height 150/300/600/900/1200 mm, wall thickness 125mm) below conical piece as per required depth of manhole and having steel reinforcement in all pieces of manhole @ not less than 80 kg per cum of concrete, including cast-in-situ PCC M-10 grade (1:3:6) foundation of 2.125m dia and 150mm thickness, PCC M15 grade circular wall ID 1.425 m, wall thickness 200mm, height equal to OD of sewer pipe+50mm , PCC M15 grade benching and channel portion and up to top level of sewer pipe etc complete with curing compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II), supplying and fixing plastic encapsulated CI/MS foot steps, including cost of shuttering, steel reinforcement, testing for water tightness etc complete in all respect as per drawing, as per specification and the direction of the Engineer. Note:- Excavation of earth work and road cutting for manhole will be measured and paid separately.		
17.57.1	Pre-cast RCC M-40 grade circular manholes 1.555 m deep to invert with pre-cast manhole cover frame (height 0.20), conical piece (height 1.105), cast-in-situ PCC M-10 grade foundation, PCC M15 grade circular wall ID 1.425m, wall thickness 200mm height equal to OD of sewer pipe+50mm, PCC M15 grade benching and channel portion.	each manhole	20500.00
17.57.2	Providing and fixing pre-cast RCC M-40 grade circular ring of ID 1.5m, wall thickness 125mm, height 150/300/600/900/1200mm for constructing extra depth of manhole for depth beyond 1.555m as per drawing.	metre	8180.00

Code No	Description	Unit	Rate Rs.
17.58	Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mmx25mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes while casting in RCC manhole and with 30x20x15 cm cement concrete block 1:3:6 in brick/RR stone manhole complete as per design.	each	339.00
17.59	Providing, fixing of Plastic HDPE Circular Manhole Chamber made from 100% virgin UV Stabilized special rotomoulding grade Polyethylene (PE) material having internal diameter of 1000mm, shall provide access for cleaning and inspection, to be used in sewers for gravity system. Chamber shall be made as per EN 13598-2 for use in non- pressure underground sewerage system. It shall be used for receiving / connecting solid wall plain surface (PVC, uPVC, HDPE) or structured wall corrugated DWC) pipes or CI/FRP/CLAY/PP/RCC, etc. by use of appropriate transition adaptors. Chamber shall have a base and riser shaft of 1000mm internal diameter and top cone with cover opening of internal diameter of 600mm and height adjustment of minimum 450mm. Chambers shall be provided with arrangement for 4 nos. connections at the base and shall be designed to receive / connect various diameter pipes. Chamber shaft also shall be designed to receive / connect anywhere at the shaft level. Chamber base / shaft shall receive maximum of pipe having OD of 715mm. Chamber shall have integrated base benching. The riser shaft outside shall be reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 55mm to enhance the products resistance to compression and anchoring in the soil. These ribs shall provide lift-retention system in case of ground water. Chamber shall have molded-in PE manhole steps. In order for a person to step down safely the steps shall be provided at vertical distance of 250mm and the minimum width and depth of each step shall be 300mm and 125mm respectively. These steps shall be able to take a vertical load of 2kN and pull-out resistance of 1kN. Chamber shall be placed on PCC M-10 grade (1:4:8) 150mm thick, 1200mm dia foundation, etc. complete with curing, compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II) complete in all respect including testing for water tightness (including the cost of RCC load distribution ring and SFRC manhole frame and cover) as per specification and the direction of the Engineer. {Note: Excavation of earth work, road cutting and non-cohesive backfilling material (quarry dust / rock sand, etc., depending on native soil condition)}, compaction, etc. for manhole will be measured and paid separately).		
17.59.1	HDPE circular manholes 1000mm ID, 2000mm deep to invert with HDPE conical piece and bottom piece, Cast-in-situ PCC M-10 grade foundation.	each	49600.00
17.59.2	Providing and fixing HDPE circular column extension piece of dia	metre	22700.00

Code No	Description	Unit	Rate Rs.
17.60	1000mm ID and height 250mm/500mm/1000mm each in HDPE manhole for making extra depth beyond 2000mm as per drawing and direction of Engineer. Providing, fixing of Plastic HDPE Circular Manhole Chamber made from 100% virgin UV Stabilized special rotomoulding grade Polyethylene (PE) material having internal diameter of 1200mm, shall provide access for cleaning and inspection, to be used in buried sewers for gravity system. Chamber shall be made as per EN 13598-2 for use in non- pressure underground drainage and sewerage system. It shall be used for receiving / connecting solid wall plain surface (PVC, uPVC, HDPE) or structured wall corrugated (DWC) pipes or CI/FRP/CLAY/PP/RCC, etc. by use of appropriate transition adaptors. Chamber shall have a base and riser shaft of 1200mm internal diameter and top cone with cover opening of internal diameter of 600mm and height adjustment of minimum 450mm. Chambers shall be provided with arrangement for 4 nos. connections at the base and shall be designed to receive / connect various diameter pipes. Chamber shaft also shall be designed to receive / connect anywhere at the shaft level. Chamber base / shaft shall receive maximum of pipe having OD of 1200mm. Chamber shall have integrated base benching. The riser shaft outside shall be reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 55mm to enhance the products resistance to compression and anchoring in the soil. These ribs shall provide lift-retention system in case of ground water. Chamber shall have molded-in PE manhole steps. In order for a person to step down safely the steps shall be provided at vertical distance of 250mm and the minimum width and depth of each step shall be 300mm and 125mm respectively. These steps shall be able to take a vertical load of 2kN and pull-out resistance of 1kN. Chamber shall be placed on PCC M-10 grade (1:4:8) 150mm thick, 1400mm dia foundation, etc. complete with curing, compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II) complete in all respect including testing for water tightness (including the cost of RCC load distribution ring and SFRC manhole frame and cover) as per specification and the direction of the Engineer. {Note: Excavation of earth work, road cutting and non-cohesive backfilling material (quarry dust / rock sand, etc., depending on native soil condition)}, compaction, etc. for manhole will be measured and paid separately).		
17.60.1	HDPE circular manholes 1200mm ID, 2000mm deep to invert with HDPE conical piece and bottom piece, Cast-in-situ PCC M-10 grade foundation.	each	57000.00
17.60.2	Providing and fixing HDPE circular column extension piece of dia 1200mm ID and height 250mm/500mm/1000mm each in HDPE manhole for making extra depth beyond 2000mm as per drawing and direction of Engineer.	metre	26400.00
17.61	Construction of brick masonry cylindrical road side inspection chamber of 450mm dia (internal) with 230mm thick wall of brick masonry (75 class designation brick) in cement mortar 1:4 (1 cement : 4 coarse sand), wall 230mm thick, filling of Jhiri, 20mm thick inside and outside plastering with CM (1:3), inside plaster finished with neat coat of cement, with 100 mm thick PCC M10 in foundation, 75mm thick PCC M15 flooring, precast SFRC/RCC circular 450mm		

Code No	Description	Unit	Rate Rs.
	dia MD manhole frame and cover embedded in 200mm thick PCC M20 grade concrete, including providing and fixing 2 Nos 110mm OD, 0.5m long uPVC pipe pieces of stiffness class SN 8 as per IS 15328 and plugging the same etc complete as per approved drawing and/or directed by Engineer.		
	Note: Excavation of earth work and road cutting will be measured and paid separately		
17.61.1	BM Road side inspection chamber of 450mm depth	each	4560.00
17.61.2	BM Road side inspection chamber of 600mm depth	each	5040.00
17.61.3	BM Road side inspection chamber of 900mm depth	each	5980.00
17.62	Construction of stone masonry cylindrical road side inspection chamber of 450mm dia (internal) with 300mm thick wall of stone masonry in cement mortar 1:4 (1 cement : 4 coarse sand), filling of Jhiri, 20mm thick inside and outside plastering with CM (1:3), inside plaster finished with neat coat of cement, with 100 mm thick PCC M10 in foundation, 75mm thick PCC M15 flooring, precast SFRC/RCC circular 450mm dia MD manhole frame and cover embedded in 200mm thick PCC M20 grade concrete, including providing and fixing 2 Nos 110mm OD, 0.5m long PVC-U pipe pieces of stiffness class SN 8 as per IS 15328 and plugging the same etc complete as per approved drawing and/or directed by Engineer.		
	Note: Excavation of earth work and road cutting will be measured and paid separately		
17.62.1	SM Road side inspection chamber of 450mm depth	each	5150.00
17.62.2	SM Road side inspection chamber of 600mm depth	each	5700.00
17.62.3	SM Road side inspection chamber of 900mm depth	each	6790.00
17.63	Constructing providing and fixing of pre-cast RCC M-40 grade circular Road Side Inspection Chamber including earthwork using sulphate resistant cement with following dia and depth cylindrical piece with 100mm wall thickness, 100mm base slab, inbuilt cover & frame on top, provision for 110mm OD in and out sewer connection with making proper in built benching and channel with PCC M-15 grade including providing cast-in-situ 100mm thick foundation of PCC M-10 grade, supplying and fixing circular precast SFRC Circular 300 mm dia manhole cover with frame - M.D. - 10, including steel reinforcement minimum @ 80kg/cum, testing for water tightness complete in all respect as per drawing, specification and the direction of the Engineer.		
17.63.1	Pre-cast Road side inspection chamber of 300mm dia (internal), 450mm depth and 600mm dia base foundation	each	2920.00
17.63.2	Pre-cast Road side inspection chamber of 450mm dia (internal), 600mm depth and 750mm dia base foundation	each	4520.00
17.63.3	Pre-cast Road side inspection chamber of 450mm dia (internal), 900mm depth and 750mm dia base foundation	each	5630.00
17.64	Providing, fixing of Plastic HDPE Circular Inspection Chamber made from 100% virgin UV Stabilized special rotomoulding grade Polyethylene (PE) material having internal diameter of 600mm, shall provide access for cleaning and inspection, to be used in buried sewers for gravity system. Chamber shall be made as per EN		

Code No	Description	Unit	Rate Rs.
	13598-1 for use in non- pressure underground sewerage system. It shall be used for receiving / connecting solid wall plain surface (PVC, uPVC, HDPE) or structured wall corrugated DWC) pipes or CI/FRP/CLAY/PP/RCC, etc. by use of appropriate transition adaptors; and/or for changing the direction of drainage / sewerage runs. Chamber shall have a base and riser shaft of internal diameter 600mm. Chambers shall be provided with arrangement for 4 nos. connections at the base and shall be designed to receive / connect various diameter pipes. Chamber shaft also shall be designed to receive / connect anywhere at the shaft level. Chamber base / shaft shall receive maximum of pipe having OD of 315mm. Chamber shall have integrated base benching. The riser shaft outside shall be reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm to enhance the products resistance to compression and anchoring in the soil. These ribs shall provide lift-retention system in case of ground water. Chamber shall be placed on PCC M-10 grade (1:4:8) 150mm thick, 800mm dia foundation, etc. complete with curing, compaction and form work, supplying and fixing heavy duty SFRC manhole cover as per IS 12592 (Part I and II) complete in all respect including testing for water tightness (including the cost of RCC load distribution ring and SFRC manhole frame and cover) as per specification and the direction of the Engineer. {Note: Excavation of earth work, road cutting and non-cohesive backfilling material (quarry dust / rock sand, etc., depending on native soil condition)}, compaction, etc. for manhole will be measured and paid separately).		
17.64.1	HDPE Road side inspection chamber of 500 mm depth	each	7580.00
17.64.2	HDPE Road side inspection chamber of 750 mm depth	each	10500.00
17.64.3	HDPE Road side inspection chamber of 1000 mm depth	each	13600.00
17.64.4	HDPE Road side inspection chamber of 1200 mm depth	each	16600.00
17.64.5	HDPE Road side inspection chamber of 1500 mm depth	each	19600.00
17.65	Providing and making connection to the manhole/ road side chamber/ property chamber by cutting hole in wall, making good the same with brick work/ stone masonry work in cement mortar 1:4, plaster in cement mortar 1:3, encasement of pipe at manhole with 75mm thick M15 grade concrete etc complete as directed by Engineer.	each	707.00
17.66	Providing PVC-U pipes as per IS 15328 drop connection externally for depth from 0.60 m and upto 1.0 m drop from branch sewer line to main sewer manhole or vise versa including inspection and cleaning eye, PVC-U drop pipe and bend encased around with cement concrete M15 with all form work, cutting holes in walls and making good with brick/ stone masonry work in cement sand mortar 1:4 plastered with cement sand mortar 1:3 with stiff cement mortar 1:1 around PVC-U pipe in masonry wall, making required channels complete as per standard design and specifications and/ or as the directed of the Engineer:		
17.66.1	110mm dia	each	4800.00
17.66.2	160mm dia	each	7990.00
17.66.3	200mm dia	each	11100.00

Code No	Description	Unit	Rate Rs.
17.66.4	250mm dia	each	17700.00
17.66.5	315mm dia	each	27700.00
17.67	Extra for additional drop depth of PVC-U pipes as per IS 15328 drop connection beyond 1.0 m complete as per standard specification and the direction of the Engineer. (To be paid for actual depth beyond 1.0 m)		
17.67.1	110mm dia	metre	1320.00
17.67.2	160mm dia	metre	1770.00
17.67.3	200mm dia	metre	2250.00
17.67.4	250mm dia	metre	2810.00
17.67.5	315mm dia	metre	4250.00
17.68	Providing, fixing and erecting precast RCC (M20) Vent shaft with cowl, 125mm and 225mm internal and external dia respectively at top, 300mm and 450mm internal and external dia at bottom and 9.0m over all length, bottom 1.175m below ground level fixed in the pit 900mmx900mmx1500mm with PCC M15, 250mm in bed and minimum 200mm all around with top 150mm in PCC M15 with 20mm nominal size graded stone aggregate, junction of vent shaft and concrete grouted with cement mortar 1: including making connection with sewer manhole with 150mm dia NP4 RCC pipe (IS 458-amended upto date) as required including Type-A bedding complete as per standard design and finished with water proofing cement of approved brand as per drawings and/or as directed by Engineer.		
	Note : Only Excavation work will be measured and paid separately	each	26700.00
17.69	Raising circular manhole with circular cover 560mm dia and frame slab to required level including dismantling existing slab, taking out the existing CI frame & cover of manhole and raising it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer.		
	(Brick work of raising depth of manhole to be paid separately)	each	445.00
17.70	Raising precast circular manhole cover and frame by taking out existing precast frame and cover, providing and fixing precast SFRC circular spacer of height 100/125/150mm, re-fixing existing manhole cover frame and cover with cement sand mortar (1:3), including making good the damage, complete as directed by Engineer.	each	1510.00
17.71	Lowering of circular manhole with circular cover 600mm dia and frame slab to required level including dismantling existing slab and manhole wall, taking out the existing CI frame & cover of manhole and lowering it upto ground/ road level, refixing of frame and cover in M15 (1:2:4) concrete all around the frame, including making good the damage, form work, curing, complete as directed by Engineer.		
	(Dismantling of brick work depth of manhole to be paid separately)	each	445.00
17.72	Supplying & fixing 560mm dia SFRC manhole frame & cover as per IS : 12592-2002 in existing manholes including grouting the frame in PCC M-15 complete in all respect as directed by the Engineer.		
17.72.1	HD-20	each	2400.00

Code No	Description	Unit	Rate Rs.
17.72.2	EHD-35	each	2690.00
17.73	Supplying & fixing 560mm dia SFRC manhole cover as per IS : 12592-2002 in existing manholes frame complete in all respect as directed by the Engineer.		
17.73.1	HD-20	each	1270.00
17.73.2	EHD-35	each	1570.00
17.74	Supplying and fixing of 560 mm dia Ductile Iron manhole frame & cover, Hinged Type, Heavy Duty with test load of 400 KN, class D-400 as per BS EN 124, in existing manholes including grouting the frame in PCC M-15 complete in all respect as directed by the Engineer.	set	5840.00
17.75	Extra for supplying and fixing of 560 mm dia Ductile Iron manhole frame & cover, Hinged Type, Heavy Duty with test load of 400 KN, class D-400 as per BS EN 124, in place of RCC/ SFRC manhole frame & cover (ED/EHD) in manhole.	each	3290.00
17.76	Supplying and fixing of approved brand composite fiberglass reinforced polymer manhole cover with frame 560mm Dia (circular) confirming to BSEN – 124 : 1994 of specified load capacity including grouting. Top shall have abrasion resistant layer of decorative grey granite finish. It shall also confirm “permanent Set” criterion as per BSEN 24. Product should be tested MSME accredited test lab for load capacity and permanent set as per IS -1726.		
17.76.1	HD - 20 Ton	each	6720.00
17.76.2	EHD - 35 Ton	each	8120.00
17.77	Emptying of septic tank/ soakage well etc, disposing of sludge within a lead of 5km and taking out sewage including refilling with local earth, ramming and compaction in layers, cleaning of site.	each	3560.00
17.78	Supply and Pushing of MS casing pipe of specified thickness by trenchless method adopting any suitable technology below ground at required depth under running traffic condition as per railway standard including carrying out survey work at the job site for determining underground cable trenches like telephone, cable, water & sanitary lines and resistivity test for finding the soil strata using necessary equipments for completion of works, mobilizing of machineries and specialized crew at the job site complete in all respect, including excavation of driven pit and exit pit (upto 3 metre depth) with proper protection at three sites with shoring sheets and ISMB's. Providing MS cutting edges for front shield and Constructing thrust bed at designated level. Necessary de-watering and providing concrete foundation at the base of the driven pit, PVC/Rubber saddle as per the requirement of Railway Authority, crane for handling of pipe and any other machinery, tools, and tackles required, construction of temporary works as per requirement and as per approved by railway authorities, specification and the direction of the Engineer. (Protective coating/ lining if done that will be paid extra)		
17.78.1	In all type of soils		
17.78.1.1	600 mm dia 12 mm thick casing pipe	metre	35400.00
17.78.1.2	700 mm dia 12 mm thick casing pipe	metre	38800.00

Code No	Description	Unit	Rate Rs.
17.78.1.3	800 mm dia 12 mm thick casing pipe	metre	45500.00
17.78.1.4	900 mm dia 12 mm thick casing pipe	metre	48900.00
17.78.1.5	1000 mm dia 12 mm thick casing pipe	metre	52300.00
17.78.1.6	1100 mm dia 16mm thick casing pipe	metre	70200.00
17.78.1.7	1200 mm dia 16mm thick casing pipe	metre	74700.00
17.78.1.8	1400 mm dia 16mm thick casing pipe	metre	86700.00
17.78.1.9	1600 mm dia 20 mm thick casing pipe	metre	114400.00
17.78.1.10	1800 mm dia 20 mm thick casing pipe	metre	129400.00
17.78.1.11	2000 mm dia 20 mm thick casing pipe	metre	140800.00
17.78.2	In Rock		
17.78.2.1	600 mm dia 12 mm thick casing pipe	metre	66400.00
17.78.2.2	700 mm dia 12 mm thick casing pipe	metre	69800.00
17.78.2.3	800 mm dia 12 mm thick casing pipe	metre	82700.00
17.78.2.4	900 mm dia 12 mm thick casing pipe	metre	86100.00
17.78.2.5	1000 mm dia 12 mm thick casing pipe	metre	89500.00
17.78.2.6	1100 mm dia 16mm thick casing pipe	metre	114900.00
17.78.2.7	1200 mm dia 16mm thick casing pipe	metre	119400.00
17.78.2.8	1400 mm dia 16mm thick casing pipe	metre	138400.00
17.78.2.9	1600 mm dia 20 mm thick casing pipe	metre	166000.00
17.78.2.10	1800 mm dia 20 mm thick casing pipe	metre	188200.00
17.78.2.11	2000 mm dia 20 mm thick casing pipe	metre	199600.00
17.79	Providing, laying and jointing RCC NP4 pipe with cement mortar joints by trenchless method adopting any suitable technology below ground at required depth under running traffic condition as per the direction of NHAI including carrying out survey work at the job site for determining underground cable trenches like telephone, power cable, water & sanitary lines and resistivity tests for finding the soil strata using necessary equipments for completion of work, mobilizing of machineries and specialized crew at the job site, etc. complete in all respects, including excavation of drive pit and exit pit (upto 3 metre depth) with proper protection at the three sides, providing and casting of MS cutting edges for front shield and constructing thrust bed at designed level as directed by the Engineer, necessary de-watering and providing concrete foundations at the base of the Drive pit, crane for handling of pipes, and any other machinery, tool & tackels required, construction of temporary works as per requirement and as approved by NH authorities complete in all respect for the road crossing at necessary depth (all depths) with all lead and lifts, as per specification and the direction of the Engineer.		
17.79.1	In all type of soils		
17.79.1.1	600 mm dia RCC pipe	metre	18200.00
17.79.1.2	700 mm dia RCC pipe	metre	19100.00
17.79.1.3	800 mm dia RCC pipe	metre	22800.00

Code No	Description	Unit	Rate Rs.
17.79.1.4	900 mm dia RCC pipe	metre	23800.00
17.79.1.5	1000 mm dia RCC pipe	metre	24600.00
17.79.1.6	1100 mm dia RCC pipe	metre	27600.00
17.79.1.7	1200 mm dia RCC pipe	metre	30400.00
17.79.1.8	1400 mm dia RCC pipe	metre	36100.00
17.79.1.9	1600 mm dia RCC pipe	metre	39600.00
17.79.1.10	1800 mm dia RCC pipe	metre	48700.00
17.79.2	In Rock		
17.79.2.1	600 mm dia RCC pipe	metre	49200.00
17.79.2.2	700 mm dia RCC pipe	metre	50100.00
17.79.2.3	800 mm dia RCC pipe	metre	60000.00
17.79.2.4	900 mm dia RCC pipe	metre	61000.00
17.79.2.5	1000 mm dia RCC pipe	metre	61800.00
17.79.2.6	1100 mm dia RCC pipe	metre	72300.00
17.79.2.7	1200 mm dia RCC pipe	metre	75100.00
17.79.2.8	1400 mm dia RCC pipe	metre	87700.00
17.79.2.9	1600 mm dia RCC pipe	metre	91300.00
17.79.2.10	1800 mm dia RCC pipe	metre	107600.00
17.80	Providing, jointing, laying, testing and commissioning of HDPE PE-100/PN-6 (suitable for pulling method for jointing) pipes for sewer line as per IS-14333 by trenchless method adopting any suitable technology below ground at required depth including carriage etc. complete in all respect, construction of thrust pit and receiving pit of required size upto 3 metre depth and soil investigation, making suitable arrangement for barricading of pits, traffic diversion, lights, traffic permission from relevant authority (though department will assist in getting the permission), refilling of pits in compacted layers of 150 mm including disposal of surplus material with all lift and lead upto 50 metre as per specification and the direction of the Engineer.		
17.80.1	In all types of soil		
17.80.1.1	200 mm dia HDPE pipe	metre	2260.00
17.80.1.2	250 mm dia HDPE pipe	metre	3440.00
17.80.1.3	315 mm dia HDPE pipe	metre	5120.00
17.80.1.4	400 mm dia HDPE pipe	metre	8250.00
17.80.1.5	500 mm dia HDPE pipe	metre	15800.00
17.80.1.6	630 mm dia HDPE pipe	metre	24900.00
17.80.1.7	800 mm dia HDPE pipe	metre	43500.00
17.80.1.8	900 mm dia HDPE pipe	metre	50400.00
17.80.1.9	1000 mm dia HDPE pipe	metre	58100.00
17.81	Providing and laying RCC NP4 pipe (with steel pushing collar) jointing with cement mortar joints by trenchless method adopting any suitable technology below ground at required depth including		

Code No	Description	Unit	Rate Rs.
	carrying out survey work at the job site for determining underground cable trenches like telephone, power cable, water & sanitary lines and resistivity tests for finding the soil strata using necessary equipments for completion of work, mobilizing of machineries and specialized crew at the job site, etc. complete in all respects, including excavation of drive pit and exit pit upto 3 metre depth with proper protection at the three sides, providing and casting of MS cutting edges for front shield and constructing thrust bed at designed level as directed by the Engineer, crane for handling of pipes, and any other machinery, tool & tackles required, complete in all respect as per specification and the direction of the Engineer.		
17.81.1	200 mm internal diameter	metre	7180.00
17.81.2	250 mm internal diameter	metre	7420.00
17.81.3	300 mm internal diameter	metre	10600.00
17.81.4	400 mm internal diameter	metre	13700.00
17.81.5	500 mm internal diameter	metre	17200.00
17.82	Extra for excavation of driven pit/ exit pit / intermediate pit beyond 3 metre depth, required for pushing/ pulling of MS/HDPE/RCC pipe in trenchless technology, with proper protection at three sides with shoring sheets/ wooden planks and ISMB's, maintaining during pushing/ puling of pipe, back filling, necessary de-watering including all machinery, tools, and tackles required as per specification and the direction of the Engineer		
17.82.1	In all types of soil	per pit per metre depth	24200.00
17.82.2	In rocks	per pit per metre depth	48400.00
17.83	Cleaning and Flow Test of RCC/SW pipes already laid but not commissioned (including cost and conveyance of water to site) complete in all respect as per direction of Engineer-In-Charge.		
17.83.1	150 mm dia	r.metre	30.50
17.83.2	200 mm dia	r.metre	41.00
17.83.3	250 mm dia	r.metre	43.50
17.83.4	300 mm dia	r.metre	48.50
17.83.5	400 mm dia	r.metre	65.00
17.83.6	450 mm dia	r.metre	71.50
17.83.7	500 mm dia	r.metre	83.00
17.83.8	600 mm dia	r.metre	90.50
17.83.9	700 mm dia	r.metre	129.00
17.83.10	800 mm dia	r.metre	160.00
17.83.11	900 mm dia	r.metre	184.00
17.83.12	1000 mm dia	r.metre	210.00
17.84	Operation & maintenance of sewerage collection & conveyance system (RCC/ HDPE/HDPE DWC pipes) from consumer point to STP complete. (line between property chamber and sewer manhole will not be measured for payment purpose).	km per month	2790.00

18.0 STP (Sewage Treatment Plant)

Code No	Description	Unit	Rate Rs.
18.1	Supply delivery at site with necessary packing, receiving, unloading, shifting, storing, installation, testing and commissioning of Non clog submersible pumping set of 2% Ni Cl Cascading, Impeller CF 8M ,Shaft SS 410,mechanical seal with 10M Power & Control cable , 5M Galvanized Chain,,10M, 50mm MS galvanized Guide pipe, Duck FootBend, with Guide wire SS 304 etc. complete with all respect as per specification		
18.1.1	Discharge 36 cum/hr and head 8 to 10 M	each	121900.00
18.1.2	Discharge 36 cum/hr and head 11 to 15 M	each	121900.00
18.1.3	Discharge 36 cum/hr and head 16 to 20 M	each	121900.00
18.1.4	Discharge 75 cum/hr and head 8 to 10 M	each	131500.00
18.1.5	Discharge 75 cum/hr and head 11 to 15 M	each	131500.00
18.1.6	Discharge 75 cum/hr and head 16 to 20 M	each	131500.00
18.1.7	Discharge 90 cum/hr and head 8 to 10 M	each	135100.00
18.1.8	Discharge 90 cum/hr and head 11 to 15 M	each	135100.00
18.1.9	Discharge 90 cum/hr and head 16 to 20 M	each	135100.00
18.1.10	Discharge 110 cum/hr and head 8 to 10 M	each	135100.00
18.1.11	Discharge 110 cum/hr and head 11 to 15 M	each	135100.00
18.1.12	Discharge 110 cum/hr and head 16 to 20 M	each	224000.00
18.1.13	Discharge 110 cum/hr and head 21 to 25 M	each	224000.00
18.1.14	Discharge 110 cum/hr and head 26 To 30 M	each	224000.00
18.1.15	Discharge 110 cum/hr and head 31 To 35 M	each	308600.00
18.1.16	Discharge 160 cum/hr and head 8 to 10 M	each	135100.00
18.1.17	Discharge 160 cum/hr and head 11 TO 15 M	each	245700.00
18.1.18	Discharge 160 cum/hr and head 16 TO 20 M	each	245700.00
18.1.19	Discharge 160 cum/hr and head 21 to 25 M	each	308600.00
18.1.20	Discharge 160 cum/hr and head 26 to 30 M	each	341100.00
18.1.21	Discharge 160 cum/hr and head 31 To 35 M	each	545900.00
18.1.22	Discharge 220 cum/hr and head 8 to 10 M	each	252100.00
18.1.23	Discharge 220 cum/hr and head 11 TO 15 M	each	276100.00
18.1.24	Discharge 220 cum/hr and head 16 TO 20 M	each	312800.00
18.1.25	Discharge 220 cum/hr and head 21 TO25 M	each	341100.00
18.1.26	Discharge 220 cum/hr and head 26 to 30 M	each	341100.00
18.1.27	Discharge 220 cum/hr and head 31 To 35 M	each	545900.00
18.1.28	Discharge 320 cum/hr and head 8 TO 10 M	each	276100.00
18.1.29	Discharge 320 cum/hr and head 11 TO 15 M	each	312800.00

Code No	Description	Unit	Rate Rs.
18.1.30	Discharge 320 cum/hr and head 16 TO 20 M	each	341100.00
18.1.31	Discharge 320 cum/hr and head 21 TO 25 M	each	545900.00
18.1.32	Discharge 320 cum/hr and head 26 To 30 M	each	571600.00
18.1.33	Discharge 320 cum/hr and head 31 To 35 M	each	631600.00
18.1.34	Discharge 420 cum/hr and head 8 TO 10 M	each	312800.00
18.1.35	Discharge 420 cum/hr and head 11 TO 15 M	each	341100.00
18.1.36	Discharge 420 cum/hr and head 16 TO 20 M	each	341100.00
18.1.37	Discharge 420 cum/hr and head 21 TO 25 M	each	571600.00
18.1.38	Discharge 420 cum/hr and head 26 To 30 M	each	631600.00
18.1.39	Discharge 420 cum/hr and head 31 To 35 M	each	631600.00
18.1.40	Discharge 490 cum/hr and head 8 TO 10 M	each	500200.00
18.1.41	Discharge 490 cum/hr and head 11 TO 15 M	each	520400.00
18.1.42	Discharge 490 cum/hr and head 16 TO 20 M	each	596700.00
18.1.43	Discharge 490 cum/hr and head 21 TO 25 M	each	631600.00
18.1.44	Discharge 490 cum/hr and head 26 To 30 M	each	631600.00
18.1.45	Discharge 490 cum/hr and head 31 To 35 M	each	1091500.00
18.1.46	Discharge 630 cum/hr and head 8 TO 10 M	each	520400.00
18.1.47	Discharge 630 cum/hr and head 11 TO 15 M	each	596700.00
18.1.48	Discharge 630 cum/hr and head 16 TO 20 M	each	608800.00
18.1.49	Discharge 630 cum/hr and head 21 TO 25 M	each	631600.00
18.1.50	Discharge 630 cum/hr and head 26 To 30 M	each	1091500.00
18.1.51	Discharge 630 cum/hr and head 31 To 35 M	each	1091500.00
18.1.52	Discharge 710 cum/hr and head 8 TO 10 M	each	606800.00
18.1.53	Discharge 710 cum/hr and head 11 TO 15 M	each	709500.00
18.1.54	Discharge 710 cum/hr and head 16 TO 20 M	each	900500.00
18.1.55	Discharge 710 cum/hr and head 21 TO 25 M	each	1091500.00
18.1.56	Discharge 710 cum/hr and head 26 To 35 M	each	1278100.00
18.1.57	Discharge 840 cum/hr and head 8 TO 10 M	each	606800.00
18.1.58	Discharge 840 cum/hr and head 11 TO 15 M	each	606800.00
18.1.59	Discharge 840 cum/hr and head 16 TO 20 M	each	631600.00
18.1.60	Discharge 840 cum/hr and head 21 TO 25 M	each	1063500.00
18.1.61	Discharge 840 cum/hr and head 26 To 30 M	each	1119700.00
18.1.62	Discharge 840 cum/hr and head 31 To 35 M	each	1396600.00
18.1.63	Discharge 1050 cum/hr and head 8 TO 10 M	each	696400.00
18.1.64	Discharge 1050 cum/hr and head 11 TO 15 M	each	696400.00
18.1.65	Discharge 1050 cum/hr and head 16 TO 20 M	each	1182000.00
18.1.66	Discharge 1050 cum/hr and head 21 TO 25 M	each	1210200.00

Code No	Description	Unit	Rate Rs.
18.1.67	Discharge 1050 cum/hr and head 26 to 30 M	each	1396600.00
18.1.68	Discharge 1050 cum/hr and head 31 To 35 M	each	1969400.00
18.1.69	Discharge 1410 cum/hr and head 8 TO 10 M	each	1390000.00
18.1.70	Discharge 1410 cum/hr and head 11 TO 15 M	each	1450700.00
18.1.71	Discharge 1410 cum/hr and head 16 TO 20 M	each	1748500.00
18.1.72	Discharge 1410 cum/hr and head 21 TO 25 M	each	1768600.00
18.1.73	Discharge 1410 cum/hr and head 26 to 30 M	each	1969400.00
18.1.74	Discharge 1880 cum/hr and head 8 TO 10 M	each	1562300.00
18.1.75	Discharge 1880 cum/hr and head 11 TO 15 M	each	1846500.00
18.1.76	Discharge 1880 cum/hr and head 16 TO 20 M	each	1871000.00
18.1.77	Discharge 1880 cum/hr and head 21 TO 30 M	each	1969400.00
18.1.78	Discharge 2350 cum/hr and head 8 TO 10 M	each	1846500.00
18.1.79	Discharge 2350 cum/hr and head 11 TO 15 M	each	1871000.00
18.1.80	Discharge 2350 cum/hr and head 16 TO 20 M	each	1969400.00
18.1.81	Discharge 2350 cum/hr and head 21 TO 25 M	each	1969400.00
18.2	Supply,Installation,Testing and Commissioning of Grit Seperator Mechanism including Classifier on one side in inclined position and Organic Return pump interconnection pipes,valves and accessories complete in all respect for following PEAK FLOW as per specification and direction of the of Engineer.		
18.2.1	Up to 5 MLD	set	1540400.00
18.2.2	5.1 MLD to 7.5 MLD	set	1573200.00
18.2.3	7.6 MLD to10 MLD	set	1573200.00
18.2.4	11 MLD to 15 MLD	set	1614100.00
18.2.5	16 MLD to 20 MLD	set	1614100.00
18.2.6	21 MLD to 25 MLD	set	1634600.00
18.2.7	26 MLD to30 MLD	set	1634600.00
18.2.8	31 MLD to 35 MLD	set	1634600.00
18.2.9	36 MLD to 40 MLD	set	1704300.00
18.2.10	41 MLD to 45 MLD	set	1704300.00
18.2.11	46 MLD to 50 MLD	set	1737100.00
18.2.12	51 MLD to 55 MLD	set	1737100.00
18.2.13	56 MLD to 60 MLD	set	1737100.00
18.2.14	61 MLD to 65 MLD	set	1761600.00
18.2.15	66 MLD to 70 MLD	set	1761600.00
18.2.16	71 MLD to 75MLD	set	1761600.00
18.2.17	76 MLD to 80 MLD	set	1761600.00
18.2.18	81 MLD to 85 MLD	set	1761600.00
18.2.19	86 MLD to 90 MLD	set	1843600.00

Code No	Description	Unit	Rate Rs.
18.2.20	91 MLD to 95 MLD	set	1843600.00
18.2.21	96 MLD to 100 MLD	set	1843600.00
18.3	Supply, fabrication, fixing and Testing of stainless steel (SS-316) Manual Coarse Bar screen with flat bar 50mm X 10mm, Spacing of bars 50mm suitable for mounting in channel of specified size with inclination not more than 45 degree and a movable covered containers of 1 cum capacity complete in all respect as per technical specification and the direction of the Engineer. Manually Raked Coarse Bar Screen with 50 mm clear opening for following PEAK FLOW and upto 3m channel depth.		
18.3.1	Up to 3 MLD	set	86000.00
18.3.2	3.1 MLD to 5 MLD	set	86000.00
18.3.3	5.1 MLD to 10 MLD	set	86000.00
18.3.4	10.1 MLD to 15 MLD	set	90100.00
18.3.5	15.1 MLD to 20 MLD	set	102400.00
18.3.6	20.1 MLD to 25 MLD	set	110600.00
18.3.7	25.1 MLD to 30 MLD	set	122900.00
18.3.8	30.1 MLD to 35 MLD	set	127000.00
18.3.9	35.1 MLD to 40 MLD	set	129000.00
18.3.10	40.1 MLD to 45 MLD	set	131100.00
18.3.11	45.1 MLD to 50 MLD	set	133800.00
18.3.12	50.1 MLD to 55 MLD	set	147200.00
18.3.13	55.1 MLD to 60 MLD	set	160600.00
18.3.14	60.1 MLD to 65 MLD	set	160600.00
18.3.15	65.1 MLD to 75 MLD	set	174900.00
18.3.16	75.1 MLD to 85 MLD	set	174900.00
18.3.17	85.1 MLD to 90 MLD	set	185200.00
18.3.18	90.1 MLD to 95MLD	set	201600.00
18.3.19	95.1 MLD to 100MLD	set	201600.00
18.3.20	Add extra for additional depth of channel in manual coarse bar screen beyond 3M depth	metre	6500.00
18.4	Supply, fabrication and fixing of stainless steel (SS-316) Coarse Bar screen (mechanically raked) with flat bar 50mm X 10mm Spacing of bars 50mm suitable for mounting in channel of specified size with inclination not more than 75 degree complete in all respect as per technical specification and the direction of the Engineer for following PEAK FLOW and upto 3m channel depth.		
18.4.1	5 MLD to 10 MLD	set	1298700.00
18.4.2	10.1 MLD to 15 MLD	set	1360100.00
18.4.3	15.1 MLD to 20 MLD	set	1409300.00
18.4.4	20.1 MLD to 25 MLD	set	1450300.00
18.4.5	25.1 MLD to 30 MLD	set	1560900.00

Code No	Description	Unit	Rate Rs.
18.4.6	30.1 MLD to 35 MLD	set	1597800.00
18.4.7	35.1 MLD to 40 MLD	set	1671500.00
18.4.8	40.1 MLD to 45 MLD	set	1728900.00
18.4.9	45.1 MLD to 50 MLD	set	1761600.00
18.4.10	50.1 MLD to 55 MLD	set	1884500.00
18.4.11	55.1 MLD to 60 MLD	set	2275400.00
18.4.12	60.1 MLD to 65 MLD	set	2275400.00
18.4.13	65.1 MLD to 75 MLD	set	2275400.00
18.4.14	75.1 MLD to 85 MLD	set	2597400.00
18.4.15	85.1 MLD to 90 MLD	set	2769400.00
18.4.16	90.1 MLD to 95 MLD	set	2957900.00
18.4.17	95.1 MLD to 100 MLD	set	3134100.00
18.4.18	Add extra for additional depth of channel in mechanical coarse bar screen beyond 3 m depth.	metre	42000.00
18.5	Supply, Installation, Testing and Commissioning of stainless steel (SS-316) Fine Bar screen (Mechanical operated) with flat bar 50 mm X 2 mm with 6 mm spacing suitable for mounting in channel of specified size with suitable inclination complete in all respect as per technical specification, reputed make and direction of the Engineer inclusive of Banner Make Upstream Type Ultrasonic Level Sensor for following PEAK FLOW and length up to 3M.		
18.5.1	5 MLD to 7.5 MLD	set	630900.00
18.5.2	7.6 MLD to 10 MLD	set	655500.00
18.5.3	10.1 MLD to 15 MLD	set	819400.00
18.5.4	15.1 MLD to 20 MLD	set	905400.00
18.5.5	20.1 MLD to 25 MLD	set	930000.00
18.5.6	25.1 MLD to 30 MLD	set	1196300.00
18.5.7	30.1 MLD to 35 MLD	set	1294600.00
18.5.8	35.1 MLD to 40 MLD	set	1351900.00
18.5.9	40.1 MLD to 45 MLD	set	1433900.00
18.5.10	45.1 MLD to 55 MLD	set	1507600.00
18.5.11	55.1 MLD to 65 MLD	set	1589600.00
18.5.12	65.1 MLD to 75 MLD	set	1704300.00
18.5.13	75.1 MLD to 85 MLD	set	1794400.00
18.5.14	85.1 MLD to 95 MLD	set	1917300.00
18.5.15	95.1 MLD to 105 MLD	set	2900500.00
18.5.16	Add extra for additional depth of channel in Mechanical Fine bar screen beyond 3m length	metre	42000.00
18.6	Supply, Installation, Testing and Commissioning of CI Open Channel Sluice Gates, Manually operated, Rising Spindle type suitable for mounting in between two parallel walls of an Open Channel. Water		

Code No	Description	Unit	Rate Rs.
	sealing shall be provided at two vertical sides and bottom side of gate aperture by means of rubber seal, mounted on gate slide and having forced contact with gate aperture. The gate shall be designed in such a manner, so that it can be operated at 2 meter head. Gate frame & Shutter of CI Grade IS 210 FG 260, Head Stock IS 210 Grade FG 260, Hinge Pin SS ASTM A276, Yoke IS MS 2062, Flush Bottom Seal Support Bar of SS ASTM A276, Stem Operating Nut ASTM A276., Duly tested for tensile strength, Chemical testing and tested Shop tested for over all dimensions as per approved GA drawing complete in all respect as per specification and direction of Engineer for following PEAK FLOW up to 3m channel depth.		
18.6.1	Up to 5 MLD	set	69600.00
18.6.2	5.1 MLD to 7.5 MLD	set	69600.00
18.6.3	7.6 MLD to 10 MLD	set	69600.00
18.6.4	10.1 MLD to 15 MLD	set	80800.00
18.6.5	15.1 MLD to 20 MLD	set	85600.00
18.6.6	20.1MLD to 25MLD	set	96200.00
18.6.7	25.1 MLD to 30 MLD	set	105200.00
18.6.8	30.1 MLD to 35 MLD	set	110300.00
18.6.9	35.1 MLD to 40 MLD	set	127200.00
18.6.10	40.1 MLD to 45 MLD	set	133400.00
18.6.11	45.1 MLD to 50 MLD	set	146700.00
18.6.12	50.1 MLD to 55 MLD	set	162100.00
18.6.13	55.1 MLD to 60 MLD	set	177600.00
18.6.14	60.1 MLD to 65 MLD	set	193100.00
18.6.15	65.1 MLD to 70 MLD	set	208500.00
18.6.16	70.1 MLD to 75 MLD	set	224000.00
18.6.17	75.1 MLD to 80 MLD	set	239500.00
18.6.18	80.1 MLD to 85 MLD	set	250600.00
18.6.19	85.1 MLD to 90 MLD	set	265800.00
18.6.20	90.1 MLD to 95MLD	set	290500.00
18.6.21	95.1 MLD to 100MLD	set	296300.00
18.6.22	100.1 MLD to 105MLD	set	296300.00
18.6.23	Add extra for additional depth of open channel beyond 3m depth	metre	4200.00
18.7	Supply, Installation, Testing and Commissioning of CI Thimble Mounted Sluice Gate, Manually operated, Rising Spindle type. Sluice gates are as per IS 13349 Including all taxes, Freight, loading, unloading, fitting in position including Sluice gates are upward opening wall thimble mounted suitable for isolating the flow of sewer into out of the opening in the wall. It consists Gate frame, wall thimble, gate slide, shutter, seating/sealing faces .The gates will be provided with pads on sides, top and bottom to mount the wedges. The gate shall be designed in such a manner, so that it can be operated at 2 meter head. Gate frame & Shutter of CI Grade IS 210 FG 260, Head Stock assembly bolts & SS ASTM A276 Type		

Code No	Description	Unit	Rate Rs.
	316, Stem, Operating Nut SS ASTM A276 Type 316., Duly tested for tensile strength, Tested for over all dimensions as per approved GA drawing complete in all respect as per specification and direction of Engineer for following PEAK FLOW and depth up to 3M.		
18.7.1	Up to 5 MLD	set	89600.00
18.7.2	5.1 MLD to 7.5 MLD	set	112900.00
18.7.3	7.6 MLD to 10 MLD	set	137600.00
18.7.4	10.1 MLD to 15 MLD	set	142600.00
18.7.5	15.1 MLD to 20 MLD	set	144500.00
18.7.6	20.1MLD to 25MLD	set	149400.00
18.7.7	25.1 MLD to 30 MLD	set	182500.00
18.7.8	30.1 MLD to 35 MLD	set	215600.00
18.7.9	35.1 MLD to 40 MLD	set	231500.00
18.7.10	40.1 MLD to 45 MLD	set	247300.00
18.7.11	45.1 MLD to 50 MLD	set	263100.00
18.7.12	50.1 MLD to 55 MLD	set	282800.00
18.7.13	55.1MLD to 60MLD	set	307800.00
18.7.14	60.1 MLD to 65 MLD	set	327800.00
18.7.15	65.1 MLD to 70 MLD	set	327800.00
18.7.16	70.1 MLD to 75 MLD	set	352100.00
18.7.17	75.1 MLD to 80 MLD	set	362300.00
18.7.18	80.1 MLD to 85 MLD	set	362300.00
18.7.19	85.1 MLD to 90 MLD	set	396100.00
18.7.20	90.1 MLD to 95MLD	set	469400.00
18.7.21	95.1 MLD to 100MLD	set	494100.00
18.7.22	Add extra for additional depth beyond 3m depth.	metre	4200.00
18.8	Supplying, erecting, testing & commissioning of Hand operated Travelling Crane (HOT) (single bridge girder carrying two wheels , complete with chain pulley block, load chain of welded construction of alloy steel as per IS:2429, hand chains for hoisting & traverse mechanism, totally encased Gears, trolley, trolley track wheels. Axle & shaft, swivel type lifting hook as per IS:3815, lock to prevent hook from swiveling, brakes for lifting gear, suitable for the above parameters and as per the direction of the Engineer.		
18.8.1	2 MT Capacity		
18.8.1.1	Span 3 M and Lift 3 M	set	233300.00
18.8.1.2	Span 4 M and Lift 3 M	set	241100.00
18.8.1.3	Span 5 M and Lift 3 M	set	256400.00
18.8.1.4	Span 6 M and Lift 3 M	set	275800.00
18.8.1.5	Span 7 M and Lift 3 M	set	297800.00
18.8.1.6	Span 8 M and Lift 3 M	set	324900.00

Code No	Description	Unit	Rate Rs.
18.8.1.7	Span 9 M and Lift 3 M	set	341100.00
18.8.2	3 MT Capacity		
18.8.2.1	Span 3 M and Lift 3 M	set	244700.00
18.8.2.2	Span 4 M and Lift 3 M	set	257400.00
18.8.2.3	Span 5 M and Lift 3 M	set	272300.00
18.8.2.4	Span 6 M and Lift 3 M	set	293600.00
18.8.2.5	Span 7 M and Lift 3 M	set	315800.00
18.8.2.6	Span 8 M and Lift 3 M	set	344400.00
18.8.2.7	Span 9 M and Lift 3 M	set	344400.00
18.8.3	Add extra for additional per metre lift.	metre	847.00
18.9	Supplying, erecting, testing & commissioning of Electrically Operated Travelling Crane (EOT) .Main girder & End Carriage fabricated from Rolled Steel Section, Gear Box for all motion, Electro Magnetic Friction Disc Type Brakes, all safety limit switches, LT wheels EN 9, Double Flanged 4No, with Sq. Cage motor of adequate rating (KW), duly painted mechanical cleaning and one coat of primer and two coat of synthetic paint and as per the direction of the Engineer.		
18.9.1	2 MT Capacity		
18.9.1.1	Span 7 M and Lift 6 M	set	373700.00
18.9.1.2	Span 9 M and Lift 6 M	set	429800.00
18.9.2	3 MT Capacity		
18.9.2.1	Span 7 M and Lift 6 M	set	457900.00
18.9.2.2	Span 9 M and Lift 6 M	set	521100.00
18.9.3	5 MT Capacity		
18.9.3.1	Span 7 M and Lift 6 M	set	534000.00
18.9.3.2	Span 9 M and Lift 6 M	set	585100.00
18.9.4	Add extra for additional per metre lift.	metre	847.00
18.10	Supply, installation and commissioning of Mono Rail Single Girder Crane suitable for lift up to 9m with chain 9m pulley block and traveling trolley excluding cost of girder complete in all respect as per the direction of the Engineer.		
18.10.1	1 MT Capacity	set	24700.00
18.10.2	2 MT Capacity	set	31800.00
18.10.3	3 MT Capacity	set	39100.00
18.10.4	Add extra for additional per metre lift.	metre	847.00
18.11	Providing, lowering, laying, aligning, fixing in position in pipe line, manually operated Knife Gate Valves of approved make for sewage applications of PN 10 class with valve Body of Cast Iron IS 210 FG 260 / Ductile Iron, Seal Retainer ring with Stainless Steel ASTM A743 type CF8, Inlet Seal / Rubber Seals of EPDM Rubber, Knife gate of Stainless Steel ASTM A 743 type 304, Bracket / Adaptor plate of Carbon Steel IS : 2062 grade A and packing of PTFE		

Code No	Description	Unit	Rate Rs.
	impregnated synthetic yarn of following dia complete in all respect (excluding jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
18.11.1	80 mm dia	each	7710.00
18.11.2	100 mm dia	each	10000.00
18.11.3	125 mm dia	each	12300.00
18.11.4	150 mm dia	each	14600.00
18.11.5	200 mm dia	each	24300.00
18.11.6	250 mm dia	each	31700.00
18.11.7	300 mm dia	each	38400.00
18.11.8	350 mm dia	each	57700.00
18.11.9	400 mm dia	each	78800.00
18.11.10	450 mm dia	each	108800.00
18.11.11	500 mm dia	each	137300.00
18.11.12	600 mm dia	each	186700.00
18.11.13	700 mm dia	each	289000.00
18.11.14	750 mm dia	each	320100.00
18.11.15	800 mm dia	each	342600.00
18.11.16	900 mm dia	each	445800.00
18.11.17	1000 mm dia	each	537000.00
18.11.18	1200 mm dia	each	726000.00
18.12	Supply, installation, testing and commissioning of following capacity Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve complete with all required accessories with Technical Specifications.		
18.12.1	810 cum per hour	set	310300.00
18.12.2	1600 cum per hour	set	477900.00
18.12.3	2200 cum per hour	set	520500.00

19.0 WATER SUPPLY

Code No	Description	Unit	Rate Rs.
19.1	Providing, lowering, laying in trenches, aligning, fixing in position and jointing socketed rubber gasket type ISI marked uPVC pipes of Class III (6 Kg/sqcm) suitable for potable water with rubber ring joints (as per IS 4985-2000) of following outer dia with all accessories (excluding specials) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.1.1	90 mm dia	metre	189.00
19.1.2	110 mm dia	metre	273.00
19.1.3	125mm dia	metre	355.00
19.1.4	140 mm dia	metre	439.00
19.1.5	160 mm dia	metre	564.00
19.1.6	180mm dia	metre	715.00
19.1.7	200mm dia	metre	884.00
19.1.8	225 mm dia	metre	1110.00
19.1.9	250 mm dia	metre	1370.00
19.1.10	280 mm dia	metre	1730.00
19.1.11	315 mm dia	metre	2220.00
19.2	Providing, lowering, laying in trenches, aligning, fixing in position and jointing uPVC pipe fittings/ accessories of class III (6 Kg/sqcm) conforming to IS:7834 suitable for potable water with rubber rings joints in uPVC pipe line at all levels/ depth including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.2.1	Equal Tee (Moulded) welded with socket		
19.2.1.1	90 mm dia	each	444.00
19.2.1.2	110 mm dia	each	710.00
19.2.1.3	125mm dia	each	825.00
19.2.1.4	140 mm dia	each	1230.00
19.2.1.5	160 mm dia	each	1810.00
19.2.1.6	180mm dia	each	2350.00
19.2.1.7	200mm dia	each	2950.00
19.2.1.8	225 mm dia	each	4680.00
19.2.1.9	250 mm dia	each	5700.00
19.2.2	Equal Tee (Fabricated)		
19.2.2.1	280 mm dia	each	6480.00
19.2.2.2	315 mm dia	each	7270.00

Code No	Description	Unit	Rate Rs.
19.2.3	Unequal Tee (Moulded) welded with socket		
19.2.3.1	125 X 110 mm dia	each	997.00
19.2.3.2	140 X 110 mm dia	each	1100.00
19.2.3.3	140 X 125 mm dia	each	1110.00
19.2.3.4	160 X 110 mm dia	each	1350.00
19.2.3.5	160 X 125 mm dia	each	1520.00
19.2.3.6	160 X 140 mm dia	each	1870.00
19.2.3.7	180 X 110 mm dia	each	1690.00
19.2.3.8	180 X 125 mm dia	each	2550.00
19.2.3.9	180 X 140 mm dia	each	2620.00
19.2.3.10	180 X 160 mm dia	each	2800.00
19.2.3.11	200 X 110 mm dia	each	2660.00
19.2.3.12	200 X 125 mm dia	each	2750.00
19.2.3.13	200 X 140 mm dia	each	2620.00
19.2.3.14	200 X 160 mm dia	each	2800.00
19.2.3.15	200 X 180 mm dia	each	2850.00
19.2.3.16	225 X 110 mm dia	each	2820.00
19.2.3.17	225 X 125 mm dia	each	2980.00
19.2.3.18	225 X 140 mm dia	each	3120.00
19.2.3.19	225 X 160 mm dia	each	3470.00
19.2.3.20	225 X 180 mm dia	each	3570.00
19.2.3.21	225 X 200 mm dia	each	3620.00
19.2.3.22	250 X 110 mm dia	each	2850.00
19.2.3.23	250 X 125 mm dia	each	2950.00
19.2.3.24	250 X 140 mm dia	each	3510.00
19.2.3.25	250 X 160 mm dia	each	3660.00
19.2.3.26	250 X 180 mm dia	each	3800.00
19.2.3.27	250 X 200 mm dia	each	4010.00
19.2.3.28	250 X 225 mm dia	each	4200.00
19.2.4	Unequal Tee (Fabricated)		
19.2.4.1	280 X 110 mm dia	each	2850.00
19.2.4.2	280 X 125 mm dia	each	3540.00
19.2.4.3	280 X 140 mm dia	each	3860.00
19.2.4.4	280 X 160 mm dia	each	3880.00
19.2.4.5	280 X 180 mm dia	each	3890.00
19.2.4.6	280 X 200 mm dia	each	4020.00
19.2.4.7	280 X 225 mm dia	each	4230.00

Code No	Description	Unit	Rate Rs.
19.2.4.8	280 X 250 mm dia	each	4510.00
19.2.4.9	315 X 110 mm dia	each	4980.00
19.2.4.10	315 X 125 mm dia	each	4990.00
19.2.4.11	315 X 140 mm dia	each	5100.00
19.2.4.12	315 X 160 mm dia	each	5180.00
19.2.4.13	315 X 180 mm dia	each	5760.00
19.2.4.14	315 X 200 mm dia	each	5810.00
19.2.4.15	315 X 225 mm dia	each	6030.00
19.2.4.16	315 X 250 mm dia	each	6130.00
19.2.4.17	315 X 280 mm dia	each	6440.00
19.2.5	Reducer (Fabricated)		
19.2.5.1	125 X 110 mm dia	each	399.00
19.2.5.2	140 X 110 mm dia	each	505.00
19.2.5.3	140 X 125 mm dia	each	505.00
19.2.5.4	160 X 110 mm dia	each	727.00
19.2.5.5	160 X 125 mm dia	each	661.00
19.2.5.6	160 X 140 mm dia	each	673.00
19.2.5.7	180 X 110 mm dia	each	964.00
19.2.5.8	180 X 125 mm dia	each	776.00
19.2.5.9	180 X 140 mm dia	each	862.00
19.2.5.10	180 X 160 mm dia	each	874.00
19.2.5.11	200 X 110 mm dia	each	1130.00
19.2.5.12	200 X 125 mm dia	each	1220.00
19.2.5.13	200 X 140 mm dia	each	1350.00
19.2.5.14	200 X 160 mm dia	each	1360.00
19.2.5.15	200 X 180 mm dia	each	1480.00
19.2.5.16	225 X 110 mm dia	each	1270.00
19.2.5.17	225 X 125 mm dia	each	1390.00
19.2.5.18	225 X 140 mm dia	each	1400.00
19.2.5.19	225 X 160 mm dia	each	1410.00
19.2.5.20	225 X 180 mm dia	each	1470.00
19.2.5.21	225 X 200 mm dia	each	1500.00
19.2.5.22	250 X 110 mm dia	each	1360.00
19.2.5.23	250 X 125 mm dia	each	1480.00
19.2.5.24	250 X 140 mm dia	each	1590.00
19.2.5.25	250 X 160 mm dia	each	1630.00
19.2.5.26	250 X 180 mm dia	each	1740.00

Code No	Description	Unit	Rate Rs.
19.2.5.27	250 X 200 mm dia	each	1860.00
19.2.5.28	250 X 225 mm dia	each	1940.00
19.2.5.29	280 X 110 mm dia	each	1610.00
19.2.5.30	280 X 125 mm dia	each	1730.00
19.2.5.31	280 X 140 mm dia	each	1860.00
19.2.5.32	280 X 160 mm dia	each	1920.00
19.2.5.33	280 X 180 mm dia	each	1950.00
19.2.5.34	280 X 200 mm dia	each	2080.00
19.2.5.35	280 X 225 mm dia	each	2150.00
19.2.5.36	280 X 250 mm dia	each	2150.00
19.2.5.37	315 X 110 mm dia	each	2330.00
19.2.5.38	315 X 125 mm dia	each	2450.00
19.2.5.39	315 X 140 mm dia	each	2560.00
19.2.5.40	315 X 160 mm dia	each	2620.00
19.2.5.41	315 X 180 mm dia	each	2660.00
19.2.5.42	315 X 200 mm dia	each	2780.00
19.2.5.43	315 X 225 mm dia	each	2790.00
19.2.5.44	315 X 250 mm dia	each	2900.00
19.2.5.45	315 X 280 mm dia	each	3030.00
19.2.6	Double/Single socketed 90 degree long bend (single piece welded with socket)		
19.2.6.1	90 mm dia	each	299.00
19.2.6.2	110 mm dia	each	491.00
19.2.6.3	125mm dia	each	675.00
19.2.6.4	140 mm dia	each	911.00
19.2.6.5	160 mm dia	each	1290.00
19.2.6.6	180mm dia	each	1800.00
19.2.6.7	200mm dia	each	2540.00
19.2.6.8	225 mm dia	each	3600.00
19.2.6.9	250 mm dia	each	4870.00
19.2.6.10	280 mm dia	each	7180.00
19.2.6.11	315 mm dia	each	10500.00
19.2.7	Double/Single socketed 45/22.5/11.25 degree long bend (single piece welded with socket)		
19.2.7.1	90 mm dia	each	242.00
19.2.7.2	110 mm dia	each	382.00
19.2.7.3	125mm dia	each	514.00
19.2.7.4	140 mm dia	each	684.00

Code No	Description	Unit	Rate Rs.
19.2.7.5	160 mm dia	each	956.00
19.2.7.6	180mm dia	each	1320.00
19.2.7.7	200mm dia	each	1830.00
19.2.7.8	225 mm dia	each	2520.00
19.2.7.9	250 mm dia	each	3430.00
19.2.7.10	280 mm dia	each	5160.00
19.2.7.11	315 mm dia	each	7270.00
19.2.8	uPVC End Cap		
19.2.8.1	90 mm dia	each	68.00
19.2.8.2	110 mm dia	each	82.00
19.2.8.3	125mm dia	each	167.00
19.2.8.4	140 mm dia	each	203.00
19.2.8.5	160 mm dia	each	224.00
19.2.8.6	180mm dia	each	257.00
19.2.8.7	200mm dia	each	277.00
19.2.8.8	225 mm dia	each	655.00
19.2.8.9	250 mm dia	each	677.00
19.2.8.10	280 mm dia	each	1350.00
19.2.8.11	315 mm dia	each	1440.00
19.3	Providing, lowering, laying in trenches, aligning, fixing in position and jointing ISI marked uPVC pipe fittings/ accessories of class IV (8 Kg/sqcm) suitable for potable water with rubber rings joints in uPVC pipe line at all levels/ depth including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.3.1	Equal Tee (Moulded) welded with socket		
19.3.1.1	90 mm dia	each	601.00
19.3.1.2	110 mm dia	each	744.00
19.3.1.3	125mm dia	each	1160.00
19.3.1.4	140 mm dia	each	1420.00
19.3.1.5	160 mm dia	each	2100.00
19.3.1.6	180mm dia	each	2610.00
19.3.1.7	200mm dia	each	3620.00
19.3.1.8	225 mm dia	each	4700.00
19.3.1.9	250 mm dia	each	6600.00
19.3.2	Equal Tee (Fabricated)		
19.3.2.1	280 mm dia	each	8300.00
19.3.2.2	315 mm dia	each	12700.00
19.3.3	Unequal Tee (Moulded) welded with socket		

Code No	Description	Unit	Rate Rs.
19.3.3.1	125 X 110 mm dia	each	1440.00
19.3.3.2	140 X 110 mm dia	each	1810.00
19.3.3.3	140 X 125 mm dia	each	1990.00
19.3.3.4	160 X 110 mm dia	each	2460.00
19.3.3.5	160 X 125 mm dia	each	2370.00
19.3.3.6	160 X 140 mm dia	each	2510.00
19.3.3.7	180 X 110 mm dia	each	2910.00
19.3.3.8	180 X 125 mm dia	each	3200.00
19.3.3.9	180 X 140 mm dia	each	3290.00
19.3.3.10	180 X 160 mm dia	each	3580.00
19.3.3.11	200 X 110 mm dia	each	3360.00
19.3.3.12	200 X 125 mm dia	each	3570.00
19.3.3.13	200 X 140 mm dia	each	3600.00
19.3.3.14	200 X 160 mm dia	each	3620.00
19.3.3.15	200 X 180 mm dia	each	4910.00
19.3.3.16	225 X 110 mm dia	each	5340.00
19.3.3.17	225 X 125 mm dia	each	5600.00
19.3.3.18	225 X 140 mm dia	each	5670.00
19.3.3.19	225 X 160 mm dia	each	6370.00
19.3.3.20	225 X 180 mm dia	each	7080.00
19.3.3.21	225 X 200 mm dia	each	8650.00
19.3.3.22	250 X 110 mm dia	each	6250.00
19.3.3.23	250 X 125 mm dia	each	6380.00
19.3.3.24	250 X 140 mm dia	each	6620.00
19.3.3.25	250 X 160 mm dia	each	6380.00
19.3.3.26	250 X 180 mm dia	each	6740.00
19.3.3.27	250 X 200 mm dia	each	7080.00
19.3.3.28	250 X 225 mm dia	each	7350.00
19.3.4	Unequal Tee (Fabricated)		
19.3.4.1	280 X 110 mm dia	each	7420.00
19.3.4.2	280 X 125 mm dia	each	7490.00
19.3.4.3	280 X 140 mm dia	each	7580.00
19.3.4.4	280 X 160 mm dia	each	7650.00
19.3.4.5	280 X 180 mm dia	each	7730.00
19.3.4.6	280 X 200 mm dia	each	7810.00
19.3.4.7	280 X 225 mm dia	each	8080.00
19.3.4.8	280 X 250 mm dia	each	8770.00

Code No	Description	Unit	Rate Rs.
19.3.4.9	315 X 110 mm dia	each	7390.00
19.3.4.10	315 X 125 mm dia	each	7430.00
19.3.4.11	315 X 140 mm dia	each	7480.00
19.3.4.12	315 X 160 mm dia	each	8070.00
19.3.4.13	315 X 180 mm dia	each	8150.00
19.3.4.14	315 X 200 mm dia	each	8540.00
19.3.4.15	315 X 225 mm dia	each	8780.00
19.3.4.16	315 X 250 mm dia	each	9050.00
19.3.4.17	315 X 280 mm dia	each	10100.00
19.3.5	Reducer (Fabricated)		
19.3.5.1	125 X 110 mm dia	each	409.00
19.3.5.2	140 X 110 mm dia	each	652.00
19.3.5.3	140 X 125 mm dia	each	674.00
19.3.5.4	160 X 110 mm dia	each	885.00
19.3.5.5	160 X 125 mm dia	each	670.00
19.3.5.6	160 X 140 mm dia	each	693.00
19.3.5.7	180 X 110 mm dia	each	1100.00
19.3.5.8	180 X 125 mm dia	each	1120.00
19.3.5.9	180 X 140 mm dia	each	1210.00
19.3.5.10	180 X 160 mm dia	each	1220.00
19.3.5.11	200 X 110 mm dia	each	1270.00
19.3.5.12	200 X 125 mm dia	each	1300.00
19.3.5.13	200 X 140 mm dia	each	1460.00
19.3.5.14	200 X 160 mm dia	each	1530.00
19.3.5.15	200 X 180 mm dia	each	1640.00
19.3.5.16	225 X 110 mm dia	each	1780.00
19.3.5.17	225 X 125 mm dia	each	1970.00
19.3.5.18	225 X 140 mm dia	each	1990.00
19.3.5.19	225 X 160 mm dia	each	2100.00
19.3.5.20	225 X 180 mm dia	each	2230.00
19.3.5.21	225 X 200 mm dia	each	2350.00
19.3.5.22	250 X 110 mm dia	each	2560.00
19.3.5.23	250 X 125 mm dia	each	2640.00
19.3.5.24	250 X 140 mm dia	each	2750.00
19.3.5.25	250 X 160 mm dia	each	2890.00
19.3.5.26	250 X 180 mm dia	each	2910.00
19.3.5.27	250 X 200 mm dia	each	3030.00

Code No	Description	Unit	Rate Rs.
19.3.5.28	250 X 225 mm dia	each	3080.00
19.3.5.29	280 X 110 mm dia	each	2570.00
19.3.5.30	280 X 125 mm dia	each	2600.00
19.3.5.31	280 X 140 mm dia	each	2760.00
19.3.5.32	280 X 160 mm dia	each	2930.00
19.3.5.33	280 X 180 mm dia	each	3090.00
19.3.5.34	280 X 200 mm dia	each	3190.00
19.3.5.35	280 X 225 mm dia	each	3220.00
19.3.5.36	280 X 250 mm dia	each	3400.00
19.3.5.37	315 X 110 mm dia	each	3880.00
19.3.5.38	315 X 125 mm dia	each	3990.00
19.3.5.39	315 X 140 mm dia	each	4100.00
19.3.5.40	315 X 160 mm dia	each	4150.00
19.3.5.41	315 X 180 mm dia	each	4240.00
19.3.5.42	315 X 200 mm dia	each	4330.00
19.3.5.43	315 X 225 mm dia	each	4460.00
19.3.5.44	315 X 250 mm dia	each	4600.00
19.3.5.45	315 X 280 mm dia	each	4620.00
19.3.6	Double/Single socketed 90 degree long bend (single piece welded with socket)		
19.3.6.1	90 mm dia	each	454.00
19.3.6.2	110 mm dia	each	751.00
19.3.6.3	125mm dia	each	1090.00
19.3.6.4	140 mm dia	each	1480.00
19.3.6.5	160 mm dia	each	2160.00
19.3.6.6	180mm dia	each	3460.00
19.3.6.7	200mm dia	each	4270.00
19.3.6.8	225 mm dia	each	6130.00
19.3.6.9	250 mm dia	each	8260.00
19.3.6.10	280 mm dia	each	11300.00
19.3.6.11	315 mm dia	each	17800.00
19.3.7	Double/Single socketed 45/22.5/11.25 degree long bend (single piece welded with socket)		
19.3.7.1	90 mm dia	each	356.00
19.3.7.2	110 mm dia	each	595.00
19.3.7.3	125mm dia	each	806.00
19.3.7.4	140 mm dia	each	1090.00
19.3.7.5	160 mm dia	each	1560.00

Code No	Description	Unit	Rate Rs.
19.3.7.6	180mm dia	each	2160.00
19.3.7.7	200mm dia	each	3030.00
19.3.7.8	225 mm dia	each	4230.00
19.3.7.9	250 mm dia	each	5740.00
19.3.7.10	280 mm dia	each	8640.00
19.3.7.11	315 mm dia	each	12200.00
19.3.8	uPVC End Cap		
19.3.8.1	90 mm dia	each	117.00
19.3.8.2	110 mm dia	each	200.00
19.3.8.3	125mm dia	each	248.00
19.3.8.4	140 mm dia	each	316.00
19.3.8.5	160 mm dia	each	526.00
19.3.8.6	180mm dia	each	597.00
19.3.8.7	200mm dia	each	1120.00
19.3.8.8	225 mm dia	each	1200.00
19.3.8.9	250 mm dia	each	1290.00
19.3.8.10	280 mm dia	each	1580.00
19.3.8.11	315 mm dia	each	2460.00
19.4	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade & PN-6 for potable water as per IS 4984 (amended upto date) in trenches complete with all accessories like Bend, Tee, Reducer, Stub end, End cap etc including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.4.1	75 mm dia	metre	212.00
19.4.2	90 mm dia	metre	223.00
19.4.3	110 mm dia	metre	324.00
19.4.4	125mm dia	metre	417.00
19.4.5	140 mm dia	metre	523.00
19.4.6	160 mm dia	metre	678.00
19.4.7	180mm dia	metre	854.00
19.4.8	200mm dia	metre	1050.00
19.4.9	225 mm dia	metre	1330.00
19.4.10	250 mm dia	metre	1630.00
19.4.11	280 mm dia	metre	2040.00
19.4.12	315 mm dia	metre	2590.00
19.5	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade & PN-6 for potable water as per IS 4984 (amended upto date) in trenches in		

Code No	Description	Unit	Rate Rs.
	complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
	Note : E/w to be measured and paid separately.		
19.5.1	75 mm dia	metre	199.00
19.5.2	90 mm dia	metre	210.00
19.5.3	110 mm dia	metre	305.00
19.5.4	125mm dia	metre	392.00
19.5.5	140 mm dia	metre	492.00
19.5.6	160 mm dia	metre	637.00
19.5.7	180mm dia	metre	803.00
19.5.8	200mm dia	metre	987.00
19.5.9	225 mm dia	metre	1250.00
19.5.10	250 mm dia	metre	1530.00
19.5.11	280 mm dia	metre	1920.00
19.5.12	315 mm dia	metre	2430.00
19.5.13	355 mm dia	metre	3590.00
19.5.14	400 mm dia	metre	4650.00
19.5.15	450 mm dia	metre	5880.00
19.6	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths HDPE pipe accessories/ fittings of PE-100 grade & PN-6 for potable water as per IS 8360/ IS 8008 for fabricated/ moulded (amended upto date) within pipe line in trenches complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.6.1	Equal Tee		
19.6.1.1	75 mm dia	each	220.00
19.6.1.2	90 mm dia	each	303.00
19.6.1.3	110 mm dia	each	569.00
19.6.1.4	125mm dia	each	777.00
19.6.1.5	140 mm dia	each	937.00
19.6.1.6	160 mm dia	each	1280.00
19.6.1.7	180mm dia	each	1790.00
19.6.1.8	200mm dia	each	2400.00
19.6.1.9	225 mm dia	each	3290.00
19.6.1.10	250 mm dia	each	4540.00
19.6.1.11	280 mm dia	each	6300.00
19.6.1.12	315 mm dia	each	7450.00
19.6.1.13	355 mm dia	each	10500.00
19.6.1.14	400 mm dia	each	15000.00
19.6.1.15	450 mm dia	each	21400.00

Code No	Description	Unit	Rate Rs.
19.6.2	90 degree bend		
19.6.2.1	75 mm dia	each	231.00
19.6.2.2	90 mm dia	each	309.00
19.6.2.3	110 mm dia	each	387.00
19.6.2.4	125mm dia	each	524.00
19.6.2.5	140 mm dia	each	685.00
19.6.2.6	160 mm dia	each	966.00
19.6.2.7	180mm dia	each	1350.00
19.6.2.8	200mm dia	each	1790.00
19.6.2.9	225 mm dia	each	2520.00
19.6.2.10	250 mm dia	each	3450.00
19.6.2.11	280 mm dia	each	4710.00
19.6.2.12	315 mm dia	each	6750.00
19.6.2.13	355 mm dia	each	9400.00
19.6.2.14	400 mm dia	each	13700.00
19.6.2.15	450 mm dia	each	19400.00
19.6.3	End Cap		
19.6.3.1	75 mm dia	each	142.00
19.6.3.2	90 mm dia	each	161.00
19.6.3.3	110 mm dia	each	213.00
19.6.3.4	125mm dia	each	237.00
19.6.3.5	140 mm dia	each	274.00
19.6.3.6	160 mm dia	each	380.00
19.6.3.7	180mm dia	each	410.00
19.6.3.8	200mm dia	each	566.00
19.6.3.9	225 mm dia	each	702.00
19.6.3.10	250 mm dia	each	866.00
19.6.3.11	280 mm dia	each	1050.00
19.6.3.12	315 mm dia	each	1180.00
19.6.3.13	355 mm dia	each	1600.00
19.6.3.14	400 mm dia	each	2390.00
19.6.3.15	450 mm dia	each	2960.00
19.7	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths HDPE Stub End (Long neck pipe end) of PE-100 grade & PN-6 (moulded/ machined) for potable water with MS galvanised flange as per to BS-10 table D/IS:1538 within pipeline in trenches complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		

Code No	Description	Unit	Rate Rs.
19.7.1	110mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 100mm dia	each	908.00
19.7.2	140/160 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 125mm dia	each	983.00
19.7.3	200mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 200mm dia	each	1170.00
19.7.4	250mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 250mm dia	each	1330.00
19.7.5	315 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 300mm dia	each	1460.00
19.8	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-7 grade S&S pipes as per IS:8329-2000 (amended upto date), with internal cement mortar lining for potable water with rubber ring (EPDM/SBR) joints as per IS: 5382-1985 (excluding special accessories) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.8.1	100mm	metre	1270.00
19.8.2	150mm	metre	1740.00
19.8.3	200mm	metre	2480.00
19.8.4	250mm	metre	2820.00
19.8.5	300mm	metre	3580.00
19.8.6	350 mm	metre	3980.00
19.8.7	400 mm	metre	4830.00
19.8.8	450 mm	metre	5850.00
19.8.9	500 mm	metre	6880.00
19.8.10	600mm	metre	8980.00
19.8.11	700mm	metre	11900.00
19.8.12	800mm	metre	15300.00
19.8.13	900mm	metre	18300.00
19.8.14	1000mm	metre	22500.00
19.8.15	1100mm	metre	30300.00
19.9	Providing, lowering, laying in trenches, aligning, fixing in position and jointing Ductile Iron (DI) ISI marked K-9 grade S&S pipes as per IS:8329-2000 (amended upto date), with internal cement mortar lining for potable water with rubber ring (EPDM/SBR) joints as per IS: 5382-1985 (excluding special accessories) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.9.1	100mm	metre	1440.00
19.9.2	150mm	metre	1970.00

Code No	Description	Unit	Rate Rs.
19.9.3	200mm	metre	2590.00
19.9.4	250mm	metre	3390.00
19.9.5	300mm	metre	4240.00
19.9.6	350 mm	metre	4690.00
19.9.7	400 mm	metre	5640.00
19.9.8	450 mm	metre	6860.00
19.9.9	500 mm	metre	8100.00
19.9.10	600mm	metre	10500.00
19.9.11	700mm	metre	13200.00
19.9.12	800mm	metre	16200.00
19.9.13	900mm	metre	19500.00
19.9.14	1000mm	metre	23900.00
19.9.15	1100mm	metre	29100.00
19.10	Providing, lowering, laying in trenches, aligning, fixing in position and double flanged (welded) centrifugally (spun) Ductile iron ISI marked K-9 grade pipes as per IS:8329-2000 (amended upto date), (including jointing and jointing material) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.10.1	100mm	metre	2310.00
19.10.2	150mm	metre	3030.00
19.10.3	200mm	metre	3960.00
19.10.4	250mm	metre	5110.00
19.10.5	300mm	metre	6430.00
19.10.6	350 mm	metre	8560.00
19.10.7	400 mm	metre	10200.00
19.10.8	450 mm	metre	12400.00
19.10.9	500 mm	metre	14800.00
19.10.10	600mm	metre	19600.00
19.10.11	700mm	metre	25700.00
19.10.12	800mm	metre	30700.00
19.10.13	900mm	metre	37900.00
19.10.14	1000mm	metre	44000.00
19.10.15	1100mm	metre	54700.00
19.11	Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths DI K-12 standard specials with rubber ring (EPDM/SBR) joints as per IS: 5382-1985 such as tees, bends, tapers, caps etc. within trenches in DI pipe line complete including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		

Code No	Description	Unit	Rate Rs.
	Note : E/w to be measured and paid separately.		
19.11.1	Specials S&S DI K-12		
19.11.1.1	Upto 300mm dia	kg	118.00
19.11.1.2	Above 300mm dia and upto 600mm dia	kg	124.00
19.11.1.3	Above 600mm dia and upto 900mm dia	kg	150.00
19.11.1.4	Above 900mm dia	kg	161.00
19.11.2	Specials flanged DI K-12		
19.11.2.1	Upto 300mm	kg	121.00
19.11.2.2	Above 300mm dia and upto 600mm dia	kg	129.00
19.11.2.3	Above 600mm dia and upto 900mm dia	kg	157.00
19.11.2.4	Above 900mm dia	kg	174.00
19.12	Providing, lowering, laying, aligning, fixing in position at all level/ depths CI Class - B double flanged pipes of standard length of 2.75m as per IS : 7181 in trenches complete (including jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
	Note : E/w to be measured and paid separately.		
19.12.1	100mm	metre	2470.00
19.12.2	125mm	metre	3940.00
19.12.3	150mm	metre	3940.00
19.12.4	200mm	metre	5650.00
19.12.5	250mm	metre	7570.00
19.12.6	300mm	metre	9680.00
19.12.7	350 mm	metre	12000.00
19.12.8	400 mm	metre	14800.00
19.12.9	450 mm	metre	17900.00
19.12.10	500 mm	metre	20900.00
19.12.11	600mm	metre	28000.00
19.12.12	700mm	metre	36200.00
19.12.13	750mm	metre	40800.00
19.12.14	800mm	metre	45600.00
19.12.15	900mm	metre	54800.00
19.12.16	1000mm	metre	65500.00
19.13	Providing, lowering, laying, aligning, fixing in position at all level/ depths CI Class - B double flanged specials as per IS : 7181 in trenches complete (excluding jointing) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
	Note : E/w to be measured and paid separately.		

Code No	Description	Unit	Rate Rs.
19.13.1	Standard specials	kg	95.50
19.13.2	Non-standard specials	kg	98.00
19.14	Fabrication, supply of flanged/ plain ended MS pipe made from MS sheet strips of relevant IS specification of approved thickness by welding, lowering, laying, aligning, fixing in position at all level/ depths in trenches complete (excluding flanged jointing wherever required) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.14.1	MS pipe upto 600mm dia (with minimum 5mm thickness sheet)	kg	111.00
19.14.2	MS pipe above 600mm dia (with minimum 6.3mm thickness sheet)	kg	114.00
19.15	Fabrication, supply of flanged/ plain ended MS pipe made from MS sheet strips of relevant IS specification of approved thickness by welding, lowering, laying, aligning, fixing in position at all level/ depths in trenches complete (excluding flanged jointing wherever required) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer. Note : E/w to be measured and paid separately.		
19.15.1	MS pipe specials upto 600mm dia (with minimum 5mm thickness sheet)	kg	114.00
19.15.2	MS pipe specials above 600mm dia (with minimum 6.3mm thickness sheet)	kg	117.00
19.16	Providing and making flanged joints to double flanged C.I./ D.I. pipes and specials such as tees, bends, tapers, caps etc. at all level/ depths within trenches complete including all material i.e. rubber insertions, bolts & nuts etc, labour, testing of joint, commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
19.16.1	100mm	each	325.00
19.16.2	125mm	each	326.00
19.16.3	150mm	each	454.00
19.16.4	200mm	each	519.00
19.16.5	250mm	each	771.00
19.16.6	300mm	each	781.00
19.16.7	350 mm	each	1130.00
19.16.8	400 mm	each	1870.00
19.16.9	450 mm	each	2330.00
19.16.10	500 mm	each	2590.00
19.16.11	600mm	each	3480.00
19.16.12	700mm	each	4530.00
19.16.13	800mm	each	4580.00
19.16.14	900mm	each	5290.00

Code No	Description	Unit	Rate Rs.
19.16.15	1000mm	each	5300.00
19.16.16	1100mm	each	6180.00
19.17	Providing and making house service connections from water supply distribution HDPE pipe line upto water meter chamber inside the property using HDPE (Class-PE 80) PN 6 composite pipes for upto 5 metre length. The item consisting of composite pipes of HDPE pipe below the ground level and GI class B pipe above the ground level including supply and fixing of ferrules, electro fusion saddle, clamps, rubber sheets, tapping, compression fittings etc, complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.17.1	20 mm Diameter HDPE below the ground & 15 mm GI pipe class B above the ground	each	1200.00
19.17.2	25 mm Diameter HDPE below the ground & 20 mm GI pipe class B above the ground	each	1310.00
19.17.3	32 mm Diameter HDPE below the ground & 25 mm GI pipe class B above the ground	each	1480.00
19.18	Providing and making house service connections from water supply distribution uPVC/ DI/ CI pipe line upto water meter chamber inside the property using MDPE/ HDPE (Class-PE 80) PN 6 composite pipes for upto 5 metre length. The item consisting of composite pipes of MDPE/ HDPE pipe below the ground level and GI class B pipe above the ground level including supply and fixing of ferrules, clamps, rubber sheets, tapping, compression fittings etc, complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.18.1	With MDPE pipe		
19.18.1.1	20 mm Diameter MDPE below the ground & 15 mm GI pipe class B above the ground	each	630.00
19.18.1.2	25 mm Diameter MDPE below the ground & 20 mm GI pipe class B above the ground	each	805.00
19.18.1.3	32 mm Diameter MDPE below the ground & 25 mm GI pipe class B above the ground	each	1050.00
19.18.2	With HDPE pipe		
19.18.2.1	20 mm Diameter HDPE below the ground & 15 mm GI pipe class B above the ground	each	652.00
19.18.2.2	25 mm Diameter HDPE below the ground & 20 mm GI pipe class B above the ground	each	835.00
19.18.2.3	32 mm Diameter HDPE below the ground & 25 mm GI pipe class B above the ground	each	1100.00
19.19	Providing, lowering, laying & jointing MDPE/ HDPE pipes (Class-PE 80) PN 12.5 composite pipes for extra length for house service connections as per drawing and specifications complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.19.1	With MDPE pipe		
19.19.1.1	20 mm dia service pipe	metre	40.50

Code No	Description	Unit	Rate Rs.
19.19.1.2	25 mm dia service pipe	metre	55.50
19.19.1.3	32 mm dia service pipe	metre	85.00
19.19.2	With HDPE pipe		
19.19.2.1	20 mm dia service pipe	metre	49.00
19.19.2.2	25 mm dia service pipe	metre	67.00
19.19.2.3	32 mm dia service pipe	metre	102.00
19.20	Providing, lowering, laying, aligning, fixing in position in pipe line, manually operated CI D/F Sluice valves of approved make (IS: 14846 amended upto date) PN 1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
19.20.1	Category "A" " Make: (Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd.)		
19.20.1.1	80 mm dia	each	8390.00
19.20.1.2	100 mm dia	each	11200.00
19.20.1.3	125 mm dia	each	13900.00
19.20.1.4	150 mm dia	each	16800.00
19.20.1.5	200 mm dia	each	27500.00
19.20.1.6	250 mm dia	each	38700.00
19.20.1.7	300 mm dia	each	51000.00
19.20.1.8	350 mm dia	each	97600.00
19.20.1.9	400 mm dia	each	132700.00
19.20.1.10	450 mm dia	each	168000.00
19.20.1.11	500 mm dia	each	210400.00
19.20.1.12	600 mm dia	each	273900.00
19.20.1.13	700 mm dia	each	497600.00
19.20.1.14	750 mm dia	each	602600.00
19.20.1.15	800 mm dia	each	746100.00
19.20.1.16	900 mm dia	each	1000100.00
19.20.1.17	1000 mm dia	each	1266800.00
19.20.2	Category "B" (Makes / vendors other then Category "A" will be considered in category "B").		
19.20.2.1	80 mm dia	each	4250.00
19.20.2.2	100 mm dia	each	5690.00
19.20.2.3	125 mm dia	each	7710.00
19.20.2.4	150 mm dia	each	9230.00
19.20.2.5	200 mm dia	each	15400.00
19.20.2.6	250 mm dia	each	23700.00
19.20.2.7	300 mm dia	each	29900.00

Code No	Description	Unit	Rate Rs.
19.20.2.8	350 mm dia	each	45400.00
19.20.2.9	400 mm dia	each	58000.00
19.20.2.10	450 mm dia	each	71400.00
19.20.2.11	500 mm dia	each	89400.00
19.20.2.12	600 mm dia	each	131800.00
19.20.2.13	700 mm dia	each	246500.00
19.20.2.14	750 mm dia	each	274300.00
19.20.2.15	800 mm dia	each	333600.00
19.20.2.16	900 mm dia	each	436600.00
19.20.2.17	1000 mm dia	each	670400.00
19.21	Providing, lowering, laying, aligning, fixing in position in pipe line, manually operated DI D/F Sluice valves of approved make PN 1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer.		
19.21.1	Category "A" " Make: (Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd., VAG)		
19.21.1.1	80 mm dia	each	10200.00
19.21.1.2	100 mm dia	each	13600.00
19.21.1.3	125 mm dia	each	16500.00
19.21.1.4	150 mm dia	each	19200.00
19.21.1.5	200 mm dia	each	30100.00
19.21.1.6	250 mm dia	each	47400.00
19.21.1.7	300 mm dia	each	62400.00
19.21.1.8	350 mm dia	each	119500.00
19.21.1.9	400 mm dia	each	162500.00
19.21.1.10	450 mm dia	each	205700.00
19.21.1.11	500 mm dia	each	257700.00
19.21.1.12	600 mm dia	each	388200.00
19.21.1.13	700 mm dia	each	610100.00
19.21.1.14	750 mm dia	each	739000.00
19.21.1.15	800 mm dia	each	771500.00
19.21.1.16	900 mm dia	each	1034100.00
19.21.1.17	1000 mm dia	each	1309900.00
19.21.2	Category "B" (Makes / vendors other then Category "A" will be considered in category B).		
19.21.2.1	80 mm dia	each	6090.00
19.21.2.2	100 mm dia	each	7850.00
19.21.2.3	125 mm dia	each	9280.00

Code No	Description	Unit	Rate Rs.
19.21.2.4	150 mm dia	each	10800.00
19.21.2.5	200 mm dia	each	16900.00
19.21.2.6	250 mm dia	each	29500.00
19.21.2.7	300 mm dia	each	39200.00
19.21.2.8	350 mm dia	each	52600.00
19.21.2.9	400 mm dia	each	58100.00
19.21.2.10	450 mm dia	each	102100.00
19.21.2.11	500 mm dia	each	103900.00
19.21.2.12	600 mm dia	each	147300.00
19.21.2.13	700 mm dia	each	306700.00
19.21.2.14	750 mm dia	each	371000.00
19.21.2.15	800 mm dia	each	387300.00
19.21.2.16	900 mm dia	each	665000.00
19.21.2.17	1000 mm dia	each	707400.00
19.22	Providing, lowering, laying, aligning, fixing in position in pipe line, Resilient Seated D/F DI Sluice valves of approved make & design standard of following dia complete (including jointing & jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specification & as per direction of Engineer. (Category "A" " Make: Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd., VAG)		
19.22.1	Manually operated class PN 1.0		
19.22.1.1	80 mm dia	each	10800.00
19.22.1.2	100 mm dia	each	13700.00
19.22.1.3	125 mm dia	each	18600.00
19.22.1.4	150 mm dia	each	21100.00
19.22.1.5	200 mm dia	each	34100.00
19.22.1.6	250 mm dia	each	53400.00
19.22.1.7	300 mm dia	each	68800.00
19.22.1.8	350 mm dia	each	152800.00
19.22.1.9	400 mm dia	each	217800.00
19.22.1.10	450 mm dia	each	239100.00
19.22.1.11	500 mm dia	each	366900.00
19.22.1.12	600 mm dia	each	475200.00
19.22.2	Electrically Operated & SCADA Compatible class PN 1.0		
19.22.2.1	80 mm dia	each	63200.00
19.22.2.2	100 mm dia	each	66100.00
19.22.2.3	125 mm dia	each	71000.00

Code No	Description	Unit	Rate Rs.
19.22.2.4	150 mm dia	each	73500.00
19.22.2.5	200 mm dia	each	104200.00
19.22.2.6	250 mm dia	each	123500.00
19.22.2.7	300 mm dia	each	138900.00
19.22.2.8	350 mm dia	each	254200.00
19.22.2.9	400 mm dia	each	319100.00
19.22.2.10	450 mm dia	each	340400.00
19.22.2.11	500 mm dia	each	468200.00
19.22.2.12	600 mm dia	each	576500.00
19.22.3	Electrically Operated & SCADA Compatible class PN 1.6		
19.22.3.1	80 mm dia	each	65000.00
19.22.3.2	100 mm dia	each	68400.00
19.22.3.3	125 mm dia	each	74200.00
19.22.3.4	150 mm dia	each	77100.00
19.22.3.5	200 mm dia	each	110100.00
19.22.3.6	250 mm dia	each	132800.00
19.22.3.7	300 mm dia	each	150800.00
19.22.3.8	350 mm dia	each	280900.00
19.22.3.9	400 mm dia	each	357100.00
19.22.3.10	450 mm dia	each	382100.00
19.22.3.11	500 mm dia	each	532400.00
19.22.3.12	600 mm dia	each	659700.00
19.23	Providing, lowering, laying, aligning, fixing in position in pipe line, Resilient Seated D/F DI Sluice valves of approved make & design standard of following dia complete (including jointing & jointing material) including all material, labour, testing and commissioning along with pipe line as per Technical Specification & as per direction of Engineer. (Category "B" Makes / vendors other then Category "A" will be considered in category "B").		
19.23.1	Manually operated class PN 1.0		
19.23.1.1	80 mm dia	each	6180.00
19.23.1.2	100 mm dia	each	8020.00
19.23.1.3	125 mm dia	each	12600.00
19.23.1.4	150 mm dia	each	13100.00
19.23.1.5	200 mm dia	each	19400.00
19.23.1.6	250 mm dia	each	29800.00
19.23.1.7	300 mm dia	each	36900.00
19.23.1.8	350 mm dia	each	56200.00

Code No	Description	Unit	Rate Rs.
19.23.1.9	400 mm dia	each	72600.00
19.23.1.10	450 mm dia	each	91400.00
19.23.1.11	500 mm dia	each	118700.00
19.23.1.12	600 mm dia	each	171900.00
19.23.2	Electrically Operated & SCADA Compatible class PN 1.0		
19.23.2.1	80 mm dia	each	58600.00
19.23.2.2	100 mm dia	each	60400.00
19.23.2.3	125 mm dia	each	65000.00
19.23.2.4	150 mm dia	each	65500.00
19.23.2.5	200 mm dia	each	89500.00
19.23.2.6	250 mm dia	each	99900.00
19.23.2.7	300 mm dia	each	107100.00
19.23.2.8	350 mm dia	each	157500.00
19.23.2.9	400 mm dia	each	173900.00
19.23.2.10	450 mm dia	each	192700.00
19.23.2.11	500 mm dia	each	220000.00
19.23.2.12	600 mm dia	each	273200.00
19.23.3	Electrically Operated & SCADA Compatible class PN 1.6		
19.23.3.1	80 mm dia	each	58600.00
19.23.3.2	100 mm dia	each	60400.00
19.23.3.3	125 mm dia	each	65600.00
19.23.3.4	150 mm dia	each	66900.00
19.23.3.5	200 mm dia	each	91600.00
19.23.3.6	250 mm dia	each	103100.00
19.23.3.7	300 mm dia	each	111700.00
19.23.3.8	350 mm dia	each	168400.00
19.23.3.9	400 mm dia	each	188000.00
19.23.3.10	450 mm dia	each	212400.00
19.23.3.11	500 mm dia	each	246900.00
19.23.3.12	600 mm dia	each	315200.00
19.24	Providing, lowering, laying, aligning, fixing in position C.I. D/F manually operated long body butterfly valves (IS: 13095) PN-1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing along with pipe line and commissioning as per Technical Specifications and as per direction of Engineer		
19.24.1	Category "A" Make: (Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd.)		
19.24.1.1	80 mm dia	each	8850.00

Code No	Description	Unit	Rate Rs.
19.24.1.2	100 mm dia	each	11100.00
19.24.1.3	125 mm dia	each	12400.00
19.24.1.4	150 mm dia	each	13900.00
19.24.1.5	200 mm dia	each	15300.00
19.24.1.6	250 mm dia	each	32800.00
19.24.1.7	300 mm dia	each	39900.00
19.24.1.8	350 mm dia	each	52100.00
19.24.1.9	400 mm dia	each	65000.00
19.24.1.10	450 mm dia	each	75900.00
19.24.1.11	500 mm dia	each	85600.00
19.24.1.12	600 mm dia	each	142300.00
19.24.1.13	700 mm dia	each	201700.00
19.24.1.14	750 mm dia	each	261900.00
19.24.1.15	800 mm dia	each	288600.00
19.24.1.16	900 mm dia	each	341800.00
19.24.1.17	1000 mm dia	each	445500.00
19.24.2	Category "B" (Makes / vendors other then Category "A" will be considered in category "B").		
19.24.2.1	80 mm dia	each	4110.00
19.24.2.2	100 mm dia	each	4940.00
19.24.2.3	125 mm dia	each	6670.00
19.24.2.4	150 mm dia	each	7660.00
19.24.2.5	200 mm dia	each	13500.00
19.24.2.6	250 mm dia	each	18300.00
19.24.2.7	300 mm dia	each	22300.00
19.24.2.8	350 mm dia	each	34200.00
19.24.2.9	400 mm dia	each	45600.00
19.24.2.10	450 mm dia	each	49200.00
19.24.2.11	500 mm dia	each	51200.00
19.24.2.12	600 mm dia	each	82500.00
19.24.2.13	700 mm dia	each	132700.00
19.24.2.14	750 mm dia	each	156300.00
19.24.2.15	800 mm dia	each	166200.00
19.24.2.16	900 mm dia	each	212800.00
19.24.2.17	1000 mm dia	each	272900.00
19.25	Providing, lowering, laying, aligning, fixing in position D.I. D/F manually operated long body butterfly valves PN-1.0 class of following dia complete (including jointing and jointing material) including all material, labour, testing along with pipe line and		

Code No	Description	Unit	Rate Rs.
	commissioning as per Technical Specifications and as per direction of Engineer		
19.25.1	Category "A" Make: (Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd., VAG)		
19.25.1.1	80 mm dia	each	10800.00
19.25.1.2	100 mm dia	each	13300.00
19.25.1.3	125 mm dia	each	14800.00
19.25.1.4	150 mm dia	each	16900.00
19.25.1.5	200 mm dia	each	26500.00
19.25.1.6	250 mm dia	each	40100.00
19.25.1.7	300 mm dia	each	48900.00
19.25.1.8	350 mm dia	each	63800.00
19.25.1.9	400 mm dia	each	79400.00
19.25.1.10	450 mm dia	each	92800.00
19.25.1.11	500 mm dia	each	135700.00
19.25.1.12	600 mm dia	each	173900.00
19.25.1.13	700 mm dia	each	246700.00
19.25.1.14	750 mm dia	each	320700.00
19.25.1.15	800 mm dia	each	353500.00
19.25.1.16	900 mm dia	each	418600.00
19.25.1.17	1000 mm dia	each	546000.00
19.25.2	Category "B" (Makes / vendors other then Category "A" will be considered in category B).		
19.25.2.1	80 mm dia	each	5080.00
19.25.2.2	100 mm dia	each	6090.00
19.25.2.3	125 mm dia	each	8250.00
19.25.2.4	150 mm dia	each	9450.00
19.25.2.5	200 mm dia	each	16700.00
19.25.2.6	250 mm dia	each	22700.00
19.25.2.7	300 mm dia	each	27700.00
19.25.2.8	350 mm dia	each	42500.00
19.25.2.9	400 mm dia	each	56500.00
19.25.2.10	450 mm dia	each	60900.00
19.25.2.11	500 mm dia	each	63300.00
19.25.2.12	600 mm dia	each	102200.00
19.25.2.13	700 mm dia	each	175400.00
19.25.2.14	750 mm dia	each	203500.00
19.25.2.15	800 mm dia	each	214700.00
19.25.2.16	900 mm dia	each	279400.00

Code No	Description	Unit	Rate Rs.
19.25.2.17	1000 mm dia	each	367500.00
19.26	Providing, lowering, laying, aligning, fixing in position in pipe line, Resilient Seated D/F DI Butterfly valves of approved make & design standard of following dia. complete (including jointing & jointing material) including all material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer. (Category "A" Make: Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd., VAG)		
19.26.1	Manually operated (PN 1.0 class)		
19.26.1.1	80 mm dia	each	13000.00
19.26.1.2	100 mm dia	each	16200.00
19.26.1.3	125 mm dia	each	18200.00
19.26.1.4	150 mm dia	each	20300.00
19.26.1.5	200 mm dia	each	31600.00
19.26.1.6	250 mm dia	each	47400.00
19.26.1.7	300 mm dia	each	58100.00
19.26.1.8	350 mm dia	each	75800.00
19.26.1.9	400 mm dia	each	94100.00
19.26.1.10	450 mm dia	each	109900.00
19.26.1.11	500 mm dia	each	160800.00
19.26.1.12	600 mm dia	each	206000.00
19.26.2	Electrically Operated & SCADA Compatible (PN 1.0 class)		
19.26.2.1	80 mm dia	each	65400.00
19.26.2.2	100 mm dia	each	68600.00
19.26.2.3	125 mm dia	each	70600.00
19.26.2.4	150 mm dia	each	72600.00
19.26.2.5	200 mm dia	each	101700.00
19.26.2.6	250 mm dia	each	117600.00
19.26.2.7	300 mm dia	each	128200.00
19.26.2.8	350 mm dia	each	177100.00
19.26.2.9	400 mm dia	each	195400.00
19.26.2.10	450 mm dia	each	211200.00
19.26.2.11	500 mm dia	each	262100.00
19.26.2.12	600 mm dia	each	307300.00
19.26.3	Manually operated (PN 1.6 class)		
19.26.3.1	80 mm dia	each	15000.00
19.26.3.2	100 mm dia	each	18700.00
19.26.3.3	125 mm dia	each	20900.00

Code No	Description	Unit	Rate Rs.
19.26.3.4	150 mm dia	each	23300.00
19.26.3.5	200 mm dia	each	36400.00
19.26.3.6	250 mm dia	each	54700.00
19.26.3.7	300 mm dia	each	67000.00
19.26.3.8	350 mm dia	each	87300.00
19.26.3.9	400 mm dia	each	108400.00
19.26.3.10	450 mm dia	each	126600.00
19.26.3.11	500 mm dia	each	185300.00
19.26.3.12	600 mm dia	each	237400.00
19.26.4	Electrically Operated & SCADA Compatible (PN 1.6 class)		
19.26.4.1	80 mm dia	each	67400.00
19.26.4.2	100 mm dia	each	71100.00
19.26.4.3	125 mm dia	each	73300.00
19.26.4.4	150 mm dia	each	75700.00
19.26.4.5	200 mm dia	each	106500.00
19.26.4.6	250 mm dia	each	124800.00
19.26.4.7	300 mm dia	each	137100.00
19.26.4.8	350 mm dia	each	188700.00
19.26.4.9	400 mm dia	each	209700.00
19.26.4.10	450 mm dia	each	227900.00
19.26.4.11	500 mm dia	each	286700.00
19.26.4.12	600 mm dia	each	338800.00
19.27	Providing, lowering, laying, aligning, fixing in position in pipe line, Resilient Seated D/F DI Butterfly valves of approved make & design standard of following dia. complete (including jointing & jointing material) including all material, labour, testing and commissioning along with pipeline as per Technical Specification & as per direction of Engineer. (Category "B" - Makes / vendors other then Category "A" will be considered in category B).		
19.27.1	Manually operated (PN 1.0 class)		
19.27.1.1	80 mm dia	each	7610.00
19.27.1.2	100 mm dia	each	9240.00
19.27.1.3	125 mm dia	each	11900.00
19.27.1.4	150 mm dia	each	14200.00
19.27.1.5	200 mm dia	each	22800.00
19.27.1.6	250 mm dia	each	28900.00
19.27.1.7	300 mm dia	each	40600.00
19.27.1.8	350 mm dia	each	45400.00

Code No	Description	Unit	Rate Rs.
19.27.1.9	400 mm dia	each	63700.00
19.27.1.10	450 mm dia	each	79900.00
19.27.1.11	500 mm dia	each	90800.00
19.27.1.12	600 mm dia	each	111200.00
19.27.2	Electrically Operated & SCADA Compatible (PN 1.0 class)		
19.27.2.1	80 mm dia	each	60000.00
19.27.2.2	100 mm dia	each	61600.00
19.27.2.3	125 mm dia	each	64300.00
19.27.2.4	150 mm dia	each	66600.00
19.27.2.5	200 mm dia	each	92900.00
19.27.2.6	250 mm dia	each	99000.00
19.27.2.7	300 mm dia	each	110800.00
19.27.2.8	350 mm dia	each	146700.00
19.27.2.9	400 mm dia	each	165100.00
19.27.2.10	450 mm dia	each	181200.00
19.27.2.11	500 mm dia	each	192100.00
19.27.2.12	600 mm dia	each	212600.00
19.27.3	Manually operated (PN 1.6 class)		
19.27.3.1	80 mm dia	each	10200.00
19.27.3.2	100 mm dia	each	13800.00
19.27.3.3	125 mm dia	each	17200.00
19.27.3.4	150 mm dia	each	19600.00
19.27.3.5	200 mm dia	each	24800.00
19.27.3.6	250 mm dia	each	31800.00
19.27.3.7	300 mm dia	each	42800.00
19.27.3.8	350 mm dia	each	60300.00
19.27.3.9	400 mm dia	each	84400.00
19.27.3.10	450 mm dia	each	103800.00
19.27.3.11	500 mm dia	each	145900.00
19.27.3.12	600 mm dia	each	187200.00
19.27.4	Electrically Operated & SCADA Compatible (PN 1.6 class)		
19.27.4.1	80 mm dia	each	62500.00
19.27.4.2	100 mm dia	each	66200.00
19.27.4.3	125 mm dia	each	69600.00
19.27.4.4	150 mm dia	each	72000.00
19.27.4.5	200 mm dia	each	94900.00
19.27.4.6	250 mm dia	each	101900.00

Code No	Description	Unit	Rate Rs.
19.27.4.7	300 mm dia	each	112900.00
19.27.4.8	350 mm dia	each	161600.00
19.27.4.9	400 mm dia	each	185700.00
19.27.4.10	450 mm dia	each	205100.00
19.27.4.11	500 mm dia	each	247200.00
19.27.4.12	600 mm dia	each	288500.00
19.28	Providing, lowering, laying, aligning, fixing in position jointing in pipeline following dia D/F DI Plunger valve (Flow Control Valve) PN 1.6 class with electrical actuator suitable for SCADA compatibility complete (including jointing & jointing material) including all material, labour, testing and commissioning as per Technical Specification & as per direction of Engineer.		
19.28.1	100mm diameter	each	272900.00
19.28.2	150mm diameter	each	297400.00
19.28.3	200mm diameter	each	388600.00
19.28.4	250mm diameter	each	498500.00
19.28.5	300mm diameter	each	557400.00
19.28.6	350mm diameter	each	646500.00
19.28.7	400mm diameter	each	928200.00
19.28.8	450mm diameter	each	1056900.00
19.28.9	500mm diameter	each	1265000.00
19.29	Providing, Supplying and fixing of D/F DI Pressure Reducing Valve in pipe line including jointing etc. complete as per standard/ technical specification and direction of Engineer-in-Charge.		
19.29.1	100mm diameter	each	53000.00
19.29.2	150mm diameter	each	71200.00
19.29.3	200mm diameter	each	100700.00
19.29.4	250mm diameter	each	144400.00
19.29.5	300mm diameter	each	188700.00
19.29.6	350mm diameter	each	310600.00
19.29.7	400mm diameter	each	397500.00
19.30	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line CI Kinetic Double Air Valves as per IS:14845 of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.30.1	Category "A" Make: (Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd.)		
19.30.1.1	50 mm dia	each	20500.00
19.30.1.2	80 mm dia	each	23900.00
19.30.1.3	100 mm dia	each	31600.00

Code No	Description	Unit	Rate Rs.
19.30.1.4	150 mm dia	each	59000.00
19.30.1.5	200 mm dia	each	88000.00
19.30.2	Category "B" (Makes / vendors other then Category "A" will be considered in category B).		
19.30.2.1	50 mm dia	each	8220.00
19.30.2.2	80 mm dia	each	9120.00
19.30.2.3	100 mm dia	each	13500.00
19.30.2.4	150 mm dia	each	28800.00
19.30.2.5	200 mm dia	each	46800.00
19.31	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line DI Kinetic Double Air Valves of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.31.1	Category "A" Make: (Kirlokar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd., VAG)		
19.31.1.1	50 mm dia	each	20100.00
19.31.1.2	80 mm dia	each	20600.00
19.31.1.3	100 mm dia	each	25400.00
19.31.1.4	150 mm dia	each	35100.00
19.31.1.5	200 mm dia	each	36600.00
19.31.2	Category "B" (Makes / vendors other then Category "A" will be considered in category B).		
19.31.2.1	50 mm dia	each	8220.00
19.31.2.2	80 mm dia	each	9120.00
19.31.2.3	100 mm dia	each	13500.00
19.31.2.4	150 mm dia	each	29500.00
19.31.2.5	200 mm dia	each	31800.00
19.32	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, CI screwed Air valves class PN-1.0 single ball of approved make, including screw down isolation valve of following dia including cost of all labour, jointing material i.e. bolts, nuts, rubber insertions etc. complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.32.1	25mm dia screwed end.	each	1530.00
19.32.2	50 mm dia screwed end.	each	2510.00
19.33	Providing, lowering, laying, aligning, fixing in position CI Flanged ends single ball air valves in pipe line suitable for potable water as per API:602/ API:598 at all level/ depth including all material, labour, hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.33.1	80 mm dia	each	4850.00

Code No	Description	Unit	Rate Rs.
19.33.2	100 mm dia	each	6780.00
19.33.3	150 mm dia	each	10300.00
19.34	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, C.I. dual plate check valves as per API:594 and API:598 of PN 1.0 rating of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.34.1	Category "A" " Make: (Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd.)		
19.34.1.1	80 mm dia	each	9000.00
19.34.1.2	100 mm dia	each	10900.00
19.34.1.3	125 mm dia	each	14400.00
19.34.1.4	150 mm dia	each	17900.00
19.34.1.5	200 mm dia	each	40100.00
19.34.1.6	250 mm dia	each	49900.00
19.34.1.7	300 mm dia	each	68600.00
19.34.1.8	350 mm dia	each	101400.00
19.34.1.9	400 mm dia	each	109600.00
19.34.1.10	450 mm dia	each	161600.00
19.34.1.11	500 mm dia	each	172600.00
19.34.1.12	600 mm dia	each	254700.00
19.34.1.13	700 mm dia	each	354700.00
19.34.1.14	750 mm dia	each	400700.00
19.34.1.15	800 mm dia	each	460900.00
19.34.1.16	900 mm dia	each	711000.00
19.34.1.17	1000 mm dia	each	852300.00
19.34.2	Category "B" (Makes / vendors other then Category "A" will be considered in category "B").		
19.34.2.1	80 mm dia	each	4380.00
19.34.2.2	100 mm dia	each	5210.00
19.34.2.3	125 mm dia	each	6110.00
19.34.2.4	150 mm dia	each	7910.00
19.34.2.5	200 mm dia	each	13800.00
19.34.2.6	250 mm dia	each	18600.00
19.34.2.7	300 mm dia	each	22700.00
19.34.2.8	350 mm dia	each	34600.00
19.34.2.9	400 mm dia	each	46000.00
19.34.2.10	450 mm dia	each	49600.00
19.34.2.11	500 mm dia	each	51700.00

Code No	Description	Unit	Rate Rs.
19.34.2.12	600 mm dia	each	83100.00
19.34.2.13	700 mm dia	each	144000.00
19.34.2.14	750 mm dia	each	165000.00
19.34.2.15	800 mm dia	each	189200.00
19.34.2.16	900 mm dia	each	263300.00
19.34.2.17	1000 mm dia	each	340800.00
19.35	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, DI dual plate check valves of PN 1.0 rating of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.35.1	Category "A" " Make: (Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd., VAG)		
19.35.1.1	80 mm dia	each	10100.00
19.35.1.2	100 mm dia	each	12200.00
19.35.1.3	125 mm dia	each	16100.00
19.35.1.4	150 mm dia	each	20100.00
19.35.1.5	200 mm dia	each	32700.00
19.35.1.6	250 mm dia	each	51900.00
19.35.1.7	300 mm dia	each	62800.00
19.35.1.8	350 mm dia	each	112300.00
19.35.1.9	400 mm dia	each	123100.00
19.35.1.10	450 mm dia	each	181500.00
19.35.1.11	500 mm dia	each	193800.00
19.35.1.12	600 mm dia	each	286100.00
19.35.1.13	700 mm dia	each	398500.00
19.35.1.14	750 mm dia	each	450200.00
19.35.1.15	800 mm dia	each	517800.00
19.35.1.16	900 mm dia	each	799300.00
19.35.1.17	1000 mm dia	each	925900.00
19.35.2	Category "B" (Makes / vendors other then Category "A" will be considered in category B).		
19.35.2.1	80 mm dia	each	5150.00
19.35.2.2	100 mm dia	each	6360.00
19.35.2.3	125 mm dia	each	7840.00
19.35.2.4	150 mm dia	each	9720.00
19.35.2.5	200 mm dia	each	17000.00
19.35.2.6	250 mm dia	each	23000.00
19.35.2.7	300 mm dia	each	28100.00

Code No	Description	Unit	Rate Rs.
19.35.2.8	350 mm dia	each	42900.00
19.35.2.9	400 mm dia	each	56900.00
19.35.2.10	450 mm dia	each	61300.00
19.35.2.11	500 mm dia	each	63900.00
19.35.2.12	600 mm dia	each	102800.00
19.35.2.13	700 mm dia	each	268200.00
19.35.2.14	750 mm dia	each	311300.00
19.35.2.15	800 mm dia	each	328700.00
19.35.2.16	900 mm dia	each	427800.00
19.35.2.17	1000 mm dia	each	523800.00
19.36	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, DI Resilient Seated Dual Plate Check Valves in accordance with BS EN 12334 of following dia (including jointing and jointing material), including material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer. (Category "A" - Make: Kirloskar Bros. Ltd., Indian Valve Co. (IVC), Fouress Engineers Pvt. Ltd., VAG)		
19.36.1	PN 1.0 rating		
19.36.1.1	100mm diameter	each	13000.00
19.36.1.2	150mm diameter	each	15400.00
19.36.1.3	200mm diameter	each	23100.00
19.36.1.4	250mm diameter	each	28900.00
19.36.2	PN 1.6 rating		
19.36.2.1	100mm diameter	each	13100.00
19.36.2.2	150mm diameter	each	15500.00
19.36.2.3	200mm diameter	each	23300.00
19.36.2.4	250mm diameter	each	29100.00
19.37	Providing, lowering, laying, aligning, fixing in position and jointing in pipe line, DI Resilient Seated Dual Plate Check Valves in accordance with BS EN 12334 of following dia (including jointing and jointing material), including material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer. (Category "B" - Makes / vendors other than Category "A" will be considered in category B).		
19.37.1	PN 1.0 rating		
19.37.1.1	100mm diameter	each	5340.00
19.37.1.2	150mm diameter	each	8420.00
19.37.1.3	200mm diameter	each	12800.00
19.37.1.4	250mm diameter	each	20600.00

Code No	Description	Unit	Rate Rs.
19.37.2	PN 1.6 rating		
19.37.2.1	100mm diameter	each	5810.00
19.37.2.2	150mm diameter	each	9180.00
19.37.2.3	200mm diameter	each	14000.00
19.37.2.4	250mm diameter	each	22600.00
19.38	Providing, laying and fixing float valve system of following dia of C.I. with internal parts of auxiliary valve of copper float ball, gunmetal ball cap, brass lever, brass split pin, gunmetal piston & piston cap, washer of nitrile rubber with gunmetal body including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.38.1	150mm dia.	each	12100.00
19.38.2	200mm dia.	each	16200.00
19.38.3	250mm dia.	each	25600.00
19.38.4	300mm dia.	each	37500.00
19.38.5	350mm dia	each	59000.00
19.38.6	400mm dia	each	99800.00
19.39	Providing, lowering, laying, aligning, fixing in position and jointing CI Transition Coupling Joints for making connection between AC pipes and CI/DI pipes to match the outside diameter of following proposed pipe sizes for potable water including all jointing material as per manufacturer's specification, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.39.1	80 mm dia	each	1200.00
19.39.2	100 mm dia	each	1350.00
19.39.3	125 mm dia	each	1600.00
19.39.4	150 mm dia	each	1700.00
19.39.5	200 mm dia	each	2290.00
19.39.6	250 mm dia	each	2830.00
19.39.7	300 mm dia	each	3440.00
19.39.8	350 mm dia	each	4770.00
19.39.9	400 mm dia	each	5470.00
19.39.10	450 mm dia	each	6760.00
19.39.11	500 mm dia	each	8020.00
19.40	Providing, lowering, laying, aligning, fixing in position and jointing CI dismantling joint (suitable for sluice valves etc.) as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.40.1	80 mm dia PN-1.0	each	2120.00
19.40.2	100 mm dia PN-1.0	each	2350.00

Code No	Description	Unit	Rate Rs.
19.40.3	125 mm dia PN-1.0	each	2520.00
19.40.4	150 mm dia PN-1.0	each	3750.00
19.40.5	200 mm dia PN-1.0	each	5650.00
19.40.6	250 mm dia PN-1.0	each	7900.00
19.40.7	300 mm dia PN-1.0	each	10100.00
19.40.8	350 mm dia PN-1.0	each	12200.00
19.40.9	400 mm dia PN-1.0	each	15600.00
19.40.10	450 mm dia PN-1.0	each	17300.00
19.40.11	500 mm dia PN-1.0	each	21300.00
19.40.12	600 mm dia PN-1.0	each	32000.00
19.40.13	700 mm dia PN-1.0	each	47300.00
19.41	Providing, lowering, laying, aligning, fixing in position and jointing CI D- joint class-10 as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.41.1	80 mm dia	each	543.00
19.41.2	100 mm dia	each	615.00
19.41.3	125 mm dia	each	738.00
19.41.4	150 mm dia	each	860.00
19.41.5	200 mm dia	each	1140.00
19.41.6	250 mm dia	each	1350.00
19.41.7	300 mm dia	each	1670.00
19.41.8	350 mm dia	each	2550.00
19.41.9	400 mm dia	each	3100.00
19.41.10	450 mm dia	each	4350.00
19.41.11	500 mm dia	each	5510.00
19.41.12	600 mm dia	each	7160.00
19.42	Providing, lowering, laying, aligning, fixing in position and jointing CI D- joint class-15 as per IS specifications complete of the following sizes including all jointing material, cost of all labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.		
19.42.1	80 mm dia	each	571.00
19.42.2	100 mm dia	each	649.00
19.42.3	125 mm dia	each	784.00
19.42.4	150 mm dia	each	920.00
19.42.5	200 mm dia	each	1220.00
19.42.6	250 mm dia	each	1460.00
19.42.7	300 mm dia	each	1800.00

Code No	Description	Unit	Rate Rs.
19.42.8	350 mm dia	each	2760.00
19.42.9	400 mm dia	each	3370.00
19.42.10	450 mm dia	each	4740.00
19.42.11	500 mm dia	each	6010.00
19.42.12	600 mm dia	each	7830.00
19.43	Providing, lowering, laying, aligning, fixing in position CI Duckfoot bend in pipe line as per IS:1538 (amended up to date) suitable for potable water at all level/ depth including all material, labour hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.43.1	80 mm dia	each	2180.00
19.43.2	100 mm dia	each	2640.00
19.43.3	125 mm dia	each	3540.00
19.43.4	150 mm dia	each	4470.00
19.43.5	200 mm dia	each	6600.00
19.43.6	250 mm dia	each	9720.00
19.43.7	300 mm dia	each	13200.00
19.43.8	350 mm dia	each	19100.00
19.43.9	400 mm dia	each	24700.00
19.44	Providing, lowering, laying, aligning, fixing in position DI Duckfoot bend in pipe line as per IS:1538 (amended up to date) suitable for potable water at all level/ depth including all material, labour hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.44.1	80 mm dia	each	2240.00
19.44.2	100 mm dia	each	2860.00
19.44.3	125 mm dia	each	3610.00
19.44.4	150 mm dia	each	4600.00
19.44.5	200 mm dia	each	6700.00
19.44.6	250 mm dia	each	10600.00
19.44.7	300 mm dia	each	14200.00
19.44.8	350 mm dia	each	22000.00
19.44.9	400 mm dia	each	29900.00
19.45	Providing, lowering, laying, aligning, fixing in position CI Foot valves in pipe line as per IS:4038-1986 (amended upto date) suitable for potable water at all level/ depth including all material, labour hydraulic testing and commissioning as per technical specifications and as per direction of Engineer for following sizes:		
19.45.1	80 mm dia	each	2070.00
19.45.2	100 mm dia	each	2670.00
19.45.3	125 mm dia	each	3880.00

Code No	Description	Unit	Rate Rs.
19.45.4	150 mm dia	each	6550.00
19.45.5	200 mm dia	each	12400.00
19.45.6	250 mm dia	each	18200.00
19.45.7	300 mm dia	each	20500.00
19.45.8	350 mm dia	each	38900.00
19.45.9	400 mm dia	each	50600.00
19.45.10	450 mm dia	each	55400.00
19.45.11	500 mm dia	each	77900.00
19.46	Providing and fixing Stain less steel AISI 304 Strainer Cylindrical type for out let, drain pipes of following sizes including all material labour as per Technical Specifications and as per direction of Engineer.		
19.46.1	150 mm dia	each	8780.00
19.46.2	200 mm dia	each	14000.00
19.46.3	250 mm dia	each	23700.00
19.46.4	350 mm dia	each	32500.00
19.46.5	400 mm dia	each	60200.00
19.46.6	450 mm dia	each	65000.00
19.46.7	500 mm dia	each	87000.00
19.46.8	600 mm dia	each	103000.00
19.47	Providing and fixing in position CI Puddle collar (approx. 1m length) inside the wall including all material labour as per Technical Specifications and as per direction of Engineer.		
19.47.1	80mm dia	each	3600.00
19.47.2	100mm dia	each	4190.00
19.47.3	125mm dia	each	5110.00
19.47.4	150mm dia	each	6190.00
19.47.5	200mm dia	each	8860.00
19.47.6	250mm dia	each	11500.00
19.47.7	300mm dia	each	14700.00
19.47.8	350mm dia	each	19100.00
19.47.9	400mm dia	each	23000.00
19.47.10	450mm dia	each	27400.00
19.47.11	500mm dia	each	34400.00
19.48	Providing and fixing electronic water level indicator with specified nos of level indications including p/f prons in overhead tank, necessary cabling from level indicating panel to prones in over head tank (upto 5 metre length) in proper manner as per specification and direction of Engineer.		
19.48.1	5 level indications and cabling upto length of 5 metre	set	10600.00

Code No	Description	Unit	Rate Rs.
19.48.2	Providing and fixing extra length of cable in above item	metre	66.50
19.49	Supply, installation and comissioning of Capacitance type Level Indicator-Transmitter suitable for measure liquid level in the sump upto specified depth with microcontroller based system. . The 6 digit LCD display Indicator shall be installed on the top of the tank with 24 VDC power supply, rigid/flexible type electrode of SS 316, PTFE sheathed as per technical specification and direction of the Engineer.		
19.49.1	Depth 0-3 m	each	26200.00
19.49.2	Depth 0-6 m	each	34100.00
19.49.3	Depth 0-10 m	each	45300.00
19.50	Providing and fixing angle iron frame 25 x 25 x 3mm for ventilators fixed with 24 gauge square mesh of 14 gauge stainless steel wire including 10 mm square bars at interval of 100 mm welded to frame with metal beading of 20 x 3mm complete in all respect as per technical specifications and drawings as per technical specification and as per direction of Engineer.	sqm	92.50
19.51	Providing, installation, testing and commissioning of following Stain less steel AISI 304 Expansion bellows of 10 bar rating with tie rods as per technical specifications and layout drawings including jointing material like nuts, bolts, rubber gaskets etc. complete in all respect as per technical specification and as per direction of Engineer.		
19.51.1	125 mm	each	7130.00
19.51.2	150 mm	each	8420.00
19.51.3	200 mm	each	10800.00
19.51.4	250 mm	each	13700.00
19.51.5	400 mm	each	27700.00
19.51.6	500 mm	each	38500.00
19.51.7	600 mm	each	50100.00
19.52	Providing, installation, testing and commissioning of glycerin filled Pressure gauge of following ranges with isolation valve and tap off pipe complete in all respect as per technical specification and as per direction of Engineer.		
19.52.1	- 1.0 to +1.0 kg/cm ²	each	1360.00
19.52.2	0 to 4.0 / 0 to 6.0 / 0 to 10.0 kg/cm ²	each	1280.00
19.53	Supply, fixing, testing and commissioning of Multi jet magnetic type domestic water meter Class-B confirming to IS:779-1996 / EEC/ MDIL with end coupling as per relevant technical specification and the direction of the Engineer		
19.53.1	15 mm size	each	1390.00
19.53.2	20 mm size	each	2090.00
19.53.3	25 mm size	each	3170.00
19.53.4	32 mm size	each	7670.00
19.53.5	50 mm size	each	9910.00
19.54	Supplying and Replacing, testing and commissioning of existing		

Code No	Description	Unit	Rate Rs.
	Multi jet magnetic type domestic water meter Class-B confirming to IS:779-1996 / EEC/ MDIL with end coupling as per relevant technical specification and the direction of the Engineer.		
19.54.1	15 mm size	each	1550.00
19.54.2	20 mm size	each	2250.00
19.54.3	25 mm size	each	3330.00
19.54.4	32 mm size	each	7850.00
19.54.5	50 mm size	each	7900.00
19.55	Supply, fixing, testing and commissioning of Orifice flow equalizer (Brass) for 15 mm domestic water meter with seal wire & seal complete set as per drawing. Weight of Orifice flow equalizer (Brass) complete set must be in 110 gm +/- 5% tolerance complete as per specification complete.		
19.55.1	To be fixed on new domestic water meter by replacing with nut and tail piece at delivery end	each	344.00
19.55.2	To be fixed on old existing domestic water meter	each	447.00
19.56	Supplying and Fixing water METER BOX- with Weather resistant PE/ GRP box, press fitted Lid fixing & locking and locked with built-in or external lock.	each	638.00
19.57	Providing, installation, testing and commissioning of Electromagnetic Flow Meter etc. including all materials (excluding CI/DI fittings) and making connection with existing pipeline required for Electromagnetic Flow Meter including cutting the existing pipe line etc. complete in all respect as per technical specification and as per direction of Engineer.		
19.57.1	EMF80 for DN 80 mm	each	86400.00
19.57.2	EMF100 for DN 100 mm	each	92100.00
19.57.3	EMF150 for DN 150 mm	each	108000.00
19.57.4	EMF200 for DN 200 mm	each	119300.00
19.57.5	EMF250 for DN 250 mm	each	175100.00
19.57.6	EMF300 for DN 300 mm	each	196900.00
19.57.7	EMF400 for DN 400 mm	each	448700.00
19.57.8	EMF450 for DN 450 mm	each	477300.00
19.57.9	EMF500 for DN 500 mm	each	572500.00
19.57.10	EMF600 for DN 600 mm	each	604100.00
19.58	Providing, installation, testing and commissioning of Bulk Flow Meter with removable mechanism class "B" confirming to ISO: 4064/1 including all materials (excluding CI/DI fittings) and making connection with existing pipeline required for Bulk Flow Meter including cutting the existing pipe line etc complete in all respect as per technical specification and as per direction of Engineer.		
19.58.1	BFM80 for DN 80 mm	each	11800.00
19.58.2	BFM100 for DN 100 mm	each	16100.00
19.58.3	BFM125 for DN 125 mm	each	21700.00

Code No	Description	Unit	Rate Rs.
19.58.4	BFM150 for DN 150 mm	each	22900.00
19.58.5	BFM200 for DN 200 mm	each	32500.00
19.58.6	BFM250 for DN 250 mm	each	53600.00
19.58.7	BFM300 for DN 300 mm	each	92300.00
19.58.8	BFM400 for DN 400 mm	each	131000.00
19.58.9	BFM500 for DN 500 mm	each	163700.00
19.58.10	BFM600 for DN 600 mm	each	196300.00
19.59	Construction of RCC valve chamber for different type of valves including earthwork excavation, 100mm PCC M10 (1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) as leveling course, RCC M20 grade (1:1½:3 (1 Cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size) for base slab, side wall & cover slab all 125mm thick with C.I. surface box with hinged cover 100x100x75mm (deep), including cost of steel reinforcement not less than 80kg per cum CC, form work, proper curing of concrete work complete in all respect as per standard specifications and drawings and as directed by Engineer.		
19.59.1	60cm x 60cm x 75cm (depth) for 80/100/125/150 mm dia valve	each	7660.00
19.59.2	90cm x 90cm x 100cm (depth) for 200/250/300 mm dia valve	each	12900.00
19.59.3	120cm x 120cm x 100cm (depth) for 350/400/450/500/600 mm dia valve	each	17600.00
19.60	Construction of brick masonry valve chamber for different type of valves with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand), wall 230mm thick, top cover slab 150mm thick RCC M20 grade (1:1½:3 (1 Cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size) with C.I. surface box with hinged cover 100x100x75mm (deep) including earthwork excavation, 100mm thick leveling course of PCC M10 1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) including cost of steel reinforcement not less than 80kg per cum CC, form work, proper curing complete in all respect as per standard specifications and drawings and as directed by Engineer.		
19.60.1	60cm x 60cm x 75cm (depth) for 80/100/125/150 mm dia valve	each	5690.00
19.60.2	90cm x 90cm x 100cm (depth) for 200/250/300 mm dia valve	each	9860.00
19.60.3	120cm x 120cm x 100cm (depth) for 350/400/450/500/600 mm dia valve	each	13600.00
19.61	Disinfecting water mains by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, operation to be repeated three times including getting the sample of water from the disinfected main tested in the municipal laboratory :		
19.61.1	80 mm dia	metre	10.00
19.61.2	100 mm dia	metre	13.50
19.61.3	125 mm dia	metre	17.50
19.61.4	150 mm dia	metre	23.50
19.61.5	200 mm dia	metre	33.00

Code No	Description	Unit	Rate Rs.
19.61.6	250 mm dia	metre	45.00
19.61.7	300 mm dia	metre	58.00
19.61.8	350 mm dia	metre	73.00
19.61.9	400 mm dia	metre	89.00
19.61.10	450 mm dia	metre	106.00
19.61.11	500 mm dia	metre	125.00
19.61.12	600 mm dia	metre	167.00
19.61.13	700 mm dia	metre	218.00
19.61.14	750 mm dia	metre	277.00
19.61.15	800 mm dia	metre	341.00
19.61.16	900 mm dia	metre	415.00
19.61.17	1000 mm dia	metre	497.00
19.62	Extra for every operation of disinfecting the water main by flushing with water containing bleaching powder at 0.5 gms per litre of water and cleaning the same with fresh water, including getting the samples of water tested in the municipal laboratory :		
19.62.1	80 mm dia	metre	4.00
19.62.2	100 mm dia	metre	5.00
19.62.3	125 mm dia	metre	6.50
19.62.4	150 mm dia	metre	8.50
19.62.5	200 mm dia	metre	12.00
19.62.6	250 mm dia	metre	16.50
19.62.7	300 mm dia	metre	19.50
19.62.8	350 mm dia	metre	24.50
19.62.9	400 mm dia	metre	28.50
19.62.10	450 mm dia	metre	36.50
19.62.11	500 mm dia	metre	42.00
19.62.12	600 mm dia	metre	57.00
19.62.13	700 mm dia	metre	73.50
19.62.14	750 mm dia	metre	92.50
19.62.15	800 mm dia	metre	113.00
19.62.16	900 mm dia	metre	138.00
19.62.17	1000 mm dia	metre	163.00
19.63	Supply of Chlorine Safety Equipment set comprising of the items Chlorine leak detector with two sensors, self contained compressed air breathing apparatus, safety shower with eye wash, emergency tonner repair kit, protective clothing such as PVC overall, gloves and rubber boots; complete as per detailed specifications & the directed of the Engineer.	set	263200.00

Code No	Description	Unit	Rate Rs.
19.64	Supply, fabricating & fixing of anodised (20 to 25 micron) Aluminum ladder of 450mm wide with 2 nos rectangular section of 65 x 35 mm (3 mm thick) as vertical post and 25 mm bars steps at 300 mm c/c complete in all respect as per the specification and the direction of the Engineer.	metre	1500.00
19.65	Providing, fabricating and erecting MS ladder of 450mm wide made of 65 x 65 x 6mm angle iron and 20mm MS bars for walkway to top of the OHSR including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer complete in all respect as per specifications and the direction of the Engineer.	metre	1390.00
19.66	Providing, fabricating and erecting MS ladder (with MS cage) of 450mm wide made of 65 x 65 x 6mm angle iron, 20mm MS bars for walk way to top of the OHSR and for cage flat 3 Nos-75 x 8 as vertical member and flat 40 x 5 as horizontal member 300 c/c including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete as per specification and the direction of the Engineer.	metre	3450.00
19.67	Providing, fabricating and erecting hand railing for walkway, top dome slab, balcony, staircase and landing consist of two rows (one at top and other at middle level) of 20 mm GI pipe class-B and 900 mm high vertical angle 65X65X6 mm at spacing 1.50 m c/c including welding, threading, applying a priming coat of approved steel primer and embedding in cement concrete floor complete in all respect as per specification and the direction of the Engineer.	metre	780.00
19.68	Providing, installation, testing and commissioning of vacuum Feed Gas Chlorinator with all accessories and making connection with existing pipeline required including supply & installation of trunnion roller support, auxiliary container valve, flexible copper connector, manifold valve, tonner manifold pipes, chlorine Pressure gauge, Isolation valve, gas filter, pressure reducing valve, chlorine gas pipe with fittings, diffuser, lifting beam, load indicator, 25 NB PP diaphragm Valve on injector inlet & outlet, 32 OD uPVC pipe for chlorine solution, 25 NB GI pipe for pump suction & delivery, 25 NB GM gate valve on pump suction & delivery, 25 NB GM 'Y' type strainer on pump suction, 25 NB GM Check valve on pump delivery, pressure gauge with Isolated valve on pump delivery and chlorine booster pump with motor of required capacity complete in all respect as per specification and the direction of the Engineer.		
19.68.1	1 kg/hr capacity	each	481400.00
19.68.2	2 kg/hr capacity	each	490900.00
19.68.3	3 kg/hr capacity	each	495700.00
19.69	Supply of Chlorine Tonner as per specifications with rollers complete in all respect as per the direction of Engineer.	each	173700.00
19.70	Providing bedding/ hunching for pipe with clean sand passing through IS sieve 2.36 mm and retained on 180 micron sieve in layers including ramming ,consolidation complete in all respect as per specification and the direction of the Engineer with all lead and lift.	cum	1160.00
19.71	Providing, lowering, laying, alingning, fixing in position in pipe line Zero Velocity Valves of 600 mm dia as per IS:14845 of following dia (including jointing and jointing material), including all material,	each	290100.00

Code No	Description	Unit	Rate Rs.
	labour, testing and commissioning as per Technical Specifications and as per direction of Engineer etc,complete in all respect.		
19.72	Providing, lowering, laying, alingning, fixing in position in pipe line Air Cussion Valves 150 mm dia as per IS:14845 of following dia (including jointing and jointing material), including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer etc,complete in all respect.	each	120200.00
19.73	Labour Charges for making connection with proposed pipe line to existing pipe line of AC/ DI/ CI including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.73.1	80-200 mm dia	each	2180.00
19.73.2	250-500 mm dia	each	2900.00
19.74	Labour Charges for making connection with proposed pipe line to existing pipe line of PVC/ HDPE/ GRP including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.74.1	80-200 mm dia	each	1820.00
19.74.2	250-500 mm dia	each	2540.00
19.75	Labour Charges for leakage repair in existing pipe line of AC/ DI/ CI including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.75.1	80-200 mm dia	each	1960.00
19.75.2	250-500 mm dia	each	2690.00
19.76	Labour Charges for leakage repair in existing pipe line of PVC/ HDPE/ GRP including dewatering etc. complete but excluding the cost of pipes, specials, joints etc as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.76.1	80-200 mm dia	each	1670.00
19.76.2	250-500 mm dia	each	2400.00
19.77	Making disconnection of existing pipeline of AC/ DI/ CI/ PVC/ GI etc including dewatering, cost of clamps, plates, specials, joints etc. complete as directed by site engineer for following dia. (Earthwork to be measured and paid separately)		
19.77.1	80-200 mm dia	each	2480.00
19.77.2	250-500 mm dia	each	3540.00
19.78	Operation, maintenance and management of water supply system through regular water supply in DMAs/Zones from service reservoirs to consumer water meter points as per specifications including consumables & excluding power charges as directed by Engineer Incharge.	consumer month	36.00
19.79	Operation, maintenance and management of entire water supply system through regular water supply up to consumer water meter points as per specifications including consumables & excluding power charges as directed by Engineer Incharge.	consumer month	54.00

Code No	Description	Unit	Rate Rs.
19.80	Providing and fixing in position lightening arrester set complete with 600mm x 600mm x 6mm thick G.I. earthing plate embedded below ground in earthing pit at 3.5 metre depth, G.I. strip of size 25mmx5mm thick from earthing plate to top of Over head tank, G.I. Finial made of GI bar 25mm dia and 2m long fixed on top of OH tank and connected to GI strip. The earthing set shall comply of IS:3043 complete in all respect as per specification and the direction of the Engineer.	set	12500.00
19.81	Supply, delivery at site with necessary packing, receiving, unloading, shifting, storing, installation, testing and commissioning of Horizontal Centrifugal Split Casting pumps with motor, CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts etc. complete with all respect as per the specification		
19.81.1	Discharge 20 to 30 LPS and head 20 to 30 M	each	114900.00
19.81.2	Discharge 20 to 30 LPS and head 31 to 40 M	each	114900.00
19.81.3	Discharge 20 to 30 LPS and head 41 to 50 M	each	129000.00
19.81.4	Discharge 20 to 30 LPS and head 51 to 60 M	each	129000.00
19.81.5	Discharge 20 to 30 LPS and head 61 to 70 M	each	129000.00
19.81.6	Discharge 31 to 40 LPS and head 20 to 30 M	each	135800.00
19.81.7	Discharge 31 to 40 LPS and head 31 to 40 M	each	135800.00
19.81.8	Discharge 31 to 40 LPS and head 41 to 50 M	each	152300.00
19.81.9	Discharge 31 to 40 LPS and head 51 to 60 M	each	192800.00
19.81.10	Discharge 31 to 40 LPS and head 61 to 70 M	each	202500.00
19.81.11	Discharge 41 to 50 LPS and head 20 to 30 M	each	152300.00
19.81.12	Discharge 41 to 50 LPS and head 31 to 40 M	each	152300.00
19.81.13	Discharge 41 to 50 LPS and head 41 to 50 M	each	164700.00
19.81.14	Discharge 41 to 50 LPS and head 51 to 60 M	each	213500.00
19.81.15	Discharge 41 to 50 LPS and head 61 to 70 M	each	213500.00
19.81.16	Discharge 51 to 60 LPS and head 20 to 30 M	each	175900.00
19.81.17	Discharge 51 to 60 LPS and head 31 to 40 M	each	175900.00
19.81.18	Discharge 51 to 60 LPS and head 41 to 50 M	each	204300.00
19.81.19	Discharge 51 to 60 LPS and head 51 to 60 M	each	246700.00
19.81.20	Discharge 51 to 60 LPS and head 61 to 70 M	each	246700.00
19.81.21	Discharge 61 to 70 LPS and head 20 to 30 M	each	175900.00
19.81.22	Discharge 61 to 70 LPS and head 31 to 40 M	each	189900.00
19.81.23	Discharge 61 to 70 LPS and head 41 to 50 M	each	240700.00
19.81.24	Discharge 61 to 70 LPS and head 51 to 60 M	each	240700.00
19.81.25	Discharge 61 to 70 LPS and head 61 to 70 M	each	284300.00
19.81.26	Discharge 71 to 80 LPS and head 20 to 30 M	each	189900.00
19.81.27	Discharge 71 to 80 LPS and head 31 to 40 M	each	189900.00

Code No	Description	Unit	Rate Rs.
19.81.28	Discharge 71 to 80 LPS and head 41 to 50 M	each	240700.00
19.81.29	Discharge 71 to 80 LPS and head 51 to 60 M	each	240700.00
19.81.30	Discharge 71 to 80 LPS and head 61 to 70 M	each	303100.00
19.81.31	Discharge 81 to 90 LPS and head 20 to 30 M	each	258600.00
19.81.32	Discharge 81 to 90 LPS and head 31 to 40 M	each	258600.00
19.81.33	Discharge 81 to 90 LPS and head 41 to 50 M	each	298100.00
19.81.34	Discharge 81 to 90 LPS and head 51 to 60 M	each	344900.00
19.81.35	Discharge 81 to 90 LPS and head 61 to 70 M	each	344900.00
19.81.36	Discharge 91 to 100 LPS and head 20 to 30 M	each	319200.00
19.81.37	Discharge 91 to 100 LPS and head 31 to 40 M	each	361200.00
19.81.38	Discharge 91 to 100 LPS and head 41 to 50 M	each	452500.00
19.81.39	Discharge 91 to 100 LPS and head 51 to 60 M	each	483900.00
19.81.40	Discharge 91 to 100 LPS and head 61 to 70 M	each	528800.00
19.81.41	Discharge 101 to 120 LPS and head 20 to 30 M	each	322700.00
19.81.42	Discharge 102 to 120 LPS and head 31 to 40 M	each	393500.00
19.81.43	Discharge 103 to 120 LPS and head 41 to 50 M	each	483900.00
19.81.44	Discharge 104 to 120 LPS and head 51 to 60 M	each	528800.00
19.81.45	Discharge 105 to 120 LPS and head 61 to 70 M	each	677100.00
19.81.46	Discharge 121 to 140 LPS and head 20 to 30 M	each	363900.00
19.81.47	Discharge 121 to 140 LPS and head 31 to 40 M	each	476500.00
19.81.48	Discharge 121 to 140 LPS and head 41 to 50 M	each	517500.00
19.81.49	Discharge 121 to 140 LPS and head 51 to 60 M	each	554400.00
19.81.50	Discharge 121 to 140 LPS and head 61 to 70 M	each	800600.00
19.81.51	Discharge 141 to 160 LPS and head 20 to 30 M	each	505600.00
19.81.52	Discharge 141 to 160 LPS and head 31 to 40 M	each	505600.00
19.81.53	Discharge 141 to 160 LPS and head 41 to 50 M	each	554400.00
19.81.54	Discharge 141 to 160 LPS and head 51 to 60 M	each	590900.00
19.81.55	Discharge 141 to 160 LPS and head 61 to 70 M	each	800600.00
19.81.56	Discharge 161 to 180 LPS and head 20 to 30 M	each	498700.00
19.81.57	Discharge 161 to 180 LPS and head 31 to 40 M	each	505600.00
19.81.58	Discharge 161 to 180 LPS and head 41 to 50 M	each	505600.00
19.81.59	Discharge 161 to 180 LPS and head 51 to 60 M	each	647200.00
19.81.60	Discharge 161 to 180 LPS and head 61 to 70 M	each	839200.00
19.81.61	Discharge 181 to 200 LPS and head 20 to 30 M	each	498700.00
19.81.62	Discharge 181 to 200 LPS and head 31 to 40 M	each	614300.00
19.81.63	Discharge 181 to 200 LPS and head 41 to 50 M	each	654700.00
19.81.64	Discharge 181 to 200 LPS and head 51 to 60 M	each	811700.00

Code No	Description	Unit	Rate Rs.
19.81.65	Discharge 181 to 200 LPS and head 61 to 70 M	each	839200.00
19.82	Supply, delivery at site with necessary packing, receiving, unloading, shifting, storing, installation, testing and commissioning of Horizontal Centrifugal Split Casting pumps with motor, CI casing and casing ring, SS 316 impeller, SS 410 Shaft and shaft sleeve, coupling guard, common base plate, foundation bolts etc. complete with all respect as per the specification		
19.82.1	Discharge 201 to 220 LPS and head 20 to 30 M	each	555400.00
19.82.2	Discharge 201 to 220 LPS and head 31 to 40 M	each	610500.00
19.82.3	Discharge 201 to 220 LPS and head 41 to 50 M	each	811700.00
19.82.4	Discharge 201 to 220 LPS and head 51 to 60 M	each	839200.00
19.82.5	Discharge 201 to 220 LPS and head 61 to 70 M	each	870600.00
19.82.6	Discharge 221 to 240 LPS and head 20 to 30 M	each	559000.00
19.82.7	Discharge 221 to 240 LPS and head 31 to 40 M	each	636000.00
19.82.8	Discharge 221 to 240 LPS and head 41 to 50 M	each	817000.00
19.82.9	Discharge 221 to 240 LPS and head 51 to 60 M	each	845100.00
19.82.10	Discharge 221 to 240 LPS and head 61 to 70 M	each	870600.00
19.82.11	Discharge 241 to 260 LPS and head 20 to 30 M	each	596900.00
19.82.12	Discharge 241 to 260 LPS and head 31 to 40 M	each	643700.00
19.82.13	Discharge 241 to 260 LPS and head 41 to 50 M	each	821900.00
19.82.14	Discharge 241 to 260 LPS and head 51 to 60 M	each	870600.00
19.82.15	Discharge 241 to 260 LPS and head 61 to 70 M	each	881200.00
19.82.16	Discharge 261 to 280 LPS and head 20 to 30 M	each	608500.00
19.82.17	Discharge 261 to 280 LPS and head 31 to 40 M	each	687700.00
19.82.18	Discharge 261 to 280 LPS and head 41 to 50 M	each	821900.00
19.82.19	Discharge 261 to 280 LPS and head 51 to 60 M	each	870600.00
19.82.20	Discharge 261 to 280 LPS and head 61 to 70 M	each	881200.00
19.82.21	Discharge 281 to 300 LPS and head 20 to 30 M	each	608500.00
19.82.22	Discharge 281 to 300 LPS and head 31 to 40 M	each	687700.00
19.82.23	Discharge 281 to 300 LPS and head 41 to 50 M	each	845100.00
19.82.24	Discharge 281 to 300 LPS and head 51 to 60 M	each	881200.00
19.82.25	Discharge 281 to 300 LPS and head 61 to 70 M	each	941000.00
19.82.26	Discharge 301 to 325 LPS and head 20 to 30 M	each	637300.00
19.82.27	Discharge 301 to 325 LPS and head 31 to 40 M	each	718300.00
19.82.28	Discharge 301 to 325 LPS and head 41 to 50 M	each	962700.00
19.82.29	Discharge 301 to 325 LPS and head 51 to 60 M	each	984500.00
19.82.30	Discharge 301 to 325 LPS and head 61 to 70 M	each	1034900.00
19.82.31	Discharge 326 to 350 LPS and head 20 to 30 M	each	652900.00
19.82.32	Discharge 326 to 350 LPS and head 31 to 40 M	each	749600.00

Code No	Description	Unit	Rate Rs.
19.82.33	Discharge 326 to 350 LPS and head 41 to 50 M	each	962700.00
19.82.34	Discharge 326 to 350 LPS and head 51 to 60 M	each	1034900.00
19.82.35	Discharge 326 to 350 LPS and head 61 to 70 M	each	1034900.00
19.82.36	Discharge 351 to 400 LPS and head 20 to 30 M	each	721900.00
19.82.37	Discharge 351 to 400 LPS and head 31 to 40 M	each	781700.00
19.82.38	Discharge 351 to 400 LPS and head 41 to 50 M	each	984500.00
19.82.39	Discharge 351 to 400 LPS and head 51 to 60 M	each	1034900.00
19.82.40	Discharge 351 to 400 LPS and head 61 to 70 M	each	1351500.00
19.83	Providing, Fixing and maintaining barricading of active site such as at tanks etc to keep it safe entry from trespassers and unauthorized persons with using 80 - 100 mm dia Wooden Ballies as vertical post, at least 1.80 m above ground level and at least 60 cm below ground level at a spacing of 2 m and 0.63mm thick GI corrugated sheets for 1.8 m height above ground level for covering the barricading in rows one above another with providing suitable gate arrangement and painting in red and white stripes as per the specifications and directions of the Engineer Incharge with proper fixing arrangements with GI limpet washers nuts and bolts complete in all respect and maintaining it till completion of the work at active site.	metre	269.00

20.0 TUBE WELL

Code No	Description	Unit	Rate Rs.
20.1	Construction of Tube-well upto 100 Meter depth and above in all type of rocks by DTH system and over burden to accommodate casing pipe of following sizes in all types of soils and over burden including lowering of casing pipes but excluding cost of casing pipes as per IS : 2800 (Part I & II) 1979 specifications. The work would be completed after obtaining sand free water. The tube well should have a throughout bore as per nominal dia of casing pipe:		
20.1.1	100 mm dia Nominal bore	metre	363.00
20.1.2	125 mm dia Nominal bore	metre	415.00
20.1.3	150 mm dia Nominal bore	metre	580.00
20.1.4	200 mm dia Nominal bore	metre	967.00
20.2	Construction of tube-well from ground levels and upto 100 Meter depth and above to accommodate housing and assembly pipe of following sizes in all types of alluvium strata by percussion/ rotary drilling method and with gravel as per IS:4097-1967 and packing as per IS:2800 (Part I -& II) 1979 as amended upto date (the work includes the cost of gravel & its primary packing and packing during development, lowering of housing & strainer assembly pipes, with supply and wrapping of coir-rope, wherever necessary for arresting fine sand particles. The work will not include cost of housing pipe and strainer pipe assembly and development work, but work would be completed after obtaining sand free water).		
20.2.1	150 mm Nominal bore	metre	1016.00
20.2.2	200 mm dia Nominal bore	metre	1270.00
20.2.3	250 mm dia Nominal bore	metre	1693.00
	Development of tube well as per IS specification using suitable compressor to give sand free water for required yield of the gravel packed tube well.	hour	424.00
20.4	Supply of ERW M.S. black casing pipe ISI marked (IS: 4270/1992) of grade Fe410 of following nominal bore sizes at site of work.		
20.4.1	100 mm dia	metre	934.00
20.4.2	125 mm dia	metre	1116.00
20.4.3	150 mm dia	metre	1287.00
20.4.4	200 mm dia	metre	1556.00
20.4.5	250 mm dia	metre	1798.00
20.5	Supply of strainer pipes made of ERW M.S. black pipe ISI mark of following sizes at the site of work including required size of slotting as per IS:8110-1985 of following nominal bore sizes at site of work.		
20.5.1	150 mm dia	metre	1300.00
20.5.2	200 mm dia	metre	1569.00
20.5.3	250 mm dia	metre	1569.00

Code No	Description	Unit	Rate Rs.
20.6	Testing verticality of tube-well by plumbing system and yield test and draw down test by pumping system as per IS: 2800 (Part II) 1979.	each	7260.00
20.7	Supply and fixing of tube well cover of M.S. sheet (6mm thick) with nuts and bolts complete for casing size:		
20.7.1	100 mm dia	each	200.00
20.7.2	125 mm dia	each	218.00
20.7.3	150 mm dia	each	236.00
20.7.4	200 mm dia	each	260.00
20.7.5	250mm dia	each	321.00
20.8	Supply and fixing of M.S. clamp set of 50 x6mm flat iron with nuts and bolts etc. for holding the riser pipe assembly of submersible pump set.	each set	260.00
20.9	Installation of submersible motor pump set in tube-well/open well complete (labour charges only) including transportation of tripod, chain pulley block & any other material required for lowering purpose.	each	3509.00
20.10	Providing & lowering of G.I. flange pipe B Class including rubber washer and nuts of 8 mm dia complete in all respect.		
20.10.1	50 mm dia	metre	539.00
20.10.2	75 mm dia	metre	721.00
20.10.3	100 mm dia	metre	963.00

21.0 CONCRETE WORK

Code No	Description	Unit	Rate Rs.
21.1	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level :		
21.1.1	1:1:2 (1 Cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	4770.00
21.1.2	1:1½:3 (1 Cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size).	cum	4700.00
21.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	4280.00
21.1.4	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size).	cum	4210.00
21.1.5	1:3:6 (1 Cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	cum	3750.00
21.1.6	1:3:6 (1 Cement : 3 fine/ coarse sand : 6 graded stone aggregate 40 mm nominal size).	cum	3670.00
21.1.7	1:4:8 (1 Cement : 4 fine/ coarse sand : 8 graded stone aggregate 40 mm nominal size).	cum	3360.00
21.1.8	1:5:10 (1 cement : 5 fine/ coarse sand : 10 graded stone aggregate 40 mm nominal size)	cum	3120.00
21.1.9	1:2:3½:9 (1 ordinary Portland cement : 2 Fly ash : 3½ coarse sand : 9 graded stone aggregate 40 mm nominal size).	cum	3260.00
21.1.10	1:2½:4:11 (1 ordinary Portland cement : 2½ fly ash : 4 coarse sand : 11 graded stone aggregate 40 mm nominal size)	cum	2980.00
21.2	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets etc. upto two stories, excluding the cost of centring, shuttering and finishing :		
21.2.1	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	5100.00
21.2.2	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size).	cum	5030.00
21.2.3	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	4610.00
21.2.4	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size).	cum	4540.00
21.2.5	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size).	cum	4080.00
21.2.6	1:3:6 (1 cement : 3 fine/ coarse sand : 6 graded stone aggregate 40 mm nominal size).	cum	4000.00
21.3	Providing and laying cement concrete in kerbs, steps and the like at		

Code No	Description	Unit	Rate Rs.
	or near ground level excluding the cost of centring, shuttering and finishing.		
21.3.1	1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	4280.00
21.4	Providing and fixing upto two stories precast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases, etc. including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 Cement : 3 fine sand) on exposed surfaces complete.		
21.4.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	6900.00
21.4.2	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	cum	6370.00
21.5	Providing and fixing at or near ground level precast cement concrete in kerbs, edgings etc. as per approved pattern and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand) including the cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete.		
21.5.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	5880.00
21.6	Providing and fixing upto two stories precast cement concrete solid block including hoisting and setting in position with cement mortar 1:3 (1 cement : 3 coarse sand), including cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete :		
21.6.1	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	9560.00
21.6.2	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	cum	9030.00
21.7	Providing and laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size).	sqm	215.00
21.8	Providing and laying damp-proof course 50mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	sqm	259.00
21.9	Extra for providing and mixing water proofing material in cement concrete work @ 1 kg per 50kg of cement.	per 50 kg cement	34.50
21.10	Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil.	sqm	103.00
21.11	Extra for concrete work in superstructure above two stories for every two stories or part thereof.	cum	272.00
21.12	Extra for laying concrete in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	cum/mtr	439.00

Code No	Description	Unit	Rate Rs.
21.13	Extra for laying concrete in or under foul positions.	cum	182.00
21.14	Making plinth protection 50mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) over 75mm bed by dry brick ballast 40mm nominal size well rammed and consolidated and grouted with fine sand including finishing the top smooth.	sqm	352.00

22.0 FORM WORK

Code No	Description	Unit	Rate Rs.
22.1	Centring and shuttering with plywood or steel sheet upto two stories or height upto 7.5 metre above plinth level including strutting, propping etc. and removal of form for :		
22.1.1	Foundations, footings, bases of columns, etc. for mass concrete.	sqm	162.00
22.1.2	Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	sqm	240.00
22.1.3	Suspended floors, roofs, landings, balconies and access platform.	sqm	287.00
22.1.4	Shelves (Cast in situ)	sqm	287.00
22.1.5	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	sqm	269.00
22.1.6	Columns, Pillars, Piers, Abutments, Posts and Struts.	sqm	254.00
22.1.7	Stairs, (excluding landings) except spiral-staircases.	sqm	320.00
22.1.8	Spiral staircases (including landing).	sqm	268.00
22.1.9	Arches, domes, vaults upto 6 m span	sqm	793.00
22.1.10	Extra for arches, domes, vaults exceeding 6 m span	sqm	427.00
22.1.11	Chimneys and shafts	sqm	203.00
22.1.12	Vertical and horizontal fins individually or Grid roofing forming box louvers band, facias and eaves boards.	sqm	429.00
22.1.13	Extra for shuttering in circular work (20% of respective centring and shuttering items).	sqm	20.00
22.1.14	Small lintels not exceeding 1.5m clear span, moulding as in cornices, window sills, string courses, bands, copings, bed plates, anchor blocks and the like.	sqm	110.00
22.1.15	Edges of slabs and breaks in floors and walls.		
22.1.15.1	Under 20 cm wide	metre	95.00
22.1.15.2	Above 20 cm wide	sqm	439.00
22.1.16	Cornices and mouldings	sqm	505.00
22.1.17	Small surfaces such as cantilever ends, brackets and ends of steps, caps and bases to pilasters and columns and the like.	sqm	375.00
22.1.18	Weather shade, Chajjas, corbels etc., including edges.	sqm	389.00
22.1.19	Suspended floors, roofs, landings, balconies and access platform. with water proof ply 12mm thick.	sqm	295.00
22.1.20	Lintels, beams, plinth beams, girders, bressumers and cantilevers with water proof ply 12mm thick.	sqm	264.00
22.1.21	Lintels of sewer and manhole work	sqm	248.00
22.2	Add extra for doing centering and shutteriing work for each subsequent storey above two storey.	sqm	21.00
22.3	Add extra for doing centering and shutteriing work for every additional height of 1 metre or part thereof beyond initial 7.5 metre height from plinth level.	sqm	6.50

23.0 REINFORCED CEMENT CONCRETE

Code No	Description	Unit	Rate Rs.
23.1	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - All work upto plinth level :		
23.1.1	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size). (As per design mix)	cum	5030.00
23.1.2	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	4960.00
23.1.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	4540.00
23.2	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. upto two stories excluding cost of centring, shuttering, finishing and reinforcement :		
23.2.1	1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) (As per design mix)	cum	5420.00
23.2.2	1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size)	cum	5360.00
23.2.3	1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	4940.00
23.3	Reinforced cement concrete work in beams, suspended floors, roofs having slope upto 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills, staircases and spiral stair cases upto two stories excluding the cost of centring, shuttering, finishing and reinforcement:		
23.3.1	M-15 Grade Concrete (1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) -As per design mix)	cum	5110.00
23.3.2	M-20 Grade Concrete (1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20 mm nominal size) -As per design mix)	cum	5530.00
23.3.3	M-25 Grade Concrete (1:1:2 (1 cement : 1 coarse sand : 2 graded stone aggregate 20 mm nominal size) -As per design mix)	cum	5590.00
23.3.4	M-30 Grade Concrete	cum	5620.00
23.3.5	M-35 Grade Concrete	cum	5650.00
23.4	Providing and laying upto two stories reinforced cement concrete in kerbs, steps and the like excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	4660.00
23.5	Reinforced cement concrete work in arches, arch ribs, domes, vaults, shells, folded plate and roofs having slope more than 15° upto two stories excluding the cost of centring, shuttering, finishing and reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	4600.00

Code No	Description	Unit	Rate Rs.
23.6	Reinforced cement concrete work in vertical and horizontal fins individually or forming box louvers, facias and eaves boards upto two stories excluding the cost of centring, shuttering, finishing and reinforcement with 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size).	cum	5290.00
23.7	Providing and fixing tie bolt, spring coil and plastic cone in wall shuttering complete as per the direction of Engineer-in-charge		
23.7.1	12 mm dia. & 100 mm length.	each set	116.00
23.7.2	12 mm dia. & 150 mm length.	each set	128.00
23.7.3	20 mm dia. & 150 mm length.	each set	140.00
23.7.4	20 mm dia. & 225 mm length.	each set	152.00
23.8	Add extra for laying reinforced cement concrete above two stories (or 7.50 mtr height above plinth level) for every one storey or 3.00 m height or part thereof.	cum	142.00
23.9	Providing, hoisting and fixing upto two stories precast reinforced cement concrete work in string courses, bands, copings, bed plates, anchor blocks, plain window sills and the like including the cost of required centring, shuttering, finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding cost of reinforcement with 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20mm nominal size).	cum	7080.00
23.10	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in small lintels not exceeding 1.5m clear span upto two stories including the cost of required centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	8610.00
23.11	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in mouldings as in cornices, windows sills etc. including setting in cement mortar 1:3 (1 cement : 3 coarse sand) cost of required centring, shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	10100.00
23.12	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in lintels, beams and bressumers including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centring and shuttering and finishing smooth with 6 mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	7390.00
23.13	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in shelves including setting in cement mortar 1:3 (1 cement : 3 coarse sand), cost of required centring, shuttering and finishing with neat cement punning on exposed surfaces but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size).	cum	9590.00

Code No	Description	Unit	Rate Rs.
23.14	Providing, hoisting and fixing upto two stories precast reinforced cement concrete in vertical & horizontal fins individually or forming box louvers setting in cement mortar 1:2 (1 cement : 2 coarse sand) including the cost of required centring, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete but excluding the cost of reinforcement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size).	cum	10700.00
23.15	Providing precast cement concrete Jali 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6mm nominal size) reinforced with 1.6 mm dia mild steel wire including centring and shuttering, roughening cleaning, fixing and finishing in cement mortar 1:3 (1 cement: 3 fine sand) etc. complete excluding plastering of the jambs, sills and soffits.		
23.15.1	50 mm thick	sqm	746.00
23.15.2	40 mm thick	sqm	650.00
23.15.3	25 mm thick	sqm	614.00
23.16	Encasing rolled steel sections, in beams and columns, with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) including centring and shuttering complete but excluding cost of reinforcement.	cum	7110.00
23.17	Encasing rolled steel section in grillages with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) including centring and shuttering but excluding cost of expanded metal and hangers.	cum	4770.00
23.18	Extra for providing and fixing expanded metal mesh of size 20x60mm and strands 3.25mm wide 1.6mm thick weighing 3.64 kg. per sqm. for encasing of rolled steel sections in beams, columns and grillages excluding cost of hangers.	sqm	383.00
23.19	Reinforcement for R.C.C. work at all levels including straightening, cutting, bending, placing in position and binding all complete.		
23.19.1	Mild steel and Medium Tensile steel bars.	kg	50.00
23.19.2	Hard drawn steel wire	kg	62.50
23.19.3	Cold twisted bars	kg	51.50
23.19.4	Hot rolled deformed bars	kg	51.50
23.19.5	Hard drawn steel wire fabric	kg	73.50
23.19.6	Thermo-Mechanically Treated bars.	kg	51.50
23.20	Deduct for omitting in R.C.C. work smooth finishing of the exposed surface with 6mm thick cement mortar 1:3 (1 Cement : 3 fine sand)	sqm	122.00
23.21	Extra for rendering smooth the top of suspended floors, landings and staircases (treads and risers) with cement mortar 1:2 (1 cement : 2 coarse sand) including a floating coat of neat cement and protecting the surface with a layer of 7.5 cm of earth laid over 15 mm of fine sand in case of suspended floor and bricks laid in mud mortar in case of landings and steps including subsequent removal and cleaning of the same.	sqm	83.00

Code No	Description	Unit	Rate Rs.
23.22	Providing and fixing in position copper plate as per design for expansion joints.	kg	321.00
23.23	Providing and filling in position, blown bitumen in expansion joints.	mtr/cmdep/cmwidth h	529.00
23.24	Providing and filling in position bitumen mix filler of Proportion 80 kg. of hot bitumen, 1 kg. of cement and 0.25 cubic metre of coarse sand for expansion joints.	mtr/cmdep/cmwidth h	183.00
23.25	Providing and fixing in position 12mm thick bitumen impregnated fibre board conforming to IS:1838 including cost of primer, sealing compound in expansion joints.	cm/100m	452.00
23.26	Providing and fixing sheet covering over expansion joints with iron screws as per design to match the colour / shade of wall treatment.		
23.26.1	Non-asbestos fibre cement board 6 mm thick as per IS:14862.		
23.26.1.1	150mm wide.	metre	122.00
23.26.1.2	200mm wide.	metre	165.00
23.26.2	Aluminium fluted strips 3.15mm thick.		
23.26.2.1	150 mm wide.	metre	343.00
23.26.2.2	200 mm wide.	metre	479.00
23.27	Add or deduct for plaster drip course/ groove in plastered surface or moulding to R.C.C. projections.	mtr	31.50
23.28	Extra for laying reinforced cement concrete in or under water and/ or liquid mud including cost of pumping or bailing out water and removing slush etc., complete.	cum	439.00
23.29	Extra for laying reinforced cement concrete in or under foul positions.	cum	182.00

24.0 BRICK WORK

Code No	Description	Unit	Rate Rs.
24.1	Brick work with FPS bricks of class designation 75 in foundation and plinth in:		
24.1.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	3950.00
24.1.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	3760.00
24.2	Brick work with sewer-bricks of in foundation and plinth in:		
24.2.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4250.00
24.3	Brick work with modular bricks of class designation 75 in foundation and plinth in:		
24.3.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	3810.00
24.3.2	Cement Mortar 1:6 (1 cement : 6 coarse sand).	cum	3640.00
24.4	Brick work with machine moulded perforated bricks of class designation 125 conforming to IS: 2222 -1991 in superstructure above plinth level upto two stories in cement mortar 1:6 (1 cement : 6 coarse sand) :		
24.4.1	With FPS bricks.	cum	4920.00
24.4.2	With Modular bricks.	cum	4200.00
24.5	Brick work with FPS bricks of class designation 75 in superstructure above plinth level upto two stories in all shapes and sizes in :		
24.5.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4500.00
24.5.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4300.00
24.6	Extra for brick work in superstructure above two stories for each two stories or part thereof by mechanical means by lifting material using mobile crane .	cum	157.00
24.7	Brick work 7 cm thick with FPS brick of class designation 75 in cement mortar 1:3 (1 cement : 3 coarse sand) in superstructure.	sqm	395.00
24.8	Brick work in plain arches in superstructure including centring and shuttering complete for span upto 6 metres with brick of class designation 75 in cement mortar 1:3 (1 cement : 3 coarse sand).	cum	6480.00
24.9	Brick work in gauged arches in superstructure in cement mortar 1:3 (1 cement : 3 coarse sand) including centring and shuttering complete, for span upto 6 meters with brick of class designation 75.	cum	8080.00
24.10	Extra for additional cost of centring for arches exceeding 6m span including all shuttering, bolting, wedging and removal (Area of the soffit to be measured).	sqm	809.00
24.11	Half brick masonry with FPS brick of class designation 75 in foundations and plinth in :		
24.11.1	Cement mortar 1:3 (1 cement : 3 coarse sand)	sqm	494.00
24.11.2	cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	472.00
24.12	Half brick masonry with FPS bricks of class designation 75 in superstructure above plinth level upto two stories.		

Code No	Description	Unit	Rate Rs.
24.12.1	Cement mortar 1:3 (1 cement :3 coarse sand)	sqm	550.00
24.12.2	Cement mortar 1:4 (1 cement :4 coarse sand)	sqm	528.00
24.13	Extra for half brick masonry in superstructure, above two stories for every two stories or part thereof by mechanical means by lifting material using mobile crane.	sqm	14.00
24.14	Extra for providing and placing in position 2 Nos. 6mm dia. M.S. bars at every third course of half brick masonry.	sqm	58.50
24.15	Tile brick masonry with tile bricks of class designation 100 in foundation and plinth in:		
24.15.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	6690.00
24.15.2	Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	6370.00
24.16	Tile brick masonry with machine moulded tile bricks of class designation 125 conforming to IS : 2690 (Part I) - 1993 in foundation and plinth in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	6000.00
24.17	Tile brick masonry with machine moulded tile bricks of class designation 125 conforming to IS : 2690 (Part I) - 1993 in superstructure above plinth level upto two stories in Cement mortar 1:6 (1 cement : 6 coarse sand).	cum	6560.00
24.18	Extra for tile brick masonry with tile bricks of class designation 100 in superstructure above two stories for every two stories or part thereof.	cum	272.00
24.19	Tile brick masonry with tile bricks of class designation 100 in plain arch work in superstructure in cement mortar 1:4 (1 cement : 4 coarse sand) including centring and shuttering complete.	cum	9010.00
24.20	Tile brick masonry with tile bricks of class designation 100 in gauged arch work in superstructure in cement mortar 1:4 (1 cement : 4 coarse sand) including centring and shuttering complete.	cum	10600.00
24.21	Tile brick masonry work 5 cm thick with tile bricks of class designation 100 in cement mortar 1:3 (1 cement : 3 coarse sand) in superstructure.	sqm	435.00
24.22	Honey-comb brick work 10/11.4 cm thick with FPS bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand).	sqm	298.00
24.23	Extra for laying brick work in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	cum	439.00
24.24	Extra for laying brick work in or under foul position.	cum	182.00
24.25	Brick work with selected FPS bricks of class designation 75 in exposed brick work including making horizontal and vertical grooves 10mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand)	cum	3870.00
24.26	Brick work with modular bricks of class designation 75 in exposed brick work including making horizontal and vertical grooves 10mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	3660.00
24.27	Brick work with machine moulded modular bricks of class designation 125 in exposed brick work including making horizontal and vertical grooves 10mm wide 12mm deep complete from ground		

Code No	Description	Unit	Rate Rs.
	level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	3660.00
24.28	Brick work with machine moulded F.P.S. bricks of class designation 125 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4140.00
24.29	Brick work with machine moulded perforated F.P.S. bricks of class designation 125 conforming IS : 2222-1991 in exposed brick work including making horizontal and vertical grooves 10mm wide 12 mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	4220.00
24.30	Brick work with machine moulded perforated modular bricks of class designation 125 conforming to IS : 2222 -1991 in exposed brick work including making horizontal and vertical grooves 10 mm wide 12mm deep complete from ground level upto plinth level in cement mortar 1:6 (1 cement : 6 coarse sand).	cum	3720.00
24.31	Brick work with clay flyash brick of class designation 75 in superstructure above plinth level upto two stories in :		
24.31.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4500.00
24.31.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4310.00
24.32	Extra for exposed brick work/ clay flyash brick work in superstructure above two stories, for each two stories or part thereof.	cum	272.00
24.33	Brick work with modular fly ash lime bricks (FALG Bricks) conforming to IS:12894-2002, class designation 100 average compressive strength in super structure above plinth level upto two stories in :		
24.33.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	3730.00
24.33.2	Cement mortar 1:6 (1 cement : 6 Coarse sand)	cum	3550.00
24.34	Brick work with modular calcium silicate bricks machine moulded conforming to IS:4139-1989, class designation 100 average compressive strength in super structure above plinth level upto two stories in :		
24.34.1	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	4790.00
24.34.2	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	4610.00
24.35	Brick work with modular extruded brunt fly ash clay sewer bricks (Conforming to IS: 4885 - 1988) in foundation and plinth :		
24.35.1	Cement Mortar 1:4 (1 cement : 4 coarse sand)	cum	3930.00
24.36	Brick work with modular extruded brunt fly ash clay sewer bricks (conforming to IS : 4885-1988) in arches in foundation and plinth in cement mortar 1:3 (1 cement : 3 fine sand).	cum	6440.00
24.37	Providing and laying Gypsum panel partitions 100mm thick with water proof Gypsum panels of size 666x500x100mm, made of calcite phosphor Gypsum fixed with tongue and groove, jointed with bonding plaster as per manufacturers specifications in superstructure above plinth level upto two stories. Gypsum blocks will have a minimum compressive strength of 9.3 kg/cm ²	sqm	719.00

Code No	Description	Unit	Rate Rs.
24.38	Extra for Gypsum panel Partitions in superstructure above two stories for every two stories or part thereof.	sqm	31.00
24.39	Brick work with mechanised autoclaved flyash lime bricks conforming to IS: 12894 :2002 of class designation 100 in superstructure above plinth level upto two stories in.		
24.39.1	Cement mortar 1:4 (1 cement :4 coarse sand)	cum	4490.00
24.39.2	Cement mortar 1:6 (1 cement :6 coarse sand).	cum	4290.00
24.40	Extra for mechanised autoclave flyash lime bricks conforming to IS: 12894- 1990 of class designation 100 in superstructure above two stories for every two stories or part thereof.	cum	272.00
24.41	Brick edging 7cm wide 11.4cm deep to plinth protection with FPS bricks of class designation 75 including grouting with cement mortar 1:4 (1 cement : 4 fine sand).	metre	31.00
24.42	Providing and laying autoclaved aerated cement blocks masonry with 150mm/230mm/300 mm thick AAC blocks in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (Thepayment of RCC band and reinforcement shall be made for seperately).	cum	5310.00

25.0 STONE WORK (Masonry)

Code No	Description	Unit	Rate Rs.
25.1	Random rubble masonry with hard stone in foundation and plinth :		
25.1.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	3190.00
25.1.2	Cement mortar 1:4 (1 cement : 4 coarse sand)	cum	3450.00
25.1.3	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	3710.00
25.2	Extra for random rubble masonry with hard stone in superstructure above plinth level and upto two stories.	cum	622.00
25.3	Extra for random rubble masonry with hard stone in superstructure above two stories for every two stories or part thereof	cum	424.00
25.4	Extra for random rubble masonry with hard stone in :		
25.4.1	Square or rectangular pillars	cum	449.00
25.4.2	Circular pillars.	cum	1180.00
25.5	Extra for random rubble masonry with hard stone curved on plan for a mean radius not exceeding 6 m.	cum	422.00
25.6	Coursed rubble masonry (first sort) with hard stone in foundation and plinth with :		
25.6.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	3950.00
25.7	Coursed rubble masonry (second sort) with hard stone in foundation & plinth with :		
25.7.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	cum	3650.00
25.8	Extra for coursed rubble masonry with hard stone (first or second sort) in superstructure above plinth level and upto two stories.	cum	607.00
25.9	Extra for coursed rubble masonry with hard stone (first or second sort) in superstructure above two stories for every two stories or part thereof.	cum	424.00
25.10	Extra for coursed rubble masonry with hard stone (first or second sort) in :		
25.10.1	Square or rectangular pillars	cum	503.00
25.10.2	Circular pillars.	cum	1350.00
25.11	Extra for coursed rubble masonry with hard stone (first or second sort) curved on plan for a mean radius not exceeding 6 m.	cum	465.00
25.12	Stone work in plain ashlar in super structure upto floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) including pointing with cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade :		
25.12.1	One face dressed.		
25.12.1.1	Red sand stone	cum	27000.00
25.12.1.2	White sand stone	cum	27800.00
25.12.2	Both face dressed.		
25.12.2.1	Red sand stone.	cum	37000.00
25.12.2.2	White sand stone	cum	37800.00

26.0 STONE WORK (Slabs)

Code No	Description	Unit	Rate Rs.
26.1	Stone work (machine cut edges) for wall lining etc. (veneer work) backing filled with a grout of 12mm thick cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade : (To be secured to the backing by means of cramps which shall be paid for separately) :		
26.1.1	Red sand stone - Exposed face fine dressed with rough backing.		
26.1.1.1	70 mm thick.	sqm	1590.00
26.1.1.2	60 mm thick.	sqm	1500.00
26.1.1.3	50 mm thick.	sqm	1410.00
26.1.1.4	40 mm thick.	sqm	1320.00
26.1.1.5	30 mm thick.	sqm	1230.00
26.1.2	Red sand stone - Exposed face machine cut and table rubbed with rough backing.		
26.1.2.1	70 mm thick	sqm	1590.00
26.1.2.2	60 mm thick	sqm	1500.00
26.1.2.3	50 mm thick	sqm	1410.00
26.1.2.4	40 mm thick	sqm	1320.00
26.1.2.5	30 mm thick	sqm	1230.00
26.1.3	White sand stone - Exposed face fine dressed with rough backing.		
26.1.3.1	70 mm thick.	sqm	1640.00
26.1.3.2	60 mm thick.	sqm	1550.00
26.1.3.3	50 mm thick.	sqm	1450.00
26.1.3.4	40 mm thick.	sqm	1350.00
26.1.3.5	30 mm thick.	sqm	1260.00
26.1.4	White sand stone - Exposed face machine cut and table rubbed with rough backing.		
26.1.4.1	70 mm thick.	sqm	1640.00
26.1.4.2	60 mm thick.	sqm	1550.00
26.1.4.3	50 mm thick.	sqm	1450.00
26.1.4.4	40 mm thick.	sqm	1400.00
26.1.4.5	30 mm thick.	sqm	1260.00
26.2	Extra for stone work (veneer work) curved on plan with a mean radius not exceeding 6 m.	cum	1090.00
26.3	Providing and fixing stainless steel cramps of required size and shape for anchoring stone wall lining to the backing or securing adjacent stones in stone wall lining in cement mortar 1:2 (1 cement : 2 coarse sand) including making the necessary chases in stone and holes in walls wherever required.	kg	619.00

Code No	Description	Unit	Rate Rs.
26.4	Providing and fixing stone dowels 10x5x2.50 cm cut to double wedge shape as per design in cement mortar 1:2 (1 cement : 2 coarse sand) including making the necessary chases.	each	23.00
26.5	Providing and fixing copper pins 7.5 cm long 6 mm diameter for securing adjacent stones in stone wall lining in cement mortar 1:2 (1 cement : 2 coarse sand) including making the necessary chases.	each	23.50
26.6	Providing and fixing sloping chajja of stone 40 mm thick and upto 80 cm wide beyond the wall as measured along the slope in cement mortar 1:4 (1 cement : 4 coarse sand) with 12mm diameter anchoring steel bar 45 cm long fixed in each stone and supported on and including with bricks cove of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including pointing in cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade:		
26.6.1	Red sand stone:		
26.6.1.1	With bricks	sqm	1400.00
26.6.2	White sand stone:		
26.6.2.1	With bricks	sqm	1500.00
26.7	Providing and fixing horizontal chajja of stone 40 mm thick and upto 80 cm projection in cement mortar 1:4 (1 cement : 4 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade:		
26.7.1	Red sand stone	sqm	933.00
26.7.2	White sand stone	sqm	1020.00
26.8	30mm red sand stone sun-shade (chisel-dressed) supported on red sand stone brackets, fixed in walls with cement mortar 1:4 (1 cement : 4 coarse sand) including finishing complete.	sqm	1060.00
26.9	Providing and fixing red sand stone brackets 55x22.5x45cm sunk and moulded including providing and fixing with 4 Nos. gun metal cramp 25x6mm 30 cm long and dowel bars 7.5 cm long 6 mm dia as per design.	each	3210.00
26.10	Stone work, plain in copings, cornices, string courses and plinth courses, upto 75 mm thick in Cement mortar 1:6 (1 cement : 6 coarse sand) including pointing with white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment matching the stone shade.		
26.10.1	Red sand stone	cum	38600.00
26.10.2	White sand stone	cum	39400.00
26.11	Providing and fixing stone jali 40mm thick throughout in cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment, matching the stone shade, jali slab without any chamfers etc.		
26.11.1	Red sand stone	sqm	11700.00
26.11.2	White sand stone	sqm	11800.00
26.12	Extra for laying stone work in or under water and/or liquid mud including cost of pumping or bailing out water and removing slush etc. complete.	cum/ mtr depth	439.00

Code No	Description	Unit	Rate Rs.
26.13	Extra for laying stone work in or under foul position.	cum	182.00
26.14	Wall lining butch work upto 10m height with red/ white sand stone 40 mm thick rough facing on the exposed surface with stone strips of minimum length 300 mm and required width including embedding every tenth layer and bottom most layer in masonry or concrete after making necessary chases of size 75x75mm and by providing layer of 75mm thick strips i/c 12mm thick bed of cement mortar 1:3 (1 Cement : 3 coarse sand) i/c ruled pointing in cement mortar 1:2 (1 white cement : 2 stone dust) with an admixture of pigment to match the shade of stone complete as per direction of Engineer-in-charge.	sqm	1670.00
26.15	Stone work (machine cut edges) for wall lining upto 10 m height etc. (Veneer work) backing filled with a grout of 12mm thick cement mortar 1:3 (1 Cement : 3 coarse sand) and jointed with Cement mortar 1:2 (1 cement : 2 stone dust) including rubbing and polishing complete. (To be secured to the backing by means of cramps which shall be paid for separately)		
26.15.1	Kota stone slabs exposed face dressed and rubbed.		
26.15.1.1	25 mm thick.	sqm	1700.00
26.16	Stone tile work for wall lining upto 10 m height with special adhesive over 12mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in white cement with an admixture of pigment to match the stone shade.		
26.16.1	8mm thick (mirror polished and machine cut edge)		
26.16.1.1	Granite stone of any colour and shade.	sqm	1720.00
26.16.1.2	Raj Nagar plain white marble/ Udaipur green marble/ Zebra black marble.	sqm	1530.00
26.17	Extra for stone work for wall lining on exterior walls of height more than 10 m from ground level for every additional height of 3 m or part there of.	sqm	62.50
26.18	Providing and fixing dry cladding upto 10 metre heights with 30mm thick gang saw cut stone with (machine cut edges) of uniform colour and size upto 1mx1m, fixed to structural steel frame work and/ or with the help of cramps, pins etc. and sealing the joints with approved weather sealant as per Architectural drawing and direction of Engineer-in-charge. (The steel frame work, stainless steel cramps and pins etc. shall be paid for separately.)		
26.18.1	Red sand stone.	sqm	2180.00
26.18.2	White sand stone	sqm	2370.00
26.19	Providing and fixing structural steel frame (for dry cladding with 30 mm thick gang saw cut with machine cut edges sand stone) on walls at all heights using M.S. square/ rectangular tube in the required pattern as per architectural drawing including cost of cutting, bending, welding etc. The frame work shall be supported in wall with the help of MS brackets/ lugs of angle iron/ flats etc. which shall be welded to the frame and embedded in brick wall with cement concrete block 1:2:4 (1 cement :2 coarse sand :4 graded stone aggregate 20mm nominal size) of size 300x230x300mm including cost of necessary centring and shuttering and with approved expansion hold fasteners on CC/RCC surface including drilling necessary holes. Approved cramps/ pins etc. shall be welded to the frame work to support stone cladding the steel work will be given a		

Code No	Description	Unit	Rate Rs.
	priming coat of "ZINC" primer as approved by Engineer-in-charge and painted with two or more coats of epoxy paint (Shop drawings shall be submitted by the contractor to the Engineer-in-charge for approval before execution). The frame work shall be fixed in true horizontal & vertical lines/planes. (Only structural steel frame work shall be measured for the purpose of payment, stainless steel cramps shall be paid for separately and nothing extra shall be paid.)	kg	118.00
26.20	Providing and fixing adjustable stainless steel cramps of approved quality and of required shape and size adjustable with stainless steel nuts bolts and washer (total weight not less than 260 gms) for dry stone cladding fixed on frame work at suitable location including making necessary recesses in stone slab, drilling required holes etc complete as per direction of the Engineer-in-charge.	each	211.00
26.21	Providing and fixing single paitam (rebated) stone doors windows and ventilator frames of approved quarry in cement sand mortar 1:4:		
26.21.1	size 75x75 mm	metre	121.00
26.21.2	size 100x60 mm	metre	121.00
26.21.3	size 100x75 mm	metre	127.00
26.21.4	size 125x100 mm	metre	134.00
26.22	Providing and fixing double paitam (rebated) stone doors windows and ventilator frames of approved quality in cement sand mortar 1:4:		
26.22.1	size 100x75 mm	metre	134.00
26.22.2	size 125x100 mm	metre	140.00

27.0 MARBLE WORK

Code No	Description	Unit	Rate Rs.
27.1	Providing and fixing Marble stone flooring table rubbed, 15-18 mm thick over 20mm (Av.) thick base of CM 1:4 (1 cement : 4 coarse sand) or slab in wal, steps, pillars, counters, jambs, shelves, sills etc laid over 12mm (Av.) thick base of CM 1:3 (1 cement : 3 coarse sand), jointing with white cement mortar 1:2 (1 white cement : 2 marble dust) with pigment to match the shade of the marble slab including grinding, rubbing and polishing complete.		
27.1.1	Makrana 'Adanga'.		
27.1.1.1	Upto to 1500 Cm ² Tiles	sqm	1390.00
27.1.1.2	1501 Cm ² to 3600 Cm ² Tiles	sqm	1520.00
27.1.1.3	Above 3601 Cm ² Slabs	sqm	1970.00
27.1.2	Rajnagar 1st quality/Ageria with light spots.		
27.1.2.1	Upto to 1500 Cm ² Tiles	sqm	1110.00
27.1.2.2	1501 Cm ² to 3600 Cm ² Tiles	sqm	1320.00
27.1.2.3	Above 3601 Cm ² Slabs	sqm	1640.00
27.1.3	Keseriaji/ Abu Ambaji (Green Marble)		
27.1.3.1	Upto to 1500 Cm ² Tiles	sqm	1390.00
27.1.3.2	1501 Cm ² to 3600 Cm ² Tiles	sqm	1520.00
27.1.3.3	Above 3601 Cm ² Slabs	sqm	1970.00
27.1.4	Bhaislana, Abu, Kishangarh Zebra (Black Marble)		
27.1.4.1	Upto to 1500 Cm ² Tiles	sqm	1220.00
27.1.4.2	1501 Cm ² to 3600 Cm ² Tiles	sqm	1320.00
27.1.4.3	Above 3601 Cm ² Slabs	sqm	1720.00
27.2	Providing and fixing Granite stone slab mirror polished and machine edge cut in walls, pillars, steps, Shelves, Sills Counters, Floors etc. laid on 12mm (Av.) thick base of cement mortar 1:3 (1 cement : 3 coarse sand) jointing with white cement mortar 1:2 (1 white cement : 2 marble dust) with pigment to match the shade of the marble slab including grinding, rubbing and polishing complete.		
27.2.1	Jhunjhunu / Jalore (Red / Chocolate Colour)		
27.2.1.1	Upto to 1500 Cm ² Tiles	sqm	1920.00
27.2.1.2	1501 Cm ² to 3600 Cm ² Tiles	sqm	2870.00
27.2.1.3	Above 3601 Cm ² Slabs	sqm	3440.00
27.2.2	South (Red)		
27.2.2.1	Upto to 1500 Cm ² Tiles	sqm	2270.00
27.2.2.2	1501 Cm ² to 3600 Cm ² Tiles	sqm	2940.00

Code No	Description	Unit	Rate Rs.
27.2.2.3	Above 3601 Cm ² Slabs	sqm	4800.00
27.2.3	Green / Black		
27.2.3.1	Upto to 1500 Cm ² Tiles	sqm	2170.00
27.2.3.2	1501 Cm ² to 3600 Cm ² Tiles	sqm	3190.00
27.2.3.3	Above 3601 Cm ² Slabs	sqm	5450.00
27.3	Extra for providing edge moulding to 15-18mm thick marble/ Granite stone counters, Vanities etc. including machine polishing to edge to give high gloss finish etc. complete as per design approved by Engineer-in-Charge.		
27.3.1	Marble work	metre	117.00
27.3.2	Granite Work	metre	200.00
27.4	Extra for fixing marble /granite stone over and above corresponding basic item, in facia and drops of width upto 150 mm with epoxy resin based adhesive including cleaning etc. complete	metre	24.00
27.5	Extra for providing opening of required size & shape for wash basins/ kitchen sink in kitchen platform, vanity counters and similar location in marble/Granite/stone work including necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete	each	242.00
27.6	Extra for Mirror polishing on marble work where ever required to give high gloss finish complete.	sqm	95.00
27.7	Extra in marble flooring work for upto 50 mm wide strip of Green/White/ Jaisalmer stone in flooring work as per direction of Engineer in Charge	metre	40.50
27.8	Providing and fixing cramps of required size & shape in RCC/ CC backing with cement mortar 1:2 (1 cement :2 coarse sand) including drilling necessary hole in stones and embedding the cramp in the hole .		
27.8.1	Gun Metal cramp	kg	566.00
27.8.2	Stainless steel cramps	kg	619.00
27.9	Providing and fixing expansion hold fasteners on C.C. /R.C.C. surface backing including drilling necessary holes and the cost of bolt etc complete.		
27.9.1	Wedge expansion type		
27.9.1.1	Fastener with threaded dia 6 mm.	each	25.50
27.9.1.2	Fastener with threaded dia 10 mm.	each	26.00
27.9.1.3	Fastener with threaded dia 12 mm.	each	46.00
27.10	Providing and fixing stone slab table rubbed, edges rounded and polished of size 75x50 cm deep and 1.8 cm thick fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.		

Code No	Description	Unit	Rate Rs.
27.10.1	White Agaria Marble Stone.	sqm	1320.00
27.10.2	Granite Stone of approved shade.	sqm	2800.00
27.11	Providing and fixing 1st quality standard white, grey, ivory, fume red brown, light green, light blue and other light shades glazed tiles confirming to IS : 13753 & IS :15622 of size 200mm x 300mm in walls, floors, steps, pillars etc. laid on a bed of neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (excluding the cost of cement plaster on walls and pillar).	sqm	679.00
27.12	Providing and fixing 1st quality MAT finished ceramic tile size 300x300mm confirming to IS : 13755 and IS : 15622 colour such as white, grey, ivory, fume red brown, light green, light blue and other light shades in floors, steps, pillars etc. laid on a bed of neat cement slurry finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (including the cost of cement mortar bed 1:4).	sqm	660.00
27.13	Extra for using Marble printed / Granite shade or dark shade tiles instead of white, grey, ivory, fume red brown, light green, light blue and other light shades in glazed tiles and MAT finished tiles.	percent	10.00
27.14	Extra for using size above 200x300mm in glazed tiles and for using 400mm x 400mm MAT finished tiles in place of 300mm x 300mm size.	percent	10.00
27.15	Providing and fixing 75 mm wide Decorative Border in different shades and in all colours in glazed tiles laid over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white mixed with pigment of matching shade complete.	metre	292.00
27.16	Providing and fixing Motive pieces all colours for glazed tiles laid over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3 kg per sqm including pointing in white mixed with pigment of matching shade complete..		
27.16.1	Size 200 x 200mm	each	146.00
27.16.2	Size 200 x 300mm	each	171.00
27.17	P & F 1st quality Vitrified Porcelain Polished tiles on floor, skirting and steps etc.in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08% and conforming to IS 15622 of approved make in all colour and shade, laid with 20 mm thick CM 1 : 4 including grouting the joints with white cement and matching pigment etc complete.		
27.17.1	Size 450 mm X 450 mm	sqm	1220.00
27.17.2	Size 600 mm X 600 mm	sqm	1250.00
27.17.3	Size 800mm X 800 mm	sqm	1440.00
27.18	Providing and fixing 1st quality ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades with water absorption less than or equal to 0.08% confirming to IS : 13753 & IS : 15622 in floor, steps etc laid		

Code No	Description	Unit	Rate Rs.
	on bed on neat cement slury finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (excluding the the cost of cement plaster on wall and pillar)		
27.18.1	Size 600mm x 600mm	sqm	1310.00
27.18.2	Size 800mm x 800mm	sqm	1380.00
27.18.3	Size 600mm x 1200mm	sqm	1600.00
27.18.4	Size 800mm x 1200mm	sqm	2010.00
27.18.5	Size 896mm x 1215mm	sqm	2010.00
27.18.6	Size 1000mm x 2000mm	sqm	4230.00
27.19	Providing and fixing 1st quality MAT & GLOSSY finished ceramic tiles colour such as standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades with water absorbtion less than or equal to 0.08% confirming to IS : 13753 & IS : 15622 in floor, steps etc laid on bed on neat cement slury finished with flush pointing in the white cement mixed with pigment to match the shade of the tile complete (including the the cost of cement mortar bed 1:4)		
27.19.1	Size 250mm x 375mm	sqm	770.00
27.19.2	Size 300mm x 450mm	sqm	862.00
27.19.3	Size 200mm x 600mm	sqm	921.00
27.19.4	Size 300mm x 600mm	sqm	959.00
27.19.5	Size 250mm x 1000mm	sqm	1170.00
27.20	Providing and fixing 1st quality Vitrified Polished tiles in all colours and shades with water absorbtion less than or equal to 0.08% confirming to IS : 15622 on floor, skirting, steps etc laid with 20mm thick CM 1:4 including grouting the joints with white cement mixed with pigment to match the shade of the tile complete (excluding the the cost of cement mortar bed 1:4)		
27.20.1	Size 800mm x 800mm	sqm	1470.00
27.20.2	Size 800mm x 1200mm	sqm	2100.00
27.21	Providing and fixing 1st quality Heavy duty Vitrified Polished Digital tiles in all colours and shades with water absorbtion less than or equal to 0.08% confirming to IS : 15622 on floor, skirting, steps etc laid with 20mm thick CM 1:4 including grouting the joints with white cement mixed with pigment to match the shade of the tile complete (excluding the the cost of cement mortar bed 1:4)		
27.21.1	Size 298mm x 298mm	sqm	746.00
27.22	Extra for Fixing glazed/ Ceramic/ Vitrified floor tiles with cement based high polymer modified quick-set tile adhesive (Water based) conforming to IS: 15477 , using 5kg. adhesive per cum of tile area, in average 3mm thickness instead of cement mortar.	sqm	195.00

28.0 WOOD AND PVC WORK

Code No	Description	Unit	Rate Rs.
28.1	Providing & fixing door, window, chowkhats and other frames, including antitermite treatment, M.S. flat, hold fasts of size 250 x 40 x 3mm fixed with M.S. bolt 5mm dia 50mm long duly embedded in cement concrete M-15 grade :		
28.1.1	Second class teak wood	cum	89000.00
28.1.2	Sal wood	cum	67200.00
28.1.3	Kiln seasoned and chemically treated Hollock wood.	cum	57000.00
28.1.4	Sheesham wood Grade - I.	cum	100400.00
28.1.5	Nigeria teak wood Grade - I.	cum	111300.00
28.1.6	Ghana teak wood Grade - I.	cum	112600.00
28.1.7	Ivory coast wood Grade I	cum	133600.00
28.2	Providing laminated veneer lumber conforming to IS:14616 and TAD -15: 2001(Part B) in factory made frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position as per directions of Engineer-in-charge.	cum	87900.00
28.3	Supplying and fixing wood work in frames of wall panelling, false ceiling partition wall etc. as per approved design and drawing including antitermite treatment.		
28.3.1	Sal wood	cum	61200.00
28.3.2	Kiln seasoned and chemically treated Hollock wood.	cum	50900.00
28.3.3	Chir wood	cum	48900.00
28.4	Extra for additional labour in frames for circular members such as in fan lights, staircase railing etc.:		
28.4.1	Second class teak wood	cum	8900.00
28.4.2	Sal wood	cum	6720.00
28.4.3	Kiln seasoned and chemically treated Hollock wood.	cum	5700.00
28.5	Providing and fixing fully panelled/partly panelled/ double leaf shutter frame for doors as per approved design and drawings with approved ordinary C.P./ oxidised steel fittings as per Annexure - 'A' and width of styles & top rails of 100mm and lock rails width of 150mm and bottom rails of 200mm width including teak wood beading of size 19mm x 12mm on both faces complete :		
28.5.1	35 mm thick		
28.5.1.1	Nigeria wood grade I	sqm	2870.00
28.5.1.2	Ghana wood grade I	sqm	2900.00
28.5.1.3	Shesham wood grade I	sqm	2630.00
28.5.1.4	Ivory coast wood grade I	sqm	3370.00
28.5.2	30 mm thick		
28.5.2.1	Nigeria wood grade I	sqm	2570.00
28.5.2.2	Ghana wood grade I	sqm	2590.00

Code No	Description	Unit	Rate Rs.
28.5.2.3	Shesham wood grade I	sqm	2360.00
28.5.2.4	Ivory coast wood grade I	sqm	3000.00
28.6	Providing and fixing fully panelled /partly panelled double leaf shutters frame for windows and ventilators as per approved design and drawings with approved steel fittings as per Annexure 'A' and width of styles, bottom and top rails 75mm including intermediate rails 50mm wide, beading of 25mm x 15mm size on both faces :		
28.6.1	35 mm thick		
28.6.1.1	Nigeria wood grade I	sqm	2010.00
28.6.1.2	Ghana wood grade I	sqm	2030.00
28.6.1.3	Shesham wood grade I	sqm	1860.00
28.6.1.4	Ivory coast wood grade I	sqm	2310.00
28.6.2	30 mm thick		
28.6.2.1	Nigeria wood grade I	sqm	1840.00
28.6.2.2	Ghana wood grade I	sqm	1860.00
28.6.2.3	Shesham wood grade I	sqm	1710.00
28.6.2.4	Ivory coast wood grade I	sqm	2110.00
28.6.3	25 mm thick		
28.6.3.1	Nigeria wood grade I	sqm	1680.00
28.6.3.2	Ghana wood grade I	sqm	1690.00
28.6.3.3	Shesham wood grade I	sqm	1570.00
28.6.3.4	Ivory coast wood grade I	sqm	1910.00
28.7	Providing and fixing wood panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (Area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled and glazed shutter 25 mm to 40 mm thick		
28.7.1	Wood panel		
28.7.1.1	Nigeria wood Grade I	sqm	2300.00
28.7.1.2	Ghana wood grade I	sqm	2320.00
28.7.1.3	Shesham wood grade I	sqm	2100.00
28.7.1.4	Ivory coast wood grade I	sqm	2700.00
28.7.2	Ply wood IS : 710- 1976 marked		
28.7.2.1	9 mm thick commerical ply	sqm	1120.00
28.7.2.2	9 mm thick Teak ply BWR one side	sqm	1450.00
28.7.2.3	9 mm thick Teak ply BWR both side	sqm	1680.00
28.7.2.4	12 mm thick commerical ply	sqm	1140.00
28.7.2.5	12 mm thick Teak ply BWR one side	sqm	1710.00
28.7.2.6	12 mm thick Teak ply BWR both side	sqm	1960.00

Code No	Description	Unit	Rate Rs.
28.7.2.7	12 mm thick Plain particle board flat pressed, 3 layer or graded wood particle board medium density Grade I, IS : 3087 marked.	sqm	876.00
28.7.2.8	12 mm thick Veneered flat pressed three layer or graded wood particle board with commercial veneering on both sides conforming to IS:3097, grade I.	sqm	1240.00
28.7.2.9	12 mm thick Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side, Grade I, Type II IS:12823 marked.	sqm	1330.00
28.7.2.10	12 mm thick Pre-laminated particle board with decorative lamination on both sides, Grade I, Type II, IS:12823 marked.	sqm	1380.00
28.7.3	Wire gauge		
28.7.3.1	GI wire gauge 24 gauge 14 mesh of IS 1568-1970 marked 85 gauge of dia 0.56 mm	sqm	750.00
28.7.3.2	SS wire gauge 14 mesh x 24 gauge	sqm	908.00
28.7.4	Float glass		
28.7.4.1	4 mm thick	sqm	905.00
28.7.4.2	5 mm thick	sqm	1160.00
28.7.4.3	8 mm thick	sqm	1490.00
28.8	Providing and fixing wall panelling on existing wood frame as per specification and drawing using :		
28.8.1	6 mm teak ply one side BWR ISI marked	sqm	951.00
28.8.2	9 mm teak ply one side BWR ISI marked	sqm	1160.00
28.8.3	12 mm thick Acoustical Board	sqm	978.00
28.8.4	12 mm thick one side laminated board Practical board (Phenol bonded)	sqm	1220.00
28.9	Extra for providing movable/ fixed Nigeria / Ghana /Ivory Teak wood grade - I louvers instead of wooden panels in column No.4 for Nigeria / Ghana/Ivory Teak wood door shutters.	percent	10.00
28.10	Providing Single leaf shutter instead of double leaf.	percent	20.00
28.11	Add extra for etching work in glass work as per direction of engineer incharge (Area of opening for glass panes excluding portion inside rebate shall be measured)	percent	20.00
28.12	Providing and fixing panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25 mm to 40 mm thick. Coir veneer board (conforming to IS : 14842-2000) :		
28.12.1	12 mm thick	sqm	1530.00
28.13	Providing and fixing glazed shutters for doors, windows and clerestory windows using 4 mm thick float glass panes including black enamelled ISI marked M.S butt hinges with necessary screws.		
28.13.1	Second class teak wood		
28.13.1.1	35 mm thick	sqm	3050.00
28.13.1.2	30 mm thick	sqm	2760.00
28.13.2	Kiln seasoned and chemically treated Hollock wood		

Code No	Description	Unit	Rate Rs.
28.13.2.1	35 mm thick	sqm	2240.00
28.13.2.2	30 mm thick	sqm	2060.00
28.14	Providing and fixing factory made laminated veneer lumber glazed shutter conforming to IS : 14616 and TADS 15:2001 (Part B) , using 4mm thick float glass panes for doors, windows and clerestory windows including ISI marked black enamelled M.S butt hinges with necessary screws as per directions of Engineer-in-charge		
28.14.1	30 mm thick shutters	sqm	1990.00
28.15	Extra for providing heavy sheet float glass panes instead of ordinary float glass in glazed doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured)		
28.15.1	5.5 mm thick instead of 4 mm thick.	sqm	218.00
28.16	Extra for providing frosted glass panes 4 mm thick instead of ordinary float glass panes 4 mm thick in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	12.00
28.17	Deduct for providing pin headed glass panes instead of ordinary float glass panes weighing 4 mm thick in doors, windows and clerestory windows, shutters (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	91.00
28.18	Extra for providing ISI marked Stainless Steel butt hinges instead of black enamelled M.S. butt hinges with necessary screws. (Shutter area to be measured).	sqm	103.00
28.19	Deduct if fixed shutters (without hinges) are provided instead of openable shutters for doors, windows or clerestory windows with :		
28.19.1	Stainless steel butt hinges with stainless steel screws :		
28.19.1.1	For 2nd class teak wood and other inferior class of wood shutters.	sqm	152.00
28.19.2	Black enamelled M.S. butt hinges with necessary screws.		
28.19.2.1	For 2nd class teak wood and other inferior class of wood shutters.	sqm	48.50
28.20	Providing and fixing 25 mm thick shutters for cup board etc. :		
28.20.1	Panelled or panelled & glazed shutters :		
28.20.1.1	Second class teak wood including ISI marked anodised aluminium butt hinges with necessary screws.	sqm	2610.00
28.20.2	Glazed shutters :		
28.20.2.1	Second class teak wood including ISI marked SS butt hinges with necessary screws.	sqm	2520.00
28.21	Providing and fixing flat pressed 3 layer particle board medium density exterior grade (Grade I) or graded wood particle board IS : 3087 marked to frame, backing or studding with screws etc. complete (Frames, backing or studding to be paid separately) :		
28.21.1	12 mm thick	sqm	453.00
28.21.2	18 mm thick	sqm	593.00
28.22	Providing and fixing Pre-laminated flat pressed 3 layer (medium density) particle board or graded wood particle board IS : 3087 marked with one side decorative and other side balancing lamination Grade I, Type II exterior grade IS : 12823 marked in shelves with		

Code No	Description	Unit	Rate Rs.
	screws and fittings wherever required, edges to be painted with polyurethane primer (fittings to be paid separately).		
28.22.1	18 mm thick	sqm	1020.00
28.22.2	25 mm thick	sqm	1340.00
28.23	Providing and fixing 25 mm thick shutters for cupboards etc. including ISI marked black enamelled M.S. butt hinges with necessary screws :		
28.23.1	Panelled or panelled and glazed shutters		
28.23.1.1	Second class teak wood	sqm	2480.00
28.23.2	Glazed shutters		
28.23.2.1	Second class teak wood	sqm	2510.00
28.24	Providing and fixing external grade board solid core single leaf flush door shutters ISI 2202-67 marked using Phenol formal dehyderesin in glue both sides including approved ISI marked Stainless Steel butt hinges fittings with necessary screws complete as per annexure 'A' :		
28.24.1	25 mm thick		
28.24.1.1	Commercial Veneer both side	sqm	1530.00
28.24.1.2	Decorative teak veneer One side	sqm	1530.00
28.24.1.3	Decorative teak veneer both side	sqm	2260.00
28.24.2	30 mm thick		
28.24.2.1	Commercial Veneer both side	sqm	1530.00
28.24.2.2	Decorative teak veneer One side	sqm	1590.00
28.24.2.3	Decorative teak veneer both side	sqm	2440.00
28.24.3	35 mm thick		
28.24.3.1	Commercial Veneer both side	sqm	1590.00
28.24.3.2	Decorative teak veneer One side	sqm	1890.00
28.24.3.3	Decorative teak veneer both side	sqm	2560.00
28.25	Extra for Providing and fixing flush doors with decorative veneering		
28.25.1	On one side	sqm	411.00
28.26	Extra for providing lipping with 2nd class teak wood battens 25 mm minimum depth on all edges of shutters (over all area of door shutter to be measured)	sqm	351.00
28.27	Extra for providing vision panel not exceeding 0.1 sqm in all type of flush doors (cost of glass excluded) (overall area of door shutter to be measured) :		
28.27.1	Rectangular or square.	sqm	169.00
28.27.2	Circular.	sqm	182.00
28.28	Extra if louvers (not exceeding 0.2 sqm) are provided in flush door shutters (overall area of door shutters to be measured).		
28.28.1	Decorative type door.	sqm of door area	393.00
28.29	Extra for cutting rebate in flush door shutters (Total area of the shutter to be measured).	sqm of door area	133.00
28.30	Providing and fixing 35mm thick wire gauze shutters using		

Code No	Description	Unit	Rate Rs.
	galvanised M.S. wire gauze of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked bright finished or/and black enamelled M.S. butt hinges with necessary screws :		
28.30.1	Second class teak wood.	sqm	2880.00
28.30.2	Kiln seasoned and chemically treated Hollock wood.	sqm	2160.00
28.31	Providing and fixing 35mm thick wire gauze shutters using galvanised M.S. wire gauze of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked stainless steel butt hinges with necessary screws :		
28.31.1	Second class teak wood.	sqm	2980.00
28.31.2	Kiln seasoned and chemically treated Hollock wood.	sqm	2260.00
28.32	Providing and fixing 30mm thick wire gauge shutters using galvanised M.S. wire gauge of average width of aperture 1.4mm with wire of dia. 0.63 mm for doors, windows and clerestory windows including ISI marked Stainless Steel butt hinges with necessary screws :		
28.32.1	Second class teak wood.	sqm	2600.00
28.32.2	Kiln seasoned and chemically treated Hollock wood.	sqm	1980.00
28.33	Providing and fixing 30mm thick wire gauze shutters using galvanised M.S. wire gauze of average width of aperture 1.4mm with wire of dia 0.63 mm for doors, windows and clerestory windows including ISI marked bright finished or /and black enamelled M.S. butt hinges with necessary screws :		
28.33.1	Second class teak wood.	sqm	2550.00
28.33.2	Kiln seasoned and chemically treated Hollock wood.	sqm	1930.00
28.34	Providing and fixing wire gauze laminated veneer lumber shutters conforming to IS : 14616, and as per TADS 15 :2001 (Part B) using galvanised wire gauze with average width of aperture 1.4mm in both directions with wire of dia 0.63mm as per IS :1568 for doors, windows and clerestory windows including ISI marked bright finished or/ and black enamelled M.S. butt hinges with necessary screws as per directions of Engineer-in-charge:		
28.34.1	35 mm thick shutters	sqm	2040.00
28.34.2	30 mm thick shutters	sqm	1810.00
28.35	Providing 50x50x50mm 2nd class teak wood plugs including cutting brick work and fixing in cement mortar 1:3 (1 cement : 3 fine sand) and making good the walls etc.	each	21.00
28.36	Providing and fixing expandable fasteners of specified size with necessary plastic sleeves and galvanised M.S. screws including drilling holes in masonry work /CC/ R.C.C. and making good etc. complete.		
28.36.1	25 mm long	each	12.00
28.36.2	32 mm long	each	14.00
28.36.3	40 mm long	each	17.50
28.36.4	50 mm long	each	19.00
28.37	Providing and fixing 2nd class teak wood plain lining tongued and		

Code No	Description	Unit	Rate Rs.
	grooved on and including wooden plugs complete with necessary screws and priming coat on unexposed surface.		
28.37.1	40 mm thick.	sqm	4610.00
28.37.2	25 mm thick.	sqm	3010.00
28.37.3	20 mm thick	sqm	2300.00
28.37.4	12 mm thick	sqm	1510.00
28.38	Providing and fixing in wall lining flat pressed three layer (medium density) particle board or graded wood Pre-laminated one side decorative lamination on other side balancing lamination Grade I, Type II, IS : 12823 marked including priming coat on unexposed surface, with necessary fixing arrangement and screws etc. complete :		
28.38.1	12 mm thick	sqm	968.00
28.38.2	18 mm thick	sqm	1120.00
28.38.3	25 mm thick	sqm	1460.00
28.39	Providing and fixing specified wood frame work consisting of battens 50x25mm fixed with rawl plug and drilling necessary holes for rawl plug etc. including priming coat complete.		
28.39.1	Hollock wood.	cum	96200.00
28.40	Providing and fixing plywood 4 mm thick one side decorative veneer conforming to IS: 1328 (type-1) for plain lining / cladding with necessary screws, priming coat on unexposed surface with:		
28.40.1	Decorative veneer facings of approved manufacture.	sqm	1050.00
28.41	Providing and fixing 4mm thick coir veneer board, ISI marked IS : 14842 - 2000, plain lining with necessary screws, priming coat on unexposed surface etc., complete.	sqm	1050.00
28.42	Providing and fixing skirting of Pre-laminated with (one side decorative and other side balancing lamination) flat pressed, 3 layer or graded particle board (medium density) Grade I, Type II, IS :12823 marked, with necessary fixing arrangements and screws including drilling necessary holes for rawl plugs etc. and priming coat on unexposed surface complete :		
28.42.1	18 mm thick	sqm	1260.00
28.42.2	25 mm thick	sqm	1600.00
28.43	Providing and fixing wooden moulded beading to door and window frames with iron screws, plugs and priming coat on unexposed surface etc. complete :		
28.43.1	2nd class teak wood		
28.43.1.1	50x12 mm	metre	123.00
28.43.1.2	50 x 20 mm	metre	158.00
28.43.2	Hollock wood		
28.43.2.1	50x12 mm	metre	102.00
28.43.2.2	50x20 mm	metre	123.00
28.44	Providing and fixing plain jaffri of 35x10 mm laths placed 35 mm apart (frames to be paid separately) including fixing 50x12 mm beading complete with :		

Code No	Description	Unit	Rate Rs.
28.44.1	Second class teak wood.	sqm	1720.00
28.45	Providing and fixing 18 mm thick, 150 mm wide pelmet of flat pressed 3 layer or graded wood particle board medium density grade I, IS : 3087 marked including top cover of 6 mm commercial ply wood conforming to IS: 303 BWR grade, nickel plated M.S. pipe 20 mm dia (heavy type) curtain rod with nickel plated brackets including fixing with 25x3 mm M.S. flat 10 cm long and rawl plugs 50 mm long (designation 10 no.) etc all complete	metre	334.00
28.46	Providing and fixing 18 mm thick, 150 mm wide pelmet of coir veneer board ISI marked IS : 14842 - 2000, including top cover of 6 mm coir veneer board, nickel plated M.S. Pipe 20 mm dia (heavy type) curtain rod with nickel plated brackets including fixing with 25x3 mm M.S. Flat 10 cm long and rawl plug 50 mm long (designation 10 No.) etc., all complete	metre	471.00
28.47	Extra for using veneered particle board conforming to IS 3097 Grade I, in item of pelmet 18mm thick 150mm wide.		
28.47.1	Non decorative veneer on both sides.	metre	24.00
28.47.2	Particle board with decorative veneering on both sides.	metre	87.00
28.48	Providing and fixing teak wood lipping of size 25x3 mm in pelmet.	metre	42.50
28.49	Providing and fixing curtain rods of 1.25 mm thick chromium plated brass plate, with two chromium plated brass brackets fixed with C.P. brass screws and wooden plugs, etc., wherever necessary complete:		
28.49.1	12 mm dia.	metre	226.00
28.49.2	20 mm dia.	metre	262.00
28.49.3	25 mm dia.	metre	432.00
28.50	Providing and fixing nickel plated M.S. pipe curtain rods with nickel plated brackets :		
28.50.1	20 mm dia (heavy type)	metre	69.50
28.50.2	25 mm dia (heavy type)	metre	85.00
28.51	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. all complete.		
28.51.1	Fixed to steel windows by welding.	kg	103.00
28.51.2	Fixed to openings /wooden frames with rawl plugs screws etc.	kg	108.00
28.52	Providing and fixing expanded metal 20x60mm strands 3.25mm wide and 1.6mm thick for windows etc. including 62x19mm beading of IInd class teak wood.	sqm	864.00
28.53	Providing and fixing hard drawn steel wire fabric 75x25 mm mesh of weight not less than 7.75 Kg per sqm to window frames etc. including 62x19 mm beading of second class teak wood.	sqm	1020.00
28.54	Providing and fixing fly proof galvanised M.S. wire gauze to windows and clerestory windows using galvanised M.S. wire gauge with average width of aperture 1.4 mm in both directions with wire of dia. 0.63 mm.		
28.54.1	With 2nd class teak wood beading 62X19 mm.	sqm	718.00
28.54.2	With 12 mm mild steel U beading.	sqm	458.00

Code No	Description	Unit	Rate Rs.
28.55	Deduct for fixing 75x25 mm hard drawn steel wire fabric of weight not less than 7.75 Kg. per sqm in panelled and glazed door and window shutter instead of glass sheet 4 mm thick.	sqm	-157.30
28.56	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embeddings in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size)	each	102.00
28.57	Providing beams including hoisting, fixing in position and applying wood preservative for the unexposed surfaces, etc. complete with :		
28.57.1	Sal wood.	cum	59300.00
28.57.2	Hollock wood.	cum	48200.00
28.58	Providing and fixing ISI marked M.S. pressed butt hinges bright finished with necessary screws etc. complete :		
28.58.1	125x65x2.12 mm	each	33.00
28.58.2	100x58x1.90 mm	each	26.50
28.58.3	75x47x1.70 mm	each	21.50
28.58.4	50x37x1.50 mm	each	11.50
28.59	Providing and fixing IS : 1341 marked M.S. heavy weight butt hinges with necessary screws etc. complete :		
28.59.1	125x90x4.00 mm	each	42.00
28.59.2	100x75x3.50 mm	each	34.00
28.59.3	75x60x3.10 mm	each	24.50
28.59.4	50x40x2.50 mm	each	14.00
28.60	Providing and fixing ISI marked oxidised M.S. pressed butt hinges with necessary screws etc. complete.		
28.60.1	125x65x2.12 mm	each	30.50
28.60.2	100x58x1.90 mm	each	26.00
28.60.3	75x47x1.70 mm	each	21.00
28.60.4	50x37x1.50 mm	each	10.50
28.61	Providing and fixing ISI marked oxidised M.S. pressed Parliamentary hinges with necessary screws etc. complete :		
28.61.1	150x125x27x2.50 mm	each	58.50
28.61.2	125x125x27x2.50 mm	each	51.00
28.61.3	100x125x27x2.50 mm	each	43.50
28.61.4	75x100x20x2.24 mm	each	36.00
28.62	Providing and fixing ISI marked oxidised M.S. single acting spring hinges with necessary screws etc. complete :		
28.62.1	150 mm	each	144.00
28.62.2	125 mm	each	134.00
28.62.3	100 mm	each	119.00
28.63	Providing and fixing oxidised M.S. double acting spring hinges with necessary screws etc. complete.		
28.63.1	150 mm	each	146.00

Code No	Description	Unit	Rate Rs.
28.63.2	125 mm	each	138.00
28.63.3	100 mm	each	121.00
28.64	Providing M.S. Piano hinges ISI marked IS : 3818 finished with nickel plating and fixing with necessary screws etc., complete.		
28.64.1	Overall width 35 mm.	metre	156.00
28.64.2	Overall width 50 mm.	metre	160.00
28.64.3	Overall width 65 mm.	metre	166.00
28.65	Providing and fixing ISI marked oxidised M.S. sliding door bolts with nuts and screws etc. complete :		
28.65.1	300x16 mm	each	121.00
28.65.2	250x16 mm	each	102.00
28.66	Providing and fixing ISI marked oxidised M.S. tower bolt black finish, (Barrel type) with necessary screws etc. complete :		
28.66.1	250x10 mm	each	45.50
28.66.2	200x10 mm	each	38.50
28.66.3	150x10 mm	each	34.00
28.66.4	100x10 mm	each	28.00
28.67	Providing and fixing ISI marked 85x42mm oxidised M.S. pull bolt lock conforming to IS : 7534 with necessary screws bolts, nut and washers etc. complete.	each	62.00
28.68	Providing and fixing ISI marked oxidised M.S. door latches conforming to IS:5930 with screws etc. complete :		
28.68.1	300x20x6 mm	each	51.00
28.68.2	250x20x6 mm	each	45.00
28.69	Providing and fixing ISI marked oxidised M.S. handles conforming to IS:4992 with necessary screws etc. complete :		
28.69.1	125 mm	each	16.00
28.69.2	100 mm	each	14.00
28.69.3	75 mm	each	11.50
28.70	Providing and fixing oxidised M.S. hasp and staple (safety type) conforming to IS : 363 with necessary screws etc. complete :		
28.70.1	150 mm	each	18.00
28.70.2	115 mm	each	15.50
28.70.3	90 mm	each	13.00
28.71	Providing and fixing oxidised M.S. casement stays (straight peg type) with necessary screws etc. complete.		
28.71.1	300 mm weighing not less than 200 gms.	each	28.50
28.71.2	250 mm weighing not less than 150 gms.	each	24.50
28.71.3	200 mm weighing not less than 120 gms.	each	23.50
28.72	Providing and fixing oxidised M.S. Safety chain with necessary fixtures for doors. (Weighing not less than 450 gms.)	each	79.50
28.73	Providing and fixing IS : 12817 marked stainless steel butt hinges with stainless steel screws etc. complete :		

Code No	Description	Unit	Rate Rs.
28.73.1	125x64x1.90 mm	each	65.00
28.73.2	100X58X1.90 mm	each	52.00
28.73.3	75x47x1.80 mm	each	39.00
28.73.4	50x37x1.50 mm	each	24.50
28.74	Providing and fixing IS : 12817 marked stainless steel butt hinges (heavy weight) with stainless steel screws etc. complete :		
28.74.1	125x64x2.50 mm	each	74.50
28.74.2	100x60x2.50 mm	each	59.50
28.74.3	75x50x2.50 mm	each	44.50
28.75	Providing and fixing bright finished brass butt hinges with necessary screws etc. complete :		
28.75.1	125x85x5.5 mm (heavy type)	each	214.00
28.75.2	125x70x4 mm (ordinary type)	each	110.00
28.75.3	100x85x5.5 mm (heavy type)	each	169.00
28.75.4	100x70x4 mm (ordinary type)	each	76.50
28.75.5	75x65x4 mm (heavy type)	each	95.50
28.75.6	75x40x2.5 mm (ordinary type)	each	48.50
28.75.7	50x40x2.5 mm (ordinary type)	each	23.00
28.76	Providing and fixing bright finished brass parliamentary hinges with necessary screws etc. complete :		
28.76.1	150x125x27x5 mm	each	273.00
28.76.2	125x125x27x5 mm	each	249.00
28.76.3	100x125x27x5 mm	each	212.00
28.76.4	75x100x20x3.2 mm	each	170.00
28.77	Providing and fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete :		
28.77.1	250x10 mm	each	217.00
28.77.2	200x10 mm	each	177.00
28.77.3	150x10 mm	each	141.00
28.77.4	100x10 mm	each	101.00
28.78	Providing and fixing bright finished brass door latch with necessary screws etc. complete :		
28.78.1	300x16x5 mm	each	151.00
28.78.2	250x16x5 mm	each	145.00
28.79	Providing and fixing bright finished brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	579.00
28.80	Providing and fixing bright finished brass 100 mm mortice latch with one dead bolt and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	470.00
28.81	Providing and fixing bright finished brass night latch including necessary screws etc. complete (best make of approved quality).	each	640.00

Code No	Description	Unit	Rate Rs.
28.82	Providing and fixing special quality bright finished brass cupboard or wardrobe locks with four levers including necessary screws etc. complete (best make of approved quality) :		
28.82.1	40 mm	each	170.00
28.82.2	50 mm	each	180.00
28.82.3	65 mm	each	210.00
28.82.4	75 mm	each	228.00
28.83	Providing and fixing 50 mm bright finished brass cup board or wardrobe knob with necessary screws (best make of approved quality)	each	42.50
28.84	Providing and fixing bright finished brass handles with screws etc. complete :		
28.84.1	125 mm	each	154.00
28.84.2	100 mm	each	142.00
28.84.3	75 mm	each	105.00
28.85	Providing and fixing bright finished brass hanging type floor door stopper with necessary screws, etc. complete.	each	85.50
28.86	Providing and fixing IS : 3564 marked Aluminium die cast body tubular type universal hydraulic door closer with necessary accessories and screws etc. complete.	each	431.00
28.87	Providing and fixing IS : 3564 marked aluminium extruded section body tubular type universal hydraulic door closer with double speed adjustment with necessary accessories and screws etc. complete.	each	1150.00
28.88	Providing and fixing bright finished brass casement window fastener with necessary screws etc. complete.	each	53.00
28.89	Providing and fixing bright finished brass casement stays (straight peg type) with necessary screws etc. complete :		
28.89.1	300 mm weighing not less than 330 gms	each	116.00
28.89.2	250 mm weighing not less than 280 gms	each	95.50
28.89.3	200 mm weighing not less than 240 gms	each	83.50
28.90	Providing and fixing bright finished brass hasp and staple (safety type) with necessary screws etc. complete:		
28.90.1	150 mm	each	87.00
28.90.2	115 mm	each	73.00
28.90.3	90 mm	each	61.00
28.91	Providing and fixing chromium plated brass 100 mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	each	646.00
28.92	Providing and fixing chromium plated brass night latch including necessary screws etc. complete (Best make of approved quality).	each	751.00
28.93	Providing and fixing special quality chromium plated brass cupboard locks with six levers including necessary screws etc. complete (Best make of approved quality) of :		
28.93.1	Size 40 mm	each	169.00
28.93.2	Size 50 mm	each	187.00

Code No	Description	Unit	Rate Rs.
28.93.3	Size 65 mm	each	216.00
28.93.4	Size 75 mm	each	240.00
28.94	Providing and fixing chromium plated brass 50 mm cupboard or wardrobe knobs with nuts complete.	each	51.00
28.95	Providing and fixing chromium plated brass handles with necessary screws etc. complete:		
28.95.1	125 mm	each	160.00
28.95.2	100 mm	each	129.00
28.95.3	75 mm	each	117.00
28.96	Providing and fixing chromium plated brass casement window fastener with necessary screws etc. complete.	each	106.00
28.97	Providing and fixing chromium plated brass casement stays (straight peg type) with necessary screws etc. complete :		
28.97.1	300 mm weighing not less than 330 gms	each	136.00
28.97.2	250 mm weighing not less than 280 gms	each	124.00
28.97.3	200 mm weighing not less than 240 gms	each	106.00
28.98	Providing and fixing ISI marked aluminium butt hinges ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:		
28.98.1	125x75x4 mm	each	122.00
28.98.2	125x63x4 mm	each	102.00
28.98.3	100x75x4 mm	each	88.00
28.98.4	100x63x4 mm	each	79.50
28.98.5	100x63x3.2 mm	each	85.00
28.98.6	75x63x4 mm	each	62.00
28.98.7	75x63x3.2 mm	each	56.00
28.98.8	75x45x3.2 mm	each	47.50
28.99	Providing and fixing aluminium sliding door bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with nuts and screws etc. complete :		
28.99.1	300x16 mm	each	220.00
28.99.2	250x16 mm	each	196.00
28.100	Providing and fixing aluminium tower bolts ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :		
28.100.1	300x10 mm	each	100.00
28.100.2	250x10 mm	each	88.00
28.100.3	200x10 mm	each	76.00
28.100.4	150x10 mm	each	63.50
28.100.5	100x10 mm	each	48.50

Code No	Description	Unit	Rate Rs.
28.101	Providing and fixing aluminium pull bolt lock anodised ISI marked (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws bolts, nut and washers etc. complete.	each	63.00
28.102	Providing and fixing 50cm long aluminium kicking plate 100x3.15 mm anodised (anodic coating not less than grade AC 10 as per IS :1868) transparent or dyed to required colour or shade with necessary screws etc. complete.	each	148.00
28.103	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :		
28.103.1	125 mm	each	52.50
28.103.2	100 mm	each	46.00
28.103.3	75 mm	each	37.50
28.104	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.		
28.104.1	Single rubber stopper	each	28.00
28.104.2	Twin rubber stopper	each	39.00
28.105	Providing and fixing aluminium casement stays ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete.	each	51.00
28.106	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screws etc. complete (Best make of approved quality).	each	590.00
28.107	Providing and fixing aluminium tee channels (heavy duty) with rollers, stop end in pelmets as curtain rod.	metre	52.50
28.108	Providing and fixing partition upto ceiling height consisting of G.I. frame and required board including providing and fixing of frame work made of special section power pressed/ role form G.I. sheet with zinc coating of grade 175 in consisting of floor and ceiling channel 50mm wide having equal flanges of 32mm and 0.5mm thick fixed to the floor and ceiling at the spacing of 610mm centre to centre with dash fastener of 12.5mm diameter 40mm length and the studs 48mm wide having one flange of 34mm and other flange 36mm and 0.50mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610mm centre to centre by 6mm dia bolts and nuts at both ends of partition fixed flush to wall with rawl plugs at spacing of 450mm centre to centre and fixing of boards to either side of frame work by 25mm dry wall screws on studs, floor and ceiling channels at the spacing of 300mm centre to centre, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, joint finisher and two coats of primer suitable for board as per manufacture's specification all complete.		

Code No	Description	Unit	Rate Rs.
28.108.1	67mm overall thickness partition with 8.5mm thick double skin glass reinforced Gypsum board (GRG) conforming to IS: 2095: part III	sqm	1340.00
28.108.2	75mm overall thickness partition with 12.5mm thick double skin plain Gypsum board conforming to IS: 2095: part I	sqm	1210.00
28.108.3	66mm overall thickness Partition with 8mm thick double skin Calcium Silicate Board made with Calcareous & Siliceous materials reinforced with cellulose fibre manufactured through autoclaving process with compressive Strength 225 kg/sq.cm, Bending Strength 100 kg/ sg.cm.	sqm	1340.00
28.108.4	66mm overall thickness partition using 8mm thick double skin non-asbestos multipurpose cement board reinforced with cellulose fibre manufactured through autoclaving process (High pressure steam cured) as per IS: 14862 with suitable fibre cement screw.	sqm	1340.00
28.109	Providing and fixing PTMT handles with necessary screws etc. complete.		
28.109.1	125x34x24 mm weighing not less than 23 gms.	each	35.00
28.109.2	150x34x24 mm weighing not less than 26 gms.	each	35.00
28.110	Providing and fixing PTMT Butt hinges with necessary screws etc. complete.		
28.110.1	75x60x10 mm fitted with 5.5 mm dia M.S. Bright Bar Rod weighing not less than 34 gms.	each	56.50
28.110.2	100x75x10 mm fitted with 5.5 mm dia MS Bright Bar Rod weighing not less than 53 gms.	each	70.50
28.111	Providing and fixing PTMT Tower Bolts with 12 mm one piece rod inside and necessary screws etc., complete.		
28.111.1	152x42x18 mm weighing not less than 60 gms.	each	68.00
28.111.2	202x42x18 mm weighing not less than 78 gms.	each	94.00
28.112	Providing and fixing PTMT door catcher of length 72 mm and dia. of 42 mm with suitable washers weighing not less than 33 gms.	each	33.00
28.113	Providing and fixing Bamboo jaffery/ fencing consisting of superior quality 25mm dia (Average) half cut bamboo placed vertically and fixed together with three numbers horizontal running members of hollock wood in scantling of section 50X25mm fixed with nails and G.I wire to existing surface complete as per direction of Engineer-in-charge.	sqm	382.00
28.114	Providing and fixing wooden moulded corner beading of triangular shape to the junction of panelling etc. with iron screws, plugs and priming coat on unexposed surface etc. complete 2nd class teak wood.		
28.114.1	50x50mm (base and height).	metre	203.00
28.115	Providing and fixing 2nd class teak wood lipping/ moulded beading or Taj beading of size 18X5mm fixed with wooden adhesive of approved quality and screws/ nails on the edges of the Pre-laminated particle board as per direction of Engineer-in-charge.	metre	57.00
28.116	Providing and fixing bright finished 100mm mortice lock with 6 levers without pair of handles for aluminium door with necessary screws etc complete (Best make of approved quality) as per direction of Engineer-in-charge.	each	493.00

Code No	Description	Unit	Rate Rs.
28.117	Providing and fixing magnetic catcher in cupboard / ward robe shutters including fixing with necessary screws etc. complete (Best make of approved quality).		
28.117.1	Triple strip vertical type.	each	27.50
28.117.2	Double strip (horizontal type).	each	20.00
28.118	Providing and fixing powder coated telescopic drawer channels 300mm long with necessary screws etc. complete as per directions of Engineer-in-charge.	each	194.00
28.119	Providing and fixing sliding arrangement in racks/ cupboards/ cabinets shutter by P/F stainless steel rollers to run inside C or E aluminium channel section (The payment of C or E channel shall be made separately)	each	12.00
28.120	Providing and fixing factory made uPVC door frame made of uPVC profile section having an overall dimension as below (tolerance ± 1 mm) with wall thickness 2.0mm ± 0.2 mm, corners of the door frame to be mitred and welded of plastic, galvanized brackets and stainless steel screws. The hinge side vertical of the frames reinforced by galvanized M.S. tube of size 19 X 19mm and 1mm ± 0.1 mm wall thickness and 3 nos. stainless steel hinges fixed to the frame complete as per manufacturers specification and direction of Engineer-in-charge		
28.120.1	Extruded section Profile size 48x40 mm.	metre	193.00
28.120.2	Extruded section Profile size 42x50 mm.	metre	211.00
28.121	Providing and fixing to existing door frames.		
28.121.1	24 mm thick factory made PVC door shutters made of styles and rails of a uPVC hollow section of size 59x24 mm and wall thickness 2 mm ± 0.2 mm with inbuilt edging on both sides. The styles and rails mitred and joined at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 20x20 mm and 1 mm ± 0.1 mm wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x24 mm and 2 mm ± 0.2 mm wall thickness fixed to the shutter styles by means of plastic/ galvanised M.S. 'U' cleats. The shutter frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm ± 0.1 mm wall thickness . The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge. (For W.C. and bathroom door shutter).	sqm	1860.00
28.121.2	30 mm thick factory made Polyvinyl Chloride (PVC) door shutter made of styles and rails of a uPVC hollow section of size 60x30 mm and wall thickness 2 mm ± 0.2 mm with inbuilt decorative moulding edging on one side. The styles and rails mitred and joined at the corners by means of M.S. galvanised/ plastic brackets of size 75x220 mm having wall thickness 1.0 mm and stainless steel screws. The styles of the shutter reinforced by inserting galvanised M.S. tube of size 25x20 mm and 1 mm ± 0.1 mm wall thickness. The lock rail made up of 'H' section, a uPVC hollow section of size 100x30 mm and 2 mm ± 0.2 mm wall thickness fixed to the shutter styles by means of plastic/ galvanised M.S. 'U' cleats. The shutter		

Code No	Description	Unit	Rate Rs.
28.121.2	frame filled with a uPVC multi-chambered single panel of size not less than 620 mm, having over all thickness of 20 mm and 1 mm $\pm$ 0.1 mm wall thickness . The panels filled vertically and tie bar at two places by inserting horizontally 6 mm galvanised M.S. rod and fastened with nuts and washers, complete as per manufacturer's specification and direction of Engineer-in-charge.	sqm	2010.00
28.121.3	25mm thick PVC flush door shutters made out of a one piece Multi chamber extruded PVC section of the size of 762mm X 25mm or less as per requirement with an average wall thickness of 1mm $\pm$ 0.3mm. PVC foam end cap of size 23x10mm are provided on both vertical edges to ensure the overall thickness of 25mm. An M.S. tube having dimensions 19mm x 19mm is inserted along the hinge side of the door. Core of the door shutter should be filled with High Density Polyurethane foam. The Top & Bottom edges of the shutter are covered with an end-cap of the size 25mm X 11mm. Door shutter shall be reinforced with special polymeric reinforcements as per manufactures' specification and direction of Engineer-in-charge to take up necessary hardware and fixtures. Stickers indicating the locations of hardware will be pasted at appropriate places.	sqm	2220.00
28.122	Providing and fixing factory made P.V.C. door frame of size 50x47mm with a wall thickness of 5mm, made out of extruded 5mm rigid PVC foam sheet mitred at corners and joined with 2 Nos. of 150mm long brackets of 15x15mm M.S. square tube, the vertical door profiles to be reinforced with 19x19mm M.S. square tube of 19 gauge, EPDM rubber gasket weather seal to be provided through out the frame. The door frame to be fixed to the wall using M.S. screws of 65/100mm size complete as per manufacturers specification and direction of Engineer-in-Charge.	metre	453.00
28.123	Providing and fixing to existing door frames.		
28.123.1	30mm thick factory made panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top & bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture. M.S. frame covered with 5mm thick heat moulded PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5mm thick both side PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge. Manufacturer's specification & drawing (for W.C. and bathroom door shutter).	sqm	2860.00
28.123.2	30mm thick factory made solid both side Pre-laminated panel PVC door shutter consisting of frame made out of M.S. tubes of 19 gauge thickness and size of 19mm x 19mm for styles and 15x15mm for top		

Code No	Description	Unit	Rate Rs.
	& bottom rails. M.S. frame shall have a coat of steel primers of approved make and manufacture. M.S. frame covered with 5mm thick heat moulded Pre-laminated PVC 'C' channel of size 30mm thickness, 70mm width out of which 50mm shall be flat and 20mm shall be tapered in 45degree angle on either side forming styles; and 5mm thick, 95mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered in 45 degree on the inner side to form top and bottom rail and 115mm wide PVC sheet out of which 75mm shall be flat and 20mm shall be tapered on both sides to form lock rail. Top, bottom and lock rails shall be provided either side of the panel. 10mm (5mm x 2) thick, 20mm wide cross PVC sheet be provided as gap insert for top rail & bottom rail. paneling of 5mm thick both side Pre-laminated PVC sheet to be fitted in the M.S. frame welded/ sealed to the styles & rails with 7mm (5mm+2mm) thick x 15mm wide PVC sheet beading on inner side, and joined together with solvent cement adhesive. An additional 5mm thick PVC strip of 20mm width is to be stuck on the interior side of the 'C' Channel using PVC solvent adhesive etc. complete as per direction of Engineer-in-charge. Manufacturer's specification & drawing (for W.C. and bathroom door shutter).	sqm	3130.00
28.124	Providing and fixing of Fibre Glass Reinforced plastic (FRP) Door Frames of three legged of cross-section 90mm x 45mm having single rebate of 32mm x 15mm to receive shutter of 30mm thickness .The laminate doorframe moulded with fire resistant grade unsaturated polyester resin and chopped mat .Doorframe laminate shall be 2mm thick and shall be filled with suitable wooden block in all the three legs. The frame shall be covered with fibreglass from all sides. MS stat shall be provided at the bottom to sturdy the frame.	metre	429.00
28.125	Providing and fixing to existing door frames.		
28.125.1	30 mm thick Glass Fibre Reinforced Plastic (FRP) panelled door shutter of required colour and approved brand and manufacture, made with fire - retardant grade unsaturated polyester resin, moulded to 3 mm thick FRP laminate for forming hollow rails and styles, with wooden frame and suitable blocks of seasoned wood inside at required places for fixing of fittings, cast monolithically with 5 thick FRP laminate for panels and confirming to IS: 14856 - 2000 including fixing to frames.	sqm	2260.00
28.125.2	30mm thick fibreglass reinforced plastic (F.R.P.) flush door shutter in different plain and wood finish made with fire retardant grade unsaturated polyester resin, moulded to 3mm thick FRP laminate all around, with suitable wooden blocks inside at required places for fixing of fittings and polyurethane foam (PUF) / Polystyrene foam to be used as filler material throughout the hollow panel, casted monolithically with testing parameters of F.R.P. laminate conforming to table - 3 of IS: 14856 : 2000, complete as per direction of Engineer-in-charge.	sqm	2620.00
28.126	Providing and fixing factory made door frame (single rebate) made of solid PVC foam profile with homogenous fine cellular structure having smooth outer integral skin having 60mm width & 30mm thickness and shall be fixed to wall as per instructions of engineer-in-charge using 100x8 sheet metal CSK screws.	metre	381.00
28.127	Providing and fixing 28 mm thick door shutter made of solid PVC foam profile with homogenous fine cellular structure having smooth outer integral skin having 71mm width & 28mm thick as styles and		

Code No	Description	Unit	Rate Rs.
	rails. Joints are made using solvent adhesive and GI 'C' sections (39mm x 19mm x 0.6mm thick) or M S pipe (40mm x 20mm) stiffener frame insert & telescopic polymeric 'L' corners .The panel shall be filled with 3mm thick high - pressure compact laminate as per manufacturer's specifications and direction of Engineer-in-charge, cover moulding shall be provided for covering fixing screws and elegant look.(for W.C. and bathroom door shutter).	sqm	3610.00
28.128	Providing and fixing PVC rigid foam sheet 1mm thick on existing door shutters (bathroom and W.C. doors) using synthetic rubber based adhesive.	sqm	757.00
28.129	Providing and fixing 12mm thick panelling or panelling and glazing in panelled or panelled and glazed shutters for doors, windows and clerestory windows (area of opening for panel inserts excluding portion inside grooves or rebates to be measured). Panelling for panelled or panelled and glazed shutters 25mm to 40mm thick.		
28.129.1	Marine plywood of lamination / painting quality and conforming to IS: 710	sqm	1480.00
28.129.2	Fire retardant plywood of lamination / painting quality conforming to IS: 5509.	sqm	1670.00
28.130	Providing & Fixing decorative high pressure laminated sheet of plain / wood grain in gloss / matt / suede finish with high density protective surface layer and reverse side of adhesive bonding quality conforming to IS : 2046 Type S including cost of adhesive of approved quality.		
28.130.1	1.5 mm thick.	sqm	828.00
28.130.2	1.0 mm thick.	sqm	495.00
28.131	Providing and fixing factory made Fibreglass Reinforced plastics (F.R.P.) chajja 4mm thick of required colour, size and design made by Resin Transfer Moulding (RTM) Machine Technology, resulting in void free compact laminate in single piece, having smooth gradual slope curvature for easy drainage of water and duly reinforced by 2nos. vertically and 1nos. horizontally 50x2mm thick M.S. flat with 12mm in built hole for grouting on the existing wall along with the 50mm flanges duly inserted and sealed in the wall complete in one single piece casted monolithically, including all necessary fittings . The FRP Chajja should be manufactured using unsaturated Polyester resin as per IS: 6746 duly reinforced with fibre glass chopped strand mat (CSM) as per IS: 11551 complete with protective Gel coat U/V coating on Top for complete resistance from the extreme of temperature, weather & sunlight,	sqm	3950.00
28.132	Providing and fixing cup board shutters 25mm thick, with Pre-laminated flat pressed three layer particle board or graded wood particle board IS: 12823 marked exterior grade (Grade I Type II) having one side decorative lamination and other side balancing lamination including IInd class teak wood lipping of 25mm wide x12 mm thick with necessary screws and bright finished stainless steel piano hinges complete as per direction of the Engineer-in-Charge.	sqm	1480.00
28.133	Providing and fixing cup board shutters with 25mm thick veneered particle board IS : 3097 marked exterior grade (Grade I) of approved make including IInd class teak wood lipping of 25mm wide x 12 mm thick with necessary screws and bright finished stainless steel piano hinges complete as per direction of Engineer-in-Charge.		

Code No	Description	Unit	Rate Rs.
28.133.1	With decorative veneering on one side and commercial veneering on other side.	sqm	1340.00
28.133.2	With non decorative veneering on both sides.	sqm	1230.00
28.134	Providing and fixing factory made Pre-laminated particle board flat pressed three layer or graded wood particle board with one side decorative finish and other side balancing lamination conforming to IS: 12823 Grade I Type II, of approved design, and edges sealed with water resistant paint and lipped with aluminium 'U' type edge beading all-round the shutter, including fixing with angle cleat, grip strip, cadmium plated steel screws including fixing of aluminium hinges 100x63x4 mm etc. complete as per architectural drawing and direction of Engineer-in-Charge (Cost of 'U' beading and hinges will be paid for separately).		
28.134.1	25 mm thick.	sqm	1720.00
28.135	Providing and fixing aluminum U beading of required size to Pre-laminated /flush door shutter including fixing etc. complete as per direction of Engineer-in-charge.	kg	387.00
28.136	Providing and fixing, in position concealed G.I. section for wall panelling using board of required thickness fixed on the 'W' profile (0.55mm thick) having a knurled web of 51.55mm and two flanges of 26mm each with lips of 10.55 mm placed @ 610mm C/C in perimeter channel having one flange of 20mm and another flange of 30mm with thickness of 0.55mm and web of length 27mm. Perimeter channel is fixed on the floor and the ceiling with the nylon sleeves @ 610mm C/C with fully threaded self-tapping drywall screws. Board is fixed to the 'W' profile with 25 mm countersunk ribbed head screws @ 200mm C/C., all complete as per the drawing & directions of Engineer-in-charge the joints of the boards are finished with specially formulated jointing compound and 48mm wide fibre tape to provide seamless finish.		
28.136.1	Tapered edge calcium silicate board made with calcareous & siliceous materials reinforced with cellulose fibre manufactured through autoclaving process to give stable crystalline structure, with compressive strength 225 kg/sq.cm, Bending strength 100 kg/sq.cm.		
28.136.1.1	10mm thick.	sqm	933.00
28.136.2	Non-asbestos multipurpose cement board reinforced with cellulose fibre manufactured through autoclaving process (high pressure steam cured) as per IS 14862 with suitable fibre cement screw.		
28.136.2.1	8 mm thick.	sqm	766.00
28.136.3	Gypsum board conforming to IS: 2095 - 1996: Part - I.		
28.136.3.1	12.5 mm thick.	sqm	699.00

29.0 STEEL WORK

Code No	Description	Unit	Rate Rs.
29.1	Structural steel work in single section fixed with or without connecting plate including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	kg	60.00
29.2	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:	kg	69.00
29.3	Providing and fixing in position collapsible steel shutters with vertical channels 20x10x2mm and braced with flat iron diagonals 20x5mm size with top and bottom rail of T-iron 40x40x6mm with 40mm dia, steel pulleys complete with bolts, nuts, locking arrangement, stoppers, handles, including applying a priming coat of approved steel primer.	sqm	5280.00
29.4	Providing and fixing 1mm thick M.S. sheet sliding-shutters with frame and diagonal braces of 40x40x6mm angle iron, 3mm M.S. gusset plates at the junction and corners 25mm dia pulley, 40x40x6mm angle and T-iron guide at the top and bottom respectively including applying a priming coat of approved steel primer.	sqm	3160.00
29.5	Providing and fixing 1mm thick M.S. sheet door with frame of 40x40x6mm angle iron and 3mm M.S. gusset plates at the junctions and corners, all necessary fittings complete, including applying a priming coat of approved steel primer.		
29.5.1	Using M.S. angels 40x40x6 mm for diagonal braces.	sqm	2790.00
29.5.2	Using flats 30x6mm for diagonal braces and central cross piece.	sqm	2680.00
29.6	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5cm long wire springs grade No.2 and M.S. top cover of required thickness for rolling shutters.		
29.6.1	80x1.25mm M.S. laths with 1.25 mm thick top cover.	sqm	2250.00
29.6.2	80x1.20 mm M.S. laths with 1.20 mm thick top cover.	sqm	1600.00
29.6.3	80x0.90 mm M.S. laths with 0.90 mm thick top cover.	sqm	1450.00
29.7	Providing and fixing ball bearing for rolling shutters.	each	339.00
29.8	Extra for providing mechanical device chain and crank operation for operating rolling shutters.		
29.8.1	Exceeding 10.00 sqm and upto 16.80 sqm in the area.	sqm	726.00
29.8.2	Exceeding 16.80 sqm in area.	sqm	726.00

Code No	Description	Unit	Rate Rs.
29.9	Extra for providing grilled rolling shutters manufactured out of 8 mm dia. M.S. bar instead of laths as per design approved by Engineer-in-charge. (Area of grill to be measured).	sqm	272.00
29.10	Fixing standard steel glazed doors, windows and ventilators in walls with 15x3mm lugs 10 cm long embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including fixing of float glass panes with glazing clips and special metal-sash putty of approved make, or metal beading with screws (only steel windows with lugs, glass panes cut to size and glazing clips or metal beading with screws, shall be supplied by department free of cost.)	kg	41.50
29.11	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators side /top /centre hung with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and rivetted with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including providing and fixing of hinges, pivots, float glass panes with glazing clips and special metal sash putty of approved make and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approved design.	kg	128.00
29.12	Providing and fixing factory made ISI marked steel glazed doors, windows and ventilators side /top /centre hung with beading and all members such as F7D, F4B, K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and rivetted with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including providing and fixing of hinges, pivots, float glass panes with glazing clips and special metal sash putty of approved make and a priming coat of approved steel primer excluding the cost of metal beading and other fittings except necessary hinges or pivots complete as per approved design.	sqm	3040.00
29.13	Extra for providing and fixing steel beading of approved shape and section with screws instead of glazing clips and metal sash putty in steel doors, windows, ventilators and composite units.	metre	22.50
29.14	Providing and fixing T-iron frames for doors, windows and ventilators of mild steel Tee-sections, joints mitred and welded with 15x3 mm lugs 10cm long embedded in cement concrete blocks 15x10x10 cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) or with wooden plugs and screws or with dash fastener or rawl plugs and screws or with fixing clips or with bolts and nuts as require including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primer.	kg	71.00

Code No	Description	Unit	Rate Rs.
29.15	Providing and fixing pressed steel door frames confirming to IS: 4351 manufactured from commercial mild steel sheet of 1.25 mm thickness including hinges jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25mm, or base ties of 1.25mm pressed mild steel welded or rigidly fixed together by mechanical means, adjustable lugs with split end tail to each jamb including steel butt hinges 2.5mm thick with mortar guards, lock strike-plate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge:		
29.15.1	Profile B	metre	396.00
29.15.2	Profile C	metre	433.00
29.15.3	Profile E	metre	469.00
29.16	Providing and fixing M.S. Tubular frames for doors, windows, ventilators and cupboard with L-Type section made of 1.60mm thick M.S. Sheet, joints mitred and welded and grinded finish profiles required size with 15x3mm lugs 10cm long embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required including fixing of necessary butt hinges and screws and applying a priming coat of approved steel primers.	kg	117.00
29.17	Steel work in built up tubular trusses including cutting, hoisting fixing in position and applying a priming coat of approved steel primer, welded and bolted including special shaped washers etc. complete.		
29.17.1	Hot finished welded type tubes	kg	91.00
29.17.2	Hot finished seamless type tubes	kg	94.50
29.17.3	Electric resistance or induction butt welded tubes.	kg	114.00
29.18	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete.	each	112.00
29.19	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp of internal dia 140mm, 73mm height, top lid of 1.5mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3mm dia. round headed screws, one lock at the corners. Clamp shall be made of 12mm dia M.S. bar bent to shape as per standard drawing.	each	126.00
29.20	Providing and fixing M.S. round holding down bolts with nuts and washer plates complete.	kg	90.00
29.21	Providing and fixing bolts including nuts and washers complete.	kg	119.00
29.22	Providing and fixing M.S. rivets of sizes in position.	kg	145.00
29.23	Welding by gas or electric plant including transportation of plant at site etc. complete.	cm	2.50

Code No	Description	Unit	Rate Rs.
29.24	Providing and fixing bright finished brass casement window fasteners or peg stays to windows/ ventilators with necessary welding and machine screws etc. complete.	kg	57.50
29.25	Providing and fixing 14 mm bright finished brass spring catch to steel centre hung ventilators with necessary welding and machine screws etc. complete.	each	33.50
29.26	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.		
29.26.1	In stringers, treads, landings etc. of stair cases including use of chequered plate wherever required, all complete.	kg	72.00
29.26.2	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	kg	87.50
29.27	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.		
29.27.1	M.S. tube.	kg	90.50
29.27.2	E.R.W. tubes.	kg	120.00
29.27.3	G.I. pipes.	kg	124.00
29.28	Providing and fixing GI wire gauge of average width of aperture 1.56mm with wire of 0.45mm to existing steel door, window shutter frames with necessary M.S. strip beading 20x3mm with suitable screw at not exceeding 150mm distance etc. complete.	sqm	495.00

30.0 FLOORING

Code No	Description	Unit	Rate Rs.
30.1	Brick on edge flooring with bricks of class designation 75 including cement slurry etc. complete in cement mortar:		
30.1.1	1:4 (1 cement : 4 coarse sand)	sqm	542.00
30.1.2	1:6 (1cement : 6 coarse sand)	sqm	508.00
30.2	Dry brick on edge flooring in required pattern with bricks of class designation 75 on a bed of 12 mm mud mortar including filling joints with Jamuna sand complete.	sqm	405.00
30.3	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded 20mm nominal size stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete.		
30.3.1	40mm thick	sqm	292.00
30.3.2	75mm thick	sqm	548.00
30.4	52 mm thick cement concrete flooring with concrete hardener topping under layer 40 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12 mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume .hardening compound is mixed @ 2 litre per 50kg of cement or as per manufacturers specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	sqm	461.00
30.5	62 mm thick cement concrete flooring with concrete hardener topping under layer 50 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) and top layer 12mm thick cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6mm nominal size) by volume. Hardening compound is mixed @ 2 litre per 50kg of cement or as per manufactures specifications. This includes cost of cement slurry, but excluding the cost of nosing of steps etc. complete.	sqm	504.00
30.6	Cement plaster skirting (upto 30 cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.		
30.6.1	18 mm thick.	sqm	300.00
30.7	Cement concrete pavement with 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete.	cum	4870.00
30.8	Extra for making chequers of approved pattern on cement concrete floors, steps, landing, pavements etc.	sqm	34.50
30.9	40 mm thick marble chips flooring rubbed and polished to granolithic finish, under layer 34 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 6mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 1mm to 4mm nominal size laid in		

Code No	Description	Unit	Rate Rs.
	cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume including cement slurry etc. complete :		
30.9.1	Dark shade pigment with ordinary cement.	sqm	482.00
30.9.2	Light shade pigment with white cement .	sqm	613.00
30.9.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	566.00
30.9.4	White cement without any pigment.	sqm	507.00
30.9.5	Light shade pigment with ordinary cement.	sqm	520.00
30.9.6	Ordinary cement without any pigment.	sqm	460.00
30.10	40 mm thick marble chips flooring, rubbed and polished to granolithic finish, under layer 31mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 9mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from 4mm to 7mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder : 7 marble chips) by volume including cement slurry etc. complete.		
30.10.1	Dark shade pigment with Ordinary cement.	sqm	481.00
30.10.2	Light shade pigment with white cement.	sqm	668.00
30.10.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	601.00
30.10.4	White cement without any pigment.	sqm	537.00
30.10.5	Light shade pigment with ordinary cement.	sqm	519.00
30.10.6	Ordinary cement without any pigment.	sqm	474.00
30.11	40 mm thick marble chips flooring, rubbed and polished to granolithic finish, under layer 28 mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size) and top layer 12mm thick with white, black, chocolate, grey yellow or green marble chips of sizes from 7mm to 10mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 2:3 (2 cement marble powder mix : 3 marble chips) by volume including cement slurry etc. complete :		
30.11.1	Dark shade pigment with ordinary cement.	sqm	524.00
30.11.2	Light shade pigment with white cement.	sqm	605.00
30.11.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	561.00
30.11.4	White cement without any pigment.	sqm	575.00
30.11.5	Light shade pigment with ordinary cement.	sqm	517.00
30.11.6	Ordinary cement without any pigment.	sqm	486.00
30.12	Marble chips skirting (upto 30 cm height) rubbed and polished to granolithic finish, top layer 6 mm thick with white, black, chocolate, grey, yellow or green marble chips of sizes from smallest to 4 mm nominal size laid in cement marble powder mix 3:1 (3 cement : 1 marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 marble chips) by volume :		

Code No	Description	Unit	Rate Rs.
30.12.1	18 mm thick with under layer 12 mm thick in cement plaster 1:3 (1 cement : 3 coarse sand) :		
30.12.1.1	Dark shade pigment with ordinary cement.	sqm	789.00
30.12.1.2	Light shade pigment with white cement.	sqm	830.00
30.12.1.3	Medium shade pigment with 50% white cement and 50% ordinary cement.	sqm	808.00
30.12.1.4	White cement without any pigment.	sqm	814.00
30.12.1.5	Light shade pigment with ordinary cement.	sqm	786.00
30.12.1.6	Ordinary cement without any pigment.	sqm	767.00
30.13	Providing and fixing glass strips in joints of terrazo/ cement concrete floors.		
30.13.1	40 mm wide and 4 mm thick.	metre	41.50
30.14	Extra for laying terrazo flooring on staircase treads not exceeding 30 cm in width including cost of forming, nosing etc.	sqm	38.00
30.15	Crazy marble stone flooring including filling the gaps with light shade pigment with white cement marble powder mixture (3 parts of white cement : 1 part of marble powder) by weight in proportion of 4:7 (4 cement marble powder mix : 7 white, black or white and black marble chips of sizes from 1mm to 4mm nominal size by volume) and under layer 25mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 12.5 mm nominal size) rubbing, polishing and cement slurry etc. complete :		
30.15.1	18 mm thick crazy marble stone white, black or as specified.	sqm	842.00
30.16	Precast terrazo tiles 22mm thick with graded marble chips of size upto 12mm laid in floors, and landings, jointed with neat cement slurry mixed with pigment to match the shade of the tiles including rubbing and polishing complete with precast tiles on 20mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :		
30.16.1	Light shade using white cement.	sqm	769.00
30.16.2	Medium shade using 50%white cement and 50% ordinary cement.	sqm	718.00
30.16.3	Dark shade using ordinary cement.	sqm	685.00
30.16.4	Ordinary cement without any pigment.	sqm	642.00
30.17	Extra if terrazo tiles are laid in treads of steps not exceeding 30 cm in width.	sqm	50.00
30.18	Precast terrazo tiles 22 mm thick with graded marble chips of sizes upto 12 mm in skirting and risers of steps not exceeding 30 cm in height on 12 mm thick cement plaster 1:3 (1 cement : 3 coarse sand) jointed with neat cement slurry mixed with pigment to match the shade of the tiles, including rubbing and polishing complete with tiles of :		
30.18.1	Light shade using white cement.	sqm	1140.00
30.18.2	Medium shades using 50% white cement and 50% ordinary cement.	sqm	1070.00
30.18.3	Dark shade using ordinary cement.	sqm	1030.00
30.18.4	Ordinary cement without any pigment.	sqm	986.00
30.19	Chequered terrazo tiles 22 mm thick with graded marble chips of size up to 6 mm in floors jointed with neat cement slurry mixed with		

Code No	Description	Unit	Rate Rs.
	pigment to match the shade of the tiles including rubbing and polishing complete on 20 mm thick bed of cement mortar 1:4 (1 cement :4 coarse sand) :		
30.19.1	Light shade using white cement.	sqm	676.00
30.19.2	Medium shade using 50% white cement, 50% ordinary cement.	sqm	645.00
30.19.3	Dark shade using ordinary cement.	sqm	618.00
30.19.4	Ordinary cement without any pigment.	sqm	575.00
30.20	Chequered precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).		
30.20.1	Light shade using white cement.	sqm	750.00
30.20.2	Medium shade using 50% white cement 50% Grey cement.	sqm	870.00
30.20.3	Dark shade using ordinary cement.	sqm	689.00
30.20.4	Ordinary cement without any pigment.	sqm	646.00
30.21	Providing and fixing 10mm thick acid and or alkali resistant tiles of approved make and colour using acid and or alkali resisting mortar bedding and joints filled with acid and or alkali resisting cement as per IS : 4457 complete as per the direction of Engineer-in- Charge.		
30.21.1	In flooring on a bed of 10 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand).		
30.21.1.1	Acid and alkali resistant tile.	sqm	992.00
30.21.2	In dado/skirting on 12 mm thick mortar 1:4 (1 acid proof cement : 4 coarse sand).		
30.21.2.1	Acid and alkali resistant tile.	sqm	1060.00
30.22	Extra for prefinished nosing to treads of steps of marble stone.	metre	330.00
30.23	Extra for marble stone flooring in treads of steps and risers using single length upto 2.00 metre .	sqm	358.00
30.24	Kota stone slab flooring 25mm thick over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab including rubbing and polishing complete with base of cement mortar 1 : 4 (1 cement : 4 coarse sand) :		
30.24.1	Area of each slab 900 to 2000 sqcm	sqm	1020.00
30.24.2	Area of each slab 2001 to 5000 sqcm	sqm	1090.00
30.25	Kota stone slabs 25 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	sqm	1160.00
30.26	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1cement : 5 coarse sand) with joints finished flush.		
30.26.1	Red sand stone	sqm	512.00
30.26.2	White sand stone	sqm	585.00

Code No	Description	Unit	Rate Rs.
30.27	40 mm thick fine dressed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement : 5 coarse sand) including pointing with cement mortar 1:2 (1 cement : 2 stone dust) with an admixture of pigment to match the shade of stone.		
30.27.1	Red sand stone	sqm	734.00
30.27.2	White sand stone	sqm	806.00
30.28	40 mm thick rubbed stone flooring over 20 mm (average) thick base of cement mortar 1:5 (1 cement :5 coarse sand) with joints 3mm thick, side buttered with cement mortar 1:2 (1 cement : 2 stone dust) admixed with pigment to match the shade of stone and pointing with same mortar		
30.28.1	Red sand stone	sqm	790.00
30.28.2	White sand stone	sqm	863.00
30.29	Extra for pre finished nosing in treads of steps of Kota stone/ sand stone slab.	metre	109.00
30.30	Extra for Kota stone/ sand stone in treads of steps and risers using single length upto 1.05 metre .	sqm	18.00
30.31	25mm wooden planking, tongued and grooved in flooring including fixing with iron screws complete with :		
30.31.1	Second class teak wood	sqm	2940.00
30.31.2	Second class deodar wood	sqm	2860.00
30.32	38mm thick wood block flooring of first class teak wood laid over 25mm thick levelling layer of cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 10mm nominal size) to be paid separately coated with a thin layer of hot bitumen (blown type) @ 2.45 kg per sqm. including fixing blocks in position after dipping in hot bitumen (blown type) upto half depth, planed, levelled smooth and finished complete.	sqm	7350.00
30.33	Providing and fixing M.S. angle 50x50x5 mm to act as nosing with lugs of M.S. flat 10x5 mm 10cm long forked at end 60cm apart (minimum three lugs to be provided) including necessary welding and applying a priming coat of approved primer on exposed surface etc. complete.	kg	77.00
30.34	Random rubble dry stone Kharanja (soling) under floor.	cum	1360.00

31.0 ROOFING

Code No	Description	Unit	Rate Rs.
31.1	Providing corrugated G.S. sheet roofing including vertical/ curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead and including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete upto any pitch in horizontal/ vertical or curved surfaces) excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.		
31.1.1	1.00mm thick with zinc coating not less than 275gm/m ²	sqm	974.00
31.1.2	0.80mm thick with zinc coating not less than 275gm/m ²	sqm	829.00
31.1.3	0.63 mm thick with zinc coating not less than 275gm/m ²	sqm	706.00
31.2	Extra for straight cutting in C.G.S. sheet roofing for making opening of area exceeding 40 sq. decimetre for chimney stacks, sky light etc. :		
31.2.1	1.00 mm thick	metre	51.50
31.2.2	0.80 mm thick	metre	41.00
31.2.3	0.63 mm thick	metre	41.00
31.3	Extra for circular cutting in C.G.S. sheet roofing for making opening of area exceeding 40 square decimetre :		
31.3.1	1.00 mm thick	metre	289.00
31.3.2	0.80 mm thick	metre	231.00
31.3.3	0.63 mm thick	metre	231.00
31.4	Providing ridges or hips of width 60 cm over all width plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts 8 mm dia. G.I. limpet and bitumen washers complete.		
31.4.1	0.80mm thick with zinc coating not less than 275gm/m ²	metre	620.00
31.4.2	0.63mm thick with zinc coating not less than 275gm/m ²	metre	549.00
31.5	Providing valleys of 90cm wide overall in plain G.S. sheet fixed with polymer coated J or L hooks, bolts and nuts 8mm dia. G.I. limpet and bitumen washers complete :		
31.5.1	1.60mm thick with zinc coating not less than 350gm/m ²	metre	1140.00
31.6	Providing flashing of 40 cm over all width in plain, G.S. sheet fixed with polymer coated J, or L hooks, bolts and nuts, G.I. limpet and bitumen washer complete, bent to shape and fixed in wall with cement mortar 1:3 (1cement : 3 coarse sand).		
31.6.1	1.00mm thick with zinc coating not less than 275gm/m ²	metre	480.00
31.7	Providing and fixing 15 cm wide 45 cm over all semi circular plain G.S. sheet gutter with iron brackets 40x3mm size, bolts, nuts and washers etc. including making necessary connections with rain water pipes complete.		
31.7.1	0.80mm thick with zinc coating not less than 275gm/m ²	metre	575.00

Code No	Description	Unit	Rate Rs.
31.7.2	0.63mm thick with zinc coating not less than 275gm/m ²	metre	515.00
31.8	Providing non-asbestos high impact Polypropylene reinforced cement 6 mm thick corrugated sheets (As per IS:14871) roofing upto any pitch and fixing with polymer coated J or L hooks, bolts and nuts 8mm dia. G.I. plain and bitumen washers or with self drilling fastener and EPDM washers etc. complete excluding the cost of purlins, rafters and trusses: corrugated sheets and including cutting to size and shape wherever required.	sqm	376.00
31.9	Extra for straight cutting in non- asbestos polypropylene reinforced cement corrugated, semi-corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimetre for chimney stacks, skylights etc.	metre	41.00
31.10	Extra for circular cutting in non-asbestos polypropylene reinforced cement corrugated/ semi-corrugated 6 mm thick sheet roofing for making openings of area exceeding 40 square decimetre.	metre	114.00
31.11	Extra for providing and fixing wind ties of 40x 6mm flat iron section.	metre	106.00
31.12	Providing and fixing ridges and hips in non-asbestos fibre cement high impact polypropylene reinforced roofing with suitable fixing accessories or self drilling fastener and EPDM washer etc. complete.		
31.12.1	Corrugated serrated adjustable ridges	metre	381.00
31.12.2	Plain wing adjustable ridges	metre	381.00
31.12.3	Close fitting adjustable ridges	metre	467.00
31.12.4	Unserrated adjustable hips	metre	389.00
31.13	Providing and fixing non-asbestos fibre cement high impact polypropylene reinforced roofing accessories with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers or with self drilling fastener and EPDM washer etc. complete:		
31.13.1	Corrugated apron pieces	metre	295.00
31.13.2	Eave's filler pieces	metre	191.00
31.13.3	North light curves	metre	390.00
31.13.4	ventilator curves	metre	454.00
31.13.5	Barge boards	metre	463.00
31.13.6	Ridge finials	pair	172.00
31.13.7	Special north light curves	each	503.00
31.13.8	S type louvers	metre	311.00
31.14	Providing flat iron brackets 50x3mm size with necessary bolts, nuts and washers etc. for fixing asbestos cement/G.S. sheets gutters with purlins.	metre	39.00
31.15	Painting top of roofs with bitumen of approved quality at 17kg per 10 sqm impregnated with a coat of coarse sand at 60 cudm per 10sqm including cleaning the slab surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil complete :		
31.15.1	With residual type petroleum bitumen of penetration 80/100	sqm	113.00

Code No	Description	Unit	Rate Rs.
31.16	10 cm thick (average) mud phaska of damped brick earth on roofs laid to slope consolidated and plastered with 25 mm thick mud mortar mixed with bhusa at 35 kg per cum of earth and gobri leaping with mix 1:1 (1 clay : 1 cow dung) and covered with flat tile bricks of class designation 100 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement and finished neat :		
31.16.1	With F.P.S. brick tiles	sqm	497.00
31.17	10cm thick (average) mud phaska of damped brick earth on roofs laid to slope consolidated and plastered with 25mm thick mud mortar with bhusha at 35kg per cum of earth and gobri leaping with mix 1:1 (1 clay : 1 cow-dung) and covered with machine moulded tile bricks of class designation 125 conforming to IS : 2690 (Part I) -1992 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement and finished neat.		
31.17.1	With machine moulded F.P.S. brick tiles	sqm	478.00
31.18	Extra for every additional 1 cm thickness of mud phaska	sqm	8.50
31.19	Providing and laying brick tiles of class designation 100 over mumty roofs grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement, over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat :		
31.19.1	With F.P.S. brick tiles	sqm	355.00
31.20	Providing and laying pressed clay tiles (as per approved pattern 20 mm nominal thickness and of approved size) on roofs jointed with cement mortar 1:4 (1 cement : 4 coarse sand) mixed with 2% integral water proofing compound laid over a bed of 20 mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and finished neat complete.	sqm	539.00
31.21	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10mm and down gauge) including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :		
31.21.1	In 75x75mm deep chase	metre	136.00
31.22	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1mx1mx400micron, finished with 12mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement rounding the edge sand making and finishing the outlet complete.	each	131.00
31.23	Providing sand stone slab for roofing and laying them in cement mortar 1 : 4 (1 cement : 4 coarse sand) over wooden karries or R.C.C. battens (Karries and battens to be paid separately) including pointing the ceiling joints with cement mortar 1:3 (1 cement : 3 fine sand) complete :		
31.23.1	Red sand stone slab		
31.23.1.1	40 to 50 mm thick	sqm	546.00
31.23.2	White sand stone slab :		
31.23.2.1	40 to 50 mm thick	sqm	652.00

Code No	Description	Unit	Rate Rs.
31.24	Providing and fixing insulating board ceiling of approved quality with necessary nails etc. complete (frame work to be paid separately) :		
31.24.1	Natural colour insulating board		
31.24.1.1	12 mm thick	sqm	536.00
31.24.2	White face insulating board		
31.24.2.1	12 mm thick	sqm	576.00
31.24.3	Flame retardant face insulating board		
31.24.3.1	12 mm thick	sqm	682.00
31.25	Providing and fixing flat pressed 3 layer medium density particle board or graded particle board (Grade I) IS: 3087 marked in ceiling with necessary nails etc. complete (frame work to be paid separately) :		
31.25.1	12 mm thick	sqm	576.00
31.26	Providing and fixing plain Multipurpose Cement board (High Pressure steam cured) as per IS : 14862 : 2000) with suitable fibre cement screw in ceiling etc. complete (frame work to be paid separately) :		
31.26.1	6 mm thick cement board	sqm	536.00
31.27	Extra for Circular cutting and waste in ceiling with:		
31.27.1	2nd class teak wood planks 20 mm thick	metre	390.00
31.27.2	Natural colour insulating board		
31.27.2.1	12 mm thick	metre	231.00
31.27.3	White face insulating board:		
31.27.3.1	12 mm thick	metre	236.00
31.27.4	Flame retardant face insulating board:		
31.27.4.1	12 mm thick	metre	249.00
31.27.5	Standard quality hard board sheet:		
31.27.5.1	3 mm thick	metre	219.00
31.27.5.2	4.5 mm thick	metre	244.00
31.28	Extra for providing and fixing ceiling to curved surfaces in narrow widths	sqm	200.00
31.29	Providing and fixing false ceiling with 12 mm thick plain/ semi perforated or with design ceiling tiles of BWP type phenol formaldehyde synthetic resin bonded pressed particle board conforming to IS:3087 finished with a coat of aluminium primer on both sides & edges and two coats of synthetic enamel paint of approved quality on exposed face fixed to a grid made out of anodised aluminium (with 15 micron anodic coating) T-sections 35 x15x1.5 mm size main runners and cross runners 23.5x19x1.5 mm fixed to main runners placed 600 mm centre to centre both ways so as to form a grid of 600 mm square. The frame work shall be suspended from ceiling by level adjusting hangers of 6 mm dia M.S rod fixed to roof slab by means of ceiling cleats. The suspenders shall be placed 600x 1200 mm centre to centre including fixing to the		

Code No	Description	Unit	Rate Rs.
	frame with C.P brace screws and applying a priming coat of zinc chromate yellow primer (aluminium frame work shall be paid separately.)	sqm	403.00
31.30	Extra for providing 3 mm thick translucent white acrylic plastic sheets of approved quality in false ceiling instead of 12 mm thick plain/or with design particle board ceiling tiles in item above.	sqm	554.00
31.31	Providing 10 mm thick plaster of Paris (gypsum anhydrous) ceiling upto a height of 5 m above floor level over first class kail wood strips 25x6 mm with 10 mm gap in between and reinforced with rabbit wire mesh fixed to wooden frame (frame work to be paid separately) :		
31.31.1	Flat surfaces	sqm	924.00
31.31.2	Curved surfaces	sqm	1090.00
31.32	Extra for any sunk or raised mouldings in the plaster of Paris (Gypsum anhydrous) ceiling	sqm	294.00
31.33	Extra for providing plaster of Paris (Gypsum anhydrous) ceiling above 5 metres height from floor level	sqm/ metre	126.00
31.34	Providing and fixing thermal insulation of ceiling (under deck insulation) with Resin Bonded Fibre glass wool conforming to IS : 8193 density 24kg/m ³ , 50mm thick, wrapped in 200 G Virgin Polythene bags fixed to ceiling with metallic cleats (50x50x3 mm) @ 60 cm and wire mesh of 12.5mm x 24g wire and mesh, for top most ceiling of building.	sqm	400.00
31.35	Providing and fixing thermal insulation with Resin Bonded Fibre glass wool conforming to IS : 8193, density 16kg/m ³ , 50mm thick, wrapped in 200G Virgin Polythene bags placed over existing false ceiling and held in position by criss-crossing GI wire.	sqm	197.00
31.36	Thermal Insulation of roofing with Expanded polystyrene fixed with suitable adhesive to the false ceiling as per the directions of the Engineer-in-charge :		
31.36.1	With Type N - Normal 50 mm thick	sqm	239.00
31.36.2	With Type SE - Self Extinguishing type 50 mm thick	sqm	279.00
31.37	Providing and fixing 100 mm diameter and 60 cm long rain water spout in cement mortar 1:4 (1 cement : 4 fine sand)		
31.37.1	Stone ware spout	each	63.50
31.38	Providing and fixing M.S. holder bat clamps of approved design to C.I. or S.C.I. rain water pipes embedded in and including cement concrete blocks 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and cost of cutting holes and making good the walls etc. :		
31.38.1	100 mm diameter	each	152.00
31.38.2	150 mm diameter	each	164.00
31.39	Providing lead caulked joints to sand cast iron rain water pipes and fittings :		
31.39.1	100 mm dia. Pipe	each	220.00
31.39.2	150 mm dia. Pipe	each	300.00
31.40	Providing, fixing and embedding sand cast iron accessories for rain water pipes in the masonry surrounded with 12 mm thick cement		

Code No	Description	Unit	Rate Rs.
	mortar of the same mix, as that of masonry (lead caulking will be paid for separately) :		
31.40.1	Sand cast iron plain shoes :		
31.40.1.1	150 mm diameter	each	396.00
31.41	Providing and fixing on wall face Unplasticised Rigid PVC Single socketed pipes rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.		
31.41.1	75 mm diameter	metre	155.00
31.41.2	110 mm diameter	metre	253.00
31.42	Providing and fixing on wall face Unplasticised - PVC moulded fittings/ accessories for Unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.		
31.42.1	Coupler		
31.42.1.1	75 mm	each	100.00
31.42.1.2	110 mm	each	152.00
31.42.2	Single push fit Coupler :		
31.42.2.1	75 mm	each	107.00
31.42.2.2	110 mm	each	155.00
31.42.3	Single tee with door		
31.42.3.1	75x75x75 mm	each	187.00
31.42.3.2	110x110x110 mm	each	316.00
31.42.4	Single tee without door		
31.42.4.1	75x75x75 mm	each	173.00
31.42.4.2	110x110x110 mm	each	286.00
31.42.5	Bend 87.5°		
31.42.5.1	75 mm bend	each	101.00
31.42.5.2	110 mm bend	each	128.00
31.42.6	Shoe (Plain)		
31.42.6.1	75 mm Shoe	each	178.00
31.42.6.2	110 mm Shoe	each	316.00
31.43	Providing and fixing Unplasticised -PVC pipe clips of approved design to Unplasticised - PVC rain water pipes by means of 50x50x50mm hard wood plugs, screwed with M.S. screws of required length including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.		
31.43.1	75 mm	each	169.00
31.43.2	110 mm	each	173.00
31.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	each	39.00

Code No	Description	Unit	Rate Rs.
31.45	Providing and fixing at all height false ceiling including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm diax40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick button wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm diax230mm long G.I. wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed all complete as per drawing and specification and direction of the Engineer in Charge but excluding the cost of painting with :		
31.45.1	12.5 mm thick tapered edge gypsum board conforming to IS: 2095-Part I,	sqm	984.00
31.46	Providing and fixing to the inlet mouth of rain water pipe PTMT (an Engineering Thermoplastic) grating square (Slit) 150 mm square with a height of 8 mm and weighing not less than 100 gms.	each	65.50
31.47	Providing & fixing UV stabilised fibreglass reinforced plastic sheet roofing upto any pitch including fixing with polymer coated 'J' or 'L' hooks, bolts & nuts 8mm dia. G.I plain/bitumen washers complete but excluding the cost of purlins, rafters, trusses etc. The sheets shall be manufactured out of 2400 TEX panel rovigs incorporating minimum 0.3% Ultra-violet stabiliser in resin system under approximately 2400 psi and hot cured. They shall be of uniform pigmentation and thickness without air pockets and shall conform to IS 10192 and IS 12866.The sheets shall be opaque or translucent, clear or pigmented, textured or smooth as specified.		
31.47.1	2mm thick corrugated (2.5" or 4.2" or 6") or step-down (2"or 3"or 6") as specified.	sqm	1030.00
31.47.2	2mm thick flat.	sqm	922.00
31.48	Providing & fixing pressed clay tile (Mangalor tile) 20 mm nominal thickness and of approved size and as per approved pattern ceiling on steel frame work complete (steel frame work to be paid separately)	sqm	239.00

Code No	Description	Unit	Rate Rs.
31.49	Providing & laying pressed clay tile ridge (Mangalore tile) of 20mm thickness of approved pattern ceiling over steel frame work complete (steel frame work to be paid separately)	sqm	120.00
31.50	Supply & installation of precoated galvanized iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-charge) 0.50 mm +/- 5% total coated thickness (TCT), Zinc coating 120gsm as per IS: 277 in 240mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches while transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55mm) with EPDM seal or with polymer coated J or L hooks, bolts and nuts 8mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead complete upto any pitch in horizontal/ vertical or curved surfaces excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	sqm	547.00
31.51	Providing and fixing precoated galvanised steel sheet roofing accessories 0.50 mm +/- 5% total coated thickness (TCT), Zinc coating 120gsm as per IS: 277 in 240mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws or with polymer coated J or L hooks, bolts and nuts and or G.I. seam bolts and nuts, G.I. plain and bitumen washers complete :		
31.51.1	Ridges plain (500 - 600mm).	metre	469.00
31.51.2	Flashings/ Aprons.(Upto 600 mm)	metre	442.00
31.51.3	North light curves.	metre	500.00
31.51.4	Barge board (Upto 300 mm).	metre	412.00
31.51.5	Crimp curve	sqm	511.00
31.51.6	Gutter. (600 mm over all girth).	metre	810.00
31.52	Providing and fixing False Ceiling Tiles of approved materials of size 595x595 mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanized @ 170 gsm/sqm.) consisting of main "T" runner suitably spaced at joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet spaced at 1200mm center to center and cross "T" of size 24x25mm made of 0.30mm thick (minimum) sheet, 1200mm long spaced between main "T" at 600mm center to center to form a grid of 1200x600 mm and secondary cross "T" of length 600mm and size 24x25mm made of 0.30 mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and laying false ceiling tiles of approved texture in the grid including, wherever, required, cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended		

Code No	Description	Unit	Rate Rs.
	from ceiling using GI slotted cleats fixed to ceiling with 6 mm dia and 50mm long dash fasteners, 4mm GI adjustable rods with galvanised level clips spaced at 1200mm center to center along main T, bottom exposed width of 24mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-Charge. (The rate is excluding cost of tiles which will be paid separately).	sqm	543.00
31.53	Stone slab roofing on ground floor with fine grained stone slab 90mm average thickness from approved quarry including filling of joints slab in cement sand mortar 1:4 with ceiling pointing in cement sand mortar 1 : 3 complete as per specification for span:		
31.53.1	Up to 2.00 metre.	sqm	985.00
31.53.2	Above 2.00 metre and up to 2.50 metre	sqm	1030.00
31.53.3	Above 2.50 metre and up to 3.00 metre	sqm	1120.00
31.53.4	Above 3.00 metre and up to 3.30 metre	sqm	1190.00

32.0 FINISHING

Code No	Description	Unit	Rate Rs.
32.1	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 12 mm cement plaster of mix :		
32.1.1	1:4 (1 cement : 4 fine/ coarse sand)	sqm	150.00
32.1.2	1:6 (1 cement : 6 fine/ coarse sand)	sqm	138.00
32.2	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 15 mm cement plaster on the rough side of single or half brick wall of mix :		
32.2.1	1:4 (1 cement : 4 fine/ coarse sand)	sqm	174.00
32.2.2	1:6 (1 cement : 6 fine/ coarse sand)	sqm	161.00
32.3	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster of mix :		
32.3.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	228.00
32.3.2	1:4 (1 cement : 4 fine/ coarse sand)	sqm	210.00
32.3.3	1:6 (1 cement : 6 fine/ coarse sand)	sqm	192.00
32.4	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 12 mm cement plaster finished with a floating coat of neat cement of mix :		
32.4.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	197.00
32.4.2	1:4 (1 cement : 4 fine/ coarse sand)	sqm	186.00
32.5	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix :		
32.5.1	1:3 (1 cement : 3 fine/ coarse sand)	sqm	224.00
32.5.2	1:4 (1 cement : 4 fine/ coarse sand)	sqm	210.00
32.6	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 20 mm cement plaster on rough side of brick wall finished with a floating coat of neat cement of mix :		
32.6.1	1:3 (1 cement : 3 fine/ coarse sand)		248.00
32.7	6 mm cement plaster of mix :		
32.7.1	1:3 (1 cement : 3 fine sand)	sqm	122.00
32.8	Cement plastering including T&P, scaffolding, material and complete labpour, including cost of water, curing, racking of joints etc. with 6 mm cement plaster 1:3 (1 cement : 3 fine sand) finished with a		

Code No	Description	Unit	Rate Rs.
	floating coat of neat cement and thick coat of Lime wash on top of walls when dry for bearing of R.C.C. slabs and beams.	sqm	164.00
32.9	Neat cement punning	sqm	37.00
32.10	Extra for providing and mixing water proofing material in cement plaster work in proportion recommended by the manufacturers.	per bag of 50kg. of cement used in the mix.	30.50
32.11	Extra for plastering exterior walls of height more than 10 m from ground level for every additional height of 3 m or part thereof.	sqm	32.50
32.12	Extra for plastering on circular work not exceeding 6 m in radius:		
32.12.1	In one coat	sqm	18.00
32.12.2	In two coats	sqm	27.00
32.13	Extra for plastering done on moulding cornices or architraves including neat finish to line and level:		
32.13.1	In one coat	sqm	275.00
32.13.2	In two coats	sqm	454.00
32.14	Extra for plastering :		
32.14.1	Spherical ceiling	sqm	67.50
32.14.2	Groined ceiling	sqm	72.50
32.14.3	Flewing soffits	sqm	45.50
32.15	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete	sqm	126.00
32.16	Extra for lining out plaster to imitate stone or concrete blocks walling	sqm	45.50
32.17	12 mm thick plain cement mortar bands in cement mortar 1:4 (1 cement : 4 fine sand) :		
32.17.1	Flush Band	cm per metre	3.00
32.17.2	Sunk Band	cm per metre	3.50
32.17.3	Raised Band	cm per metre	3.50
32.17.4	Moulded Band	cm per metre	6.00
32.18	18 mm thick plain cement mortar band in cement mortar 1:4 (1 cement : 4 fine sand):		
32.18.1	Flush Band	cm per metre	3.50
32.18.2	Sunk Band	cm per metre	4.00
32.18.3	Raised Band	cm per metre	4.50

Code No	Description	Unit	Rate Rs.
32.18.4	Moulded Band	cm per metre	8.50
32.19	18 mm thick moulded cement mortar band in two coats under layer 12mm thick with cement mortar 1:5 (1 cement : 5 coarse sand) top layer 6mm thick with cement mortar 1:4 (1 cement : 4 fine sand).	cm per metre	8.50
32.20	Pointing on brick work or brick flooring with cement mortar 1:3 (1 cement : 3 fine sand) :		
32.20.1	Flush / Ruled/ Struck or weathered pointing.	sqm	95.50
32.20.2	Raised and cut pointing	sqm	159.00
32.21	Pointing on tile brick work with cement mortar 1:3 (1 cement :3 fine sand) :		
32.21.1	Flush/ Ruled/ Struck or weathered pointing	sqm	131.00
32.22	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :		
32.22.1	Flush/ Ruled pointing	sqm	141.00
32.22.2	Raised and cut pointing	sqm	260.00
32.23	Raised and cut pointing on stone work in white cement mortar 1:3 (1 white cement : 3 marble dust)	sqm	277.00
32.24	Pointing on stone slab ceiling with cement mortar 1:2 (1 cement : 2 fine sand):		
32.24.1	Flush/ Ruled pointing	sqm	79.50
32.25	Extra for pointing on walls on the outside at height more than 10 m from ground level for every additional height of 3 m or part there of.	sqm	3.00
32.26	White washing with lime to give an even shade:		
32.26.1	New work (three or more coats)	sqm	16.00
32.27	Satna lime wash on walls one coat	sqm	6.50
32.28	Colour washing such as green, blue or buff to give an even shade :		
32.28.1	New work (two or more coats) with a base coat of white washing with lime	sqm	21.00
32.28.2	New work (two or more coats) with a base coat of whiting	sqm	21.00
32.29	Distempering with dry distemper of approved brand and manufacture (two or more coats) and of required shade on new work, over and including priming coat of whiting to give an even shade.	sqm	65.50
32.30	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade		
32.30.1	New work (two or more coats) over and including priming coat with cement primer.	sqm	86.00
32.31	Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
32.31.1	Two or more coats on new work.	sqm	50.00

Code No	Description	Unit	Rate Rs.
32.32	Applying one coat of cement primer of approved brand and manufacture on wall surface :		
32.32.1	Cement primer.	sqm	33.50
32.33	Finishing walls with water proofing cement paint of required shade :		
32.33.1	New work (Two or more coats applied @ 3.84 kg/10 sqm).	sqm	55.50
32.34	Finishing walls with textured exterior paint of required shade :		
32.34.1	New work (Two or more coats applied @ 3.28 ltr/10 sqm) over and including base coat of water proofing cement paint applied @ 2.20kg/10 sqm.	sqm	148.00
32.35	Finishing walls with Acrylic Smooth exterior paint of required shade :		
32.35.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm	90.50
32.36	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
32.36.1	New work (Two or more coats applied @ 1.43 ltr/ 10 sqm. over and including base coat of water proofing cement paint applied @ 2.20 kg/ 10 sqm).	sqm	91.50
32.37	Finishing walls with Deluxe Multi surface paint system for interiors and exteriors using Primer as per manufacturers specifications :		
32.37.1	Two or more coats applied @ 1.25 ltr/10 sqm. over and including one coat of Special primer applied @ 0.75 ltr / 10 sqm.	sqm	94.00
32.37.2	Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied @0.75 ltr/ 10 sqm of approved brand or manufacture	sqm	83.00
32.37.3	Painting Steel work with Deluxe Multi Surface Paint to give an even shade. Two or more coat applied @0.90 ltr/10 sqm over an under coat of primer applied @ 0.80 ltr/ 10 sqm of approved brand or manufacture	sqm	82.50
32.38	Extra for applying water proofing cement paint as primer applied @ 2.2 kg/ 10 sqm instead of primer for exterior finishing in Item No. 13.48.1	sqm	1.05
32.39	Applying priming coat :		
32.39.1	With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)	sqm	31.50
32.39.2	With ready mixed aluminium primer of approved brand and manufacture on resinous wood and plywood	sqm	31.50
32.39.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/steel works	sqm	27.50
32.39.4	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel work (second coat)	sqm	14.50
32.40	Painting one thin coat with white lead of approved brand and manufacture on wet or patchy portion of plastered surfaces	sqm	45.00

Code No	Description	Unit	Rate Rs.
32.41	Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.		
32.41.1	On steel work	sqm	116.00
32.41.2	On concrete work	sqm	117.00
32.42	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
32.42.1	New work (two or more coats) including a coat of approved steel primer but excluding a coat of mordant solution.	sqm	79.50
32.43	Applying a coat of mordant solution on G.S. sheet :		
32.43.1	With a solution of 38 gms of copper acetate in a litre of soft water	sqm	24.00
32.43.2	With a solution made of 13 gms of hydrochloric acid in a solution of 13 gms each of copper chloride, copper nitrate and ammonium chloride dissolved in a litre of soft water.	sqm	24.00
32.44	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint approved brand and manufacture over and including a priming of ready mixed zinc chromate yellow primer on new work :		
32.44.1	100 mm diameter pipes	metre	32.00
32.44.2	150 mm diameter pipes	metre	47.50
32.45	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour over a priming coat of approved steel primer on new work.		
32.45.1	100 mm diameter pipes	metre	32.50
32.45.2	150 mm diameter pipes	metre	48.50
32.46	Painting with oil type wood preservative of approved brand and manufacture:		
32.46.1	New work (two or more coats)	sqm	22.50
32.47	Providing and applying two coats of fire retardant paint unthinned on cleaned wood/ply surface @ 3.5 sqm per litre per coat including preparation of base surface as per recommendations of manufacturer to make the surface fire retardant.	sqm	239.00
32.48	Coal tarring two coats on new work using 0.16 and 0.12 litre coal tar per sqm in the first coat and second coat respectively.	sqm	31.50
32.49	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade:		
32.49.1	Two or more coats on new work	sqm	80.50
32.50	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade :		
32.50.1	Two or more coats on new work	sqm	69.00
32.51	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:		

Code No	Description	Unit	Rate Rs.
32.51.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture.	sqm	105.00
32.52	Painting with aluminium paint of approved brand and manufacture to give an even shade .		
32.52.1	Two or more coats on new work	sqm	63.00
32.53	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade:		
32.53.1	Two or more coats on new work.	sqm	70.00
32.54	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade:		
32.54.1	Two or more coats on new work.	sqm	60.50
32.55	Floor painting with floor enamel paint of approved brand and manufacture of required colour to give an even shade:		
32.55.1	Two or more coats on new work.	sqm	72.50
32.56	Varnishing with varnish of approved brand and manufacture:		
32.56.1	Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish.	sqm	107.00
32.56.2	Two or more coats glue sizing with spar varnish or an under coat of flatting varnish.	sqm	109.00
32.57	French spirit polishing :		
32.57.1	Two or more coats on new works including a coat of wood filler.	sqm	214.00
32.58	Polishing on wood work with ready mixed wax polish of approved brand and manufacture :		
32.58.1	New work	sqm	88.00
32.59	Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture.	sqm	40.00
32.60	Lettering with black Japan paint of approved brand and manufacture	per letter per cm height	2.50
32.61	Washed stone grit plaster on exterior walls of height upto 10 M. above level in two layers, under layer 12mm cement plaster 1:4 (1 cement : 4 coarse sand) furrowing the under layer with scratching tool, applying cement slurry on the under layer @ 2 Kg of cement per square metre, top layer 15mm cement plaster 1:1/2:2 (1 cement : 1/2 coarse sand : 2 stone chipping 10mm nominal size) in panels with groove all around as per approved pattern including scrubbing and washing, the top layer with brushes and water to expose the stone chippings ,complete as per specification and direction of Engineer-in- charge (Payment for providing grooves shall be made separately).	sqm	535.00
32.62	Forming groove of uniform size in the top layer of washed stone grit plaster as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repair to the edges of panels and finishing the groove complete as per specifications and direction of the Engineer-in-charge :		

Code No	Description	Unit	Rate Rs.
32.62.1	15 mm wide and 15 mm deep groove	metre	33.50
32.62.2	20 mm wide and 15 mm deep groove	metre	34.00
32.63	Extra for washed grit plaster on exterior walls of height more than 10m from ground level for every additional height of 3 m or part thereof.	sqm	62.50
32.64	Extra for washed stone grit plaster on circular work not exceeding 6m in radius (in two coats).	sqm	51.50
32.65	Forming groove of uniform size from 12x12mm and upto 25x15mm in plastered surface as per approved pattern using wooden battens, nailed to the under layer including removal of wooden battens, repairs to the edges of plaster panel and finishing the groove complete as per specifications and direction of the Engineer-in-Charge.	metre	33.50
32.66	Extra for using white cement in place of ordinary cement in the top layer of the item of washed stone grit plaster.	sqm	109.00
32.67	Providing and applying 12 mm thick (average) premixed formulated one coat gypsum lightweight plaster having additives and light weight aggregates as vermiculite/ perlite respectively conforming to IS: 2547 (Part - 1 & II) 1976, applied on hacked / uneven background such as bare brick/ block/ RCC work on walls & ceiling at all floors and locations, finished in smooth line and level etc. complete.	sqm	206.00
32.68	Cement, Concrete flooring/ cement plaster/ CC Road, Plain or RCC work & water retaining works providing and mixing admixture of synthetic polypropylene Fibrillated mesh fibers free from any reprocess Olefins & confirming to ASTM C 1116 Type III 4.1.3 Having grade 6mm / 12mm melting point of 165 deg.C., strength > 600 mpa Sp. Gravity: 0.92 g/cc, diameter 10-70 microns. It is required in specified ratio @ 0.25% (125 Gm. Fibre in 50kg cement) for use. Mix it directly with contents in rotating site mixer direction of the Engineer with all leads and lifts.	per pack 125 gm	58.50

33.0 REPAIRS TO BUILDINGS

Code No	Description	Unit	Rate Rs.
33.1	Repairs to plaster of thickness 12mm to 20mm in patches of area 2.5 sq. metres and under including cutting the patch in proper shape, raking out joints and preparing and plastering the surface of the walls complete including disposal of rubbish to the dumping ground within 50metres lead :		
33.1.1	With cement mortar 1:4 (1 cement : 4 fine sand)	sqm	234.00
33.1.2	With cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	234.00
33.2	Fixing chowkhats in existing opening including embedding chowkhats in floors or walls cutting masonry for holdfasts embedding hold fasts in cement concrete blocks with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) painting two coats of approved wood preservative to sides of chowkhats and making good the damages to walls and floors as required complete including disposal of rubbish to the dumping ground within 50 metres lead :		
33.2.1	Door chowkhats	each	748.00
33.2.2	Window chowkhats	each	476.00
33.2.3	Clerestory window chowkhats	each	351.00
33.3	Fixing chowkhat in existing opening in brick / RCC wall with dash fasteners of appropriate size/ chemical fastener (3nos on each vertical member of door chowkhat and 2 nos. on each vertical member of window 1.20 metre height as per CPWD specification including cost of dash fasteners/ chemical fastener.	each	99.00
33.4	Making the opening in brick masonry including dismantling in floor or walls by cutting masonry and making good the damages to walls, flooring and jambs complete to match existing surface i/c disposal of mulba/ rubbish to the nearest municipal dumping ground.		
33.4.1	For door/ window/ clerestory window.	sqm	514.00
33.5	Renewing glass panes, with putty and nails wherever necessary:		
33.5.1	Float glass panes of thickness 4 mm	sqm	637.00
33.5.2	Float glass panes of thickness 5.5 mm	sqm	877.00
33.6	Renewing glass panes, with wooden fillets wherever necessary:		
33.6.1	Float glass panes of thickness 4 mm	sqm	869.00
33.6.2	Float glass panes of thickness 5.5 mm	sqm	1110.00
33.7	Renewing glass panes and refixing existing wooden fillets:		
33.7.1	Float glass panes of thickness 4 mm	sqm	686.00
33.7.2	Float glass panes of thickness 5.5 mm	sqm	926.00
33.8	Supplying and fixing new wooden fillets wherever necessary:		
33.8.1	2nd class teak wood fillets	metre	36.50
33.8.2	Hollock wood fillets.	metre	32.00

Code No	Description	Unit	Rate Rs.
33.9	Renewal of old putty of glass panes (length)	metre	25.00
33.10	Refixing old glass panes with putty and nails	sqm	345.00
33.11	Fixing old glass panes with wooden fillets (excluding cost of fillets)	sqm	313.00
33.12	Providing and fixing 16 mm M.S. Fan clamps of standard shape and size in existing R.C.C. slab including cutting chase and making good and painting exposed portion of the clamps complete.	each	234.00
33.13	Re-grading terracing of mud phaska covered with tiles or brick, in cement by dismantling tiles or bricks, removing mud plaster preparing the surface of mud phaska to proper slope relaying mud plaster gobri leaping and tiles or bricks, grouted in cement mortar 1:3 (1 cement : 3 fine sand) including replacing unserviceable tiles or bricks with new ones and disposal of unserviceable material to the dumping ground (the cost of the new tiles or brick excluded) within 50 metres lead.	sqm	278.00
33.14	Replacing sand stone slabs in roofing laid in cement mortar 1:4 (1 cement : 4 coarse sand) including necessary repairs and cement pointing with same mortar complete including disposal of rubbish to dumping ground within 50 metres of lead :		
33.14.1	Red/ white sand stone slabs 30 to 50 mm thick.	sqm	625.00
33.15	Renewing wooden battens in roofs, including making good the holes in wall and painting with oil type wood preservative of approved brand and manufacture complete including removal of rubbish to the dumping ground within 50 metres lead :		
33.15.1	Sal wood battens.	cum	58100.00
33.16	Renewing wooden beams in roofs including making good the holes in walls and painting with oil type wood preservative of approved brand and manufacture complete including removal of rubbish to the dumping ground within 50 metres lead :		
33.16.1	Not exceeding 4.00 metres in length.		
33.16.1.1	Sal wood beams	cum	60300.00
33.16.1.2	Hollock wood beams	cum	49100.00
33.16.2	Above 4.00 metres and upto 5.00 metres length.		
33.16.2.1	Sal wood beams	cum	61300.00
33.16.2.2	Hollock wood beams	cum	50100.00
33.17	Raking out joints in lime or cement mortar and preparing the surface for re-pointing or replastering including disposal of rubbish to the dumping ground within 50 metres lead.	sqm	28.00
33.18	Flush pointing with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% of integral water proofing compound by weight of cement for flat tile bricks on top of mud phaska :		
33.18.1	With F.P.S. brick tiles	sqm	51.00
33.18.2	With modular brick tiles	sqm	52.00

Code No	Description	Unit	Rate Rs.
33.19	Taking out wind ties from roof including cutting out rusted bolts, nuts etc. and removing materials to any distance within compound and stacking.	kg	2.00
33.20	Fixing of old wind tie with new fittings including painting two or more coats with anticorrosive bitumastic paint of approved brand & manufacturer over and including priming coat of ready mixed zinc chromate yellow primer of approved brand.	metre	69.00
33.21	Renewing bottom rail and/or top rubber of collapsible gate including making good all damages and applying priming coat of zinc chromate yellow primer of approved brand and manufacturer.	kg	136.00
33.22	Renewing Wrought iron or M.S. Wheel or roller of steel door or gate and fitting and fixing the same with necessary clamps, nuts and bolts/welding and erection etc. complete.		
33.22.1	Wheel 50 mm dia. and below.	per wheel	124.00
33.22.2	Wheel above 50 mm dia.	per wheel	192.00
33.23	Pumping out water caused by springs, tidal or river seepage, broken water mains or drains and the like.	kilo litre	91.50
33.24	Mud mortar	cum	358.00
33.25	Brick work with bricks of class designation 75 in mud mortar	cum	3100.00
33.26	Providing and fixing 25 mm thick shutters for cup board etc. :		
33.26.1	Panelled or panelled & glazed shutters :		
33.26.1.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3580.00
33.26.1.2	1st class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3020.00
33.26.2	Glazed shutters :		
33.26.2.1	Superior class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3640.00
33.26.2.2	1st class teak wood including nickel plated bright finished M.S. piano hinges with necessary screws.	sqm	3040.00
33.27	Providing and fixing plain jaffri door and window shutters including bright or/and black enamelled M.S. butt hinges with necessary screws 35x10mm laths placed 35mm apart (frames to be paid separately) including fixing 50x12mm beading complete with :		
33.27.1	Second class teak wood.	sqm	2170.00
33.28	Providing and fixing curtain rods of 1.25mm thick brass plates with two brass brackets fixed with brass screws and wooden plugs etc. wherever necessary complete.		
33.28.1	20 mm diameter.	metre	166.00
33.28.2	25 mm diameter.	metre	182.00
33.29	Providing and fixing M.S. round or square bars with M.S. flats at required spacing in wooden frames of windows and clerestory windows.	kg	61.50

Code No	Description	Unit	Rate Rs.
33.30	Providing joists (karries) including hoisting fixing in position and applying wood preservative on unexposed surface etc. complete with:		
33.30.1	Sal wood.	cum	57300.00
33.30.2	Hollock wood.	cum	46200.00
33.31	Providing and fixing bright finished brass single acting spring hinges with necessary screws etc. complete :		
33.31.1	150 mm	each	356.00
33.31.2	125 mm	each	296.00
33.31.3	100 mm	each	219.00
33.32	Providing and fixing bright finished brass double acting spring hinges with necessary screws etc. complete :		
33.32.1	150 mm	each	550.00
33.32.2	125 mm	each	417.00
33.32.3	100 mm	each	340.00
33.33	Providing and fixing bright finished brass flush bolts with necessary screws etc. complete :		
33.33.1	250 mm	each	152.00
33.33.2	150 mm	each	126.00
33.33.3	100 mm	each	90.00
33.34	Providing and fixing 150 mm bright finished floor brass door stopper with rubber cushion, screws etc. to suit shutter thickness complete	each	183.00
33.35	Providing and fixing bright finished brass hard drawn hooks and eyes :		
33.35.1	300 mm	each	74.00
33.35.2	250 mm	each	68.00
33.35.3	200 mm	each	64.00
33.35.4	150 mm	each	58.00
33.35.5	100 mm	each	52.00
33.36	Providing and fixing bright finished brass fan light pivot with necessary screws etc. complete.	each	36.00
33.37	Providing and fixing 300 mm long bright finished brass chain with hook for fan light including necessary screws etc. complete.	each	35.00
33.38	Providing and fixing bright finished brass quadrant stay 300mm long with necessary screws etc. complete.	each	132.00
33.39	Providing and fixing bright finished brass helical door spring (superior quality).	each	336.00
33.40	Providing and fixing chromium plated brass butt hinges with necessary screws etc. complete.		
33.40.1	125x70x4 mm (ordinary type)	each	126.00
33.40.2	100x70x4 mm (ordinary type)	each	111.00
33.40.3	75x65x4 mm (heavy type)	each	104.00

Code No	Description	Unit	Rate Rs.
33.40.4	75x40x2.5 mm (ordinary type)	each	52.50
33.40.5	50x40x2.5 mm (ordinary type)	each	27.00
33.41	Providing and fixing 85x42mm chromium plated brass pull bolt lock with necessary screws, nuts, bolts and washers etc. complete.	each	207.00
33.42	White washing with lime to give an even shade :		
33.42.1	Old work (two or more coats)	sqm	9.50
33.42.2	Old work (one or more coats)	sqm	5.50
33.43	Removing white or colour wash by scrapping and sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete	sqm	7.50
33.44	Distempering with dry distemper of approved brand and manufacture (one or more coats) and of required shade on old work to give an even shade.	sqm	28.50
33.45	Distempering with oil bound washable distemper of approved brand and manufacture to give an even shade :		
33.45.1	Old work (one or more coats)	sqm	29.00
33.46	Removing dry or oil bound distemper, water proofing cement paint and the like by scrapping, sand papering and preparing the surface smooth including necessary repairs to scratches etc. complete.	sqm	9.50
33.47	Painting on G.S. sheet with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
33.47.1	Old work (one or more coats)	sqm	40.00
33.48	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture over and including a priming coat of ready mixed zinc chromate yellow primer on new work :		
33.48.1	75 mm diameter pipes	metre	24.00
33.49	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint of approved brand and manufacture on old work :		
33.49.1	75 mm diameter pipes	metre	11.50
33.50	Painting (two or more coats) on rain water, soil, waste and vent pipes and fittings with aluminium paint of approved brand and manufacture over a priming coat of ready mixed zinc chromate yellow primer on new work :		
33.50.1	75 mm diameter pipes	metre	24.50
33.51	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with synthetic enamel paint of approved brand and manufacture and required colour on old work :		
33.51.1	75 mm diameter pipes	metre	12.00
33.51.2	100 mm diameter pipes	metre	15.00
33.51.3	150 mm diameter pipes	metre	22.00
33.52	Painting with oil type wood preservative of approved brand and manufacture :		

Code No	Description	Unit	Rate Rs.
33.52.1	Old work (one or more coats)	sqm	17.00
33.53	Wall painting with plastic emulsion paint of approved brand and manufacture to give an even shade :		
33.53.1	One or more coats on old work.	sqm	51.50
33.54	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :		
33.54.1	One or more coats on old work.	sqm	48.00
33.55	Painting with aluminium paint of approved brand and manufacture to give an even shade :		
33.55.1	One or more coats on old work.	sqm	41.00
33.56	Painting with acid proof paint of approved brand and manufacture of required colour to give an even shade :		
33.56.1	One or more coats on old work.	sqm	45.50
33.57	Painting with black anti-corrosive bitumastic paint of approved brand and manufacture to give an even shade :		
33.57.1	One or more coats on old work.	sqm	40.00
33.58	French spirit polishing :		
33.58.1	One or more coats on old work.	sqm	108.00
33.59	Polishing on wood work with ready made wax polish of approved brand and manufacture :		
33.59.1	Old work	sqm	44.50
33.60	Re-lettering with black Japan paint of approved brand and manufacture.	letter per cm height	1.70
33.61	Painting (one or more coats) with black Japan paint of approved brand and manufacture to give an even shade.	sqm	38.50
33.62	Providing and fixing C.P. brass chain and rubber plug complete for sink or wash basin :		
33.62.1	32 mm dia	each	40.00
33.62.2	40 mm dia	each	41.00
33.63	Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.		
33.63.1	One or more coats on old work.	sqm	26.00
33.64	Finishing walls with water proofing cement paint of required shade :		
33.64.1	Old work (one or more coats applied @ 2.20 kg/10 sqm) over priming coat of primer applied @ 0.80 litres/10 sqm complete including cost of Priming coat.	sqm	53.00
33.65	Finishing walls with textured exterior paint of required shade :		
33.65.1	Old work (Two or more coats on existing cement paint surface applied @ 3.28 ltr/10 sqm.	sqm	126.00
33.65.2	Old work (One or more coats) applied @ 1.82 ltr/10 sqm.	sqm	75.50
33.66	Finishing walls with Acrylic Smooth exterior paint of required shade		

Code No	Description	Unit	Rate Rs.
	:		
33.66.1	Old work (Two or more coat applied @ 1.67 ltr/ 10 sqm) on existing cement paint surface).	sqm	68.50
33.66.2	Old work (One or more coat applied @ 0.90 ltr/10 sqm).	sqm	43.50
33.67	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone additives of required shade		
33.67.1	Old work (Two or more coats applied @ 1.43 ltr/ 10 sqm) over existing cement paint surface.	sqm	69.50
33.67.2	Old work (one or more coats applied @ 0.83 ltr/10 sqm).	sqm	45.50
33.68	Painting (one or more coats) on rain water, soil, waste and vent pipes and fittings with black anticorrosive bitumastic paint approved brand and manufacture on old work :		
33.68.1	100 mm diameter pipes	sqm	15.00
33.68.2	150 mm diameter pipes	sqm	21.50
33.69	Varnishing with varnish of approved brand and manufacture:		
33.69.1	One or more coats with copal varnish.	sqm	44.00
33.69.2	One or more coats with spar varnish.	sqm	45.00
33.70	Melamine polishing on wood work (one or more coat).	sqm	75.50
33.71	Varnishing with flatting varnish of approved brand and manufacture one or more coats on old work.	sqm	42.00
33.72	Providing and fixing double scaffolding system (cup lock type) on the exterior side, upto seven story height made with 40mm dia. M.S. tube 1.5 m centre to centre horizontal & vertical tubes joining with cup & lock system with M.S. tubes, M.S. tube challies, M.S. clamps and M.S. staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for the required duration as approved and removing it there after .The scaffolding system shall be stiffened with bracings, runners, connection with the building etc wherever required for inspection of work at required locations with essential safety features for the workmen etc. complete as per directions and approval of Engineer-in-charge .The elevational area of the scaffolding shall be measured for payment purpose .The payment will be made once irrespective of duration of scaffolding. (To be used for maintenance work judicially . necessary deduction for scaffolding in the existing item to be done.)	sqm	130.00

34.0 WATER SUPPLY (Building)

Code No	Description	Unit	Rate Rs.
34.1	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80 C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows, tees, reducers, couplers & connectors etc. with clamps at 1.00 metre spacing. this includes testing of joints complete as per direction of the Engineer in charge.		
	Internal work - Exposed on wall		
34.1.1	1216 (16 mm OD) pipe	metre	178.00
34.1.2	1620 (20 mm OD) pipe	metre	211.00
34.1.3	2025 (25 mm OD) pipe	metre	269.00
34.1.4	2532 (32 mm OD) pipe	metre	356.00
34.1.5	3240 (40 mm OD) pipe	metre	509.00
34.1.6	4050 (50 mm OD) pipe	metre	659.00
34.2	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80 C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with clamps at 1.00 metre spacing. This includes the costs of cutting chases and including testing of joints complete as per direction of the engineer in charge.		
	Concealed work including cutting chases and making good the wall etc.		
34.2.1	1216 (16 mm OD) pipe	metre	297.00
34.2.2	1620 (20 mm OD) pipe	metre	331.00
34.2.3	2025 (25 mm OD) pipe	metre	399.00
34.2.4	2532 (32 mm OD) pipe	metre	498.00
34.3	Providing and fixing Polyethelene-Aluminium-Polyethelene (PE-AL-PE) Composite Pressure Pipes conforming to IS - 15450 - 2004 U.V. stabilised with carbon black having thermal stability for hot & cold water supply, capable to withstand temperature up to 80 C including all special fittings of composite material (engineering plastic blend and brass inserts wherever required) e.g. elbows ,tees ,reducers, couplers & connectors etc. with trenching, refilling and testing of joints complete as per direction of the engineer in charge.		
	External work		
34.3.1	1216 (16 mm OD) pipe	metre	161.00

Code No	Description	Unit	Rate Rs.
34.3.2	1620 (20 mm OD) pipe.	metre	186.00
34.3.3	2025 (25 mm OD) pipe.	metre	237.00
34.3.4	2532 (32 mm OD) pipe.	metre	310.00
34.3.5	3240 (40 mm OD) pipe.	metre	445.00
34.3.6	4050 (50 mm OD) pipe.	metre	595.00
34.4	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes testing of joints complete as per direction of Engineer in Charge.		
	Internal work - Exposed on wall		
34.4.1	PN - 16 Pipe, 16 mm OD	metre	156.00
34.4.2	PN - 16 Pipe, 20 mm OD	metre	164.00
34.4.3	PN - 16 Pipe, 25 mm OD	metre	240.00
34.4.4	PN - 16 Pipe, 32 mm OD	metre	319.00
34.4.5	PN - 16 Pipe, 40 mm OD	metre	454.00
34.4.6	PN - 16 Pipe, 50 mm OD	metre	632.00
34.5	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.		
	Concealed work including cutting chases and making good the walls etc.,		
34.5.1	PN - 16 Pipe, 16 mm OD	metre	269.00
34.5.2	PN - 16 Pipe, 20 mm OD	metre	279.00
34.5.3	PN - 16 Pipe, 25 mm OD	metre	341.00
34.5.4	PN - 16 Pipe, 32 mm OD	metre	447.00
34.6	Providing and fixing 3 layer PP-R (Poly propylene Random copolymer) pipes SDR 7.4 U V stabilized & anti - microbial fusion welded, having thermal stability for hot & cold water supply including all PP - R plain & brass threaded polypropylene random fittings i/c trenching, refilling & testing of joints complete as per direction of Engineer in Charge.		
	External work		
34.6.1	PN - 16 Pipe, 16 mm OD	metre	140.00
34.6.2	PN - 16 Pipe, 20 mm OD	metre	148.00
34.6.3	PN - 16 Pipe, 25 mm OD	metre	200.00
34.6.4	PN - 16 Pipe, 32 mm OD	metre	279.00

Code No	Description	Unit	Rate Rs.
34.6.5	PN - 16 Pipe, 40 mm OD	metre	390.00
34.6.6	PN - 16 Pipe, 50 mm OD	metre	568.00
34.6.7	PN - 16 Pipe, 63mm OD	metre	853.00
34.6.8	PN - 16 Pipe, 75 mm OD	metre	1200.00
34.6.9	PN - 16 Pipe, 90 mm OD	metre	1700.00
34.6.10	PN - 10 Pipe, 110 mm OD (SDR - 11)	metre	2460.00
34.6.11	PN - 10 Pipe, 160 mm OD (SDR - 11)	metre	6870.00
34.7	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer in Charge.		
	Internal work - Exposed on wall		
34.7.1	15 mm nominal outer dia .Pipes.	metre	171.00
34.7.2	20 mm nominal outer dia .Pipes.	metre	226.00
34.7.3	25 mm nominal outer dia .Pipes.	metre	288.00
34.7.4	32 mm nominal outer dia .Pipes.	metre	410.00
34.7.5	40 mm nominal outer dia .Pipes.	metre	561.00
34.7.6	50 mm nominal outer dia .Pipes.	metre	819.00
34.8	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge.		
	Concealed work including cutting chases and making good the walls etc.,		
34.8.1	15 mm nominal outer dia .Pipes.	metre	277.00
34.8.2	20 mm nominal outer dia .Pipes.	metre	341.00
34.8.3	25 mm nominal outer dia .Pipes.	metre	424.00
34.8.4	32 mm nominal outer dia .Pipes.	metre	570.00
34.9	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings. This included jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge.		
	External work		
34.9.1	15 mm nominal outer dia .Pipes.	metre	146.00
34.9.2	20 mm nominal outer dia .Pipes.	metre	193.00
34.9.3	25 mm nominal outer dia .Pipes.	metre	262.00

Code No	Description	Unit	Rate Rs.
34.9.4	32 mm nominal outer dia .Pipes.	metre	370.00
34.9.5	40 mm nominal outer dia .Pipes.	metre	497.00
34.9.6	50 mm nominal outer dia .Pipes.	metre	755.00
34.9.7	62.50 mm nominal inner dia Pipes.	metre	1650.00
34.9.8	75 mm nominal inner dia .Pipes.	metre	2120.00
34.9.9	100mm nominal inner dia .Pipes.	metre	3010.00
34.10	Providing and fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc.		
	Internal work - Exposed on wall		
34.10.1	15 mm dia. nominal bore	metre	199.00
34.10.2	20 mm dia. nominal bore	metre	249.00
34.10.3	25 mm dia. nominal bore	metre	292.00
34.10.4	32 mm dia. nominal bore	metre	375.00
34.10.5	40 mm dia. nominal bore	metre	489.00
34.10.6	50 mm dia. nominal bore	metre	554.00
34.11	Concealed pipe including painting with anti corrosive bitumastic paint, cutting chases and making good the wall.		
34.11.1	15 mm dia nominal bore	metre	290.00
34.11.2	20 mm dia nominal bore	metre	332.00
34.12	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc.		
	External work :		
34.12.1	15 mm dia. nominal bore	metre	169.00
34.12.2	20 mm dia. nominal bore	metre	206.00
34.12.3	25 mm dia. nominal bore	metre	243.00
34.12.4	32 mm dia. nominal bore	metre	305.00
34.12.5	40 mm dia. nominal bore	metre	385.00
34.12.6	50 mm dia. nominal bore	metre	416.00
34.12.7	65 mm dia. nominal bore	metre	525.00
34.12.8	80 mm dia. nominal bore	metre	626.00
34.13	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete :		
34.13.1	25 to 40 mm nominal bore	each	402.00
34.13.2	50 to 80 mm nominal bore	each	826.00
34.14	Fixing water meter and stop cock in G.I. pipe line including cutting and threading the pipe and making long screws etc. complete (cost of water meter and stop cock to be paid separately).	each	352.00
34.15	Providing and fixing brass bib cock of approved quality :		

Code No	Description	Unit	Rate Rs.
34.15.1	15 mm nominal bore	each	215.00
34.15.2	20 mm nominal bore	each	284.00
34.16	Providing and fixing brass stop cock of approved quality :		
34.16.1	15 mm nominal bore	each	240.00
34.16.2	20 mm nominal bore	each	284.00
34.17	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :		
34.17.1	25 mm nominal bore	each	497.00
34.17.2	32 mm nominal bore.	each	805.00
34.17.3	40 mm nominal bore	each	1050.00
34.17.4	50 mm nominal bore	each	1910.00
34.17.5	65 mm nominal bore	each	3600.00
34.17.6	80 mm nominal bore	each	7590.00
34.18	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :		
34.18.1	15 mm nominal bore	each	280.00
34.18.2	20 mm nominal bore	each	317.00
34.18.3	25 mm nominal bore	each	478.00
34.19	Providing and fixing gun metal non- return valve of approved quality (screwed end) :		
34.19.1	25 mm nominal bore		
34.19.1.1	Horizontal	each	784.00
34.19.1.2	Vertical	each	633.00
34.19.2	32 mm nominal bore		
34.19.2.1	Horizontal	each	1420.00
34.19.2.2	Vertical	each	993.00
34.19.3	40 mm nominal bore		
34.19.3.1	Horizontal	each	1610.00
34.19.3.2	Vertical	each	1220.00
34.19.4	50 mm nominal bore		
34.19.4.1	Horizontal	each	2460.00
34.19.4.2	Vertical	each	2050.00
34.19.5	65 mm nominal bore		
34.19.5.1	Horizontal	each	5890.00
34.19.5.2	Vertical	each	3260.00
34.19.6	80 mm nominal bore		
34.19.6.1	Horizontal	each	8280.00
34.19.6.2	Vertical	each	4530.00
34.20	Providing and fixing brass ferrule with C.I. mouth cover including		

Code No	Description	Unit	Rate Rs.
	boring and tapping the main :		
34.20.1	15 mm nominal bore	each	166.00
34.20.2	20 mm nominal bore	each	224.00
34.20.3	25 mm nominal bore	each	294.00
34.21	Providing and fixing uplasticised PVC connection pipe with brass unions :		
34.21.1	30 cm length		
34.21.1.1	15 mm nominal bore	each	41.50
34.21.1.2	20 mm nominal bore	each	51.00
34.21.2	45 cm length		
34.21.2.1	15 mm nominal bore	each	52.50
34.21.2.2	20 mm nominal bore	each	67.00
34.22	Providing and fixing C.P. brass shower rose with 15 or 20 mm inlet :		
34.22.1	100 mm diameter	each	49.50
34.22.2	150 mm diameter	each	68.00
34.23	Laying in position centrifugally cast (spun) iron S&S or flanged pipes (excluding cost of pipe)	quintal	146.00
34.24	Laying in position S&S or flanged C.I. special such as tees, bends, collars, tapers and caps etc. (excluding cost of specials).	quintal	273.00
34.25	Providing and laying S&S C.I. standard specials such as tees, bends, collars, tapers, caps etc. (Heavy class) :		
34.25.1	Upto 300 mm dia.	quintal	4630.00
34.25.2	Over 300 mm dia.	quintal	4750.00
34.26	Providing and laying flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :		
34.26.1	Upto 300 mm dia.	quintal	6930.00
34.26.2	Over 300 mm dia.	quintal	7530.00
34.27	Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536 :		
34.27.1	100 mm dia. pipe	metre	1120.00
34.27.2	125 mm dia. pipe	metre	1390.00
34.27.3	150 mm dia. pipe	metre	1680.00
34.27.4	200 mm dia. pipe	metre	2850.00
34.27.5	250 mm dia. pipe	metre	3720.00
34.27.6	300 mm dia. pipe	metre	5020.00
34.27.7	350 mm dia. pipe	metre	6020.00
34.27.8	400 mm dia. pipe	metre	7930.00
34.27.9	450 mm dia. pipe	metre	9600.00
34.27.10	500 mm dia. pipe	metre	11100.00

Code No	Description	Unit	Rate Rs.
34.27.11	600 mm dia. pipe	metre	15600.00
34.28	Providing lead caulked joints to spun iron or C.I. pipes and specials including testing of joints but excluding the cost of pig lead :		
34.28.1	100 mm diameter pipe	each	216.00
34.28.2	125 mm diameter pipe	each	320.00
34.28.3	150 mm diameter pipe	each	324.00
34.28.4	200 mm diameter pipe	each	431.00
34.28.5	250 mm diameter pipe	each	538.00
34.28.6	300 mm diameter pipe	each	647.00
34.28.7	350 mm diameter pipe	each	660.00
34.28.8	400 mm diameter pipe	each	868.00
34.28.9	450 mm diameter pipe	each	974.00
34.28.10	500 mm diameter pipe	each	1030.00
34.28.11	600 mm diameter pipe	each	1400.00
34.29	Supplying pig lead at site of work.	quintal	8470.00
34.30	Constructing masonry Chamber 30x30x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for stop cock, with C. I. surface box 100x100 x75 mm (inside) with hinged cover fixed in cement concrete slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12mm thick finished with a floating coat of neat cement complete as per standard design :		
34.30.1	With bricks	each	947.00
34.31	Constructing masonry Chamber 60x60x75 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
34.31.1	With F.P.S. bricks	each	5530.00
34.32	Constructing masonry Chamber 90x90x100 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		

Code No	Description	Unit	Rate Rs.
34.32.1	With F.P.S. bricks	each	9580.00
34.33	Constructing masonry Chamber 120x120x100 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
34.33.1	With F.P.S. bricks	each	13200.00
34.34	Constructing masonry Chamber 60x60x75 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for fire hydrants, with C.I. surface box 350x350 mm top and 165 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand:10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
34.34.1	With F.P.S. bricks	each	5190.00
34.35	Constructing masonry Chamber 60x45x50 cm, inside with 75 class designation brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for water meter complete with C.I. double flap surface box 400x200x200 mm (inside) with locking arrangement and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand :10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :		
34.35.1	With F.P.S. bricks	each	4970.00
34.36	Painting G.I. pipes and fittings with synthetic enamel white paint over a ready mixed priming coat, both of approved quality for new work :		
34.36.1	15 mm diameter pipe.	metre	8.50
34.36.2	20 mm diameter pipe.	metre	10.00
34.36.3	25 mm diameter pipe.	metre	13.00
34.36.4	32 mm diameter pipe.	metre	16.00
34.36.5	40 mm diameter pipe.	metre	18.50
34.36.6	50 mm diameter pipe.	metre	22.50
34.37	Repainting G.I. pipes and fittings with synthetic enamel white paint of approved quality :		
34.37.1	15 mm diameter pipe.	metre	4.00
34.37.2	20 mm diameter pipe.	metre	5.00
34.37.3	25 mm diameter pipe	metre	6.50

Code No	Description	Unit	Rate Rs.
34.37.4	32 mm diameter pipe	metre	7.50
34.37.5	40 mm diameter pipe	metre	9.00
34.37.6	50 mm diameter pipe	metre	10.50
34.38	Painting G.I. pipes and fittings with two coats of anti-corrosive bitumastic paint of approved quality :		
34.38.1	15 mm diameter pipe	metre	5.00
34.38.2	20 mm diameter pipe	metre	6.00
34.38.3	25 mm diameter pipe	metre	7.50
34.38.4	32 mm diameter pipe	metre	9.50
34.38.5	40 mm diameter pipe	metre	10.50
34.38.6	50 mm diameter pipe	metre	13.00
34.38.7	65 mm diameter pipe	metre	16.00
34.38.8	80 mm diameter pipe	metre	18.50
34.39	Providing and filling fine sand of grading zone V or coarser grade all-round the G.I. pipes in external work.	cum	1170.00
34.40	Providing and filling sand of grading zone V or coarser grade all-round the G.I. pipes in external work.		
34.40.1	15 mm diameter pipe	metre	86.50
34.40.2	20 mm diameter pipe	metre	88.00
34.40.3	25 mm diameter pipe	metre	90.00
34.40.4	32 mm diameter pipe	metre	92.50
34.40.5	40 mm diameter pipe	metre	93.50
34.40.6	50 mm diameter pipe	metre	97.00
34.40.7	65 mm diameter pipe	metre	153.00
34.40.8	80 mm diameter pipe	metre	158.00
34.40.9	100 mm diameter pipe	metre	167.00
34.40.10	150 mm diameter pipe	metre	249.00
34.41	Boring with 100 mm diameter casting pipe for hand pump/ tube well in all soils except ordinary hard rocks requiring blasting including removing the casing pipe after the hand pipe/tube well is lowered and tested :		
34.41.1	Upto 6 metres depth.	metre	326.00
34.41.2	Beyond 6 m and upto 12 m depth.	metre	386.00
34.41.3	Beyond 12 m and upto 18 m depth.	metre	449.00
34.42	Providing and placing in position filters of 40 mm diameter G.I. pipe with brass strainer of approved quality.	metre	526.00
34.43	Providing and fixing to filter and lowering to proper levels 40 mm G.I. pipe for tube well including cleaning and priming the tube well.	metre	361.00
34.44	Providing and placing in position hand pump of approved quality for 40 mm diameter G.I. pipe complete with all accessories.	each	914.00
34.45	Providing and fixing G.I. Union in G.I. pipe including cutting and		

Code No	Description	Unit	Rate Rs.
	threading the pipe and making long screws etc. complete (New work)		
34.45.1	15 mm nominal bore	each	172.00
34.45.2	20 mm nominal bore	each	198.00
34.45.3	25 mm nominal bore	each	231.00
34.45.4	32 mm nominal	each	289.00
34.45.5	40 mm nominal bore	each	320.00
34.45.6	50mm nominal bore	each	468.00
34.45.7	65mm nominal bore	each	759.00
34.45.8	80 mm nominal bore	each	999.00
34.46	Providing and fixing G.I. Union in existing G.I. pipe line, cutting and threading the pipe and making long screws including excavation, refilling the earth or cutting of wall and making good the same complete wherever required :		
34.46.1	15 mm nominal bore.	each	399.00
34.46.2	20 mm nominal bore.	each	424.00
34.46.3	25 mm nominal bore.	each	457.00
34.46.4	32 mm nominal bore.	each	515.00
34.46.5	40 mm nominal bore.	each	546.00
34.46.6	50 mm nominal bore.	each	776.00
34.46.7	65 mm nominal bore.	each	1070.00
34.46.8	80 mm nominal bore.	each	1310.00
34.47	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank	per litre	6.50
34.48	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931		
34.48.1	15 mm nominal bore.	each	377.00
34.49	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.		
34.49.1	15 mm nominal bore.	each	342.00
34.50	Providing and fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms.		
34.50.1	15 mm nominal bore	each	394.00
34.51	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.		
34.51.1	15 mm nominal bore.	each	392.00
34.52	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931		
34.52.1	15 mm nominal bore	each	436.00

Code No	Description	Unit	Rate Rs.
34.53	Providing and fixing PTMT bib cock of approved quality and colour.		
34.53.1	15mm nominal bore, 86 mm long. Weighing not less than 88 gms.	each	101.00
34.53.2	15 mm nominal bore, 122mm long. Weighing not less than 99 gms.	each	143.00
34.53.3	15 mm nominal bore, 165mm long. Weighing not less than 110 gms.	each	157.00
34.53.4	15mm nominal bore, 90mm long. Weighing not less than 93 gms.	each	111.00
34.54	Providing and fixing PTMT stop cock of approved quality and colour.		
34.54.1	15 mm nominal bore, 86mm long. Weighing not less than 88 gms.	each	101.00
34.54.2	20mm nominal bore, 89mm long. Weighing not less than 88 gms.	each	133.00
34.54.3	Concealed stop cock, 15mm nominal bore, 108mm long. Weighing not less than 108 gms.	each	161.00
34.55	Providing and fixing PTMT pillar cock of approved quality and colour .		
34.55.1	15mm nominal bore, 107mm long. Weighing not less than 110 gms.	each	168.00
34.55.2	15mm nominal bore, 125mm long foam flow. Weighing not less than 120 gms.	each	145.00
34.56	Providing and fixing PTMT, push cock of approved quality and colour.		
34.56.1	15 mm nominal bore, 98mm long. Weighing not less than 75 gms.	each	88.50
34.56.2	15 mm nominal bore, 80mm long. Weighing not less than 46 gms.	each	82.50
34.57	Providing and fixing PTMT grating of approved quality and colour.		
34.57.1	Circular type.		
34.57.1.1	100 mm nominal dia.	each	30.50
34.57.1.2	125 mm nominal dia with 25 mm waste hole.	each	35.50
34.57.2	Rectangular type with openable circular lid.		
34.57.2.1	150 mm nominal size square 100 mm diameter of the inner hinged round grating .	each	41.50
34.58	Providing and fixing PTMT Ball cock of approved quality, colour and make complete with Epoxy coated aluminium rod with L.P./ H.P.H.D. plastic ball.		
34.58.1	15 mm nominal bore, 105 mm long. Weighing not less than 138 gms.	each	153.00
34.58.2	20 mm nominal bore, 120 mm long. Weighing not less than 198 gms.	each	202.00
34.58.3	25 mm nominal bore, 152mm long. Weighing not less than 440 gms.	each	402.00
34.58.4	40mm nominal bore, 206mm long. Weighing not less than 690 gms.	each	645.00
34.58.5	50mm nominal bore, 242mm long. Weighing not less than 1240 gms.	each	1140.00
34.59	Providing and fixing PTMT angle stop cock 15 mm nominal bore. Weighing not less than 85 gms.	each	133.00
34.60	Providing and fixing PTMT swivelling shower, 15mm nominal bore. Weighing not less than 40gms.	each	99.00
34.61	Providing and fixing PTMT soap Dish Holder having length of	each	111.00

Code No	Description	Unit	Rate Rs.
	138mm, breadth 102mm, height of 75mm with concealed fitting arrangements. Weighing not less than 106 gms.		
34.62	Providing and fixing Unplasticised P.V.C. connection pipe with PTMT Nuts collar and bush of approved quality and colour.		
34.62.1	15 mm nominal bore with 30cm length.	each	53.50
34.62.2	15 mm nominal bore with 45 cm length.	each	57.50
34.63	Providing and fixing PTMT extension nipple for water tank pipe, fittings of approved quality and colour.		
34.63.1	15 mm nominal bore. Weighing not less than 32 gms.	each	27.00
34.63.2	20mm nominal bore. Weighing not less than 40gms.	each	38.00
34.63.3	25mm nominal bore. Weighing not less than 62 gms.	each	52.50
34.64	Cutting holes upto 30x30 cm in walls including making good the same :		
34.64.1	With F.P.S. bricks.	each	194.00
34.65	Cutting holes upto 15x15 cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including finishing complete so as to make it leak proof.	each	189.00
34.66	Making chases upto 7.5x7.5 cm in walls including making good and finishing with matching surface after housing G.I. pipe etc.	metre	86.00
34.67	Making hole upto 20x20 cm and embedding pipes upto 150 mm diameter in masonry and filling with cement concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) including disposal of malba.	metre	91.50
34.68	Dismantling old C.I. pipes including excavation and refilling trenches after taking out the pipes, breaking lead caulked joints, melting of lead and making into blocks including stacking of pipes at site lead upto 50 metre :		
34.68.1	80 mm diameter C.I. pipe.	metre	161.00
34.68.2	100 mm diameter C.I. pipe.	metre	168.00
34.68.3	125 mm diameter C.I. pipe.	metre	174.00
34.68.4	150 mm diameter C.I. pipe.	metre	181.00
34.68.5	200 mm diameter C.I. pipe.	metre	202.00
34.68.6	250 mm diameter C.I. pipe.	metre	223.00
34.68.7	300 mm diameter C.I. pipe.	metre	241.00
34.68.8	350 mm diameter C.I. pipe.	metre	258.00
34.68.9	400 mm diameter C.I. pipe.	metre	274.00
34.68.10	450 mm diameter C.I. pipe.	metre	291.00
34.68.11	500 mm diameter C.I. pipe.	metre	305.00
34.68.12	600 mm diameter C.I. pipe.	metre	331.00
34.69	Labour for cutting C.I. pipe with steel saw.		
34.69.1	80 mm diameter C.I. pipe.	each cut	64.00

Code No	Description	Unit	Rate Rs.
34.69.2	100 mm diameter C.I. pipe.	each cut	85.50
34.69.3	125 mm diameter C.I. pipe.	each cut	118.00
34.69.4	150 mm diameter C.I. pipe.	each cut	161.00
34.69.5	200 mm diameter C.I. pipe.	each cut	214.00
34.69.6	250 mm diameter C.I. pipe.	each cut	267.00
34.69.7	300 mm diameter C.I. pipe.	each cut	321.00
34.69.8	350 mm diameter C.I. pipe.	each cut	373.00
34.69.9	400 mm diameter C.I. pipe.	each cut	427.00
34.69.10	450 mm diameter C.I. pipe.	each cut	479.00
34.69.11	500 mm diameter C.I. pipe	each cut	533.00
34.69.12	600 mm diameter C.I. pipe.	each cut	637.00

35.0 DRAINAGE (Building)

Code No	Description	Unit	Rate Rs.
35.1	Providing, laying and jointing glazed stoneware pipes grade 'A' with stiff mixture of cement mortar in the proportion of 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
35.1.1	100 mm diameter	metre	286.00
35.1.2	150 mm diameter	metre	512.00
35.1.3	200 mm diameter	metre	785.00
35.1.4	230 mm diameter	metre	1090.00
35.1.5	250 mm diameter	metre	1270.00
35.1.6	300 mm diameter	metre	1560.00
35.2	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all-round S.W. pipes including bed concrete as per standard design:		
35.2.1	100 mm diameter S.W. pipe	metre	462.00
35.2.2	150 mm diameter S.W. pipe	metre	565.00
35.2.3	200 mm diameter S.W. pipe	metre	658.00
35.2.4	230 mm diameter S.W. pipe	metre	721.00
35.2.5	250 mm diameter S.W. pipe	metre	761.00
35.3	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design :		
35.3.1	100 mm diameter S.W. pipe	metre	219.00
35.3.2	150 mm diameter S.W. pipe	metre	356.00
35.3.3	200 mm diameter S.W. pipe	metre	418.00
35.3.4	230 mm diameter S.W. pipe	metre	459.00
35.3.5	250 mm diameter S.W. pipe	metre	487.00
35.3.6	300 mm diameter S.W. pipe	metre	562.00
35.4	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design :		
35.4.1	100x100 mm size P type		
35.4.1.1	With bricks class designation 75	each	1360.00
35.4.1.2	With Sewer bricks conforming to IS : 4885	each	1360.00
35.4.2	150 x 100 mm size P type.		
35.4.2.1	With bricks class designation 75	each	1400.00
35.4.2.2	With sewer bricks conforming to IS : 4885	each	1390.00

Code No	Description	Unit	Rate Rs.
35.4.3	180x150 mm size P type		
35.4.3.1	With bricks class designation 75	each	1480.00
35.4.3.2	With Sewer bricks conforming to IS : 4885	each	1480.00
35.5	Dismantling of old S.W. pipes including breaking of joints and bed concrete stacking of useful materials near the site within 50 m lead and disposal of unserviceable materials into municipal dumps:		
35.5.1	100 mm diameter	metre	34.00
35.5.2	150 mm diameter	metre	37.00
35.5.3	200 mm diameter	metre	39.50
35.5.4	230 mm diameter	metre	40.50
35.5.5	250 mm diameter	metre	41.50
35.5.6	300 mm diameter	metre	43.50
35.5.7	350 mm diameter	metre	50.50
35.5.8	400 mm diameter	metre	55.00
35.5.9	450 mm diameter	metre	57.50
35.6	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design :		
35.6.1	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) :		
35.6.1.1	With bricks with class designation 75	each	7190.00
35.6.1.2	With Sewer bricks conforming to IS : 4885	each	7180.00
35.6.2	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :		
35.6.2.1	With bricks class designation 75	each	15900.00
35.6.2.2	With Sewer bricks conforming to IS : 4885	each	15900.00
35.6.3	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg) :		
35.6.3.1	With bricks class designation 75	each	20800.00
35.6.3.2	With Sewer bricks conforming to IS : 4885	each	20800.00
35.7	Extra for depth for manholes		

Code No	Description	Unit	Rate Rs.
35.7.1	Size 90x80 cm		
35.7.1.1	With bricks class designation 75	metre	4580.00
35.7.1.2	With Sewer bricks conforming to IS : 4885	metre	4560.00
35.7.2	Size 120x90 cm		
35.7.2.1	With bricks class designation 75	metre	5490.00
35.7.2.2	With Sewer bricks conforming to IS : 4885	metre	5460.00
35.8	Supplying and fixing C.I. cover without frame for manholes :		
35.8.1	455x610 mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 23 kg.	each	1260.00
35.8.2	500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg.	each	2830.00
35.8.3	560 mm diameter C.I. cover (heavy duty) the weight of the cover to be not less than 108 kg.	each	5500.00
35.9	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality		
35.9.1	L D- 2.5		
35.9.1.1	Rectangular shape 600x450mm internal dimensions	each	1140.00
35.9.1.2	Square shape 450mm internal dimensions	each	902.00
35.9.1.3	Circular shape 450mm internal diameter	each	1310.00
35.9.2	M D - 10		
35.9.2.1	Square shape 450mm internal dimension	each	1100.00
35.9.2.2	Circular shape 500mm internal diameter	each	1610.00
35.10	Supplying and fixing C.I. cover 300x300 mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5kg.	each	285.00
35.11	Dismantling of manhole including R.C.C. top slab, C.I. cover with frame including stacking of useful materials near the site and disposal of unserviceable materials into municipal dumps within 50 m lead :		
35.11.1	Rectangular manhole 90x80 cm and 45 cm deep	each	556.00
35.11.2	Rectangular manhole 120x90 cm and 90 cm deep	each	881.00
35.11.3	Rectangular arch type manhole 140x90cm and 2.45m deep	each	1340.00
35.11.4	Circular manhole 122 cm diameter and 1.68 m deep	each	764.00
35.12	Extra for depth of manholes dismantled:		
35.12.1	Rectangular manhole 90x80 cm and 45 cm deep	metre	261.00
35.12.2	Rectangular manhole 120x90 cm and 90 cm deep	metre	310.00
35.12.3	Rectangular arch type manhole 140x90 cm and 2.45m deep (upto 4.25 m depth).	metre	245.00
35.12.4	Circular manhole 122 cm diameter and 1.68 m deep (upto 2.29 m depth)	metre	293.00
35.13	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal		

Code No	Description	Unit	Rate Rs.
	grating with frame complete as per standard design :		
35.13.1	With bricks	each	3510.00
35.14	Constructing brick masonry road gully chamber 45x45x77.5 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) with precast R.C.C. vertical grating complete as per standard design :		
35.14.1	With bricks	each	3730.00
35.15	Constructing brick masonry road gully chamber 110x50x77.5 cm with bricks of class designation 75 in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design :		
35.15.1	With bricks	each	6600.00
35.16	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) R.C.C. top slab with 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design :		
35.16.1	Inside dimensions 455x610 mm and 45 cm deep for single pipe line :		
35.16.1.1	With bricks	each	4120.00
35.16.2	Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets :		
35.16.2.1	With bricks	each	4750.00
35.16.3	Inside dimensions 600x 850 mm and 45 cm deep for pipe line with three or more inlets :		
35.16.3.1	With bricks	each	5460.00
35.17	Extra for depth beyond 45 cm of brick masonry chamber :		
35.17.1	For 455x610 mm size		
35.17.1.1	With bricks	metre	3180.00
35.17.2	For 500x700 mm size		
35.17.2.1	With bricks	metre	3470.00
35.17.3	For 600x850 mm size		
35.17.3.1	With bricks	metre	4050.00
35.18	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks of class designation 75 and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.		

Code No	Description	Unit	Rate Rs.
35.18.1	With bricks	each	14400.00
35.19	Constructing soak pit 1.20x1.20x1.20m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.	each	1730.00
35.20	Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1 cement : 1 fine sand) including testing of joints etc. complete :		
35.20.1	100 mm dia	each	278.00
35.20.2	150 mm dia	each	394.00
35.21	Providing and fixing precast dense cement concrete M-20 Grade(Vibro-pressed) drain section block of different size as per approved drawing, design and strength as per IS:2185 (part I) of grade 'D' (5.00 N/mm ²) proper quality of additive/admixture like plasticizer etc. added to produce high quality and durable drain section Blocks of 'L' shape 'U' shape etc. over 50mm thick CC M15 base course with fixing and joining with C.M.1:4 in proper grade and level complete in all respect. (cost of earth work, steel & welded mesh shall be paid extra).		
35.21.1	40mm thick	sqm	414.00
35.21.2	60mm thick	sqm	475.00
35.21.3	80mm thick	sqm	596.00
35.22	Cleaning and removal of earth, silt, sludge, kankar, boulder, building material and garbage in existing nallah/drain including construction of bye pass arrangement to bypass water with 1.5m lift from ground level and lead upto 50 m including foul & saturated condition where pumping out or bailing out of water is required, including shoring, shuttering where required and dewatering. Making access for disposal and dressing disposal side as per the directed of the Engineer.		
35.22.1	For Depth upto 1.50 m	cum	278.00
35.22.2	For depth above 1.50 m and upto 3.00 m	cum	326.00
35.22.3	For depth above 3.00 m and upto 4.50 m	cum	350.00
35.22.4	For depth above 4.50 m and upto 6.00 m	cum	412.00
35.22.5	For depth above 6.00 m and upto 7.50 m	cum	460.00
35.22.6	For depth above 7.50 m and upto 9.00 m	cum	505.00

36.0 SANITARY INSTALLATIONS

Code No	Description	Unit	Rate Rs.
36.1	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :		
36.1.1	White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	each	3570.00
36.1.2	Stainless Steel AISI-304(18/8) Orissa pattern W.C. pan of size 585x480 mm with flush pipe and integrated type foot rests.	each	6980.00
36.2	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 10 litre low level white P.V.C. flushing cistern with manually controlled device (handle lever), conforming to IS : 7231, with all fittings and fixtures complete including cutting and making good the walls and floors wherever required :		
36.2.1	W.C. pan with ISI marked white solid plastic seat and lid	each	3450.00
36.2.2	W.C. pan with ISI marked black solid plastic seat and lid	each	3420.00
36.3	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
36.3.1	W.C. pan with ISI marked white solid plastic seat and lid.	each	4590.00
36.3.2	W.C. pan with ISI marked black solid plastic seat and lid.	each	4560.00
36.4	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
36.4.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern.	each	3510.00
36.4.2	Range of two urinal basins with 5 litre white P.V.C. automatic flushing cistern.	each	5460.00
36.4.3	Range of three urinal basins with 10litre white P.V.C. automatic flushing cistern.	each	7500.00
36.4.4	Range of four urinal basins with 10 litre white P.V.C. automatic flushing cistern.	each	10200.00
36.5	Providing and fixing white vitreous china flat back half stall urinal of size 580x380x350mm with white PVC automatic flushing cistern, with fittings, standard size C.P. brass flush pipe, spreaders with unions and clamps (all in C.P. brass) with waste fitting as per IS :		

Code No	Description	Unit	Rate Rs.
	2556, C.I. trap with outlet grating and other couplings in C.P. brass including painting of fittings and cutting and making good the walls and floors wherever required :		
36.5.1	Single half stall urinal with 5 litre P.V.C. automatic flushing cistern.	each	6240.00
36.5.2	Range of two half stall urinals with 5 litre P.V.C. automatic flushing cistern.	each	9460.00
36.5.3	Range of three half stall urinals with 10 litre P.V.C. automatic flushing cistern.	each	11900.00
36.5.4	Range of four half stall urinals with 10 litre P.V.C. automatic flushing cistern.	each	14100.00
36.6	Providing and fixing one piece construction white vitreous china squatting plate with an integral longitudinal flushing pipe, white P.V.C. automatic flushing cistern, with fittings, standard size G.I. flush pipe for back and front flush with standard spreader pipes with fittings, G.I. clamps and C.P. brass coupling complete including painting of fittings and cutting and making good the walls and floors etc. wherever required :		
36.6.1	Single squatting plate with 5 litre P.V.C. automatic flushing cistern.	each	4560.00
36.6.2	Range of two squatting plates with 5 litre P.V.C. automatic flushing cistern.	each	6600.00
36.6.3	Range of three squatting plates with 10 litre P.V.C. automatic flushing cistern.	each	8670.00
36.6.4	Range of four squatting plates with 10 litre P.V.C. automatic flushing cistern.	each	10400.00
36.7	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require :		
36.7.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps.	each	2050.00
36.7.2	White Vitreous China Wash basin size 630x450 mm with a single 15 mm C.P. brass pillar taps.	each	1860.00
36.7.3	White Vitreous China Wash basin size 550x400 mm with a pair of 15 mm C.P. brass pillar taps.	each	1850.00
36.7.4	White Vitreous China Flat back wash basin size 550x400 mm with single 15 mm C.P. brass pillar tap.	each	1670.00
36.7.5	White Vitreous China Angle back wash basin size 600x480 mm with single 15 mm C.P. brass pillar tap.	each	1800.00
36.7.6	White Vitreous China Angle back wash basin size 400x400 mm with single 15 mm C.P. brass pillar tap.	each	1510.00
36.7.7	White Vitreous China Flat back wash basin size 450x300 mm with single 15 mm C.P. brass pillar tap.	each	1400.00
36.7.8	White Vitreous China Surgeon type wash basin of size 660x460 mm with a pair of 15 mm C.P. brass pillar taps with elbow operated levers.	each	3170.00
36.7.9	White Vitreous China Surgeon type wash basin of size 660x460 mm with single 15 mm C.P. brass pillar taps with elbow operated levers ISI marked.	each	2590.00

Code No	Description	Unit	Rate Rs.
36.7.10	Stainless Steel AISI-304(18/8) Round basin 405x355 mm with single 15 mm C.P. brass pillar tap.	each	2820.00
36.7.11	Stainless Steel AISI-304(18/8) Wash basin 530x345 mm with single 15 mm C.P. brass pillar tap.	each	2820.00
36.8	Providing and fixing white vitreous china pedestal for wash basin completely recessed at the back for the reception of pipes and fittings.	each	870.00
36.9	Providing and fixing kitchen sink with C.I. brackets, C.P. brass chain with rubber plug, 40 mm C.P. brass waste complete, including painting the fittings and brackets, cutting and making good the walls wherever required :		
36.9.1	White glazed fire clay kitchen sink of size 600x450x250 mm.	each	2390.00
36.10	Providing and fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40 mm including painting of fittings and brackets, cutting and making good the walls wherever required :		
36.10.1	Kitchen sink with drain board		
36.10.1.1	510x1040 mm bowl depth 250mm.	each	4200.00
36.10.1.2	510x1040 mm bowl depth 225mm.	each	3890.00
36.10.1.3	510x1040 mm bowl depth 200mm.	each	3830.00
36.10.1.4	510x1040 mm bowl depth 178mm.	each	3770.00
36.10.2	Kitchen sink without drain board		
36.10.2.1	610x510 mm bowl depth 200 mm.	each	2500.00
36.10.2.2	610x460 mm bowl depth 200 mm.	each	2200.00
36.10.2.3	470x420 mm bowl depth 178 mm.	each	2020.00
36.11	Providing and fixing white vitreous china laboratory sink with C.I. brackets, C.P. brass chain with rubber plug 40mm C.P brass waste and 40mm C.P. brass trap with necessary fittings complete including painting of fittings and brackets, cutting and making good the wall wherever required :		
36.11.1	Size 450x300x150mm	each	1900.00
36.11.2	Size 600x450x200mm	each	2780.00
36.12	Providing and fixing draining board with C.I. brackets including painting of brackets, cutting and making good the walls wherever required :		
36.12.1	White glazed fire clay draining board of size 600x450x25mm	each	921.00
36.13	Providing and fixing white vitreous china water closet squatting pan (Indian type)		
36.13.1	Long pattern W.C. pan of size 580 mm	each	955.00
36.13.2	Orissa pattern W.C. pan of size 580x440 mm	each	1470.00
36.14	Extra for using coloured W.C. pan instead of white W.C. pan		
36.14.1	Orissa pattern W.C. pan 580x440 mm	each	242.00
36.15	Providing and fixing white vitreous china pedestal type (European type/ wash down type) water closet pan.	each	1340.00

Code No	Description	Unit	Rate Rs.
36.16	Extra for using coloured pedestal type W.C pan (European type) with low level cistern of same colour instead of white vitreous china W.C pan and cistern.	each	702.00
36.17	Providing and fixing a pair of white vitreous china foot rests of standard pattern for squatting pan water closet:		
36.17.1	250x130x30 mm	pair	162.00
36.17.2	250x125x25 mm	pair	163.00
36.18	Providing and fixing P.V.C. low level flushing cistern with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete.		
36.18.1	10 litre capacity - White	each	855.00
36.18.2	10 litre capacity - coloured	each	945.00
36.19	Providing and fixing controlled flush, low level cistern made of vitreous china with all fittings complete.		
36.19.1	10 litre (full flush) capacity-white	each	1480.00
36.19.2	10 litre (full flush) capacity-coloured	each	1970.00
36.20	Providing and fixing solid plastic seat with lid for pedestal type W.C. pan complete :		
36.20.1	White solid plastic seat with lid	each	416.00
36.20.2	Black solid plastic seat with lid	each	383.00
36.21	Extra for providing coloured other than black solid P.V.C. plastic seat and cover in European type W.C. pan, instead of white plastic seat and cover.	each	91.00
36.22	Providing and fixing G.I. inlet connection for flush pipe connecting with W.C. pan.	each	96.50
36.23	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively.	each	947.00
36.24	Providing and fixing white vitreous china squatting plate urinal with integral rim longitudinal flush pipe.	each	1930.00
36.25	Providing and fixing white vitreous china wash basin including making all connections but excluding the cost of fittings :		
36.25.1	Flat back wash basin of size 630x450mm.	each	921.00
36.25.2	Flat back wash basin of size 550x400mm.	each	725.00
36.25.3	Angle back wash basin of size 600x480mm.	each	855.00
36.25.4	Angle back wash basin of size 400x400mm.	each	573.00
36.25.5	Flat back wash basin of size 450x300mm.	each	458.00
36.25.6	Surgeon type wash basin of size 660x460mm.	each	1250.00
36.26	Providing and fixing kitchen sink including making all connections excluding cost of fittings.		
36.26.1	White glazed fire clay sink of size 600x450x250mm.	each	1620.00
36.27	Providing and fixing white vitreous china laboratory sink including making all connections excluding cost of fittings:		

Code No	Description	Unit	Rate Rs.
36.27.1	Size 450x300x150 mm.	each	1020.00
36.27.2	Size 600x450x200 mm.	each	1890.00
36.28	Providing and fixing P.V.C. waste pipe for sink or wash basin including P.V.C. waste fittings complete.		
36.28.1	Semi rigid pipe		
36.28.1.1	32 mm dia	each	48.50
36.28.1.2	40 mm dia	each	55.00
36.28.2	Flexible pipe		
36.28.2.1	32 mm dia	each	53.50
36.28.2.2	40 mm dia	each	56.00
36.29	Providing and fixing 100 mm sand cast Iron grating for gully trap.	each	27.00
36.30	Providing and fixing in position 25mm diameter mosquito proof coupling of approved municipal design.	each	36.00
36.31	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	each	816.00
36.32	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :		
36.32.1	Circular shape 450mm dia.	each	917.00
36.32.2	Rectangular shape 453x357mm	each	751.00
36.32.3	Oval shape 450x350mm (outer dimensions)	each	802.00
36.32.4	Rectangular shape 1500x450 mm	each	1350.00
36.33	Providing and fixing 600x120x5mm glass shelf with edges round of supported on anodised aluminium angle frame with C.P. brass brackets and guard rail complete fixed with 40 mm long screws, rawl plugs etc., complete.	each	413.00
36.34	Providing and fixing toilet paper holder :		
36.34.1	C.P. brass	each	265.00
36.34.2	Vitreous china	each	292.00
36.35	Providing and fixing soil, waste and vent pipes :		
36.35.1	100 mm dia.		
36.35.1.1	Sand cast iron S&S pipe as per IS: 1729.	metre	886.00
36.35.1.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	metre	947.00
36.35.2	75 mm diameter :		
36.35.2.1	Sand cast iron S&S pipe as per IS: 1729.	metre	731.00
36.35.2.2	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	metre	817.00
36.36	Providing and filling the joints with spun yarn cement slurry and cement mortar 1:2 (1 cement : 2 fine sand) in S.C.I./ C.I. Pipes :		
36.36.1	75 mm dia pipe	each	74.00

Code No	Description	Unit	Rate Rs.
36.36.2	100 mm dia pipe	each	87.50
36.37	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) including cost of cutting holes and making good the walls etc. :		
36.37.1	For 100 mm dia. Pipe	each	152.00
36.37.2	For 75 mm dia. Pipe	each	150.00
36.38	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
36.38.1	100 mm		
36.38.1.1	Sand cast iron S&S as per IS - 1729	each	342.00
36.38.1.2	Sand cast iron S&S as per IS - 3989	each	388.00
36.38.2	75 mm dia		
36.38.2.1	Sand cast iron S&S as per IS - 1729	each	275.00
36.38.2.2	Sand cast iron S&S as per IS- 3989	each	323.00
36.39	Providing and fixing plain bend of required degree.		
36.39.1	100 mm		
36.39.1.1	Sand cast iron S&S as per IS - 1729	each	319.00
36.39.1.2	Sand cast iron S&S as per IS : 3989	each	337.00
36.39.2	75 mm		
36.39.2.1	Sand cast iron S&S as per IS -1729	each	219.00
36.39.2.2	Sand cast iron S&S as per IS - 3989	each	249.00
36.40	Providing and fixing heel rest sanitary bend		
36.40.1	100 mm dia		
36.40.1.1	Sand cast iron S&S as per IS - 1729	each	319.00
36.40.1.2	Sand cast iron S&S as per IS - 3989	each	375.00
36.40.2	75 mm		
36.40.2.1	Sand cast iron S&S as per IS - 1729	each	279.00
36.40.2.2	Sand cast iron S&S as per IS - 3989	each	316.00
36.41	Providing and fixing double equal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
36.41.1	100x100x100x100mm		
36.41.1.1	Sand cast iron S&S as per IS - 1729	each	703.00
36.41.1.2	Sand cast iron S&S as per IS - 3989	each	782.00
36.41.2	75x75x75x75 mm		
36.41.2.1	Sand cast iron S&S as per IS - 1729	each	547.00
36.41.2.2	Sand cast iron S&S as per IS - 3989	each	614.00

Code No	Description	Unit	Rate Rs.
36.42	Providing and fixing double equal plain junction of required degree.		
36.42.1	100x100x100x100 mm		
36.42.1.1	Sand cast iron S&S as per IS - 1729	each	646.00
36.42.1.2	Sand cast iron S&S as per IS - 3989	each	767.00
36.42.2	75x75x75x75 mm		
36.42.2.1	Sand cast iron S&S as per IS - 1729	each	432.00
36.42.2.2	Sand cast iron S&S as per IS - 3989	each	572.00
36.43	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.		
36.43.1	100x100x100 mm		
36.43.1.1	Sand cast iron S&S as per IS - 1729	each	492.00
36.43.1.2	Sand cast iron S&S as per IS - 3989	each	636.00
36.43.2	75x75x75 mm		
36.43.2.1	Sand cast iron S&S as per IS - 1729	each	369.00
36.43.2.2	Sand cast iron S&S as per IS - 3989	each	484.00
36.44	Providing and fixing single equal plain junction of required degree :		
36.44.1	100x100x100 mm		
36.44.1.1	Sand cast iron S&S as per IS - 1729	each	440.00
36.44.1.2	Sand cast iron S&S as per IS - 3989	each	587.00
36.44.2	75x75x75 mm		
36.44.2.1	Sand cast iron S&S as per IS - 1729	each	334.00
36.44.2.2	Sand cast iron S&S as per IS - 3989	each	412.00
36.45	Providing and fixing double unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
36.45.1	100x100x75x75 mm		
36.45.1.1	Sand cast iron S&S as per IS - 1729	each	733.00
36.45.1.2	Sand cast iron S&S as per IS - 3989	each	1070.00
36.46	Providing and fixing double unequal plain junction of required degree:		
36.46.1	100x100x75x75 mm		
36.46.1.1	Sand cast iron S&S as per IS - 1729	each	682.00
36.46.1.2	Sand cast iron S&S as per IS - 3989	each	984.00
36.47	Providing and fixing single unequal junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete :		
36.47.1	100x100x75 mm		
36.47.1.1	Sand cast iron S&S as per IS - 1729	each	522.00
36.47.1.2	Sand cast iron S&S as per IS - 3989	each	812.00

Code No	Description	Unit	Rate Rs.
36.48	Providing and fixing single unequal plain junction of required degree:		
36.48.1	100x100x75 mm		
36.48.1.1	Sand cast iron S&S as per IS - 1729	each	464.00
36.48.1.2	Sand cast iron S&S as per IS - 3989	each	706.00
36.49	Providing and fixing double equal plain invert branch of required degree:		
36.49.1	100x100x100x100 mm		
36.49.1.1	Sand cast iron S&S as per IS - 1729	each	682.00
36.49.1.2	Sand cast iron S&S as per IS - 3989	each	658.00
36.49.2	75x75x75x75 mm		
36.49.2.1	Sand cast iron S&S as per IS - 1729	each	509.00
36.49.2.2	Sand cast iron S&S as per IS - 3989	each	527.00
36.50	Providing and fixing single equal plain invert branch of required degree:		
36.50.1	100x100x100 mm		
36.50.1.1	Sand cast iron S&S as per IS - 1729	each	512.00
36.50.1.2	Sand cast iron S&S as per IS - 3989	each	531.00
36.50.2	75x75x75 mm		
36.50.2.1	Sand cast iron S&S as per IS - 1729	each	400.00
36.50.2.2	Sand cast iron S&S as per IS - 3989	each	404.00
36.51	Providing and fixing double unequal invert branch of required degree :		
36.51.1	100x100x75x75 mm		
36.51.1.1	Sand cast iron S&S as per IS - 1729	each	706.00
36.51.1.2	Sand cast iron S&S as per IS - 3989	each	894.00
36.52	Providing and fixing single unequal plain invert branch of required degree :		
36.52.1	100x100x75 mm		
36.52.1.1	Sand cast iron S&S as per IS - 1729	each	615.00
36.52.1.2	Sand cast iron S&S as per IS - 3989	each	676.00
36.53	Providing and fixing sand cast iron S&S off sets as per IS: 1729		
36.53.1	76 mm off sets		
36.53.1.1	With 75 mm dia. pipe	each	285.00
36.53.1.2	With 100 mm dia. pipe	each	334.00
36.53.2	114 mm off sets		
36.53.2.1	With 75 mm dia. pipe	each	379.00
36.53.2.2	With 100 mm dia. Pipe	each	480.00
36.53.3	152 mm off sets		
36.53.3.1	With 75 mm dia. Pipe	each	455.00

Code No	Description	Unit	Rate Rs.
36.53.3.2	With 100 mm dia. pipe	each	572.00
36.54	Providing and fixing sand cast iron S&S off sets as per IS: 3989.		
36.54.1	75 mm off sets		
36.54.1.1	With 75 mm dia. pipe	each	285.00
36.54.2	150 mm off sets		
36.54.2.1	With 75 mm dia. pipe	each	364.00
36.54.2.2	With 100 mm dia. pipe	each	491.00
36.55	Providing and fixing door piece, insertion rubber washer 3mm thick, bolts & nuts complete :		
36.55.1	100 mm		
36.55.1.1	Sand cast iron S&S as per IS - 1729	each	522.00
36.55.1.2	Sand cast iron S&S as per IS - 3989	each	528.00
36.55.2	75 mm		
36.55.2.1	Sand cast iron S&S as per IS - 1729	each	390.00
36.55.2.2	Sand cast iron S&S as per IS - 3989	each	384.00
36.56	Providing and fixing terminal guard:		
36.56.1	100 mm		
36.56.1.1	Sand cast iron S&S as per IS - 1729	each	258.00
36.56.1.2	Sand cast iron S&S as per IS - 3989	each	270.00
36.56.2	75 mm		
36.56.2.1	Sand cast iron S&S as per IS - 1729	each	195.00
36.56.2.2	Sand cast iron S&S as per IS - 3989	each	249.00
36.57	Providing and fixing collar:		
36.57.1	100 mm		
36.57.1.1	Sand cast iron S&S as per IS - 1729	each	192.00
36.57.1.2	Sand cast iron S&S as per IS - 3989	each	264.00
36.57.2	75 mm		
36.57.2.1	Sand cast iron S&S as per IS - 1729	each	140.00
36.57.2.2	Sand cast iron S&S as per IS- 3989	each	189.00
36.58	Providing lead caulked joints to sand cast iron/ centrifugally cast (spun) iron pipes and fittings of diameter:		
36.58.1	100 mm	each	220.00
36.58.2	75 mm	each	184.00
36.58.3	50 mm	each	146.00
36.59	Providing and fixing M.S. stays and clamps for sand cast iron/ centrifugally cast (spun) iron pipes of diameter :		
36.59.1	100 mm	each	52.50
36.59.2	75 mm	each	49.50

Code No	Description	Unit	Rate Rs.
36.59.3	50 mm	each	40.50
36.60	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors :		
36.60.1	100 mm inlet and 100 mm outlet		
36.60.1.1	Sand cast iron S&S as per IS: 3989.	each	912.00
36.60.1.2	Sand Cast iron S&S as per IS: 1729.	each	863.00
36.60.2	100 mm inlet and 75 mm outlet		
36.60.2.1	Sand cast iron S&S as per IS - 3989	each	894.00
36.60.2.2	Sand Cast iron S&S as per IS- 1729.	each	794.00
36.61	Cutting chases in brick masonry walls for following diameter sand cast iron/ centrifugally cast (spun) iron pipes and making good the same with cement concrete 1:3:6 (1 cement : 3 coarse sand :6 graded stone aggregate 12.5 mm nominal size) including necessary plaster and pointing in cement mortar 1:4 (1 cement : 4 coarse sand) :		
36.61.1	100 mm dia.	metre	301.00
36.61.2	75 mm dia.	metre	216.00
36.61.3	50 mm dia.	metre	141.00
36.62	Painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint over a coat of zinc chromate yellow primer (of approved quality) on the outside surface of the cistern flush pipe, other fittings, etc. complete for new work.	each	486.00
36.63	Re-painting C.I. cistern with bitumastic or any other anti-corrosive paint inside and white paint on the outside surface of the cistern, flush pipe, other fittings, etc. complete including polishing of wooden seat and lid and cleaning of W.C. pan with acid wherever necessary.	each	315.00
36.64	Repainting C.I. cistern with synthetic enamel paint of approved colour brand and manufacture on the outside surface of cistern flush pipe, other fittings etc. complete.	each	136.00
36.65	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :		
36.65.1	100 mm diameter pipe	metre	37.00
36.65.2	75 mm diameter pipe	metre	28.00
36.66	Repainting sand cast iron/ centrifugally cast iron (spun) iron, soil, waste, vent pipes and fittings with paint of any colour such as chocolate, grey or buff etc :		
36.66.1	100 mm diameter pipe	metre	18.00
36.66.2	75 mm diameter pipe	metre	13.50
36.67	Repainting bath tub of size 1700x730x430mm with enamel paint.	each	396.00
36.68	Providing and fixing vitreous china dual purpose closet suitable for use as squatting pan or European type water closet (Anglo Indian W.C pan) with seat lid with C.P. brass hinges and rubber buffers, 10 litre low level flushing cistern with fitting and brackets, 40mm flush		

Code No	Description	Unit	Rate Rs.
	bend 20mm over flow pipe with specials of standard make and mosquito proof coupling of approved municipal design complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :		
36.68.1	White vitreous china dual purpose WC pan with white solid plastic seat and lid with white vitreous china flushing cistern and C.P. flush bend.	each	5430.00
36.69	Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour.		
36.69.1	Waste coupling 31mm of 79mm length and 62mm breadth weighing not less than 45gms.	each	68.00
36.69.2	Waste coupling 38mm of 83mm length and 77mm breadth, weighing not less than 60gms.	each	85.00
36.70	Providing and fixing PTMT Bottle Trap for Wash basin and sink.		
36.70.1	Bottle trap 31mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 260gms.	each	288.00
36.70.2	Bottle trap 38mm single piece moulded with height of 270mm, effective length of tail pipe 265mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighting not less than 263gms.	each	300.00
36.71	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour. weighing not less than 105 gms.	each	138.00
36.72	Providing and fixing PTMT towel ring trapezoidal shape 215mm long, 200mm wide with minimum distances of 37mm from wall face with concealed fittings arrangement of approved quality and colour. Weighing not less than 88 gms.	each	183.00
36.73	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour.		
36.73.1	450MM long towel rail with total length of 495mm, 78mm wide and effective height of 88mm, weighing not less than 170gms.	each	390.00
36.73.2	600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms.	each	424.00
36.74	Providing and fixing PTMT shelf 440 mm long, 124 mm width and 36 mm height of approved quality and colour. Weighing not less than 300 gms.	each	474.00
36.75	Providing and fixing PTMT 15 mm Urinal spreader size 95x69x100 mm with 1/2" BSP thread and shapes. Weighing not less than 60 gms.	each	105.00
36.76	Providing and fixing PTMT urinal cock of approved quality and colour.		
36.76.1	15 mm nominal bore, 80mm long. 42 mm high and 30mm wide with BSP female threads weighing not less than 48 gms.	each	142.00

Code No	Description	Unit	Rate Rs.
36.77	Providing and fixing M.S. holder bat clamp of approved design to sand cast iron/ cast iron (spun) pipes comprising of M.S. flat brackets made of 50x5mm flat of specified shape, projecting 75mm outside the wall surface and fixed on wall with 4nos, 6mm dia expansion hold fasteners including drilling necessary holes in brick wall/ CC/ RCC surface and the cost of bolts etc. The pipes shall be fixed to the already fixed brackets with the help of 30mm x1.6mm galvanised M.S. flats of specified shape and of total length 420mm and shall be fixed with M.S. nuts, bolts, & washers of size 25x6mm, one bolts on each side of the pipe.		
36.77.1	Total bracket length 580mm of approved shape and design (for single, 100mm dia pipe).	each	182.00
36.77.2	Total bracket length 810mm of approved shape and design (for two, 100mm dia pipes).	each	219.00
36.77.3	Total bracket length 1040mm of approved shape and design (for three, 100mm dia pipes).	each	257.00

37.0 ALUMINIUM WORK

Code No	Description	Unit	Rate Rs.
37.1	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixed with rawl plugs and screws or with fixing clips, or with expansion hold fasteners including necessary filling up of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing and panelling to be paid for separately) :		
37.1.1	For fixed portion.		
37.1.1.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	357.00
37.1.1.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	383.00
37.1.1.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	393.00
37.1.2	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of PVC / neoprene gasket required (Fittings shall be paid for separately).		
37.1.2.1	Anodised aluminium (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	383.00
37.1.2.2	Powder coated aluminium (minimum thickness of powder coating 50 micron)	kg	409.00
37.1.2.3	Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron)	kg	421.00
37.2	Providing and fixing 12mm thick Pre-laminated particle board flat pressed three layer or graded wood particle board conforming to IS: 12823 Grade I Type II, in panelling fixed in aluminium doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge.		
37.2.1	Pre-laminated particle board with decorative lamination on one side and balancing lamination on other side.	sqm	851.00
37.2.2	Pre-laminated particle board with decorative lamination on both sides.	sqm	892.00
37.3	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with PVC/ neoprene gasket etc. complete		

Code No	Description	Unit	Rate Rs.
	as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item) :		
37.3.1	With float glass panes of 4.0 mm thickness	sqm	741.00
37.3.2	With float glass panes of 5.50 mm thickness	sqm	981.00
37.3.3	With float glass panes of 8 mm thickness	sqm	741.00
37.4	Providing and fixing double action hydraulic floor spring of approved brand and manufacture IS : 6315 marked, for doors including cost of cutting floors as required, embedding in floors and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge.		
37.4.1	With stainless steel cover plate	each	1410.00
37.4.2	With brass cover plate	each	1960.00
37.5	Providing and fixing powder coated aluminium work (minimum thickness of powder coating 50 micron) consisting of tee/ angle sections, of approved make conforming to IS : 733 in frames of false ceiling including aluminium angle cleats with necessary C.P. brass/ stainless steel sunk screws, aluminium perimeter angles fixed to wall with rawl plugs @ 450 mm centre to centre and fixing the frame work to G.I. level adjusting hangers 6 mm dia. with necessary cadmium plated machine screws all complete as per approved architectural drawings and direction of the Engineer-in-charge (level adjusting hangers, ceiling cleats and expansion hold fasteners to be paid for separately).	kg	501.00
37.6	Providing and fixing 6 mm dia. G.I. level adjusting hangers (upto 1200mm length) fixed to roof slabs by means of ceiling cleats made out of G.I. flat 40x3mm size 60mm long and expansion hold fasteners 12.5 mm dia. 40mm long complete as per direction of Engineer -in-charge.	each	60.50
37.7	Providing and fixing machine moulded aluminium covering of approved pattern & design, made out of machine cut aluminium sheet and machine holed for receiving screws, over expansion joints on vertical surfaces/ceilings with full threaded, cadmium plated steel screws 4mm dia. stem, 30mm long and aluminium washers 2mm thick, 15mm dia. at a staggered pitch of 200mm centre to centre including drilling holes in the receiving surface and providing expandable plastic sleeves in holes etc. complete.		
37.7.1	Anodised aluminium sheet 2.5mm thick (anodised transparent or dyed to required shade according to IS: 1868, Minimum anodic coating of grade AC 15)	kg	443.00
37.7.2	Powder coated aluminium sheet 2.5mm thick (minimum thickness of powder coating 50 micron)	kg	469.00
37.8	Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete.		
37.8.1	Upto 5mm depth and 5 mm width	metre	44.50
37.9	Extra for applying additional anodic coating AC 25 instead of AC 15 to aluminium extruded sections.		

Code No	Description	Unit	Rate Rs.
37.9.1	For fixed portion	kg	12.00
37.9.2	For shutters of doors, windows & ventilators.	kg	12.00
37.10	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side having 12 mm air gap including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings and direction of Engineer-in-charge complete.	sqm	3280.00
37.11	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete.		
37.11.1	205 X 19 mm	each	212.00
37.11.2	255 X 19 mm	each	234.00
37.11.3	355 X 19 mm	each	293.00
37.11.4	510 X 19 mm	each	539.00
37.11.5	710 X 19 mm	each	971.00
37.12	Providing and fixing aluminium tubular handle bar 32 mm outer dia, 3.0 mm thick & 2100 mm long with SS screws etc .complete as per direction of Engineer-in-Charge.		
37.12.1	Anodized (AC 15) aluminium tubular handle bar	each	523.00
37.12.2	Powder coated minimum thickness 50 micron aluminium tubular handle bar.	each	562.00
37.12.3	Polyester powder coated minimum thickness 50 micron aluminium tubular handle bar	each	578.00
37.13	Providing and fixing 100mm brass locks (best make of approved quality) for aluminium doors including necessary cutting and making good etc. complete.	each	325.00
37.14	Providing and fixing anodised aluminium (anodised transparent or dyed to required shade according to IS : 1868. Minimum anodic coating of grade AC 15) sub frame work for windows and ventilators a with extruded built up standard tubular sections of approved make conforming to IS: 733 and IS : 1285 fixed with rawl plugs and stainless steel screws etc.	kg	367.00
37.15	Providing fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete.		
37.15.1	Anodized (AC 15) aluminium	each	55.50
37.15.2	Powder coated minimum thickness 50 micron aluminium.	each	59.00
37.15.3	Polyester powder coated minimum thickness 50 micron aluminium.	each	58.00
37.16	Providing fixing aluminium round shape handle of outer dia 100mm with SS screws etc. Complete as per direction of Engineer-in-charge		
37.16.1	Anodized (AC 15) aluminium	each	66.50
37.16.2	Powder coated minimum thickness 50 micron aluminium	each	72.50
37.16.3	Polyester powder coated minimum thickness 50 micron aluminium.	each	78.50

38.0 WATER PROOFING

Code No	Description	Unit	Rate Rs.
38.1	Providing and laying integral cement based treatment for water proofing on horizontal surface at all depth below ground level for under ground structures as directed by Engineer-in-Charge and consisting of : i) 1st layer of 22mm to 25mm thick approved and specified rough stone slab over a 25mm thick base of cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound conforming to IS:2645 in the recommended proportion over the levelling course (levelling course to be paid separately). Joints sealed and grouted with cement slurry mixed with water proofing compound. ii) 2nd layer of 25mm thick cement mortar 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportions. iii) Finishing top with stone aggregate of 10mm to 12mm nominal size spreading @ 8 cu dm/sqm thoroughly embedded in the 2nd layer.		
38.1.1	Using rough Kota stone.	sqm	855.00
38.2	Providing and laying integral cement based treatment for water proofing on the vertical surface by fixing specified stone slab 22 mm to 25mm thick with cement slurry mixed with water proofing compound conforming to IS:2645 in recommended proportions with a gap of 20mm (minimum) between stone slabs and the receiving surfaces and filling the gaps with neat cement slurry mixed with water proofing compound and finishing the exterior of stone slab with cement mortar 1:3 (1 cement : 3 coarse sand) 20mm thick with neat cement punning mixed with water proofing compound in recommended proportion complete at all levels and as directed by Engineer-in-charge :		
38.2.1	Using rough Kota stone	sqm	1080.00
38.3	Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of : i) 1st course of applying cement slurry @ 4.4 Kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface. ii) 11nd course of 20mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface. iii) 111rd course of applying blown or residual bitumen applied hot at 1.7 Kg. per sqm of area. iv) 1Vth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 Kg/sqm.)		
		sqm	446.00

Code No	Description	Unit	Rate Rs.
38.4	Providing and Placing in position suitable PVC water stops conforming to IS:12200 for construction/ expansion joints between two RCC members and fixed to the reinforcement with binding wire before pouring concrete etc. complete :		
38.4.1	Serrated with central bulb (225mm wide, 8-11mm thick).	metre	264.00
38.4.2	Dumb bell with central bulb (180mm wide, 8mm thick).	metre	208.00
38.4.3	Kickers (320mm wide, 5mm thick).	metre	245.00
38.5	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	sqm	284.00
38.6	Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying : a) after surface preparation, first layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm. c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30cm on parapet wall and tucked into groove in parapet all around. d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately For the purpose of measurement the entire treated surface will be measured.	sqm	381.00
38.7	Providing and laying integral cement based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc consisting of following operations: a) Applying a slurry coat of neat cement using 2.75 kg/sqm. of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300mm height including cleaning the surface before treatment. b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115mm size with 50% of cement mortar 1:5 (1 cement : 5 coarse sand) admixed with water proofing compound conforming to		

Code No	Description	Unit	Rate Rs.
	IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs		
	c) After two days of proper curing applying a second coat of cement slurry using 2.75kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.		
	d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3mm deep.		
	e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. All above operations to be done in order and as directed and specified by the Engineer-in-Charge :		
38.7.1	With average thickness of 120mm and minimum thickness at khurra as 65 mm.	sqm	874.00
38.8	Providing and laying four courses water proofing treatment with bitumen felt over roofs consisting of first and third courses of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45 Kg per square metre of area for each course, second course of roofing felt type 3 grade-I (hessian based self finished bitumen felt) and fourth and final course of stone grit 6mm and down size or pea-sized gravel spread at 6 cubic diameter per square metre including preparation of surface but excluding grading complete with :		
38.8.1	Bitumen felt (hessian base) type 3 grade I conforming to IS : 1322.	sqm	316.00
38.9	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth course of blown bitumen 85/25 or 90/15 conforming to IS : 702 applied hot @ 1.45, 1.20 and 1.45 Kg per square metre of area respectively, second and fourth courses of roofing felt type 3 grade I conforming to IS : 1322 (Hessian based self finished bitumen felt) conforming to IS : 1322 and sixth and final course of stone grit 6 mm and down size or pea sized gravel spread at 6 cubic dm per sqm including preparation of surface but excluding grading, complete.	sqm	503.00
38.10	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blown or / and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade I (fibre base self finished bitumen felt) six and final courses of stone grit 6mm and down size or pea sized gravel spread at 6cu.dm per sqm including preparation of surface, excluding grading, compete.	sqm	561.00

Code No	Description	Unit	Rate Rs.
38.11	Providing and laying six courses water proofing treatment with bitumen felt over roofs consisting of first, third and fifth courses of blow or/ and residual bitumen applied hot at 1.45, 1.20 and 1.70 kg per square metre of area respectively, second and fourth courses of roofing felt type 2 grade II (glass fibre base self finished bitumen felt) and sixth and final course of stone grit 6mm and down size or pea sized gravel spread at 6 cubic dm per sqm including preparation of surface but excluding grading, complete.	sqm	561.00
38.12	Supplying and applying bituminous solution primer on roof and or wall surface at 0.24 litre per sqm.	sqm	32.50
38.13	Deduct for omitting in water proofing treatment final course of spreading stone grit 6mm down size or pea sized gravel :		
38.13.1	At 6 cudm per sqm.	sqm	6.00
38.13.2	At 8 cudm per sqm.	sqm	7.50
38.14	Grading roof for water proofing treatment with		
38.14.1	Cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size)	cum	4370.00
38.14.2	Cement mortar 1:3 (1 cement : 3 coarse sand)	cum	7950.00
38.14.3	Cement mortar 1:4 (1cement : 4 coarse sand)	cum	7160.00
38.15	Providing and laying in situ seven course water proofing treatment with APP (Atactic poly-propylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 1.5mm thick of 2.25 Kg/sqm weight consisting of five layers prefabricated with centre core as 20micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1cement:3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately.	sqm	446.00
38.16	Providing and laying in situ five course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd & 4th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd layer of roofing membrane APP modified Polymeric membrane 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 5th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a		

Code No	Description	Unit	Rate Rs.
38.17	12mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately. Providing and laying in situ seven course water proofing treatment with APP (Atactic Polypropylene) modified Polymeric membrane over roof consisting of first coat of bitumen primer @ 0.40Kg per sqm, 2nd, 4th & 6th courses of bonding material @ 1.20 Kg/sqm, which shall consist of blown type bitumen of grade 85/25 conforming to IS : 702, 3rd and 5th layers of roofing membrane APP modified Polymeric membrane 2.0mm thick of 3.00 Kg/sqm weight consisting of five layers prefabricated with centre core as 100micron HMHDPE film sandwiched on both sides with polymeric mix and the polymeric mix is protected on both side with 20micron HMHDPE film. 7th, the top most layer shall be finished with brick tiles of class designation 100 grouted with cement mortar 1:3 (1 cement : 3 fine sand) mixed with 2% integral water proofing compound by weight of cement over a 12 mm layer of cement mortar 1:3 (1 cement : 3 fine sand) and finished neat which shall be paid for separately.	sqm	329.00
38.18	Providing and fixing APP (Atactic Polypropylene Polymer) modified prefabricated five layer 2mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sq. mtr. by the same membrane manufacture of density at 25°C, 0.87 - 0.89 kg/ ltr and viscosity 70 - 160 cps. Over the primer coat the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/ 5cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacture of membrane.	sqm	533.00
38.18.1	2mm (for corrugated roof sheets)	sqm	277.00
38.19	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer, 3mm thick water proofing membrane, black finished reinforced with glass fibre matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm. by the same membrane manufactured of density at 25°C, 0.87 - 0.89 kg/ltr and viscosity 70 - 160 cps. over the primer coat the layer of membrane shall be laid using Butane torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be : Joint strength in longitudinal and transverse direction at 23°C as 350/300 N/5cm. Tear strength in longitudinal and transverse direction as 60/80N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :		
38.19.1	3 mm thick	sqm	410.00
38.20	Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3mm thick water proofing membrane, black		

Code No	Description	Unit	Rate Rs.
	finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 ltr/sqm. by the same membrane manufacture of density at 25°C, 0.87-0.89 kg/ltr and viscosity 70-160 cps. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under : Joint strength in longitudinal and transverse direction at 23°C as 650/450N/5cm. Tear strength in longitudinal and transverse direction as 300/250N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane :		
38.20.1	3 mm thick	sqm	417.00
38.21	Extra for covering top of membrane with Geotextile, 120gsm non woven, 100% polyester of thickness 1 to 1.25mm bonded to the membrane with intermittent touch by heating the membrane by Butane Torch as per manufactures recommendation [for Item No. 22.18 to 22.20].	sqm	58.50

39.0 HORTICULTURE

Code No	Description	Unit	Rate Rs.
39.1	Trenching in specified soil upto a depth of 60 cm. including removal and stacking of serviceable materials and then disposal by spreading and neatly leveling within a lead of 50 metres and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and farm-yard manure before and after flooding with water (excluding cost of imported earth and sludge or farm-yard manure).	cum	220.00
39.2	Preparation of mounds of various size and shape by available excavated/surplus/earth in layers not exceeding 20 cm in depth, breaking clods, watering of each layer, dressing etc.lead upto 50 meters and lift upto 1.5 m as per direction of officers in charge.	cum	239.00
39.3	Supplying and stacking good earth at site of work. Note: 1) Loading, unloading and carriage to be paid extra as per actual lead. 2) Earth measured in stacks will be reduced by 20% for payment	cum	206.00
39.4	Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stacking.	cum	605.00
39.5	Supplying and stacking of well decayed cow dung manure at site.	cum	605.00
39.6	Supply at site of work/ store- deoiled neem cake duly packed in used gunny bags.	quintal	411.00
39.7	Supplying sludge duly stacked at site/ store.	cum	109.00
39.8	Rough dressing the trenched ground including breaking of clods.	sqm	0.85
39.9	Uprooting weeds from the trenched area after 10 to 15 days of its flooding with water including disposal of uprooted vegetation.	sqm	3.00
39.10	Fine dressing the ground.	sqm	2.00
39.11	Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm- yard manure or/and good earth to be paid for separately).	cum	29.50
39.12	Grassing with 'Doobs' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for moving including supplying good earth if needed.		
39.12.1	In rows 15 cm apart in either direction	sqm	21.00
39.12.2	In rows 7.5 cm apart in either direction	sqm	36.00
39.12.3	In rows 30 cm apart in either direction	sqm	13.00
39.13	Grassing with 'Carpet' grass (selection no. 1) including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for moving including supplying good earth if needed.(The good earth shall be paid separately)		
39.13.1	In rows 5 cm apart in either direction	sqm	928.00

Code No	Description	Unit	Rate Rs.
39.13.2	With grass Turf	sqm	710.00
39.14	Uprooting rank vegetation and weeds by digging the area to a depth of 60 cm removing all weeds and other growth with roots by forking repeatedly, breaking, clods, rough dressing, flooding with water, uprooting fresh growth after 10 to 15 days and then fine dressing for planting new grass, including disposal of all rubbish with all leads and lifts.	sqm	35.00
39.15	Filling mixture of earth and sludge farm-yard manure in the desired proportion in trenches, flooding with water and leveling (cost of supplying earth and sludge or farm yard manure and labour for mixing not included in this rate).	sqm	10.50
39.16	Flooding the ground with water including making kiaries and dismantling the same.	sqm	1.80
39.17	Turfing slopes of new banks with rough grassing including preparation of ground by loosening soil with kassi, flooding with water, rough dressing, fine dressing, supplying and spreading farm yard manure at the rate of 0.18 cum per 100 sqm and supplying and planting doob grass roots at 15 cm apart, complete.		
39.17.1	Of Old banks	sqm	40.00
39.17.2	Of New banks	sqm	36.00
39.18	Making lawns including ploughing and breaking of clod, removal of rubbish, dressing and supplying doobs grass roots and planting at 15 cm apart, including supplying and spreading of farm yard manure at rate of 0.18 cum per 100 sqm.	sqm	39.00
39.19	Maintenance of lawns or Turfing of slopes (rough grassing) for a period of one year including watering etc.	sqm	164.00
39.20	Turfing lawns with fine grassing including ploughing, dressing including breaking of clods, removal of rubbish, dressing and supplying doobs grass roots at 10 cm apart, including supplying and spreading of farm yard manure at rate of 0.6 cum per 100 sqm.	sqm	46.50
39.21	Maintenance of Lawns with Fine Grassing for the First Year	sqm	139.00
39.22	Planting permanent hedges including digging of trenches, 60 cm wide and 45 cm deep, refilling the excavated earth mixed with farmyard manure, supplied at the rate of 4.65 cum per 100 metres and supplying and planting hedge plants at 30 cm apart.	metre	264.00
39.23	Maintenance of Hedge for one year	metre	214.00
39.24	Planting Flowering Plants and Shrubs in Central Verge.	km	69400.00
39.25	Maintenance of Flowering Plants and Shrubs in Central Verge for one Year.	km	214700.00
39.26	Maintenance of Shrubs - Complete maintenance of shrub for 12 months including weeding, hoeing, watering, pruning application of good earth, manure, insecticides, fungicides & fertilizers, security of plants disposal of garden rubbish from the premises to the approved municipal dumping ground replacing casualty of plants(occurred due to any reason) by healthy plants.	per sqm per year	214.00
39.27	Maintenance of Plants (other than Road side Plantation) -Complete maintenance of plants with watering for 12 months including weeding, hoeing, watering, pruning application of good earth,		

Code No	Description	Unit	Rate Rs.
	manure, insecticides, fungicides & fertilizers , security of plants disposal of garden rubbish from the premises to the approved municipal dumping ground replacing casualty of plants occurred due to any reason) by healthy plants.	per sqm per year	216.00
39.28	Renovation lawns including, weeding, forking the ground, top dressing with forked soil, watering and maintenance the lawns, for 30 days or more, till the grass forms a thick lawn, free from weeds, and fit for moving and disposal of rubbish as directed, including supplying good earth, if needed but excluding the cost of well decayed farm yard manure.	sqm	17.50
39.29	Digging holes in all kinds of soil and refilling the same with the excavated earth mixed with well decayed farm yard manure (cost of well decayed farm yard manure to be paid separately).		
39.29.1	Hole 1.2 m dia and 1.2 m deep	each	538.00
39.29.2	Hole 0.9 m dia and 0.9 m deep	each	227.00
39.29.3	Hole 0.6 m dia and 0.6 m deep	each	71.00
39.29.4	Holes 0.45 m dia, and 0.45 m deep	each	40.00
39.30	Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year.	each	1200.00
39.31	Half brick circular tree guard, in 2nd class brick, internal diameter 1.25 metres, and height 1.2 metres, above ground and 0.20 metre below ground, bottom two courses laid dry, and top three courses in cement mortar 1:6 (1 cement 6 sand) and the intermediate courses being in dry honey comb masonry, as per design complete.	each	1360.00
39.32	Edging with 2nd class bricks, laid dry lengthwise, including excavation, refilling, consolidation, with a hand packing and spreading nearly surplus earth within a lead of 50 metres.	metre	27.00
39.33	Making tree guard 53 cm dia and 1.3 m high as per design from empty bitumen drum, slit suitably to permit sun and air, (supplied by the department at stock issue rate) including providing and fixing 2 nos MS sheet rings 50 x 0.5 mm with rivets, complete in all respect.	each	792.00
39.34	Providing and fixing of RCC pre cast tree guard consisting of four panels of size 1800mm (Height) X 600mm (Width) X 35mm (thickness); Size of opening: 100mm X 100mm. All the panels shall be manufactured with monolithic legs of size 50 x 35 mm; the legs of the panels shall be 0.5 m below ground level. All the four Panels shall have a space for display of Name etc. preferably at middle level. RCC panels to be manufactured with M-30 grade of concrete using vibro-compaction process using jointless FRP moulds so as to achieve shuttering finish. RCC panels are to be suitably reinforced to promote long use and to prevent damage during handling, transportation & erection as per drawing & specifications.	each	1820.00

Code No	Description	Unit	Rate Rs.
39.35	Wrought iron and mild steel welded work) (using angles, square bars, tees and channel grills, grating frames, gates and tree guards of any size and design etc. including cost of screens and welding rods or bolts and nuts complete fixed in position but without the cost of excavation and concrete for fixing which will be paid separately.	quintal	6770.00
39.36	Providing and fixing MS iron tree guard 60 cm dia and 2 metre high above ground level formed of 4 Nos (25 x 6 mm) and 8 Nos (25 x 3 mm) vertical MS riveted to 3 Nos (25 x 6 mm) iron rings in two halves, bolted together with 8 mm dia and 30 mm long bolts including painting two coats with paint of approved brand over a coat of priming, complete in all respects.	each	1610.00
39.37	Providing and fixing tree guard 0.60 metre square, 2.00 metre high fabricated with MS angle iron 30 x 30 x 3 mm, MS iron 25 x 3 mm and steel wire 3 mm dia welded and fabricated as per design in two halves bolted together.	each	2310.00
39.38	Providing and fixing M. S. tree guard 45 cm square in plan, height 1.20 metre above ground level and 0.40 metre below ground level. The vertical members shall consist of four nos angle iron of size 25x25x3 mm, 1.6 m long, one at each corner and 8 nos flat iron of size 25x3 mm, 1.2 m long. The vertical members shall be welded to 4 nos 25x6 mm M. S. flats placed horizontally around the vertical member of the cage. The tree guard shall be painted with two or more coats of synthetic enamel paint of approved brand and manufacture over a coat of primer, complete in all respect.	each	1630.00
39.39	Providing and fixing M. S. tree guard 50 cm square in plan, height 1.40 metre above ground level and 0.50 metre below ground level. The vertical members shall consist of four nos of angle iron of size 25x25x5 mm 1.9 long, one at each corner and 8 nos flat iron of size 25x5 mm 1.4 long. The vertical members shall be welded to 4 nos 25x6 mm M. S. flats placed horizontally around the vertical member of the cage. The tree guard shall be painted with two coats of paint of approved brand and manufacture over a coat of primer, complete in all respect.	each	2540.00
39.40	Planting trees as compensatory afforestation at the rate of 290 trees per hectare at a spacing of 6 m by grubbing and leveling the ground upto a depth of 150 mm, digging holes 0.9 m dia, 1 m deep, mixing farm yard/sludge manure with soil, planting of sapling 2 m high with 25 cm dia stem, backfilling the hole and watering.	hectare	137200.00
39.41	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 300 mm min. height ground covers at site in 0.3 m dia holes, 0.3 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.41.1	Wedelia trilobata (SunFlower Family)	sqm	185.00
39.41.2	Alternanthera green (Parrot Leaf)	sqm	348.00
39.41.3	Iresine herbstii (Blood Leaf)	sqm	185.00
39.41.4	Ophiopogon Black (Lily Turf, Mondograss)	sqm	203.00
39.41.5	Asparagus myerii (Fox Tail)	sqm	312.00

Code No	Description	Unit	Rate Rs.
39.41.6	Lantana sellowiana	sqm	156.00
39.41.7	Rhoeo spathacea 'Compacta' (Oyster, Boat Lily)	sqm	111.00
39.41.8	Golden duranta	sqm	203.00
39.41.9	Pennisetum setaceum (Fountain Grass)	sqm	192.00
39.42	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 900 mm min. height plants at site in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.42.1	Ficus panda	each	553.00
39.42.2	Tecoma capensis (Ratanjot)	each	396.00
39.42.3	Clerodendron inermii (Choti Aari)	each	396.00
39.42.4	Tabernaemontana variegated (Chandni)	each	396.00
39.42.5	Hamelia patens (Firebush, Thal Kamal)	each	365.00
39.42.6	Hibiscus variegated (Guddal)	each	378.00
39.43	Supply and planting following in poly bags / earthen pots well branched, well established & free from disease of 600 mm min. height shrubs at site in 0.45 m dia holes, 0.45 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.43.1	Rhaphis excelsa with 3-4 suckers (Lady Palm)	each	1060.00
39.43.2	Furcaria with 10-12 leaves (cactus)	each	1250.00
39.43.3	Agave with 10-12 leaves (Kamal Cactus)	each	1430.00
39.43.4	Phonenix sylvertris (Date Palm)	each	1970.00
39.44	Supply and planting following species best quality container grown healthy trees of 2 mt. min. height, well established & free from disease at site in 0.90 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.44.1	Plumeria alba (Champa)	each	1180.00
39.44.2	Gulmohar(Delonix regia)	each	997.00
39.44.3	Neem(Azadirachta indica)	each	828.00
39.44.4	Jacaranda mimosifolia (Neelli Gulmohar)	each	828.00
39.44.5	Bauhinia blakeana (Arckid)	each	852.00
39.44.6	Erythrina variegata (Lantern Tree)	each	828.00
39.44.7	Bottle Brush(Callistemon Lanciolatous)	each	876.00
39.44.8	Mangifera indica (Mango)	each	900.00
39.44.9	Yucca	each	1180.00
39.44.10	Bignonia Venusta	each	797.00
39.44.11	Quis quallis indica (Madhu Malti)	each	785.00
39.44.12	Morning glory (Ipomea)	each	797.00

Code No	Description	Unit	Rate Rs.
39.44.13	Vernonium (Parda Bel)	each	797.00
39.44.14	Bougain villea	each	797.00
39.45	Supply and planting following species best quality container grown healthy trees of 3 mt. min. height, well established & free from disease at site in 1.20 m dia holes, 1.20 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, backfilling the hole watering etc as required.		
39.45.1	Plumeria alba (Champa) 3 M height minimum	each	1320.00
39.45.2	Gulmohar(Delonix regia)	each	1240.00
39.45.3	Neem(Azadirachta indica)	each	1240.00
39.45.4	Jacaranda mimosifolia (Neelli Gulmohar)	each	1240.00
39.45.5	Bauhinia blakeana (Arckid)	each	1230.00
39.45.6	Erythrina variegata (Lantern Tree)	each	1990.00
39.45.7	Bottle Brush(Callistemon Lanciolatous)	each	1240.00
39.45.8	Mangifera indica (Mango)	each	1240.00
39.45.9	Yucca	each	1810.00
39.46	Providing & laying 1500 Microns thick 6 m wide HDPE Geo embrane, over the synthetic clay liner having Thickness 1.5mm, Density .94g/cm ³ , Tensile Strength at yield 23 Nmm/ width and at break 42 Nmm/ width, Elongation at Yield 13%, Elongation at Break 700%, Tear Resistance 175 N, Puncture Resistance 490 N, Carbon Black Content 2.5 and Carbon Black dispersion at Satisfactory level.	sqm	408.00
39.47	Providing & laying synthetic clay liner in excavated trench.	sqm	363.00
39.48	Supplying, erecting and fixing in position specified precast RCC bench made of RCC grade M-30 consisting of 2 Nos. "L" shaped base support of thickness 100 mm back height 1000mm, front height 450 mm, base width 420mm and 5 Nos. RCC planks of size of 1500x100 x 50 mm and 1 Nos RCC planks of 150x200x50mm including joining all parts with galvanised nuts and bolts of suitable size. All bolts to be sealed after assembly with nice finish and appearance and level complete in all respect as per direction of engineer in charge. Every bench should have a manufacture's logo of appropriate size Engraved at suitable place.	each	7600.00
39.49	Supply and fixing different type of steel pre-fabricated garden bench/ jhula/ slides and other children play items made of steel duly painted as per approved design and specifications by engineer in charge made of MS pipe, Flates, rectangular hollow section or other steel sections duly welded and or nut bolted where ever required, rubbing and buffing welded joints to make safe for use of children and painted in approved pattern complete as required.	kg	73.50

40.0 HERITEGE WORK

Code No	Description	Unit	Rate Rs.
40.1	Excavation carefully by manual means up to 2.00 mtr. Depth without damaging the buried architectural parts of the monument/structure and stacking all the intact parts at proper place for reuse at the time of restoration work as per direction of Engineer in-charge with in 50mtr.lead.	cum	206.00
40.2	Lime Sand Mortar 1:2 (1 Lime putty : 2 Sand) including preparation of mortar by traditional practice (by grinding)	cum	2210.00
40.3	Lime Surkhi Mortar 1:2 (1 Lime putty : 2 Surkhi) including preparation of mortar by traditional practice (by grinding)	cum	1640.00
40.4	Cément Sand Mortar 1:3 (1 Cément : 3 Sand)	cum	4500.00
40.5	P & L Lime Surkhi Plaster lime surkhi mortar 1:2 (1 Lime : 2 Surkhi) including preparation of mortar by traditional practice (by grinding) in specified course for base coarse and subsequent course & Loi, tamping, beating, curing till the shrinkage cracks are disappear. The work is to be done with all lead as the work is of restoration nature as per Jaipur practice including adding gur, methi & gugal on old walls including removal of all old loose and decade plaster, each coat to be done after 3 days of previous coat.		
40.5.1	33 mm thick in four coats	sqm	268.00
40.5.2	45 mm thick in four coats	sqm	294.00
40.5.3	75 mm thick in seven coats	sqm	468.00
40.6	P & L Lime Sand Plaster with lime sand mortar 1:2 (1 Lime : 2 Sand) including preparation of mortar by traditional practice (by grinding) in specified course for base coarse and subsequent course & Loi, tamping, beating, till the shrinkage cracks are disappear. The work is done with all leads as the work is of restoration nature as per Jaipur practice including adding gur, methi & gugal on old walls including removal of all old loose and decade plaster, each coat to be done after 3 days of previous coat.		
40.6.1	25 mm thick in three coats	sqm	210.00
40.6.2	33 mm thick in four coats	sqm	283.00
40.6.3	45 mm thick in four coats	sqm	316.00
40.6.4	75 mm thick in seven coats	sqm	507.00
40.7	Making Mehrab's, Arches, pillars, highly decorative creepers, flower of small sizes etc.in lime Surkhi plaster (1:2) as per B248old traditional practices (Arches, Mehrab's) in three coats for base course and subsequent course and Loi tamping, beating till the shrinkage cracks are disappear than making ornamental flowering/design etc. The work is to done with all leads and lifts as per work of restoration nature as per Jaipur practice.	sqm	548.00
40.8	Add extra over item no. 20.5 to 20.6 for Lime plaster work done over Spherical or groin ceiling/ladao ceiling of doms.	percent	80.00

Code No	Description	Unit	Rate Rs.
40.9	Add extra over item no. 20.5 to 20.6 for Lime plaster work done over flat ceiling.	percent	20.00
40.10	Add extra over item no. 20.5 to 20.6 for Lime plaster work done over curved/circular masonry work (curved or circular surface.)	percent	25.00
40.11	Deduct for plaster work over item no. 20.5 to 20.6 if lime kara is to be done on plaster as finishing coat.	percent	5.00
40.12	Flush and ruled pointing in Cement Mortar 1:3 over joints of dressed stone cladding, chajjas, jali etc. with cement, sand & colour including racking the joints as per traditional practice including all leads and lifts.	sqm	124.00
40.13	Flush and ruled pointing over joints of dressed stone cladding, chajjas, jali etc. including racking the joints as per traditional practice including all leads and lifts with grinded mortar of lime putty and surkhi mixed in 1:2 ratio and gur, methi, gugal etc. are to be mixed as per traditional practice.	sqm	139.00
40.14	Flush and ruled pointing over joints of dressed stone cladding, chajjas, jali etc. including racking the joints as per traditional practice including all leads and lifts with grinded mortar of lime putty and fine sand mixed in 1:2 ratio and gur, methi, gugal etc. are to be mixed as per traditional practice	sqm	151.00
40.15	Araish plaster (as per Jaipur practice) 1:2 (1 lime : 2 Zikki) on lime plaster or plane back ground including preparation of lime for 6 months by slaking of lime with curd and changing the water every week. The Kara plaster of not more than 6 mm thick is to be left the maximum of 3 months to appear the shrinkage & temperature cracks. Over the Kara plaster 2mm layer of grinded lime putty is to be done and is to be rubbed Gently by Akik stone. Then adding Khoppra & Ghee and inserting the design of colour boarder all round.	sqm	2280.00
40.16	Coloured plain Araish work 1:2 (1 lime : 2 zikki) on lime plaster or plane back ground including preparation of lime for 6 months by slaking of lime with curd and changing the water every week. The Kara plaster of not more than 6mm thick is to be left the maximum of 3 months to appear the shrinkage & temperature cracks. Over the Kara plaster 2mm layer of grinded lime putty is to be done and is to be rubbed Gently by Akik stone. Then adding Khoppra & Ghee and inserting the design of colour boarder all round including desired colour stone pigment to match the existing colour.	sqm	2520.00
40.17	Khamira Colour Washing as per old traditional practice to prepare the Khamira the lime should be slaked at least for 7-10 days and regularly it should be stirred by adding cured, Gugal, for non-synthetic colour adding gum (babool gum) as per specification. Then applying prepared solution on walls three to four thin coats as desired finishing.	sqm	122.00
40.18	Stucco work in lime, Surkhi, mortar (1:2) as per existing design work/ traditional practices by skilled craftsman, the stucco work should be done as per restoration nature, the mortar should be prepared by grinding mill adding gur, methi & gugal.. The thickness varies from 50 mm to 100mm as per the design (minimum rectangular surface area to be measured).	sqm	3260.00

Code No	Description	Unit	Rate Rs.
40.19	Providing & applying Lime kara 1:2 (1lime cream : 2 Zikki powder) grinding mortar with grinding mill/manually on lime base, on ceiling and all flat surface in two coats. First coat applying 3 mm to 4 mm thick and curing properly at least 7 days, second finishing coat done after 7 days of previous coat as per traditional practice.(thickness not more than 6 mm.)	sqm	460.00
40.20	Add extra for Lime Kara work (on lime plaster base) other than flat surface as per traditional practice with all lead & lift with fine finishing complete in all respect on :		
40.20.1	Domical surface/spherical/domical ceiling.	sqm	115.00
40.20.2	Curved surface.	sqm	46.00
40.21	Providing & applying "Lime Kara on stone work only" having carving stone work /decorative stone work (stone pillars, stone arches, railing etc.) as per traditional practice, as per specifications with grinded mortar in two coats with finishing complete in all respect.	sqm	908.00
40.22	Tuman masonry by brick bats/ stones in grinded mortar of Lime Surkhi mortar 1:2/lime sand mortar 1:2 including racking and removal of all old loose plaster and cleaning the wall surface properly as per direction of Engineer In-charge.	sqm	341.00
40.23	Making Kangura on top of the wall as per Jaipur traditional practice with tile brick bats/stones in grinded Lime Surkhi mortar 1:2 thickness of kangoor 15cm & height 45cm, finishing with lime Surkhi mortar 1:2 complete in all respect up to 10.00 meter from ground level including all scaffolding, lead & lift.	rmtr	1160.00
40.24	Removing of old lime plaster up to 75 mm thick in patches with height up to 4.5 m. Disposal up to 100 meter lead	sqm	63.50
40.25	Scraping & Removing of white wash/ distemper/algli etc. from plain plaster & surfaces gently with care to keep intact the old designs.	sqm	35.00
40.26	Scraping & Removing of white wash/ distemper/oil paint /algli etc. from lime plaster highly decorative, ornamental and stucco work with at most care by using fine sand paper under the close supervision to keep intact the old designs.	sqm	109.00
40.27	Vaulted roofing (Ladao) with grinded lime sand/Surkhi mortar prepared as per traditional practice including centering shuttering (Dhoola) the layer of lime mortar and brick bats/stone should 25 cm thick and each layer should be done after 1 week complete with top finishing.	sqm	6300.00
40.28	Providing and fixing stone Patties (slab) on roofing including removing broken patties carefully and replacement new slab with Kharanja, ralthal and lime dhar as per traditional practice. Span about 3.30 mtr. To 5.50 mtr. 100 mm to 150 mm thick of approved stone.	sqm	4520.00
40.29	Providing and laying lime Dhar on roofing as per Rajasthan, Jaipur traditional practice with lime, Surkhi, old lime powder, brick aggregate 12 to 20mm (1:2:2:2) and using Methi, Gur, Hemp, Belgiri etc. including beating and temping 100 to 150 mm thick as per specifications. Including dismantling of old deteriorated roofing	sqm	1160.00
40.30	Painting on Stucco work with stone colours including base coat of khameera as per traditional practice (minimum rectangular to be measured).	sqm	610.00

Code No	Description	Unit	Rate Rs.
40.31	Rubbing / removal of lime plaster on stone works by abrasive method		
40.31.1	Up to 1" thick layer	sqm	375.00
40.31.2	above 1" thick layer	sqm	569.00
40.32	Cleaning of Araish by Tee pole	sqm	756.00
40.33	Washing Marble Stucco by Tee pole	sqm	545.00
40.34	De-vegetation from monument by removing bushes, trees including complete uprooting from the wall & roofs/structures carefully including suitable chemical treatment to roots to avoid further growth including disposal of rubbish with in 50 mtr. Lead as per direction of Engineer in-charge.	sqm	339.00
40.35	Providing and fixing double leaf door wooden shutters made of 1st grade wood as per traditional design (Desi pattern) planks thickness 40mm and width of Binies, Andheri 50mm and 35mm, including Adwa etc. with fittings (nails, sankal, kunda, cheri, handle and patti etc.) as per existing matching/ as per approved design with moulding/ carving complete in all respect :		
40.35.1	M.P teak wood grade 1st	sqm	7090.00
40.35.2	Sheesham wood grade 1st	sqm	5980.00
40.35.3	Babool wood grade 1st	sqm	3500.00
40.36	Providing and fixing double leaf Window wooden shutters made of 1st grade wood as per traditional design (Desi pattern) planks thickness 25mm and width of Binies, Andheri 35mm and 25mm, including Adwa etc. with fittings (nails, sankal, kunda, cheri, handle and patti etc.) as per existing matching/ as per approved design with moulding/ carving complete in all respect : Sheesham wood grade 1st.		
40.36.1	M.P teak wood grade 1st	sqm	5830.00
40.36.2	Sheesham wood grade 1st	sqm	5140.00
40.36.3	Babool wood grade 1st	sqm	3610.00
40.37	Add extra for brass fittings in place of M.S./ G.I fittings over item no. 20.35 & item no. 20.36		
40.37.1	For doors (desi pattern double leaf shutters)	sqm	348.00
40.37.2	For windows (desi pattern double leaf window shutters)	sqm	325.00
40.38	Providing and applying breathable, non-reactive, transparent, antifungal, UV resistant, alkaline stable, impregnable silane-siloxane or equivalent based water repellent coating on exposed absorbing substrate like stone surface/ concrete surface/ mineral painted surface / exposed brick surface / lime surface in two or more coats to give uniform finish surface in all heights, horizontal, inclined, vertical and on ceiling complete in all respect and making it complete water-proof as per direction of the Engineer-in charge.	sqm	173.00
40.39	Providing and applying ceilent adhesive to existing cracks by suitable silicon or equivalent ceilent complete in all respect and making it complete water-proof as per direction of the Engineer-in charge.	rmtr	267.00

Code No	Description	Unit	Rate Rs.
40.40	To expose the original surface of stone art / Chiseling work / Fresco paintings /tempera painting carefully by removing upper coatings of whitewash /paint / distemper / plastering / wooden and metal frames etc. without any harm to the original hidden art work & further strengthen the original art work with a suitable coating of preservative and making it water tight as per direction of Engineer-In charge.	sqm	587.00
40.41	Water proofing with consolidation of basic substrata, making it complete water proof with Protekta series of compounds or equivalent as per manufacturers specifications and as per direction of engineer in charge	sqm	454.00
40.42	Water proofing with consolidation of sand stone, making it complete water proof with Protekta series of compounds or equivalent as per manufacturers specifications and as per direction of engineer in charge	sqm	308.00
40.43	Chemical treatment of sand stone to clean from yellowness, blackness, algal growth, dust, dirt oily accretions, lime & gypsum deposits, filling of cracks/ joining of gaps/ pointing, strengthening of weak stone, removal of salt effect and application of preservative coating to prevent algal growth and make the stone water proof.	sqm	635.00
40.44	Chemical treatment of marble stone to clean from yellowness, blackness, algal growth, dust, dirt oily accretions, lime & gypsum deposits, filling of cracks/ joining of gaps/ pointing, strengthening of weak stone, removal of salt effect and application of preservative coating to prevent algal growth and make the stone water proof.	sqm	696.00
40.45	Chemical treatment of arash surface to clean from yellowness, blackness, algal growth, dust, dirt oily accretions, lime & gypsum deposits, filling of gaps & cracks and application of preservative coating to prevent algal growth and make the surface water proof.	sqm	433.00
40.46	Conservation of plain arash in monuments by cleaning of the painted surface from dust, dirt, greasy & oily all types of accretions with the help of suitable chemicals, removal of cracks and holes, consolidation of plaster, filling of the lacunae in the plaster, treatment of salt effect, restoration of the lost portions and providing a preservative coating.	sqm	1490.00
40.47	Conservation of coloured arash with designs in fresco technique in monuments by cleaning of the painted surface from dust, dirt, greasy & oily accretions with the help of suitable chemicals, removal of cracks and holes, consolidation of plaster, filling of the lacunae in the plaster, treatment of salt effect, retouching of the lost portions and providing a preservative coating.	sqm	1910.00
40.48	Conservation of fresco paintings in monuments by cleaning of the painted surface from all types of stains, dust, dirt, greasy & oily accretions etc. with the help of suitable chemicals, removal of cracks, consolidation of flaking paint layer and plaster, filling of the lacunae in the plaster, treatment of salt effect and altered paint layer retouching of the lost portions and providing a preservative coating.	sqm	4840.00

Code No	Description	Unit	Rate Rs.
40.49	Conservation of oil paintings & portraits in monuments by cleaning of the painted surface from all types of stains, dust, dirt, greasy & oily accretions etc. with the help of suitable chemicals, removal of cracks and holes, consolidation of flaking paint layer and plaster, filling of the lacunae in the plaster, treatment of salt effect, retouching of the lost portions and providing a preservative coating.	sqm	5720.00
40.50	Exposition of the original surface of fresco paintings/tempra paintings by careful removal of upper coating of whitewash/paint/distemper/plaster, araish etc. without any harm to the original hidden art work, conservation of the paintings & strengthen the original art work with the preservative coating and making it water proof as per direction of the Chemist-in-charge.	sqm	5930.00
40.51	Conservation of intricate carving work in Plaster of Paris by cleaning the surface from dust, dirt, greasy oily and all types of accretions etc. with the help of suitable chemicals, filling of lacunae, removal of cracks and holes, restoration of lost portions with the same designs & materials and providing a preservative coating.	sqm	1520.00
40.52	Restoration of Jamia glass work by cleaning the surface with the help of chemicals, replacement of the broken/ lost glasses with the same type, filling of POP along the edges according to the designs and preserve (rates are upto 10% damages on wall excluding gold work)		
40.52.1	On wall	sqm	14500.00
40.52.2	On Gardana	sqm	16000.00
40.52.3	On Ceiling.	sqm	17400.00
40.53	Conservation of oil paintings and portraits on glass by clearing with the help of suitable chemicals, retouching of the lost portions, providing mica sheet behind the glass and filling of POP along the edges according to the original designs preserve.	sqm	11400.00
40.54	Restoration of wooden doors with polychrome art in oil colour by cleaning the paintings with the help of suitable chemicals, consolidation of the wood and flecking paint layer, filling of the gaps and cracks in the wood, retouching of the paintings by the same technique and design wherever required with the help of same material (originally used) and provide of a preservative coating.	sqm	10800.00
40.55	Control of infestation (Bio-deterioration) from termites, insects, rodents, micro-organism etc. in museums and monuments.	sqm	6.50

41.0 PVC INSULATED WIRING IN PVC CASING CAPPING

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
41.1	Wiring of light point / fan point / exhaust fan point / call bell point with 1.5 sq. mm FR PVC insulated unsheathed 1.1kV grade flexible copper conductor and 1.5 sq.mm FR PVC insulated copper earth conductor (IS:694) of approved make in double lock/ ISI marked single lock pvc casing capping & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers , making connections, testing etc. as required.			
41.1.1	Short point (up to 3 mtr.)	p. point	230.00	184.00
41.1.2	Medium point (up to 6 mtr.)	p. point	322.00	258.00
41.1.3	Long point (up to 10 mtr..)	p. point	487.00	390.00
41.2	Wiring of twin control point with 1.5 sq. mm FR PVC insulated unsheathed 1.1kV grade flexible copper conductor and 1.5 sq.mm FR PVC insulated copper earth conductor (IS:694) of approved make in double lock/ ISI marked single lock pvc casing capping & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A two way switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers , making connections, testing etc. as required.			
41.2.1	Short point (up to 3 mtr.)	p. point	267.00	214.00
41.2.2	Medium point (up to 6 mtr.)	p. point	397.00	318.00
41.2.3	Long point (up to 10 mtr..)	p. point	528.00	422.00
41.3	Wiring of 3 pin 6 amp. Light plug point with 1.5 sq. mm FR PVC insulated unsheathed 1.1 kV grade flexible copper conductor and 1.5 sq.mm FR PVC insulated unsheathed 1.1 kV grade copper earth conductor (IS:694) of approved make double lock/ ISI marked single lock pvc casing capping & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 6 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required.			
41.3.1	On board	p. point	79.00	63.00
41.3.2	Short point (up to 3 mtr.)	p. point	295.00	236.00
41.3.3	Medium point (up to 6 mtr.)	p. point	378.00	302.00
41.3.4	Long point (up to 10 mtr..)	p. point	537.00	430.00
41.4	P&F following size double lock / ISI marked single lock			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	PVC casing capping & it's accessories like coupler, inner, outer, elbow , square box, tee etc. with screws, PVC expansion fasteners as required.			
41.4.1	20 mm x 12 mm	rmtr	25.00	20.00
41.4.2	25 mm x 12 mm	rmtr	31.00	25.00
41.4.3	32 mm x 12 mm	rmtr	34.00	27.00
41.4.4	38 mm x 18.5mm	rmtr	57.00	46.00
41.4.5	50 mm x 20mm	rrmtr	78.00	62.00

NOTE:

1. For conductor group classification refers list of makes.
2. Increase rate of point wiring for FRLS PVC by 5.0% and for ZHFR non PVC by 16.0% in place of FR PVC.
3. Wiring with items of Group1 and 2 shall be with all component of Group1 and 2 respectively.
4. The rates are for flush type/ PC series. For using semi modular PC series accessories, rate shall be increased 3% in point wiring rate and for using modular PC series accessories, rate shall be increased 20% in point wiring rate.

42.0 PVC INSULATED WIRING IN PVC CONDUIT

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
42.1	Wiring of light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point. 6 A switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required.			
42.1.1	Short point (up to 3 mtr.)	p. point	219.00	175.00
42.1.2	Medium point (up to 6 mtr.)	p. point	305.00	244.00
42.1.3	Long point (up to 10 mtr..)	p. point	421.00	337.00
42.2	Wiring of twin control light point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point 6 A two way switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required.			
42.2.1	Short point (up to 3 mtr.)	p. point	243.00	194.00
42.2.2	Medium point (up to 6 mtr.)	p. point	403.00	322.00
42.2.3	Long point (up to 10 mtr..)	p. point	563.00	450.00
42.3	Wiring of 3 pin 5 amp. light plug point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked medium duty PVC conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 6 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, making connections, testing etc. as required.			
42.3.1	On board	p. point	79.00	63.00
42.3.2	Short point (up to 3 mtr.)	p. point	278.00	222.00
42.3.3	Medium point (up to 6 mtr.)	p. point	374.00	299.00
42.3.4	Long point (up to 10 mtr..)	p. point	517.00	414.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
42.4	S&F following sizes (dia.) of ISI marked medium duty PVC conduit along with accessories in surface / recessed using saddles, clamps, fastener as required including cutting the wall and making good the same as required.			
42.4.1	20 mm	rmtr	20.00	16.00
42.4.2	25 mm	rmtr	27.00	22.00
42.4.3	32 mm	rmtr	46.00	37.00
42.4.4	40 mm	rmtr	62.00	50.00
42.4.5	50 mm	rmtr	93.00	74.00
42.5	Wiring of 6 pin 15 amp. Light power point with 4.0 sq. mm PVC insulated unsheathed solid / stranded copper conductor 1.1 kV grade of approved make in surface / recessed ISI marked pvc conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board , 15 A switch, 15 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required.			
42.5.1	Short point (up to 3 mtr.)	p. point	439.00	307.00
42.5.2	Medium point (up to 6 mtr.)	p. point	622.00	435.00
42.5.3	Long point (up to 10 mtr..)	p. point	809.00	566.00
42.6	Wiring of 6 pin 15 amp. Light power point with 6.0 sq. mm PVC insulated unsheathed solid / stranded copper conductor 1.1 kV grade of approved make in surface / recessed ISI marked pvc conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board , 15 A switch, 15 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required.			
42.6.1	Short point (up to 3 mtr.)	p. point	518.00	363.00
42.6.2	Medium point (up to 6 mtr.)	p. point	784.00	549.00
42.6.3	Long point (up to 10 mtr..)	p. point	1033.00	723.00

NOTE :

5. For conductor group classification refers list of makes.
6. Increase rate of point wiring for FRLS PVC by 3.0% and for ZHFR non PVC by 10.0% in place of FR PVC.
7. Wiring with items of Group1 and 2 shall be with all component of Group1 and 2 respectively.
8. The rates are for flush type/ PC series. For using semi modular PC series accessories, rate shall be increased 3% in point wiring rate and for using modular PC series accessories, rate shall be increased 20% in point wiring rate.

43.0 PVC INSULATED WIRING IN STEEL CONDUIT

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
43.1	Wiring of light point/fan point / exhaust fan point/ call bell point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible earth copper conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked steel conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes check nuts, making connections, testing etc. as required.			
43.1.1	Short point (up to 3 mtr.)	p. point	298.00	238.00
43.1.2	Medium point (up to 6 mtr.)	p. point	456.00	365.00
43.1.3	Long point (up to 10 mtr..)	p. point	623.00	498.00
43.2	Wiring of twin control light point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked steel conduit & it's accessories, round tiles,18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A two way switch, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required.			
43.2.1	Short point (up to 3 mtr.)	p. point	250.00	200.00
43.2.2	Medium point (up to 6 mtr.)	p. point	430.00	344.00
43.2.3	Long point (up to 10 mtr)	p. point	627.00	502.00
43.3	Wiring of 3 pin 6 amp. Light plug point with 1.5 sq. mm FR PVC insulated unsheathed flexible copper conductor 1.1 kV grade and 1.5 sq.mm FR PVC insulated unsheathed flexible copper earth conductor 1.1 kV grade (IS:694) of approved make in surface / recessed ISI marked steel conduit & it's accessories, 18 SWG M.S. box with earth terminal, screwless cage connectors for neutral looping in switch board & false ceiling point, 6 A switch, 6 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required.			
43.3.1	On board		92.00	74.00
43.3.2	Short point (up to 3 mtr.)	p. point	353.00	282.00
43.3.3	Medium point (up to 6 mtr.)	p. point	490.00	392.00
43.3.4	Long point (up to 10 mtr..)	p. point	654.00	523.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
43.4	S&F following sizes of ISI marked steel conduit along with heavy duty accessories in surface /recessed using saddles, clamps, fasteners as required including cutting the wall and making good the same as required.			
43.4.1	20 mm	rmtr	70.00	56.00
43.4.2	25 mm	rmtr	88.00	70.00
43.4.3	32 mm	rmtr	133.00	106.00
43.4.4	40 mm	rmtr	216.00	173.00
43.4.5	50 mm	rmtr	304.00	243.00
43.5	Wiring of 6 pin 15 amp. Light power point with 4.0 sq. mm PVC insulated unsheathed solid / stranded copper conductor 1.1 kV grade of approved make in surface / recessed ISI marked steel conduit & it's accessories, 18 SWG M.S. box with earth terminal, screw less cage connectors for neutral looping in switch board , 15 A switch, 15 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required.			
43.5.1	Short point (up to 3 mtr.)	p. point	516.00	361.00
43.5.2	Medium point (up to 6 mtr.)	p. point	763.00	534.00
43.5.3	Long point (up to 10 mtr..)	p. point	1022.00	715.00
43.6	Wiring of 6 pin 15 amp. Light power point with 6.0 sq. mm PVC insulated unsheathed solid / stranded copper conductor 1.1 kV grade of approved make in surface / recessed ISI marked steel conduit & it's accessories, 18 SWG M.S. box with earth terminal, screw less cage connectors for neutral looping in switch board , 15 A switch, 15 A socket, 3.0 mm thick phenolic laminated sheet, zinc plated / brass screws, cup washers, bushes, check nuts, making connections, testing etc. as required.			
43.6.1	Short point (up to 3 mtr.)	p. point	579.00	405.00
43.6.2	Medium point (up to 6 mtr.)	p. point	907.00	635.00
43.6.3	Long point (up to 10 mtr.)	p. point	1234.00	864.00

NOTE :

1. For conductor group classification refers list of makes.
2. Increase rate of point wiring for FRLS PVC by 3.0% and for ZHFR non PVC by 10.0% in place of FR PVC.
3. Wiring with items of Group1 and 2 shall be with all component of Group1 and 2 respectively.
4. The rates are for flush type/ PC series. For using semi modular PC series accessories, rate shall be increased 3% in point wiring rate and for using modular PC series accessories, rate shall be increased 20% in point wiring rate.
5. If wiring is done in GI conduit,the rates will be increaed by 20%

44.0 DRAWING OF WIRES & SUBMAINS

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
44.1	Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor ISI marked (IS:694) of 1.1 kV grade and approved make in existing surface or recessed conduit/casing capping including making connections etc. as required.			
44.1.1	1 x 1.5 sq.mm	metre	13.00	11.00
44.1.2	2 x 1.5 sq.mm	metre	26.00	22.00
44.1.3	3x 1.5 sq.mm	metre	39.00	33.00
44.1.4	4 x 1.5 sq.mm	metre	52.00	44.00
44.1.5	6 x 1.5 sq.mm	metre	78.00	66.00
44.1.6	1 x 2.5 sq.mm	metre	21.00	18.00
44.1.7	2 x 2.5 sq.mm	metre	42.00	36.00
44.1.8	2 x 2.5 sq. mm. + 1x1.5sqmm	metre	55.00	47.00
44.1.9	3 x 2.5 sq.mm	metre	63.00	54.00
44.1.10	4 x 2.5 sq.mm	metre	84.00	71.00
44.1.11	6 x 2.5 sq.mm	metre	126.00	107.00
44.1.12	1 x 4.0 sq.mm	metre	32.00	27.00
44.1.13	2 x 4.0 sq.mm	metre	64.00	54.00
44.1.14	3 x 4 sq. mm.	metre	96.00	82.00
44.1.15	4 x 4.0 sq.mm	metre	128.00	109.00
44.1.16	6 x 4.0 sq.mm	metre	192.00	163.00
44.1.17	2 x 4.0 sq.mm+1x 2.5 sq. mm.	metre	77.00	65.00
44.1.18	1 x 6.0 sq.mm	metre	48.00	41.00
44.1.19	2 x 6.0 sq.mm	metre	96.00	82.00
44.1.20	3 x 6.0 sq. mm.	metre	144.00	122.00
44.1.21	4 x 6.0 sq.mm	metre	192.00	163.00
44.1.22	2 x 6.0 sq. mm. + 1 x 2.5 sq. mm.	metre	109.00	93.00
44.1.23	1 x 10.0 sq.mm	metre	83.00	71.00
44.1.24	2 x 10.0 sq.mm	metre	166.00	141.00
44.1.25	4 x 10.0 sq.mm	metre	332.00	282.00
44.1.26	1 x 16.0 sq.mm	metre	134.00	114.00
44.1.27	2 x 16.0 sq.mm	metre	268.00	228.00
44.1.28	4 x 16.0 sq.mm	metre	536.00	456.00
44.2	Supplying and drawing PVC jacketed with annealed bare copper inner conductor & tinned copper conductor shielding foam PE dielectric coaxial cable of approved make in existing surface or recessed conduit/casing			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	capping including making connections as required.			
44.2.1	RG - 6	metre	16.00	14.00
44.2.2	RG -11	metre	35.00	30.00
44.3	Supplying and drawing PVC/ Polythene insulated and PVC sheathed unarmoured/ armoured telephone cable with 0.5 mm dia. Tinned / annealed copper conductor taped & confirming to ITD specification S/WS-112C & 113 C of approved make in existing surface or recessed conduit/casing capping.			
44.3.1	Unarmoured			
44.3.1.1	1 pair	metre	6.00	5.00
44.3.1.2	2 pair	metre	9.00	8.00
44.3.1.3	3 pair	metre	14.00	12.00
44.3.1.4	4 pair	metre	18.00	15.00
44.3.1.5	5 pair	metre	23.00	20.00
44.3.1.6	10 pair	metre	44.00	37.00
44.3.1.7	20 pair	metre	83.00	71.00
44.3.1.8	50 pair	metre	245.00	208.00
44.3.1.9	100 pair	metre	382.00	325.00
44.3.2	Jelly filled armoured (PIJF)			
44.3.2.1	5 pair	metre	93.00	84.00
44.3.2.2	10 pair	metre	115.00	104.00
44.3.2.3	20 pair	metre	169.00	152.00
44.3.2.4	50 pair	metre	329.00	296.00
44.3.2.5	100 pair	metre	582.00	524.00

NOTE : The rate of wiring shall be increased as per following in case higher insulation class of wires are used.

1. FRLS – 10%
2. HFFR / ZHFR (Non PVC) – 40%.

45.0 SHEET STEEL/ WOODEN BOXES

Code No	Description	Unit	Rate Rs. Group 1
45.1	P & F 18 SWG Sheet steel boxes duly finished with two coats of red oxide and with earthing terminal of following sizes (nominal size) on surface or in recessed as required.		
45.1.1	75mm x 75mm x 50mm	each	41.00
45.1.2	100mm x 100mm x 50mm	each	41.00
45.1.3	150mm x 75mm x 60mm	each	57.00
45.1.4	175mm x 100mm x 60mm	each	57.00
45.1.5	150mm x 150mm x 60mm	each	70.00
45.1.6	225mm x 100mm x 60mm	each	70.00
45.1.7	200mm x 150mm x 60mm	each	70.00
45.1.8	200mm x 250mm x 75mm	each	89.00
45.1.9	200mm x 300 mm x 75 mm	each	121.00
45.1.10	250mm x 300mm x 75mm	each	153.00
45.1.11	250mm x 300mm x 100mm	each	172.00
45.1.12	300mm x 375mm x 75mm	each	191.00
45.1.13	300mm x 375mm x 100mm	each	191.00
45.2	P & F in position frame made out of M.S. angle (riveted or welded) finished with two coats of red oxide and enamel paint of following sizes as required.		
45.2.1	25mm x 25mm x 3mm	metre	80.00
45.2.2	25mm x 25mm x 5mm	metre	117.00
45.2.3	35mm x 35mm x 5mm	metre	170.00
45.2.4	40mm x 40mm x 5mm	metre	194.00
45.2.5	50mm x 50mm x 6mm	metre	286.00
45.3	P & Fixing M.S. sheet on existing angle iron frame by means of nuts and bolts and making required no. of holes for fixing accessories including two coat of red oxide paint and two coats of enamel paint etc. as required.		
45.3.1	1.6 mm thick	sqm	856.00
45.3.2	2.0 mm thick	sqm	1065.00
45.3.3	3.0 mm thick	sqm	1596.00
45.4	P & Fixing M.S. flat on existing angle iron frame and making required no. of holes for fixing accessories including one coat of red oxide paint and two coats of enamel paint etc. as required.		
45.4.1	25 mm x 3 mm	metre	53.00
45.4.2	25 mm x 5 mm	metre	79.00
45.4.3	38 mm x 5 mm	metre	124.00

Code No	Description	Unit	Rate Rs. Group 1
45.4.4	50 mm x 6 mm	metre	172.00
45.5	P & F sheet for boxes/ frames including making holes for switches etc, with brass screws, washers/ zinc plated nut and bolts as required.		
45.5.1	3.0 mm thick Synthetic phenolic resin bonded laminates confirming to IS:2046	sqm	651.00
45.6	Bakelite sheet		
45.6.1	4.8 mm thick	sqm	1082.00
46.6.2	6.4 mm thick	sqm	1436.00
45.6.3	9.0 mm thick	sqm	1867.00
47.6.4	12.0 mm thick	sqm	2537.00
45.6.5	19.0 mm thick	sqm	3878.00
48.6.6	25.0 mm thick	sqm	5026.00
45.7	P & F phenolic laminated sheet 2.0 mm thick of size 75 mm dia. Including screws, cup washer as required.	each	6.00
45.8	P & F P.V.C. sheet 2 mm thick of size 75 mm dia. Including screws, cup washer as required.	each	4.00
45.9	P & F Aluminium sheet 1.0 m thick of size 75 mm dia. Including screws, cup washer as required.	each	3.00
45.10	P & F surface/recessed type 10 mm thick Teak wood board duly antitermite treated, varnished and fixed by using gutties/ PVC fasteners of following size as required.		
45.10.1	175 mm x 75 mm	each	15.00
46.10.2	100 mm x 100 mm	each	13.00
45.10.3	100 mm x 175 mm	each	18.00
46.10.4	200 mm x 250 mm	each	28.00
45.10.5	250 mm x 300 mm	each	36.00
46.10.6	300 mm x 375 mm	each	52.00
45.10.7	375 mm x 450 mm	each	62.00
46.10.8	450 mm x 600 mm	each	91.00
45.11	P & F of 3.00mm PVC sheet for fan box with help of screws, cup washer as required	each	13.00
45.12	P & F screw less Cage Clamp type Terminal Blocks with Nylon T.B., End Plate, Adjacent insulated Jumpers, End Stop, Yellow Chromated Din Rail etc. complete in all respect for following sizes.		
45.12.1	2.5 sq. mm.- One In One Out		
45.12.1.1	3 way	each	70.00
45.12.1.2	4 way	each	79.00
45.12.1.3	6 way	each	105.00
45.12.1.4	8 way	each	125.00
45.12.2	2.5 sq. mm.- One In Two Out		

Code No	Description	Unit	Rate Rs. Group 1
45.12.2.1	3 way	each	97.00
45.12.2.2	4 way	each	109.00
45.12.2.3	6 way	each	143.00
45.12.2.4	8 way	each	171.00
45.12.3	2.5 sq. mm. - One In Three Out		
45.12.3.1	3 way	each	117.00
45.12.3.2	4 way	each	130.00
45.12.3.3	6 way	each	176.00
45.12.3.4	8 way	each	211.00
45.12.4	4 sq. mm. - One In One Out		
45.12.4.1	3 way	each	102.00
45.12.4.2	4 way	each	115.00
45.12.4.3	6 way	each	153.00
45.12.4.4	8 way	each	183.00
45.12.5	4 sq. mm. - One In Two Out		
45.12.5.1	3 way	each	140.00
45.12.5.2	4 way	each	156.00
45.12.5.3	6 way	each	198.00
45.12.5.4	8 way	each	243.00
45.12.6	4 sq. mm. - One In Three Out		
45.12.6.1	3 way	each	153.00
45.12.6.2	4 way	each	198.00
45.12.6.3	6 way	each	230.00
45.12.6.4	8 way	each	281.00
45.12.7	6 sq. mm. - One In One Out		
45.12.7.1	3 way	each	160.00
45.12.7.2	4 way	each	198.00
45.12.7.3	6 way	each	230.00
45.12.7.4	8 way	each	283.00
45.12.8	6 sq. mm. - One In Two Out		
45.12.8.1	3 way	each	236.00
45.12.8.2	4 way	each	287.00
45.12.8.3	6 way	each	357.00
45.12.8.4	8 way	each	453.00
45.12.9	10 sq. mm. - One In One Out		
45.12.9.1	3 way	each	243.00
45.12.9.2	4 way	each	300.00

Code No	Description	Unit	Rate Rs. Group 1
45.12.9.3	6 way	each	364.00
45.12.9.4	8 way	each	460.00
45.12.10	10 sq. mm. - One In Two Out		
45.12.10.1	3 way	each	389.00
45.12.10.2	4 way	each	460.00
45.12.10.3	6 way	each	543.00
45.12.10.4	8 way	each	753.00
45.12.11	16 sq. mm. - One In One Out		
45.12.11.1	3 way	each	332.00
45.12.11.2	4 way	each	408.00
45.12.11.3	6 way	each	479.00
45.12.11.4	8 way	each	626.00
45.12.12	16 sq. mm. - One In Two Out		
45.12.12.1	3 way	each	415.00
45.12.12.2	4 way	each	523.00
45.12.12.3	6 way	each	677.00
45.12.12.4	8 way	each	855.00
45.12.13	35 sq. mm. - One In One Out		
45.12.13.1	3 way	each	779.00
45.12.13.2	4 way	each	945.00
45.12.14	95 sq. mm. - One In One Out		
45.12.14.1	3 way	each	1915.00
45.12.14.2	4 way	each	2170.00
45.13	P & F 3 Way Connector equivalent to Ceiling Rose Connector for False Ceiling	each	23.00
45.14	P & F 3 Wire Shorting Connectors for Neutral or Phase	each	22.00
45.15	P & F 5 Wire Shorting Connectors for Neutral or Phase	each	32.00
45.16	P & F Service Connector for One to One Wire Connection in place of Tape	each	19.00
45.17	P & F Lighting Connector for One Solid & One Flexible wire connection	each	13.00
45.18	P & F Lighting Connector for Two Solid & One Flexible wire connection	each	18.00
45.19	P & F 3 Way Male Female Connector	each	96.00
45.20	P & F 2Way, 4 Conductors high current 32 Amp. Connector	each	38.00
45.21	P & F 3 Way, 4 Conductors high current 32 Amp. Connector	each	70.00
45.22	Labour charges for dismantling of surface PVC/ Steel conduit including wiring in conduit, conduit fittings and depositing the same with listing of material in store.	rmtr	15.00

Code No	Description	Unit	Rate Rs. Group 1
45.23	Labour charges for dismantling of surface/ recessed switch board of any size and depositing the same with listing of material in store.	each	10.00
45.24	Labour charges for dismantling of switch accessories like switch, socket, ceiling rose, holder and depositing the same with listing of material in store.	each	5.00
45.25	Labour charges for dismantling of wiring in existing conduit of following size and depositing the same with listing of material in store.		
45.25.1	up to 2.5 sq. mm. wire	rmtr	5.00
45.25.2	4/ 6 sq. mm. wire	rmtr	5.00
45.25.3	10 sq. mm. wire	rmtr	5.00

46.0 MCB, DB & RCCB

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
46.1	P&F 240/415 V MCB of breaking capacity not less than 10 KA (B/ C/ D tripping characteristic) ISI marked IS 8828(1996)]/ conforming to IEC 60898 in existing board/sheets including making connections with lugs, testing etc. as required.			
46.1.1	Single pole MCB			
46.1.1.1	0.5 A to 4 A rating	each	225.00	180.00
46.1.1.2	6 A to 32 A rating	each	161.00	129.00
46.1.1.3	40A to 63 A rating	each	320.00	256.00
46.1.2	Double pole MCB			
46.1.2.1	6 A to 32 A rating	each	437.00	350.00
46.1.2.2	40 A to 63 A rating	each	717.00	574.00
46.1.3	Single pole & neutral MCB			
46.1.3.1	6 A to 32 A rating	each	466.00	373.00
46.1.3.2	40 A 63 A rating	each	755.00	604.00
46.1.4	Triple pole MCB			
46.1.4.1	6 A to 32 A rating	each	670.00	536.00
46.1.4.2	40 A 63 A rating	each	1033.00	826.00
46.1.5	Triple pole & neutral MCB			
46.1.5.1	6 A to 32 A rating	each	941.00	753.00
46.1.5.2	40 A 63 A rating	each	1347.00	1078.00
46.1.6	Four pole MCB			
46.1.6.1	6 A to 32 A rating	each	906.00	725.00
46.1.6.2	40 A 63 A rating	each	1311.00	1049.00
46.2	P&F 240/415 V isolator conforming to IS:13947-III/ IEC 60947-3 on existing board / sheet including making connections with lugs , testing etc. as required.			
46.2.1	Double pole isolator			
46.2.1.1	30 A / 40 A rating	each	354.00	283.00
46.2.1.2	63 A rating	each	468.00	374.00
46.2.2	Triple pole Isolator			
46.2.2.1	30 A / 40 A rating	each	608.00	486.00
46.2.2.2	63 A rating	each	710.00	568.00
46.2.2.3	100 A rating	each	964.00	771.00
46.2.3	Four pole Isolator			
46.2.3.1	30 A / 40 A rating	each	621.00	497.00
46.2.3.2	63 A rating	each	832.00	666.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
46.2.3.3	100 A rating	each	1176.00	941.00
46.3	P&F of RCBO with overload, short-circuit and earth leakage protection ISI marked (IS12640)/ conforming to IEC 61009/1 complete in all respect including making connections with lugs, testing etc. as required.			
46.3.1	Two pole 30 mA sensitivity			
46.3.1.1	16-25 A rating	each	2353.00	1882.00
46.3.1.2	40 A rating	each	2877.00	2302.00
46.3.2	Two pole 100 mA sensitivity			
46.3.2.1	16-25 A rating	each	2454.00	1963.00
46.3.2.2	40 A rating	each	2934.00	2347.00
46.3.3	Two pole 300 mA sensitivity			
46.3.3.1	16-25 A rating	each	2584.00	2067.00
46.3.3.2	40 A rating	each	2991.00	2393.00
46.3.4	Four pole 30mA sensitivity			
46.3.4.1	25-40 A rating	each	3971.00	3177.00
46.3.4.2	40-63 A rating	each	4104.00	3283.00
46.3.5	Four pole 100 mA sensitivity			
46.3.5.1	25-40 A rating	each	4287.00	3430.00
46.3.5.2	40-63 A rating	each	4678.00	3742.00
46.3.6	Four pole 300 mA sensitivity			
46.3.6.1	25-40 A rating	each	4385.00	3508.00
46.3.6.2	40-63 A rating	each	4678.00	3742.00
46.4	P&F 240/415 V Residual current circuit breaker conforming to IS:12640:1988/ IEC 61008 on existing board/sheet including making connections with lugs, testing etc. as required			
46.4.1	Two pole 30 mA sensitivity			
46.4.1.1	25 A rating	each	1634.00	1307.00
46.4.1.2	40 A rating	each	1802.00	1442.00
46.4.1.3	63A rating	each	2141.00	1713.00
46.4.2	Two pole 100 mA sensitivity			
46.4.2.1	25 A rating	each	1728.00	1382.00
46.4.2.2	40 A rating	each	1883.00	1506.00
46.4.2.3	63 A rating	each	2318.00	1854.00
46.4.3	Two pole 300 mA sensitivity			
46.4.3.1	25 A rating	each	1743.00	1394.00
46.4.3.2	40 A rating	each	1890.00	1512.00
46.4.3.3	63 A rating	each	2355.00	1884.00
46.4.4	Four pole 30 mA sensitivity			
46.4.4.1	25-40 A rating	each	2191.00	1753.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
46.4.4.2	63 A rating	each	2428.00	1942.00
46.4.5	Four pole 100 mA sensitivity			
46.4.5.1	25 A rating	each	2226.00	1781.00
46.4.5.2	40 A rating	each	2257.00	1806.00
46.4.5.3	63 A rating	each	2546.00	2037.00
46.4.6	Four pole 300 mA sensitivity			
46.4.6.1	25 A rating	each	2240.00	1792.00
46.4.6.2	40 A rating	each	2322.00	1858.00
46.4.6.3	63 A rating	each	2625.00	2100.00
46.5	P&F Recessed/ Surface mounting heavy duty horizontal type sheet steel Distribution board phophatised/ powder painted complete with copper bus bar, shorting link , neutral link, earth link and din bar masking sheet conforming to IS13032 & IS8623 including making internal DB terminations with copper lugs , testing etc. as required.			
46.5.1	Single door (single phase)			
46.5.1.1	4 Way	each	434.00	347.00
46.5.1.2	6 Way	each	701.00	561.00
46.5.1.3	8 Way	each	804.00	643.00
46.5.1.4	12 Way	each	1045.00	836.00
46.5.1.5	16 Way	each	1324.00	1059.00
46.5.2	Single door (Three phase)			
46.5.2.1	4 Way	each	1552.00	1242.00
46.5.2.2	6 Way	each	2029.00	1623.00
46.5.2.3	8 Way	each	2411.00	1929.00
46.5.2.4	12 Way	each	3714.00	2971.00
46.5.3	Double door (single phase)			
46.5.3.1	4 Way	each	915.00	732.00
46.5.3.2	6 Way	each	1006.00	805.00
46.5.3.3	8 Way	each	1190.00	952.00
46.5.3.4	12 Way	each	1365.00	1092.00
46.5.3.5	16 Way	each	1806.00	1445.00
46.5.4	Double door (Three phase)			
46.5.4.1	4 Way	each	2033.00	1626.00
46.5.4.2	6 Way	each	2434.00	1947.00
46.5.4.3	8 Way	each	2993.00	2394.00
46.5.4.4	12 Way	each	4509.00	3607.00
46.5.5	Single door (Three phase) Per phase isolation			
46.5.5.1	2+8 Way	each	3140.00	2512.00
46.5.5.2	2+12 Way	each	5538.00	4430.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
46.5.6	Double door (Three phase) Per phase isolation			
46.5.6.1	2+8 Way	each	4706.00	3765.00
46.5.6.2	2+12 Way	each	6360.00	5088.00
46.6	P&F flush/surface type enclosure for housing MCB/Isolator with Din rail including making connections with lugs, repairs etc. as required.			
46.6.1	With sheet steel enclosure			
46.6.1.1	One /two way	each	345.00	276.00
46.6.1.2	Three/Four way	each	349.00	279.00
46.6.2	With plastic enclosure			
46.6.2.1	One /two way	each	166.00	133.00
46.6.2.2	Three/Four way	each	166.00	133.00
46.7	P&F metal clad industrial plug top & socket unit with pin and sleeve type contact on porcelain/ bakelite base in sheet steel enclosure (without MCB) including making connections with lugs, testing etc.as required			
46.7.1	Single phase (Three pin)			
46.7.1.1	10 A	each	858.00	686.00
46.7.1.2	20 A	each	858.00	686.00
46.7.2	Three phase (Five pin)			
46.7.2.1	20 A	each	1770.00	1416.00
46.7.2.2	30A-32A	each	2068.00	1654.00
46.8	P&F metal clad industrial plug top & socket with butt type contacts, interlocking feature and auto closing safety shutter (without MCB), making connections with lugs, testing etc. as required			
46.8.1	Three pin/Four pin 20 A	each	1389.00	1111.00
46.9	P & F of Industrial plug and socket conforming to IEC 60309-1/2 made out of self extinguishing engineering polymer / polyamide, nickel plated brass sleeve and pins, socket with shutter including making connection etc as required			
46.9.1	Panel mounted socket			
46.9.1.1	16 A 3 pin	each	410.00	328.00
46.9.1.2	32 A 4 pin	each	559.00	447.00
46.9.1.3	63 A 5 pin	each	2232.00	1786.00
46.9.2	Surface mounted socket			
46.9.2.1	16 A 3 pin	each	469.00	375.00
46.9.2.2	32 A 4 pin	each	677.00	542.00
46.9.2.3	63 A 5 pin	each	3123.00	2498.00
46.9.3	Mobile socket			
46.9.3.1	16 A 3 pin	each	456.00	365.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
46.9.3.2	32 A 4 pin	each	605.00	484.00
46.9.3.3	63 A 5 pin	each	2278.00	1822.00
46.9.4	Plug top			
46.9.4.1	16 A 3 pin	each	278.00	222.00
46.9.4.2	32 A 4 pin	each	499.00	399.00
46.9.4.3	63 A 5 pin	each	1993.00	1594.00
46.10	P&F recessed/ surface mounting heavy duty Vertical type sheet steel Distribution board with provision of incomer, phophatised ,powder painted complete with 100 A insulated copper bus bar , neutral link, earth link and din bar, conforming to IS13032 & IS8623 including making internal DB terminations with copper lugs , testing etc. as required.			
46.10.1	Single door (Three phase)			
46.10.1.1	4 Way	each	4746.00	3797.00
46.10.1.2	6 Way	each	4746.00	3797.00
46.10.1.3	8 Way	each	5541.00	4433.00
46.10.1.4	12 Way	each	7997.00	6398.00
46.10.2	Double door (Three phase)			
46.10.2.1	4 Way	each	5264.00	4211.00
46.10.2.2	6 Way	each	6192.00	4954.00
46.10.2.3	8 Way	each	6485.00	5188.00
46.10.2.4	12 Way	each	8482.00	6786.00

47.0 ELECTRICAL ACCESSORIES

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
47.1	P & F ISI marked (IS :3854) 6 amp. flush type switch including cutting hole in tile and making connection testing etc. as required.	each	17.00	14.00
47.2	P & F ISI marked (IS :3854) 16 amp. flush type switch including cutting hole in tile and making connection testing etc. as required.	each	68.00	54.00
47.3	P & F ISI marked (IS :3854) bell push surface type including making connection testing etc. as required.	each	25.00	20.00
47.4	P & F ISI marked (IS :3854) twin control switch surface type including making connection testing etc. as required.	each	25.00	20.00
47.5	P & F ISI marked (IS :3854) bell push flush type including cutting hole in tile and making connection testing etc. as required.	each	25.00	20.00
47.6	P & F ISI marked (IS :3854) 6A twin control switch flush type including cutting hole in tile and making connection testing etc. as required.	each	25.00	20.00
47.7	P & F ISI marked hanging bell push/one way switch including making connection testing etc. as required.	each	31.00	25.00
47.8	P & F ISI marked (IS :1293) 3 pin 6 amp. flush type socket including cutting hole in tile and making connection testing etc. as required.	each	28.00	22.00
47.9	P & F ISI marked (IS :1293) 3/6 pin 16 amp flush type socket including cutting hole in tile and making connection testing etc. as required.	each	68.00	54.00
47.10	P & F ISI marked 6 amp surface type ceiling rose including making connection testing etc. as required.	each	17.00	14.00
47.11	P & F ISI marked 6 amp bakelite batten/angle holder including making connection testing etc. as required.	each	27.00	22.00
47.12	P & F ISI marked 6 amp bakelite unbreakable 3 pin plug top including making connection testing etc. as required.	each	46.00	37.00
47.13	P & F ISI marked 16 amp bakelite unbreakable 3 pin plug top including making connection testing etc. as required.	each	63.00	50.00
47.14	P & F ISI marked flush type 2 pin telephone socket with plug top including making connection testing etc. as required.	each	53.00	42.00
47.15	P & F ISI marked flush type single line telephone jack including making connection testing etc. as required.	each	53.00	42.00
47.16	P & F ISI marked flush type double line telephone jack including making connection testing etc. as required.	each	69.00	55.00
47.17	P & F ISI marked flush type coaxial T.V. socket including making connection testing etc. as required.	each	30.00	24.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
47.18	P & F ISI marked flush type 120/280 watt rotary step fan regulator including making connection testing etc. as required.	each	221.00	177.00
47.19	P & F ISI marked 32 A D.P. switch with fuse and indicating lamp including making connection testing etc. as required.	each	92.00	74.00
47.20	P & F ISI marked gong bell including making connection testing etc. as required.	each	55.00	44.00
47.21	P & F ISI marked flush/surface type buzzer including making connection testing etc. as required.	each	55.00	44.00
47.22	P & F ISI marked single tone electronic call bell including making connection testing etc. as required.	each	157.00	126.00
47.23	P & F ISI marked ding dong/musical chime bell including making connection testing etc. as required.	each	102.00	82.00
47.24	P & F office one module call bell system comprising of indicator, push to reset switch housed in pvc/metallic sheet including making connection testing etc. as required.	each	109.00	87.00
47.25	P & F ISI marked 400 watt switch type dimmer including making connection testing etc. as required.	each	167.00	134.00
47.26	P & F ISI marked 400 watt metallic flush/surface type dimmer including making connection testing etc. as required.	each	213.00	170.00
47.27	P & F following modular accessories made out of unbreakable and fire retardant poly carbonate with silver contacts including making connections testing etc. as required			
47.27.1	6 A one way switch	each	59.00	47.00
47.27.2	6 A two way switch	each	72.00	58.00
47.27.3	6 A bell push	each	73.00	58.00
47.27.4	16 A one way switch	each	91.00	73.00
47.27.5	6 A 3 pin shuttered socket	each	111.00	89.00
47.27.6	16 A 6 pin shuttered socket	each	154.00	123.00
47.27.7	13 A flat pin English socket	each	150.00	120.00
47.27.8	2 pin Telephone socket	each	72.00	58.00
47.27.9	RJ-11 telephone jack single two line	each	84.00	67.00
47.27.10	RJ-11 telephone jack double two line	each	72.00	58.00
47.27.11	RJ-45 computer jack with shutter	each	141.00	113.00
47.27.12	T.V. coaxial socket	each	76.00	61.00
47.27.13	5 step fan regulator	each	240.00	192.00
47.27.14	Dimmer 300-500 watt switch type	each	332.00	266.00
47.27.15	Blanking plate	each	16.00	13.00
47.28	P & F following size mounting grid plates with cover plates			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
47.28.1	1/2/3 Module	each	50.00	40.00
47.28.2	4 Module	each	56.00	45.00
47.28.3	5-6 Module	each	88.00	70.00
47.28.4	8 Module	each	108.00	86.00
47.28.5	10- 12 Module	each	140.00	112.00
47.28.6	16- 18 Module	each	218.00	174.00
47.29	P & F following size hot dip galvanized M.S. box with earthing terminal in recess/ surface suitable for modular accessories as required.			
47.29.1	1-2 Module	each	36.00	29.00
47.29.2	3 Module	each	45.00	36.00
47.29.3	4 Module	each	52.00	42.00
47.29.4	5-6 Module	each	82.00	66.00
47.29.5	8 Module	each	97.00	78.00
47.29.6	10-12 Module	each	194.00	155.00
47.29.7	16- 18 Module	each	154.00	123.00
47.30	P & F ISI marked following semi modular accessories with decorative cover plate of approved colours including making connections testing etc as required			
47.30.1	6 A one way switch	each	20.00	16.00
47.30.2	6 A two way switch	each	24.00	19.00
47.30.3	6 A bell push	each	24.00	19.00
47.30.4	16 A one way switch	each	74.00	59.00
47.30.5	6 A 3 pin socket	each	33.00	26.00
47.30.6	16 A 6 pin socket	each	74.00	59.00
47.30.7	2-3 pin Telephone socket with top	each	41.00	33.00
47.30.8	RJ-11 telephone jack single two line	each	53.00	42.00
47.30.9	RJ-11 telephone jack double two line	each	71.00	57.00
47.30.10	RJ-45 computer jack with shutter	each	95.00	76.00
47.30.11	T.V. socket single outlet	each	37.00	30.00
47.30.12	5 step fan regulator	each	197.00	158.00
47.30.13	300-500 watt switch type Dimmer	each	185.00	148.00
47.31	P & F modular Down light/Foot light with recessed metal box, fitted with lamp holder, covered with polycarbonate louvered four module plate including making connection testing etc. as required.	each	376.00	301.00
47.32	P & F of Multiple socket with surge and spikes protection cartridge and minimum four nos. universal 6 A sockets, one 6 A switch and plug top including making connection etc as required.	each	263.00	210.00
47.33	S & F of PVC trunking system for cable management			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	including finishing accessories like corners, tee, adjustable angles, junction etc. as required . The trunking system shall have adaptable system for RJ 45 data socket/ wiring accessories/ power sockets and shall be covered with peel off plastic cover.			
47.33.1	80mm x 50mm	metre	401.00	321.00
47.33.2	100-105mm x 50mm	metre	505.00	404.00
47.33.3	150-160mm x 50mm	metre	869.00	695.00
47.33.4	195-200mm x 50mm	metre	1043.00	834.00
47.34	Supply, Fixing and testing of following capacity wall mounted stabilisers having output voltage variation from 200V to 250V(+/-5%) with input voltage variation from 170V to 260V, time delay facility from 2 to 4 minute and high cutoff at 270V complete in all respect			
47.34.1	3 kVA	each	2585.00	2068.00
47.34.2	4 kVA	each	2893.00	2314.00
47.34.3	5 kVA	each	3385.00	2708.00

48.0 LT PANEL & ACCESSORIES

Code No	Description	Unit	Rate Rs. Group 1
48.1	SITC of wall/free standing floor mounted dust and vermin proof compartmentalised cubical panel made out of CRCA sheet, required hardware, duly painted by two coats of zinc/red oxide primer followed by Powder coated / epoxy / PU painted with phosphatisation in grey or required shade after rinsing. The panel having PU/Neoprene rubber gasket of not less than 3mm thickness, separate detachable, gland plate M.S. base channel, hinged door with locking arrangement for equipment/switchgear. Thickness of sheet shall not be less than 1.6mm up to 600mm length/width of any compartment and be of 2.0mm above 600mm. Load bearing structure shall be of 2.0mm thick sheet supported by base M.S. channel if required. Side walls and cable alley compartments having bolted type doors with detachable extension type structure (only outer area on all sides shall be measured and panel to be fabricated from CPRI approved fabricator).	sqm	1800.00
48.2	Supplying and fixing of Aluminium / Copper bus bar by means of SMC / DMC type insulator, high tensile nuts and bolts spring washers in existing panel including bending , cutting in required shape and size and colour coding with heat shrinkable PVC sleeves.		
48.2.1	Electrolytic grade aluminium bus bar	kg	394.00
48.2.2	Electrolytic grade copper bus bar	kg	754.00
48.3	SF of (0-500) V range Volt meter on existing panel , making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required.		
48.3.1	Analog type (96 mm x 96 mm)	each	878.00
48.3.2	Digital type	each	1053.00
48.4	SF of CT operated direct reading type Ampere meter on existing panel , making connection by PVC insulated copper conductor with PVC sleeves / channel etc. as required.		
48.4.1	Analog type (96 mm x 96 mm)		
48.4.1.1	Below 500 A	each	878.00
48.4.1.2	Above 500A	each	878.00
48.4.2	Digital type		
48.4.2.1	Below 500 A	each	1053.00
48.4.2.2	Above 500 A	each	1053.00
48.5	SF of Current Transformer , with all necessary support in existing panel including connection etc. as required .		
48.5.1	up to 150 / 5 Ratio , 5 VA , class 1 accuracy	each	479.00
48.5.2	from 200 / 5 to 400/5 Ratio , 10 VA , class 1 accuracy	each	719.00
48.5.3	from 500 / 5 to 1600/5 Ratio , 15 VA , class 1 accuracy	each	943.00
48.5.4	from 2000 / 5 to 3200 /5 Ratio , 15 VA, class 1 accuracy	each	1457.00
48.5.5	up to 150 / 5 Ratio , 5 VA , class 0.5 accuracy	each	588.00

Code No	Description	Unit	Rate Rs. Group 1
48.5.6	from 200 / 5 to 400/5 Ratio , 10 VA , class 0.5 accuracy	each	886.00
48.5.7	from 500 / 5 to 1600/5 Ratio , 15 VA , class 0.5 accuracy	each	1384.00
48.5.8	from 2000 / 5 to 3200 /5 Ratio , 15 VA, class 0.5 accuracy	each	1726.00
48.6	SF of selector switch for voltmeter (4 position) including making connection etc. as required .	each	341.00
48.7	SF of CT linked selector switch of 10 A for Ampere meter (4 position) including making connection etc. as required .	each	377.00
48.8	SF of 240/220 V, LED (22.5 mm dia) Pilot lamp with integral circuit, terminal block, including connection etc. as required.		
48.8.1	Red/yellow/Green colour	each	120.00
48.8.2	Blue colour	each	205.00
48.9	SF of Tap-off boxes suitable for following size of approved design.		
48.9.1	up to 95 sq. mm.(3.5/4 core)	each	372.00
48.9.2	from 120 sq. mm. to 185 sq. mm.(3.5/4 core)	each	671.00
48.10	P & F of energy analyser (multy function energy meter) with LCD/ LED display capable of minimum 20 numbers electrical parameters display with 1A/5A CT input for LV/ HV network, RS 485 communication port etc. complete in all respect.	each	10005.00
48.11	SF of rubber matting with one side corrugated as per IS specifications 15652/2006		
48.11.1	3.3 KV, 20 mm thick,	sqm	2831.00
48.11.2	11 KV, 25 mm thick,	sqm	3618.00
48.11.3	33 KV, 30 mm thick,	sqm	4404.00
48.12	SITC of self healing MPP/MP type shunt capacitor (banks) conforming to IS:13340-41 / IEC :831-1&2 in existing panel or parallel with load terminals , the capacitor shall be fitted with discharge resistors, pressure sensitive disconnecter (PSD) and shall have dissipation factor less than 0.0025 at 50 Hz and total wattage loss less than 0.5 Watt per KVAR. including making connections with suitable capacity conductors/cables testing as required.		
48.12.1	Standard duty Single phase 250 V / Three phase 440 V, 50 Hz capacitor (Bank)	kvar	196.00
48.12.2	Heavy duty Three phase 440 V , 50 Hz capacitor (Bank)	kvar	300.00
48.12.3	Gas filled Three phase 440 V, 50 Hz capacitor (Bank)	kvar	291.00
48.13	SITC of microprocessor based intelligent power factor correction relay having sensitivity up to 50 milli Amp secondary current and following way, self analysing auto c/k setting according to targeted power factor setting, the relay shall have minimum three digit display unit for display of real power factor, targeted power factor, lag/lead capacitor switching status, alarm output for under current, over current, insufficient compensation, indication of switching on units, auto/manual status, and shall have over load protection, no volt release etc. as required.		
48.13.1	6 to 14 stage - sensitivity upto 50 milli Amp.	each	18220.00

Code No	Description	Unit	Rate Rs. Group 1
48.14	P & F Cam operated rotary switches on existing panel with 2 way and off position		
48.14.1	one pole		
48.14.1.1	16 A	each	339.00
48.14.1.2	32 A	each	456.00
48.14.1.3	63 A	each	679.00
48.14.2	Two pole		
48.14.2.1	16 A	each	386.00
48.14.2.2	32 A	each	531.00
48.14.2.3	63 A	each	874.00
48.14.3	Three pole		
48.14.3.1	16 A	each	479.00
48.14.3.2	32 A	each	695.00
48.14.3.3	63 A	each	1246.00
48.14.4	Four pole		
48.14.4.1	16 A	each	483.00
48.14.4.2	32 A	each	761.00
48.14.4.3	63 A	each	1399.00
48.15	P & F of ac operated heavy duty 230 /440 Volt power contactor conforming to IS:13947-4-1/IEC:947-4-1having provision of mechanical interlocking, Din rail mounting type including making connections, testing etc. as required.		
48.15.1	3 pole AC3 Rating contactors .		
48.15.1.1	Up to 12 Amp	each	982.00
48.15.1.2	13 to 20 Amp	each	1326.00
48.15.1.3	21to 25 Amp	each	1374.00
48.15.1.4	26 to 32 Amp	each	1385.00
48.15.1.5	35 to 40 Amp	each	1574.00
48.15.1.6	41 to 50 Amp	each	3760.00
48.15.2	4 pole AC 1 Rating contactors		
48.15.2.1	Up to 25 Amp	each	1214.00
48.15.2.2	26 to 32 Amp	each	1278.00
48.15.2.3	33 to 45 Amp	each	2338.00
48.15.2.4	46 to 60 Amp	each	4792.00
48.16	P & F of 440 Volt 3 pole capacitor (AC 6 B) duty contactor with 3 no. early make and post break auxiliary contacts in series with quick discharge damping resistors/ reactors to limit the inrush current , conforming to IS:13947-4-1/IEC:947-4-1, Din rail mounting type including making connections, testing etc. as required. suitable for following capacity capacitor bank.		
48.16.1	Up to 6 KVAR	each	1588.00

Code No	Description	Unit	Rate Rs. Group 1
48.16.2	7 to 10 KVAR	each	1649.00
48.16.3	11 to 20 KVAR	each	3108.00
48.16.4	21 to 30 KVAR	each	3601.00
48.16.5	31 to 50 KVAR	each	10935.00
48.17	P & F thermal over load relay with built in single phase protection and having at least 1NO & 1NC contacts, manual /auto reset facility including making connection testing etc. as required.		
48.17.1	Up to 14 Amp	each	1366.00
48.17.2	15 to 20 Amp	each	1652.00
48.17.3	21 to 30 Amp	each	2332.00
48.17.4	31 to 40 Amp	each	2638.00
48.18	P & F push button actuators and integral contact block of dia. 22.5 mm including making connection etc. as required.		
48.18.1	Non luminous type	each	88.00
48.18.2	Luminous type	each	128.00
48.19	P&F of removable Voltage surge protection device (surge arrester) for protection against transient over voltage (8/20 micro -seconds) and to run current waves to ground, making connection, testing etc. as required. (I _{max} =40 kA, U _p = 1.2kV, U _c =275 volts)		
48.19.1	one pole	each	2674.00
48.19.2	Triple pole & neutral	each	9718.00
48.19.3	Replacement of cartridge	each	3184.00
48.20	P&F of mechanical / digital time switch having following day / week programme and minimum 100 hours reserve and AC1 rating of 16-20 amperes including making connection, programming etc. as required		
48.20.1	One day reserve (mechanical type)	each	2859.00
48.20.2	One day & week reserve (mechanical type)	each	2859.00
48.20.3	One day & week reserve (digital type)	each	4581.00
48.21	P&F of IP51 direct or CT operated, 1x240 / 3x240 volts , 50 Hz static watt-hour meter (kwh) having resolution 0.1 / 0.01 kwh , 1/ 0.5 accuracy class , LED indicators for tamper operation (Reverse &/or earth connection) , pulsating LED indicator for meterology , electromechanical counter , cover plate for body and terminal sealing , including making connection ,testing etc. as required.		
48.21.1	up to 40 ampere single phase meter	each	2336.00
48.21.2	up to 60 ampere three phase meter	each	5156.00
48.22	P&F of thermoplastic/ PVC cable junction boxes of following minimum sizes with IP65/ IP55 protection including threaded cable glands made of polyamide material, terminals complete in all respect.		
48.22.1	80x 80x 40(mm)) (2.5 Sq. mm)	each	200.00
48.22.2	98 x 98 x 50 (mm) (4 Sq. mm)	each	213.00

Code No	Description	Unit	Rate Rs. Group 1
48.22.3	139 x 119 x 70 (mm)) (6 Sq. mm)	each	333.00
48.22.4	150 x 110 x 70 (mm)) (10 Sq. mm)	each	1091.00
48.22.5	190 x 140 x 70 (mm)) (16/ 25 Sq. mm)	each	1464.00
48.22.6	210 x 300 x 116 (mm)) (35/50 Sq. mm)	each	2196.00
48.22.7	300 x 400 x 170 (mm)) (50/ 70 Sq. mm)	each	2662.00

NOTE :

1. Deduct 5 % on the rates of Group1 for rates of Group 2 item.
2. Add Rs. 2500.00 on rates of CODE NO EO81300 for APFC relay having multi parameter metering facility like kW, kVA, kVA_r, THD etc.
3. Interconnection between bus bar and switchgears /cable shall be rigidly supported and made out by flexible copper wires (up to 125 amp) and by solid bus bar (>125 amp) . All joints / interconnections of copper bus bar shall be duly tinned. Clearance between main bus bar and risers / metal parts shall be at least 10 mm additional to width of bus bar. Bus bar is insulated by Heat Shrinkable sleeves. Earth and Neutral bus bar shall be half of the size of phase bus bar.

49.0 AIR-CIRCUIT BREAKER & MCCB

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
49.1	SITC of fixed / Draw out type 3 pole Air Circuit Breaker conforming to IS 13947/IEC 60947 P-2 in existing LT panel suitable for LT installation 440 V, 50 Hz and having adjustable short-circuit, earth fault and over load MICRO-PROCESSOR release with LCD display, bargraph and separate LED indication for each type of fault , at least 4NO & 4NC auxiliary contacts safety shutter and fault position acknowledgement mechanism type, ACB shall have separate indication for service, test, isolation, maintenance position including making connections etc. as required.			
49.1.1	Fixed type			
49.1.1.1	800 A Rating , 50 kA	each	105497.00	60309.00
49.1.1.2	1000 A Rating , 50 kA	each	110023.00	62861.00
49.1.1.3	1250 A Rating , 50 kA	each	128454.00	78336.00
49.1.1.4	1600 A Rating , 50 / 65kA	each	137211.00	81687.00
49.1.1.5	2000 A Rating , 65 kA	each	165789.00	92135.00
49.1.1.6	2500 A Rating , 65 kA and above	each	191231.00	104742.00
49.1.1.7	3200 A Rating ,65 kA and above	each	237323.00	156193.00
49.1.2	Draw out type (Manual spring charged)			
49.1.2.1	800 A Rating , 50kA	each	123484.00	79895.00
49.1.2.2	1000 A Rating , 50kA	each	133838.00	87098.00
49.1.2.3	1250 A Rating ,50kA	each	150346.00	107834.00
49.1.2.4	1600 A Rating ,50 / 65kA	each	160701.00	111746.00
49.1.2.5	2000 A Rating ,65 kA	each	193598.00	133107.00
49.1.2.6	2500 A Rating ,65 kA	each	224780.00	155327.00
49.1.2.7	3200 A Rating ,65 kA	each	278978.00	206271.00
49.1.3	Draw out type (Motorised charging)			
49.1.3.1	800 A Rating, 50kA	each	146086.00	106421.00
49.1.3.2	1000 A Rating, 50kA	each	156440.00	112605.00
49.1.3.3	1250 A Rating, 50kA	each	172948.00	130679.00
49.1.3.4	1600 A Rating, 50 / 65kA	each	183303.00	138897.00
49.1.3.5	2000 A Rating ,65 kA	each	216200.00	159399.00
49.1.3.6	2500 A Rating ,65 kA	each	247382.00	180760.00
49.1.3.7	3200 A Rating ,65 kA	each	301580.00	234735.00
49.2	SITC of fixed / Draw out type 4 pole Air Circuit Breaker conforming to IS 13947/IEC 60947 P-2 in existing LT panel suitable for LT installation 440 V, 50 Hz and having adjustable short-circuit, earth fault and over			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	load MICRO-PROCESSOR release with LCD display, bargraph and separate LED indication for each type of fault, at least 4NO & 4NC auxiliary contacts safety shutter and fault position acknowledgement mechanism type, ACB shall have separate indication for service, test, isolation, maintenance position including making connections etc. as required.			
49.2.1	Fixed type			
49.2.1.1	800 A Rating , 50 kA	each	131057.00	69560.00
49.2.1.2	1000 A Rating , 50 kA	each	136412.00	77935.00
49.2.1.3	1250 A Rating , 50 kA	each	151174.00	100112.00
49.2.1.4	1600 A Rating , 50 / 65kA	each	165493.00	103464.00
49.2.1.5	2000 A Rating , 65 kA	each	205432.00	121892.00
49.2.1.6	2500 A Rating , 65 kA and above	each	237027.00	138641.00
49.2.1.7	3200 A Rating ,65 kA and above	each	285545.00	199348.00
49.2.2	Draw out type (Manual spring charged)			
49.2.2.1	800 A Rating , 50kA	each	153482.00	103528.00
49.2.2.2	1000 A Rating , 50kA	each	160168.00	110099.00
49.2.2.3	1250 A Rating ,50kA	each	172120.00	135613.00
49.2.2.4	1600 A Rating ,50 / 65kA	each	193716.00	147893.00
49.2.2.5	2000 A Rating ,65 kA	each	239808.00	178335.00
49.2.2.6	2500 A Rating ,65 kA	each	278445.00	204627.00
49.2.2.7	3200 A Rating ,65 kA	each	335483.00	258858.00
49.2.3	Draw out type (Motorised charging)			
49.2.3.1	800 A Rating , 50kA	each	176084.00	130054.00
49.2.3.2	1000 A Rating , 50kA	each	182770.00	137644.00
49.2.3.3	1250 A Rating ,50kA	each	194722.00	159399.00
49.2.3.4	1600 A Rating ,50 / 65kA	each	216319.00	170901.00
49.2.3.5	2000 A Rating ,65 kA	each	262410.00	202124.00
49.2.3.6	2500 A Rating ,65 kA	each	301047.00	230922.00
49.2.3.7	3200 A Rating ,65 kA	each	358085.00	291132.00
49.3	SITC of fixed / Draw out/ type 3 pole Air Circuit Breaker conforming to IS 13947 in existing LT panel suitable for LT installation 440 V, 50 Hz and having adjustable short-circuit ,earth fault and over load Thermal magnetic release with at least 4NO & 4NC auxiliary contacts safety shutter and fault position acknowledgement mechanism type, ACB shall have separate indication for service, test, isolation, maintenance position including making connections etc. as required.			
49.3.1	Fixed type			
49.3.1.1	800 A Rating , 50 kA	each	89452.00	41927.00
49.3.1.2	1000 A Rating , 50kA	each	93752.00	44383.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
49.3.1.3	1250 A Rating , 50 kA	each	115526.00	57671.00
49.3.1.4	1600 A Rating , 50 /65 kA	each	128119.00	62670.00
49.3.1.5	2000 A Rating , 65 kA	each	132760.00	73018.00
49.3.1.6	2500 A Rating , 65 kA	each	155467.00	85507.00
49.3.1.7	3200 A Rating , 65 kA	each	248144.00	136479.00
49.3.2	Draw out type (Manual spring charged)			
49.3.2.1	800 A Rating , 50 kA	each	130742.00	59507.00
49.3.2.2	1000 A Rating , 50 kA	each	137960.00	66440.00
49.3.2.3	1250 A Rating , 50 kA	each	155671.00	86402.00
49.3.2.4	1600 A Rating , 50 / 65kA	each	177189.00	92792.00
49.3.2.5	2000 A Rating , 65 kA	each	213143.00	113954.00
49.3.2.6	2500 A Rating , 65 kA	each	256937.00	135972.00
49.3.2.7	3200 A Rating , 65 kA	each	339467.00	181555.00
49.3.3	Draw out type (Motorised charging)			
49.3.3.1	800 A Rating , 50 kA	each	164270.00	85046.00
49.3.3.2	1000 A Rating , 50 kA	each	171489.00	90996.00
49.3.3.3	1250 A Rating , 50 kA	each	189200.00	108395.00
49.3.3.4	1600 A Rating , 50 / 65kA	each	210717.00	119691.00
49.3.3.5	2000 A Rating , 65 kA	each	246672.00	140005.00
49.3.3.6	2500 A Rating , 65 kA	each	290466.00	159150.00
49.3.3.7	3200 A Rating , 65 kA	each	372996.00	205972.00
49.4	SITC of fixed / Draw out/ type 4 pole Air Circuit Breaker conforming to IS 13947 in existing LT panel suitable for LT installation 440 V, 50 Hz and having adjustable short-circuit ,earth fault and over load Thermal magnetic release with at least 4NO & 4NC auxiliary contacts safety shutter and fault position acknowledgement mechanism type, ACB shall have separate indication for service , test , isolation , maintenance position including making connections etc. as required.			
49.4.1	Fixed type			
49.4.1.1	800 A Rating , 50 kA	each	114786.00	50837.00
49.4.1.2	1000 A Rating , 50kA	each	120141.00	57284.00
49.4.1.3	1250 A Rating , 50 kA	each	147378.00	78634.00
49.4.1.4	1600 A Rating , 50 /65 kA	each	163126.00	84240.00
49.4.1.5	2000 A Rating , 65 kA	each	186360.00	102498.00
49.4.1.6	2500 A Rating , 65 kA	each	212224.00	116723.00
49.4.1.7	3200 A Rating , 65 kA	each	315384.00	173461.00
49.4.2	Draw out type (Manual spring charged)			
49.4.2.1	800 A Rating , 50 kA	each	167278.00	79923.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
49.4.2.2	1000 A Rating , 50 kA	each	177465.00	87833.00
49.4.2.3	1250 A Rating , 50 kA	each	198815.00	111558.00
49.4.2.4	1600 A Rating , 50 / 65kA	each	219849.00	126979.00
49.4.2.5	2000 A Rating , 65 kA	each	270349.00	152249.00
49.4.2.6	2500 A Rating , 65 kA	each	315770.00	182329.00
49.4.2.7	3200 A Rating , 65 kA	each	418920.00	229151.00
49.4.3	Draw out type (Motorised charging)			
49.4.3.1	800 A Rating , 50 kA	each	200807.00	107791.00
49.4.3.2	1000 A Rating , 50 kA	each	210993.00	115097.00
49.4.3.3	1250 A Rating , 50 kA	each	232343.00	136039.00
49.4.3.4	1600 A Rating , 50 / 65kA	each	253387.00	151397.00
49.4.3.5	2000 A Rating , 65 kA	each	303877.00	181086.00
49.4.3.6	2500 A Rating , 65 kA	each	349299.00	206359.00
49.4.3.7	3200 A Rating , 65 kA	each	452449.00	254811.00
49.5	Supply and fixing of following accessories for ACB			
49.5.1	Shunt Trip Release	each	2426.00	1846.00
49.5.2	Under Voltage Release	each	3570.00	2584.00
49.5.3	Earth Fault Release	each	1927.00	1349.00
49.5.4	mechanical interlocking kit	each	7692.00	5384.00
49.6	SITC of quick make and quick break 3 POLE current limiting MCCB having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings and conforming to IS 13947-2 / IEC 60947-2 with front face and centralised adjustable, line load interchangeability, having positive isolation capability, provision for UVR , shunt trip , earth fault trip, push (test) to trip, including making connections with lugs / spreaders etc. as required			
49.6.1	With Thermal Magnetic release			
49.6.1.1	up to 100 Amp , 10 kA, fixed O/L & S/C setting	each	2122.00	1296.00
49.6.1.2	up to 100 Amp , 16/25 kA, adjustable O/L & fixed S/C setting	each	5317.00	3440.00
49.6.1.3	160 Amp , 16/25 kA, adjustable O/L & fixed S/C setting	each	10571.00	4743.00
49.6.1.4	200 Amp , 25 kA, adjustable O/L & fixed S/C setting	each	13411.00	5936.00
49.6.1.5	200 Amp , 25/35 kA, adjustable O/L & adjustable S/C setting	each	15305.00	7562.00
49.6.1.6	250 Amp , 35/40 kA, adjustable O/L & fixed S/C setting	each	18145.00	8943.00
49.6.1.7	250 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting	each	19013.00	9262.00
49.6.1.8	400 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting	each	25640.00	15187.00
49.6.1.9	630 Amp , 35/50 kA, adjustable O/L & adjustable S/C	each	32724.00	18144.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	setting			
49.6.2	With Microprocessor based Release			
49.6.2.1	up to 100 Amp, 35 kA, adjustable O/L & adjustable S/C setting	each	6730.00	7665.00
49.6.2.2	160 Amp, 35A, adjustable O/L & adjustable S/C setting	each	11965.00	8566.00
49.6.2.3	200 Amp, 35kA, adjustable O/L & adjustable S/C setting	each	21392.00	10870.00
49.6.2.4	250 Amp, 35 kA, adjustable O/L & adjustable S/C setting	each	21392.00	12816.00
49.6.2.5	400 Amp, 35/50 kA, adjustable O/L & adjustable S/C setting	each	28763.00	18886.00
49.6.2.6	630 Amp, 35/50 kA, adjustable O/L & adjustable S/C setting	each	32819.00	20037.00
49.7	SITC of quick make and quick break 4 POLE current limiting MCCB having following current rating, short circuit breaking capacity at 440/415 V, 50 Hz; O/L & S/C settings and conforming to IS 13947-2 / IEC 60947-2 with front face and centralised adjustable, line load interchangeability, having positive isolation capability, provision for UVR , shunt trip ,earth fault trip, push (test) to trip , including making connections with lugs / spreaders etc. as required			
49.7.1	With Thermal Magnetic Release			
49.7.1.1	up to 100 Amp , 10 kA, fixed O/L & S/C setting	each	2840.00	1853.00
49.7.1.2	up to 100 Amp , 16/25 kA, adjustable O/L & fixed S/C setting	each	7716.00	4608.00
49.7.1.3	160 Amp, 16/25 kA, adjustable O/L & fixed S/C setting	each	12623.00	5531.00
49.7.1.4	200 Amp, 25/35 kA, adjustable O/L & fixed S/C setting	each	17356.00	7366.00
49.7.1.5	250 Amp , 35/40kA, adjustable O/L & fixed S/C setting	each	22089.00	11378.00
49.7.1.6	250 Amp , 35/50kA, adjustable O/L & adjustable S/C setting	each	24851.00	11712.00
49.7.1.7	400 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting	each	22426.00	20104.00
49.7.1.8	630 Amp , 35/50 kA, adjustable O/L & adjustable S/C setting	each	40891.00	22557.00
49.7.2	With Microprocessor based Release			
49.7.2.1	up to 100 Amp, 35 kA, adjustable O/L & adjustable S/C setting	each	10158.00	9922.00
49.7.2.2	160 Amp, 35A, adjustable O/L & adjustable S/C setting	each	15230.00	10824.00
49.7.2.3	200 Amp, 35kA, adjustable O/L & adjustable S/C setting	each	25041.00	12628.00
49.7.2.4	250 Amp , 35/50kA, adjustable O/L & adjustable S/C setting	each	25041.00	15088.00
49.7.2.5	400 Amp, 35/50 kA, adjustable O/L & adjustable S/C setting	each	22426.00	22863.00
49.7.2.6	630 Amp, 35/50 kA, adjustable O/L & adjustable S/C setting	each	40891.00	26746.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
49.8	Supply and fixing of following accessories for MCCB			
49.8.1	Shunt trip Release	each	2004.00	1136.00
49.8.2	Under Voltage Release	each	2175.00	1267.00
49.8.3	Earth Fault Module	each	5726.00	4125.00
49.8.4	Motor mechanism for 250A EDO MCCB (240V, 50Hz)	each	21101.00	14771.00
49.8.5	Motor mechanism for 400A EDO MCCB (240V, 50Hz)	each	21879.00	15315.00
49.8.6	Motor mechanism for 630A EDO MCCB (240V, 50Hz)	each	21879.00	15315.00

NOTE : Add 3 % extra on the Rate of MCCB having Ics= 100% Icu.

50.0 SWITCH FUSE UNITS, FSU AND CHANGEOVER SWITCH

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
50.1	P&F 240 V metal clad rewire able porcelain switch fuse unit conforming to IS:13947 P-I & III including making connections with lugs, testing etc. as required.			
50.1.1	Single pole & neutral			
50.1.1.1	16 A / 240 V	each	498.00	415.00
50.1.1.2	32 A / 240 V	each	1188.00	990.00
50.1.1.3	63 A / 240 V	each	1697.00	1414.00
50.1.2	Double pole			
50.1.2.1	16 A / 240 V	each	516.00	430.00
50.1.2.2	32 A / 240 V	each	1265.00	1054.00
50.1.2.3	63 A / 240 V	each	3100.00	2584.00
50.2	P&F TP&N 415 V metal clad HBC cum rewire able switch fuse unit with porcelain kit-kat & neutral link and conforming to IS:13947 P-I&III and making connections with lugs testing etc. as required.			
50.2.1	16 A rating	each	1482.00	1235.00
50.2.2	32 A rating	each	1883.00	1569.00
50.2.3	63 A rating	each	3710.00	3092.00
50.2.4	100 A rating	each	6739.00	5616.00
50.3	P&F TP&N 415 V side handle operated double break fuse switch unit in sheet steel enclosure conforming to IS: 13947 P-III and IS:4064 (W/o HBC fuses) including making connections with suitable lugs, testing etc. as required.			
50.3.1	63 A rating	each	4649.00	2676.00
50.3.2	100 A rating	each	7499.00	5071.00
50.3.3	200 A rating	each	1865.00	7691.00
50.3.4	300/320 A rating	each	16823.00	11613.00
50.3.5	400 A rating	each	19593.00	13510.00
50.3.6	500/630 A rating	each	31274.00	19284.00
50.4	P&F TP&N 415 V AC-23A front handle operated switch disconnector fuse unit, cubical type, without metallic enclosure, conforming to IS:13947 P-III in existing panel (With HBC fuses) including making connections with lugs, testing etc as required.			
50.4.1	32 A rating	each	1863.00	1401.00
50.4.2	63 A rating	each	2506.00	1898.00
50.4.3	100/125 A rating	each	4812.00	4254.00
50.4.4	200 A rating	each	8764.00	5794.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
50.4.5	250 A rating	each	10359.00	7001.00
50.4.6	300/320 A rating	each	12753.00	9553.00
50.4.7	400 A rating	each	15326.00	10990.00
50.4.8	630 A rating	each	24515.00	19568.00
50.5	P&F Insulated DMC fuse bases suitable for Din type HBC fuse links conforming to IS:9224-79 including making connections with lugs, testing etc. as required.			
50.5.1	125 A rating	each	316.00	213.00
50.5.2	250 A rating	each	631.00	408.00
50.5.3	400 A rating	each	1026.00	632.00
50.5.4	630 A rating	each	1282.00	813.00
50.6	P&F bakelite fuse fitting for HBC fuse links (front/bus bar connections) w/o HBC fuses on existing board including making connections with lugs, testing etc. as required.			
50.6.1	20 A rating	each	107.00	86.00
50.6.2	32 A rating	each	130.00	104.00
50.6.3	63 A rating	each	325.00	260.00
50.6.4	100 A rating	each	833.00	666.00
50.7	P&F 240/415 V porcelain kitkat fuse conforming to IS:2086,1983 On existing board/ sheet including making connections with lugs, testing etc. as required			
50.7.1	16 A ,240 V	each	90.00	75.00
50.7.2	16 A ,415 V	each	157.00	131.00
50.7.3	32 A ,240 V	each	157.00	131.00
50.7.4	32 A ,415 V	each	192.00	160.00
50.7.5	63 A , 415 V	each	311.00	259.00
50.7.6	100 A ,415 V	each	563.00	469.00
50.7.7	200 A , 415 V	each	1124.00	937.00
50.7.8	320 A , 415 V	each	1644.00	1370.00
50.8	P&F 240/415 V triple pole vertical type fuse switch (W/O HBC fuses) suitable for directly connecting to bus bar and conforming to IS:13947 P-III including making connections with lugs, testing etc as required.			
50.8.1	250 A	each	9453.00	4657.00
50.8.2	400 A	each	13885.00	7268.00
50.8.3	630 A	each	21745.00	8914.00
50.9	P&F bolted type/ Din type HBC (High breaking capacity) fuse links of 80 KA breaking capacity, conforming to IS:13703 in the existing fuse base, fuse switch unit etc. of the following type and rating.			
50.9.1	Offset tag type			
50.9.1.1	2 A to 20 A	each	50.00	38.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
50.9.1.2	25 A to 32 A	each	53.00	41.00
50.9.1.3	35 A to 63 A	each	99.00	60.00
50.9.1.4	80 A to 125 A	each	209.00	135.00
50.9.2	Central tag type			
50.9.2.1	80 A to 125 A	each	249.00	135.00
50.9.2.2	160 A to 200 A	each	330.00	195.00
50.9.2.3	250 A to 315 A	each	488.00	284.00
50.9.2.4	400 A to 630 A	each	947.00	543.00
50.9.3	Din (knife type) type			
50.9.3.1	6 A to 160 A	each	383.00	231.00
50.9.3.2	32 A to 250 A	each	556.00	398.00
50.9.3.3	200 A to 400 A	each	813.00	536.00
50.9.3.4	425 A to 630 A	each	1262.00	774.00
50.10	P&F onload change over switch, front handle operated, four pole 415 V conforming to IS:13947 P-III including connections , testing etc. as required in the following rating:			
50.10.1	Open execution type			
50.10.1.1	63 A	each	2854.00	3389.00
50.10.1.2	125 A	each	7003.00	6404.00
50.10.1.3	200 A	each	9653.00	8308.00
50.10.1.4	250 A	each	11405.00	12003.00
50.10.1.5	320 A	each	14031.00	12910.00
50.10.1.6	400 A	each	16851.00	18564.00
50.10.1.7	630 A	each	26917.00	21898.00
50.10.1.8	800 A	each	29139.00	32116.00
50.10.1.9	1000 A	each	71483.00	54511.00
50.10.2	With sheet steel enclosure			
50.10.2.1	63 A	each	4754.00	4416.00
50.10.2.2	125 A	each	9070.00	8488.00
50.10.2.3	200 A	each	12741.00	10515.00
50.10.2.4	250 A	each	14551.00	14591.00
50.10.2.5	320 A	each	17266.00	15269.00
50.10.2.6	400 A	each	20044.00	22101.00
50.10.2.7	630 A	each	32079.00	25461.00
50.10.2.8	800 A	each	34422.00	37709.00
50.10.2.9	1000 A	each	90111.00	70002.00
50.11	S&F off load change over switch four pole/2 pole, 230/415 V ,conforming to IS:13947 P-III in sheet steel			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	enclosure complete with connections with lugs, testing etc. as required in the following rating:			
50.11.1	Double pole			
50.11.1.1	16 A	each	775.00	646.00
50.11.1.2	32 A	each	1530.00	1275.00
50.11.2	Four pole			
50.11.2.1	16 A	each	2180.00	1817.00
50.11.2.2	32 A	each	2580.00	2150.00
50.11.2.3	63 A	each	4985.00	4154.00
50.11.2.4	100 A	each	9764.00	8137.00
50.11.2.5	200 A	each	14597.00	12164.00
50.11.2.6	250 A	each	16234.00	13528.00
50.11.2.7	320 A	each	17869.00	14891.00
50.11.2.8	400 A	each	23287.00	19406.00
50.11.2.9	630 A	each	36300.00	30250.00
50.11.2.10	800 A	each	45211.00	37676.00
50.11.2.11	1000 A	each	62960.00	52467.00

51.0 CABLES

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.1	Providing & Laying XLPE insulated / P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor Armoured of IS:7098-I/1554-1 approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, second Class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size.			
51.1.1	2.5 Sq. mm			
51.1.1.1	2 core	metre	117.00	94.00
51.1.1.2	3 core	metre	125.00	100.00
51.1.1.3	4 core	metre	134.00	107.00
51.1.2	4.0 Sq.mm			
51.1.2.1	2 core	metre	121.00	97.00
51.1.2.2	3 core	metre	131.00	105.00
51.1.2.3	4 core	metre	140.00	112.00
51.1.3	6.0 Sq.mm			
51.1.3.1	2 core	metre	131.00	105.00
51.1.3.2	3 core	metre	141.00	113.00
51.1.3.3	4 core	metre	151.00	121.00
51.1.4	10.0 Sq.mm			
51.1.4.1	2 core	metre	147.00	118.00
51.1.4.2	3 core	metre	161.00	129.00
51.1.4.3	4 core	metre	173.00	138.00
51.1.5	16.0 Sq.mm			
51.1.5.1	2 core	metre	163.00	130.00
51.1.5.2	3 core	metre	168.00	134.00
51.1.5.3	4 core	metre	191.00	153.00
51.1.6	25.0 Sq.mm			
51.1.6.1	2 core	metre	175.00	140.00
51.1.6.2	3 core	metre	207.00	166.00
51.1.6.3	3.5 core	metre	227.00	182.00
51.1.6.4	4 core	metre	239.00	191.00
51.1.7	35.0 Sq.mm			
51.1.7.1	1 core	metre	152.00	122.00
51.1.7.2	2 core	metre	197.00	158.00
51.1.7.3	3 core	metre	242.00	194.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.1.7.4	3.5 core	metre	262.00	210.00
51.1.7.5	4 core	metre	282.00	226.00
51.1.8	50.0 Sq.mm			
51.1.8.1	1core	metre	169.00	135.00
51.1.8.2	2 core	metre	227.00	182.00
51.1.8.3	3 core	metre	284.00	227.00
51.1.8.4	3.5 core	metre	316.00	253.00
51.1.9	70.0 Sq.mm			
51.1.9.1	1core	metre	193.00	154.00
51.1.9.2	2 core	metre	276.00	221.00
51.1.9.3	3 core	metre	355.00	284.00
51.1.9.4	3.5 core	metre	401.00	321.00
51.1.10	95.0 Sq.mm			
51.1.10.1	1core	metre	230.00	184.00
51.1.10.2	2 core	metre	356.00	285.00
51.1.10.3	3 core	metre	454.00	363.00
51.1.10.4	3.5 core	metre	502.00	402.00
51.1.11	120.0 Sq.mm			
51.1.11.1	1 core	metre	257.00	206.00
51.1.11.2	2 core	metre	405.00	324.00
51.1.11.3	3 core	metre	524.00	419.00
51.1.11.4	3.5 core	metre	602.00	482.00
51.1.12	150.0 Sq.mm			
51.1.12.1	1 core	metre	286.00	229.00
51.1.12.2	2 core	metre	468.00	374.00
51.1.12.3	3 core	metre	623.00	498.00
51.1.12.4	3.5 core	metre	695.00	556.00
51.1.13	185.0 Sq.mm			
51.1.13.1	1 core	metre	286.00	229.00
51.1.13.2	2 core	metre	558.00	446.00
51.1.13.3	3 core	metre	738.00	590.00
51.1.13.4	3.5 core	metre	841.00	673.00
51.1.14	240.0 Sq.mm			
51.1.14.1	1 core	metre	391.00	313.00
51.1.14.2	2 core	metre	681.00	545.00
51.1.14.3	3 core	metre	929.00	743.00
51.1.14.4	3.5 core	metre	1045.00	836.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.1.15	300.0 Sq.mm			
51.1.15.1	1 core	metre	452.00	362.00
51.1.15.2	2 core	metre	807.00	646.00
51.1.15.3	3 core	metre	1100.00	880.00
51.1.15.4	3.5 core	metre	1257.00	1006.00
51.1.16	400.0 Sq.mm			
51.1.16.1	1 core	metre	539.00	431.00
51.1.16.2	2 core	metre	1042.00	834.00
51.1.16.3	3 core	metre	1423.00	1138.00
51.1.16.4	3.5 core	metre	1623.00	1298.00
51.1.17	500.0 Sq.mm			
51.1.17.1	1 core	metre	727.00	582.00
51.1.17.2	2 core	metre	1326.00	1061.00
51.1.17.3	3 core	metre	1791.00	1433.00
51.1.17.4	3.5 core	metre	2060.00	1648.00
51.1.18	630.0 Sq.mm			
51.1.18.1	1 core	metre	878.00	702.00
51.1.18.2	2 core	metre	1626.00	1301.00
51.1.18.3	3 core	metre	2227.00	1782.00
51.1.18.4	3.5 core	metre	2627.00	2102.00
51.2	Providing & Laying XLPE insulated / P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor Un-armoured of IS:7098-I/1554-1 approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, second Class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size.			
51.2.1	2.5 Sq. mm			
51.2.1.1	2 core	metre	98.00	78.00
51.2.1.2	3 core	metre	99.00	79.00
51.2.1.3	4 core	metre	100.00	80.00
51.2.2	4.0 Sq.mm			
51.2.2.1	2 core	metre	101.00	81.00
51.2.2.2	3 core	metre	105.00	84.00
51.2.2.3	4 core	metre	109.00	87.00
51.2.3	6.0 Sq.mm			
51.2.3.1	2 core	metre	105.00	84.00
51.2.3.2	3 core	metre	113.00	90.00
51.2.3.3	4 core	metre	121.00	97.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.2.4	10.0 Sq.mm			
51.2.4.1	2 core	metre	115.00	92.00
51.2.4.2	3 core	metre	126.00	101.00
51.2.4.3	4 core	metre	138.00	110.00
51.2.5	16.0 Sq.mm			
51.2.5.1	2 core	metre	126.00	101.00
51.2.5.2	3 core	metre	143.00	114.00
51.2.5.3	4 core	metre	162.00	130.00
51.2.6	25.0 Sq.mm			
51.2.6.1	2 core	metre	148.00	118.00
51.2.6.2	3 core	metre	179.00	143.00
51.2.6.3	3.5 core	metre	196.00	157.00
51.2.6.4	4 core	metre	206.00	165.00
51.2.7	35.0 Sq.mm			
51.2.7.1	1 core	metre	116.00	93.00
51.2.7.2	2 core	metre	168.00	134.00
51.2.7.3	3 core	metre	209.00	167.00
51.2.7.4	3.5 core	metre	227.00	182.00
51.2.7.5	4 core	metre	245.00	196.00
51.2.8	50.0 Sq.mm			
51.2.8.1	1core	metre	129.00	103.00
51.2.8.2	2 core	metre	196.00	157.00
51.2.8.3	3 core	metre	249.00	199.00
51.2.8.4	3.5 core	metre	277.00	222.00
51.2.9	70.0 Sq,mm			
51.2.9.1	1core	metre	154.00	123.00
51.2.9.2	2 core	metre	266.00	213.00
51.2.9.3	3 core	metre	309.00	247.00
51.2.9.4	3.5 core	metre	383.00	306.00
51.2.10	95.0 Sq.mm			
51.2.10.1	1core	metre	199.00	159.00
51.2.10.2	2 core	metre	323.00	258.00
51.2.10.3	3 core	metre	412.00	330.00
51.2.10.4	3.5 core	metre	461.00	369.00
51.2.11	120.0 Sq.mm			
51.2.11.1	1 core	metre	224.00	179.00
51.2.11.2	2 core	metre	365.00	292.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.2.11.3	3 core	metre	486.00	389.00
51.2.11.4	3.5 core	metre	554.00	443.00
51.2.12	150.0 Sq.mm			
51.2.12.1	1 core	metre	251.00	201.00
51.2.12.2	2 core	metre	423.00	338.00
51.2.12.3	3 core	metre	578.00	462.00
51.2.12.4	3.5 core	metre	647.00	518.00
51.2.13	185.0 Sq.mm			
51.2.13.1	1 core	metre	287.00	230.00
51.2.13.2	2 core	metre	504.00	403.00
51.2.13.3	3 core	metre	695.00	556.00
51.2.13.4	3.5 core	metre	787.00	630.00
51.2.14	240.0 Sq.mm			
51.2.14.1	1 core	metre	345.00	276.00
51.2.14.2	2 core	metre	625.00	500.00
51.2.14.3	3 core	metre	871.00	697.00
51.2.14.4	3.5 core	metre	989.00	791.00
51.2.15	300.0 Sq.mm			
51.2.15.1	1 core	metre	398.00	318.00
51.2.15.2	2 core	metre	746.00	597.00
51.2.15.3	3 core	metre	1046.00	837.00
51.2.15.4	3.5 core	metre	1191.00	953.00
51.2.16	400.0 Sq.mm			
51.2.16.1	1 core	metre	489.00	391.00
51.2.16.2	2 core	metre	980.00	784.00
51.2.16.3	3 core	metre	1369.00	1095.00
51.2.16.4	3.5 core	metre	1559.00	1247.00
51.2.17	500.0 Sq.mm			
51.2.17.1	1 core	metre	618.00	494.00
51.2.17.2	2 core	metre	1191.00	953.00
51.2.17.3	3 core	metre	1631.00	1305.00
51.2.17.4	3.5 core	metre	1859.00	1487.00
51.2.18	630.0 Sq.mm	metre		
51.2.18.1	1 core	metre	741.00	593.00
51.2.18.2	2 core	metre	1459.00	1167.00
51.2.18.3	3 core	metre	2026.00	1621.00
51.2.18.4	3.5 core	metre	2366.00	1893.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.3	Providing and laying XLPE/PVC insulated & PVC sheathed armoured control cables of 1.1 KV grade with copper conductor as per IS 1255 including excavation of 30 CmX75 Cm size trench 25 Cm thick under layer of sand and second class bricks covering, backfilling & compaction			
51.3.1	2C x 2.5 sq.mm	metre	124.00	
51.3.2	3C x 2.5 sq.mm	metre	176.00	
51.3.3	4C x 2.5 sq.mm	metre	202.00	
51.3.4	5C x 2.5 sq.mm	metre	229.00	
51.3.5	6C x 2.5 sq.mm	metre	289.00	
51.3.6	8C x 2.5 sq.mm	metre	329.00	
51.3.7	10C x 2.5 sq.mm	metre	381.00	
51.3.8	12C x 2.5 sq.mm	metre	496.00	
51.3.9	14 C x 2.5 sq.mm	metre	547.00	
51.3.10	19C x 2.5 sq.mm	metre	670.00	
51.3.11	2C x 1.5 sq.mm	metre	120.00	
51.3.12	3C x 1.5 sq.mm	metre	135.00	
51.3.13	4C x 1.5 sq.mm	metre	152.00	
51.3.14	5C x 1.5 sq.mm	metre	180.00	
51.3.15	6C x 1.5 sq.mm	metre	186.00	
51.3.16	8C x 1.5 sq.mm	metre	222.00	
51.3.17	10C x 1.5 sq.mm	metre	274.00	
51.3.18	12C x 1.5 sq.mm	metre	305.00	
51.3.19	14C x 1.5 sq.mm	metre	338.00	
51.3.20	19C x 1.5 sq.mm	metre	425.00	
51.4	Providing and laying XLPE/PVC insulated & PVC sheathed Un-armoured control cables of 1.1 KV grade with copper conductor as per IS 1255 including excavation of 30 CmX75 Cm size trench 25 Cm thick under layer of sand and second Class bricks covering			
51.4.1	2C x 2.5 sq.mm	metre	118.00	
51.4.2	3C x 2.5 sq.mm	metre	138.00	
51.4.3	4C x 2.5 sq.mm	metre	162.00	
51.4.4	5C x 2.5 sq.mm	metre	183.00	
51.4.5	6C x 2.5 sq.mm	metre	251.00	
51.4.6	8C x 2.5 sq.mm	metre	301.00	
51.4.7	10C x 2.5 sq.mm	metre	345.00	
51.4.8	12C x 2.5 sq.mm	metre	390.00	
51.4.9	14 C x 2.5 sq.mm	metre	436.00	
51.4.10	19 C x 2.5 sq.mm	metre	508.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.4.11	2C x 1.5 sq.mm	metre	110.00	
51.4.12	3C x 1.5 sq.mm	metre	112.00	
51.4.13	4C x 1.5 sq.mm	metre	127.00	
51.4.14	5C x 1.5 sq.mm	metre	140.00	
51.4.15	6C x 1.5 sq.mm	metre	155.00	
51.4.16	8C x 1.5 sq.mm	metre	181.00	
51.4.17	10C x 1.5 sq.mm	metre	224.00	
51.4.18	12C x 1.5 sq.mm	metre	252.00	
51.4.19	14C x 1.5 sq.mm	metre	281.00	
51.4.20	19C x 1.5 sq.mm	metre	352.00	
51.5	Providing and laying ISI marked P.V.C. insulated submersible cable confirming to IS:694 with flexible copper conductor including making connection etc. as required			
51.5.1	1.5 Sq.mm 3 core flat	metre	50.00	43.00
51.5.2	2.5 Sq.mm 3 core flat	metre	78.00	66.00
51.5.3	4.0 Sq.mm 3 core flat	metre	121.00	103.00
51.5.4	6.0 Sq.mm 3 core flat	metre	168.00	143.00
51.5.5	10.0 Sq.mm 3 core flat	metre	252.00	214.00
51.5.6	16.0 Sq.mm 3 core flat	metre	375.00	319.00
51.5.7	25.0 Sq.mm 3 core flat	metre	559.00	475.00
51.5.8	35.0 Sq.mm 3 core flat	metre	755.00	642.00
51.6	Providing & Laying XLPE insulated IS:7098/II/85 of approved make H.T.cable for working voltage 11 K.V.Earthed with Stranded Compacted Circular Aluminium Conductor, Conductor Screened with Extruded Semi-conducting compound, XLPE Insulated, Insulation Screened with extruded semi-conducting compound in combination with Copper Tape, cores laid up, inner sheath of Thermoplastic tape, galvanised flat steel strip armoured and overall Extruded PVC Type ST-2 Outer Sheathed cable direct in ground including excavation of 30cmx100cm size trench, 25cm layer of river sand, second Class bricks covering, refilling earth, compaction of earth, making necessary connection testing etc.as required of size.			
51.6.1	3 core 35.0 Sq.mm	metre	615.00	
51.6.2	3 core 50.0 Sq.mm	metre	675.00	
51.6.3	3 core 70.0 Sq.mm	metre	771.00	
51.6.4	3 core 95.0 Sq.mm	metre	889.00	
51.6.5	3 core 120.0 Sq.mm	metre	1000.00	
51.6.6	3 core 150.0 Sq.mm	metre	1097.00	
51.6.7	3 core 185.0 Sq.mm	metre	1249.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.6.8	3 core 240.0 Sq.mm	metre	1466.00	
51.6.9	3 core 300.0 Sq.mm	metre	1680.00	
51.6.10	3 core 400.0 Sq.mm	metre	2067.00	
51.7	Providing & Laying XLPE insulated IS:7098/II/85 of approved make H.T.cable for working voltage 11 K.V.Un-Earthed with Stranded Compacted Circular Aluminium Conductor, Conductor Screened with Extruded Semi-conducting compound, XLPE Insulated, Insulation Screened with extruded semi-conducting compound in combination with Copper Tape, cores laid up, inner sheath of Thermoplastic tape, galvanised flat steel strip armoured and overall Extruded PVC Type ST-2 Outer Sheathed cable direct in ground including excavation of 30cmx100cm size trench, 25cm layer of river sand, second Class bricks covering, refilling earth, compaction of earth, making necessary connection testing etc.as required of size.			
51.7.1	3 core 50.0 Sq.mm	metre	780.00	
51.7.2	3 core 70.0 Sq.mm	metre	887.00	
51.7.3	3 core 95.0 Sq.mm	metre	1015.00	
51.7.4	3 core 120.0 Sq.mm	metre	1139.00	
51.7.5	3 core 150.0 Sq.mm	metre	1247.00	
51.7.6	3 core 185.0 Sq.mm	metre	1414.00	
51.7.7	3 core 240.0 Sq.mm	metre	1645.00	
51.7.8	3 core 300.0 Sq.mm	metre	1878.00	
51.7.9	3 core 400.0 Sq.mm	metre	2190.00	
51.8	Providing & Laying XLPE insulated IS:7098/II/85 of approved make H.T.cable for working voltage 33 K.V.Earthed with Stranded Compacted Circular Aluminium Conductor, Conductor Screened with Extruded Semi-conducting compound, XLPE Insulated, Insulation Screened with extruded semi-conducting compound in combination with Copper Tape, cores laid up, inner sheath of Thermoplastic tape, galvanised flat steel strip armoured and overall Extruded PVC Type ST-2 Outer Sheathed cable direct in ground including excavation of 30cmx150cm size trench, 25cm layer of river sand, second Class bricks covering, refilling earth, compaction of earth, making necessary connection testing etc.as required of size.			
51.8.1	3 core 95.0 Sq.mm	metre	1436.00	
51.8.2	3 core 120.0 Sq.mm	metre	1613.00	
51.8.3	3 core 150.0 Sq.mm	metre	1735.00	
51.8.4	3 core 185.0 Sq.mm	metre	1917.00	
51.8.5	3 core 240.0 Sq.mm	metre	2168.00	
51.8.6	3 core 300.0 Sq.mm	metre	2350.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.8.7	3 core 400.0 Sq.mm	metre	2705.00	
51.9	Providing & Laying XLPE insulated IS:7098/II/85 of approved make H.T.cable for working voltage 33 K.V.Un Earthed with Stranded Compacted Circular Aluminium Conductor, Conductor Screened with Extruded Semi-conducting compound, XLPE Insulated, Insulation Screened with extruded semi-conducting compound in combination with Copper Tape, cores laid up, inner sheath of Thermoplastic tape, galvanised flat steel strip armoured and overall Extruded PVC Type ST-2 Outer Sheathed cable direct in ground including excavation of 30cmx150cm size trench, 25cm layer of river sand, second Class bricks covering, refilling earth, compaction of earth, making necessary connection testing etc.as required of size.			
51.9.1	3 core 95.0 Sq.mm	metre	1606.00	
51.9.2	3 core 120.0 Sq.mm	metre	1759.00	
51.9.3	3 core 150.0 Sq.mm	metre	1879.00	
51.9.4	3 core 185.0 Sq.mm	metre	2071.00	
51.9.5	3 core 240.0 Sq.mm	metre	2334.00	
51.9.6	3 core 300.0 Sq.mm	metre	2593.00	
51.9.7	3 core 400.0 Sq.mm	metre	2966.00	
51.10	Providing and laying Stranded/ Flexible Annealed Bare copper conductor ,XLPE/PVC insulated suitably laid up together overall polyester taped Al (inner sheeted GI Steel wire Mylar/Drain wire) along with ATC drain wire , round/steel armoured overall PVC sheathed (ST-1) overall screened Core armoured instrumentation Cables generally confirming to PAS 5308- Part-2-2009.			
51.10.1	0.5 sq.mm			
51.10.1.1	2 core	metre	87.00	
51.10.1.2	3 core	metre	95.00	
51.10.1.3	4 core	metre	100.00	
51.10.1.4	5 core	metre	107.00	
51.10.1.5	6 core	metre	112.00	
51.10.1.6	7 core	metre	118.00	
51.10.1.7	8 core	metre	128.00	
51.10.1.8	9 core	metre	134.00	
51.10.1.9	10 core	metre	139.00	
51.10.1.10	12 core	metre	149.00	
51.10.1.11	14 core	metre	161.00	
51.10.1.12	16 core	metre	175.00	
51.10.1.13	18 core	metre	191.00	
51.10.1.14	19 core	metre	196.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.10.1.15	20 core	metre	200.00	
51.10.1.16	22 core	metre	209.00	
51.10.1.17	24 core	metre	218.00	
51.10.1.18	25 core	metre	237.00	
51.10.1.19	27 core	metre	246.00	
51.10.1.20	40 core	metre	316.00	
51.10.2	0.75 sq.mm			
51.10.2.1	2 core	metre	92.00	
51.10.2.2	3 core	metre	102.00	
51.10.2.3	4 core	metre	112.00	
51.10.2.4	5 core	metre	118.00	
51.10.2.5	6 core	metre	128.00	
51.10.2.6	7 core	metre	133.00	
51.10.2.7	8 core	metre	144.00	
51.10.2.8	9 core	metre	153.00	
51.10.2.9	10 core	metre	161.00	
51.10.2.10	12 core	metre	175.00	
51.10.2.11	14 core	metre	191.00	
51.10.2.12	16 core	metre	207.00	
51.10.2.13	18 core	metre	223.00	
51.10.2.14	19 core	metre	224.00	
51.10.2.15	20 core	metre	248.00	
51.10.2.16	22 core	metre	261.00	
51.10.2.17	24 core	metre	270.00	
51.10.2.18	25 core	metre	284.00	
51.10.2.19	27 core	metre	297.00	
51.10.2.20	40 core	metre	386.00	
51.10.3	1 sq.mm			
51.10.3.1	2 core	metre	98.00	
51.10.3.2	3 core	metre	112.00	
51.10.3.3	4 core	metre	123.00	
51.10.3.4	5 core	metre	133.00	
51.10.3.5	6 core	metre	144.00	
51.10.3.6	7 core	metre	149.00	
51.10.3.7	8 core	metre	161.00	
51.10.3.8	10 core	metre	191.00	
51.10.3.9	12 core	metre	207.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.10.3.10	14 core	metre	228.00	
51.10.3.11	16 core	metre	249.00	
51.10.3.12	18 core	metre	281.00	
51.10.3.13	24 core	metre	334.00	
51.10.4	1.5 sq.mm			
51.10.4.1	2 core	metre	107.00	
51.10.4.2	3 core	metre	122.00	
51.10.4.3	4 core	metre	133.00	
51.10.4.4	5 core	metre	149.00	
51.10.4.5	6 core	metre	165.00	
51.10.4.6	7 core	metre	178.00	
51.10.4.7	8 core	metre	197.00	
51.10.4.8	9 core	metre	209.00	
51.10.4.9	10 core	metre	217.00	
51.10.4.10	12 core	metre	242.00	
51.10.4.11	14 core	metre	271.00	
51.10.4.12	16 core	metre	297.00	
51.10.4.13	18 core	metre	323.00	
51.10.4.14	19 core	metre	333.00	
51.10.4.15	20 core	metre	369.00	
51.10.4.16	22 core	metre	377.00	
51.10.4.17	24 core	metre	397.00	
51.10.4.18	25 core	metre	416.00	
51.10.4.19	27 core	metre	440.00	
51.10.4.20	40 core	metre	605.00	
51.10.5	2.5 sq.mm			
51.10.5.1	2 core	metre	124.00	
51.10.5.2	3 core	metre	142.00	
51.10.5.3	4 core	metre	162.00	
51.10.5.4	5 core	metre	188.00	
51.10.5.5	6 core	metre	204.00	
51.10.5.6	7 core	metre	216.00	
51.10.5.7	8 core	metre	243.00	
51.10.5.8	9 core	metre	250.00	
51.10.5.9	10 core	metre	288.00	
51.10.5.10	12 core	metre	322.00	
51.10.5.11	14 core	metre	370.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.10.5.12	16 core	metre	416.00	
51.10.5.13	18 core	metre	456.00	
51.10.5.14	19 core	metre	471.00	
51.10.5.15	20 core	metre	511.00	
51.10.5.16	22 core	metre	537.00	
51.10.5.17	24 core	metre	567.00	
51.10.5.18	25 core	metre	596.00	
51.10.5.19	27 core	metre	636.00	
51.10.5.20	40 core	metre	886.00	
51.11	Providing and laying Stranded/ Flexible Annealed Bare copper conductor ,XLPE/PVC insulated suitably laid up together overall polyester taped Al (Mylar tape wrapped) along with ATC Drain wire overall PVC sheathed (ST-1) overall screened Pair armoured instrumentation Cables generally confirming to PAS 5308- Part-2-2009.			
51.11.1	0.5 sq.mm			
51.11.1.1	1 pair	metre	87.00	
51.11.1.2	2 pair	metre	98.00	
51.11.1.3	3 pair	metre	111.00	
51.11.1.4	4 pair	metre	124.00	
51.11.1.5	5 pair	metre	139.00	
51.11.1.6	6 pair	metre	144.00	
51.11.1.7	7 pair	metre	152.00	
51.11.1.8	8 pair	metre	181.00	
51.11.1.9	10 pair	metre	201.00	
51.11.1.10	12 pair	metre	222.00	
51.11.1.11	14 pair	metre	244.00	
51.11.1.12	15 pair	metre	257.00	
51.11.1.13	16 pair	metre	270.00	
51.11.1.14	18 pair	metre	283.00	
51.11.1.15	19 pair	metre	296.00	
51.11.1.16	20 pair	metre	310.00	
51.11.1.17	22 pair	metre	332.00	
51.11.1.18	24 pair	metre	355.00	
51.11.1.19	30 pair	metre	471.00	
51.11.2	0.75 sq.mm			
51.11.2.1	1 pair	metre	92.00	
51.11.2.2	2 pair	metre	105.00	
51.11.2.3	3 pair	metre	123.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.11.2.4	4 pair	metre	137.00	
51.11.2.5	5 pair	metre	161.00	
51.11.2.6	6 pair	metre	181.00	
51.11.2.7	7 pair	metre	197.00	
51.11.2.8	8 pair	metre	212.00	
51.11.2.9	10 pair	metre	249.00	
51.11.2.10	12 pair	metre	276.00	
51.11.2.11	14 pair	metre	307.00	
51.11.2.12	15 pair	metre	322.00	
51.11.2.13	16 pair	metre	338.00	
51.11.2.14	18 pair	metre	362.00	
51.11.2.15	19 pair	metre	385.00	
51.11.2.16	20 pair	metre	401.00	
51.11.2.17	22 pair	metre	433.00	
51.11.2.18	24 pair	metre	464.00	
51.11.2.19	30 pair	metre	619.00	
51.11.3	1 sq.mm			
51.11.3.1	1 pair	metre	98.00	
51.11.3.2	2 pair	metre	128.00	
51.11.3.3	3 pair	metre	144.00	
51.11.3.4	4 pair	metre	170.00	
51.11.3.5	5 pair	metre	191.00	
51.11.3.6	6 pair	metre	212.00	
51.11.3.7	7 pair	metre	228.00	
51.11.3.8	8 pair	metre	260.00	
51.11.3.9	10 pair	metre	302.00	
51.11.3.10	12 pair	metre	338.00	
51.11.3.11	14 pair	metre	380.00	
51.11.3.12	16 pair	metre	417.00	
51.11.3.13	19 pair	metre	485.00	
51.11.3.14	24 pair	metre	586.00	
51.11.4	1.5 sq.mm			
51.11.4.1	1 pair	metre	107.00	
51.11.4.2	2 pair	metre	132.00	
51.11.4.3	3 pair	metre	170.00	
51.11.4.4	4 pair	metre	185.00	
51.11.4.5	5 pair	metre	233.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.11.4.6	6 pair	metre	260.00	
51.11.4.7	7 pair	metre	269.00	
51.11.4.8	8 pair	metre	279.00	
51.11.4.9	10 pair	metre	376.00	
51.11.4.10	12 pair	metre	433.00	
51.11.4.11	14 pair	metre	485.00	
51.11.4.12	15 pair	metre	514.00	
51.11.4.13	16 pair	metre	543.00	
51.11.4.14	18 pair	metre	583.00	
51.11.4.15	19 pair	metre	622.00	
51.11.4.16	20 pair	metre	651.00	
51.11.4.17	22 pair	metre	710.00	
51.11.4.18	24 pair	metre	769.00	
51.11.4.19	30 pair	metre	1004.00	
51.11.5	2.5 sq.mm			
51.11.5.1	1 pair	metre	128.00	
51.11.5.2	2 pair	metre	165.00	
51.11.5.3	3 pair	metre	205.00	
51.11.5.4	4 pair	metre	243.00	
51.11.5.5	5 pair	metre	282.00	
51.11.5.6	6 pair	metre	320.00	
51.11.5.7	7 pair	metre	353.00	
51.11.5.8	8 pair	metre	391.00	
51.11.5.9	10 pair	metre	474.00	
51.11.5.10	12 pair	metre	540.00	
51.11.5.11	14 pair	metre	620.00	
51.11.5.12	15 pair	metre	662.00	
51.11.5.13	16 pair	metre	690.00	
51.11.5.14	18 pair	metre	769.00	
51.11.5.15	19 pair	metre	809.00	
51.11.5.16	20 pair	metre	850.00	
51.11.5.17	22 pair	metre	918.00	
51.11.5.18	24 pair	metre	993.00	
51.11.5.19	30 pair	metre	1199.00	
51.12	Providing and laying Stranded/ Flexible Annealed Bare copper conductor ,XLPE/PVC insulated suitably laid up together overall polyester taped Al (Mylar tape wrapped) along with ATC Drain wire overall PVC sheathed (ST-1) overall screened Triad armoured instrumentation			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	Cables generally confirming to PAS 5308- Part-2-2009.			
51.12.1	0.5 sq.mm			
51.12.1.1	1 pair	metre	95.00	
51.12.1.2	2 pair	metre	131.00	
51.12.1.3	3 pair	metre	149.00	
51.12.1.4	4 pair	metre	169.00	
51.12.1.5	5 pair	metre	189.00	
51.12.1.6	6 pair	metre	210.00	
51.12.1.7	7 pair	metre	225.00	
51.12.1.8	8 pair	metre	249.00	
51.12.1.9	10 pair	metre	285.00	
51.12.1.10	12 pair	metre	317.00	
51.12.1.11	14 pair	metre	353.00	
51.12.1.12	16 pair	metre	386.00	
51.12.1.13	19 pair	metre	437.00	
51.12.2	0.75 sq.mm			
51.12.2.1	1 pair	metre	102.00	
51.12.2.2	2 pair	metre	139.00	
51.12.2.3	3 pair	metre	162.00	
51.12.2.4	4 pair	metre	187.00	
51.12.2.5	5 pair	metre	211.00	
51.12.2.6	6 pair	metre	237.00	
51.12.2.7	7 pair	metre	258.00	
51.12.2.8	8 pair	metre	279.00	
51.12.2.9	10 pair	metre	332.00	
51.12.2.10	12 pair	metre	374.00	
51.12.2.11	14 pair	metre	419.00	
51.12.2.12	16 pair	metre	465.00	
51.12.2.13	19 pair	metre	528.00	
51.12.3	1 sq.mm			
51.12.3.1	1 pair	metre	112.00	
51.12.3.2	2 pair	metre	157.00	
51.12.3.3	3 pair	metre	187.00	
51.12.3.4	4 pair	metre	219.00	
51.12.3.5	5 pair	metre	252.00	
51.12.3.6	6 pair	metre	285.00	
51.12.3.7	7 pair	metre	312.00	
51.12.3.8	8 pair	metre	345.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.12.3.9	10 pair	metre	407.00	
51.12.3.10	12 pair	metre	467.00	
51.12.3.11	14 pair	metre	527.00	
51.12.3.12	16 pair	metre	587.00	
51.12.3.13	19 pair	metre	672.00	
51.12.4	1.5 sq.mm			
51.12.4.1	1 pair	metre	123.00	
51.12.4.2	2 pair	metre	176.00	
51.12.4.3	3 pair	metre	216.00	
51.12.4.4	4 pair	metre	258.00	
51.12.4.5	5 pair	metre	300.00	
51.12.4.6	6 pair	metre	337.00	
51.12.4.7	7 pair	metre	374.00	
51.12.4.8	8 pair	metre	420.00	
51.12.4.9	10 pair	metre	504.00	
51.12.4.10	12 pair	metre	579.00	
51.12.4.11	14 pair	metre	658.00	
51.12.4.12	16 pair	metre	737.00	
51.12.4.13	19 pair	metre	852.00	
51.12.5	2.5 sq.mm			
51.12.5.1	1 pair	metre	149.00	
51.12.5.2	2 pair	metre	228.00	
51.12.5.3	3 pair	metre	291.00	
51.12.5.4	4 pair	metre	351.00	
51.12.5.5	5 pair	metre	415.00	
51.12.5.6	6 pair	metre	483.00	
51.12.5.7	7 pair	metre	542.00	
51.12.5.8	8 pair	metre	611.00	
51.12.5.9	10 pair	metre	740.00	
51.12.5.10	12 pair	metre	862.00	
51.12.5.11	14 pair	metre	988.00	
51.12.5.12	16 pair	metre	1114.00	
51.12.5.13	19 pair	metre	1296.00	
51.13	Laying of 33 KV & 11 KV XLPE cable without Road cutting i.e. Through burrowing machine VERMiER (120 cm deep) executed cast of cable use of this technology must be restricted to the situation like:-(i) When the passage available for laying the proposed cable is totally a metal or cement. (ii) When the road cutting is not permitted by the local administration			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
51.13.1	33/11 KV 3 C x 300 Sq mm cable	metre	493.00	
51.13.2	33/11kv below 3c x300 Sq mm cable	metre	443.00	
51.13.3	LT 3.5 core 95 Sq mm and above	metre	443.00	
51.13.4	When cable laid in a HDPE pipe			
51.13.4.1	33/11kv 3cx300 Sq mm cable	metre	624.00	
51.13.4.2	33/11 kv below 3x300 Sq mm cable	metre	560.00	
51.13.4.3	LT below 3.5 core 300 Sq mm	metre	561.00	
51.13.5	ADD cost of 200 HDPE Pipe			
51.13.5.1	PN4 HDPE Pipe (IS-4984)	metre	436.00	
51.13.5.2	HDPE DWC pipe (IS-14930)	metre	272.00	

52.0 CABLE TERMINATION & ACCESSORIES

Code No	Description	Unit	Rate Rs. Group 1
52.1	Providing & making heat shrinkable type indoor/outdoor/straight through terminations/joint kit of approved make suitable for XLPE insulated 33 KV cable, with required components, preperation of cable ends, testing etc. as required of following sizes.		
52.1.1	Indoor		
52.1.1.1	3 core 95/120/150/185 Sq.mm	set	7768.00
52.1.1.2	3 core 240/300 /400 Sq.mm	set	12322.00
52.1.2	Outdoor		
52.1.2.1	3 core 95/120/150/185 Sq.mm	set	12318.00
52.1.2.2	3 core 240/300 /400 Sq.mm	set	18669.00
52.1.3	Straight Through		
52.1.3.1	3 core 95/120/150/185 Sq.mm	set	29451.00
52.1.3.2	3 core 240/300 /400 Sq.mm	set	45078.00
52.2	Providing & making heat shrinkable type indoor/outdoor/straight through terminations/joint kit of approved make suitable for XLPE insulated 11 KV cable, with required components, preperation of cable ends,testing etc. as required of following sizes .		
52.2.1	Indoor		
52.2.1.1	3 core 35/50 Sq.mm	set	3660.00
52.2.1.2	3 core 70/95 Sq.mm	set	4536.00
52.2.1.3	3 core 120/150/185 Sq.mm	set	5429.00
52.2.1.4	3 core 240/300 Sq.mm	set	5791.00
52.2.1.5	3 core 400/500 Sq.mm	set	6116.00
52.2.2	Outdoor		
52.2.2.1	3 core 35/50 Sq.mm	set	6010.00
52.2.2.2	3 core 70/95 Sq.mm	set	6989.00
52.2.2.3	3 core 120/150/185/225 Sq.mm	set	7504.00
52.2.2.4	3 core 240/300 Sq.mm	set	8438.00
52.2.2.5	3 core 400/500 Sq.mm	set	9950.00
52.2.3	Straight Through		
52.2.3.1	3 core 35/50 Sq.mm	set	9968.00
52.2.3.2	3 core 70/95 Sq.mm	set	11159.00
52.2.3.3	3 core 120/150/185/225 Sq.mm	set	14775.00
52.2.3.4	3 core 240/300 Sq.mm	set	16159.00
52.3	Supply & Making heat shrinkable outdoor straight through joint for following size of PVC/ XLPE insulated aluminium conductor cable of 1.1 KV grade including cost of compound, sleeves etc. as required.		

Code No	Description	Unit	Rate Rs. Group 1
52.3.1	2 x 2.5 sq.mm	set	736.00
52.3.2	2 x 4 sq.mm	set	736.00
52.3.3	2 x 6 sq.mm	set	736.00
52.3.4	2 x 10 sq.mm	set	736.00
52.3.5	2 x 16 sq.mm	set	736.00
52.3.6	2 x 25.0 sq.mm	set	883.00
52.3.7	2 x 35.0 sq.mm	set	883.00
52.3.8	2 x 50.0 sq.mm	set	1031.00
52.3.9	2 x 70.0 sq.mm	set	1031.00
52.3.10	3 x 2.5 sq.mm	set	521.00
52.3.11	3 x 4 sq.mm	set	521.00
52.3.12	3 x 6 sq.mm	set	521.00
52.3.13	3 x 10.0 sq.mm	set	521.00
52.3.14	3 x 16.0 sq.mm	set	883.00
52.3.15	3 x 25.0 sq.mm	set	883.00
52.3.16	3 x 35.0 sq.mm	set	1031.00
52.3.17	3 x 50.0 sq.mm	set	1031.00
52.3.18	3 x 70.0 sq.mm	set	1233.00
52.3.19	3 x 95.0 sq.mm	set	1267.00
52.3.20	3 x 120.0 sq.mm	set	1449.00
52.3.21	3 x 150.0 sq.mm	set	1449.00
52.3.22	3 x 185.0 sq.mm	set	1765.00
52.3.23	3 x 240.0 sq.mm	set	2068.00
52.3.24	3 x 300.0 sq.mm	set	2553.00
52.3.25	3.5 x 25.0 sq.mm	set	1031.00
52.3.26	3.5 x 35.0 sq.mm	set	1031.00
52.3.27	3.5 x 50.0 sq.mm	set	1233.00
52.3.28	3.5 x 70.0 sq.mm	set	1267.00
52.3.29	3.5 x 95.0 sq.mm	set	1449.00
52.3.30	3.5 x 120.0 sq.mm	set	1765.00
52.3.31	3.5 x 150.0 sq.mm	set	1765.00
52.3.32	3.5 x 185.0 sq.mm	set	2028.00
52.3.33	3.5 x 240.0 sq.mm	set	2553.00
52.3.34	3.5 x 300.0 sq.mm	set	3059.00
52.3.35	3.5 x 400.0 sq.mm	set	3772.00
52.3.36	3.5 x 500.0 sq.mm	set	5039.00
52.3.37	3.5 x 630.0 sq.mm	set	6008.00

Code No	Description	Unit	Rate Rs. Group 1
52.3.38	4 x 2.5 sq.mm	set	521.00
52.3.39	4 x 4 sq.mm	set	521.00
52.3.40	4 x 6 sq.mm	set	521.00
52.3.41	4 x 10 sq.mm	set	521.00
52.3.42	4 x 16.0 sq.mm	set	883.00
52.3.43	4 x 25.0 sq.mm	set	1031.00
52.3.44	4 x 35.0 sq.mm	set	1031.00
52.3.45	4 x 50.0 sq.mm	set	1233.00
52.4	Supply, Fabricating & installing following sizes of perforated cable trays including horizontal and vertical bends, reducers tees,cross members and other accessories as required and duly suspended from the ceiling with suspenders and including painting as required.		
52.4.1	Mild Steel		
52.4.1.1	100mm x 50mm x 1.6mm	metre	226.00
52.4.1.2	150mm x 50mm x 1.6mm	metre	283.00
52.4.1.3	225mm x 50mm x 1.6mm	metre	366.00
52.4.1.4	300mm x 50mm x 1.6mm	metre	452.00
52.4.1.5	375mm x 50mm x 2.0mm	metre	671.00
52.4.1.6	450mm x 50mm x 2.0mm	metre	777.00
52.4.1.7	600mm x 50mm x 2.0mm	metre	990.00
52.4.1.8	300mm x 62.5mm x 2.0mm	metre	600.00
52.4.1.9	375mm x 62.5mm x 2.0mm	metre	708.00
52.4.1.10	450mm x 62.5mm x 2.0mm	metre	814.00
52.4.1.11	600mm x 62.5mm x 2.0mm	metre	1025.00
52.4.1.12	750mm x 62.5mm x 2.0mm	metre	1239.00
52.4.1.13	900mm x 62.5mm x 2.0mm	metre	1450.00
52.4.1.14	600mm x 75mm x 2.0mm	metre	1062.00
52.4.1.15	750mm x 75mm x 2.0mm	metre	1273.00
52.4.1.16	900mm x 75mm x 2.0mm	metre	1485.00
52.4.2	Hot Dipped Galvanized		
52.4.2.1	100mm x 50mm x 1.6mm	metre	265.00
52.4.2.2	150mm x 50mm x 1.6mm	metre	333.00
52.4.2.3	225mm x 50mm x 1.6mm	metre	427.00
52.4.2.4	300mm x 50mm x 1.6mm	metre	518.00
52.4.2.5	375mm x 50mm x 2.0mm	metre	698.00
52.4.2.6	450mm x 50mm x 2.0mm	metre	867.00
52.4.2.7	600mm x 50mm x 2.0mm	metre	1095.00
52.4.2.8	300mm x 62.5mm x 2.0mm	metre	686.00
52.4.2.9	375mm x 62.5mm x 2.0mm	metre	799.00

Code No	Description	Unit	Rate Rs. Group 1
52.4.2.10	450mm x 62.5mm x 2.0mm	metre	913.00
52.4.2.11	600mm x 62.5mm x 2.0mm	metre	1141.00
52.4.2.12	750mm x 62.5mm x 2.0mm	metre	1368.00
52.4.2.13	900mm x 62.5mm x 2.0mm	metre	1596.00
52.4.2.14	600mm x 75mm x 2.0mm	metre	1178.00
52.4.2.15	750mm x 75mm x 2.0mm	metre	1406.00
52.4.2.16	900mm x 75mm x 2.0mm	metre	1633.00
52.5	Supply, Fabricating & installing following sizes of ladder type cable trays with rungs at span of 250 mm including horizontal and vertical bends, reducers tees,cross members and other accessories as required and duly suspended from the ceiling/wall with suspenders and including painting as required.		
52.5.1	Mild Steel		
52.5.1.1	100mm x 50mm x 1.6mm	metre	257.00
52.5.1.2	150mm x 50mm x 1.6mm	metre	257.00
52.5.1.3	225mm x 50mm x 1.6mm	metre	280.00
52.5.1.4	300mm x 50mm x 1.6mm	metre	302.00
52.5.1.5	375mm x 50mm x 2.0mm	metre	395.00
52.5.1.6	450mm x 50mm x 2.0mm	metre	423.00
52.5.1.7	600mm x 50mm x 2.0mm	metre	479.00
52.5.1.8	300mm x 62.5mm x 2.0mm	metre	411.00
52.5.1.9	375mm x 62.5mm x 2.0mm	metre	439.00
52.5.1.10	450mm x 62.5mm x 2.0mm	metre	466.00
52.5.1.11	600mm x 62.5mm x 2.0mm	metre	521.00
52.5.1.12	750mm x 62.5mm x 2.0mm	metre	577.00
52.5.1.13	900mm x 62.5mm x 2.0mm	metre	632.00
52.5.1.14	600mm x 75mm x 2.0mm	metre	556.00
52.5.1.15	750mm x 75mm x 2.0mm	metre	610.00
52.5.1.16	900mm x 75mm x 2.0mm	metre	667.00
52.5.2	Hot Dipped Galvanized		
52.5.2.1	100mm x 50mm x 1.6mm	metre	286.00
52.5.2.2	150mm x 50mm x 1.6mm	metre	286.00
52.5.2.3	225mm x 50mm x 1.6mm	metre	310.00
52.5.2.4	300mm x 50mm x 1.6mm	metre	333.00
52.5.2.5	375mm x 50mm x 2.0mm	metre	436.00
52.5.2.6	450mm x 50mm x 2.0mm	metre	468.00
52.5.2.7	600mm x 50mm x 2.0mm	metre	526.00
52.5.2.8	300mm x 62.5mm x 2.0mm	metre	445.00
52.5.2.9	375mm x 62.5mm x 2.0mm	metre	475.00

Code No	Description	Unit	Rate Rs. Group 1
52.5.2.10	450mm x 62.5mm x 2.0mm	metre	506.00
52.5.2.11	600mm x 62.5mm x 2.0mm	metre	566.00
52.5.2.12	750mm x 62.5mm x 2.0mm	metre	626.00
52.5.2.13	900mm x 62.5mm x 2.0mm	metre	686.00
52.5.2.14	600mm x 75mm x 2.0mm	metre	603.00
52.5.2.15	750mm x 75mm x 2.0mm	metre	663.00
52.5.2.16	900mm x 75mm x 2.0mm	metre	724.00
52.6	Supplying and making one end termination with heavy duty double compression brass gland SIBG type, heavy duty copper lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.		
52.6.1	2 x 2.5 sq.mm	set	10.00
52.6.2	2 x 4.0 sq.mm	set	145.00
52.6.3	2 x 6.0 sq.mm	set	148.00
52.6.4	2 x 10.0 sq.mm	set	149.00
52.6.5	2 x 16.0 sq.mm	set	155.00
52.6.6	2 x 25.0 sq.mm	set	222.00
52.6.7	2 x 35.0 sq.mm	set	234.00
52.6.8	2 x 50.0 sq.mm	set	266.00
52.6.9	2 x 70.0 sq.mm	set	416.00
52.6.10	3 x 2.5 sq.mm	set	148.00
52.6.11	3 x 4.0 sq.mm	set	150.00
52.6.12	3 x 6.0 sq.mm	set	155.00
52.6.13	3 x 10.0 sq.mm	set	167.00
52.6.14	3 x 16.0 sq.mm	set	175.00
52.6.15	3 x 25.0 sq.mm	set	250.00
52.6.16	3 x 35.0 sq.mm	set	269.00
52.6.17	3 x 50.0 sq.mm	set	357.00
52.6.18	3 x 70.0 sq.mm	set	464.00
52.6.19	3 x 95.0 sq.mm	set	654.00
52.6.20	3 x 120.0 sq.mm	set	784.00
52.6.21	3 x 150.0 sq.mm	set	922.00
52.6.22	3 x 185.0 sq.mm	set	1047.00
52.6.23	3 x 240.0 sq.mm	set	1126.00
52.6.24	3 x 300.0 sq.mm	set	1607.00
52.6.25	3.5 x 25.0 sq.mm	set	275.00
52.6.26	3.5 x 35.0 sq.mm	set	355.00
52.6.27	3.5 x 50.0 sq.mm	set	462.00

Code No	Description	Unit	Rate Rs. Group 1
52.6.28	3.5 x 70.0 sq.mm	set	699.00
52.6.29	3.5 x 95.0 sq.mm	set	862.00
52.6.30	3.5 x 120.0 sq.mm	set	1001.00
52.6.31	3.5 x 150.0 sq.mm	set	1126.00
52.6.32	3.5 x 185.0 sq.mm	set	1204.00
52.6.33	3.5 x 240.0 sq.mm	set	1627.00
52.6.34	3.5 x 300.0 sq.mm	set	1917.00
52.6.35	3.5 x 400.0 sq.mm	set	2638.00
52.6.36	3.5 x 500.0 sq.mm	set	3039.00
52.6.37	3.5 x 630.0 sq.mm	set	4165.00
52.6.38	4 x 2.5 sq.mm	set	153.00
52.6.39	4 x 4.0 sq.mm	set	156.00
52.6.40	4 x 6.0 sq.mm	set	173.00
52.6.41	4 x 10.0 sq.mm	set	175.00
52.6.42	4 x 16.0 sq.mm	set	253.00
52.6.43	4 x 25.0 sq.mm	set	275.00
52.6.44	4 x 35.0 sq.mm	set	355.00
52.6.45	4 x 50.0 sq.mm	set	462.00
52.7	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, copper lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.		
52.7.1	2 x 2.5 sq.mm	set	10.00
52.7.2	2 x 4.0 sq.mm	set	69.00
52.7.3	2 x 6.0 sq.mm	set	72.00
52.7.4	2 x 10.0 sq.mm	set	73.00
52.7.5	2 x 16.0 sq.mm	set	79.00
52.7.6	2 x 25.0 sq.mm	set	95.00
52.7.7	2 x 35.0 sq.mm	set	108.00
52.7.8	2 x 50.0 sq.mm	set	125.00
52.7.9	2 x 70.0 sq.mm	set	208.00
52.7.10	3 x 2.5 sq.mm	set	72.00
52.7.11	3 x 4.0 sq.mm	set	75.00
52.7.12	3 x 6.0 sq.mm	set	80.00
52.7.13	3 x 10.0 sq.mm	set	81.00
52.7.14	3 x 16.0 sq.mm	set	90.00
52.7.15	3 x 25.0 sq.mm	set	109.00
52.7.16	3 x 35.0 sq.mm	set	127.00

Code No	Description	Unit	Rate Rs. Group 1
52.7.17	3 x 50.0 sq.mm	set	198.00
52.7.18	3 x 70.0 sq.mm	set	256.00
52.7.19	3 x 95.0 sq.mm	set	294.00
52.7.20	3 x 120.0 sq.mm	set	382.00
52.7.21	3 x 150.0 sq.mm	set	382.00
52.7.22	3 x 185.0 sq.mm	set	585.00
52.7.23	3 x 240.0 sq.mm	set	638.00
52.7.24	3 x 300.0 sq.mm	set	713.00
52.7.25	3.5 x 25.0 sq.mm	set	134.00
52.7.26	3.5 x 35.0 sq.mm	set	196.00
52.7.27	3.5 x 50.0 sq.mm	set	254.00
52.7.28	3.5 x 70.0 sq.mm	set	340.00
52.7.29	3.5 x 95.0 sq.mm	set	461.00
52.7.30	3.5 x 120.0 sq.mm	set	461.00
52.7.31	3.5 x 150.0 sq.mm	set	663.00
52.7.32	3.5 x 185.0 sq.mm	set	716.00
52.7.33	3.5 x 240.0 sq.mm	set	733.00
52.7.34	3.5 x 300.0 sq.mm	set	958.00
52.7.35	3.5 x 400.0 sq.mm	set	1303.00
52.7.36	3.5 x 500.0 sq.mm	set	1518.00
52.7.37	3.5 x 630.0 sq.mm	set	1518.00
52.7.38	4 x 2.5 sq.mm	set	77.00
52.7.39	4 x 4.0 sq.mm	set	80.00
52.7.40	4 x 6.0 sq.mm	set	87.00
52.7.41	4 x 10.0 sq.mm	set	100.00
52.7.42	4 x 16.0 sq.mm	set	111.00
52.7.43	4 x 25.0 sq.mm	set	134.00
52.7.44	4 x 35.0 sq.mm	set	196.00
52.7.45	4 x 50.0 sq.mm	set	254.00
52.8	Supplying and making one end termination with heavy duty double compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.		
52.8.1	2 x 2.5 sq.mm	set	130.00
52.8.2	2 x 4.0 sq.mm	set	136.00
52.8.3	2 x 6.0 sq.mm	set	137.00
52.8.4	2 x 10.0 sq.mm	set	138.00
52.8.5	2 x 16.0 sq.mm	set	139.00

Code No	Description	Unit	Rate Rs. Group 1
52.8.6	2 x 25.0 sq.mm	set	203.00
52.8.7	2 x 35.0 sq.mm	set	205.00
52.8.8	2 x 50.0 sq.mm	set	224.00
52.8.9	2 x 70 Sq. mm	set	231.00
52.8.10	3 x 2.5 sq.mm	set	138.00
52.8.11	3 x 4.0 sq.mm	set	138.00
52.8.12	3 x 6.0 sq.mm	set	138.00
52.8.13	3 x 10.0 sq.mm	set	150.00
52.8.14	3 x 16.0 sq.mm	set	152.00
52.8.15	3 x 25.0 sq.mm	set	221.00
52.8.16	3 x 35.0 sq.mm	set	224.00
52.8.17	3 x 50.0 sq.mm	set	295.00
52.8.18	3 x 70.0 sq.mm	set	355.00
52.8.19	3 x 95.0 sq.mm	set	509.00
52.8.20	3 x 120.0 sq.mm	set	598.00
52.8.21	3 x 150.0 sq.mm	set	751.00
52.8.22	3 x 185.0 sq.mm	set	811.00
52.8.23	3 x 240.0 sq.mm	set	1028.00
52.8.24	3 x 300.0 sq.mm	set	1507.00
52.8.25	3.5 x 25.0 sq.mm	set	224.00
52.8.26	3.5 x 35.0 sq.mm	set	292.00
52.8.27	3.5 x 50.0 sq.mm	set	351.00
52.8.28	3.5 x 70.0 sq.mm	set	517.00
52.8.29	3.5 x 95.0 sq.mm	set	595.00
52.8.30	3.5 x 120.0 sq.mm	set	753.00
52.8.31	3.5 x 150.0 sq.mm	set	898.00
52.8.32	3.5 x 185.0 sq.mm	set	890.00
52.8.33	3.5 x 240.0 sq.mm	set	1497.00
52.8.34	3.5 x 300.0 sq.mm	set	1783.00
52.8.35	3.5 x 400.0 sq.mm	set	2379.00
52.8.36	3.5 x 500.0 sq.mm	set	2948.00
52.8.37	3.5 x 630.0 sq.mm	set	4237.00
52.8.38	4 x 2.5 sq.mm	set	139.00
52.8.39	4 x 4.0 sq.mm	set	139.00
52.8.40	4 x 6.0 sq.mm	set	150.00
52.8.41	4 x 10.0 sq.mm	set	153.00
52.8.42	4 x 16.0 sq.mm	set	221.00

Code No	Description	Unit	Rate Rs. Group 1
52.8.43	4 x 25.0 sq.mm	set	224.00
52.8.44	4 x 35.0 sq.mm	set	292.00
52.8.45	4 x 50.0 sq.mm	set	351.00
52.8.46	1 x 300 sq.mm	set	1589.00
52.8.47	1 x 400 sq.mm	set	2099.00
52.8.48	1 x 500 sq.mm	set	2542.00
52.8.49	1 x 630 sq.mm	set	3708.00
52.9	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, aluminium lugs duly crimped with crimping tool, PVC tape etc for following size of Armoured PVC insulated & PVC sheathed/ XLPE aluminium conductor cable of 1100 volt grade as required of size.		
52.9.1	2 x 2.5 sq.mm	set	59.00
52.9.2	2 x 4.0 sq.mm	set	60.00
52.9.3	2 x 6.0 sq.mm	set	61.00
52.9.4	2 x 10.0 sq.mm	set	62.00
52.9.5	2 x 16.0 sq.mm	set	63.00
52.9.6	2 x 25.0 sq.mm	set	76.00
52.9.7	2 x 35.0 sq.mm	set	78.00
52.9.8	2 x 50.0 sq.mm	set	83.00
52.9.9	2 x 70 Sq. mm	set	90.00
52.9.10	3 x 2.5 sq.mm	set	62.00
52.9.11	3 x 4.0 sq.mm	set	62.00
52.9.12	3 x 6.0 sq.mm	set	62.00
52.9.13	3 x 10.0 sq.mm	set	65.00
52.9.14	3 x 16.0 sq.mm	set	66.00
52.9.15	3 x 25.0 sq.mm	set	79.00
52.9.16	3 x 35.0 sq.mm	set	83.00
52.9.17	3 x 50.0 sq.mm	set	136.00
52.9.18	3 x 70.0 sq.mm	set	146.00
52.9.19	3 x 95.0 sq.mm	set	150.00
52.9.20	3 x 120.0 sq.mm	set	196.00
52.9.21	3 x 150.0 sq.mm	set	211.00
52.9.22	3 x 185.0 sq.mm	set	349.00
52.9.23	3 x 240.0 sq.mm	set	540.00
52.9.24	3 x 300.0 sq.mm	set	612.00
52.9.25	3.5 x 25.0 sq.mm	set	83.00
52.9.26	3.5 x 35.0 sq.mm	set	133.00
52.9.27	3.5 x 50.0 sq.mm	set	143.00

Code No	Description	Unit	Rate Rs. Group 1
52.9.28	3.5 x 70.0 sq.mm	set	157.00
52.9.29	3.5 x 95.0 sq.mm	set	194.00
52.9.30	3.5 x 120.0 sq.mm	set	213.00
52.9.31	3.5 x 150.0 sq.mm	set	435.00
52.9.32	3.5 x 185.0 sq.mm	set	402.00
52.9.33	3.5 x 240.0 sq.mm	set	602.00
52.9.34	3.5 x 300.0 sq.mm	set	824.00
52.9.35	3.5 x 400.0 sq.mm	set	1044.00
52.9.36	3.5 x 500.0 sq.mm	set	1428.00
52.9.37	3.5 x 630.0 sq.mm	set	1590.00
52.9.38	4 x 2.5 sq.mm	set	63.00
52.9.39	4 x 4.0 sq.mm	set	63.00
52.9.40	4 x 6.0 sq.mm	set	64.00
52.9.41	4 x 10.0 sq.mm	set	78.00
52.9.42	4 x 16.0 sq.mm	set	80.00
52.9.43	4 x 25.0 sq.mm	set	83.00
52.9.44	4 x 35.0 sq.mm	set	133.00
52.9.45	4 x 50.0 sq.mm	set	143.00
52.9.46	1 x 300 sq.mm	set	630.00
52.9.47	1 x 400 sq.mm	set	763.00
52.9.48	1 x 500 sq.mm	set	1021.00
52.9.49	1 x 630 sq.mm	set	1061.00
52.10	Supplying and making end termination with heavy copper lugs (pin/ ring type) duty crimped with crimping tool, PVC tape etc of following size		
52.10.1	1.5 Sq mm	each	5.00
52.10.2	2.5 Sq mm	each	6.00
52.10.3	4.0 Sq mm	each	6.00
52.10.4	6.0 Sq mm	each	8.00
52.10.5	10.0 Sq mm	each	9.00
52.10.6	16.0 Sq mm	each	12.00
52.10.7	25 Sq mm	each	18.00
52.10.8	35 Sq mm	each	23.00
52.10.9	50 Sq mm	each	39.00
52.10.10	70 Sq mm	each	63.00
52.10.11	95 Sq mm	each	88.00
52.10.12	120 Sq mm	each	88.00
52.10.13	150 Sq mm	each	88.00

Code No	Description	Unit	Rate Rs. Group 1
52.10.14	240 Sq mm	each	88.00
52.10.15	300 Sq mm	each	111.00
52.10.16	400 Sq mm	each	178.00
52.10.17	500 Sq mm	each	178.00
52.10.18	630 Sq mm	each	178.00
52.11	Supplying and making end termination with heavy aluminium lugs (pin/ ring type) duty crimped with crimping tool, PVC tape etc of following size		
52.11.1	1.5 Sq mm	each	2.00
52.11.2	2.5 Sq mm	each	2.00
52.11.3	4.0 Sq mm	each	2.00
52.11.4	6.0 Sq mm	each	2.00
52.11.5	10.0 Sq mm	each	3.00
52.11.6	16.0 Sq mm	each	3.00
52.11.7	25 Sq mm	each	4.00
52.11.8	35 Sq mm	each	5.00
52.11.9	50 Sq mm	each	8.00
52.11.10	70 Sq mm	each	12.00
52.11.11	95 Sq mm	each	13.00
52.11.12	120 Sq mm	each	19.00
52.11.13	150 Sq mm	each	24.00
52.11.14	240 Sq mm	each	52.00
52.11.15	300 Sq mm	each	73.00
52.11.16	400 Sq mm	each	105.00
52.11.17	500 Sq mm	each	152.00
52.11.18	630 Sq mm	each	198.00

53.0 BUS BAR CHAMBERS

Code No	Description	Unit	Rate Rs. Group 1
53.1	P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 100 amp. Capacity housed in sheet metal box made out from 1.6 mm MS sheet front openable , bus bar fixed on epoxy insulators at approved spacing including making connections etc. as required		
53.1.1	300 mm long , 2 strip	each	834.00
53.1.2	300 mm long , 4 strip	each	1095.00
53.1.3	450 mm long , 2 strip	each	1179.00
53.1.4	450 mm long , 4 strip	each	1600.00
53.1.5	600 mm long ,2 strip	each	1516.00
53.1.6	600 mm long , 4 strip	each	2021.00
53.1.7	900 mm long , 2 strip	each	2190.00
53.1.8	900 mm long , 4 strip	each	2847.00
53.2	P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 200 amp. Capacity housed in sheet metal box made out from 1.6 mm MS sheet front openable , bus bar fixed on insulators at approved spacing including making connections etc. as required		
53.2.1	300 mm long , 4 strip	each	1364.00
53.2.2	450 mm long , 4 strip	each	2021.00
53.2.3	600 mm long , 4 strip	each	2695.00
53.2.4	900 mm long , 4 strip	each	3874.00
53.2.5	1200 mm long , 4 strip	each	4801.00
53.2.6	1500 mm long , 4 strip	each	5980.00
53.3	P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 300 amp. Capacity housed in sheet metal box made out from 1.6 mm MS sheet front openable , bus bar fixed on insulators at approved spacing including making connections etc. as required		
53.3.1	450 mm long, 4 strip	each	2190.00
53.3.2	600 mm long, 4 strip	each	3335.00
53.3.3	900 mm long, 4 strip	each	4515.00
53.3.4	1200 mm long, 4 strip	each	6081.00
53.3.5	1500 mm long, 4 strip	each	7732.00
53.4	P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 400 amp. Capacity housed in sheet metal box made out from 1.6 mm MS sheet front openable , bus bar fixed on insulators at approved spacing including making connections etc. as required		
53.4.1	600 mm long, 4 strip	each	4228.00

Code No	Description	Unit	Rate Rs. Group 1
53.4.2	900 mm long, 4 strip	each	6199.00
53.4.3	1200 mm long, 4 strip	each	10074.00
53.4.4	1500 mm long, 4 strip	each	10158.00
53.5	P&F bus bar chamber made out of aluminium or wrought aluminium alloy suitable for 500 amp. Capacity housed in sheet metal box made out from 1.6 mm MS sheet front openable , bus bar fixed on insulators at approved spacing including making connections etc. as required		
53.5.1	900 mm long, 4 strip	each	7463.00
53.5.2	1200 mm long, 4 strip	each	9754.00
53.5.3	1500 mm long, 4 strip	each	12381.00
53.6	P&F following size aluminium bus bar on insulators at approved spacing in existing bus bar chamber including making holes etc. as required		
53.6.1	20 x 5 mm	metre	337.00
53.6.2	30 x 5 mm	metre	489.00
53.6.3	50 x 5 mm	metre	606.00
53.6.4	50 x 6 mm	metre	687.00
53.7	P&F following size copper bus bar on insulators at approved spacing in existing panel/bus bar chamber including making holes etc. as required		
53.7.1	20 x 3 mm	metre	320.00
53.7.2	25 x 5 mm	metre	337.00
53.7.3	40 x 5 mm	metre	1179.00
53.7.4	50 x 5 mm	metre	1263.00
53.8	S.I.T.C. of bus trunking arrangement in convenient sections complete with housing of galvanized sheet steel of minimum 1.5 mm thickness, aluminium bus bar for use on 3 phase, 4 wire, 415 volts, A.C. supply with degree of protection IP-42 for the following current carrying capacity, including jointing of sections, flexible joints. expansion joints, bends, and earthing with 2 runs of alum. strips etc. as required.		
53.8.1	800 amps.	metre	13476.00
53.8.2	1000 amps.	metre	15161.00
53.8.3	1250 amps	metre	20004.00
53.8.4	1400 amps	metre	22110.00
53.8.5	1600 amps	metre	22110.00
53.8.6	2000 amps	metre	26321.00
53.8.7	2500 amps	metre	29480.00

NOTE : For rate of copper bus bar add 35% on rates of aluminium bus bar.

54.0 EARTHING

Code No	Description	Unit	Rate Rs. Group 1
54.1	Pipe Earthing as per IS:3043 with perforated 3.0 Mtr. Long, 40 mm dia. ' B ' class G.I. Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300 mm and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance as required.	each	3000.00
54.2	Plate Earthing as per IS:3043 with G.I. Earth plate of size 600mm x 600mm x 6.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer ,nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required.	each	2800.00
54.3	Plate Earthing as per IS:3043 with copper Earth plate of size 600mm x 600mm x 3.0mm by embodying 3 to 4 mtr. below the ground level with 20 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer, nipple ,wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required.	each	5500.00
54.4	S & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/recess including riveting, soldering, saddles, making connection etc. as required.		
54.4.1	6 SWG copper Wire	metre	84.00
54.4.2	8 SWG copper Wire	metre	84.00
54.4.3	10 SWG copper. Wire	metre	70.00
54.4.4	6 SWG G.I. Wire	metre	13.00
54.4.5	8 SWG G.I. Wire	metre	10.00
54.4.6	10 SWG G.I. Wire	metre	8.00
54.4.7	20mm x 3mm copper strip	metre	452.00
54.4.8	25mm x 3mm copper strip	metre	527.00
54.4.9	25mm x 5mm copper strip	metre	843.00
54.4.10	32mm x 6mm copper strip	metre	1201.00
54.4.11	50mm x 6mm copper strip	metre	1966.00
54.4.12	20mm x 3mm G.I. Strip	metre	42.00
54.4.13	25mm x 3mm G.I. Strip	metre	49.00
54.4.14	25mm x 6mm G.I. Strip	metre	93.00
54.4.15	32mm x6mm G.I. Strip	metre	117.00
54.4.16	50mm x 6mm G.I. Strip	metre	185.00

Code No	Description	Unit	Rate Rs. Group 1
54.4.17	25mm x 3mm Alum. Strip	metre	56.00
54.4.18	25mm x 6mm Alum. Strip	metre	108.00
54.4.19	32mm x 6mm Alum. Strip	metre	133.00
54.4.20	50mm x 6mm Alum. Strip	metre	211.00
54.4.21	14 SWG copper wire	metre	56.00
54.4.22	12 SWG copper wire	metre	70.00
54.5	S & Laying following size' A' class G.I. Pipe with accessories for laying earth conductor/strip in ground/surface/recess as required		
54.5.1	15 mm dia.	metre	140.00
54.5.2	20 mm dia.	metre	183.00
54.5.3	25 mm dia.	metre	225.00
54.5.4	32mm dia	metre	267.00
54.5.5	40 mm dia.	metre	309.00
54.5.6	50 mm dia.	metre	393.00
54.6	Mesh earthing as per IS:3043 with copper earth strip of size 20 mm x 3 mm to form a mesh of size 3000 mm x 1000 mm in horizontal formation to create equal sections of 500 mm x 500 mm by means of 10 mm brass bolts, & nuts with spring washer, embodying 1 mtr. Below the ground level, refilling the pit by alternative layers of charcoal & salt up to 500 mm with 20 mm dia, 20mm GI 'B' class watering pipe and 12 mm G I 'B' class pipe for the earth wire including all accessories like nuts, bolts, wire mesh funnel and brick masonry finished chamber covered with hinged CI cover and locking arrangement of size 300 mm x 300 mm complete in all respect.	each	12000.00
54.7	Mesh earthing as per IS:3043 with GI earth strip of size 25 mm x 6 mm to form a mesh of size 3000 mm x 1000 mm in horizontal formation to create equal sections of 500 mm x 500 mm by means of 10 mm brass bolts, & nuts with spring washer, embodying 1 mtr. below the ground level, refilling the pit by alternative layers of charcoal & salt up to 500 mm with 20 mm dia, 20mm GI 'B' class watering pipe and 12 mm G I 'B' class pipe for the earth wire including all accessories like nuts, bolts, wire mesh funnel and brick masonry finished chamber covered with hinged CI cover and locking arrangement of size 300 mm x 300 mm complete in all respect.	each	10000.00
54.8	P & F lightning conductor final made out of 25 mm dia.,300 mm long copper tube having single prong at top with 85 mm dia., 3 mm thick copper base plate including holes etc. complete as required.	each	2000.00
54.9	P & F lightning conductor finial made out of 25 mm dia.,300 mm long G.I. tube having single prong at top with 85 mm dia., 3 m thick G.I. base plate including holes etc. complete as required.	each	750.00
54.10	Rivetting, sweating and soldering of copper /G.I. Tape with another copper /G.I. Tape, base of the finial or any other metallic objects as required.	each	10.00
54.11	P & F copper tape 20mm x 3 mm on parapet or surface of wall in vertical/horizontal run as required.	metre	250.00

Code No	Description	Unit	Rate Rs. Group 1
54.12	P & F G.I. tape 20mm x 3 mm on parapet or surface of wall in vertical/horizontal run as required.	metre	40.00
54.13	P & F testing joint, made out of 20mm x 3mm copper Strip, 125 mm long, with 4 no. tinned brass bolts, nuts, checknuts, spring washer etc. complete as required.	each	250.00
54.14	P & F testing joint, made out of 20mm x 3mm G.I. Strip, 125 mm long, with 4 no.G.I. bolts, nuts, checknuts, spring washer etc. complete as required.	each	50.00
54.15	Maintenance free gel earthing with pipe in pipe /Strip in Pipe technology filled with anti corrosive conductive compound (CPRI tested) below the ground in 150 -200 mm dia earth pit and surrounding filled with required mineral filling compound (MFC should have hygroscopic proper ty to retain the moisture for long time to create low resistance Zone) and C.C. finished chamber covered with hinge type with locking arrangement C.I cover. C.I. frame of size 300mm x300mm complete testing of earth resistance as required of following sizes With pipe in pipe technology (inner pipe dia / outer pipe dia) 80 -100 micron G.I. coating		
54.15.1	With pipe in pipe technology with 80-100 micron G.I. coating		
54.15.1.1	G.I. pipe 2000 mm long , 50/25 mm , terminal 12 mm G.I. strip	set	2808.00
54.15.1.2	G.I. pipe 2000 mm long , 80/40 mm , terminal 12 mm G.I. strip	set	4915.00
54.15.1.3	G.I. pipe 3000 mm long , 50/25 mm , terminal 14 mm G.I. strip	set	4213.00
54.15.1.4	G.I. pipe 3000 mm long , 80/40 mm , terminal 14 mm G.I. strip	set	7723.00
54.15.2	With strip in pipe technology with 80-100 micron G.I. coating		
54.15.2.1	G.I. pipe 2000 mm long , 63/80 mm , inner strip 50 mmx 3mm copper	set	4213.00
54.15.2.2	G.I. pipe 3000 mm long , 63/80 mm , inner strip 50 mmx 3mm copper	set	5617.00
54.15.3	Add extra for GEL / pipe earthing in rocky strata for making pit by boring machine (labour ch.)	set	702.00

55.0 CEILING, FRESH AIR, EXHAUST & VENTILATION FANS AND AIR CIRCULATOR

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
55.1	Making of hole in wall of required size for housing exhaust fan and making good the same, with cement plaster as required of following size:			
55.1.1	Up to 457 mm size	each	240.00	
55.1.2	more than 457 mm & up to 610 mm	each	300.00	
55.2	Fixing of fresh air fan/exhaust fan up to size of 300 mm on ply/ poly board of 6.0 mm in existing window frame including cutting of hole in ply. Nut bolts etc. as required.	each	135.60	
55.3	I T C of ceiling fan and regulator including wiring the down rod up to 30 cm with 3 x 1.5 sq.mm pvc insulated flexible copper conductor making connection testing etc. as required.			
55.3.1	With regulator	each	61.20	
55.3.2	Without regulator	each	54.00	
55.4	P & F double ball bearing capacitor start ceiling fan of approved make complete with regulator and other accessories as required. (for estimation purpose only)			
55.4.1	900 mm sweep	each	1481.00	
55.4.2	1050 mm sweep	each	1621.00	
55.4.3	1200 mm sweep	each	1481.00	
55.4.4	1400 mm sweep	each	1585.00	
55.5	P & F 1.6 mm thick M.S. Recessed fan box, hexagonal/ round of size 100 mm dia, depth 75mm, 12 mm dia rod fan hook with 100 mm length extended on each side .	each	114.00	
55.6	P & F of iron hook/clamp 40 mm x 5 mm M.S. flat complete with nut & bolt etc. as required.	each	54.00	
55.7	P & F of M.S. J- hook of standard design made out of 16 mm dia. M.S. round bar and fixed with cement concrete mortar with required support as required.	each	162.00	
55.8	P&F of capacitor start single phase metallic blade fresh air fan, in existing opening including cost of hardware , flexible copper conductor ,making connections, testing etc. as required.			
55.8.1	225 mm sweep	each	1273.00	1018.00
55.8.2	300 mm sweep	each	1361.00	1089.00
55.9	P&F of Heavy duty capacitor start 900/1400 RPM single phase ISI marked Exhaust fan,ISI:2312 marked in existing opening including making connections testing etc. as required.			
55.9.1	300 mm sweep(900/1400 RPM)	each	2369.00	1895.00
55.9.2	380 mm sweep(900/1400 RPM)	each	2788.00	2230.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
55.9.3	450 mm sweep(900 RPM)	each	3809.00	3047.00
55.10	P & F of ventilating fans, Capacitor start, single phase with PVC impeller, ABS body, automatic openable louver shutter in existing opening including making connection, testing etc. as required.			
55.10.1	200 mm sweep	each	1358.00	1086.00
55.10.2	250 mm sweep	each	1413.00	1130.00
55.11	P & F heavy duty, Double ball bearing and with sturdy mesh guard; Aluminium alloy one piece blade wall mounting oscillating type air circulator conforming to IS:2997, including fixing with anchor bolts, regulator making connection testing etc. as required			
55.11.1	450 mm sweep With three speed regulator	each	5402.00	4322.00
55.11.2	600 mm sweep With three speed regulator	each	6380.00	5104.00
55.11.3	750 mm sweep With three speed regulator	each	7562.00	6050.00
55.12	P & F of capacitor start, three speed wall mounting/cabin fan of following sweep with the help of anchor bolts including making connection testing etc. as required.			
55.12.1	400 mm sweep(Oscillating type)	each	1974.00	1579.00
55.12.2	300 mm sweep(Non oscillating type)	each	1829.00	1463.00
55.13	P & F capacitor start, three speed, oscillating type pedestal fan with adjustable height, of following size with cord and plug top as required.			
55.13.1	400 mm sweep	each	2452.00	1962.00
55.13.2	450 mm sweep	each	2857.00	2286.00
55.14	P & F extra down rod of 12mm dia, B class GI pipe including cutting, threading, drilling, fixing quarter pin etc as reqd.	metre	107.00	
55.15	Numbering of ceiling fans/ fixtures with approved enamel paint etc as reqd	each	16.00	
55.16	P&F of Resistance type regulator of approved make including cutting of sheet, nut bolts, making connections etc as reqd.	each	88.00	
55.17	P&F of Gravity Louver shutter of superior quality made out of M.S. sheet with enamel paint including cost of nuts, bolts, etc as reqd.			
55.17.1	Up to 380 mm size	each	203.00	
55.17.2	above 380 mm size	each	270.00	

56.0 STORAGE WATER HEATER

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
56.1	P & F 4 star rated vertical storage water heater with outer casing made of M.S.sheet finished with anti-corrosive powder coating,inner tank made of pure electrolytic copper/stainless steel , Tubular copper sheathed and Nickel plated heating element/ twin ceramic cartridge heating element, stem type thermostat and thermal cut out,Dual indicating lamps for power supply and thermostat,PUF insulation, Pressure relase valve,fusible plug etc. as required held in position with 4 no. rack bolts,duly wired with 3 core 2.5 Sqmm PVC insulated & sheathed copper conductor and 16 A three pin plug top,including making inlet,outlet heavy gauge C.P. connection,testing etc. as required.			
56.1.1	6 Ltr.	each	6841.00	5473.00
56.1.2	10 Ltr.	each	7887.00	6310.00
56.1.3	15 Ltr.	each	8687.00	6950.00
56.1.4	25 Ltr.	each	9887.00	7910.00
56.1.5	35 Ltr.	each	9622.00	7698.00
56.1.6	50 Ltr.	each	11177.00	8942.00
56.2	P & F ISI marked (IS:2082) Horizontal storage water heater with outer casing made of M.S.sheet finished with anti-corrosive powder coating,inner tank made of pure electrolytic copper/stainless steel , Tubular copper sheathed and Nickel plated heating element/ twin ceramic cartridge heating element, stem type thermostat and thermal cut out,Dual indicating lamps for power supply and thermostat,PUF insulation, Pressure relase valve,fusible plug etc. as required held in position with 4 no. rack bolts,duly wired with 3 core 2.5 Sqmm PVC insulated & sheathed copper conductor and 16 A three pin plug top,including making inlet,outlet heavy gauge C.P. connection,testing etc. as required.			
56.2.1	6 Ltr.	each	7567.00	6054.00
56.2.2	10 Ltr.	each	8115.00	6492.00
56.2.3	15 Ltr.	each	8915.00	7132.00
56.2.4	25 Ltr.	each	11659.00	9327.00
56.2.5	35 Ltr.	each	13864.00	11091.00
56.2.6	50 Ltr.	each	16345.00	13076.00
56.3	P & F stem type ISI marked (IS 3017 / 85) snap action adjustable thermostat storage water heater including making connection testing etc. as required.			
56.3.1	11" stem thermostat	each	182.00	146.00
56.3.2	7" stem thermostat	each	169.00	135.00
56.4	P & F stem type, ISI marked, push to reset type auto	each	198.00	158.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	thermal cut off and rated at 20 A 250 V including testing etc. as required.			
56.5	P & F ISI marked (IS:4159) marked copper sheathed,nickle plated, mineral filled heating element including making connection testing etc as required.			
56.5.1	3.0 KW	each	688.00	550.00
56.5.2	2.0 KW	each	660.00	528.00
56.6	P&F twin ceramic catridge, shock and hard water proof heating element including making connecton testing etc as required			
56.6.1	3.0 KW	each	756.00	605.00
56.6.2	2.0 KW	each	642.00	514.00
56.7	P & F base plate assembly with neoprene rubber gasket, inlet socket with inbuilt NRV/ PRV and drain out system and outlet socket pipe,fusible plug assembly,mounting hardwares complete etc. as required.			
56.7.1	upto 10 Ltr. Capacity SWH	each	1155.00	924.00
56.7.2	15 Ltr. To 50 Ltr. Capacity SWH	each	1375.00	1100.00
56.8	P & F inlet socket with built in safety valve as required.	each	209.00	167.00
56.9	P & F fusible plug pipe assembly for storage water heater as required	each	155.00	124.00
56.10	P & F fusible tablet in fusible plug assembly as required	each	19.00	15.00
56.11	P& F bottom cover with half cover set for storage water heater as required.	each	517.00	414.00
56.12	P&F outlet socket made out of brass for SWH	each	66.00	
56.13	P & F neon indicating lamp of superior quality for storage water heater	each	36.00	
56.14	P&F Brass vent Nut with washer for SWH	each	66.00	
56.15	P & F heavy duty ISI marked C.P. vacuum release valve for Storage water heater as required.	each	218.00	
56.16	P &F Base plate neoprene gasket for SWH	each	43.00	
56.17	P & F ISI marked C.P. adjustable type non return valve for storage water heater.	each	161.00	
56.18	P & F ISI marked pressure reducing valve for storage water heater as required.	each	1815.00	
56.19	P & F of 13 mm angle valve for storage water heater as required.			
56.19.1	C.P ISI marked	each	251.00	
56.19.2	Brass ISI marked	each	251.00	
56.20	P & F heavy duty C.P. connection for storage water heater for inlet and outlet of length 300-600 mm including the cost of nuts, washers etc as required.	set	231.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
56.21	Charges for brass welding of inner copper tank for storage water heater including opening,refixing,testing etc. as required	p.job	354.00	
56.22	Charges for descaling of storage water heater including required chemical, opening, refixing, testing as complete.	p.job	270.00	
56.23	Charges for Fixing of storage water heater including four nos. rag bolts of suitable size,supply & making heavy gauge inlet, outlet C.P. connection, testing, carrying from store to site,etc. as required.			
56.23.1	10 to 15 Ltr capacity	each	660.00	
56.23.2	25 to 50 Ltr capacity	each	660.00	
56.24	SITC of MNRE Approved & confirming to IS: 12933 P-1,2,3,&5 Flat Plate Collector type Solar hot water system with collector, insulated stainless steel storage tank with electrical back up, MS stand for collector & Tank etc. as required of following capacity			
56.24.1	125 litre/ day	each	31250.00	
56.24.2	250 litre/ day	each	56250.00	
56.24.3	375 litre/ day	each	78750.00	
56.24.4	500 litre/ day	each	95000.00	
56.24.5	1000 litre/ day	each	180000.00	
56.25	SITC of MNRE Approved & confirming to IS: 12933 P-1,2,3,&5 Evacuated Tube Collector type Solar hot water system with collector, insulated stainless steel storage tank with electrical back up, MS stand for collector & Tank etc. as required of following capacity			
56.25.1	125 litre/ day	each	28125.00	
56.25.2	250 litre/ day	each	53750.00	
56.25.3	375 litre/ day	each	74500.00	
56.25.4	500 litre/ day	each	87500.00	
56.25.5	1000 litre/ day	each	165000.00	

57.0 INDOOR LIGHTING

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
57.1	P & F strip type flourscent tube fitting fabricated from (CRCA sheet and finished with powder coating / stove enamelled paint)/(extruded non corrosive UV resist EP channel) complete with accessories like (OCCB, starter, starter seat)/ EB, rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube)			
57.1.1	1 X 18 Watts with EB	each	258.00	206.00
57.1.2	1 X 36 Watts with OCCB	each	277.00	222.00
57.1.3	1 X 36 Watts with EB	each	287.00	230.00
57.2	P & F box type fluorescent tube fitting fabricated from CRCA sheet and finished with powder coating / stove enamelled paint complete with accessories like (OCCB, starter, starter seat)/ EB, condensor,rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube)			
57.2.1	1 X 36 Watts with OCCB	each	792.00	634.00
57.2.2	2 X 36 Watts with OCCB	each	1139.00	911.00
57.2.3	1 X 36 Watts with EB	each	599.00	479.00
57.2.4	2 X 36 Watts with EB	each	1118.00	894.00
57.3	P & F industrial fluorescent tube fitting with reflector fabricated from CRCA sheet and finished with powder coating / vitreous enamelled complete with accessories like (OCCB, starter, starter seat)/ EB, condensor,rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required.(without tube)			
57.3.1	With powder coated reflector			
57.3.1.1	1 X 36 Watts with OCCB	each	1119.00	895.00
57.3.1.2	2 X 36 Watts with OCCB	each	1486.00	1189.00
57.3.1.3	1 X 36 Watts with EB	each	1159.00	927.00
57.3.1.4	2 X 36 Watts with EB	each	1511.00	1209.00
57.3.2	With vitreous enamelled/bright anodised reflector			
57.3.2.1	1 X 36 Watts with OCCB	each	1783.00	1426.00
57.3.2.2	2 X 36 Watts with OCCB	each	2130.00	1704.00
57.4	P & F Mirror optics type fluorescent tube fitting fabricated from CRCA sheet and finished with powder coating,aluminium mirror reflector standard cross louvers complete with accessories like (OCCB, starter, starter seat)/ EB, condensor, rotor holder, terminal block duly prewired with copper conductor including making			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	connection, testing etc. as required. (without tube)			
57.4.1	Surface mounting			
57.4.1.1	1 X 36 Watts with OCCB	each	1456.00	1165.00
57.4.1.2	2 X 36 Watts with OCCB	each	2377.00	1902.00
57.4.1.3	1 X 36 Watts with EB	each	1743.00	1394.00
57.4.1.4	2 X 36 Watts with EB	each	2452.00	1962.00
57.4.2	Recess mounting			
57.4.2.1	1 X 36 Watts with OCCB	each	2130.00	1704.00
57.4.2.2	2 X 36 Watts with OCCB	each	2278.00	1822.00
57.4.2.3	1 X 36 Watts with EB	each	2076.00	1661.00
57.4.2.4	2 X 36 Watts with EB	each	2457.00	1966.00
57.5	P & F Mirror optics type fluorescent tube fitting fabricated from CRCA sheet and finished with powder coating,having aluminium mirror reflector,low glare V shape double parabolic cross louvers,complete with accessories like (OCCB, starter, starter seat)/ EB, condensor, rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube)			
57.5.1	Surface mounting			
57.5.1.1	2 X 36 Watts with OCCB	each	2476.00	1981.00
57.5.2	Recess mounting			
57.5.2.1	1 X 36 Watts with OCCB	each	2377.00	1902.00
57.5.2.2	2 X 36 Watts with OCCB	each	2486.00	1989.00
57.5.2.3	2 X 36 Watts with EB	each	2576.00	2061.00
57.6	P & F dark lighter technique mirror optics type fluorescent tube fitting fabricated from CRCA sheet and finished with powder coating,having aluminium mirror reflector with cat.-2 mirror system low glare V shape double parabolic cross louvers for 65 degree cut off as per LG 3 guide of CIBSE,UK complete with accessories like (OCCB, starter, starter seat)/ EB, condensor, rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube)			
57.6.1	Surface mounting			
57.6.1.1	2 X 36 Watts with OCCB	each	2972.00	2378.00
57.6.1.2	2 X 36 Watts with EB	each	2992.00	2394.00
57.6.2	Recess mounting			
57.6.2.1	1 X 36 Watts with OCCB	each	2476.00	1981.00
57.6.2.2	2 X 36 watts with OCCB	each	2942.00	2354.00
57.6.2.3	1 X 36 Watts with EB	each	2655.00	2124.00
57.6.2.4	2 X 36 Watts with EB	each	3120.00	2496.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
57.7	P & F Fluorscent tube rod in existing fixtures as required			
57.7.1	Flourscent powder coated			
57.7.1.1	18/20 Watts	each	42.00	34.00
57.7.1.2	36/40 Watts	each	36.00	29.00
57.7.2	Triphosphor coated			
57.7.2.1	18/20 Watts	each	94.00	75.00
57.7.2.2	36/40 Watts	each	99.00	79.00
57.7.3	T5 Lamps			
57.7.3.1	14 Watts	each	88.00	70.00
57.7.3.2	28 Watts	each	100.00	80.00
57.8	P & F Ballast for existing FTL / CFL fixture as required.			
57.8.1	Polyester copper ballast 18/36 Watts suitable for FTL	each	178.00	142.00
57.8.2	Vacuum pressure impregnated open construction(VPIT) copper ballast 18/36 Watts for FTL	each	132.00	106.00
57.8.3	High frequency electronic ballast 18/36 watts for FTL	each	132.00	106.00
57.8.4	Vacuum pressure impregnated copper ballast for 9/11/13/18 watt CFL	each	120.00	96.00
57.8.5	Vacuum pressure impregnated copper ballast for 26 watt CFL	each	198.00	158.00
57.9	P & F Capacitors for power factor improvement in existing fluorscent lamp fixture as required.			
57.9.1	4 Mfd 250 V	each	115.00	92.00
57.9.2	8 Mfd 250 V	each	157.00	126.00
57.10	P & F starter for existing fluorscent lamp fixture as required.			
57.10.1	FSU	each	10.00	8.00
57.10.2	FS-2 rated 110 V for 2x20 W FTL luminaire with single ballast	each	19.00	15.00
57.11	P & F fluorscent tube fitting fabricated from prephosphated and powder coated CRCA steel channel with coloured ABS end caps complete with accessories like copper wound open construction (VPIT) ballast, starter,starter seat,rotor holder, terminal block duly prewired with copper conductor including making connection, testing etc. as required. (without tube)			
57.11.1	1 X 18/20 Watts	each	317.00	254.00
57.11.2	1 X 36/40 Watts	each	406.00	325.00
57.12	P & F of recess mounting CFL luminaire made from powder coated CRCA sheet with perforations on the body with metalised polystyrene louvers, complete with accessories extra low watt loss copper ballast,starter,holder,condensor,terminal block duly prewired with copper conductor including making connections, testing etc. as required (without lamp)			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
57.12.1	2 X PL-36 Watt	each	2774.00	2219.00
57.12.2	3 X PL-36 Watt	each	3170.00	2536.00
57.13	P & F of surface/ recess mounting CFL luminaire made from powder coated CRCA sheet with aluminium reflector assembly electrochemically brightened and anodized cross louvers, complete with accessories e copper ballast, starter, holder, terminal block duly prewired with copper conductor including making connections, testing etc. as required (without lamp)			
57.13.1	Surface mounting 2 X PL-9/11 Watt	each	991.00	793.00
57.13.2	Recess mounting 2 X PL-9/11 Watt	each	941.00	753.00
57.14	P & F of surface mounting 2 X 9/11 watt CFL luminaire made from engineering plastic with aluminium reflector assembly electrochemically brightened and anodized cross louvers, complete with accessories copper ballast,starter,holder,terminal blockduly prewired with copper conductor including making connections, testing etc. as required (without lamp)	each	1238.00	990.00
57.15	P & F adjustable type recess mounting down lighter with electrochemically brightened and anodized aluminium reflector complete with holder prewired upto terminal block including making connection testing etc.as required. (without lamp)			
57.15.1	Without ballast suitable for GLS lamp/direct fit (retrofit) CFL	each	479.00	383.00
57.15.2	With copper ballast and polycarbonate lamp holder suitable for CFL 9/11/13/18 watt	each	559.00	447.00
57.16	P & F low depth recess mounting down lighter with electrochemically brightened and anodized aluminium reflector complete with ballast, holder prewired upto terminal block including making connection testing etc.as required. (without lamp)			
57.16.1	Suitable for 1 X PL-11/13/18 watt,	each	479.00	383.00
57.16.2	Suitable for 2 X PL-11/13/18 watt	each	559.00	447.00
57.17	P & F 9/11/13/ Watt CFL mirror light with CRCA powder coated housing,diffuser,end covers,copper ballast,holder prewired upto terminal block including making connection testing etc. as required (without tube)	each	347.00	278.00
57.18	P & F energy efficient direct fit (Retrofit) composite compact fluroscent lamp of energy saving labelling not less than 3 star in existing holder/ fixture as required.			
57.18.1	5 Watt	each	108.00	86.00
57.18.2	8/9 Watt	each	120.00	96.00
57.18.3	11 Watt	each	132.00	106.00
57.18.4	14/15 Watt	each	136.00	109.00
57.18.5	18/20 Watt	each	152.00	122.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
57.19	P & F two pin energy efficient compact flourscent lamp in existing holder/fixture as required.			
57.19.1	7/9 watt	each	60.00	48.00
57.19.2	11 watt	each	64.00	51.00
57.19.3	13/18 watt	each	88.00	70.00
57.19.4	26 watt	each	108.00	86.00
57.19.5	36 Watt 4 pin	each	116.00	93.00
57.19.6	54/55 Watt 4 pin	each	261.00	209.00
57.20	P & F round/square shape surface mounting ceiling fitting complete with holder,aluminium anodized back plate glass globe of approved design,prewired terminal block making connection,testing etc. as required.			
57.20.1	150 mm	each	157.00	
57.20.2	200 mm	each	208.00	
57.20.3	250 mm	each	261.00	
57.21	P & F of light sensing device meant to be integrated into the luminaire adding a regulating function in combination with a regulating ballast. The device should have clips for easy mounting to be clicked on to the lamp using special clip. The device should be able to handle maximum of 16 regulating HFR ballasts to adjust the lighting level of the luminaire in accordance with the incoming daylight levels.	each	3396.00	
57.22	P & F of occupancy sensor with a build in lighting switch designed for automatic switching on/off of lights in case of no occupancy for a pre-determined amount of time in indoor applications. The device must have a circular detection pattern for a range of 8/ 6.7 meters diameter at a mounting height of 2.7 meters. The device should be able to work with electronic ballasts and handle lighting loads upto 10A(GP1)/ 6A (GP2).	each	3962.00	3170.00
57.23	P & F of IP20 LED Recessed/ Surface Mounted Round/ sqaure Non Dimmable Downlight with die-cast aluminum housing & Heat sink for heat dissipation, high purity reflector with external driver having efficiency > 85% and in compliance to IEC standards. (supplied together with luminaire) Power consumption of =< 7w/10w/8w/12w/15w/18W with 100/500/750/1100/1250 lumens, system lumen, efficeancy of 70 lm / Watt or 100 lm / Watt output suitable to replace 1x18W/ 2x18w/2x26w CFL downlights, life time of 50000 Burning Hours with 70% of intial Lumen maintained. CCT 3000° K, 4000° K and 6000° K. Fixture shall be CE Compliance.			
57.23.1	Recessed mounting			
57.23.1.1	LED downlight 5/6/7 W	each	609.00	
57.23.1.2	LED downlight 8 W	each	688.00	
57.23.1.3	LED downlight 9/10/12 W	each	847.00	

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
57.23.1.4	LED downlight 14/15 W	each	900.00	
57.23.1.5	LED downlight 18/20 W	each	953.00	
57.23.2	Surface Mounting			
57.23.2.1	LED downlight 18/20 W	each	1483.00	
57.24	P & F of IP20 LED Recessed/ Surface Mounted Round/ square Dimmable Downlight with die Cast aluminum housing & Heat sink for heat dissipation, high purity reflector with external driver having efficiency >85% and in compliance to IEC standards. (supplied together with luminaire) Power consumption of < 15W/ 20W with 1100/1400 lumens system lumen efficacy of 70 lm / Watt output downlights, life time of 50000 Burning Hours with 70% of initial Lumen maintained. CCT 3000° K, 4000° K and 6000° K. Fixture shall be CE compliance.			
57.24.1	Recessed mounting			
57.24.1.1	3W LED downlighter Round	each	434.00	
57.24.1.2	6/8W LED downlighter Round/Square	each	688.00	
57.24.1.3	LED downlight 12/14/15 W	each	1006.00	
57.24.1.4	LED downlight 18/20 W	each	1297.00	
57.24.2	Surface Type			
57.24.2.1	6/8W LED downlighter Round	each	794.00	
57.24.2.2	LED downlight 12/14/15 W	each	1165.00	
57.24.2.3	LED downlight 18/20 W	each	1483.00	
57.25	P & F of IP20 LED Ceiling/ Recessed/ suspended mounting light fixture made from CRCA sheet steel housing, high purity/ transmissivity diffuser for uniform light distribution. High efficiency driver electronics having efficiency > 85% and in compliance to IEC standards. (integral driver). Power consumption of 40 W/50W/60W, 3000/3300/4200 lumens, system lumen efficacy of 70-80 lm / Watt output suitable for 2x36W FTL/ 2x36w CFL/3x36w CFL light fixtures, life time of 50000 burning Hours with 70% initial Lumens maintained. CCT 3000° K, 4000° K and 6000° K. Fixture shall be CE compliance.			
57.25.1	Recessed mounting			
57.25.1.1	36/40W LED Light 1'x4' with acrylic/ prismatic front cover	each	3601.00	
57.25.1.2	48W LED Light 1'x4' with acrylic/ prismatic front cover	each	4130.00	
57.25.1.3	36W LED Light 2'x2' with acrylic/ prismatic front cover	each	2965.00	
57.25.1.4	43W LED Light 2'x2' with acrylic/ prismatic front cover	each	3707.00	
57.25.1.4	48/50W LED Light 2'x2' with acrylic/ prismatic front cover	each	6429.00	
57.25.2	Suspended mounting			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
57.25.2.1	36-40 /48W LED Light 1'x4' with acrylic/ prismatic front cover	each	3654.00	
57.25.3	Surface Mounting			
57.25.3.1	36W LED Light 1'x4' with acrylic/ prismatic front cover	each	4448.00	
57.25.3.1	40-45/48W LED Light 1'x4' with acrylic/ prismatic front cover	each	3389.00	
57.25.3.2	36W LED Light 2'x2' with acrylic/ prismatic front cover	each	3601.00	
57.26	P & F of IP20 LED batten type light fixture made from CRCA sheet stlle housing suitable for mounting LED tube system (integral driver), Power consumption of 18W/36W, 1500/3000 lumens, system lumen efficiency 80 lm/ watt output, life time of 50000 burning hours with 70% initial lumen maintained. CCT 3000° K, 4000° K and 6000° K.			
57.26.1	4' LED Tube shape fixture 15W	each	1112.00	
57.26.2	4' LED Tube shape fixture 2x15W	each	1694.00	
57.26.3	4' LED Tube shape fixture 18W	each	1048.00	
57.26.4	4' LED Tube shape fixture 2x18W	each	932.00	
57.27	P & F of IP65 IK10 rated LED bulk head type ligh fixture made from CRCA sheet steel housing suitable for mounting LED tube system (integral driver), Powen consumption of 10-15W , 500-600 lumens system lumen efficiency 70 lm/ watt output suitable for1x100 W GLS/ 9W CFL bulk head fixtures, life time of 50000 burning hours with 70% initial lumen maintained. CCT 3000° K, 4000° K and 6000° K. Fixture shall be in compliance with CE & KEMA standards.			
57.27.1	LED Bulk head luminaire 6/7W	each	1112.00	
57.27.2	LED Bulk head luminaire 9/10W	each	1271.00	
NOTE : Deduct 20% on Rates of Group 1 for rates of Group 2				

58.0 OUTDOOR LIGHTING

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
58.1	P & F IP-43 protected street light luminaire on existing bracket suitable for FTL, made out from CRCA sheet steel finished with stove enameled paint, having deep drawn aluminium alloy canopy reflector cum control gear tray, clear ribbed acrylic diffuser held with synthetic gasket, with all necessary accessories copper wound ballast, capacitor, starter, holder prewired with pvc insulated copper conductor including making connection testing etc. as required. (without tube)			
58.1.1	1 X 36 Watt	each	1171.00	937.00
58.1.2	2 X 36 Watt	each	1801.00	1441.00
58.2	P & F IP-54/65 protected street light luminaire on existing bracket suitable for HPMV lamp, made out from powder coated single piece die cast aluminium housing electrochemically brightened and anodized aluminium reflector, UV stabilised acrylic bowl cover and accessories like copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp)			
58.2.1	1 X 70/80 Watt	each	2744.00	2195.00
58.2.2	1 X 125/150 Watt	each	3634.00	2907.00
58.2.3	1 X 250 Watt	each	4828.00	3862.00
58.3	P & F IP-54/65 protected street light luminaire on existing bracket suitable for HPSV/ MH LAMP, made out from powder coated single piece die cast aluminium housing, electrochemically brightened and anodized POT optics aluminium reflector, heat resistant and toughened glass cover and accessories like copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp)			
58.3.1	1 X 70/80 Watt	each	2995.00	2396.00
58.3.2	1 X 125/150 Watt	each	4142.00	3314.00
58.3.3	1 X 250 Watt	each	4773.00	3818.00
58.4	P & F IP-43 protected street light luminaire on existing bracket suitable for CFL, made out from CRCA sheet steel finished/ Aluminium coating with stove enameled paint, having deep drawn aluminium alloy canopy reflector cum control gear tray, clear ribbed acrylic diffuser held with synthetic gasket, with all necessary accessories copper wound ballast, starter, holder prewired with pvc insulated copper conductor including making connection testing etc. as required. (without tube)			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
58.4.1	1 X 9/11/13/18 Watt	each	1081.00	865.00
58.4.2	1 X 36 Watt	each	1171.00	937.00
58.5	P & F IP65 protected decorative lighting luminaire Post top/ Bollard suitable for following lamps, made of powder coated cast aluminium housing, moulded acrylic lamp compartment with built in anodized aluminium louvers for lamp shielding and glare control, metallic lid top cover, including the cost of control gear complete in all respect. Bollards are including cost of decorative base pipe/ plate. (without lamp)			
58.5.1	70 Watt HPSV/125 Watt HPMV Post top	each	4413.00	3530.00
58.5.2	70 Watt Metal Halide Bollard	each	4233.00	3386.00
58.5.3	18/13 Watt CFL Bollard	each	3049.00	2439.00
58.6	P & F IP-65 protected decorative lighting luminaire Post top/ Bollard suitable for following lamps , made of powder coated die cast aluminium housing, UV stabilised polyethylene bowl, including the cost of control gear complete in all respect as required. Bollards are including cost of decorative base pipe/ plate. (without lamp)			
58.6.1	70 Watt Metal Halide Post top	each	4545.00	3636.00
58.6.2	70 watt HPSV/125 Watt HPMV Post top	each	4545.00	3636.00
58.6.3	70 Watt Metal Halide Bollard	each	5088.00	4070.00
58.6.4	18/13 Watt CFL Bollard	each	4356.00	3485.00
58.7	P & F IP -54 protected flood light luminaire suitable for Tungston Halogen lamp comprising of powder coated die cast aluminium housing, electrochemically brightened and anodized textured aluminium reflector, covered with suitably gasketed heat resistant and toughened glass, porcelain holder, rewired with pvc insulated copper conductor up to terminal block including making connection testing etc. as required. (without lamp)			
58.7.1	1 X 500 Watt	each	540.00	432.00
58.7.2	1 X 1000 Watt	each	1171.00	937.00
58.8	P & F IP -65 protected integral flood light luminaire suitable for HPSV/ Metal halide lamp comprising of powder coated die cast aluminium housing, electrochemically brightened and anodized stippled aluminium reflector, covered with suitably gasketed heat resistant and toughened glass, porcelain holder, integral control gear box having copper ballast, capacitor, electronic ignitor prewired with pvc insulated copper conductor up to terminal block including making connection testing etc. as required. (with out lamp)			
58.8.1	1 X 150 Watt	each	4138.00	3310.00
58.8.2	1 X 250 Watt	each	5313.00	4250.00
58.8.3	1 X 400 Watt	each	5854.00	4683.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
58.9	P & F High pressure sodium vapour/ High pressure mercury vapour/ Metal halide/ Halogen lamp as required.			
58.9.1	HPSV Elleptical lamp normal output			
58.9.1.1	70 Watt (without ignitor)	each	189.00	151.00
58.9.1.2	150 Watt	each	254.00	203.00
58.9.1.3	250 Watt	each	261.00	209.00
58.9.1.4	400 Watt	each	341.00	273.00
58.9.2	HPSV tubular lamp normal output			
58.9.2.1	70 Watt	each	182.00	146.00
58.9.2.2	150 Watt	each	254.00	203.00
58.9.2.3	250 Watt	each	261.00	209.00
58.9.2.4	400 Watt	each	327.00	262.00
58.9.3	HPMV lamp			
58.9.3.1	80 Watt BC lamp	each	109.00	87.00
58.9.3.2	125 Watt BC lamp	each	113.00	90.00
58.9.3.3	160 Watt MLL lamp BC	each	170.00	136.00
58.9.3.4	250 Watt ES lamp	each	218.00	174.00
58.9.4	Metal halide lamp double ended			
58.9.4.1	70 Watt	each	327.00	262.00
58.9.4.2	150 Watt	each	327.00	262.00
58.9.4.3	250 Watt	each	919.00	735.00
58.9.5	Metal halide lamp single ended tubular			
58.9.5.1	150 Watt	each	472.00	378.00
58.9.5.2	250 Watt	each	501.00	401.00
58.9.5.3	400 Watt	each	501.00	401.00
58.9.6	Halogen tube lamp			
58.9.6.1	500 Watt	each	47.00	38.00
58.9.6.2	1000 Watt	each	65.00	52.00
58.10	P & F Capacitors for power factor improvement in existing HPSV/ HPMV/ Metal halide lamp fixture as required.			
58.10.1	8 mfd	each	73.00	58.00
58.10.2	10 mfd	each	87.00	70.00
58.10.3	12/15 mfd	each	116.00	93.00
58.10.4	16 mfd	each	138.00	110.00
58.10.5	20 mfd	each	160.00	128.00
58.10.6	33 mfd	each	254.00	203.00
58.10.7	43/42 mfd	each	290.00	232.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
58.11	P & F Electronic ignitor suitable for HPSV/ Metal halide lamp up to 30.0 Mtr. distance as required.	each	109.00	87.00
58.12	P & F low loss electromagnetic polyester copper ballast suitable for HPMV / HPSV / Metal halide lamp luminaire as required.			
58.12.1	For HPMV lamp			
58.12.1.1	80 Watt	each	144.00	115.00
58.12.1.2	125 Watt	each	144.00	115.00
58.12.1.3	250 Watt	each	342.00	274.00
58.12.2	For HPSV/ Metal halide lamp			
58.12.2.1	70 Watt	each	817.00	654.00
58.12.2.2	150 Watt	each	865.00	692.00
58.12.2.3	250 Watt	each	919.00	735.00
58.12.2.4	400 Watt	each	919.00	735.00
58.13	P & F vacuum pressure impregnated copper ballast suitable for HPMV / HPSV / Metal halide lamp luminaire as required.			
58.13.1	For HPMV lamp			
58.13.1.1	80 Watt	each	847.00	678.00
58.13.1.2	125 Watt	each	908.00	726.00
58.13.1.3	250 Watt	each	1634.00	1307.00
58.13.2	For HPSV/Metal halide lamp			
58.13.2.1	70 Watt	each	817.00	654.00
58.13.2.2	150 Watt	each	1307.00	1046.00
58.13.2.3	250 Watt	each	1888.00	1510.00
58.13.2.4	400 Watt	each	2650.00	2120.00
58.14	P & F IP-54 protected Bulkhead luminaire suitable for 100 Watt GLS / 11/13 Watt CFL lamp made out from Die cast aluminium alloy body, suitably gasketed frosted glass cover including making connection testing etc. as required.			
58.14.1	100 Watt GLS lamp	each	330.00	264.00
58.14.2	9/11/13 Watt CFL lamp	each	472.00	378.00
58.15	P & F of IP 55 protected light controlled switch based on infrared sensing and daylight with built in over load protection, timer to switch OFF at preselected time. Switch shall have 7 day power backup without hampering of preset time and over ride facility for maintenance purpose			
58.15.1	Suitable for 3 kw load direct lighting load (single phase)	each	5475.00	4380.00
58.15.2	Suitable for 15 kw load (three phase) including contactor, MCB, cable glands, terminal block and locking arrangement	each	20352.00	16282.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
58.16	Supply and erection of hot dipped galvanised steel swaged tubular pole /GI Conical Pole conforming to IS: 2713-1980 (part I to II) with galvanised base plate of size 400mm x 400mm x 7mm in position including excavation of the pit and filling the same with C.C. of M-10/M-20 grade (1:3:6)/ grade(1:1.5:3) from base plate to 50cm above ground level, with the help of steel frame not less than 40 cm dia up to 114.3mm outer dia and 50 cm beyond 114.3mm outer dia around the pole. Duly finished with cement plaster, earthing terminals , cable entry, GI cable sleeve complete as required. The pole shall be galvanised using ISI mark tube for structural purpose.			
58.16.1	7/7.5 Mtr.	each	17781.00	14225.00
58.16.2	8 /8.5 Mtr.	each	21591.00	17273.00
58.16.3	9 Mtr.	each	26042.00	20834.00
58.16.4	10 Mtr.	each	28682.00	22946.00
58.16.5	11 Mtr.	each	33519.00	26815.00
58.16.6	12 Mtr.	each	39069.00	31255.00
58.17	Add for supply and fixing of hot dipped galvanised Overhang of following size over the existing poles			
58.17.1	76.1mm OD x 3.25mm thickness	each	946.00	757.00
58.17.2	88.9mm OD x 3.25mm thickness	each	1198.00	958.00
58.18	Supply and erection of Octagonal pole of following length and dimension as per table-3 with base plate on the cement concrete foundation of M-15 /M-20 grade (1:1.5:3) with the help of anchor bolts of grade 6.8 (IS 1367 P III). The pole shall be made of S-355JO grade steel sheet , folded lengthwise to obtained Octagonal shape, having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning.			
58.18.1	7 Mtr.	each	15962.00	12770.00
58.18.2	8 Mtr.	each	17650.00	14120.00
58.18.3	9 Mtr.	each	23220.00	18576.00
58.18.4	10 Mtr.	each	26661.00	21329.00
58.18.5	11 Mtr	each	34248.00	27398.00
58.18.6	12 Mtr	each	39309.00	31447.00
58.19	Supply, Erection and Fixing of hot dipped galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles			
58.19.1	Single arm overhang	each	1382.00	1106.00
58.19.2	Double arm overhang	each	2078.00	1662.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
58.20	Supply, erection testing and commissioning of high mast lighting system (as per CP3-TRT/1996 of ILE, UK) consisting of totally hot dip galvanised by single dipped method high mast, lantern carriage suitable for up to 12 nos luminaries, mast head assembly, two nos aviation obstruction neon lights, double drum type self sustaining winch, integral power tool(winch motor with control circuit) hot dipped galvanised heavy duty pipe lightening finial, suitable ropes and CC foundation of M-15 grade complete as required. The mast is constructed from mild steel plates (as per BS-EN 10025) cut and folded to form a polygonal section, telescopic jointed and welding as per BS 5135. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning of high mast. with all accessories, which also includes internal electrical cable and panel with foundation, erection & commissioning excluding luminaries and lamps			
58.20.1	16 Mtr HM (in 2 section)	each	424088.00	339270.00
58.20.2	20 Mtr Hm (in 2 section)	each	469585.00	375668.00
58.20.3	25 Mtr Hm (in 2 section)	each	567706.00	454165.00
58.20.4	30 Mtr HM (in 3 section)	each	665360.00	532288.00
58.21	P & F IP-65 protected multi tap ballast street light luminaire on existing bracket suitable for HPSV LAMP, made out from powder coated single piece die cast aluminium housing, electrochemically brightened and anodized POT optics aluminium reflector, heat resistant and toughened glass cover and accessories like multi tap copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp)			
58.21.1	1 X 150/ 100 Watt	each	2206.00	1765.00
58.21.2	1 X 250/ 150 Watt	each	2765.00	2212.00
58.22	P & F of aviation obstruction light luminaire comprising of yellow painted die cast aluminium alloy housing, built in 75 VA step up transformer, heat resistant clear glass cover, neon spiral lamp complete in all respect	each	9144.00	7315.00
58.23	P & F of aviation obstruction light luminaire comprising of yellow painted die cast aluminium alloy housing, red coloured polycarbonate dome, 2x100 watt GLS lamp complete in all respect	each	4676.00	3741.00
58.24	P & F of aviation obstruction light luminaire comprising of yellow painted die cast aluminium alloy housing, red coloured polycarbonate dome, LED lamp complete in all respect	each	3949.00	3159.00
58.25	P & F of IP 65/ 67 protected LED strip flood light system with aluminium housing, 9 X 1W , 24V DC LED lamps with dynamic color changing capability available in quick connecting cable coupled with various mounting accessories. Ability to create 16.7 million uniform,	each	2206.00	1765.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	smooth and brilliant colors without revealing any lamp image. Available in 5 colors – amber, green, blue, red and white.			
58.26	P & F of IP 65/ 67 protected LED flood light system with aluminium housing, 3 X 1W, 220V, 50Hz LED lamps with dynamic color changing capability available in quick connecting cable coupled with various mounting accessories. Ability to create 16.7 million uniform, smooth and brilliant colors without revealing any lamp image. Available in 5 colors – amber, green, blue, red and white.	each	2765.00	2212.00
58.27	P & F of IP 68 protected LED underwater light system with Die cast housing, toughened glass diffuser, 9 X 1W, 12V DC LED lamps with dynamic color changing capability available in quick connecting cable coupled with various mounting accessories. Ability to create 16.7 million uniform, smooth and brilliant colors without revealing any lamp image. Available in 5 colors – amber, green, blue, red and white.	each	24938.00	19950.00
58.28	Supply and erection of Decorative Cast Iron pole as per approved design of following length with base plate on the cement concrete foundation of M-15 grade (1:1.5:3) with the help of anchor bolts of grade 6.8 (IS 1367 P III). The pole shall be made of Cast Iron as per IS 210:1993, precision machining and filling job to achieve good finish and a fine coat of primer on each element before assembling. After assembling of each element one coat of primer and two coats of P.U. paint are applied. Approved coloured UV resist coating of mat/ glossy/ metallic finish followed after air drying of pole. The pole shall have a weatherproof flush door and locking arrangements, two/ one arm bracket of length of 430/380mm complete in all respect.			
58.28.1	2 Mtr.	each	17976.00	14381.00
58.28.2	2.6 Mtr.	each	20990.00	16792.00
58.28.3	3.0 Mtr.	each	23795.00	19036.00
58.28.4	4.0 Mtr.	each	25458.00	20366.00
58.28.5	5.0 Mtr.	each	29926.00	23941.00
58.28.6	6.0 Mtr	each	35641.00	28513.00
58.28.7	7.0 Mtr	each	39485.00	31588.00
58.28.8	8.0 Mtr	each	43642.00	34914.00
58.29	Add extra in rates of outdoor luminaires for switching module along with Multi-Tap ballast attachment with capability of auto changeover to lower wattage as per selected duration during non-peak hours.	each	2619.00	2095.00
58.30	Providing & fixing of IP-54 protected street light luminaire on existing bracket suitable for '36' watt CFL, made out from polycarbonate cement gray in bult colour finished with electro chemically brightened and anodized aluminum alloy canopy reflector cum control gear tray, UV stabilized unbreakable polycarbonate cover and			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	accessories like copper wound VPIT ballast, capacitor, starter, holder pre wired with FR PVC insulated copper conductor including making connection testing etc. as required (Without CFL lamps)			
58.30.1	1 X 36 W CFL	each	1343.00	1074.00
58.30.2	2 x 36 Watt CFL	each	2105.00	1684.00
58.31	P/ F IP-65/ IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with high power LEDs . Diffuser / glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 100 lum/watt high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 50000 burning hours with 70 % of initial lumens maintained. Fixture shall be in CE compliance.			
58.31.1	IP-65 protected LED street light luminaries			
58.31.1.1	LED street light fixture 20-25 watt	each	1870.00	1496.00
58.31.1.2	LED street light fixture 30-40 Watt	each	2806.00	2245.00
58.31.1.3	LED street light fixture 45 Watt	each	4364.00	3491.00
58.31.1.4	LED street light fixture 60 Watt	each	5715.00	4572.00
58.31.1.5	LED street light fixture 72 Watt	each	6650.00	5320.00
58.31.1.6	LED street light fixture 80-90 watt	each	8313.00	6650.00
58.31.1.7	LED street light fixture 110-120 watt	each	12469.00	9975.00
58.31.1.8	LED street light fixture 150 watt	each	14547.00	11638.00
58.31.1.9	LED street light fixture 210 watt	each	25977.00	20782.00
58.31.2	Warm White			
58.31.2.1	BRTFG 45W LED WW	each	6607.00	5286.00
58.31.2.2	BRTFG 100W LED WW	each	12282.00	9826.00
58.31.2.3	BRTFG 120W LED WW	each	15586.00	12469.00
58.31.2.4	BRTFG 160W LED WW	each	18704.00	14963.00
58.32	P & F of IP-66 protected high power LED flood light system with extruded aluminium housing , toughened glass diffuser with suitable lenses on LED to achieve various beam angles, 240 volt, 50Hz, of high power LED lamps supplied with pre wired cable of 1 mtr. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 50000 burning hours with 70 % of initial lumen be maintained. Light output in red , green , blue, cool white or warm white colour as per engineers choice. Fixtures shall be CE compliance			
58.32.1	High power LED flood light 30 watt	each	2598.00	2078.00
58.32.2	High power LED flood light 40 watt	each	4150.00	3320.00
58.32.3	High power LED flood light 60 watt	each	5611.00	4489.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
58.32.4	High power LED flood light 80 watt	each	7793.00	6234.00
58.32.5	High power LED flood light 100 watt	each	9871.00	7897.00
58.32.6	High power LED flood light 120 watt	each	11950.00	9560.00
58.32.7	High power LED flood light 150 watt	each	15067.00	12054.00
58.32.8	High power LED flood light 160 watt	each	16106.00	12885.00
58.32.9	High power LED flood light 180 watt	each	17145.00	13716.00
58.32.10	High power LED flood light 200 watt	each	20782.00	16626.00
58.32.11	High power LED flood light 240 watt	each	23379.00	18703.00
58.32.12	High power LED flood light 300 watt	each	30653.00	24522.00
58.32.13	High power LED flood light 350 watt	each	32918.00	26334.00
58.33	P & F of IP68, IK10 protected LED Buried marker light / Step Light Fixture. Fixture made of powder coated die cast aluminium with Toughened Glass cover and appropriate beam angle lens to be used as per requirement. The System level Luminous efficacy must be >90 Lumen/W. High Power LEDs at 1W/2W per LED. The driving current should be Minimum 350 mA per LED. CRI>70, CCT: 3000/6500 K. The integral SMPS based electronic driver must be constant current and surge protection of min. 4KV(L-N) and efficiency > 85%, PF>0.9 and input Voltage range of 90-270V AC at 50Hz. System life of 50000 Burning hours with 70% of Initial Lumens maintained. Light should include quick connecting cable coupled with various mounting accessories. Light output in Cool white or Warm White Colour as per engineers choice. Fixture must be in compliance with IS/CE Standards.			
58.33.1	Burial Light - 5W	each	8313.00	6650.00
58.33.2	Burial Light - 10W	each	10910.00	8728.00
58.33.3	Burial Light - 20W	each	18704.00	14963.00
58.33.4	Step Light - 5W	each	2078.00	1662.00
58.33.5	Rectangular LED Marker Light	each	3637.00	2910.00
58.33.6	Step Light LED	each	6754.00	5403.00
58.34	P & F of IP65 IK10 protected LED Bollard fixture. Light Fixture made of powder coated aluminium/Steel housing with diffuser for uniform distribution. The System level Luminous efficacy > 85 Lumen/W. SMD LEDs . CRI>70, CCT: 3000/4000/6000 K. The integral SMPS based electronic driver must be constant current and inbuilt surge protection of min. 4KV(L-N) and efficiency > 85%, PF>0.9 and input Voltage range of 90-270V AC at 50Hz. System life of 50000 burning hours with 70% of Initial Lumens maintained. Light should include quick connecting cable coupled with various mounting accessories. Light output in Cool white or Warm White Colour as per engineers choice. Fixture must be in compliance with IS/CE Standards.			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
58.34.1	0.5 mtr high bollard	each	3812.00	3050.00
58.34.2	0.8 mtr high bollard	each	3812.00	3050.00
58.34.3	1.0 Mtr Bollard	each	5715.00	4572.00
58.35	P&I of IP65 protected Top/Bottom mounted LED Post top Light system. Fixture made of powder coated die cast aluminium housing with UV stabilized PC diffuser. The System level Luminous efficacy >90 Lumen/W. SMD LEDs , System CRI>70, CCT: 3000/4000/6500 K. The integral SMPS based electronic driver must be constant current and surge protection of min. 4KV(L-N) and efficiency > 85%, PF>0.9, THD<20% and input Voltage range of 90-270V AC at 50Hz. System life of 50000 burning hours with 70% of Initial Lumens maintained. Light output in Cool white or Warm White Colour as per engineers choice. Fixture must be in compliance with IS/CE Standards. External Surge Protection Device (SPD) to be connected separately			
58.35.1	40W LED Post Top Fixture Top Mounted	each	6754.00	5403.00
58.35.2	65W LED Post Top Fixture Bottom Mounted	each	7623.00	6098.00
58.35.3	45W LED Post Top Fixture Indirect type	each	11950.00	9560.00
58.36	P&I of IP66 protected High Power LED Linear Flood Light System. Fixture made of powder coated Extruded Aluminium Housing with UV stabilized PC/Toughened Glass cover and appropriate lens to be used to achieve various beam angle pattern. Fixture suitable for input 12V DC, Power consumption should be 6W/0.5A per Feet with System level Luminous efficacy >80 Lumen/W. LM80 Approved RGB LEDs to be used. System CRI>70, Color Red/ Green/ Blue/ RGB/ W/ WW. The fixture must have IP66 protected 5mm Round female connector for input, The fixture must have provision to extend further. System life of 50000 burning hours with 70% of Initial Lumens maintained. Light output in Red, Green, Blue, Cool white or Warm White Colour as per requirement. Fixtures shall be CE compliance SMPS based electronic driver current rating should be chosen separately on complete series of linear flood light.			
58.36.1	Linear LED Strip 1 Feet (With driver)	each	8313.00	6650.00
58.36.2	Linear LED Strip 2 Feet (with Driver)	each	12469.00	9975.00
58.36.3	Linear LED Strip 3 Feet (with Driver)	each	16625.00	13300.00
58.36.4	Linear LED Strip 4 Feet (with Driver)	each	22860.00	18288.00
58.37	S& F of all in one solar LED street light fixture with Integrated high efficient Monocrystalline panel with Lithium (LiFePO4) Ferro Phosphate battery with BIS approved make .luminaire should be secondary optic lenses for better distribution with delivered efficacy of > 100 Lumen per watt. Bidder shall have in house R&D Laboratory which is recognised by			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	ministry of Science & Technology department, Govt. Of India/NABL.Bidder shall have inhousepole &luminaire manufacturing facility.Luminaire can be supplied with Hybrid switch along with indicator to understand the source of power(either from solar or AC supply).shall have certificate tested from MNRE approved Lab.Guarantee for total system is two years .Note: All the above should be integrated and should be 1 system.			
58.37.1	Compact Solar LED Street Light - 20W(MONO) 18V/ 12.8V9Ah/12W	each	22860.00	18288.00
58.37.2	Compact Solar LED Street Light - 30W(MONO) 18V/ 12.8V9Ah/12W	each	25410.00	20328.00
58.37.3	Compact Solar LED Street Light - 35W(MONO) 18V/ 12.8V9Ah/12W	each	31173.00	24938.00
58.37.4	Compact Solar LED Street Light - 40W(MONO) 18V/ 12.8V 21Ah/20W	each	33880.00	27104.00
58.37.5	Compact Solar LED Street Light - 60W(MONO) 18V/ 12.8V 27Ah/40W	each	40656.00	32525.00
58.37.6	Compact Solar LED Street Light - 90W(MONO) 18V/ 12.8V 42Ah/60W	each	60984.00	48787.00
58.38	Provide and fixing of LED POST TOP fixture made form Die cast aluminum graphite grey powder coated finished housing. Polycarbonate opal diffuser. Low power Warm White (WW) LEDs connected in series and parallel combination with better Heat dissipation arrangement. Highly efficient constant current electronic driver having operating voltage range from 140- 280 Volt AC; provided with high voltage, open and short circuit protection. Suitable for 60mm OD pipe entry with fixing bolts. Degree of protection IP65 LED or Equivalent LED color temperature range form 3000-5700 °K ±300 °K. Voltage surge protection 5KV. the luminaire should bear 5 KV surge protection,PF >=0.9(HPF) and total harmonic distortion of THD(I) <10% voltage range of 140-280V. Manufacturer to provide certificate of LM 80 LM 79 form source manufacturer and should have in house adequate testing facilities (approved by Govt. of India ministry of science and technology/NABL) .			
58.38.1	LED POST TOP 25W	each	3637.00	2910.00
58.38.2	LED POST TOP 40W	each	7623.00	6098.00
58.38.3	LED POST TOP 45W	each	7623.00	6098.00
58.38.4	LED POST TOP 65W	each	12989.00	10391.00
58.38.5	LED POST TOP 90W	each	15067.00	12054.00

NOTE : Deduct/Add 10% Rates of Group 1 and Group 2

59.0 OVER-HEAD LINES

Code No	Description	Unit	Rate Rs. Group 1
59.1	Supply & Erection of 33KV Double Circuit Lattice Structure (42'Long) made of steel sections (MS Angle 75X75X6mm, 65X65X6mm, 50X50X6mm, MS flat 50X10mm & 50X6mm) conforming to IS : 2062 – 1984 (latest amended) with 3 Nos. 33 KV Cross arms made of MS Channel size 100X50X6mm and nuts & Bolts. Total weight 581 Kg with construction features of 33KV Double Circuit Lattice Structure excluding civil works as under:- Main Legs: 4 Nos. each of length 12.8 meter, MS angle size – 65X65X6mm forming square of size 915 mm at bottom & 305 mm at top Bracings – 24 Nos. on each vertical face of the structure and shall be of MS Flat size 50 X 6mm of different lengths Belts – 5 Nos each of MS Angle size 50X50X6mm provided at bottom and at distance of 2125 mm, 3580 mm, 5690mm, 7130mm from bottom Butt Jointing All four legs shall be butt jointed with MS angle of size 75X75X6mm at the middle of each leg for strengthening Support for fixing MS flat of size 50X10mm shall be welded to the top of structure and at a distance of 1325mm & 2645mm from top 3 cross arms 3 Nos. Cross arms made of MS channel size 100X50X6mm, each having weight 22.2Kg Cross arms – Size M 16X45N as per IS 1363 and IS 1367 (latest amended) Nuts & Bolts – Overall Length - ± 3mm Permissible Tolerances. Edge dimension - ± 2mm As per IS – 1852 – 1985(Latest Amended) Weight = +2% to - 4% Complete as per technical specifications and/or as directed by Engineer	each	42668.00
59.2	Supply and Erection of 33KV Single Circuit Lattice Structure (36 f long) made of steel sections ,(MS angle 65X65X5mm, 50X50X6mm. MS flat 50X10mm & 50X6mm) conforming to IS – 2062 – 1984 (latest amended) with 1 no. 33Kv cross arm made of MS channel size 100X50X6mm and nuts and bolts. Total weight 450 kg with construction features of 33KV single circuit lattice structure excluding civil works as under:- Main legs – 4 Nos. each of length 11.0meter made of MS angle size 50X50X6mm forming square of size 800 mm at bottom & 300 mm at top. Bracings – 18 Nos. on each vertical face of the structure and shall be of MS flat size 50X6mm of different lengths. Belts – 6 Nos. each of MS angle size 50X50X6mm provided at bottom and at a height of 1.850mm, 3300mm 4750mm, 6350mm 7400mm from bottom. Butt Jointing - All four legs shall be butt jointed with MS angle of size 65X65X5mm and MS flat of size 50X6mm at the middle of each leg for strengthening.		

Code No	Description	Unit	Rate Rs. Group 1
	Support for fixing of cross arms MS flat of size 50X10mm shall be welded at the top of –structure and at a distance of 1300mm & 2600mm from top		
	Cross Arm – Cross arm made of MS channel size 100X50X6mm having weight 22KG		
	Top hamper – Top hamper made of MS flat size 50X10mm shall be welded at top of Tower and total weight would be 4KG		
	Nuts and Bolts – size M16X45N as per IS 1363 and IS 1367 (latest amended) Permissible Tolerances – Overall length - ± 3 mm as per IS 1852-1985 Edge dimensions - ± 2 mm (Latest amended) Weight – +2% to - 4% Complete as per technical specifications and/or as directed by Engineer.	each	39949.00
59.3	Supply and erection of RS joist of 116 x 100 mm, 11 Meter long with the welded/ bolted top hamper 65 x 65 x 6mm (0.7 Mtr long) making necessary arrangement for fixing 11 kV 'V' cross arm, LT bracket and guard wire bracket, grouted in ground 1/6 th of its length and fixed with cement, coarse and grit in 1:3:6 ratio in 1/5th of its length (40cm dia) from the bottom including two coats of aluminium paint over the complete length of joist & exculding civil works.	each	14702.00
59.4	Fabrication ,supply and erection of new 11 KV pole 10 mtr height. (single phase/3 phase) R.S joist (230 Kg) structures with all necessary required items for stringing the ACSR conductors insulators, V - cross arms, chakri, top hamper, brackets, stay and other items including reconnection of existing service lines of service connections.	each	13762.00
59.5	Supply and erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect		
59.5.1	8.0 Mtr long (200 Kg) as per Discom specification	each	2580.00
59.5.2	9.0 Mtr long (200 Kg) as per Discom specification	each	3535.00
59.5.3	9.0 Mtr long (400 Kg) as per Discom specification	each	4573.00
59.5.4	11.0 Mtr long (400 Kg) as per Discom specification	each	5608.00
59.6	Providing fixing of 10 mtr RS joist as Stud Support 200x100x6mm	each	11778.00
59.7	Supply and erection of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator including excavation of pit-re-filling etc & exculding cement concrete .		
59.7.1	Stay set of dia 20mm,2.4m long stay rod and anchor plate 380x380x6.4mm	set	1845.00
59.7.2	Stay set of dia 16mm,1.8m long stay rod and anchor plate 300x300x6.4mm	set	1338.00
59.8	Supply and fixing of a set of 4 nos V cross arm made out of MS angle with bracing of MS flat 50 x 6 mm with nuts and bolts (as per specification of Discom) for 11 kV made up of 65 x 65 x6mm MS angle.	each	2992.00

Code No	Description	Unit	Rate Rs. Group 1
59.9	Supply and fixing of 33 KV cross arms (Angle) with clamp and Top Hamper made of steel sections (MS channel 100x50mm, MS angle 75x75x6mm and 65x65x6mm, MS flat 50x10 mm) conforming to IS-2062-1984. Total weight- 22.849 kg suitable for 9 m long PCC pole with tolerance as per IS-1852-1985 complete as per technical specifications and/or as directed by Engineer	each	1678.00
59.10	Supply and fixing of 11kV cross arms MS channel (75 x 40 x 6.8 kg/mtr) on the existing poles complete including all necessary nut and bolt etc with clamps as per Discom specification.	each	815.00
59.11	Supply and fixing of 33 KV Top Hamper made of steel sections (MS angle of size 65x65x6mm and MS channel size 100x50x6mm) conforming to IS-2062-1984 Total weight-2.825 kg suitable for 9 m long PCC pole with tolerance as per IS-1852-1985 complete as per technical specifications and/or as directed by Engineer.	each	225.00
59.12	Supply and fixing of top hamper on the existing pole complete including nut bolts etc as required.		
59.12.1	11 kV (.7m long) (65 x 65 x6mm angle)	each	291.00
59.12.2	11 kV(50 x 6 mm flat)	each	97.00
59.13	Supply and fixing of cross arms as per Discom specification, made out from angle iron 50mmx 50mmx6mm including all necessary nuts,bolts & clamp etc as reqd.		
59.13.1	LT Bracket with clamp 1200mm long	each	381.00
59.13.2	LT Bracket with clamp 600 mm long	each	271.00
59.14	Supply and fixing of Suspension clamp & eye hook with PCC pole Clamp (REC Standard)	set	298.00
59.15	Supply and fixing of Dead End Clamp & eye hook with PCC pole Clamp (REC Standard)	set	313.00
59.16	Supply and fixing of LT Connector Type A/B (REC Standard)	set	76.00
59.17	supply and fixing of guard bracket 2.2 mtr long made from (75x40) ISMC 7.14 kg per mtr M.S channel including necessary clamp and bolts etc. as per technical specification & drawing of DISCOM	each	1152.00
59.18	Supply and fixing of Cross arms made out from 100 x 50 x 6mm MS channel complete in all respect as required including nuts and bolts and clamp as per Discom specification etc as required.		
59.18.1	1.3 m long	each	814.00
59.18.2	2 x 1.3 m long	each	1628.00
59.19	supply and fixing M.S Channel (cut point) 100x50 mm ISMC (9.5kg per mtr) 2x1.8 long with pilot patti 50x6mm thick necessary nuts and bolts etc. as per technical specification & drawing of DISCOM	each	2254.00
59.20	Supplying and fixing of straight type 1.5 mtr long cross arms made out from MS angle of size 50 x 50 x 6mm for guarding on existing poles complete including 2 nos 150mm long MS flat of size 50 x 6mm bend into shape at both the ends duly welded clamps, nut and bolt etc as required.	each	577.00

Code No	Description	Unit	Rate Rs. Group 1
59.21	Providing cut point for 33 KV line	each	3820.00
59.22	Providing cut point for 11 KV line	each	2070.00
59.23	Providing cut point for LT line	each	961.00
59.24	Supply and fixing of 33 KV Pin Insulator of brown glazed porcelain with minimum failing load of 10KN conforming to IS: 731/1971 (with latest amendment). The design of the insulator for the stresses due to expansion and contraction in any part of the insulator not lead to deterioration with minimum creep age distance of 580 mm.	each	287.00
59.25	Supply and fixing of 33 KV Pins for 33 KV Pin Insulators . The 33 KV galvanized MS Forged Pins suitable for use with 33 KV pin Insulators conforming to IS – 731/1971, IS : 2486 (Part –I)/1993.& IS: 2486 Part -2/1889 with latest amendments if any. The dimensions of the pins be as per standard drawing and technical specifications as per ISS.	each	187.00
59.26	Supply and fixing 11kV pin insulator(IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specificationof Discom).	each	139.00
59.27	Supply and fixing of LT porcelain pin insulator as per IS 1445-1997 suitable for working voltage 1100 volts including all accessories like hot dip GI forged spindle of 260mm long and nuts etc as reqd as per Discom specification.		
59.27.1	105mm x 65mm	each	55.00
59.27.2	105mm x 80mm	each	67.00
59.27.3	120mm x 85mm	each	81.00
59.28	Supply and fixing of porcelain shackle insulator as per IS:1443 1979 suitable for working on 1100 volts including hot dipped GI accessories and heavy duty hardwares etc as required as per Discom specification.		
59.28.1	75mm x 90mm	each	70.00
59.28.2	100mm x 110mm	each	114.00
59.29	Supply and fixing 11 kV Disc insulator (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specificationof Discom).		
59.29.1	B & S type hardware & insulator	each	855.00
59.29.2	T & C type hardware & insulator	each	507.00
59.30	Painting over the existing poles above ground level including overhang making surface well clean and apply two coats of aluminium/ enamel paint as approved with required T & P etc as required.		
59.30.1	pole of 7 to 9 mtr long		
59.30.1.1	with one overhang	each	101.00

Code No	Description	Unit	Rate Rs. Group 1
59.30.1.2	with two overhang	each	115.00
59.30.2	pole of 10 to 12 mtr long		
59.30.2.1	with one overhang	each	128.00
59.30.2.2	with two overhang	each	142.00
59.31	Supplying and drawing overhead steel core Aluminium conductor (ACSR) ISI marked (IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.		
59.31.1	30 Sqmm of (6+1) 2.59mm (Weasel)	metre	25.00
59.31.2	50 Sqmm of (6+1) 3.35 mm (Rabbit)	metre	42.00
59.31.3	50 Sqmm of (6+1) 3.35 mm (Insulated Rabbit)	metre	55.00
59.31.4	80 Sqmm of (6+1) 4.09 mm (Raccon)	metre	67.00
59.31.5	100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog)	metre	76.00
59.31.6	Panther	metre	186.00
59.32	Supply and fixing of PG clamps on overhead lines/jumpers, made of aluminium alloy of IS 617-1994 (with latest amendment if any) with steel nut and bolts conforming to IS 1363-1992 & IS 1367/1979-80 (with latest amendments if any) all ferrous metal parts intended for outdoor use except those made of stainless steel shall be protected by hotdip galvanising in accordance with IS 2633-1986 complete in all respect as required for ACSR conductor.		
59.32.1	Dog	each	171.00
59.32.2	Racoon	each	98.00
59.32.3	Rabbit	each	61.00
59.32.4	Weasel	each	49.00
59.33	Supplying and laying earth conductor from electrode to source in ground/ floor/ wall on iron saddles etc as required including making connection duly soldered or crimped 7/3.15 mm hot dipped stay wire.	metre	32.00
59.34	supply and installation of spike of M.S rod 20mm dia 3.0 mrt long for earthing of (tower/pole) drive into earth by mechanical means structure connecting the spike with cross arm top hamper PCC pole, lattices tower to earth etc. complete as per technical specification of DISCOM.	each	861.00
59.35	Supply and fixing of 50 x 6mm MS strip having two holes of 5/8" dia with cut for providing 6/8 SWG GI wire.		
59.35.1	80 mm long	each	21.00
59.35.2	100 mm long	each	24.00
59.36	Supply and fixing of pilot patti made from MS flat (as per specification of Discom) and suitable for PCC pole (50 x 6mm)/ R.S. joist (50 x 6mm).	each	40.00

Code No	Description	Unit	Rate Rs. Group 1
59.37	Supply & fixing of 33 KV 800 A, 3- phase, central post rotating double break type isolator (IS:9921 part I to V) without earth blade gang operated horizontal type switch, operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 36 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, GI pipe, nut, bolts etc complete in all respect as per specification of Discom.(Type tested by ERDA/CPRI.)	each	32132.00
59.38	Supply and fixing of 11 kV, 400 Amp, 3- phase, central post rotating double break type isolator (IS:9921 part I to V) without earth blade gang operated horizontal type switch, operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 12 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, GI pipe, nut, bolts etc complete in all respect as per specification of Discom.(Type tested by ERDA/CPRI.)	each	16736.00
59.39	Supply and fixing of 33KV Horn Gap fuse set/Drop Out fuse set Horizontal/Vertical mounted type, 3 Nos. barrel fuses mounted on 6 Nos. Post Insulators type E-32. Each 33 KV Post Insulator be a unit with 2x24 KV post insulators and ratings of 33 KV Horn Gap fuses with post insulators as under (Type tested by ERDA/CPRI) Nominal System Voltage KV (rms) - 33 KV Rated voltage KV(rms) - 36KV Rated frequency(Hz) - 50 Hz One minute Power frequency withstand voltage 70 KV (rms) (To earth& between poles) Impulse withstand voltage 170 KV peak (To earth & between poles) Permissible temperature rise above - 40 deg@ Ambient temp.-50 deg@ Rated current (amp) - 200	each	11510.00
59.40	Supply and fixing 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos 24kV/22kV post insulator (IS:5350 part III), hot dipped hard ware,fuse wire of required size etc. complete in all respect as per specification given by Discom. (Type tested by ERDA/CPRI)	each	5336.00
59.41	Supply and fixing of distribution type Lightning arrestor 9 kV, 5 kA (IS:3070) with mounting base to be installed on existing DP structure. (Type tested by ERDA/CPRI.)	each	2629.00
59.42	Supply and fixing double pole structure for 11/0.4 Kv substation as per Discom specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6mm and 4 nos 75 x 40 x 6mm and MS flat 50 x 6mm as per Discom specifications.	each	9479.00
59.43	Providing and fixing of single pole mounted structure set for isolator as per Discom specification complete in all respect with nuts and bolts as required MS flat 50 x 6mm, MS angle 65 x 65 x6mm, MS channel 100 x 50 x 6mm. (Excluding cost of pole).	each	2704.00
59.44	Supply and fixing of 11 kV Danger plates as per specification of Discom on the existing poles complete in all respect as per Discom specification.	each	92.00

Code No	Description	Unit	Rate Rs. Group 1
59.45	Supplying and drawing of XLPE insulated LT bunched Aluminium conductor cable confirming to IS 14255/1995 and IS 398 (Pt-4)/ 1994 on existing cross arms through I hook with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.		
59.45.1	1X16 sq. mm. (insulated)	metre	11.00
59.45.2	1 X 25 sq. mm. + 1X25 sq. mm. (Bared)	metre	42.00
59.45.3	1 X 25 sq. mm. + 1X25 sq. mm. (insulated)	metre	43.00
59.45.4	3 X 16 sq. mm. + 1X16 sq. mm. (Bared)	metre	53.00
59.45.5	3 X 16 sq. mm. + 1X16 sq. mm. (insulated)	metre	57.00
59.45.6	3 X 25 sq. mm. + 1X25 sq. mm. (Bared)	metre	84.00
59.45.7	3 X 25 sq. mm. + 1X25 sq. mm. (insulated)	metre	92.00
59.45.8	3 X 50 sq. mm. + 1X35 sq. mm. (Bared)	metre	147.00
59.46	Providing & Laying GI pipe 125mm dia B- Class	metre	699.00
59.47	Providing & Laying GI pipe 150mm dia B- Class	metre	920.00
59.48	Providing & Laying uPVC pipe 125mm dia	metre	180.00
59.49	Providing & Laying uPVC pipe 160mm dia	metre	254.00
59.50	P&F of thermoplastic/ PVC cable junction boxes (United/ HPL make) of following sizes including clamps for holding the box, cost of DIN rail for MCB mounting, connectors for cables terminals, threaded cable glands made of polyamide material etc. complete in all respect.		
59.50.1	300mm X 200mm X125mm	each	650.00
59.50.2	175mm X 150mm X100mm	each	450.00
59.51	Providing and fixing of fuse box size 250(H) x 200(W) x 150(D) mm with base shape accomodating the pole partly, fabricated of 1.6mm MS sheet with hinged cover, dust and vermin proof, rubber gasket, locking arrangement, duly holded with 2 nos pole clamps of 25mm x 3mm flat with nut and bolts, complete with anticorrosive treatment, finished with two coat of approved enamel paint. The box shall be provided with 2/ 4 nos copper bus bar 150 x 20 x 3mm with brass screws suitable supports,earth terminal, inter connection, brass cable gland upto 10 Sqmm size cable, 2nos 16 Amp kitkat fuse complete in all respect.	each	515.00
59.52	Providing and fixing testing and commissioning of Kiosk type weather proof distribution feeder pillar box of size 600 x 450 x 1000mm with a taper of 75mm at top (for protection from rain water) and made out of 3.2 mm (10 gauge) thick CRCA MS Sheet, front and back both side openable, duly hinged doors with locking arrangement by providing both sides hold drafts and all hardware for fabrication of box. The cubical panel should be dust and vermin proof followed by two coats of enanel paint and primer. The cubical panel should be mounted with hardware on angle iron frame 40 x 40 x 6m and 600mm long legs duly primered and black painted. Frame be grouted with cement concrete 1:3:6 ratio in 150 x 150 x 750mm		

Code No	Description	Unit	Rate Rs. Group 1
	and providing brick masonry along angle iron frame above ground level. The panel should comprise of as per following :		
	(a) P/F of 2 Nos. knife switch 400 amp. with U contacts studs and washers etc.		
	(b) P/F of 32 amp Category-I make MCBs, 10 Nos.double pole. & 5 nos TPN .		
	(c) P&F of connecting strips of 63 amp. 4 pole.		
	(d) Bakelite sheet 10mm thick and size 3'x2'.		
	(e) Epoxy insulators 40mm: as per requirement.		
	(f) PVC copper wire 10 sq.mm. flexible connecting to bus bars to MCB's and MCB to connecting strips in proper manner.		
	(g) copper bus bar double and D-Type of size 30 x6mm strip approx. 1.5' long, 8 no. with hardware.		
	(h) Provision of cable clamps at side of box and base plate with cable glands of suitable size	each	42147.00
59.53	Supply and fixing of pillar box made of 2mm CRCA MS sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including knife switch, HRC fuses with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS angle frame of 50 x 50 x 6 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for four outgoing feeders of 400Amp capacity.	each	46362.00
59.54	Supplying and fixing H.T. Pillar Box. Made out of 3.2mm (10 guage) thick CRCA/ MS sheet, suitable for 11000 Volts, with box size 1000 x 750 x 1500mm with a taper of 75mm at top, front and back side openable, duly hinged doors with locking arrangement by providing both side hold drafts and all required hardware for box, the cubical panel should be dust and vermin proof treated with two coats of enamel paint & primer. The cubical panel should be mounted with hardware on angle iron frame sizes 100 x 50 x 6 mm and 750 mm legs duly painted. The box should be duly supported by angle 50 x 50 x 6mm and MS strip 50 x 6mm internally to support jointing kits/ HT cable and there should be provision for two extra supports for angle s for T-off H.T. cable. The frame be grouted with cement concrete 1:3:6 ratio in 1000 x 500 x 600mm to achieve the height 2.5 feet above the road and providing brick masonry along angle iron frame above ground level	each	18840.00
59.55	Providing and Fixing of pillar box for street light with 2 mm CRCA sheet steel, 63 amp LT disconnectors switch fuse units ,bakelite sheet ,insulators ,connectors,etc as required size500mm x100mmx 375mm with tapered top	each	2790.00
59.56	Providing of LT distribution pillar box & fixing of LT dis connector with 400amp I/C and 200 amp 3Nos O/G with abonite 8mm sheet,size 1100mmx500mmx700mm with top tampered for distribution transformer	each	11672.00
59.57	MAIN CUBICAL PANEL / STREET LIGHT CONTROL PANEL		

Code No	Description	Unit	Rate Rs. Group 1
	P/F testing & commissioning of kiosk type weather proof out door main cubical panel size 750 mm X 1250 mm X 500 mm (app.) made out of 14 gauge MS sheet front and back both side openable duly hinged door with locking arrangement by providing both side held draft and all required hard wares. The cubical should be dust and vermin proof followed by coat of zimpolite primer and finally two coats of enamel gray paint. The cubical should be mounted with hard ware on angle iron frame size 50 X 50 X 6 mm and 1500 legs duly painted framed be grouted 750 mm below ground level with cement concrete 1:3:6 in 1000 X 500 X 600 mm and providing brick masonry along angle iron frame above G.L. They shall be in two section comprising as follows: (i) Providing & Fixing 415 V ,TP combination double break HRC switch fuse unit .100 Amp. rating for incoming supply with HRC fuse 100 Amp rating and of BCH/L&T/EE/ Siemens/ ABB make. (ii) Providing fixing timer switch TSQ 100 series 240 Volts, and full running service standred mounting with base of L & T or equivalent make including the cost of contactor 63 amp. 50 Hz. 440/400 volt. (iii) P/F open busbars 25mmX3mm of required length duly covered by heat shrinkable sleeves with busbar supporters (iv) Provision for residual current operated 63 Amp. 1 Pole ELCB of 30MA to 300 MA sensitively as required including making connections etc.(EE/Load stop make) (v) P/F 2 Nos. 415 Volts TPN combination double break switch fuse unit,63 Amp. Rating with HRC fuses (EE/mds/ SCHNEIDER bch/Siemens)for outgoing cable and making connection etc. also to have a provision for two nos. above switches. (vi) P/F of 3 nos. RYB phase indicator resitance type complete with lamp P/F of HT danger plate of size 200 X 150 mm made of aluminium sheet 20 gauge. (vii) P/F cable glands double compression type and Al. lugs duly crimped for incoming cable and out going Cables. (viii) Providing 2 Nos. earth terminals including lugs and H/W duly inter connected with 8 SWG copper wire . (ix)Inter connection of main busbar to each out going switch and cable terminal shall be with 4 sqmm PVC copper conductor duly crimped with AL lugs. (x) Cable termination shall be fixed at backside of the panel with H/W and spring washers (xi) Light control switch with photo senser complete unit as required		
59.58	Providing andFixing of marshalling box on street light pole with 2 mm CRCA sheet steel ,6 amp two nos MCB,bakelite sheet ,insulators ,connectors,etc as required size200mm x100mmx375mm	each	57948.00
		each	765.00
59.59	MS (Iron Steel) misc. Items	each kg	44.00

60.0 TRAFFIC SIGNALS

Code No	Description	Unit	Rate Rs. Group 1
60.1	P & F 4.5 mm thick M.S. traffic post with outer dia. 114.3mm, medium class and confirming to IS:1239(P-I) 5Mtr. Long (0.8 Mtr. Below ground level) suitable for fiber cap and M.S. base plate 300 mm x 300 mm x 6 mm including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from bottom of the pole and up to 30 cm. above the ground level and 40 cm. dia. Including painting with rubber paint below ground level and red oxide on exposed surface and finishing with traffic yellow enamel paint in two coats complete as required.	each	3640.00
60.2	P & F solid state blinker caution unit weather proof box and pole clips with flashing rate 40-60 flashes per minute.	each	2285.00
60.3	P&FM.S. Cantilever swaged pole suitable for mounting signal head assembly of overall height 9.0 Mtr. (1.5 meter. Below ground level) with M.S. based plate of size 400mm x 400mm x 7mm including excavation of pit and grouting with P.C.C. of Ratio 1:3:6 from the bottom of the pole and up to 50cm above the ground level of 40 cm dia. Including painting with rubber coat below ground level and red oxide on exposed surface and finishing with two coats of traffic yellow enamel paint complete in all respect as required. The pole shall confirm following specifications as per IS:(1239 P-I) Top, middle, bottom length 1.80 Mtr, 3.60 Mtr., 6.0 Mtr. Respectively, outer dia. 88.9 mm, 114.3 mm, 139.7 mm respectively, thickness 4.05 mm, 4.5mm, respectively.	each	13500.00
60.4	S.I.T.C. of programmable three digit digital countdown timer with 5mm dia. Red colored LEDs of high intensity (visible clearly at day time) of reputed make with digit size 150mm x 300mm approx. and quantity of LEDs be approx. 800 no.s including interconnection with traffic signal controller and housing the LED assembly in sheet metal box of size approx. 750mm x 550mm with detachable pole arms clamps etc. as required	each	10000.00
60.5	S.I.T.C. of following colour retrofit LED matrices traffic light of modular size 300 mm dia, Covered with front clear acrylic sheet and back with aluminum body, InP/InGaN based 5mm dia. Coloured LEDs of ultra bright. Super intensity (visible clearly at day time up to distance 300-600 meter, viewing angle of 30 degree). The unit shall be suitable for working on A.C. supply (160-240 V) and life cycle approx. 10 yrs with power consumption below 24 watts, suitable for fast switching,		
60.5.1	Red/Amber Round (unit of 200-220 Nos LEDs)	each	3800.00
60.5.2	Green Arrow (Unit of 120-130 Nos LEDs)	each	5500.00
60.5.3	Red/Green pedestrian(Unit of 75- 80Nos LEDs)	each	2450.00
60.5.4	Add extra for SITC of M.S. housing for LED matrices	each	1190.00
60.6	All in all maintenance to keep up of complete traffic signal system in working order at a crossing including controller, posts, head assembly, bulbs/LED reflector, material (Consumables / Software of OEM of traffic signal to be used only) T&P etc. as required.		

Code No	Description	Unit	Rate Rs. Group 1
60.6.1	With solid-state controller & GLS Signal Heads	p. month	1500.00
60.6.2	With solid-state controller & LED Signal Heads	p. month	650.00
60.6.3	With microprocessor controller & GLS Signal Heads	p. month	1940.00
60.6.4	With UTCS controller & LED Signal Heads	p. month	6000.00
60.6.5	With microprocessor controller & controller & LED Signal Heads	p. month	850.00
60.6.6	Only solid state controller	p. month	1060.00
60.6.7	Programmable Three Digit Countdown timer Big/ Small	p. month	450.00
60.7	All in all maintenance to keep up blinker signal in working order at a crossing including controller, posts, head assembly, bulbs / LED reflector and material , T&P as required.	p. month	450.00
60.8	All in all maintenance to keep up Crystal control solar road warning blinker signal with solar panel in working order at a crossing including controller, posts, head assembly, bulbs/ LED reflector and material , T&P as required.	p. month	550.00
60.9	All in all maintenance to keep up each electric traffic bollard in working order including material, T&P as required.	p. month	125.00
60.10	Refixing of standard traffic post including repair and transportation (within municipal limit) as required including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (0.80 meter. Below ground level) and up to 30 cm above the ground level and 40 cm dia. Including painting with rubber coat below ground level as required.	each	850.00
60.11	Refixing of cantilever traffic post including repair and transportation (with municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio. 1:3:6 from the bottom of pole (1.40 meter. Below ground level) and up to 50 cm above the ground level and 40 cm dia. Including painting with rubber coat below ground level as required.	each	2500.00
60.12	Removing of exiting damaged standard traffic post(incl. Signal head assemble) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required.	each	350.00
60.13	Removing of exiting damaged cantilever traffic post (incl. Signal head) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required.	each	1250.00
60.14	Removing of exiting damaged cantilever traffic post (incl. Signal head) and dismantling original foundation and refilling the same with earth and transportation of pole and signal head to store (within municipal limit) as required.	each	400.00
60.15	Fixing of cantilever traffic post at same site including repair and transportation (with municipal limit) as required. Including excavation of pit and grouting with P.C.C of ratio 1:3:6 from the bottom of pole (1.40 meter. Below ground level) and up to 50 cm above the ground level and 40 cm dia. Including painting with rubber coat below ground level as required.	each	1440.00

Code No	Description	Unit	Rate Rs. Group 1
60.16	Painting of exiting traffic post/ cantilever pole/ signal head assembly/ controller box including removing of old rusted surface and applying red oxide finishing two coats of enamel paints as required.		
60.16.1	Traffic post	each	225.00
60.16.2	Cantilever pole	each	675.00
60.16.3	Controller box	each	188.00
60.16.4	Signal head assembly 300mm dia.	each	75.00
60.16.5	Signal head assembly 200mm dia.	each	60.00
60.17	P & F of unbreakable polycarbonate colored lens of following size and colour.		
60.17.1	300 mm, colored	each	350.00
60.17.2	300 mm, white	each	150.00
60.18	P & F of pole cap on existing pole complete in all respect		
60.18.1	M.S. pole cap	each	200.00
60.18.2	Fiber pole cap	each	225.00
60.19	SITC of pelican controller for safety of pedestrians crossing the road at the push of button pedestrian stop vehicles flying on road and green period is 3 to 30 seconds. Pedestrian flashing green/ red pelican.	each	20000.00
60.20	Supply of following spare card		
60.20.1	Power supply/ Blinker/ Monitor/ Safety trip unit	each	7000.00
60.20.2	Blinker card	each	499.00
60.20.3	Microprocessor card	each	15000.00
60.20.4	Power supply card	each	7500.00
60.20.5	Keyboard card	each	10000.00
60.20.6	DB card	each	5000.00
60.21	SITC of Crystal control Road warning Blinker system with solar panel module with 300mm LED Module of minimum 190 Nos., Blinker Units, Charging circuit, suitable SMF Rechargeable Battery (12 Volt,), including wiring, connections etc. complete in all respect.	each	12500.00
60.22	SITC of Micro controller/ microprocessor base Pelican Traffic Controller with built in CPU and memory, solid state switching, capable of 8 signal plans and various modes of operation (actuated, automatic and flashing) with weather proof, vandal proof, dust & splash proof powder coated steel cabinet, push button switch, etc. complete in all respect.	each	12500.00
60.23	SITC of 4.5 mm thick M.S traffic post with outer dia. 114.3mm, medium class and confirming to IS:1239 (P-1) 6 Mtr. Long (0.8 Mtr. Below ground level) suitable for mounting the signal head assembly with weather proof fiber cap and M.S base plate 300 mm x 6 mm including excavation of pit and grounding with P.C.C of ratio 1:3:6	each	4850.00

Code No	Description	Unit	Rate Rs. Group 1
	from bottom of the pole and up to 30 cm above the ground level and 40 cm dia. Including painting with rubber paint below ground level and red oxide on exposed surface and finishing with traffic yellow enamel paint two coats complete as required.		
60.24	SITC of Programmable Three digit Digital Countdown timer with 5 mm dia. Red colored LED of High intensity (visible clearly at day time) digit PCB size 302mm x215mm approx and quantity of LED be approx 256 Nos. and housing the LED assembly in sheet metal box etc.	each	5600.00
60.25	SITC of Road separating indicator, Yellow LED flashing light + back lit white arrow.		
60.25.1	200mm, dia product size 320x202x 1063mm	each	10200.00
60.25.2	300mm, dia product size 480x230x 1440mm	each	14000.00
60.26	Supply & Fixing of Spare cards for UTCS microprocessor controller		
60.26.1	Microprocessor C.P.U Card	each	21250.00
60.26.2	Microprocessor Lamp Driver Card	each	17000.00
60.26.3	Microprocessor Loop Detector Card	each	12750.00
60.26.4	Microprocessor Loop Detector Card	each	6000.00
60.26.5	Microprocessor mother board Card-Bottom	each	6000.00
60.26.6	Microprocessor mother board Card-Top	each	6000.00
60.27	SITC of SMPS input 100-250 V 1.6A AC 50/60 Hz or DC 120-300V-1Amp output + 5V/8V +12V/0.7A-12V/0.7 Amp Maximum output power 40V connection cooling 55 Watt with 30CFM forced Air LPT 43 Model	each	6375.00
60.28	SITC of crystal Control Solar Road warning Blinker system with Solar panel module, without LED module Blinker units charging circuit, suitable SMF Rechargeable Battery (12Volt) complete.	each	9520.00
60.29	SITC of solar panel Module 12 Volt 18 Watt with M.S Angle/Flat mounting Structure suitable to mount in the pole	each	3500.00
60.30	SITC of solar panel Module 12 Volt 55 Watt with M.S Angle/Flat mounting Structure suitable to mount in the pole	each	10700.00
60.31	SITC of solar panel Module 12 Volt 75 Watt with M.S Angle/Flat mounting Structure suitable to mount in the pole	each	14500.00
60.32	SITC of Cutting back up surface up to 2 Mtr. Depth by digging by Bogie including all layers of crust for laying pipe line etc. and making good to original condition (excluding cost bitumen)	metre	360.00
60.33	P/Laying P.V.C/XLPE insulated & P.V.C sheathed cable of 1.1 KV grade with Copper conductor of IS: 1554 P-I/IS: 7098 P-I of Group 1 of approved make in ground as per IS: 1255 including excavation of 30cm x 75cm size trench, 25cm thick under layer of sand, second class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size.		
60.33.1	2.5sq mm. Armored 4 core	metre	202.50

Code No	Description	Unit	Rate Rs. Group 1
60.33.2	1.5 Sq.mm Armoured 6 Core	metre	310.00
60.33.3	1.5 Sq.mm Armoured 12 Core	metre	415.00
60.34	Supplying and making one end termination with heavy duty single compression brass gland SIBG type, heavy duty Copper lugs duly crimped with crimping tool, PVC tape etc. for following size of armored PVC insulated & PVC sheathed/ XLPE aluminum conductor cable of 1100 Volt grade as required of size.		
60.34.1	4 X 2.5 sq.mm.	each	57.00
60.35	P & F in position frame made out of M.S. angle (riveted or welded) finished with two coat of red oxide and enamel paint including cutting, welding, holes etc. of following sizes as required.		
60.35.1	40mm X 40mm X 5mm	metre	190.00
60.36	Pipe Ear thing as per IS: 3043 with perforated 3.0 Mtr. Long, 40 mm dia. 'B' class G.I. Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300 mm and embodying the pipe complete with alternate layers salt and coke/charcoal, testing of earth resistance as required.	set	1650.00
60.37	Plate Earthing as per IS:3043 with copper Earth plate of size 600mm x 600 mm x 3.0mm by embodying 3 to 4 mtr. Below the ground level with 25 mm dia. G.I. 'B' class watering Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300mm complete with alternate layers of salt and coke/charcoal, testing of earth resistance as required.	set	7180.00
60.38	S & Laying following size 'B' Class G.I. Pipe confirming to IS: 1239 P-1 (1990) with accessories for laying earth conductor/ strip/ cable in ground/ surface/ recess as required.		
60.38.1	50 mm dia.	metre	358.00
60.38.2	80 mm dia.	metre	554.00
60.38.3	100mm dia.	metre	667.00
60.38.4	125 mm dia.	metre	925.00
60.39	S.I.T.C of Programmable Two digit Digital Countdown timer with 5 mm dia. Red & Green colored LED of High intensity (visible clearly at day time) digit PCB size 300 mm Round Dia.	each	8800.00
60.40	S.I.T.C of following colour retrofit LED matrices traffic light of modular size 300 mm dia, Covered with front clear acrylic sheet and back with aluminum body, InP/InGaN based 5mm dia. Coloured LEDs of ultra bright. Super intensity (visible clearly at day time up to distance 300-600 meter, viewing angle of 30 degree). The unit is suitable for working on A.C. supply (160-240 V) and life cycle approx. 10 yrs with power consumption below 12 watts, suitable for fast switching,		
60.40.1	Static Red man & walking Green man (two in one)	each	7700.00

Code No	Description	Unit	Rate Rs. Group 1
60.40.2	Two in one (Red & Green for Cycles)	each	6600.00
60.41	Supply, Installation, Testing & Commissioning of 7.5M height galvanized polygonal signal pole with dia 350mm A/F, 4mm thickness with 6M cross arm with dia 90mm A/F, thickness 4mm fabricated from HT steel confirming to BS EN 10025, S-355 JO with 520x16mm base plate.	each	145000.00
60.42	SITC of microprocessor based logic type automatic electronic controller conforming to IS:7537 for traffic signals complete with electronic timer , control board, blinker unit for night operation and slip lane, day time peak hour operation, The controller shall have 12 Signal phases, 25 Signal plan, 24 cycle plan, 24 Signal split/ cycle, 4 Day plan, 32 Cycle switching/ day, 20 Selective Day plan/ annum, 16 Conflicting condition, 28 Signal Line, Solid-state relay switching, RS 422 Communication interphase, Manual override facility, up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/ cabled interlinking for synchronised operation. The controller unit shall be totally enclosed in 1.6 mm thick metal box including making connection.	each	99800.00
60.42.1	Add extra for upgrading the existing microprocessor based controller to vehicle actuated microprocessor controller	each	36800.00
60.43	P & F one aspect signal head assembly of MS consisting of signal head optical system with unbreakable polycarbonate colored lens, aluminium reflector, 100 watt GLS brass holder with bulb ,300 mm dia. Signal vision with required supports for overhead mounting on pole etc. complete in all respect including wiring with 1.5 sq.mm (IS:694) copper conductor and connection complete in all respect confirming to IS:7537 (with left/ right/ straight/ or any other marking stencils if required.)	each	1630.00
60.44	P, Laying & Jointing R.C.C. class NP-2 (Non pressure) pipes (IS:458) with collars. Jointed with cement mortar of ratio 1:2 including excavation etc. as required.		
60.44.1	100 mm dia internal.	metre	124.00
60.44.2	150 mm dia internal.	metre	141.00
60.45	P & F of bollard having Traffic Caution for road divider made of unbreakable polycarbonate sheet placed on suitable CC platform complete with 4 number FTL fitting (Philips make), Fitting protected with frame and wire mesh complete in all respect.	each	6300.00
60.46	Shifting of standard traffic post at same site including repair and transportation (within municipal limit) as required. Including excavation of pit and grouting with P.C.C. of ratio 1:3:6 from the bottom of pole (0.80 meter. Below ground level) and up to 30 cm above the ground level and 40 cm dia. including painting with rubber coat below ground level as required.	each	650.00
60.47	P & F of unbreakable polycarbonate colored lens of following size and colour.		
60.47.1	200 mm, colored	each	263.00
60.47.2	200 mm, white	each	105.00

Code No	Description	Unit	Rate Rs. Group 1
60.47.3	Supply of spare card		
60.47.4	Controller card		
60.47.5	Master card/ LLD card	each	1050.00
60.47.6	Phase cards up to 3 phase	each	1050.00
60.47.7	Relay card	each	7350.00
60.48	Supplying and drawing PVC insulated & sheathed solid/ stranded copper conductor multi core control cable ISI marked (IS:1554) of 1.1 kV grade of approved make in existing surface or recessed conduit/ casing capping including making connections etc. as required.		
60.48.1	1.5 sq. mm. unarmoured		
60.48.1.1	2 core	each	34.00
60.48.1.2	4 core	each	48.00
60.48.1.3	6 core	each	69.00
60.48.1.4	8 core	each	85.00
60.48.1.5	10 core	each	102.00
60.48.1.6	12 core	each	119.00
60.48.2	1.5 sq. mm. armoured		
60.48.2.1	2 core	each	56.00
60.48.2.2	4 core	each	74.00
60.48.2.3	6 core	each	97.00
60.48.2.4	8 core	each	114.00
60.48.2.5	10 core	each	137.00
60.48.2.6	12 core	each	141.00
60.48.3	2.5 sq. mm. unarmoured		
60.48.3.1	2 core	each	44.00
60.48.3.2	4 core	each	71.00
60.48.3.3	6 core	each	102.00
60.48.3.4	8 core	each	127.00
60.48.3.5	10 core	each	152.00
60.48.3.6	12 core	each	181.00
60.48.4	2.5 sq. mm. armoured		
60.48.4.1	2 core	each	70.00
60.48.4.2	4 core	each	98.00
60.48.4.3	6 core	each	131.00

Code No	Description	Unit	Rate Rs. Group 1
60.48.4.4	8 core	each	162.00
60.48.4.5	10 core	each	180.00
60.48.4.6	12 core	each	205.00
60.49	SITC of following colour retrofit LED matrices traffic light of modular size 300mm Dia. Covered with front clear acrylic sheet and back with aluminum body, InP / InGaN based 5 mm Dia coloured LEDs of ultra bright, super intensity (visible clearly at day time up to distance 300 to 600 Meter, viewing angle of 23 degree). The unit shall be suitable for working on AC supply (160-240 Volt) and life cycle minimum 10 years with power consumption maximum 12 watts, suitable for fast switching		
60.49.1	RED / Amber Round Unit of 190 Nos. LEDs	each	3360.00
60.49.2	Green Round Unit of 66 Nos. LEDs	each	4200.00

61.0 LOCAL AREA NETWORK

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
61.1	Supply , Drawing and Testing of 4 pair , 100 ohm, 24 AWG UTP E Cat 5 Cable as per latest ammendments of TIA /EIA 568 B.2 Specifications in existing MS/PVC Conduits including making connections to Information outlets and Patch Panels with ferruling at both ends for identification with nessorry tools for punching, stripping, crimpping and testing required .	metre	19.00	16.00
61.2	Supply , Drawing and Testing of 4 pair, 100 ohm, 24 AWG UTP Cat 6 Cable as per latest ammendments of TIA /EIA 568 B.2-1 Specifications in existing MS/PVC Conduits including making connections to Information outlets and Patch Panels with ferruling at both ends for identification with nessorry tools for punching, stripping, crimpping and testing required .	metre	24.00	20.00
61.3	Supply and Installation of Information outlets made of high impact plastic bodyABS FR Grade with spring loaded collapsible shutters in jack Recess, suitable for Ecat 5 application complying to latest ammendments EIA/ TIA 568 B.2 specifications in existing modular /MS Boxes along with necessary connections as required. I/O's to have Terminator caps for toolless termination Single Outlet	each	146.00	124.00
61.3.1	S & F of Faceplate for Flush Mount Information Outlets Single Aperture with screw hole covers & Icon Tree Size 86mmX86mm	each	77.00	65.00
61.3.2	S & F of Faceplate for Flush Mount Information Outlets Dual Aperture with screw hole covers & Icon Tree Size 86mmX86mm	each	84.00	71.00
61.3.3	S & F of Faceplate for Flush Mount Information Outlets Quad Aperture with screw hole covers & Icon Tree Size 86mmX86mm	each	89.00	76.00
61.4	Supply and Installation of Information outlets made of high impact plastic body ABS FR Grade with spring loaded collapsible shutters in jack Recess, suitable for Cat 6 application complying to latest ammendments EIA/ TIA 568 B.2-1 Specifications in existing modular /MS Boxes along with necessary connections as required. I/O's to have Terminator caps for toolless termination Single Outlet	each	181.00	154.00
61.5	Supply , Installation, Testing and Comissioning of Rack mounted 19", ECat 5 UTP,1.5-1.6 MM CRS chasis , powder coated Modular Patch Panels (upgradable to intelligent panels with use of sensor strips) with collapsible shutters on jacks to support latest ammendments of TIA / EIA ECat 5 Specifications in Existing Communication Rack along with necessary connections of ECat 5 UTP Cables, With Rear Cable management trays and clamps.			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
61.5.1	6 Ports	each	3267.00	2777.00
61.5.2	12 Ports	each	3676.00	3125.00
61.5.3	18 Ports	each	4289.00	3646.00
61.5.4	24 Ports	each	4902.00	4167.00
61.6	Supply , Installation, Testing and Comissioning of Rack mounted 19", Cat 6 UTP,1.5-1.6 MM CRS chasis , powder coated Modular Patch Panels (upgradable to intelligent panels with use of sensor strips) with collapsible shutters on jacks to support latest ammendments of TIA / EIA Cat 6 Specifications in Existing Communication Rack along with necessary connections of Cat 6 UTP Cables, With Rear Cable management trays and clamps.			
61.6.1	6 Ports	each	2911.00	2474.00
61.6.2	12 Ports	each	3676.00	3125.00
61.6.3	18 Ports	each	4596.00	3907.00
61.6.4	24 Ports	each	5515.00	4688.00
61.7	Supply , Installation, Testing and Comissioning of Wall mounted Communication rack in two sections viz rear wall mount Section and hinged front section with glass doors, swing handles ,lock , Top and Bottom Cable entries,Supports for mounting rack on wall , Cable managers, Fan tray with 2 x 230 Volt fans, Equipment mounting hardware, wire managers , power supply box for supplying power to hubs, fans etc along with earth continuity kit, Mcb, indicator, moulded power supply cable, Blank panels , sliding shelves etc.			
61.7.1	6 U(44 mm) wall mounted	each	4961.00	4217.00
61.7.2	9 U(44 mm) wall mounted	each	5974.00	5078.00
61.7.3	12 U(44 mm) wall mounted	each	6664.00	5664.00
61.7.4	15 U(44 mm) wall mounted	each	7812.00	6640.00
61.8	Supply , Installation, Testing and Comissioning of Floor mounted Communication rack in two sections viz rear Steel Door and hinged front section with glass doors, swing handles ,lock on both doors, Top and Bottom Cable entries with gland plates ,Castor with brakes , 7 no Cable managers, 1 no Fan tray with 2 x 230 Volt fans, Equipment mounting hardware, wire managers , power supply box for supplying power to hubs, fans etc along with earth continuity kit, Mcb, indicator, moulded power supply cable, Blank panels of 1u / 2 u , sliding shelves .Frame of communication rack should be made of heavy grade Aluminum profile PS grey painted and panels should be made from CRCA steel 18 swg RS Beige painted .			
61.8.1	15 U (44 mm) Floor Standing Rack	each	20527.00	17448.00
61.8.2	18 U (44 mm) Floor Standing Rack	each	20437.00	17371.00
61.8.3	22 U (44 mm) Floor Standing Rack	each	24969.00	21224.00

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
61.8.4	24 U (44 mm) Floor Standing Rack	each	25067.00	21307.00
61.8.5	27 U (44 mm)Floor Standing Rack	each	27573.00	23437.00
61.9	Supply , Installation and Testing of 4 pair , 100 Ohm, 24 AWG, E Cat 5 UTP, flexible , Double ended Patch Cords along with 2 No of RJ 45 connectors with strain relief boots as per TIA /EIA 568 B.2 Specifications including making connections to Information outlets of lengths.			
61.9.1	1 Mtr/3 ft	each	153.00	130.00
61.9.2	2 Mtr / 7 ft	each	184.00	156.00
61.9.3	3 Mtr / 10 ft.	each	199.00	169.00
61.10	Supply , Installation and Testing of 4 pair , 100 Ohm, 24 AWG, Cat 6 UTP, flexible , Double ended Patch Cords along with 2 No of RJ 45 connectors with strain relief boots as per TIA /EIA 568 B.2-1 Specifications including making connections to Information outlets of lengths.			
61.10.1	1 Mtr/3 ft	each	169.00	144.00
61.10.2	2 Mtr / 7 ft	each	197.00	167.00
61.10.3	3 Mtr / 10 ft.	each	230.00	196.00
61.11	Supply , Drawing and Testing of Indoor multimode[62.5/125um] glass Fiber Optic Cable as per latest ammendments of TIA /EIA 568B.3 , GR 409 CORE / UL listed NEC 770 Standards in existing MS/PVC Conduits/ slotted channels including making Terminations to active passive equipments with ferruling at both ends for identification with nessorry tools for Terminations and testing required .			
61.11.1	4 fiber	metre	64.00	54.00
61.11.2	6 Fiber	metre	69.00	59.00
61.12	Supply , Drawing and Testing of Outdoor, steel tape armoured multimode[62.5/125um] glass Fiber Optic Cable as per latest ammendments of TIA /EIA 568B.3 , GR 20 CORE/ UEC 794-1/ EN 187000 Standards in existing MS/PVC Conduits/ hume pipe including making terminations to active passive equipments with ferruling at both ends for identification with nessorry tools for Terminations and testing required .			
61.12.1	4 fiber	metre	65.00	55.00
61.12.2	6 Fiber	metre	69.00	59.00
61.13	Supply ,Installation and Testing of indoor 1 pair multimode [62.5/125um] glass Fiber Optic Patch Cords of One mtr length as per latest ammendments of TIA /EIA 568B.3 and IEC 794 Standard Specifications including ST II / SC/FC/MT/PC connectors at both ends as per requirements .	each	919.00	781.00
61.14	Supply ,Installation and Testing of 19 " Rack mounted/ surface mounted aluminium / CRS powder coated multimode glass Fiber Optic Cable Patch panel/ LIU			

Code No	Description	Unit	Rate Rs.	
			Group 1	Group 2
	(upgradable to intelligent panels with use of sensor strips) along with cable tray/ fiber management system , adapters for ST II/ SC/FC/MT/PC connections including making connections (Terminations if required will be paid seperately) to active / passive equipments with ferruling at both ends for identification with necessary tools for Terminations and testing required .			
61.14.1	8 Ports	each	5974.00	5078.00
61.14.2	12 Ports	each	7966.00	6771.00
61.14.3	24 Ports	each	13625.00	11581.00
61.14.4	36 Ports	each	15472.00	13151.00

62.0 HIRE CHARGES FOR PA SYSTEM & TEMPORARY LIGHTING

Code No	Description	Unit	Rate Rs.
62.1	Hire charges of public address system for a important public function with 5/ 6 no. of microphones with following nos of stand Hi Fi box, speakers/ Horns, stand by amplifiers , battery backup complete including transportation etc. as required : (At district Head Quarters)		
62.1.1	4 Nos 3 Way Big Box Speakers,(upto 5000 audiences)	job p.day	8580.00
62.1.2	6 Nos 3 Way Big Box Speakers,(above 5000 to 10000 audiences)	job p.day	16560.00
62.1.3	8 Nos 3 Way Big Box Speakers,(above 10000 to 25000 audiences)	job p.day	29760.00
62.1.4	10 Nos 3 Way Big Box Speakers,(above 25000 audiences)	job p.day	42240.00
62.1.5	With 5/6 Mikes, 15 to 20 nos. reflex horns (upto 25000 audiences)	job p.day	1980.00
62.1.6	With 5/6 Mikes, 25-30 nos. reflex horns (above 25000 audiences)	job p.day	6600.00
62.2	Hire charges for table microphone (Delegate type)	each p.day	264.00
62.3	Hire charges for clip microphone with long lead lavilier	each p.day	264.00
62.4	Hire charges for collar cordless microphone with long lead lavilier	each p.day	667.00
62.5	Hire charges for public address system consisting of 2 Microphone with stand, Battery Backup, Amplifier,2 Loudspeakers etc as reqd.	job p.day	1980.00
62.6	Hire charges for 2 nos. 3 way Bigbox speakers with 5/6 Microphones, mixer, echo chamber, Amplifier, Battery back up etc as reqd for Musical programme	job p.day	5940.00
62.7	Hire charges for extra battery of 12 V , 125 AH	each p.day	198.00
62.8	Hire charges for 500/1000 Watt halogen flood luminaire as required.(with Lamp)		
62.8.1	With suitable pole	each p.day	60.00
62.8.2	With out pole	each p.day	35.00
62.9	Hire charges for HPMV / HPSV post top lantern upto 250 watt with lamp & pole as required.	each p.day	95.00
62.10	Hire charges for light point with lamp.asrequired for shops/ stalls	each p.day	8.00
62.11	Hire charges for power/light plug on board as requiredfor shops/ stalls	each p.day	47.00
62.12	Hire charges for Jhalar bulb15/25 watt coloured/clear asrequired.	each p.day	5.00
62.13	Hire charges for 60 nos. 6.2 v miniature bulb asrequired.	each p.day	16.00
62.14	Hire charges of niwar patti 60 no. 6.2 v miniature lamps. As required.	each p.day	28.00
62.15	Hire charges for tube light fixture with 40 watt FTL as required.	each p.day	24.00
62.16	Hire charges of Main service line for 3 phase connection upto 50 mtr. Length including meter board, dist. Board and supports as required.		
62.16.1	Upto 25.0 sq.mm size cable	p week	79.00

Code No	Description	Unit	Rate Rs.
62.16.2	above 25.0 sq.mm & upto 95 Sq.mm	p week	106.00
62.16.3	above 95.0 sq.mm	p week	132.00
62.17	Hire charges of Sub service line for single/ three phase connection upto 30 mtr. Length including dist. Board and supports as required		
62.17.1	Single phase upto 6 Sqmm	p week	26.00
62.17.2	Three phase & neutral upto 10 Sqmm	p week	40.00
62.18	Hire charges for cut glass chandelier of 20 lamps	each p.day	667.00
62.19	Hire charges for cut glass chandelier of 15 lamps	each p.day	408.00
62.20	Hire charges for cut glass chandelier of 7 lamps	each p.day	133.00
62.21	Hire charges for pendant of cut glass with single 200 watt lamp as required.	each p.day	7.00
62.22	Hire charges for 250/400 watt metal halide luminaire with lamp and pole of required height as required.	each p.day	133.00
62.23	Hire charges for D.G. Set including POL, Operator ,change over switch. Control panel etc. as required.of following capacity:		
62.23.1	Upto 10 KVA	each p.day	3300.00
62.23.2	Above 10 KVA and upto 40 KVA	each p.day	4716.00
62.23.3	Above 40 KVA and upto 62.5 KVA	each p.day	5400.00
62.23.4	Above 62.5 KVA and upto 125 KVA	each p.day	10236.00
62.24	Hire charges for Desert cooler of size 20" fan with stand, wiring including filling of water	each p.day	198.00
62.25	Hire charges for pedestal fan of size 18" / ceiling fan of size 48" sweep as required.	each p.day	60.00
62.26	Hire charges for spot /palcin lights (1000 watt) for stage function with dimmer as required.	each p.day	482.00
62.27	Hire charges for colour effect scanners for stage functions as required.	each p.day	2040.00
62.28	Hire charges for jumbo strove light for stage functions as required.	each p.day	1444.00

63.0 REPAIRING OF FANS, COOLERS, PUMPS, MOTORS, FRIDGES AND AIRCONDITIONERS

Code No	Description	Unit	Rate Rs.
63.1	Rewinding of ceiling fan motor (starting and running winding) including all necessary material. The motor is to be wound taking no. of coils, turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required. (New model ceiling fan)		
63.1.1	900/1200 mm sweep	each	356.00
63.1.2	1400 mm sweep	each	414.00
63.1.3	1500 mm sweep	each	583.00
63.2	Labour charges for removing and refixing of Ceiling fan/ Exhaust fan from site	each	48.00
63.2.1	Charges for oiling, greasing, overhauling of ceiling fan, table fan, pedestal fan irrespective to the size of fan including removing,refixing of fan from site and testing etc. as required.	each	79.00
63.2.2	Providing and Replacement of ball bearing of ceiling/ exhaust fan as required. (NBC/ SKF)	each	175.00
63.2.3	Providing & Replacement of M.S. Shaft of ceiling fan.	each	154.00
63.2.4	P & Replacement of cover/ bearing seat of ceiling/ exhaust fan.	each	154.00
63.2.5	P & F Aluminium Blades (a set of 3 blades) duly painted and well finished 900/ 1200 mm	each	242.00
63.2.6	P & F Aluminium Blades (a set of 3 blades) duly painted/ powder coated. (1400/ 1500 mm)	each	280.00
63.2.7	P & F of rubber gromet (fan insulator)	each	20.00
63.2.8	Providing and Replacement of Gun metal bush of ceiling/exhaust/cooler fan/ as required.	each	163.00
63.3	Desert Cooler		
63.3.1	3 Speed rotary switch for Desert Cooler	each	71.00
63.3.2	P & Replacement of M.S. Shaft of fan motor for Desert Cooler/ exhaust fan.	each	168.00
63.3.3	P & replacement of supporting legs(4 no.) of vertical pump of desert cooler as required for Desert Cooler/ exhaust fan.	each	79.00
63.3.4	P & F of stud with nuts and washer for Desert Cooler/ exhaust fan.	each	34.00
63.3.5	Servicing and overhauling of 20" sweep desert cooler including oiling, greasing, painting of tank from inside with rubber paint after properly dismantling each assembly and refixing the same as required.	each	190.00
63.3.6	Painting of desert cooler with two coats of rubber paint inside of water tank and two coat of synthetic enamelled paint on both side of cooler body, fan body, grills etc.after cleaning with sand paper, complete in all respect as required.	each	458.00
63.3.7	Replacement of cooler pads (heavy) set of 3 no. of size 25" x 27"	each	115.00

Code No	Description	Unit	Rate Rs.
63.3.8	P & F Brass float valve of weighing approx. 250 gm, 8" long rod,PVC ball of 4" dia. For desert cooler as required.	each	197.00
63.3.9	P & F adjustable M.S.grill 20/22 gauge of size approx. 24" x 26" including painting etc. as required.	each	326.00
63.3.10	P & F aluminium blade for 20" desert cooler fan as required.	each	205.00
63.3.11	P & F outer/inner threaded PVC nipple 1/2" dia and 2" long	each	14.00
63.3.12	P & Replacement of pvc pipe for vertical pump of desert cooler as required.	each	25.00
63.3.13	P & replacement of shaft for vertical pump of desert cooler as required.	each	71.00
63.3.14	Spray painting of ceiling fan of size 900/1200/ 1400/ 1500 mm with two coats of white/ brown enamelled paint after cleaning with sand paper. Filling etc. as required.	each	174.00
63.3.15	P & replacement of 4 nos. supporting legs of 20" fan motor with rubber pads of desert cooler as required.	each	48.00
63.3.16	P & replacement of high quality pvc distribution ' T 'and 3 no. elbow for cooler	each	29.00
63.3.17	P & F ISI marked commercial plywood 4.0 mm thick including cutting, hardwares etc. as required.	sqm	302.00
63.3.18	Labour Charges for fixing of desert cooler in windows including handling of cooler upto desired location, making electrical/water connection ,testing etc. as required.		
63.3.19	Ground floor	each	96.00
63.3.20	First floor	each	120.00
63.3.21	Second floor	each	144.00
63.3.22	P & F Vertical Pump suitable for 20" desert cooler including making connection testing etc. as required.		
63.3.23	CG/ COO LHOME / KHAITAN make	each	631.00
63.3.24	ISI marked vertical pump	each	467.00
63.3.25	submercible pump (Millborn/ Wonder make)	each	332.00
63.3.26	P & F fan motor suitable for 20" desert cooler including making connection testing etc. as required.		
63.3.27	CG/ COOLHOME/ KHAITAN fan motor make	each	1740.00
63.3.28	ISI marked fan motor	each	1332.00
63.4	Rewinding of Heavy duty Exhaust fan motor including all necessary material,The motor is to be wound taking no. of coils,turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required.		
63.4.1	300/ 380 mm sweep	each	596.00
63.4.2	450 mm sweep	each	648.00
63.4.3	600 mm sweep	each	1186.00

Code No	Description	Unit	Rate Rs.
63.5	Rewinding of 400 mm table fan/pedestal fan motor including all necessary material, The motor is to be wound taking no. of coils, turns and pitch as it was originally wound with required size super enamelled wire with 'E' class insulation material and making connections etc. as required.	each	313.00
63.6	Rewinding of single phase motor of 1400 RPM including all necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required.		
63.6.1	0.25 H.P. To 0.50 H.P.	each	530.00
63.6.2	0.75 H.P. To 1.0 H.P.	each	702.00
63.6.3	2.0 H.P.	each	1195.00
63.7	Rewinding of three phase squirrel cage induction motor of 1400 to 2800 RPM including all necessary material and of the same characteristics as original with required size of super enamelled wire 'E' class insulation material and testing etc. as required.		
63.7.1	3.0 H.P.	each	1794.00
63.7.2	5.0 H.P.	each	2353.00
63.7.3	7.5 H.P.	each	2561.00
63.7.4	10.0 H.P.	each	3367.00
63.7.5	12.5 H.P.	each	3588.00
63.7.6	15.0 H.P.	each	4225.00
63.8	Rewinding of motor of desert cooler pump with super enamelled copper wire, 'E' class insulation material including removing, refixing, testing etc. as required.	each	185.00
63.9	Rewinding of motor of desert cooler fan with super enamelled copper wire, 'E' class insulation material including removing, refixing, testing etc. as required.	each	565.00
63.10	Providing and replacement of winding kit of blower type heat convector. As required.	each	169.00
63.11	Providing and replacement of heating element of blower type heat convector. As required.	each	131.00
63.12	Providing and replacement of heating element rod of radiation type heat convector as required.	each	116.00
63.13	Providing and replacement of Superior quality Chrome plated reflector of radiation type heat convector. As required.		
63.13.1	single rod	each	145.00
63.13.2	double rod	each	175.00
63.14	Supplying and charging of fresh refrigerant and testing of performance of air conditioner/ fridge/ water cooler of following capacity including capillary and strainer/ filter.		
63.14.1	1.0 TR Window/ Split A.C.	each	1896.00
63.14.2	1.5 TR Window/ Split A.C.	each	2208.00

Code No	Description	Unit	Rate Rs.
63.14.3	2.0 TR Window/ Split A.C.	each	2520.00
63.14.4	25/50 / 40/80 Ltr. Water cooler	each	2052.00
63.14.5	60/120 Ltr. Water cooler	each	2364.00
63.14.6	150/150 Ltr. Water cooler	each	2796.00
63.14.7	165 Ltr Refrigerator	each	1260.00
63.14.8	200/210 Ltr Refrigerator	each	1848.00
63.14.9	286/310 Ltr Refrigerator	each	2166.00
63.15	Replacement of defective compressor by company repaired compressor of fridge/A.C./water cooler including testing etc. as required. (Carrier/ Kirlosker/ Techam-Shah/ Shriram/ Voltas)		
63.15.1	1.0 TR A.C.	each	7542.00
63.15.2	1.5 TR A.C.	each	8262.00
63.15.3	2.0 TR A.C.	each	9810.00
63.15.4	25/50 / 40/80 Ltr. Water cooler	each	6072.00
63.15.5	60/120 Ltr. Water cooler	each	7620.00
63.15.6	150/150 Ltr. Water cooler	each	9036.00
63.15.7	165 Ltr Refrigerator (Carrier/ Kirlosker/ Techam-Shah/ Shriram/ Voltas/ BPL/ Zenith/ Kelvinator)	each	3156.00
63.15.8	200/210 Ltr Refrigerator (Carrier/ Kirlosker/ Techam-Shah/ Shriram/ Voltas/ BPL/ Zenith/ Kelvinator)	each	3828.00
63.15.9	286/310 Ltr Refrigerator (Carrier/ Kirlosker/ Techam-Shah/ Shriram/ Voltas/ BPL/ Zenith/ Kelvinator)	each	4284.00
63.16	P & Replacement of condensing/ cooling coil of copper fins for following capacity A.C./ Water cooler/ Fridge as required.		
63.16.1	1.0 TR A.C.	each	3156.00
63.16.2	1.5 TR A.C.	each	3528.00
63.16.3	2.0 TR A.C.	each	3984.00
63.16.4	25/50 / 40/80 Ltr. Water cooler	each	2376.00
63.16.5	60/120 Ltr. Water cooler	each	3528.00
63.16.6	150/150 Ltr. Water cooler	each	3528.00
63.16.7	165 Ltr Refrigerator	each	1015.00
63.16.8	200/210 Ltr Refrigerator	each	1200.00
63.16.9	286/310 Ltr Refrigerator	each	1548.00
63.16.10	Servicing of 1.0/1.5/2.0 TR capacity air conditioner after dismanteling	each	667.00
63.16.11	P & Replacement of overload protection of A.C./ Water cooler as required.	each	493.00
63.16.12	P & Replacement of thermostat of A.C./ Water cooler/fridge as required.	each	457.00

Code No	Description	Unit	Rate Rs.
63.16.13	P & Replacement of selector switch of 1.0/1.5/2.0 TR A.C Fan as required.	each	148.00
63.16.14	P & Replacement of starting relay of A.C/water cooler/fridge compressor as required.	each	497.00
63.16.15	P & Replacement of door liner of 165/200 Ltr. Fridge as required	each	1046.00
63.16.16	P & Replacement of door liner of 286/310 Ltr. Fridge as required	each	1476.00
63.16.17	P & Replacement of main liner of 165/200 Ltr. Fridge as required	each	2040.00
63.16.18	P & Replacement of main liner of 286/310 Ltr. Fridge as required	each	2652.00
63.16.19	P & Replacement of door gasket of 165/200 Ltr. Fridge as required	each	254.00
63.16.20	P & Replacement of door gasket of 286/310 Ltr. Fridge as required	each	440.00
63.16.21	P & Replacement of PVC/ acrylic vegetable basket of 165/200 Ltr. Fridge as required	each	377.00
63.16.22	P & Replacement of PVC/acrylic vegetable basket of 286/310 Ltr. Fridge as required	each	450.00
63.16.23	P & Replacement of glass/acrylic cover for vegetable basket of 165/200 Ltr. Fridge as required	each	248.00
63.16.24	P & Replacement of glass/acrylic cover for vegetable basket of 286/310 Ltr. Fridge as required	each	293.00
63.16.25	P & Replacement of p.v.c./acrylic bottle supporter of 165/200/ 286/310 Ltr. Fridge as required	each	121.00
63.16.26	P & Replacement of aluminium bottle supporter of 165/200/ 286/310 Ltr. Fridge as required	each	121.00
63.16.27	P & Replacement of p.v.c./acrylic freezer door of 165/200 Ltr. Fridge as required	each	311.00
63.16.28	P & Replacement of p.v.c./acrylic freezer door of 286/310 Ltr. Fridge as required	each	361.00
63.16.29	P & Replacement of door handle of 165/200/286/310 Ltr. Fridge as required	each	242.00
63.16.30	P & Replacement of lamp of Fridge as required	each	35.00
63.16.31	P & Replacement of p.v.c./acrylic chiller tray of 165/200 Ltr. Fridge as required	each	278.00
63.16.32	P & Replacement of p.v.c./acrylic chiller tray of 286/310 Ltr. Fridge as required	each	308.00
63.16.33	P & Replacement of fridge lock complete as required	each	227.00
63.16.34	Spray painting of complete fridge (inside and outside) of 165/ 200 Ltr. Capacity.	each	1548.00
63.16.35	Spray painting of complete fridge (inside and outside) of 286/310 Ltr. Capacity.	each	1584.00
63.16.36	P & Replacement of fan motor of evaporator/ condensor complete as required	each	2256.00
63.17	S & F of capacitor of 230V/ 275V, 50Hz rating of Usha/ Punsumi/ Priya/ Capital/ JEC/ AMCAP/ CONCAP make		

Code No	Description	Unit	Rate Rs.
63.17.1	Starting capacitor		
63.17.1.1	20-30 micro farad	each	174.00
63.17.1.2	40-60 micro farad	each	226.00
63.17.1.3	60-80 micro farad	each	311.00
63.17.1.4	80-120 micro farad	each	384.00
63.17.1.5	120-150 micro farad	each	460.00
63.17.2	Running capacitor		
63.17.2.1	2.5/3.15 micro farad	each	52.00
63.17.2.2	4.0 micro farad	each	67.00
63.17.2.3	6.0 micro farad	each	90.00
63.17.2.4	8.0 micro farad	each	104.00
63.17.2.5	10.0 micro farad	each	149.00
63.17.2.6	15.0 micro farad	each	202.00
63.17.2.7	25.0 micro farad	each	338.00

Note :

The Components to be replaced of unit under repair, shall be guided as per guidelines of manufacturer of unit.

64.0 ELECTRIC MOTORS

Code No	Description	Unit	Rate Rs. Group 1
64.1	Supply of Horizontal Foot Mounted IE2 type 2 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments.of the following rating		
64.1.1	0.37 KW	each	4726.00
64.1.2	0.55 KW	each	6120.00
64.1.3	0.75 KW	each	6322.00
64.1.4	1.1 KW	each	6899.00
64.1.5	1.5 KW	each	7908.00
64.1.6	2.2 KW	each	10158.00
64.1.7	3.0 KW	each	11937.00
64.1.8	3.7 KW	each	12615.00
64.1.9	5.5 KW	each	20595.00
64.1.10	7.5 KW	each	21316.00
64.1.11	11 KW	each	37257.00
64.1.12	15 KW	each	43651.00
64.1.13	18.5 KW	each	56098.00
64.1.14	22 KW	each	62227.00
64.1.15	30 KW	each	92557.00
64.1.16	37 KW	each	112378.00
64.1.17	45 KW	each	144626.00
64.1.18	55 KW	each	194710.00
64.1.19	75 KW	each	243173.00
64.1.20	90 KW	each	280517.00
64.1.21	110 KW	each	354316.00
64.1.22	125 KW	each	415740.00
64.1.23	132 KW	each	435474.00
64.1.24	160 KW	each	477025.00
64.1.25	180 KW	each	502182.00
64.1.26	200 KW	each	556938.00
64.1.27	225 KW	each	588898.00
64.1.28	250 KW	each	623828.00
64.1.29	275 KW	each	660437.00
64.1.30	315 KW	each	676321.00

Code No	Description	Unit	Rate Rs. Group 1
64.2	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE2 type 4 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments. of the following rating		
64.2.1	0.37 KW	each	4961.00
64.2.2	0.55 KW	each	6495.00
64.2.3	0.75 KW	each	6591.00
64.2.4	1.1 KW	each	7485.00
64.2.5	1.5 KW	each	8192.00
64.2.6	2.2 KW	each	10865.00
64.2.7	3.0 KW	each	11485.00
64.2.8	3.7 KW	each	13865.00
64.2.9	5.5 KW	each	19191.00
64.2.10	7.5 KW	each	22263.00
64.2.11	11 KW	each	35671.00
64.2.12	15 KW	each	44339.00
64.2.13	18.5 KW	each	59006.00
64.2.14	22 KW	each	65761.00
64.2.15	30 KW	each	88365.00
64.2.16	37 KW	each	109042.00
64.2.17	45 KW	each	132170.00
64.2.18	55 KW	each	181643.00
64.2.19	75 KW	each	221064.00
64.2.20	90 KW	each	257509.00
64.2.21	110 KW	each	311895.00
64.2.22	125 KW	each	355301.00
64.2.23	132 KW	each	365464.00
64.2.24	160 KW	each	428782.00
64.2.25	180 KW	each	456064.00
64.2.26	200 KW	each	520522.00
64.2.27	225 KW	each	535204.00
64.2.28	250 KW	each	576514.00
64.2.29	275 KW	each	583706.00
64.2.30	315 KW	each	659894.00
64.2.31	355 KW	each	905470.00
64.2.32	375 KW	each	1034665.00

Code No	Description	Unit	Rate Rs. Group 1
64.3	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE2 type 6 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments. of the following rating		
64.3.1	0.37 KW	each	6894.00
64.3.2	0.55 KW	each	7072.00
64.3.3	0.75 KW	each	7966.00
64.3.4	1.1 KW	each	8735.00
64.3.5	1.5 KW	each	11216.00
64.3.6	2.2 KW	each	13403.00
64.3.7	3.0 KW	each	19576.00
64.3.8	3.7 KW	each	20388.00
64.3.9	5.5 KW	each	21196.00
64.3.10	7.5 KW	each	37873.00
64.3.11	11 KW	each	47175.00
64.3.12	15 KW	each	61626.00
64.3.13	18.5 KW	each	80149.00
64.3.14	22 KW	each	86990.00
64.3.15	30 KW	each	135425.00
64.3.16	37 KW	each	182129.00
64.3.17	45 KW	each	218155.00
64.3.18	55 KW	each	248394.00
64.3.19	75 KW	each	299021.00
64.3.20	90 KW	each	374175.00
64.3.21	110 KW	each	417240.00
64.3.22	125 KW	each	454776.00
64.3.23	132 KW	each	487067.00
64.3.24	160 KW	each	507157.00
64.3.25	180 KW	each	559351.00
64.3.26	200 KW	each	580869.00
64.3.27	225 KW	each	603455.00
64.3.28	250 KW	each	626045.00
64.3.29	275 KW	each	724625.00
64.3.30	315 KW	each	996662.00

Code No	Description	Unit	Rate Rs. Group 1
64.4	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE3 type 2 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments.of the following rating		
64.4.1	0.37 KW	each	5404.00
64.4.2	0.55 KW	each	7038.00
64.4.3	0.75 KW	each	7274.00
64.4.4	1.1 KW	each	7937.00
64.4.5	1.5 KW	each	9096.00
64.4.6	2.2 KW	each	11682.00
64.4.7	3.0 KW	each	13730.00
64.4.8	3.7 KW	each	14509.00
64.4.9	5.5 KW	each	23686.00
64.4.10	7.5 KW	each	24518.00
64.4.11	11 KW	each	42848.00
64.4.12	15 KW	each	50199.00
64.4.13	18.5 KW	each	64515.00
64.4.14	22 KW	each	71563.00
64.4.15	30 KW	each	106441.00
64.4.16	37 KW	each	129238.00
64.4.17	45 KW	each	166322.00
64.4.18	55 KW	each	223919.00
64.4.19	75 KW	each	279652.00
64.4.20	90 KW	each	322596.00
64.4.21	110 KW	each	407466.00
64.4.22	125 KW	each	478101.00
64.4.23	132 KW	each	500797.00
64.4.24	160 KW	each	548583.00
64.4.25	180 KW	each	577509.00
64.4.26	200 KW	each	640481.00
64.4.27	225 KW	each	677234.00
64.4.28	250 KW	each	717405.00
64.4.29	275 KW	each	759503.00
64.4.30	315 KW	each	777771.00
64.4.31	355 KW	each	1483107.00

Code No	Description	Unit	Rate Rs. Group 1
64.5	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE3 type 4 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments. of the following rating		
64.5.1	0.37 KW	each	5702.00
64.5.2	0.55 KW	each	7471.00
64.5.3	0.75 KW	each	7581.00
64.5.4	1.1 KW	each	8610.00
64.5.5	1.5 KW	each	9423.00
64.5.6	2.2 KW	each	12494.00
64.5.7	3.0 KW	each	13211.00
64.5.8	3.7 KW	each	15946.00
64.5.9	5.5 KW	each	22071.00
64.5.10	7.5 KW	each	25604.00
64.5.11	11 KW	each	41022.00
64.5.12	15 KW	each	50992.00
64.5.13	18.5 KW	each	67861.00
64.5.14	22 KW	each	75625.00
64.5.15	30 KW	each	101624.00
64.5.16	37 KW	each	125401.00
64.5.17	45 KW	each	151996.00
64.5.18	55 KW	each	208891.00
64.5.19	75 KW	each	254225.00
64.5.20	90 KW	each	296136.00
64.5.21	110 KW	each	358681.00
64.5.22	125 KW	each	408601.00
64.5.23	132 KW	each	420288.00
64.5.24	160 KW	each	493101.00
64.5.25	180 KW	each	524479.00
64.5.26	200 KW	each	598604.00
64.5.27	225 KW	each	615488.00
64.5.28	250 KW	each	662994.00
64.5.29	275 KW	each	671263.00
64.5.30	315 KW	each	758878.00
64.5.31	355 KW	each	1041294.00
64.5.32	375 KW	each	1189867.00

Code No	Description	Unit	Rate Rs. Group 1
64.6	Supply, Installation, Testing, Commissioning of Horizontal Foot Mounted IE3 type 6 Pole TEFC, S1 duty, IP-55, 415 Volts Squirrel cage Enclosure confirming to protection IP55 suitable for operation on 415 +/- 10%V, 3 Phase 50 HZ +/- 5% AC supply with ambient 50 C class F insulation with temperature rise limited to class B Induction Motors confirming to IS-325 & IS 12615 - 2011 with latest amendments. of the following rating		
64.6.1	0.37 KW	each	7932.00
64.6.2	0.55 KW	each	8134.00
64.6.3	0.75 KW	each	9163.00
64.6.4	1.1 KW	each	10047.00
64.6.5	1.5 KW	each	12898.00
64.6.6	2.2 KW	each	15417.00
64.6.7	3.0 KW	each	22513.00
64.6.8	3.7 KW	each	23446.00
64.6.9	5.5 KW	each	24378.00
64.6.10	7.5 KW	each	43555.00
64.6.11	11 KW	each	54252.00
64.6.12	15 KW	each	70871.00
64.6.13	18.5 KW	each	92172.00
64.6.14	22 KW	each	100042.00
64.6.15	30 KW	each	155741.00
64.6.16	37 KW	each	209449.00
64.6.17	45 KW	each	250879.00
64.6.18	55 KW	each	285656.00
64.6.19	75 KW	each	343874.00
64.6.20	90 KW	each	430301.00
64.6.21	110 KW	each	479827.00
64.6.22	125 KW	each	522993.00
64.6.23	132 KW	each	560130.00
64.6.24	160 KW	each	583235.00
64.6.25	180 KW	each	643255.00
64.6.26	200 KW	each	668004.00
64.6.27	225 KW	each	693973.00
64.6.28	250 KW	each	719953.00
64.6.29	275 KW	each	833321.00
64.6.30	315 KW	each	1146163.00

NOTE : 7% of the total cost shall be added for vertically mounted motors

65.0 AIR CONDITIONING AND AIR COOLING

Code No	Description	Unit	Rate Rs. Group 1
65.1	SITC of factory assembled central evaporating package type plant having specifications as per ABC below The central package unit should be complete in all respect of following capacity. (A) Air washer section comprising of viscous pre air filter & Wet Pads made of 90% efficiency cellulose pads of 200mm thickness with necessary arrangement of water distribution system with required capacity of Electrical Driven Self priming monoblock pump. (B) Fan Section comprising of belt driven, forward curved double inlet centrifugal fan mounted on adjustable plate suitable for given discharge and two inch static-pressure. (C) The unit should be fabricated from 1.6mm G.I., sheet supported by angle iron frame and finished with stove enameled Paint, hinged supported inspection door, water storage tank made of 2.0mm GI pan with anticorrosive / rubber paint. Angle iron stands of size 40mmx40mmx6mm of height 100mm with anti vibration pad of suitable thickness.		
65.1.1	30000 CFM	each	526350.00
65.1.2	25000 CFM	each	438625.00
65.1.3	20000 CFM	each	350900.00
65.1.4	15000CFM	each	263175.00
65.1.5	10000 CFM	each	183557.00
65.1.6	8000 CFM	each	147620.00
65.1.7	7000 CFM	each	124388.00
65.1.8	6000 CFM	each	107569.00
65.1.9	5000 CFM	each	98615.00
65.2	SITC of ducting made from GSS of class VIII & fabricated as per IS:655 and as per approved drawings & designs including the cost of hangers, supports , angle , expansion fasteners , T&P as required of following gauge:		
65.2.1	24 G	sqm	508.00
65.2.2	22G	sqm	575.00
65.2.3	20 G	sqm	629.00
65.2.4	18 G	sqm	787.00
65.3	S / F of accousting lining of duct work shall includes Anticorrosive treatment, fibre glass wrapping, tissue paper TF, chicken wiremesh of 28G and fixing with GI nut bolts		
65.3.1	25mm thick fiber glass (150 Crown)	sqm	593.00
65.3.2	12mm thick fiber glass rigid board	sqm	321.00
65.3.3	SITC of MS Powder coated Grill/Diffuser		
65.3.3.1	Double louvered supply air grills without dampers. Front louvers fixed & rear louvers movable.	sqm	8712.00

Code No	Description	Unit	Rate Rs. Group 1
65.3.3.2	Rectangular supply air diffusers without dampers	sqm	9075.00
65.3.4	SITC of Aluminium Grills /Diffusers		
65.3.4.1	Double louvered supply air grills with dampers. Front louvers fixed & rear louvers movable.	sqm	13794.00
65.3.4.2	Round/ Rectangular supply air diffusers with dampers	sqm	14036.00
65.3.4.3	SITC of Aluminium grill/ diffuser damper	sqm	5022.00
65.4	SITC of Air Cooled split Air conditioners complete with Indoor unit(IDU), Out door unit (ODU), surface / concealed copper Refrigerant piping with insulation (EP foam pipe section) upto 10 Mtr (IDU to ODU), copper power cable upto 10 Mtr (IDU to ODU), R-22 Refrigerant suitable for 400/230V +10% of 50 Hz 1 /3 AC supply capable of performing COOLING, DEHUMIDIFICATION, AIR CIRCULATION, FILTERATION & VENTILATION of following capacity with resproccating/ rotary/ scroll compressor as specified.		
65.4.1	Wall/Ceiling Mounted		
65.4.1.1	1 ton	each	30008.00
65.4.1.2	1.5 ton	each	34243.00
65.4.1.3	2 ton	each	48897.00
65.4.1.4	3 ton	each	80919.00
65.4.1.5	4 ton	each	100298.00
65.4.2	Floor Standing(Tower Type)		
65.4.2.1	2 ton	each	66550.00
65.4.2.2	3 ton	each	95590.00
65.4.2.3	4 ton	each	102850.00
65.4.3	Ductable Split type		
65.4.3.1	1.5 Ton	each	41140.00
65.4.3.2	2 Ton	each	44770.00
65.4.3.3	2.5 Ton	each	66550.00
65.4.3.4	3 ton	each	75020.00
65.4.3.5	4 ton	each	89540.00
65.4.3.6	5 ton	each	101035.00
65.4.3.7	7.5 ton	each	135520.00
65.4.3.8	10 ton	each	179685.00
65.4.4	Cassette type		
65.4.4.1	1.5 Ton	each	56870.00
65.4.4.2	2 Ton	each	70785.00
65.4.4.3	3 ton	each	87725.00
65.4.4.4	4 ton	each	105512.00
65.5	SF of rigid CPVC (25mm) drain piping of 6 kg/ cm2 with EP section insulation.	metre	417.00

66.0 SUBSTATION EQUIPMENTS

Code No	Description	Unit	Rate Rs. Group 1
66.1	Supply, Installation, Testing & Commissioning of HT metering cubical panel as approved By DISCOMs fabricated out of 14 SWG CRCA sheet steel in two compartment & MS angle of size 60mmX6mm having provision for Following: (i) Provision for fixing Trivector Meter (To be supplied by DISCOMs) (ii) Provision for fixing of combined CT PT Set (To be supplied by DISCOMs) (iii) TT Block (iv) 6mm Bakelite sheet on all sides.	each	25711.00
66.2	Supply, Installation, testing and commissioning of 33 KV Double Pole structure with Air Break Switch having following specifications. a) DP : Double Pole structure made of two nos. 11 meter long PCC poles (400Kg) & 7 nos. MS Channel each of size 100x50x6mm complete with earthing of the structure as per REC standards in all respect with nuts, springs washers, clamps as required. b) GO: Off load type gang operated 3-pole Horizontal type switch suitable for 33KV, 800A, 3 phase central post rotating double break isolator complete with MS Hardware, copper moving & fixed contacts, assembly of 9 Nos. Post Insulators, GI pipe of suitable length for operation. c) DO: 3 Nos. Horizontal/Vertical mounted 33KV Horn Gap fuse set / Drop Out fuse set, 33KV barrel fuses mounted on 6 Nos. Post insulators. e) LA: 3 piece non linear resistor type lightening arrestor of approved make suitable for 3 wire, 33KV OH line with rated voltage 30KV rms & nominal discharge current rating of 10 KA & complete with galvanized clamping arrangement, GI bolts, nuts, washers etc. as required. e) Jumpers: 3 Nos. ACSR Dog Conductor mounted on pin type insulators as required. The GO shall be operated by hand operated liver properly earthed with provision for locking mounted at 3'. Complete as per technical specifications and /or as directed by engineer.	set	84321.49
66.3	Supply, Installation, testing and commissioning of 11 KV Double Pole structure With Air Break SWITCH having following specifications : (a) DP : Double pole structure made of two nos. 9 meter long PCC poles (400 Kg) & 7 nos. MS Channel each of size 100 mmx50mmx2500mm complete with earthing of the structure as per REC standards in all respect with nuts, springs washers, clamps as required. (b) GO: Off load type gang operated 3-pole vertical flute type switch suitable for 11KV ; 400A ,3 phase, central post rotating double break isolator complete with MS hardware , copper moving & fixed contact ,assembly of 9 Nos pin insulator ,GI pipe of suitable length for operation.	each	54840.16

Code No	Description	Unit	Rate Rs. Group 1
	c) DO: 3 Nos. Horizontal/Vertical mounted 33KV Horn Gap fuse set / Drop Out fuse set, 33KV barrel fuses mounted on 6 Nos. Post insulators. (c) DO: 3nos Vertical / Horizontal mounted 11kv horn gap fuse set /drop out 11kv barrel fuses mounted on 6no pin insulators (d) LA:3 piece non linear resistor type. lighting arrestor of approved make suitable for 3 wire, 11kv oh linewith rated voltage of 9kv rms & nominal discharge current rating of 5 ka & complete with galvanized clamping arrangement GI bolts, nuts, washer etc as required. (e) JUMPERS: 3 no 11kv acsr conductors mounted on pin type insularors as required. GENERAL:The go shall be operated by hand operated liver properly earthed with provision for locking mounted at 3'		
66.4	Supply & fixing of 33 KV off load type gang operated 3 Pole horizontal type switch rating 800 A, 3- phase, central post rotating double break isolator complete with MS hardwares, copper moving & fixed contacts assembly of 9 Nos. Post Insulators conforming to IS-5350 Part III and IS-2544 with GI pipe of suitable length for operation.	each	32132.00
66.5	Supply and fixing of 33KV Horn Gap fuse set/Drop Out fuse set Horizontal/Vertical mounted type, 3 Nos. barrel fuses mounted on 6 Nos. Post Insulators type E-32. Each 33 KV Post Insulator be a unit with 2x24 KV post insulators and ratings of 33 KV Horn Gap fuses with post insulators as under: Nominal System Voltage K(rms) - 33 KV Rated voltage KV(rms) - 36KV Rated frequency(Hz) - 50 Hz One minute Power frequency - 70 withstand voltage KV(rms) (To earth& between poles) Impulse withstand voltage KV peak - 170 (To earth& between poles) Permissible temperature rise above - 40 deg Ambient temp (50 deg cent.) - cent. Rated current (amp) - 200	each	11510.00
66.6	Supply, Installation, testing & commissioning of 36 KV Potential Transformer of ratio 33000/110V, Burden-30VA with Accuracy class-0.5 conforming to IS-3156 excluding civil works complete with following parameters. Insulation Level Impulse withstand voltage - 170 KV One minute Power frequency withstand voltage on Primary winding - 70 KV rms Secondary winding - 2 KV rms Frequency - 50 Hz Winding connection - Star/Star Rated Voltage factor - 1.2 continuous and 1.5 for 30 secs Type of Insulation - Resin cast One of the secondary terminals of the VTS shall be solidly earthed complete as per technical specifications and /or as directed by engineer.	each	35663.00
66.7	Supply, Installation, testing & commissioning of 36 KV current Transformer of ratio 240-120-60/5A-5A-5A, Burden-60VA, class of Accuracy-5P for relaying & 0.5 S for metering and shall be	each	40077.28

Code No	Description	Unit	Rate Rs. Group 1
	conforming to IS-2705 excluding civil works complete with following parameters. Insulation level Impulse withstand voltage - 170KV One minute Power frequency withstand Voltage Primary winding - 70KV rms Secondary winding - 03KV rms Frequency - 50 Hz Rated continuous thermal current - 120% of rated primary current Short time thermal rating - 25 KA for 3 seconds Rated output Core I Core II 60 VA 30 VA complete as per technical specifications and /or as directed by engineer.		
66.8	Supply, installation, testing & commissioning of 36 KV outdoor type Vacuum Circuit Breaker having rated current 1250 A, fault level – 25 KA (rms) conforming to M-2 class and IS-13118/IS-3427/IS-10118 Part III/ IS-2165-1977 & IS-3716-1976 with principal parameters of Circuit Breaker as under: No. of Poles - 3 Rated Voltage (Nominal/Max) - 33/36 KV Rated frequency - 50 Hz System neutral earthing - Effectively grounded Insulation Level Impulse withstand voltage - 170KV Peak One minute Power frequency withstand voltage - 70KV (rms) Short time current for 3 sec - 25KA Breaking Capacity Symmetrical - 25KA Asymmetrical - As per relevant standard. Rated making capacity - 2.5x25KA Total breaking time - 3 cycles (max) Total closing time - 4 cycles (max) Creepage distance - 900mm or more Mounting - Steel pedestal Operating Mechanism - Motor operated spring charged closing mechanism or magnetic actuator. Type - Bimetallic/Aluminium Alloy type clamp suitable for both horizontal/vertical take off. Suitable for ACSR Dog conductor. Complete as per technical specifications and/or as directed by Engineer.	each	312359.00
66.9	Supply, installation, testing & commissioning of 33KV Control & Relay Panel duly mounted with protective relays, metering equipments etc. required for the satisfactory operation of 33KV side of 33/0.4KV Power Transformers. The C/R cubicles of folded type construction with front base frame and door frame fabricated from CRCA sheet steel 10 SWG (3mm) thickness, while the side, roof & doors fabricated out of 14 SWG (2mm) thick CRCA sheet steel. The height of panel inclusive of base channel height of 102 mm of not more than 2312 mm, width of 750 mm or suitable to accommodate equipments and panel of depth 610 mm with dust & vermin proof and suitable for tropical use. The complete panel incorporates all necessary meters, instruments relays, control switches, indicating lamps, mimic buses, audible & visual alarms. The enclosure provide minimum degree of protection equivalent to IP-51 as per IS 2147. The relays offered conforming to latest issue of IS: 3231 & IS-8686.	each	167218.00

Code No	Description	Unit	Rate Rs. Group 1
	For over current & earth fault numerical relays be provided. In three phase protection relay, the setting for over current element be 50%-200% (in steps of 10%) and for earth fault element from 10 to 80% (in steps of 10%). Relay should also have features of self diagnosis, minimum last five abnormal events recording over current & earth fault including fault level & phase along with date & time, on line display of current and communicable with open protocol having RS-485 port. The panel be equipped with Annunciation scheme for indicating all annunciations equipped for the trip & non trip alarms. All indicating instruments of Switch Board type back connected suitable for flush mounting and provided with dust & vermin proof case for tropical use. All indicating instruments conforming to latest edition of IS-2419/1963. complete as per technical specifications and /or as directed by engineer.		
66.10	TRANSFORMERS		
66.10.1	Supply, Installation, Testing and commissioning of copper wound Transformers 33/0.433 KV, Three Phase, 50 Hz, DYN 11, ONAN type , Standard accessories with off load tap changer (+5% to -10% in steps of 2.5%), winding / Top --- temperature rise of 45°C/40°C first fill oil, having permissible total loss values not exceeding 7.5% of the maximum total loss values for 11 KV as per energy efficiency level - 2 at basic Insulation level conforming to ISS 2026 (Part- I to Part - II), latest ammended and IS 1180 Part-I : 2014.		
	Transformers described as above and as per the following continuous rating		
66.10.1.1	100 KVA	each	834573.00
66.10.1.2	160 KVA	each	927303.00
66.10.1.3	200 KVA	each	1030337.00
66.10.1.4	250 KVA	each	1144819.00
66.10.1.5	315 KVA	each	1272021.00
66.10.1.6	400 KVA	each	1413356.00
66.10.1.7	500 KVA	each	1570396.00
66.10.1.8	630 KVA	each	1744884.00
66.10.1.9	750 KVA	each	1938760.00
66.10.1.10	1000 KVA	each	2154178.00
66.10.1.11	1250 KVA	each	2333693.00
66.10.1.12	1600 KVA	each	2764529.00
66.10.1.13	2000 KVA	each	3159461.00
66.10.1.14	2500 KVA	each	3374879.00
66.10.2	Supply, Installation, Testing and commissioning of copper wound ISI marked Transformer 11/0.433 KV, Three Phase, 50 Hz, DYN 11, ONAN type , Standard accessories like, conservator, Silicagel breather, radiator, fins, HT & LT cable end boxes or Bus Duct flange, Lifting lugs, Bi-directional Plain/ Flanged Rollers, Earthing terminal, Air release plug, Off load tap changer (+5% to -10% in steps of 2.5%), winding / Top oil temperature rise of 45°C/40°C, ISI marked drain valves, Dial type temperature gauge, first fill oil, Epoxy based paint etc having max. total losses as per energy efficiency level - 2 at basic Insulation level conforming to IS 2026 (Part- I to		

Code No	Description	Unit	Rate Rs. Group 1
	Part - II), latest ammended and IS 1180 Part-I : 2014 BEE star level - I as per Govt. of India, Ministry of power notification Dated 16th Dec., 2016. Transformers described as above and as per the following continuous rating		
66.10.2.1	25 KVA	each	122070.00
66.10.2.2	40 KVA	each	172334.00
66.10.2.3	63 KVA	each	258501.00
66.10.2.4	100 KVA	each	301585.00
66.10.2.5	160 KVA	each	402113.00
66.10.2.6	200 KVA	each	488280.00
66.10.2.7	250 KVA	each	552906.00
66.10.2.8	315 KVA	each	646253.00
66.10.2.9	400 KVA	each	804227.00
66.10.2.10	500 KVA	each	962200.00
66.10.2.11	630 KVA	each	1127353.00
66.10.2.12	750 KVA	each	1278146.00
66.10.2.13	1000 KVA	each	1579731.00
66.10.2.14	1250 KVA	each	1945941.00
66.10.2.15	1600 KVA	each	2204442.00
66.10.2.16	2000 KVA	each	2563472.00
66.10.2.17	2500 KVA	each	3087655.00
66.10.3	Supply, Installation, Testing and commissioning of Aluminium wound ISI marked Transformer 11/0.433 KV, Three Phase, 50 Hz, DYN 11, ONAN type , Standard accessories like, conservator, Silicagel breather, radiator, fins, HT & LT cable end boxes or Bus Duct flange, Lifting lugs, Bi-directional Plain/ Flanged Rollers, Earthing terminal, Air release plug, Off load tap changer (+5% to -10% in steps of 2.5%), winding / Top oil temperature rise of 45°C/40°C, ISI marked drain valves, Dial type temperature gauge, first fill oil, Epoxy based paint etc having max. total losses as per energy efficiency level - 2 at basic Insulation level conforming to IS 2026 (Part- I to Part - II), latest ammended and IS 1180 Part-I : 2014 BEE star level - I as per Govt. of India, Ministry of power notification Dated 16th Dec., 2016. Transformers described as above and as per the following continuous rating		
66.10.3.1	25 KVA	each	73242.00
66.10.3.2	40 KVA	each	100528.00
66.10.3.3	63 KVA	each	129251.00
66.10.3.4	100 KVA	each	179515.00
66.10.3.5	160 KVA	each	272863.00
66.10.3.6	200 KVA	each	323127.00
66.10.3.7	250 KVA	each	359030.00
66.10.3.8	315 KVA	each	524183.00
66.10.3.9	400 KVA	each	581628.00
66.10.3.10	500 KVA	each	703698.00

Code No	Description	Unit	Rate Rs. Group 1
66.10.3.11	630 KVA	each	825768.00
66.10.4	Additional Fittings		
66.10.4.1	Bochgolz Relay (Below 630 kVA)	each	7181.00
66.10.4.2	Magnetic oil Level Indicator (Below 630 kVA)	each	7181.00
66.10.4.3	OTI With A&T Connectors (Below 630 kVA)	each	5026.00
66.10.4.4	WTI with A&T Connectors (Below 630 kVA)	each	7181.00
66.10.4.5	O.L.T.C. With R.T.C.C. & AVR (for 11kV)	each	323127.00
66.10.4.6	O.L.T.C. With R.T.C.C. & AVR (for 33kV)	each	359030.00
66.11	33KV HT Panel (drowout type)		
66.11.1	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 33 KV Incomer VCB panel up to 630 A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC 31.5KA/3 and IAC A-FLR for 31.5kA/1sec. Make of HT Panel, Vaccum Interrupter and VCB should be of same make. 33 KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-36 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 36 KV on incomer, Ammeter, analog type, selector switches for ammeters, Microprocessor based numerical relay with O/L, E/F and S/C protection, Set of dual core dual ratio 3CTs of suitable ratio with secondary 1A,15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection, Multifunction Meter.	each	935179.00
66.11.2	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 33 KV Bus Coupler VCB panel upto 630 A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC 31.5KA/3 and Internal Arc test A-FLR for full short circuit current for 1 sec. duration. Make of HT Panel,Vaccum Inrrupter and VCB should be of same Make. Bus Coupler 1 No 630 Amp. VCB	each	1106628.00
66.11.3	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 33 KV outgoing VCB panel up to 630 A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC 31.5KA/3 and IAC A-FLR for 31.5kA/1sec. Make of HT Panel, Vaccum Interrupter and VCB should be of same make. 33 KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-36 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 36 KV , Ammeter, analog type, selector switches for ammeters, Microprocessor based numerical relay with O/L, E/F and S/C protection, Set of dual core dual ratio 3CTs of suitable ration with sec 1 of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection, Multifunction Meter	each	865040.00
66.12	11KV HT Panel (drowout type)		
66.12.1	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 11 KV Incomer VCB panel up to 630 A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC	each	467589.00

Code No	Description	Unit	Rate Rs. Group 1
	25KA/3 and IAC A-FLR for 25kA/1sec. Make of HT Panel, Vacuum Interrupter and VCB should be of same make.		
	11 KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-12 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 12 KV on incomer, Ammeter, analog type, selector switches for ammeters, Microprocessor based numerical relay with O/L, E/F and S/C protection, Set of dual core dual ratio 3CTs of suitable ratio with sec 1 of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection, Multifunction Meter.		
66.12.2	Supply, Installation, Testing and Commissioning of indoor type floor mounted metal clad, 11 KV Bus Coupler VCB panel upto 630 A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC 25KA/3 and Internal Arc test A-FLR for full short circuit current for 1 sec. duration. Make of HT Panel, Vacuum Interrupter and VCB should be of same Make.		
	Bus Coupler upto 630 Amp. VCB	each	335106.00
66.12.3	Supply, Installation, Testing and Commission of indoor type floor mounted metal clad, 11 KV Outgoing VCB panel UPTO 630A equipped with following switchgears and accessories designed & tested as per latest standard i.e. IEC 62271-200, suitable for STC 25KA/3 and IAC A-FLR for 25kA/1sec. Make of Panel, Vacuum Interrupter and VCB should be of same make.		
	11 KV / 110 Volts PT Class 0.5 accuracy and 100 VA burden with 1No. Voltmeter (0-12 KV), analog type, selector switch for voltmeter and protection fuses/MCB for HT metering upto 11 KV, Ammeter, analog type, selector switches for ammeters, Microprocessor based numerical relay with O/L, E/F and S/C protection, Set of dual core dual ratio 3CTs of suitable ratio with sec 1 of 15 VA burden and accuracy Class – 0.5 for metering and class 5P10 for protection, Multifunction Meter		
	Outgoing upto 630 A VCB	each	397451.00
66.13	S.I.T.C. of bus duct arrangement in convenient sections complete with encloser of CRCA sheet steel of minimum 2 mm thickness, aluminium bus bar and earth bus for use on 3 phase, 4 wire, 415 volts, A.C. supply with degree of protection IP-42 for the following current carrying capacity, including jointing of sections, copper flexible joints, expansion joints, bends, and earthing with 2 runs of alum. strips etc. as required.		
66.13.1	Straight run with 2 earth bus		
66.13.1.1	800 amps.	metre	13476.00
66.13.1.2	1000 amps.	metre	15161.00
66.13.1.3	1250 amps	metre	16845.00
66.13.1.4	1600 amps	metre	19204.00
66.13.1.5	2000 amps	metre	23247.00
66.13.1.6	2500 amps	metre	28806.00
66.13.1.7	3200 amps	metre	35544.00
66.13.1.8	4000 amps	metre	39418.00
66.13.2	Bend		

Code No	Description	Unit	Rate Rs. Group 1
66.13.2.1	800 amps.	each	16845.00
66.13.2.2	1000 amps.	each	20215.00
66.13.2.3	1250 amps	each	29480.00
66.13.2.4	1600 amps	each	35375.00
66.13.2.5	2000 amps	each	44640.00
66.13.2.6	2500 amps	each	50536.00
66.13.2.7	3200 amps	each	75805.00
66.13.2.8	4000 amps	each	109496.00
66.13.3	Copper flexible TPN		
66.13.3.1	800 amps.	set	40429.00
66.13.3.2	1000 amps.	set	47167.00
66.13.3.3	1250 amps	set	67382.00
66.13.3.4	1600 amps	set	96019.00
66.13.3.5	2000 amps	set	123814.00
66.13.3.6	2500 amps	set	146556.00
66.13.3.7	3200 amps	set	208884.00
66.13.3.8	4000 amps	set	271549.00
66.14	415 V LT Panel		
	SITC of floor mounted PMCC (Indoor, Dust proff IP-4x front operated with 2 mm thick sheet metal compartmentalised) with all accessible parts, head shrinkable sleeves, SMC/DMC bus bar supports, padlocking facility on outgoing feeders etc.		
66.14.1	Incommer feeder (drowout type)for transformer 630A/800A, 50KA, ACB 3 pole, Al Bus Bars,Digital Multifunction meter compatable to SCADA,metering,Protection CT's, IDMT 3-O/C & 1-E/F, indicating lamps, control fuse, wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	each	254057.00
66.14.2	Incommer feeder for (drowout type) transformer 1000A, 50KA, ACB 3 pole, Al Bus Bars,Digital Multifunction meter compatable to SCADA,metering,Protection CT's, IDMT 3-O/C & 1-E/F, indicating lamps, control fuse, wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	each	264188.00
66.14.3	Incommer feeder for (drowout type) transformer 1250 A, 50KA, ACB 3 pole, Al Bus Bars,Digital Multifunction meter compatable to SCADA,metering,Protection CT's, IDMT 3-O/C & 1-E/F, indicating lamps, control fuse, wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	each	282892.00
66.14.4	Incommer feeder for (drowout type) transformer 1600 A, 50KA, ACB 3 pole, Al Bus Bars,Digital Multifunction meter compatable to SCADA,metering,Protection CT's, IDMT 3-O/C & 1-E/F, indicating lamps, control fuse, wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	each	307830.00
66.14.5	Incommer feeder for (drowout type) transformer 2000 A, 50KA, ACB 3 pole, Al Bus Bars,Digital Multifunction meter compatable to SCADA,metering,Protection CT's, IDMT 3-O/C & 1-E/F, indicating lamps, control fuse, wiring etc.complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	each	356730.00

Code No	Description	Unit	Rate Rs. Group 1
66.14.6	Incommer feeder for (drowout type) transformer 2500 A, 50KA, ACB 3 pole, Al Bus Bars, Digital Multifunction meter compatable to SCADA, metering, Protection CT's, IDMT 3-O/C & 1-E/F, indicating lamps, control fuse, wiring etc. complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	each	408180.00
66.14.7	Incommer feeder for (drowout type) transformer 3200 A, 50KA, ACB 3 pole, Al Bus Bars, Digital Multifunction meter compatable to SCADA, metering, Protection CT's, IDMT 3-O/C & 1-E/F, indicating lamps, control fuse, wiring etc. complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	each	497607.00
66.14.8	Incommer feeder for (drowout type) transformer 4000 A, 50KA, ACB 3 pole, Al Bus Bars, Digital Multifunction meter compatable to SCADA, metering, Protection CT's, IDMT 3-O/C & 1-E/F, indicating lamps, control fuse, wiring etc. complete in all respect of the size appxo 900(D)X.2400(H)X1000(D)X	each	646889.00
66.14.9	Bus Coupler Feeder (drowout type), 630/800 A ACB, 50KA, 3 Pole without release with Al Bus Bars, Indicating Lamps, Control Fuses and wiring etc. complete in all respect. Size : 900(W) x 2400 (H) x 1000 (D)	each	218208.00
66.14.10	Bus Coupler Feeder (drowout type), 1000 A ACB, 50KA, 3 Pole without release with Al Bus Bars, Indicating Lamps, Control Fuses and wiring etc. complete in all respect. Size : 900(W) x 2400 (H) x 1000 (D)	each	229898.00
66.14.11	Bus Coupler Feeder (drowout type), 1250 A ACB, 50KA, 3 Pole without release with Al Bus Bars, Indicating Lamps, Control Fuses and wiring etc. complete in all respect. Size : 900(W) x 2400 (H) x 1000 (D)	each	249381.00
66.14.12	Bus Coupler Feeder (drowout type), 1600 A ACB, 50KA, 3 Pole without release with Al Bus Bars, Indicating Lamps, Control Fuses and wiring etc. complete in all respect. Size : 900(W) x 2400 (H) x 1000 (D)	each	268085.00
66.14.13	Bus Coupler Feeder (drowout type), 2000 A ACB, 50KA, 3 Pole without release with Al Bus Bars, Indicating Lamps, Control Fuses and wiring etc. complete in all respect. Size : 900(W) x 2400 (H) x 1000 (D)	each	313490.00
66.14.14	Bus Coupler Feeder (drowout type), 2500 A ACB, 50KA, 3 Pole without release with Al Bus Bars, Indicating Lamps, Control Fuses and wiring etc. complete in all respect. Size : 900(W) x 2400 (H) x 1000 (D)	each	358704.00
66.14.15	Bus Coupler Feeder (drowout type), 3200 A ACB, 50KA, 3 Pole without release with Al Bus Bars, Indicating Lamps, Control Fuses and wiring etc. complete in all respect. Size : 900(W) x 2400 (H) x 1000 (D)	each	437291.00
66.14.16	Bus Coupler Feeder (drowout type), 4000 A ACB, 50KA, 3 Pole without release with Al Bus Bars, Indicating Lamps, Control Fuses and wiring etc. complete in all respect. Size : 900(W) x 2400 (H) x 1000 (D)	each	568478.00
66.14.17	250 A MCCB Incomer (Fixed type) with metering CTs, multi fuction meter compatible to scada, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)X600(H)X1000(D)	each	52993.00
66.14.18	400 A MCCB Incomer (Fixed type) with metering CTs, multi fuction	each	60007.00

Code No	Description	Unit	Rate Rs. Group 1
	meter compatible to scada, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size:900(W)X600(H)X1000(D)		
66.15	LT outgoing Feeder without starters for the following ratings		
66.15.1	2000 A ACB (drowout type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)X2400(H)X1000(D)	each	345920.00
66.15.2	1600 A ACB (drowout type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)X2400(H)X1000(D)	each	293285.00
66.15.3	1250 A ACB (drowout type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)X2400(H)X1000(D)	each	276717.00
66.15.4	1000 A ACB (drowout type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)X2400(H)X1000(D)	each	250304.00
66.15.5	800 A ACB (drowout type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)X2400(H)X1000(D)	each	233738.00
66.15.6	630 A MCCB (Fixed type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)X900(H)X1000(D)	each	70741.00
66.15.7	400 A MCCB (Fixed type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)X900(H)X1000(D)	each	42609.00
66.15.8	250 A MCCB (Fixed type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)600(H)X1000(D)	each	43642.00
66.15.9	200 A MCCB (Fixed type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 900(W)600(H)X1000(D)	each	43642.00
66.15.10	160 A MCCB (Fixed type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 600(W)600(H)X1000(D)	each	36628.00
66.15.11	125 A MCCB (Fixed type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 600(W)600(H)X1000(D)	each	33511.00
66.15.12	MCCB up to 100A (Fixed type) as outgoing CT's, Ampermeter with SS, Voltmeter with SS, Indicating Lamps, Control Fuse, wiring etc. complete in all respect. Size: 600(W)300(H)X1000(D)	each	33511.00
66.15.13	630 A to 1250 A drowout type Empty Panel (Without switchgears) Size 900 (W) x 2400 (H) x 1000 (D)	each	54552.00
66.15.14	1250 A to 2000 A drowout type Empty Panel (Without switchgears) Size 900 (W) x 2400 (H) x 1000 (D)	each	83387.00
66.15.15	2500 A to 4000 A drowout type Empty Panel (Without switchgears) Size 900 (W) x 2400 (H) x 1000 (D)	each	109104.00
66.16	SITC of battery bank of min 150 AH capacity comprising SMF/VRLA batteries , MS / Teakwood battery stand , interconnect wiring etc as required complete in all respect of rating:		

Code No	Description	Unit	Rate Rs. Group 1
66.16.1	24 V DC	each	70918.00
66.16.2	48 V DC	each	141835.00
66.16.3	110 V DC	each	218208.00
66.17	SITC of FCBC (Float cum boost charger)suitable for 415V +/-10%, 50 Hz , 1-Ø / 3 -Ø Input & 24/ 48 /110 V DC OutputNatural Cooled, free standing in Sheet Steel enclosure,SCR controlled , regulation +/-1% , Efficiency > 75% on FLAC/ DC Instruments, Selector Switch ,Built in DC Distribution Board (6 No MCB), indication , control as required of following rating:		
66.17.1	15A + 15A	each	67645.00
66.17.2	20 A + 20 A	each	79101.00
66.17.3	25 A + 25 A	each	90993.00
66.18	SITC of DG Set complete with 1500 RPM Diesel Engine of suitable BHP & AC Brush less SPDP Alternator mounted on a common base Frame & coupled through a flexible coupling or close coupled.Alternator shall be self regulated with standard Alternator Protection(Over voltage, over speed & under voltage). Engine shall have residential silencer, up to 10 M exhaust piping , electronic / Mechanical governor, Manual & electric Start, Batteries, Fuel tank (with Stand) & piping, control panel (16 G) with MCCB (4P; 25 KA), Ammeter, Voltmeter, Frequency Meter, Energy Meter & Hour Meter, Engine instruments panel, AVM and with Weatherproof, powder coated Accoustic enclosure for DG set for sound attenuation fabricated from 1.6 mm CRCA sheet steel (structure) with side wall fabricated from 1.6 mm CRCA sheet and filled with foam as per CPCB norms latest amendments & IS 8183 .The doors are fabricated from 1.6 mm CRCA sheet packed with accoustic material, floor of MS chequered plate 5.0 mmthick, All doors/ opening are sealed with neoprene/ EPDN gaskets. The enclosure has built in fuel tank, residential silencer (isolated from main DG chamber) with protection and tripping of DG set against temperature of more than 50 °C. All controls for operation of DG set are from outside the enclosure with DG control panel having microprocessor based genset monitoring and control system mccb Ammeter, voltmeter, Pf meter, frequency meter, KWH meter, Ind. Lamps etc. mounted inside enclosure , visible and accessible from outside. The enclosure should be suitable for following capacity DG sets and alternator. Noise level is less than 75 db (A) at a distance of 1 Mtrs. duly certified by authorized agency. Complete in all respect of following capacity :		
66.18.1	Air Cooled & Naturally Aspirated-		
66.18.1.1	25 KVA at 0.8 pf 415V 50Hz 3-Ø	each	440513.00
66.18.1.2	30 KVA at 0.8 pf 415V 50Hz 3-Ø	each	459467.00
66.18.1.3	40 KVA at 0.8 pf 415V 50Hz 3-Ø	each	575578.00
66.18.1.4	50 KVA at 0.8 pf 415V 50Hz 3-Ø	each	658492.00
66.18.1.5	62.5 KVA at 0.8 pf 415V 50Hz 3-Ø	each	696724.00
66.18.1.6	70/82.5 KVA at 0.8 pf 415V 50Hz 3-Ø	each	791432.00
66.18.2	Radiator cooled and turbo charged		
66.18.2.1	25 KVA at 0.8 pf 415V 50Hz 3-Ø	each	423570.00

Code No	Description	Unit	Rate Rs. Group 1
66.18.2.2	30 KVA at 0.8 pf 415V 50Hz 3-Ø	each	441796.00
66.18.2.3	35 KVA at 0.8 pf 415V 50Hz 3-Ø	each	525680.00
66.18.2.4	40 KVA at 0.8 pf 415V 50Hz 3-Ø	each	553441.00
66.18.2.5	50 KVA at 0.8 pf 415V 50Hz 3-Ø	each	633165.00
66.18.2.6	62.5 KVA at 0.8 pf 415V 50Hz 3-Ø	each	669927.00
66.18.2.7	70 KVA at 0.8 pf 415V 50Hz 3-Ø	each	760992.00
66.18.2.8	82.5 KVA at 0.8 pf 415V 50Hz 3-Ø	each	798275.00
66.18.2.9	100 KVA at 0.8 pf 415V 50Hz 3-Ø	each	917204.00
66.18.2.10	125 KVA at 0.8 pf 415V 50Hz 3-Ø	each	929704.00
66.18.2.11	140 KVA at 0.8 pf 415V 50Hz 3-Ø	each	1238485.00
66.18.2.12	160 KVA at 0.8 pf 415V 50Hz 3-Ø	each	1337792.00
66.18.2.13	180 KVA at 0.8 pf 415V 50Hz 3-Ø	each	1478558.00
66.18.2.14	200 KVA at 0.8 pf 415V 50Hz 3-Ø	each	1605141.00
66.18.2.15	225 KVA at 0.8 pf 415V 50Hz 3-Ø	each	1858290.00
66.18.2.16	250 KVA at 0.8 pf 415V 50Hz 3-Ø	each	1977241.00
66.18.2.17	300 KVA at 0.8 pf 415V 50Hz 3-Ø	each	2479174.00
66.18.2.18	320 KVA at 0.8 pf 415V 50Hz 3-Ø	each	2510836.00
66.18.2.19	365 KVA at 0.8 pf 415V 50Hz 3-Ø	each	2762916.00
66.18.2.20	380 KVA at 0.8 pf 415V 50Hz 3-Ø	each	2890585.00
66.18.2.21	400 KVA at 0.8 pf 415V 50Hz 3-Ø	each	3098995.00
66.18.2.22	500 KVA at 0.8 pf 415V 50Hz 3-Ø	each	3872653.00
66.18.2.23	600 KVA at 0.8 pf 415V 50Hz 3-Ø	each	5179830.00
66.18.2.24	625/630 KVA at 0.8 pf 415V 50Hz 3-Ø	each	5166765.00
66.18.2.25	650 KVA at 0.8 pf 415V 50Hz 3-Ø	each	5531200.00
66.18.2.26	750 KVA at 0.8 pf 415V 50Hz 3-Ø	each	6360881.00
66.18.2.27	800 KVA at 0.8 pf 415V 50Hz 3-Ø	each	7315013.00
66.18.2.28	900 KVA at 0.8 pf 415V 50Hz 3-Ø	each	8412264.00
66.18.2.29	1000 KVA at 0.8 pf 415V 50Hz 3-Ø	each	9674104.00
66.18.2.30	1250 KVA at 0.8 pf 415V 50Hz 3-Ø	each	11125220.00
66.18.2.31	1500 KVA at 0.8 pf 415V 50Hz 3-Ø	each	12794003.00
66.18.2.32	1650 KVA at 0.8 pf 415V 50Hz 3-Ø	each	14713103.00
66.18.2.33	1875 KVA at 0.8 pf 415V 50Hz 3-Ø	each	16920069.00
66.18.2.34	2000KVA at 0.8 pf 415V 50Hz 3-Ø	each	19458079.00
66.18.2.35	2255 KVA at 0.8 pf 415V 50Hz 3-Ø	each	22376791.00
66.19	SITC of AUTO MAINS FAILURE (AMF) Panel fabricated from CRCA sheet steel 2mm Thick, Powder coated finish, Engine START & STOP commands, control RELAYS, selector switches for Ammeter & Voltmeter, Ammeter & Voltmeter, Control & Power Contactors, Timers, Electronic Hooter, Visual & Alarm indication for faults, UPS, operator interface panel complete in all respect suitable for following capacity DG sets:		
66.19.1	PLC Based:		

Code No	Description	Unit	Rate Rs. Group 1
66.19.1.1	25 to 40 KVA	each	77932.00
66.19.1.2	50 to 63.5 KVA	each	106766.00
66.19.1.3	80 to 160 KVA	each	157733.00
66.19.1.4	180 to 250 KVA	each	210415.00
66.19.1.5	320 to 500 KVA	each	261538.00
66.19.2	Electro-Mechanical Relay Based		
66.19.2.1	25 to 63.5 KVA	each	50344.00
66.19.2.2	80 to 180 KVA	each	92583.00
66.19.2.3	200 to 500 KVA	each	132141.00
66.20	S/F of DG Set Exhaust Piping insulation		
66.20.1	Asbestos rope insulation	metre	251.00
66.20.2	Rock /Glass wool with Al cladding (Density- 96 kg/m3, Thickness- 50 mm)	metre	1247.00
66.21	S I T C of 11KV ON LOAD oil immersed 630 A,350 MVA Metal Clad LOAD BREAK Switch complete in all respect With oil , fuses etc as required	each	127808.00
66.22	SITC of Local Push Button station fabricated with 16 SWG CRCA sheet, painted with polyester Powder coated finish after chemical treatment with following items and accessories:- i Shrouded Type push button with 2 NO Contacts element for Start/forward-reverse. ii Lockable Mushroom head type push button with 2 NC Contact element. iii 2.5 Sqmm clipon type terminals as required with 20% spares. iv 1.5 Sqmm PVC insulated flexible copper wire with lugs & ferrules as required.		
66.22.1	Local Push Button Station	each	2026.00
66.22.2	Local Push Button Station (RDOL Type)	each	2650.00

NOTE : For rate of copper bus bar add 35% on rates of aluminum bus bar.

67.0 FIRE PROTECTION WORKS

Code No	Description	Unit	Rate Rs. Group 1
67.1	SITC of electric driven Sprinkler / Hydrant pump Suitable for automatic Operation consisting of the following (A) Horizontal multi stage Centrifugal suction type pump complete for delivery of below mentioned discharge complete with necessary sluice value on the suction side (all items to be matching the suction side of the pump) and pressure gauge sluice value and non return valve on the delivery side side (all of the necessary dia) and including bypass arrangement for testing of pump (B) Squirrel cage induction motor suitable for 415 V, 50 HZ, Ac supply of below mentioned HP for the above pump ,1450 RPM T.E.F.C confirming to IP:55 and flexible coupling and coupling guard with the pump. (C) Common bed plate fabricated from mild steel channel or cast iron type		
67.1.1	1620 LPM at 56 Mtr Head (40 HP motor)	each	151069.00
67.1.2	1620 LPM at 70 Mtr Head (50 HP Motor)	each	167972.00
67.1.3	2280 LPM at 70 Mtr Head (60 HP Motor)	each	209899.00
67.1.4	2850 LPM at 70 Mtr Head (75 HP Motor)	each	281520.00
67.1.5	4500 LPM at 70 Mtr Head (120 HP Motor)	each	389184.00
67.2	SITC of diesel engine drive Standby Pump suitable for automatic operation consisting of the following A, B, C. .The Diesel driven pump shall be suitable for following discharge: (A) Horizontal multi stage centrifugal suction type pump complete for delivery of below mentioned discharge complete with necessary flexible pipe, sluice value on the suction side (all items shall be matching the suction side of the pump) and pressure gauge, sluice valve and non return valve on the delivery side (all of the necessary dia) and including bypass arrangement for testing of pump (B) Water cooled Diesel Engine developing suitable BHP for the below mentioned discharge at 1800 RPM, flexible coupling and coupling guard with the Pump, common bed plate for mounting of the Engine and Pump, d cushy foot, damping arrangement by cushy foot, Diesel Engine starting Panel for starting of the engine automatically with a unit of battery of 12/24v, 88 Ah, 13/21 plate , Exhaust Pipe of minimum 10 M length, with muffler, day oil tank of 300 lts capacity with first charge and hand operated oil pumping set, Supply, installation, testing, & commissioning of electric driven automatic pressurization pump set C) Horizontally mounted single stage centrifugal end delivery pump of below mentioned discharge with necessary sluice valve on the suction side (all items matching the suction side of the pump) and sluice valve, non return value, pressure gauge on the delivery side including by pass arrangement for testing of the working of the pumping set as required		
67.2.1	1620 LPM at 56 Mtr Head (40 HP Engine)	each	374357.00

Code No	Description	Unit	Rate Rs. Group 1
67.2.2	1620 LPM at 70 Mtr Head (50 HP Engine)	each	473184.00
67.2.3	2280 LPM at 70 Mtr Head (60 HP Engine)	each	534397.00
67.2.4	2850 LPM at 70 Mtr Head (75 HP Engine)	each	740435.00
67.2.5	4500 LPM at 70 Mtr Head (120 HP Engine)	each	791945.00
67.3	SITC of Jockey pump having Squirrel cage induction motor suitable for 415 V, 50 Hz AC supply with synchronous speed of 2900 RPM T.E.F.C type confirming to IP:55 and flexible coupling and coupling guard with the pump ,Common bed plate of fabricated mild steel channel or cast iron type.		
67.3.1	180 LPM at 70 Mtr (15 HP)	each	76799.00
67.3.2	180 LPM at 56 Mtr (7.5 HP)	each	61585.00
67.4	SITC of pressure switches for Main, Jockey, and standby pumps, including necessary wiring UPTO control panel and stop valve.	each	2156.00
67.5	Providing, fixing, jointing and testing of Heavy Gauge (C class) MS Pipe ISI marked with accessories like tees, elbows, flanged joints, reducers, compressed asbestos gaskets, nuts and bolts including fixing the pipe with suitable flat iron strip clamps /bracket, painting etc. Complete as required for delivery/ suction manifold relating to the pump including painting of two coats of Red Oxide and two coat of post office red enamel paint including all civil breakages and making good the same :		
67.5.1	80mm dia	metre	504.00
67.5.2	100mm dia	metre	693.00
67.5.3	150mm dia	metre	1008.00
67.5.4	200mm dia	metre	1449.00
67.5.5	250mm dia	metre	1885.00
67.5.6	300mm dia.	metre	2384.00
67.6	Supplying & Installing cylindrical type air vessel, 250 mm dia 1.5M high of thickness 6.0 mm M.S. complete with air release valve, safety valve, pressure gauge etc.along with two coats of Red Oxide and two coat of post office red enamel paint as required.	each	3771.00
67.7	Providing & fixing 100mm dia pressure Gauge on Pump Delivery Line complete with shut off cock.	each	315.00
67.8	Providing and laying M. S. (Medium duty B class) pipe IS ; 1239 marked including all accessories such as screwed/ welded flanges, tees, reducers etc. Conforming to IS : 1239 complete including painting, welding, jointing and compressed asbestos gaskets, nuts, bolts etc. as required. The pipe shall be painted with one coat of Primer & two coats of post office red primer paint fixed in ceiling, walls, columns for all heights with hangers/supports and fasteners including chasing of walls/ colums/ ceilings etc. and making good the same complete as required.		
67.8.1	150 mm dia	metre	877.00
67.8.2	100mm dia	metre	626.00
67.8.3	80mm dia	metre	437.00
67.8.4	65mm dia	metre	375.00

Code No	Description	Unit	Rate Rs. Group 1
67.8.5	50mm dia	metre	315.00
67.8.6	40mm dia	metre	221.00
67.8.7	32mm dia	metre	189.00
67.8.8	25mm dia	metre	126.00
67.8.9	MS (Medium duty B class) pipe with cleaning,wrapping and coating of the pipe as per IS; 10221 in all kind of soil at 1.0 M depth including excavation as required.		
67.8.9.1	200 mm dia	metre	1313.00
67.8.9.2	150 mm dia.	metre	935.00
67.8.9.3	100 mm dia.	metre	772.00
67.8.9.4	80 mm dia.	metre	620.00
67.9	Providing and fixing single headed hydrant valves with flanged inlet ISI marked with 63 mm female instantaneous outlet of gun metal complete with blank cap and chain conforming to IS : 5290	each	4426.00
67.10	Providing . 63 mm dia 15 M long reinforced rubber hose pipe conforming to IS : 636-1962, Part –A & ISI marked with Gun Metal male & female coupling wire wound with the pipe.	each	4055.00
67.11	Providing and fixing Swinging Drum type hose reel ISI marked 30M (L) x 20 mm (dia) rubber lined pipe with shut off nozzle of 6 mm dia including the cost of 25 mm dia pipe connection from riser to hose reel , all sockets, nipples, elbows and 25 mm globe valve.	each	6956.00
67.12	Providing & fixing (1.0 M x .45 M x 0.6 M) OUTDOOR HOSE CABINET suitable for accommodating hydrants made of not less than 16 swg. M. S. sheet having central opening glazed door including necessary locking arrangement, painting (one coat primer & two coats of paint) and housing 2 Nos. RRL hose pipe, 1 No branch pipe.	each	3313.00
67.13	Providing & fixing (0.9 M WIDE x 1.8 M HEIGHT) INDOOR HOSE CABINET suitable for accomodating hydrants made of TUBULAR pipe having central opening glazed door including necessary locking arrangement, painting (one coat primer & two coats of paint) and housing 2 Nos. RRL hose pipe, 1 no branch pipe.	each	3785.00
67.14	Providing & fixing cast iron double flanged type sluice valve of the following size complete with bolts, nuts, washers and compressed asbestos gaskets as required;		
67.14.1	250 mm dia	each	62200.00
67.14.2	200 mm dia	each	47900.00
67.14.3	150 mm dia	each	27400.00
67.14.4	100 mm dia	each	18700.00
67.14.5	80 mm dia	each	13400.00
67.14.6	65 mm dia	each	10888.00
67.15	Providing & making drainage Provision for the risers with necessary 40 mm dia pipe stop valve etc as required with Maximum length of pipe 6 M.	each	1502.00
67.16	Providing and fixing non return valve complete with bolts nuts		

Code No	Description	Unit	Rate Rs. Group 1
	washers and compressed asbestos gasket etc as required :		
67.16.1	200 mm dia	each	40100.00
67.16.2	150 mm dia	each	17900.00
67.16.3	100 mm dia	each	10900.00
67.17	Providing and fixing ISI marked Three Way fire Brigade Inlet to wet Riser with non return valve complete in all respects	each	7592.00
67.18	Providing and fixing suction coupling for fire brigade withdrawal of water from tank with 150mm dia pipe and foot valve.(Pipe max 10 M long)	each	4793.00
67.19	Providing and making 1.0 Mx 1.0 M (internal size) sluice valve chamber of 230 mm thick brick walls on 100 mm external plaster. The Man Hole shall have a 116 kg CI/ ferro cement cover.	each	3303.00
67.20	Providing and fixing air release valve with air vessels at the top of Risers. 250 mm dia, 1 Mtr long	each	3785.00
67.21	SITC of Installation Control Valve (ICV) inclusive of 150 mm dia sluice valve ,Alarm valve , water Gong ,Pressure gauge and other miscellaneous valves and fittings as required .	each	39254.00
67.22	Providing, fixing, testing & commissioning of sprinkler heads of the following type :		
67.22.1	Pendant type with quartziod bulb, operating temperature at 68 deg C as per specifications.	each	252.00
67.22.2	Upright type with quartzoid bulb , fixed on a short stem -operating temperature at 68 deg C as per specifications	each	252.00
67.22.3	Sidewall Sprinklers (ordinary)	each	351.00
67.22.4	Extended Throw Sidewall type .	each	504.00
67.22.5	Pendent type but rated at 141 degrees Centigrade.	each	504.00
67.22.6	Auto Flow Control Sprinkler Head.	each	1901.00
67.22.7	Concealed type but rated at 68 deg C.	each	378.00
67.23	Providing & fixing 10 SWG chrome plated brass 100 mm dia decorative flanges / escutcheon plates to be fixed at junction of Sprinkler piping with the false ceiling.	each	60.00
67.24	Providing & fixing Butterfly valve with Cast Iron Body, Cast Iron Disc and Seat of Nitrile Rubber Bonded on Bakelite with hard back to PN 1.6 rating with following sizes complete with bolts, washers and compressed asbestos gasket as required		
67.24.1	150 mm dia	each	4159.00
67.24.2	100 mm dia	each	2988.00
67.24.3	80 mm dia	each	1997.00
67.24.4	50 mm dia	each	1764.00
67.25	Providing and fixing 10 mm dia M S pipe drainage arrangement for Sprinkler Headers including stop valve with a maximum Pipe length of 5 Mtr.	each	1309.00
67.26	SITC Smoke Detector (Dual Chamber) Ionization type with mounting base , LED , etc complete as required.		

Code No	Description	Unit	Rate Rs. Group 1
67.26.1	Conventional type	each	1263.00
67.26.2	Analogue addressable type	each	1743.00
67.27	SITC Photo Electric type Smoke Detector with mounting base. LED, with etc complete as required .		
67.27.1	Conventional type	each	1157.00
67.27.2	Analogue addressable type	each	1597.00
67.28	SITC of Rate of Rise cum fixed Temperature thermistor type Heat Detector with mounting base LED, complete as required .		
67.28.1	Conventional Type	each	1657.00
67.28.2	Analogue Addressable type	each	2651.00
67.29	SITC Manual Call Point complete with , Glass, hammer and chain etc as required:		
67.29.1	Conventional type	each	528.00
67.29.2	Analogue addressable type	each	1320.00
67.30	SITC Speaker cum electronic Hooter mounted in M S sheet box with perforated front mesh for PA and Emergency System.	each	198.00
67.31	SITC Duct Casting Unit with casing of fabricated aluminous and hinged inspection cover, 1 no outlet tube 7.5 cm long & with 1 no Conventional /analogue addressable Photo Electric type Smoke Detector with mounting base , address switch complete as required	each	3960.00
67.32	SITC Fault Isolators for isolating shorted, dead wire and loose circuits between two successive Fault Isolators with automatic resetting arrangement.		
67.32.1	Analogue addressable type	each	4648.00
67.33	SITC Automatic commendable Control Switches for shutting down AC Plant, Power Supply, Gas Supply etc.		
67.33.1	Analogue addressable type	each	4642.00
67.33.2	Response Indicators	each	130.00
67.34	SITC of microprocessor based 2 - wire loop (each loop accessing 90 addressable units) Fire Alarm Control Panel. The Panel shall be able to give pin point location of addressable units via the address code for each unit. The Panel shall also be able to automatically switch off all control switches when-ever any Alarm is triggered. The Panel shall also be able to give voice announcement to individualized speakers. The Panel shall have built in sounder, Maintenance Free Batteries of minimum 15 Ah of 24 volts capable of minimum of 12 hours with battery charger, rectifier. Loop cards, LCD unit to indicate Fire / Fault Signal of individual unit, built in-built / external printer, to log all incoming data etc complete in all respect.		
67.34.1	1-LOOP	each	198374.00
67.34.2	2-LOOP	each	230714.00
67.35	SITC of wall / floor type following zone (each zone accessing 20 units) Conventional Type solid state main control panel fabricated from 16 SWG CRCA sheet steel incorporating audio –visual indication for each zone with Public address system complete with 2x250W channel mixing amplifier , Required zone floor selector		

Code No	Description	Unit	Rate Rs. Group 1
	console, 1-No cardioid goose neck microphone , 1-No professional grade cassette deck 6-way PA selector with “ ALL CALL “, & sealed maintenance free (SMF) batteries of min 42 AH of 2X12 V.		
67.35.1	4-zone	each	27027.00
67.35.2	6-zone	each	81223.00
67.35.3	12-zone	each	108320.00
67.35.4	24-Zone	each	138136.00
67.36	Providing and fixing flexible 20 mm dia PVC conduit 2 MM thick including all necessary supports, clamps, jointing pieces etc for drop of wire/cable from slab / wall.	each	24.00
67.37	Providing, installing & commissioning of PA system Operator Console complete with following capacity , channel mixing amplifier , 1 no cardioids goose neck microphone , 1 no professional grade cassette deck, 15 zone floor selector console , a change over Panel for connection to the fire Alarm Panel, a Mains Panel, a Monitor Panel all pre wired and rack mounted complete in all respects. PA system shall be coupled to the Fire Alarm System		
67.37.1	1 x 100 Watt	each	13200.00
67.37.2	6 x 120 Watt	each	66066.00
67.38	SITC of conventional type solid State Local Control panel (LCP) of following zones for wall mounting type fabricated out of 16 SWG CRCA sheet steel incorporating audio visual indication for each zone but without battery & battery charger etc complete in all respect.		
67.38.1	4-zone	each	13656.00
67.38.2	6-zone	each	20029.00
67.38.3	12-zone	each	26038.00
67.38.4	24-Zone	each	33275.00
67.39	Providing and fixing with bracket/ supports etc wall/floor mounted fire extinguishers as per details below:		
67.39.1	ISI marked water gas pressure type extinguisher 9 lts capacity with discharge tube, gun metal cap, 60 gms carbon Dioxide cartridge complete in all respects.	each	2118.00
67.39.2	ISI marked 10 kg capacity Dry Powder fire extinguisher with high pressure discharge hose, squeeze gripe nozzle 120 gms carbon dioxide cartridge, gun metal cap with initial charge of dry power. Both extinguisher and dry power to be ISI marked.	each	2980.00
67.39.3	ISI marked 5 kg capacity Dry Powder fire extinguisher with high pressure discharge hose, squeeze gripe nozzle 120 gms carbon dioxide cartridge, gun metal cap with initial charge of dry power. Both extinguisher and dry power to be ISI marked.	each	1584.00
67.39.4	Carbon Dioxide type fire extinguisher with cylinder fully charge of 4.5 kg capacity.	each	5836.00
67.40	Providing and fixing charged ABC type fire extinguisher including the cost of fixing with nut, bolts etc as required.		
67.40.1	2 Kg	each	2647.00
67.40.2	5 Kg	each	2647.00

Code No	Description	Unit	Rate Rs. Group 1
67.41	Supplying and fixing of Electric Flow switch for sprinkler system annunciation	each	3309.00
67.42	SITC of sprinkler system annunciation panel		
67.42.1	4 zone	each	16751.00
67.42.2	6 zone	each	23671.00
67.42.3	15 zone	each	35507.00

68.0 INSTRUMENTATION

Code No	Description	Unit	Rate Rs. Group 1
68.1	Providing, installation, testing and commissioning of Online BOD & COD Meter with Transmitter and Sensor complete with all accessories. COD: Measuring Range: 0-500 mg/L, Accuracy: $\pm 2\%$ or 5 mg/L, Resolution: 1 mg/L or better, Measurement Principle: Absorption - Double Beam UV vis with full spectrum scanning, Cleaning: Automatic Self-Cleaning using compressed Air. BOD: Measuring Range: 0-50 mg/L, Accuracy: ≤ 1 mg/L, Resolution: 1 mg/L or better, Measurement Principle: Absorption - Double Beam UV vis with full spectrum scanning	each	2027600.00
68.2	Providing, installation, testing and commissioning of TSS Meter with Transmitter and Sensor Measuring Range: 0-10 mg/L, Accuracy: $\leq 3\%$, Resolution: ≤ 0.15 mg/L, Operating Temperature: 0- 40°C, Cleaning: Automatic Self-Cleaning using compressed Air	each	550285.00
68.3	Providing, installation, testing and commissioning of Sludge level meter with Transmitter and Sensor Range: 0 - 10 m, Accuracy: $\pm 5\%$, Output: 4 - 20 mA	each	660342.00
68.4	Providing, installation, testing and commissioning of NH ₃ Meter with Transmitter and Sensor Range: 0 - 100 ppm, Repeatability: $\pm 5\%$ of measured value, Protection class: IP 68, Accuracy: $\pm 5\%$ of measured value, Output: 4 - 20 mA DC (Isolated)	each	937754.00
68.5	Providing, installation, testing and commissioning of NO ₃ Meter with Transmitter and Sensor Range: 0 - 1000 mg/L, Repeatability: $\pm 5\%$ of measured value, Protection class: IP 68, Accuracy: $\pm 5\%$ of measured value, Output: 4 - 20 mA DC (Isolated)	each	916058.00
68.6	Providing, installation, testing and commissioning of Mixed Liquid Suspended Solid (MLSS) Analyser Range: 0.001 - 4000 NTU, Repeatability: $\pm 5\%$ of measured value, Protection class: IP 68, Accuracy: $\pm 1\%$ of measured value, Output: 4 - 20 mA DC (Isolated)	each	276845.00
68.7	Providing, installation, testing and commissioning of Total Organic Carbon (TOC) Meter, Measuring Range: 0-25 mg/L, Accuracy: 3%, Resolution: ≤ 0.15 mg/L, Cleaning: Automatic Self-Cleaning using compressed Air	each	330171.00
68.8	Providing, installation, testing and commissioning of ORP Meter with Transmitter and Sensor, Measuring Range: -2000mV to 2000mV, Accuracy: ≤ 0.01 units of V, Resolution: ≤ 0.01 units of V, Response Time: ≤ 60 seconds, Operating Temperature: 0- 40°C, Repeatability: ± 0.05	each	133641.00
68.9	Differential Pressure transmitter sensor material and wetted parts MOC SS316, 4-20mA DC (Isolated) output, IP 65 of IS 13947 Part I, Overall Accuracy $\pm 0.5\%$ of measured value, Range: Adjustable over full span	each	70751.00
68.10	Providing, installation, testing and commissioning of Diaphragm Type Pressure Gauges Dial size 150 mm glycerin filled shatterproof glass, Over range protection: 125% of maximum pressure, Material of sensor and other wetted parts: SS type 316, Housing material: Die cast aluminum	each	7075.00
68.11	Providing, installation, testing and commissioning of Diaphragm type	each	6603.00

Code No	Description	Unit	Rate Rs. Group 1
	Pressure Switches Sensing Element: Bellows / Diaphragm, Material of sensor and other wetted parts: SS type 316, Housing: Die cast aluminum, Switch type: Microswitch, Repeatability: $\pm 1\%$ of span, Switch Contacts: 2 NO + 2 NC		
68.12	Providing, installation, testing and commissioning of Level Switch (Conductivity) Conductivity Probes: (i) Rigid for lengths of up to 3 meters (ii) Flexible for lengths above 3 meters (Rigid probes preferred), Probe insulation: Teflon, Probe head protection class: IP 65 of IS 13947 Part I, Probe head housing material: Aluminum	each	31445.00
68.13	Providing, installation, testing and commissioning of ULTRASONIC DIFFERENTIAL LEVEL TRANSMITTER: Principle : Time of Flight / Sensor MOC PP / Process Connection 1 1/2 inch BSP or 2 inch BSP Threaded type / Power Supply: 24 V DC / Output: 4- 20 mA / Display: Integral display for programming and Display Reading / IP 66 and as per direction of Engineer	each	237816.00
68.14	Providing, installation, testing and commissioning of Capacitance Level Transmitter for tank /sump level Accuracy: $\pm 1.5\%$ of span, Probe type: Rod, Probe material: SS type 316, Weather Protection Class: IP 65 of IS 13947 Part I, Output: 4-20 mA DC (Isolated), Material of wetted parts: SS 316, Probe insulation material: Teflon, Stilling pipe: SS type 316 with perforations	each	70751.00
68.15	Providing, installation, testing and commissioning of AIR Flow Transmitter (Annubar) Accuracy of measuring loop: $\pm 1\%$ of full scale, Temperature compensation: required, Weather protection: IP 65 of IS 13947 Part I, Output: 4-20 mA DC (Isolated), Annubar tube: SS 316, Air temperature range: -40°C to 85°C	each	393061.00
68.16	Providing, Installation, Testing and Commissioning of MAGNETIC FLOW METER for Water Application: Liner: Polyurethane or Hard Rubber / Electrode MOC: SS316L or CS /Housing : Die Cast Aluminium or CS / Power Supply: 90-230 V AC / Output: 4-20mA with HART / Sensor Cable : 10 mt / Flow Tube or Sensor housing protection IP68 / Process Flange : SS316 / Display : 3 1/2 LCD Display / Cable Connection : 1/2"NPT /Accuracy : 0.5%		
68.16.1	50	each	91033.00
68.16.2	65	each	93863.00
68.16.3	80	each	97479.00
68.16.4	100	each	105843.00
68.16.5	150	each	124050.00
68.16.6	200	each	144961.00
68.16.7	250	each	213511.00
68.16.8	300	each	245899.00
68.16.9	350	each	393061.00
68.16.10	400	each	440228.00
68.16.11	450	each	471673.00
68.16.12	500	each	518840.00
68.16.13	600	each	676579.00

Code No	Description	Unit	Rate Rs. Group 1
68.16.14	700	each	854228.00
68.16.15	800	each	1003269.00
68.16.16	900	each	1125799.00
68.16.17	1000	each	1291320.00
68.16.18	1200	each	1900843.00
68.17	Providing, Installation, Testing and Commissioning of ULTRASONIC OPEN CHANEL FLOW METER (Upto 5 metre Head rise) for Water Application : Principle : Time of Flight / Sensor MOC PP / Power Supply: 24 V DC / Output: 4- 20mA / Display: Integral display for programming and Display Reading / IP 66/ Accuracy $\pm 1\%$	each	204392.00
68.18	Providing, Installation, Testing and Commissioning of ULTRASONIC LEVEL TRANSMITTER for Water Application : Principle : Time of Flight / Sensor MOC PP / Process Connection 1 1/2 inch BSP or 2 inch BSP Threaded type / Power Supply: 24 V DC / Output: 4-20mA / Display: Integral display for programming and Display Reading / IP 66		
68.18.1	0 - 5 MTR	each	62890.00
68.18.2	0 - 8 MTR	each	99051.00
68.19	Providing, Installation, Testing and Commissioning of ULTRASONIC FLOW METER CLAMP ON TYPE for Water Application : Principle: Time of Flight / Type: Clamp on / Protection : IP68 / Power Supply: 230 V AC / Output : 4-20 mA with HART / Accuracy: 2 - 3%		
68.19.1	100-2000 DN	each	386772.00
68.19.2	100-4000 DN	each	625753.00
68.20	Providing, Installation, Testing and Commissioning of ULTRASONIC FLOW METER INSERTION TYPE for Water Application : Principle: Time of Flight / Type: Insertion / Protection : IP68 / Power Supply: 230 V AC / Output : 4-20 mA with HART / Accuracy: 2 - 3%		
68.20.1	200 - 1000 mm	each	648157.00
68.20.2	1000 -4000 mm	each	903018.00
68.21	Providing, Installation, Testing and Commissioning of PRESSURE TRANSMITTER for Water Application: Range: 0-10 Bar / Power Supply: 24 V DC / Output: 4-20 mA with HART / Diaphragm: SS316L / Process Connection: 1/2 "NPT (M) / Accuracy: 0.15% Protection: IP67		
68.21.1	1/2" M (NPT)	each	70751.00
68.22	Providing, Installation, Testing and Commissioning of pH ANALYSER for Water Application : Transmitter : Range: 0-14 pH, Power Supply 230 VAC, Input: One Digital Sensor, Output: 4-20mA HART, IP66 Protection / Tx protection cover required / Sensor Range 0-14 pH , able to transmit digital signal to transmitter, calibration data can be transferred to Transmitter , process temp: 65 deg cen/ flow through tee MOC SS		
68.22.1	0-14 pH	set	212253.00
68.23	Providing, Installation, Testing and Commissioning of CHLORINE ANALYSER for Water Application: Transmitter : Range: 0.05 to 20 ppm, Power Supply 230 VAC, Input: 2 Digital Sensors - one for		

Code No	Description	Unit	Rate Rs. Group 1
	chlorine and second for pH, Output: 4-20mA HART, IP66/67 Protection / Tx protection cover required / Sensor Range 0-14 pH , able to transmit digital signal to transmitter, calibration data can be transferred to Transmitter , process temp: 65 deg cen/ Sensor range:0.05 to 20 mg/l		
68.23.1	0.05 -20 mg/l	set	407997.00
68.24	Providing, Installation, Testing and Commissioning of TURBIDITY ANALYSER for Water Application : Turbidity Measuring range: 0 to 100 NTU ; Accuracy:+/-2% of reading or +/-0.02NTU; Compliance to US EPA180.1, With inbuilt transmitter with 4-20 mA output , Relay contacts & Modbus communication		
68.24.1	0 - 100 NTU	each	382841.00
68.25	DISSOLVED OXYGEN ANALYSER for Water Application: Measuring range: 0 to 20mg/l, Optical fluorescence technology , Membrane free operation ;Accuracy:0.01mg/l or +/-1% of measured value ; With digital transmitter having output: 4-20mA HART, IP66/67 Protection		
68.25.1	0 - 20 mg/l	set	300299.00
68.26	Providing, Installation, Testing and Commissioning of Loss of Head Indicator in Filter Beds: Measuring Range: 0 - 3 metre / Field mounted Transmitter with LCD Display / Power Supply: 230 VAC / Output : 4-20mA with HART / IP66 / Sensor 0-3 metre / Principle Time of Flight / Housing PVDF / IP68 Protection		
68.26.1	0 - 3 metre	set	66034.00
68.27	Providing, Installation, Testing and Commissioning of Rate of Flow Indicator in Inlet and Outlet Filter House: Measuring Range: 0 - 6 metre / Field mounted Transmitter with LCD Display / Power Supply: 230 VAC / Output : 4-20mA with HART / IP66 / Sensor 0-6 metre / Principle Time of Flight / Housing PVDF / IP68 Protection		
68.27.1	0 - 6 metre	set	66506.00

69.0 MOTOR STARTERS

Code No	Description	Unit	Rate Rs. Group 1
69.1	Upto 3.7 KW DOL Starter Feeder with MCB,Main and Aux Contactor,O/L Relay,L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB Size : 600 (W) x 400 (H) x 600 (D)	each	20262.00
69.2	From 3.3 KW to 7.5 KW DOL Starter Feeder with MCB,Main and Aux Contactor,O/L Relay,L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB (Size : 600 (W) x 400 (H) x 600 (D)	each	20262.00
69.3	S & F of Star delta Starter with MCB,Main and Aux Contactor,O/L Relay, L/R Selector Switch,3 Indicating lamps,Start-Stop Push Button ,Control MCB with panel with all accessories with following rating		
69.3.1	7.5 KW to 9.3KW	each	10211.00
69.3.2	11 KW	each	10211.00
69.3.3	15 KW	each	11417.00
69.3.4	18.5 KW	each	11417.00
69.3.5	22 KW	each	18784.00
69.3.6	30 KW	each	30163.00
69.3.7	37KW	each	30163.00
69.3.8	45 KW	each	49991.00
69.3.9	55 KW	each	49991.00
69.4	S & F of STAR DELTA STARTER IN THE EXISTING PANEL WITH FOLLOWING RATING		
69.4.1	7.5 KW to 9.3KW	each	10376.00
69.4.2	11 KW	each	11172.00
69.4.3	15 KW	each	13578.00
69.4.4	18.5 KW	each	15127.00
69.4.5	22 KW	each	22361.00
69.4.6	30 KW	each	22361.00
69.4.7	37KW	each	31226.00
69.4.8	45 KW	each	44367.00
69.4.9	55 KW	each	54214.00
69.5	55 KW to 90 KW Soft Starter Feeder without Soft Starter with 3 phase Size: 600 (W) x 900 (H) x 600 (D)	each	62345.00
69.6	SITC of Soft Starters with panel supplied by manufacturer conforming to applicable standards with logic inputs & outputs, relay outputs and analogue outputs, plug in I/O connections, display of electrical parameters, state of load & operating time, RS 485 serial link for connections to Modbus.		
69.6.1	22 KW	each	82567.00

Code No	Description	Unit	Rate Rs. Group 1
69.6.2	30 KW	each	91912.00
69.6.3	37 KW	each	100643.00
69.6.4	45 KW	each	112221.00
69.6.5	55 KW	each	132812.00
69.6.6	75 KW	each	154718.00
69.6.7	90 KW	each	174567.00
69.6.8	110 KW	each	193270.00
69.6.9	125 KW	each	236912.00
69.6.10	160 KW	each	277436.00
69.6.11	200KW	each	303933.00
69.6.12	225 KW	each	347575.00
69.7	PROVIDING AND FIXING OF SOFT STARTER IN EXISTING PANEL		
69.7.1	22 KW	each	51605.00
69.7.2	30 KW	each	57445.00
69.7.3	37 KW	each	62902.00
69.7.4	45 KW	each	75827.00
69.7.5	55 KW	each	83008.00
69.7.6	75 KW	each	96699.00
69.7.7	90 KW	each	121591.00
69.7.8	110 KW	each	134995.00
69.7.9	125 KW	each	189338.00
69.7.10	160 KW	each	211427.00
69.7.11	200 KW	each	252451.00
69.7.12	225 KW	each	287990.00
69.8	SITC of Variable Frequency Drives with panel supplied by manufacturer conforming to applicable standards with logic inputs & outputs, relay outputs and analogue outputs, plug in I/O connections, display of electrical parameters, state of load & operating time, RS 485 serial link for connections to Modbus.		
69.8.1	0.75 KW	each	19771.00
69.8.2	1.1 KW	each	20154.00
69.8.3	1.5 KW	each	20536.00
69.8.4	2.2 KW	each	23504.00
69.8.5	3 KW	each	23959.00
69.8.6	3.7/4 KW	each	24414.00
69.8.7	5.5 KW	each	25276.00
69.8.8	7.5 KW	each	37531.00
69.8.9	11 KW	each	42366.00

Code No	Description	Unit	Rate Rs. Group 1
69.8.10	15 KW	each	48924.00
69.8.11	18.5 KW	each	57971.00
69.8.12	22 KW	each	75588.00
69.8.13	30 KW	each	96927.00
69.8.14	37 KW	each	113406.00
69.8.15	45 KW	each	136022.00
69.8.16	55 KW	each	149941.00
69.8.17	75 KW	each	169366.00
69.8.18	90 KW	each	199920.00
69.8.19	110 KW	each	229638.00
69.8.20	132 KW	each	303933.00
69.8.21	160 KW	each	357965.00
69.8.22	200 KW	each	404076.00
69.8.23	250 KW	each	490189.00
69.8.24	250 KW	each	529934.00
69.8.25	315 KW	each	635922.00

70.0 DISMANTLING OF EXISTING STRUCTURE/ MISC. ITEMS

Code No	Description	Unit	Rate Rs.
70.1	Dismantling of existing LT/HTelectric lines including poles/towers, ACSR conductors, guard wires, stay wire, insulators and other electrical items of the pole coming along the alignment of the road or in the plant premises and removal and transportation as well as disposal of all the items as per the direction of engineer incharge.(Serviceable material or can-dum material.)		
70.1.1	Dismantling of 33KV Lattice Tower (580 kg/520kg) with all accessories brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	each	3609.00
70.1.2	Dismantling of 33KV Rail /any type of pole with all accessories brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	each	2010.00
70.1.3	Dismantling of 11KV Lattice Tower (580 kg/520kg) with all accessoriesbrackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	each	2266.00
70.1.4	Dismantling of 11KVRail/cement Pole /joist/(RSJ - 9 or 10 mtr height with earth wire and brackets, tophamper, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.	each	1929.00
70.1.5	Dismantling of Composite line pole with 11KV and LT (RSJ 10/9 mtr height pole) ACSR conductors ,V-Cross arms, top hamper, brackets, insulators, stay etc.	each	1655.00
70.1.6	Dismantling of LT line /joist/rail pole (PCC 8/9 mtr height) with existing street light fixtures, brackets, top hamper, earth guarding bracket, insulators, stay etc with ACSR conductor, 3 phase/ single phase, one neutral one earthwire and one street light phase)	each	1413.00
70.1.7	Dismantling of LT line pole (PCC - 8/9 mtr height) single phase/3 phase & 5 wires bracket, top hamper, insulators(pin or disc) earthwire and conductors.	each	934.00
70.1.8	Dismantling and rerolling of 33KV conductor any type	rmtr	10.00
70.1.9	Dismantling and rerolling of 11KV conductor any type	rmtr	8.00
70.1.10	Dismantling and rerolling of LT conductor any type	rmtr	5.00
70.1.11	Dismantling and rerolling of earth conductor any type	rmtr	2.00
70.1.12	Dismantling of Telephone pole (Tubular Type).	nos	550.00
70.1.13	Dismantling and reinstallation of 11KV Feeder pillar box any type	each	3977.00
70.1.14	Dismantling and re installation of LT Feeder pillar box any type	each	3469.00
70.1.15	Dismantling of the Double Pole structure with mounted transformers, distribution boards G.O, D.O, street light panel, stays, earthing wire pipe, cabling,etc & installing the same transformer on the structure newly erected along with distribution board along with erection, testing and commissioning.	each	5671.00
70.1.16	Dismantling of the four pole structure with mounted transformers along with distribution boards G.O, D.O, street light panel, stays, earthing wire pipe, cabling etc & installing the same transformer on the structure newly erected along with distribution board along with erection, testing and commissioning.	each	22969.00

71.0 SHIFTING of OVER-HEAD LINES (Dismantling & Re Erecting the Same)

Code No	Description	Unit	Rate Rs.
71.1	Dismantling and re - erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect		
71.1.1	8.0 Mtr (200 Kg) long as per Discom specification	each	843.00
71.1.2	9.0 Mtr (200 Kg) long as per Discom specification	each	1031.00
71.1.3	9.0 Mtr (400 Kg) long as per Discom specification	each	1213.00
71.1.4	11.0 Mtr (400 Kg) long as per Discom specification	each	1367.00
71.2	Dismantling and re - erection of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.		
71.2.1	Stay set of dia 20mm,2.4m long stay rod and anchor plate 380x380x6.4mm	each	623.00
71.2.2	Stay set of dia 16mm,1.8m long stay rod and anchor plate 300x300x6.4mm	each	541.00
71.3	Dismantling and re- fixing of cross arms as per Discom specification, made out from angle iron 50mmx 50mmx6mm including all necessary nuts,bolts, holding clamp of 50x6mm flat etc as reqd. on existing pole or on wall and special accessories for XLPE insulated ABC overhead cable like I- hook, Dead End clamp assembly, Suspension clamp assembly as required		
71.3.1	LT Bracket with clamp 1200 mm long	each	35.00
71.3.2	LT Bracket with clamp 600 mm long	each	31.00
71.3.3	Suspension clamp with eye hook (REC Standard) & pole clamp	each	92.00
71.3.4	Dead clamp with eye hook (REC Standard) & pole clamp	each	92.00
71.3.5	Type A/B LT connectors (REC Standard) suitable for ABC Cable	each	46.00
71.4	Dismantling and re - fixing of LT porcelain pin insulator as per IS 1445-1997 suitable for working voltage 1100 volts including all accessories like hot dip GI forged spindle of 260mm long and nuts etc as reqd as per Discom specification.		
71.4.1	105mm x 65mm	each	8.00
71.4.2	105mm x 80mm	each	11.00
71.4.3	120mm x 85mm	each	14.00
71.5	Dismantling and re - fixing of porcelain shackle insulator as per IS:1443 1979 suitable for working on 1100 volts including hot dipped GI accessories and heavy duty hardwares etc as required as per Discom specification.		
71.5.1	75mm x 90mm	each	18.00

Code No	Description	Unit	Rate Rs.
71.5.2	100mm x 110mm	each	24.00
71.6	Labour cost for re-painting over the existing poles above ground level including overhang making surface well clean and apply two coats of aluminium/ enamel paint as approved with required T & P etc as required.		
71.6.1	Pole of 7 to 9 mtr long		
71.6.1.1	with one overhang	each	19.00
71.6.1.2	with two overhang	each	22.00
71.6.2	Pole of 10 to 12 mtr long		
71.6.2.1	with one overhang	each	29.00
71.6.2.2	with two overhang	each	32.00
71.7	Dismantling and re - drawing overhead steel core Aluminium conductor (ACSR) ISI marked (IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.		
71.7.1	30 Sqmm of (6+1) 2.59mm (Weasel)	metre	3.00
71.7.2	50 Sqmm of (6+1) 3.35 mm (Rabbit)	metre	4.00
71.7.3	50 Sqmm of (6+1) 3.35 mm (Insulated Rabbit)	metre	5.00
71.7.4	80 Sqmm of (6+1) 4.09 mm (Raccon)	metre	4.00
71.7.5	100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog)	metre	5.00
71.8	Dismantling and re fixing of fuse box size 250(H) x 200(W) x 150(D) mm with base shape accomodating the pole partly, fabricated of 1.6mm MS sheet with hinged cover, dust and vermin proof, rubber gasket, locking arrangement, duly holded with 2 nos pole clamps of 25mm x 3mm flat with nut and bolts, complete with anticorrosive treatment, finished with two coat of approved enamel paint. The box shall be provided with 2/ 4 nos copper bus bar 150 x 20 x 3mm with brass screws suitable supports,earth terminal, inter connection, brass cable gland upto 10 Sqmm size cable, 2nos 16 Amp kitkat fuse complete in all respect.	each	86.00
71.9	Dismantling and re - fixing of 'V' type cross arms made of MS channel on the existing poles complete including all necessary nut and bolt etc with clamps as per Discom specification.		
71.9.1	11kV cross arms (75 x 40 x 6.8 kg/mtr)	each	57.00
71.9.2	11kV cross arms (75 x 40 x 5.7 kg/mtr)	each	49.00
71.10	Dismantling and re - fixing of top hamper on the existing pole complete including nut bolts etc as required.		
71.10.1	Vertical type		
71.10.1.1	11 kV (.7m long) (65 x 65 x6mm angle)	each	22.00
71.10.1.2	11 kV(50 x 6 mm flat)	each	7.00
71.11	Dismantling and re - fixing of Cross arms made out from 100 x 50 x 6mm MS channel complete in all respect as required including nuts and bolts and clamp as per Discom specification etc as required.		
71.11.1	1.3 m long	each	57.00

Code No	Description	Unit	Rate Rs.
71.11.2	2 x 1.3 m long	each	114.00
71.12	Dismantling and re - fixing of 50 x 6mm MS strip having two holes of 5/8" dia with cut for providing 6/8 SWG GI wire.		
71.12.1	100 mm long	each	2.00
71.12.2	80 mm long	each	1.00
71.13	Dismantling and re - fixing of a set of 4 nos V cross arm made out of MS angle with bracing of MS flat 50 x 6 mm with nuts and bolts (as per specification of Discom) for 11 kV made up of 65 x 65 x6mm MS angle.	each	315.00
71.14	Dismantling and re - fixing of pilot patti made from MS flat (as per specification of Discom) and suitable for PCC pole (50 x 6mm)/ R.S. joist (50 x 6mm).	each	4.00
71.15	Dismantling and re - fixing 11kV pin insulator(IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification of Discom).	each	18.00
71.16	Dismantling and re-fixing 11kV Disc insulator (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification of Discom).		
71.16.1	B & S type insulator with hardware	each	60.00
71.16.2	T & C type insulator with hardware	each	60.00
71.17	Dismantling and re- fixing of PG clamps on overhead lines/jumpers, made of aluminium alloy 4600 of IS 617-1994 (with latest amendment if any) with steel nut and bolts conforming to IS 1363-1992 & IS 1367/1979-80 (with latest amendments if any) all ferrous metal parts intended for outdoor use except those made of stainless steel shall be protected by hotdip galvanising in accordance with IS 2633-1986 complete in all respect as required for ACSR conductor.		
71.17.1	Dog	each	9.00
71.17.2	Racoon	each	9.00
71.17.3	Weasel/Rabbit	each	9.00
71.18	Dismantling and re-laying earth conductor from electrode to source in ground/ floor/ wall on iron saddles etc as required including making connection duly soldered or crimped 7/3.15 mm hot dipped stay wire.	metre	3.00
71.19	Dismantling and re-fixing of straight type 1.5 mtr long cross arms made out from MS angle of size 50 x 50 x 6mm for guarding on existing poles complete including 2 nos 150mm long MS flat of size 50 x 6mm bend into shape at both the ends duly welded clamps, nut and bolt etc as required.	each	162.00
71.20	Dismantling and re - fixing of pillar box made of 2mm CRCA MS sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including knife switch, HRC fuses with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS angle frame of 50 x 50 x 6 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for four outgoing.(400Amp capacity)	each	3923.00

Code No	Description	Unit	Rate Rs.
71.21	Dismantling and re - fixing 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos 24kV/22kV post insulator (IS:5350 part III), hot dipped hard ware, fuse wire of required size etc. complete in all respect as per specification given by Discom. (Type tested by ERDA/CPRI)	each	789.00
71.22	Dismantling and re - fixing of 11kV, 400 Amp 3pole, central pot rotating double break type isolator (IS:9921 part I to V) without earth blade operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 12 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, nut, bolts etc complete in all respect as per specification of Discom. (Type tested by ERDA/CPRI.)	each	1709.00
71.23	Dismantling and re - fixing of distribution type Lightning arrestor 9 kV, 5 kA (IS:3070) with mounting breaking to be installed on existing DP structure. (Type tested by ERDA/CPRI.)	each	789.00
71.24	Dismantling and re - fixing double pole structure for 11/0.4 Kv substation as per Discom specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6mm and 4 nos 75 x 40 x 6mm and MS flat 50 x 6mm as per Discom specifications.	each	1101.00
71.25	Dismantling and re - fixing of 11 kV Danger plates as per specification of Discom on the existing poles complete in all respect as per Discom specification.	each	13.00
71.26	Dismantling and re- fixing of single pole mounted structure set for isolator as per Discom specification complete in all respect with nuts and bolts as required MS flat 50 x 6mm, MS angle 65 x 65 x 6mm, MS channel 100 x 50 x 6mm. (Excluding cost of pole).	each	358.00
71.27	Dismantling and re - erection of RS joist of 116 x 100 mm, 11 Meter long with the welded/ bolted top hamper 65 x 65 x 6mm (0.7 Mtr long) making necessary arrangement for fixing 11 kV 'V' cross arm, LT bracket and guard wire bracket, grouted in ground 1/6 th of its length and fixed with cement, coarse and grit in 1:3:6 ratio in 1/5th of its length (40cm dia) from the bottom including two coats of aluminium paint over the complete length of joist.	each	1367.00
71.28	Dismantling and re - drawing of XLPE insulated LT bunched Aluminium conductor cable confirming to IS 14255/1995 and IS 398 (Pt-4)/ 1994 on existing cross arms through I hook with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.		
71.28.1	1X16 sq. mm. (insulated)	metre	4.00
71.28.2	1 X 25 sq. mm. + 1X25 sq. mm. (Bared)	metre	4.00
71.28.3	1 X 25 sq. mm. + 1X25 sq. mm. (insulated)	metre	4.00
71.28.4	3 X 16 sq. mm. + 1X16 sq. mm. (Bared)	metre	4.00
71.28.5	3 X 16 sq. mm. + 1X16 sq. mm. (insulated)	metre	4.00
71.28.6	3 X 25 sq. mm. + 1X25 sq. mm. (Bared)	metre	6.00
71.28.7	3 X 25 sq. mm. + 1X25 sq. mm. (insulated)	metre	6.00
71.28.8	3 X 50 sq. mm. + 1X35 sq. mm. (Bared)	metre	12.00

72.0 PLC & SCADA

Code No	Description	Unit	Qty	Rate Rs. Group 1
72.1	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 mm X 700 mm X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration PC, necessary programming for SCADA software and comprising of all accessories not limited to the following: DI –92 num DO – 92 num AI –16 num AO – 8 num MCB 10A DP – 1 num MCB4ADP – 2 num MCBSP2A – 8 num MCB 1A DP – 15 num 24 VDC Power Supply 10A – 1 num Push Buttons – 30 num Selector Switch - 15 num Control Relays – 200 num Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with Electronic Hooter – 1 num Control Transformer – 1 num Emergency PB – 1 num Panel Cooling Fan – 1 num Panel Light with Door Switch – 1 num Control Indication Lamp – 30 num Wiring + TB etc – 1 lot Hardware – 1 lot	lot	1.00	1552591.00
72.2	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 mm X 700 mm X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration PC, necessary programming for SCADA software and comprising of all accessories not limited to the following: DI – 76 num DO – 76 num	lot	1.00	1370800.00

Code No	Description	Unit	Qty	Rate Rs. Group 1
	AI – 8 num			
	AO – 4 num			
	MCB 10A DP – 1 num			
	MCB4ADP – 2 num			
	MCBSP2A – 8 num			
	MCB 1A DP – 15 num			
	24 VDC Power Supply 10A – 1 num			
	Push Buttons – 20 num			
	Selector Switch – 15 num			
	Control Relays – 200 num			
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with			
	Electronic Hooter – 1 num			
	Control Transformer – 1 num			
	Emergency PB – 1 num			
	Panel Cooling Fan – 1 num			
	Panel Light with Door Switch – 1 num			
	Control Indication Lamp – 1 num			
	Wiring + TB etc – 1 lot			
	Hardware – 1 lot			
72.3	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 mm X 700 mm X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with latest configuration PC, necessary programming for SCADA software and comprising of all accessories not limited to the following:			
	DI – 60 num			
	DO – 60 num			
	AI – 8 num			
	AO – 4 num			
	MCB 10A DP – 1 num			
	MCB4ADP – 2 num			
	MCBSP2A – 8 num			
	MCB 1A DP – 15 num			
	24 VDC Power Supply 10A – 1 num			
	Push Buttons – 20 num			
	Selector Switch – 10 num			
	Control Relays – 200 num			
	Annunciator with 24 Windows NO to NC Type	lot	1.00	1252882.00

Code No	Description	Unit	Qty	Rate Rs. Group 1
	Microprocessor Based, Window Size 75*42mm, 110VAC, with			
	Electronic Hooter – 1 num			
	Control Transformer - 1 num			
	Emergency PB – 1 num			
	Panel Cooling Fan – 1 num			
	Panel Light with Door Switch – 1 num			
	Control Indication Lamp – 20 num			
	Wiring + TB etc – 1 lot			
	Hardware – 1 lot			
72.4	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 mm X 800 mm X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with Operator Station (PC) including, necessary programming software for PLC & SCADA and comprising of all required accessories not limited to the following:			
	Programmable Logic Controller (PLC) with Dual redundant CPU, Power supply module for IO & Processor rack (Standard DC), Back up Interface/Expansion Module(BCM/BEM), Rack (Backplane) 10 slots for IO and Processor			
	DI – 144 num			
	DO – 88 num			
	AI – 16 num			
	AO – 8 num			
	Ethernet switch – 2 num			
	MCB 10A DP – 1 num			
	MCB4ADP – 2 num			
	MCBSP2A – 8 num			
	MCB 1A DP – 15 num			
	24 VDC Power Supply 10A – 1 num			
	Push Buttons – 20 num			
	Selector Switch – 10 num			
	Control Relays – 100 num			
	Annunciator with 24 Windows NO to NC Type			
	Microprocessor Based, Window Size 75*42mm, 110VAC, with Electronic Hooter			
	Control Transformer - 1 num			
	Emergency PB – 1 num			
	Panel Cooling Fan – 1 num			
	Panel Light with Door Switch – 1 num			
	Control Indication Lamp – 20 num	lot	1.00	4009222.00

Code No	Description	Unit	Qty	Rate Rs. Group 1
	Wiring + TB etc – 1 lot			
	Hardware – 1 lot			
	HMI – 1 num			
	Operator Station including, Core i5 processor, 8 GB DDR-3 RAM, 500 GB HDD, DVD RW Drive, RS-232/485 Ports, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, optical mouse, 32" monitor, Latest windows professional ver., etc.			
	Programming and troubleshooting software for HMI – OWS – 1 lot			
	Colour Printer A4, Lasejet – 1 num			
72.5	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 mm X 800 mm X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with Operator Station (PC) including, necessary programming software for PLC & SCADA and comprising of all required accessories not limited to the following: Programmable Logic Controller (PLC) with Dual redundant CPU, Power supply module for IO & Processor rack (Standard DC), Back up Interface/Expansion Module(BCM/BEM), Rack (Backplane) 10 slots for IO and Processor – 1 lot			
	DI – 288 num			
	DO – 176 num			
	AI – 32 num			
	AO – 16 num			
	Ethernet Switch – 3 num			
	MCB 10A DP – 1 num			
	MCB4ADP – 2 num			
	MCBSP2A – 10 num			
	MCB 1A DP – 15 num			
	24 VDC Power Supply 10A – 1 num			
	Push Buttons – 30 num			
	Selector Switch – 15 num			
	Control Relays – 150 num			
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with Electronic Hooter			
	Control Transformer – 1 num			
	Emergency PB – 1 num			
	Panel Cooling Fan – 1 num			
	Panel Light with Door Switch – 1 num			
	Control Indication Lamp – 30 num	lot	1.00	5031180.00

Code No	Description	Unit	Qty	Rate Rs. Group 1
	Wiring + TB etc – 1 lot			
	Hardware – 1 lot			
	HMI – 2 num			
	Operator Station including, Core i5 processor, 8 GB DDR-3 RAM, 500 GB HDD, DVD RW Drive, RS-232/485 Ports, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, optical mouse, 32" monitor, Latest windows professional ver., etc. – 02 num			
	Programming and troubleshooting software for HMI – OWS – 1 lot			
	Colour Printer A4, Lasejet – 1 num			
72.6	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 mm X 800 mm X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with Operator Station (PC) including, necessary programming software for PLC & SCADA and comprising of all required accessories not limited to the following: Programmable Logic Controller (PLC) with Dual redundant CPU, Power supply module for IO & Processor rack (Standard DC), Back up Interface/Expansion Module(BCM/BEM), Rack (Backplane) 10 slots for IO and Processor – 1 lot			
	DI – 432 num			
	DO - 264 num			
	AI – 48 num			
	AO – 24 num			
	Ethernet Switch – 4 num			
	MCB 10A DP – 2 num			
	MCB4ADP – 4 num			
	MCBSP2A – 12 num			
	MCB 1A DP – 20 num			
	24 VDC Power Supply 10A – 1 num			
	Push Buttons – 45 num			
	Selector Switch – 25 num			
	Control Relays – 200 num			
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with Electronic Hooter – 1 num			
	Control Transformer – 2 num			
	Emergency PB – 2 num			
	Panel Cooling Fan – 2 num			
	Panel Light with Door Switch – 2 num			
	Control Indication Lamp – 45 num	lot	1.00	6839260.00

Code No	Description	Unit	Qty	Rate Rs. Group 1
	Wiring + TB etc – 1 lot			
	Hardware – 1 lot			
	HMI – 4 num			
	Operator Station including, Core i5 processor, 8 GB DDR-3 RAM, 500 GB HDD, DVD RW Drive, RS-232/485 Ports, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, optical mouse, 32" monitor, Latest windows professional ver., etc. – 2 num			
	Programming and troubleshooting software for HMI – OWS – 1 lot			
	Colour Printer A4, Lasejet – 1 num			
72.7	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 mm X 800 mm X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with Operator Station (PC) including, necessary programming software for PLC & SCADA and comprising of all required accessories not limited to the following: Programmable Logic Controller (PLC) with Dual redundant CPU, Power supply module for IO & Processor rack (Standard DC), Back up Interface/Expansion Module(BCM/BEM), Rack (Backplane) 10 slots for IO and Processor – 1 lot			
	DI – 584 num			
	DO – 352 num			
	AI – 64 num			
	AO – 24 num			
	Ethernet Switch – 5 num			
	MCB 10A DP – 4 num			
	MCB4ADP – 6 num			
	MCBSP2A – 15 num			
	MCB 1A DP – 25 num			
	24 VDC Power Supply 10A – 2 num			
	Push Buttons – 60 num			
	Selector Switch – 30 num			
	Control Relays – 300 num			
	Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with Electronic Hooter – 01 num			
	Control Transformer – 2 num			
	Emergency PB – 2 num			
	Panel Cooling Fan – 2 num			
	Panel Light with Door Switch – 2 num			
	Control Indication Lamp – 30 num	lot	1.00	8254280.00

Code No	Description	Unit	Qty	Rate Rs. Group 1
	Wiring + TB etc – 1 lot			
	Hardware – 1 lot			
	HMI – 4 num			
	Operator Station including, Core i5 processor, 8 GB DDR-3 RAM, 500 GB HDD, DVD RW Drive, RS-232/485 Ports, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, optical mouse, 32" monitor, Latest windows professional ver., etc. – 2 num			
	Programming and troubleshooting software for HMI – OWS – 1 lot			
	Colour Printer A4, Lasejet – 2 num			
	Engineering Station Commercial grade 17" Laptop with latest configuration Licensed software and min. 500GB HD, 4 GB RAM – 1 num			
72.8	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 mm X 800 mm X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with Operator Station (PC) including, necessary programming software for PLC & SCADA and comprising of all required accessories not limited to the following: Programmable Logic Controller (PLC) with Dual redundant CPU, Power supply module for IO & Processor rack (Standard DC), Back up Interface/Expansion Module(BCM/BEM), Rack (Backplane) 10 slots for IO and Processor – 1 lot DI - 904 num DO – 528 num AI – 80 num AO – 24 num Ethernet Switch- 6 num MCB 10A DP – 4 num MCB4ADP – 8 num MCBSP2A – 15 num MCB 1A DP – 25 num 24 VDC Power Supply 10A – 2 num Push Buttons – 80 num Selector Switch – 40 num Control Relays – 450 num Annunciator with 24 Windows NO to NC Type Microprocessor Based, Window Size 75*42mm, 110VAC, with Electronic Hooter – 2 num Control Transformer - 3 num Emergency PB – 3 num	lot	1.00	10376809.00

Code No	Description	Unit	Qty	Rate Rs. Group 1
	Panel Cooling Fan – 3 num			
	Panel Light with Door Switch – 4 num			
	Control Indication Lamp – 40 num			
	Wiring + TB etc – 1 lot			
	Hardware – 1 lot			
	HMI – 6 num			
	Operator Station including, Core i5 processor, 8 GB DDR-3 RAM, 500 GB HDD, DVD RW Drive, RS-232/485 Ports, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, optical mouse, 32" monitor, Latest windows professional ver., etc. – 2 num			
	Programming and troubleshooting software for HMI – OWS – 1 lot			
	Colour Printer A4, Lasejet – 1 num			
	Colour Printer A3, Lasejet 1 num			
	Engineering Station Commercial grade 17" Laptop with latest configuration Licensed software and min. 500GB HD, 4 GB RAM – 1 num			
72.9	Design, manufacture, supply, installation, testing and commissioning of indoor type PLC panel of size approx. 1100 mm X 800 mm X 2100mm (LBH) , fabricated out of min. 2 mm thick CRCA sheet complete with Operator Station (PC) including, necessary programming software for PLC & SCADA and comprising of all required accessories not limited to the following: Programmable Logic Controller (PLC) with Dual redundant CPU, Power supply module for IO & Processor rack (Standard DC), Back up Interface/Expansion Module(BCM/BEM), Rack (Backplane) 10 slots for IO and Processor – 1 lot			
	DI - 1184 num			
	DO – 720 num			
	AI – 112 num			
	AO – 32 num			
	Ethernet Switch- 6 num			
	MCB 10A DP – 6 num			
	MCB 4A DP – 4 num			
	MCBSP2A – 20 num			
	MCB 1A DP – 30 num			
	24 VDC Power Supply 10A – 2 num			
	Push Buttons – 100 num			
	Selector Switch – 50 num			
	Control Relays – 550 num			
	Annunciator with 24 Windows NO to NC Type	lot	1.00	12106277.00

Code No	Description	Unit	Qty	Rate Rs. Group 1
	Microprocessor Based, Window Size 75*42mm, 110VAC, with Electronic Hooter – 1 num			
	Control Transformer - 4 num			
	Emergency PB – 4 num			
	Panel Cooling Fan – 4 num			
	Panel Light with Door Switch – 4 num			
	Control Indication Lamp – 50 num			
	Wiring + TB etc – 1 lot			
	Hardware – 1 lot			
	HMI – 6 num			
	Operator Station including, Core i5 processor, 8 GB DDR-3 RAM, 500 GB HDD, DVD RW Drive, RS-232/485 Ports, 1 Parallel Port, 4 nos. USB Port, 2x Ethernet Cards, Keyboard, optical mouse, 32" monitor, Latest windows professional ver., etc. – 3 num			
	Programming and troubleshooting software for HMI – OWS – 1 lot			
	Colour Printer A4, Lasejet – 2 num			
	Colour Printer A3, Lasejet 1 num			
	Engineering Station Commercial grade 17" Laptop with latest configuration Licensed software and min. 500GB HD, 4 GB RAM – 1 num			
72.10	RTU complete with DI, DO, AI and modbus communication ports and power supply (24 V, DC)	lot	1.00	141502.00
72.11	Programming and Troubleshooting software for RTU	lot	1.00	31445.00
72.12	Quad-band GSM/GPRS modem with Ethernet bridge/router/ serial server (RS232/485) interface.	num	1.00	117918.00
72.13	Panel Enclosure for RTU Location, wall/floor mounted along with wiring and related accessories and arrangement of mounting of RTU, Modem, UPS and having IP-42 Protection. Panels shall be self-fabricate type only.	num	1.00	39306.00
72.14	Providing, installation, testing and commissioning of UPS, 3Phase 415 V, 50 Hz with 60 min back up Ni+Cd battery bank			
72.14.1	1 KVA	num	1.00	235837.00
72.14.2	2KVA	num	1.00	298726.00
72.14.3	3KVA	num	1.00	345894.00
72.14.4	5KVA	num	1.00	503118.00

73.0 SMART SOLUTIONS

Code No	Description	Unit	Rate Rs. Group 1
73.1	Smart lighting system		
73.1.1	SITC of street light controller (SLC) along with necessary software and hardware, 140-270 Vac, Inbuilt Surge protection of 10KVA, Capacity up to 300W, ON/OFF/Dimming of Individual streetlight/floodlight, Ingress protection IP65		
73.1.1	1 Channel	each	11304.00
73.1.2	2 Channel	each	13564.00
73.1.2	SITC of street light controller (SLC) based on PLC, including software and hardware, 140-270 Vac, Inbuilt Surge protection of 10KVA, Capacity up to 300W, ON/OFF/Dimming of Individual streetlight/floodlight, Ingress protection IP65		
73.1.2.1	1 Channel	each	11933.00
73.1.2.2	2 Channel	each	14193.00
73.1.3	SITC of GPRS/ISDN/OFC gateway along with necessary software and hardware, Controls 50 nos. SLC, 140-270Vac, CE/FCC certified communication module, On-board 2 nos. current (4-20mA), and 2 nos. analog voltage channel(1-10V), On-board RS485 modbus interface	each	42526.00
73.1.4	SITC of GPRS gateway PLC based along with necessary software and hardware, Controls 50 nos. SLC, 140-270Vac, CE/FCC certified communication module, Battery backup up to 24 hours, On-board 2 nos. current (4-20mA), and 2 nos. analog voltage channel(1-10V), On-board RS485 modbus interface		
73.1.4.1	Single phase	each	42526.00
73.1.4.2	Three phase	each	62371.00
73.1.5	SITC of Smart LED luminaire with integrated SLC and 0-10V dimmable driver, 140-270V AC, 10 KV built-in surge protector, Ingress protection IP66 of following ratings:		
73.1.5.1	Smart LED luminaire 72 W	each	44809.00
73.1.5.2	Smart LED luminaire 90 W	each	47167.00
73.1.5.3	Smart LED luminaire 100W	each	47953.00
73.1.5.4	Smart LED luminaire 120W	each	51098.00
73.1.5.5	Smart LED luminaire 150W	each	60140.00
73.1.5.6	Smart LED luminaire 170W	each	64148.00
73.1.6	Server setup and software maintenance for 1 year	per light point	550.00
73.2	Environmental and Continuous Ambient Air Quality Monitoring System		
73.2.1	Sulphur Dioxide (SO ₂) Analyzer based on UV -Fluorescence Principle Model AF22 e suitable for 230V, 50 Hz. power supply, built-in solenoid valve for manual/ auto calibration, built-in zero air scrubber for zero calibration & RS 232 port for Serial communication	each	1148933.00

Code No	Description	Unit	Rate Rs. Group 1
	with Data Acquisition System (US -EPA Approval No. EQSA-0802-149)		
73.2.2	Oxide of Nitrogen (NOx) Analyzer based on Chemiluminescence principle Model AC32 e suitable for 230 V, 50 Hz. power supply, built-in solenoid valve for 230 V, 50 Hz. power supply, built-in solenoid valve for 230 V, 50 Hz. power supply, built-in solenoid valve communication with Data Acquisition System (US - EPA Approval No. RFNA-0202-146)	each	1303547.00
73.2.3	CO Analyser based on Non Dispersive IR Principle with Gas Filter Co-relation Model CO 12 e suitable for 230 V, 50 Hz. power supply, built-in solenoid valve for manual/ auto calibration, built-in zero air scrubber for zero calibration & RS 232 port for Serial communication with Data Acquisition System (US EPA Approval No. RFCA-0915-228)	each	1021927.00
73.2.4	PM2.5 Analyser based on Beta Ray Attenuation principle Model MP101M LCD suitable for 230V AC, 50 Hz. Power supply with C-14 Radioactive source, Pump, PM2.5 Inlet, Standard foil for calibration. RS 232 & Ethernet port for Serial communication with Data Acquisition System	each	1848597.00
73.2.5	PM10 Analyser based on Beta Gauge detection principle Model MP101M LCD suitable for 230V AC, 50 Hz. Power supply with C-14 Radioactive source, Pump, PM10 Inlet & Standard foil for calibration.	each	1709469.00
73.2.6	Ozone Analyser based on UV Photometry Principle Model O3 42 e suitable for 230 V, 50 Hz. Power supply, & RS 232 port for Serial communication with Data Acquisition System	each	1028397.00
73.2.7	VOC Analyser based on PID with Gas Chromatographic Column Separation Model VOC72M suitable for measurement of Benzene, Toulene, o-m-p Xylene, 230 V, 50 Hz. power supply, built-in solenoid valve for manual/ auto calibration, built-in zero air scrubber for zero calibration & RS 232 port for Serial communication with Data Acquisition System	each	3025311.00
73.2.8	Nitrogen Cylinder 47 Liters Capacity, Carbon Steel with Regulator for Carrier Gas for PID	each	83628.00
73.2.9	Multipoint, Multi-Gas Calibrator, Model MGC 101 suitable for 230V AC, 50 Hz. with the following: • Mass Flow Controller based for Dilution air & Span Gas • Inlet ports for external span gases • RS 232 interface • In built Zero air generator	each	842691.00
73.2.10	Calibration Gas Cylinder made of Aluminium with SS regulator & valve (1 Cylinder for each Gas) for following Gases:		
73.2.10.1	SO2	each	42718.00
73.2.10.2	NO	each	42718.00
73.2.10.3	CO	each	42718.00
73.2.10.4	Benzene	each	79100.00
73.2.11	Gas Sampling System & Hood Gas Sampling system consisting of SS gas sample inlet, peltier based moisture removal facility, manifold & tubings to the analyzers.	each	61019.00
73.2.12	Standard 19" Rack Cabinet (Double Bay Rack) with Telescopic slides, Overload protection, Power Distribution box, Cooling fans,	each	122045.00

Code No	Description	Unit	Rate Rs. Group 1
	Dust filters & pneumatic plumbing to accommodate Analyzer, Calibrator & Accessories		
73.2.13	Weather Monitoring Station consisting of the following Parameters: Combined Wind speed and direction, Combined Temperature & Relative Humidity, Liquid Precipitation (Rainfall) Sensor, Solar radiation, Meteorological Mast - 10 Meters, Interface unit	each	435024.00
73.2.14	Analyzer Shelter as below: Size - 3mtr(W) x 3 mtr (L) x 2.7 mtr(H), MOC - 1.2mm thick GI sheet (external walls), &1.2mm thick GI sheet (internal walls), Door - One main door, Insulation Thickness - 0mm with PUF insulation, Roof thickness - 100mm with PUF, Flooring - nti slip sheet, Lighting inside shelter at minimum of 300lux, External dome lighting shall be under the overhangs.	each	2440908.00
73.2.15	1.5 Tons Split Type Air Conditioners with auto switch over circuit.	each	73895.00
73.2.16	UPS, Capacity 5 KVA, 230 VAC, 50 Hz. with 1 hr battery backup for all the Analysers only	each	366136.00
73.2.17	4' X 8' (RGY Colour) 7 Line Display Board (Power Supply: 230V AC from UPS)	each	825428.00
73.2.18	Local Data Logger - PC based Data Acquisition System with SAM WI License Software suitable for Storing, Logging, Reporting, Printing data from above offered Analysers. PC with specifications as under: Pentium Dual Core 2 Processor, 2 GB RAM, 250 GB HDD, CD/DVD Combo Drive, 19" TFT Monitor, 2serial & 1 parallel ports, Standard WINDOWS, Operating System, standard keyboard, mouse with pad and Color Laser printer.	each	377339.00
73.2.19	Central Data Logger - PC based Data Acquisition System with XR Premium License Software suitablefor Storing, Logging, Reporting, Printing data, Validation and communicating with above offeredLocal DAS. PC with specifications as under: Pentium Dual Core 2 Processor, 2 GB RAM, 250GBHDD, CD/DVD Combo Drive, 19" TFT Monitor, 2serial & 1 parallel ports, Standard WINDOWSOperating System, standard keyboard, mouse with pad and Color Laser printer.	each	590000.00
73.3	Smart City Surveillance with vehicle Identification & Counting		
73.3.1	SITC of Net Work Station Software:Model VN-WS-SW Application for use with Kollector Digital Recorders and Video Encoders that allows full administrative Functionality without recording. Single site license. A multi-Channel Display area, Containing up to 16 Connected Cameras and Microphones and all necessary controls to operate and setup the system	each	43200.00
73.3.2	Supply, installation, testing and commissioning of Monitoring software video surveillance all channels real-time live monitoring simultaneously in single PC, Support for various video format : H.264, MPEG-4, MJPEG , Support for various video resolution: megapixel (1M, 2M, 3M), Full HD, 4CIF, Half D1, VGA, CIF, Powerful E-map based monitoring, Remote PTZ control and power area zoom, Support for various search and playback options : date and time based search : event (alarm, motion, intelligent video) based search: normal playback, backward playback, fast/slow playback, step playback , Notification in case of event occurring : highlighting in the border of video window : display event log message in real time, Back up capability : manual back up: AVI, REC1, SEC format, Multi-level user access and authority	each	43200.00

Code No	Description	Unit	Rate Rs. Group 1
	management , Support for multi-language user interface, Automatic search of network cameras for quick and easy configuration, Easy device management (configuration, firmware upgrade), The Viconnet Nucleus is the software Component that enables centralized management of all devices within a surveillance system. It is an intuitive interface for administrators to manage an enterprise-Scale Solution. The Software enables a distributed architecture with the Vicon Net Nucleus Acting as the central server that links all distributed devices into a common ViconNet Surveillance System. Vicon Net Nucleus Software Version 7 (Vicon Make)		
73.3.3	SITC of Vicon Net NVR Software: recording plus fully functional ViconNet Application for use with Vicon Net Version 5 Digital Recorders, Video Encoders and IP Cameras. Single site License Open platform allows full functionality with IP Cameras from Major manufacturers, Supports Megapixel Cameras from Vicon and of leading manufacturer, Support various compressions, Including MPEG-4, M-JPEG and H.264, Manufacturer dependant, Graphical Map feature supports realistic camera location, Full PTZ Control Hierarchy for simultaneous or Prioritized users, Multiple Channel viewing/recording system allowing networking for Network Video Recorders (NVR), IP Cameras and Digital Recorders (DVR), Device site list or logical camera grouping, Individual picture quality setting per cameras, Remote configuration of devices across the network, Feature LAN and WAN Connectivity, Remote alarm capability, Create macros to view/listen and record Video and audio, PTZ Cameras at present positions, record up to 95* cameras on a single NVR Record and view live video at different fps without additional video streams.	each	480600.00
73.3.4	Supply Installation, Testing & Commissioning of Intel i7 4th Generation processor 3Ghz, 4GB RAM with 2TB hard disk, DVD-RW/keyboard/optical mouse/LAN card/19" LED monitor. Minimum 6 USB ports. With pre-loaded licensed Windows 7 Professional software PC	each	61884.00
73.3.5	SITC of 55" Flat Screen HD LED TV with remote control and wall mount unit / floor stand complete with making connections etc. as required Sony/ Samsung/Panasonic)	each	200000.00
73.3.6	Supply, Installation, Testing Commissioning of SERVER type: 2U rack server with configuration flexibility; Processor(s): Two Dual Core 64-bit Intel CPUs, 2.4 GHz; Memory: 8 GB RAM; Local Storage: Two hard drives, 1TB each, RAID 1 mirrored; SCSI Controller: Ultra 320 on board and PCI Ultra 320; Operating System: Windows Server 2012, Enterprise Edition or higher; Network adapter: Dual Embedded Gigabit Ethernet NIC & PCI NIC Power Supply: Redundant 750Watt hot-plug power supply; and Keyboard/monitor: Keyboard and monitor inside the rack.-HP make	each	605000.00
73.3.7	Supply, Installation, Testing & Commissioning of Traffic Management Software	each	1500000.00
73.3.8	Supply, Installation, Testing & Commissioning of Traffic Control & Monitoring Software	each	1500000.00
73.3.9	Installation of OFC Network Connectivity (One Time Coast) Per NODE	each node	13000.00

Code No	Description	Unit	Rate Rs. Group 1
73.3.10	OFC Network Connectivity Maintenance and Rent Charges Per year Each NODE	each node	78000.00
73.3.11	Supply, installation, testing and commissioning of color high resolution LED Video wall of comprising of 4 nos. 40 inch display, full HD complete with all accessories.	each	1650244.00
73.3.12	SITC of Intelligent Ethernet Switches providing 24 x 10/100 Fast Ethernet ports- and 2 dual purpose uplink (provision for Copper / Fiber Giga connectivity) with LAN based Software. The LAN based S/W supports enhanced integrated security, including Network Admission Control (NAC), advanced quality of service (QoS), availability and scalable management to enable new covered applications	each	41256.00
73.3.13	SITC of Intelligent Ethernet POE Switches providing 24 x 10/100/1000 Fast Ethernet POE ports- 370W or better and 4 dual purpose uplink (provision for Copper / Fiber Giga connectivity) with LAN based Software. The LAN based S/W supports enhanced integrated security, including Network Admission Control (NAC), advanced quality of service (QoS), availability and scalable management to enable new covered applications	each	128925.00
73.3.14	Supply Installation Testing & Commissioning of 1000 Base-SX, SFP, MMF, LC connector, Multimode Fiber Giga module	each	15471.00
73.3.15	Supply, installation & testing of 1080p HD IR Indoor IP Dome camera with 1/2.7-inch CMOS, Sensor pixels 1920 x 1080, Sensitivity-0.24 lx (color) 0.05 lx (mono) & 0 Lux in IR, IR upto 15 mtrs Dynamic range, True day/night, Automatic Electronic Shutter, Video compression H.264 MP (Main Profile); M-JPEG, White balance, BLC, H.264 quad-streaming, Motion/tamper/audio detection, Privacy Mask, Motion detection, Tamper alarm, Varifocal 3 to 10 mm lens, Built-in microphone, Two-way, full duplex Audio, Audio compression AAC, G.711, L16 (live and recording), Memory card slot, 3-axis adjustment (pan/tilt/ rotation), ONVIF Profile S, CE, UL, FCC Certified.	each	46413.00
73.3.16	Supply Installation Testing & Commissioning of 720p Bullet camera with 1/3.2-inch CMOS, Total sensor pixels 1952 x 1092 (2MP), Built-in IR illuminator with 25 m (82 ft) viewing distance, Fully configurable quad streaming, Regions of interest and E-PTZ, Sensitivity-0.24 lx, 0.0 lx (IR), Dynamic range, True day/night, Electronic shutter, iDNR, BLC, Intelligent defog, Privacy Masking-Four independent areas, fully programmable, Full duplex / half duplex Audio Streaming, Varifocal 3 to 10 mm lens, 3-axis adjustment (pan/tilt/rotation), Password protection, ONVIF Profile S, IP66, IK08, CE, FCC, UL Certified. The Housing, Mounts, Lens etc should be of same make as of camera offered. using , Connectors, Lens, Camera Mounts, Power Supply and all Ancillary Equipment & all accessories as per technical specification and should be UL /FCC listed. The camera, software, storage should be of the same make for seamless integration with each other	each	51570.00
73.3.17	Supply, Installation, Testing & Commissioning of 720p HD PTZ Camera with 1/2.8" progressive scan Exmor CMOS, Effective pixels 1984 (H) x 1225 (V) approx. 2.43M pixels, 30x Optical Zoom (4.3 mm-129 mm), 16X Digital Zoom, Minimum Illumination- Sense up on- Color: 0.02 lux , B/W: 0.004 lux, With infrared (IR) 0 lux, WDR, Intelligent Dynamic Noise Reduction, BLC, White Balance,	each	290700.00

Code No	Description	Unit	Rate Rs. Group 1
	Mechanical switchable IR filter, Pan Range 360° continuous, Tilt Range 0°–90°, Pan/Tilt Modes - Pan: 0.1°/s - 240°/s; Tilt: 0.1°/s - 120°/s, Presets 256 , Tours,IR distance 180 m (590 feet) (Detection), Audio- 1/1 Channel In/Out, Micro SD card support, 24 individually configurable privacy masks, Simple single cable installation with POE+ support for indoor/Outdoor application, Defog, IP66 , ONVIF Profiles S & G, CE, UL, FCC Certified.The Housing, Mounts, Lens etc should be of same make as of camera offered.The Housing, Mounts, Lens etc should be of same make as of camera offered. The camera, software, storage should be of the same make for seamless integration with each other		
73.3.18	Server Hardware with Windows 2003 OS or later-Intel Xeon processor/16gb RAM/2TB 7.2K rpm SAS or SATA HDD/Monitor	each	492660.00
73.3.19	RAID box for recording video image 20 TB	each	3213000.00
73.3.20	RLVD Workstation	each	85000.00
73.3.21	Supply Installation Testing & Commissioning of IP Video Management Appliance shall be a RAID-5 protected, all-in-one recording, viewing and management solution for network surveillance systems It shall be designed for high speed, high capacity digital video storage and high performance play back applications. The storage array shall be a full featured RAID 5 configuration. The digital video storage array shall have 8 internal HDDs (8 x 4TB) 32 TB , two (2) redundant power supplies. The storage array shall provide an audible alarm to notify the user in the event of a failure. The system should be such that the video recording from camera should be done directly on storage array without the use of NVR/DNR single package as required as per specifications of the tender and directions of Engineer-in-charge. If Storage is not server based, seperate server should be consider for the same with cost inclusive in ISCSI server with 64 channel pre-licensed expandable to 128 channel. The camera, software, storage should be of the same make for seamless integration with each other	each	1350000.00
73.3.22	S & F of PVC Trunking for cable management.		
73.3.22.1	32 mm x 16 mm	each	88.00
73.3.23	Supply , Installation, Testing and Comissioning of 15U Wall mounted Communication rack with glass doors, handles ,lock , Top and Bottom Cable entries, Supports for mounting rack on wall , PVC Box type Cable managers, one Fan, Equipment mounting hardware, power supply box for supplying power to switches, fans etc along with earth continuity kit, Mcb, indicator, moulded power supply cable	each	12377.00
73.3.24	Supply , Installation, Testing and Comissioning of 42U Floor Standing Network Communication rack with width 800 MM, Depth 1000 MM, front glass door, rear MS door, side openable panels, min 10 socket Vertical PDU -02 no, two nos Vertical Cable managers, 05 nos Horizontal Cable managers, Keyboard Tray-01,720mm heavy duty shelf-03(for mounting servers & components), swing handles, lock on both doors, Top and Bottom Cable entries with gland plates, Coastor with brakes, 1 no Fan tray with 2 x 230 Volt fans, Equipment mounting hardware, etc		
73.3.24.1	42 U Floor standing Rack	each	75670.00
73.3.25	SITC of 3 KVA online UPS with min battery Backup of 1 hrs with	each	92826.00

Code No	Description	Unit	Rate Rs. Group 1
	batteries (Battery Make: Exide / Amron / Quanta), UPS make: Emerson / APC / Numeric (this UPS is required for central room for Storage, Central Switch, LED & related Desktops).		
73.3.26	1 KVA UPS with 1 Hr battery backup (with main switch 32 A DP) include Enclosure	each	50490.00
73.3.27	Supply, Installation, Testing & Commissioning of APNR (Automatic Plate number Recognition Camera + 1 illuminator Hardware accelerated, built-in motion detection Auto day & night switch; adaptive settings to environmental settings Automatic time synchronization (NTP) Adjustable image compression for max LPR performance Still images (JPEG) and compressed live video streams (MJPEG) Powerful IR illumination while low power consumption Extreme operation environments: IP67 rating. including power supply & suitable mounting clamp, etc. complete,	each	198900.00
73.3.28	Supply, Installation, Testing & Commissioning of Red Light Violation Detection (RLVD) Controller with 32 optically isolated RED light inputs and 48 Vehicle Detection inputs I/O module suitable for automatic detection of RED LIGHT including industrial based PC of following specs-Intel core i5, Windows 7- 64 bit OS, 16GB RAM, 1TB HDD, 4 USB ports, /1 Gbps ethernet, VGA port, Seperate Cooling fan attached to enclosure, Din rail mountable connectors, MCB and required power supplies for the system all housed in a pole mountable enclosure including necessary mounting clamps and hardware etc. complete. without client software	each	344282.00
73.3.29	SITC of Safespace series SPEED RADAR SIGN of AC or solar operated SP-100 Model	each	248269.00
73.3.30	Supply, Installation, Testing & Commissioning of Automatic Over Speed Violation Detection The SpeedCAM SmartCam should be a pre-built ANPR/LPR system, including- ANPR camera- PC- Radar- ANPR software. Also should be combination of FXCAMd camera, an embedded industrial computer with installed FreeFlow software and radar. The camera module provides ideal images for the embedded PC which processes the images with license plate recognition technology. The image capturing should be triggered by the radar and the motion detection together. Full processing should be performed inside the unit (like time stamp application). Images, license plate texts, location, speed and time should be stored in the camera database with easy access through a built-in web-server. with Vehicle Registration Number Plate Recognition and Prosecution System with other related equipment including installation & outstation communication, UPS etc.	each	2578506.00
73.3.31	SITC of battery bank comprising SMF/VRLA batteries, interconnection wiring etc. as required complete in all respect of rating Make Exide, Amara Raja, Quanta, HBL		
73.3.31.1	12 V 65Ah	each	10830.00
73.3.32	SITC of Solar Charge Controller MPPT based PWM charger to charge 12 V (nominal) battery with not less than 94% Solar charge controller efficiency with indications for charger, full charge and charge disconnected of cap. 10 Amp. Max	each	3610.00
73.3.33	Installation ,Testing & Commissioning of OS, database Application Software Configuration and Fine tuning including one year warranty support	each	1789272.00

Code No	Description	Unit	Rate Rs. Group 1
73.3.34	RLVD Application (CDAC) up to 50 Nodes	each	1500000.00
73.3.35	ANPR Software	each	750000.00
73.3.36	All in all maintenance to keep up of complete ATCS in working order. The system is based on CDAC Technology working on composite signal control strategy (CoSiCoSt) software installed at Control Room without network connectivity. (Excluding Traffic Signals, U.P.S. & A.Cs)	each per point per year	11011.00
73.3.37	All in All Maintenance of U.P.S. (5KV) to Keep up in Working Order.	each per year	844.00
73.3.38	All in All Maintenance of Air Conditioners to Keep up in Working Order	each per year	388.00
73.3.39	Rent for 100Mbps for connectivity for operation of ATCS	each per year	4323.00
73.3.40	All in All Maintenance to keep up Traffi-cam Cameras with Software & Hardware Complete in all respect.		.
73.3.40.1	Cameras with Power Supply	each per month	1000.00
73.3.40.2	Modules	each per month	525.00
73.3.41	SITC of microprocessor based UTCS type automatic electronic controller conforming to IS: 7537 for traffic signals complete with electronic timer, G.P.S. based control board, blinker unit for night operation and slip lane, day time peak hour's operation. The controller shall have 32 signal phases, 25 Signal Plan, 24 Cycle Plan, 32 Signal Split Plan, 32 Cycle conditions, 32 signal line, solid state relay switching R.S 485 communication and 4 hurry call inter phase, manual override facility up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/cabled interlinking for synchronized operation. The unit shall be totally enclosed in 2.00mm thick metal sheet box size 99 cm x 61.5 cm x 35.5 cm including making connection	each	150000.00
73.3.42	Add extra for upgrading the exiting microprocessor based controller to ATCS (area Traffic Control System) controller.	each	50000.00
73.3.43	SITC Traffic am X-Stream Integrated I.P. Based Camera for vehicle presence detection & video use for traffic monitoring, use can configuration view and control and system both side and remotely having following key Functionalities: (1) All in one Senor (Canera Detector, (2) MPEG-4 Image Compression (3) Real Time Verification & Monitoring (4) Up to 24 "Virtual" Detection Zones.		
73.3.43.1	Camera Only.	each	113954.00
73.3.43.2	Module only	each	61857.00
73.3.44	SITC of Surveyor VFT (IP Dome) APTZ Camera with 360 degree rotation and digital zoom facility, which is also a transmitter. It can be connected straight to the net work, video transmission via IP Coaxial, Fiber Optic or twisted Pair (UTP) in ceiling or pendant configurations for indoor or outdoor installation with Ex view 23 x or 35 x high resolution color on day/night camera with Vandal proof and pressurized housings and privacy masking.	each	211000.00

Code No	Description	Unit	Rate Rs. Group 1
73.3.45	S.I.T.C of WiTraC 32Bit Microcontroller based Solar Power / PWM Automatic electronic controller, conforming to IEC- 60068(ERTL) for Traffic Signals complete with electronic timer, G.P.S. based control board, blinker unit for night operation and slip lane, day time peak hours operation, The controller shall have 32 signal phase, Signal Switching and feedback on wireless medium, 24 Cycle Plan, 32 Signal Split Plan, 24 Cycle switching/days, 20 selective days/annum, 4 – Week Plan, 16 optically isolated solid state lamp driving outputs, 16 optically isolated vehicle detector, 20 X 4 LED backlit LCD and 5 X 4 keypad 8 Auxiliary I/O interface, USB, CAN, R.S.232 communication and 4 hurry call inter phase, manual override facility up gradable vehicle actuated system, also have method of traffic control with fixed time isolated intersection and cable less/ cabled interlinking for synchronized operation, including additional features such as (a) facility to enter traffic volume,(b) Provision for 3 to 5 second Red/ Green flash before starting of stage, (c) Red Light violation data from all the approaches and (d) Using External Ethernet adapter to USB for using 3G dongle router for networking and making connections.		
73.3.45.1	Master Controller (Size L -607 X W- 298 X D-176 mm.) o 12 V DC $\pm$ 10% 3.6 W	each	108583.00
73.3.45.2	Slave Controller (L - 400 X W - 298 X D - 176 mm) o 12 V DC $\pm$ 10% 3.0 W	each	63236.00

74.0 ELECTRICAL TABLES

GUIDE LINES FOR CALCULATING ELECTRICAL LOAD ON PLINTH AREA BASIS

[Clause 4.2.3(b) of National Building Code]

Type of Load	Load Requirement/ plinth Area (Watt/m ²)
Normal Lighting	20
Lighting with Lifts, Pumps but without Central Air Conditioning	30
Additional Capacity for Technical Building like Laboratories, hospitals etc	11

SWAGED STEEL POLE AS PER IS 2713 (PART I II)- 1980

S. No	Overall Length (Mtrs)	Planting Depth below ground level (Mtrs)/ Size of base plate (mm)	Length (Mtr)/ OD(mm)/ Thickness(mm)			Weight of pole excluding base plate (Kg)
			h1 (top)	h2 (middle)	h3 (bottom)	
1	7.5	1.25/300x300x5	1.5/76.1/3.25	1.5/88.9/3.25	4.5/114.3/3.65	67 kg
2	8.5	1.5/300x300x5	1.75/76.1/3.25	1.75/88.9/3.25	5.0/114.3/3.65	75 kg
3	9.0	1.5/300x300x5	2.0/76.1/3.25	2.0/88.9/4.05	5.0/114.3/4.5	92 kg
4	10.0	1.8/400x400x7	2.4/88.9/3.25	2.4/114.3/4.5	5.2/139.7/4.85	135 kg
5	11.0	1.8/400x400x7	2.7/88.9/3.25	2.7/114.3/4.5	5.6/139.7/4.85	147 kg
6	12.0	2.0/400x400x7	3.1/114.3/3.65	3.1/139.7/4.5	5.8/165.1/4.85	197 kg

OCTAGONAL POLE

S. No	Overall Length (mtr)	Size of base plate (mm)	TOP (mm)	BOTTOM (mm)	THICK NESS (mm)	PCD (mm)	BOLT SIZE (no x mm)	FOUNDATION SIZE (mm)
1	7.0	240x240x16	76	150	3	240	4 x 20	450 x 450 x 1400
2	8.0	240x240x16	76	150	3	240	4 x 20	450 x 450 x 1550
3	9.0	275x275x16	100	200	3	290	4 x 20	450 x 450 x 1700
4	10.0	310x310x20	100	200	3	310	4 x 25	450 x 450 x 1900

AREA REQUIRED FOR TRANSFORMER ROOM AND SUB-STATION FOR DIFFERENT CAPACITY

[Clause 4.2.4(v) of National Building Code]

S. No	Transformer Capacity (KVA)	Total Transformer Room Area (m ²)	Total Substation Area (with HT LT Panels) (m ²)	Suggested Minimum Face Width (m)
1	1x60	14	90	9
2	2x160	28	118	13.5
3	1x250	15	91	9
4	2x250	30	121	13.5
5	1x400/500	16.5	93	9
6	2x400/500	33	125	13.5
7	2x630	36	132	14.5
8	2x1000	39	149	14.5

75.0 ELECTRICAL ABBREVIATIONS

<i>ABBREVIATION</i>	<i>DESCRIPTION</i>
A	Ampere
ACB	Air circuit breaker
ACSR	Steel reinforced Aluminium conductor
AH	Ampere hour
APFC	Automatic Power factor Correction
AVM	Anti vibration mounting
AWG	American wire guage
BHP/ HP	Break horse power
CFL	Compact fluorescent lamp
CFM	Cubic feet per minute
CI	Cast iron
CP	Chrome plated
CPRI	Central Power Research Institute
CRT	Cast resin type
CT	Current transformer
DB	Distribution board
DG	Diesel generator
DISCOMs	Distribution companies
DMC	Dough moulded compound
DO	Drop out
DP	Double pole
EB	Electronic Ballast
EDO	Electrically draw out
ETDC	Electronic Test and Development Centre
FIA	Fire insurance approval
FR	Fire/ Flame retardant
FRLS	Fire/ Flame retardant and low smoke

<i>ABBREVIATION</i>	<i>DESCRIPTION</i>
FTL	Ffluorescent tubelight linear
GLS	General lighting service
GO	Gang operating
GSS	Galvanised Sheet steel
HBC	High breaking capacity
HDPE	High density poly ethylene
HPMV	High pressure mercury vapour lamp
HPSV	High pressure sodium vapour lamp
HR	Heat resistant
HT/ HV	High tension/ voltage
I/O	Information outlet
IDU/ ODU	Indoor/ outdoor unit
IEC	International Electro technical commission
IP	Ingress protection
IS	Indian Standard
ISI	Indian standard institute
ITC	Installation, testing and commissioning
ITD	Indian telecom department
KVAR	Reactive kilo volt-ampere
kW	Kilo watt
LA	Lightning arrester
LAN	Local area networking
LCD	Liquid crystal display
LED	Light emitting diode
LPM	Litre per minute
LT/ LV	Low tension/ voltage
LTC	Load tap changer
mA	Milli ampere
MCB	Miniature circuit breaker
MCCB	Moulded case circuit breaker

<i>ABBREVIATION</i>	<i>DESCRIPTION</i>
MDO	Manually draw out
MH	Metal halide
MM	Milli meter
MPP/ MP	Metalised poly propylene/ Paper
MS	Mild steel
MVA	Mega volt ampere
NO/ NC	Normally open/ closed
NRV	Non-return valve
O/L	Over load
OCCB	Open Construction Copper Ballast
OD/ ID	Outer / Inner diameter
P. POINT	per point
PA	Public address
PC	Poly carbonate
PE	Poly ethylene
PF	power factor
PF/ P&F/S&F/SF	Providing and fixing/ Supplying and fixing
PIJF	Polypropylene insulated jelly filled
PRV	Pressure release valve
PU	Poly urethane
PUF	Poly Utherene floride foam
PVC	Poly Vinyl Chloride
R. Mtr.	Running meter
RCBO	Residual circuit breaker with over load protection
RCC	Reinforced cement concrete
RCCB	Residual current circuit breaker
REC	Rural electrification commission
RPM	Revolution per minute
RRL	Reinforced Rubberised line
S/C	Short circuit

<i>ABBREVIATION</i>	<i>DESCRIPTION</i>
SF6	Sulfer hexa floride
SITC	Supply, installation, testing and commissioning
SMF	Sealed maintenance free
SQ MM	Square millimeter
SWG	Standard wire gauge
SWH	Storage water heater
TAC	Tarrif advisory committee
TEFC	Totally enclosed flame proof container
THD	Total harmonic distortion
TP	Triple pole
TPN	Triple pole and neutral
UL	Underwriters laboratories
UPS	Uninterrupted power supply
UV	Ultra Violet
UVR	Under voltage release
VI/ KV	Volts/ Kilo volts
VA/ KVA	Volt ampere/ Kilo volt-ampere
VCB	Vaccume circuit breaker
VPIT	Vacume Pressurised impregnated
XLPE	cross linked poly ethylene
ZHFR/ HFFR	Zero halogen/ Halogen free flame retardant

76. LIST OF MAKES

S.No.	ITEM	GROUP-1	GROUP -2
1.	PVC Casing Capping (Heavy duty)	AKG, Prestoplast, Precision, polycab, Dauphin, Richa	Shrinath, Pressfit Polypack, Plastoduct, Sanco, Modi, Metro
2.	PVC conduit	AKG, BEC, Precision, Polypack, Shrinath, Polycab, Plaza, Dauphin, Richa	Prestoplast, Nihir, Jindal, Kinjal, Sanco, Pressfit, Polyfit, Modi, Bright star, Shiva, Bharat Plast, Metro
3.	Steel Conduit	AKG, BEC, Steel Kraft, M Kay	MST, Double SS, NIC
4.	Copper conductor, Aluminium conductor	RR Kabel, National, Finolex, Rallison, Delton, Eon(Indoashian), KEI, Terexal, Plaza, Anchor, L&T Standard, Paramount, Empire, Orient cab, Orbit, HPL, Unicab, SPC, Emgee, Polycab, Havells, Rajsafe, Diatron	Romex, metro, Ashocab, Vimal Power, SMIC, Ramson, EnPowercab, Tambi, Samflex, Padam, Vinay, Maharaja, RTS, Kundan Cab, Capital, Phoenix, Swadeshi, Kinjal, Wirelink, Cona, Winner, Paralite, king's way, ESC, JSS, Snoflex, Autopal
5.	Coaxial cable	Finolex, National, RR Kabel, Polycab, Havells	Eminent, Anchor, Emgee, Orient Cab, Orbit, HPL, SPC, Empire, Unicab, Insucon, Tambi, Samflex
6.	Unarmoured telephone cable	Delton, Finolex, National, RR Kabel, Polycab, Havells	Eminent, Orient Cab, Orbit, HPL, SPC, Empire, Unicab, Insucon, Tambi, Samflex
7.	Armoured telephone cable	Delton, Finolex, National, Polycab, Havells	Samflex, Orient Cab, Orbit, HPL, SPC, Empire, Unicab
8.	Synthetic phenolic laminates	Formica, Greenlum, Bakelite Hylam,	any other approved ISI marked make
9.	MCB, isolator, RCCB, DBs, VTPN DBs, enclosures	Schneider (Acti 9), L&T, Legrand(Ekinox/Lexic), ABB(SH200M), Schneider (neo break), Siemens, HPL, GE, Standard, Indoasian(gold), Havells, C & S, ABB(S270)	Gerard(Mr. Safety), Altech, geco, SSK, Anchor, Khaitan, LS, Shi, Adhunik, Glostar, Capital, Clariton, Monetell, Versatrip, Shield, Standard Gold, Sigma, Kinjal, Billtech
10.	Metal clad industrial plug top & socket	Siemens, L&T, Havells, Standard, HPL, GE, Legrand, Schneider,	Standard Gold, Capital, Geco, Millborn, Glostar,

S.No.	ITEM	GROUP-1	GROUP -2
		ABB, BCH, Indoasian, C&S	Billtech
11.	Self Extinguishable Polymer type	Schneider, Legrand, HPL, Neptune Bals, ABB, SCAME, Indo Asian, Hensal, C&S	Standard gold, Millborn
	Electrical Accessories		
12.	Surface Type ordinary accessories	SSK, Anchor	Vinay, Kinjal, Leader, Antex
13.	Flush Type Ordinary Accessories	SSK(Topline), Anchor(Penta-Ornet), Elle, HiFi, Vinay(Clair-30), leader(euro), Precision(Prime), Cona(Wawa), Vimal(Interio/Mint), Kolors(Kubik/Kom), Antex (LK)	SSK(555), Anchor(Delux/Rider), Vinay (Clair-20) , Alemac (Santro), Kinjal (Alpha), Antex(King), Glostar, Kolors(KBC), SSK (Topstar), Vinay(Delux), Sainiso, Anchor, Plaza, Leader
14.	Accessories other than Switch / Socket/ Bells	SSK, Anchor, Precision, Vinay, Cona, Elle, Vimal, Kolors, North-West	Alemac, Antex, Kinjal, Sainiso, Plaza, Leader, Glostar
15.	Modular (PC Series)	MK (Wrap around), Legrand(Myrius), North West(PC Plus), ABB(Classic Lumina), C&S, Plaza(Rose), Anchor (Wood), Leader (Teak wood/blenz), Vinay(Camy Corsa), Schenider(Opale), L&T(Oris), Philips, Havells (Crabtree)	Havells (Coral), Anchor (Roma), Cona (glamour), Leon (Premier), Vinay (Cadila), Precision (Accord), SSK (Signature-EL), Elleys, Legrand(MyLinc), Hausmann, Elle(High class), MK(Ivory) finolex (Fino switch premium), Veto, Ceeje, Kolors(krest/kraze), Vimal (Lexi), Antex(Kelvin), SG(Manshar), Kolors(KBC)
16.	Semi – Modular (P.C. Series)	Anchor(Nova, Rider), Precision(Green), SSK (Fantasy), Vinay(Corsa), Elle(Excel), HiFi, Leader(Aura), Kolors (Kin), Vimal (Vima)	Antex (Euro), SG(Ikon), Ceeje (Power)
17.	PVC trunking system	MK, Legrand, Schneider	Any other ISI marked approved make
18.	Stabilizers	Logistat, Miracle, V- guard, Elnova, AE, IPS, AAI	Shakti, Bhurji
	Volt meters, Ampere meters		
19.	Analog type meters	Meco, Rishab, L&T, AE, Milborn	Capital, Standardgold, IMP,

S.No.	ITEM	GROUP-1	GROUP -2
			Enertrak, Essvee
20.	Digital type meters	Schneider, L&T, HPL, Secure, AE, Neptune, Raychem RPG	Meco, Standardgold, Enertrak, Essvee
21.	Current Transformer	C&S, L&T, Nippen, Schneider, Siemens, AE, Kappa, Milborn	Alfa, , Jyoti, Vaishno, Standardgold, Essvee
22.	Selector switches	GE, Siemens, C&S, HPL, L&T(Selzer), ABB, Schneider	Standardgold, Millborn, Geco, Glostar, Essvee
23.	LED (22.5 mm dia) Pilot lamp	Siemens, C&S, GE, ESBEE(L&T), BCH, ABB, Schneider, Vaishno, Rass Control, Kaycee, HPL, Milborn	Standardgold, Glostar, Essvee
24.	Energy analyser	HPL, L & T, Schneider, secure, AE, Raychem RPG, Neptune	
25.	Self healing MPP/MP type shunt capacitor (Standard duty/ Heavy duty/ Gas filled)	EPCOS, L&T, GE, Neptune, ABB, Schneider	BCH, C&S
26.	Power factor correction relay	Beluk, Epcos, Schneider, GE, Neptune, ABB, Vishay ESTA, L&T	BCH, HPL, Sycon
27.	Cam operated rotary switches	GE, Siemens, C&S, HPL, L&T(Selzer), ABB, Schneider	Standardgold, Millborn, Geco, Glostar, Essvee
28.	Power contactors, Thermal over load relays	Siemens, ABB, BCH, Schneider, SprecherSchuh, GE, L&T, C&S, Indoasian, HPL	Havells, Standardgold, Millborn, PECO
29.	Capacitor (AC 6 B) duty contactor	Siemens, ABB, Schneider, Sprecher Schuh, GE, L&T, C&S, HPL, Indoasian	Havells, BCH, Millborn
30.	Voltage surge protection device (surge arrester)	Schneider, Siemens, L&T, Legrand, GE, ABB, HPL	
31.	Push button actuators	Siemens, C&S, GE, ESBEE(L&T), BCH, ABB, HPL	Standardgold, Millborn
32.	Mechanical / digital time switch	Legrand, L&T, GE, Schneider, ABB, Siemens, Indo Asian, Millborn	Beco Controls, HPL
33.	Static watt-hour meter (kwh meter)	Schneider, Anchor, Havells, L&T, HPL, AE, Nippen, Genus, Raychem RPG, Secure	Standardgold, ECE
34.	Cable junction boxes	Hensel, Clipsal, SCAME, Gewiss,	United

S.No.	ITEM	GROUP-1	GROUP -2
		Moeller(HPL), Fibox	
35.	Air Circuit Breaker (Static release/ MICRO-PROCESSOR release/ Thermal magnetic release)	ABB, Siemens, GE, L&T, Schneider, C&S	Indo Asian, HPL, Havells, Legrand,
36.	MCCB	ABB, Siemens, GE, L&T, Schneider, Legrand, C&S, HPL, Indoasian, BCH,	Havells, Standard
37.	Metal clad Rewire able porcelain switch fuse unit	SSK, Standard, Havells, HPL, IndoAsian, Millborn	Geco, Mex, Osiya, Kumar, Capital, Anchor, Standardgold, SHI, Bentex, Zeta, Sentinel
38.	Switch disconnecter fuse unit	GE, ABB, Siemens, L & T, HPL, C&S, BCH, Schneider, Indoasian, Havells	Standard, Standardgold, Geco, SHI, LS, Capital, Zeta, Kumar, Osiya, Milborn
39.	Onload change over switch	HPL (Socomac), Gerard(Elcon), GE, L&T, C&S, ABB, Indoasian, Havells	Standard, Standardgold, Crystal
40.	Off load change over switch	Standard, Havells, HPL, Gerard, IndoAsian, L&T	Standardgold, Mex, Osiya, Capital, Zeta, Kumar, Geco, Millborn, Crystal, SHI, LS, Gloaster
41.	LT Cables	Gloster, CCI, Finolex, Rallison, Ekta, Delton, Havells, KEI, Terexal, Plaza, Paramount, Grandlay, Gem'scab, MPCAB, Worldcab, Diatron, Unicab, Unistar, Gemini, Romex, Isnwarcab, SPC, Orient cab, Empire, Orbit, Polycab, Rajsafe, Metro, RR Kable	Ashocab, Vimal Power, Ramson, Enpowercabs, Samflex, Westin, Torrent, Cap Cab, Deelux premium, Powerage, Natraj, KonarkSam, Kanha, Maharaja, RTS, Richa, Toshibacab, Neyflex, Pymen, Phoneix, Deco, Winner, Paralite, Kingsway, JSS
42.	Single compression brass gland SIBG type	Gripwel, Comet, Metalcraft, Cabend, TRINITY TOUCH, HMI	
43.	Aluminium lugs	Jainson, Dowells, Elcon, Metalcraft, Cabend, TRINITY TOUCH	
44.	Outdoor straight through joint	Reychem, Denson, M-Seal, Sasfe-kit, Cabseal, Shrinkfit, MasterSeal	
45.	M.S.Cable tray	Veenus, Pasco, Storax, Skaber, Profab, Pilco, Slotco, Needo	

S.No.	ITEM	GROUP-1	GROUP -2
46.	XLPE insulated H.T.cable	Gloster, RPG, Polycab, Unistar, KEI, Havells, MPCAB, Gem'scab, Paramount, Unicab, Diatron, Finolex, Gemini	Capcab, Torrent, Grandlay
47.	Heat shrinkable type indoor/ outdoor/ straight through terminations/ joint	Raychem, Densons, M-seal, Cabseal, 3M	Safekit, Master seal, Shrinkfit
48.	Push-on type indoor/ outdoor terminations/ joint	Densons, M-seal	Safekit, Master seal, Cabseal
49.	Ceiling Fans	Almonard, CG, Khaitan, Bajaj, Usha, Orient, Ortem, Havells, Polar	EPC, MMI, Airteck, Kraft, Orison, Rajshree, Relaxo, Kumar, Anchor, Omega, John Miller
50.	Fresh Air Fans	Almonard, CG, Alstom, Khaitan, Bajaj, Usha, Remi, EPC, Polar	MMI, Airteck, Kraft, Orison, Anchor, John Miller, Relaxo, Kumar, Konark, Omega, Rajshree
51.	Exhaust Fans	Alstom, CG, Almonard, Havells, Usha, EPC, Orient	Khaitan, Bajaj, Remi, Milborn, Orison, MMI, Polar, Rajshree, John Miller, Relaxo, Kumar, Konark, Omega
52.	Wall Mounting / Cabin / Pedestal Fans	Almonard, CG, Khaitan, Bajaj, Usha, EPC, Remi, Havells, Orient, Polar,	MMI, Airteck, Kraft, Polar, Orison, Kumar, John Miller, Relaxo
53.	Ventilation Fans	Newtek, Almonard, CG, Usha, Havells, Bajaj, Orient	Remi, Khaitan, Orison, Polar, MMI, John Miller, Airteck, Relaxo, Kraft, Konark, Omega
54.	Storage Water Heater and accessories	Spherehot, Racold, Venus, Bajaj	CG, Usha, Almonard, Kraft, Relaxo, Orison, Kumar, MIE, MMI, Ditz
55.	Solar heating system	TATA BP, BHEL, REIL, NIILLOY, Racold solare, Intersolar, Solar maxx	
	Indoor Lighting		
56.	Indoor Fittings	Philips, Bajaj, CG, Wipro, GE, Havells, HPL, Pierlite, Surya, Lighting Science	Twinkle, Klite, Decon, C&S, Valiant, Prima, Mayfair, Dollar, Eckolite, Matador, Florida, Padam, Shakti, Istlite, Compact

S.No.	ITEM	GROUP-1	GROUP -2
57.	FTL Lamps	Philips, Osram, CG, Bajaj, Wipro, Surya, Havells, HPL, GE, Pierlite, Halonix	Indo Asian, Pierlite, Istlite, Ecoglo, Cema, Sylvania, Vapolite, Lighting Science, Anchor, Padam
58.	CFL Lamps	Philips, Osram, CG, Bajaj, Wipro, Surya, Havells, HPL, GE, Pierlite, Halonix	Indo Asian, Pierlite, Istlite, Ecoglo, Cema, Sylvania, Vapolite, Lighting Science, Anchor, Padam
59.	Light sensing devices and Sensors	Philips	Wipro
60.	LED Luminaires and Supply	Philips, Bajaj, CG, Wipro, GE, Havells, HPL, Pierlite, Surya, Lighting Science, K-lite	Decon, Goldwyn, Pyrotech, Daisun, NDM, Deepakshi, Odyssey
	Outdoor Lighting		
61.	Outdoor Fittings	Philips, Bajaj, CG, Wipro, GE, Havells, HPL, Surya, Schneider, Keselec, Lighting Science	Twinkle, Klite, Decon, C&S, Mayfair, Dollar, Eckolite, Mystique, Kumar, Shakti, United, Istlite, Valiant, Ventura
62.	HPSV Lamps	Philips, Osram, CG, Bajaj, Wipro, GE, Surya, Havells, Venture	Vapolite, Balaji, Halonix, Lighting Scienc, Istlite
63.	HPMV / Halogen Lamps	Philips, Osram, CG, Bajaj, Wipro, GE, Surya, Havells, Venture	Vapolite, Balaji, Halonix, Lighting Scienc, Istlite
64.	MH Lamps	Philips, Osram, CG, Bajaj, Wipro, GE, Surya, Havells, Venture	Vapolite, Balaji, Halonix, Lighting Scienc, Istlite
65.	Hot Dipped GI Swaged Tubular/Octagonal Poles	Bajaj, Surya, Philips, BPP, PE, Aster, Volmont, CG, Transrail, Utkarsh	SRB
66.	High Mast Lighting System	Bajaj, Philips, BPP, PE, Aster, Surya, Volmont, CG, Transrail, Utkarsh	SRB, K – lite, United, Ventura
67.	LED Outdoor Luminaries	Philips, Bajaj, Surya, Wipro, CG, Havells, HPL, Lighting Science, Schneider, Keselec, Instapower	Klite , Daisun, Pyrotech, Goldwyn, Deepakshi, Odyssey
68.	Decorative C.I. Poles	Bajaj, Halomax	NDM, Raydean
69.	HT Insulators (Pin, Disc and Post types)	Jaishree insulators, Allied ceramics, JP (Jaipur Glass & Potteries), IEC (Insulators and Electricals company Bhopal)	

S.No.	ITEM	GROUP-1	GROUP -2
70.	Horn gap fuse set, isolator (GO)	Star Industries (Jaipur), Elektrolites (Jaipur), Dusad Electricals, (Jaipur)	
71.	Lightening arrestor	LPI (Australia), LPSFR(France), Sudafix(UK), EF(Switzerland)	
72.	LAN, UTP Wires	Amp, Avaya, Molex, Penduit, Dax	RRKabel, Finolex, Delton, Anchor, Specta, D-link, Polycab, Schnider, Havells, Eminent
73.	Communication Racks	President, Legrand, Rittal	Comrack, Valrack, Hulasi
74.	I/Os, Patch cords, Patch Panels, Terminations	Amp, Avaya, Molex, Penduit, Dax	RRKabel, Finolex, Delton, Anchor, Specta, D-link, Polycab, Schnider, Havells, Eminent
	Motors & Pump Sets		
75.	Self Priming / Centrifugal Monoblock Pumpsets	Kirlosker, Texmo, Crompton, Taro, Siemens, ABB, Varuna, Duke, Lubi Ujala, Falcon, Unnati, Oswal	Sumo, Usha, Sharp, MBH
76.	Submersible motor pump sets	KSB, Kirlosker, Techno, Texmo, Taro, Calama, Plugra, Crompton Greaves, Chetan, Lubi, Varuna, Duke, Ujala, Falcon, Unnati, Oswal	CRI, KDR, MBH
77.	Transformer & Accessories	Alstom, Crompton Greaves, Schneider, Volt-amp, ABB, Emco, Bharat Bijlee.	Uttam Bharat, Rajasthan Transformers and Switchgears, Kotsons, IMP, Indian, Runthala, Roshan, Swastik, United, Prakash, Vardhaman, Pactil, Danish
78.	Batteries	Exide, Standard, Amararaja, Amco	
79.	FCBC(Float cum boost charger)	Statcon, Amara Raja, CDC, AE, Expofn, Thycon India	
80.	SF6/ VCB Indoor type panel HT board	ABB, Alstom (Areva), Schneider, Crompton, Siemens	
81.	Copper bus trunking arrangement	L&T(Moeller), Schneider, EAE(Alcu-Bar)	C&S, GE
82.	Oil Immersed HT Switch	MEI, Crompton Greaves	
83.	Alternator	Stampford, Kirlosker-Green,	CG, Leroy-somer
84.	Diesel Engine	Cummins, Caterpillar, KOEL	Greaves, Eicher, Ashok Leyland, Penta-Volvo, Mahindra

S.No.	ITEM	GROUP-1	GROUP -2
85.	PLC	Allen Bradely, Enercon, ABB, Siemens, Schneider	
86.	LT Switch Board Panels (CPRI Approved)	Engineers & Engineers (Elect)GK marketing , Power Electric, Ankit Electrical, Electro-Mech, Dynamic Elec Power.	
87.	GEL EARTHING WITH Pipe in Pipe technology	Ashlok, Ash, SI, JK, REIL, True Power	
88.	Gel Earthing with strip in pipe technology	JMV, Earth Soul, RK, SH, UES, REIL, True Power, Erico	
89.	Starters Oil immersed / Air Break	L&T , Siemens , ABB, BCH, Jyoti, Schneider, C&S, Milborn	MEI, Advance, Divya

Note :

1. The List of Makes has been prepared on the basis of approved makes specified in PWD BSR-2013.
2. The List of makes has been kept same as provided in RUIDP BSR-2013 wherever not mentioned in PWD BSR-2013.

A - MACHINERY

Code No	Description	Unit	Rate Rs.
0001	Hydraulic Excavator of 1 cum bucket	hour	800.00
0003	Hire charges of Diesel Truck - 9 tonne	day	1600.00
0004	Truck 5.5 cum per 10 tonnes	hour	150.00
0005	Truck 5.5 cum per 10 tonnes	tonne.km	3.00
0010	Tipper - 5 cum	hour	150.00
0011	Hire and running charges of DTH drilling system with driver and fuel.	day	7500.00
0012	Hire and running charges of rotary drilling system with driver and fuel.	day	9500.00
0013	Transit Mixer 4.0/4.5 cum	hour	690.00
0014	Transit Mixer 4/4.5 cum	tonne.km	12.00
0015	Hire and running charges of Hydraulic Excavator (3D) with driver and fuel.	day	7500.00
0016	Truck Trailor 30 tonne capacity	hour	1320.00
0017	Truck Trailor 30 tonne capacity	tonne.km	5.00
0021	Front End loader 1 cum bucket capacity	hour	825.00
0023	Tractor Trolly	hour	170.00
0024	Tractor with Rotevator	hour	280.00
0025	Tractor with Ripper	hour	140.00
0029	Smooth Wheeled Roller 8 tonne	hour	200.00
0031	Vibratory Roller 8 tonne	hour	650.00
0034	Tandem Road Roller (Two wheeled)	hour	735.00
0037	10 HP Pumping set (Diesel Engine Operated)	day	400.00
0038	Verticality test by plumbing system and Draw down test of tube well by pumping system as per IS: 2800 (Part II) 1979 and yield test i/c hire charges of pump set and transportation	each	6000.00
0039	Hire charges of Pumpset of capacity 4000 litres/hour.	day	330.00
0043	Water supply tanker of 5000 litre capacity	each	600.00
0044	Resistivity survey by VES method for locating proper spot for tube well drilling	point	1300.00
0045	Crane with grab 0.75 cum capacity	hour	1000.00
0046	Cranes 3 tonnes	hour	275.00
0047	Crane 5 tonne capacity	hour	600.00
0048	Crane 10 tonne capacity	hour	625.00
0049	Crane 15 tonne capacity	hour	685.00
0052	Cranes 35 tonnes	hour	900.00

Code No	Description	Unit	Rate Rs.
0054	Crane 80 tonnes	hour	1000.00
0055	Mobile crane.	day	5500.00
0057	Dozer D - 50 - A 15	hour	715.00
0058	Dozer D - 80 - A 12	hour	750.00
0059	Hire charges of Concrete Mixer 0.14 cubic metre	day	440.00
0060	Concrete Mixer 0.4/0.28 cum	hour	110.00
0061	Concrete Mixer 1 cum	hour	160.00
0062	Batching and Mixing Plant (b) 15 - 20 cum capacity	hour	1825.00
0063	Batching and Mixing Plant (a) 30 cum capacity	hour	1950.00
0064	Cement concrete batch mix plant @ 75 cum per hour	hour	2500.00
0065	Cement concrete batch mix plant @ 175 cum per hour (effective output)	hour	9625.00
0068	Concrete Pump of 45 & 30 cum capacity	hour	600.00
0070	Vibrator(Needle type 40mm)	day	220.00
0072	Surface Vibrator	day	345.00
0073	Concrete Paver Finisher with 40 HP Motor	hour	2500.00
0077	Wet Mix Plant 75 TPH	hour	2500.00
0080	Hotmix Plant - 120 TPH capacity	hour	1300.00
0081	Hotmix Plant - 100 TPH capacity	hour	1300.00
0090	Hire charges of Spraying machine including electric charges	day	200.00
0091	Bitumen Pressure Distributor	hour	150.00
0092	Bitumen Boiler oil fired	hour	120.00
0093	Epoxy Injection gun	hour	345.00
0095	Motor Grader 3.35 mtr blade	hour	1400.00
0097	Paver Finisher Hydrostatic with sensor control 100 TPH	hour	1500.00
0099	Paver Finisher Mechanical 100 TPH	hour	700.00
0100	Mastic Cooker	hour	80.00
0101	HDPE Jointing Machine alongwith 15 KVA DG set	hour	250.00
0105	Road marking machine	hour	115.00
0107	Texturing machine (for rigid pavement)	hour	70.00
0109	Mechanical Broom Hydraulic	hour	190.00
0112	Hydraulic Chip Spreader	hour	1250.00
0113	Air Compressor 210 CFM	hour	200.00
0115	Air compressor with pneumatic chisel attachment for cutting hard clay.	hour	225.00
0116	Compressor with guniting equipment along with accessories	hour	550.00
0117	Pneumatic Sinking Plant	hour	2800.00
0118	Induction, deinduction and erection of plant and equipment including all components and accessories for pneumatic method of well	hour	5500.00

Code No	Description	Unit	Rate Rs.
	sinking.		
0119	Piling rig Including double acting pile driving hammer (Hydraulic rig)	hrs	6500.00
0123	Piling Rig with Bantonite Pump	hour	4500.00
0125	Pile testing for vertical load	mt	250.00
0126	Pile testing for lateral load	mt	5000.00
0128	Water tanker 6 KL capacity	hour	130.00
0131	Hire charges of chain pully block with try pod i/c transportation	day	600.00
0132	Joint Cutting Machine with 2-3 blades (for rigid pavement)	hour	95.00
0133	Machine for rubbing of floors	day	220.00
0134	Hand Grinder For mirror polish	day	125.00
0136	Hire charges of Derrickmonkey rope	day	550.00
0137	Welding by gas plant	cm	2.00
0138	Welding by electric plant	cm	2.00
0139	Grouting pump with agitator	hour	200.00
0141	Kerb Casting Machine	hour	350.00
0143	Boat to carry atleast 20 persons	hour	1725.00
0144	Plate compactor	hour	50.00
0147	Sludge suction tanker 6000 litre capacity	trip	1035.00
0149	Prestressing Jack with Pump & access	hour	450.00
0150	Electric Generator 33 KVA	hour	450.00
0151	Electric Generator 63 KVA	hour	575.00
0152	Electric Generator 100 KVA	hour	750.00
0153	Electric Generator 125 KVA	hour	825.00
0154	Electric Generator 250 KVA	hour	1450.00
0156	Drilling of 40mm dia bore hole in rock	metre	90.00
0157	Spray Pump for spraying Chemical for waterproofing	day	100.00
0158	Mechanical Grinder (Gharat) with POL and Driver per day	day	500.00
0159	M.S. Structure fabrication charges l/c cutting, electric welding etc	kg	12.50
0160	Radio-graphy testing for butt welds	metre	390.00
0161	Ultrasonic testing for fillet welds	metre	200.00
0162	Augur boring 300mm dia	rmtr	200.00
0163	Monthly rental charges of built up space	per sqm/month	60.00
0164	Monthly charges of tables	month	65.00
0165	Monthly charges of chairs	month	25.00
0166	Monthly charges of steel almirah	month	170.00
0167	Monthly charges of computer & printer	month	1035.00
0168	Monthly payment of computer operator	month	6500.00

Code No	Description	Unit	Rate Rs.
0169	Monthly charges of laboratory equipments (set of approved equipments)	month	3500.00
0170	Non destructive Integrated testing of pile	per test	1500.00
0171	Dynamic load test for checking the load bearing capacity of pile as per ASTM D4945	per test	85000.00
0172	Sonic logging test on RC bored piles and submission of report.	per test	8000.00
0173	Testing of finished PSC girder with simulation system.	each	100000.00
0174	Load testing of one or more spans of bridge as per approved load test procedure of IS/IRC/Railway codes upto 100 MT Load.	per test	200000.00
0175	Load testing of one or more spans of bridge as per approved load test procedure of IS/IRC/Railway codes per 100 MT Load or part their of after initial 100 MT.	per 100 mt per test	25000.00
0176	Plate load test for determining SBC at a specified depth and draw load settlement curve as per Indian standard	each	29000.00
0180	Photography charges including printing of photo	each	28.00
0181	Charges for Topographic Survey team using Total Station	day	3000.00
0182	Charges of Draftman for developing drawing in AUTO CAD format using the layering system and Geo referencing	day	600.00
0183	Charges for printng detailed drawings in A-2 size	sheet	50.00
0184	Charges for Water Quality Analysis Collecting sample and Physical & Chemical testing of Parameter from NABL approved laboratory: PH, TDS, Taste & Odour, turbidity, magnesium, Total hardness, total alkalinity, chloride, sulphate, nitrate, fluoride, Calcium, Iron, Pesticide, Manganese, Cooper, Aluminum, Residual Chlorine, Zinc, phenolic compound, Arsenic, Cadmium, Chromium, cyanides, lead, selenium, Mercury.	each	5600.00
0185	Charges for Raw Sewage Analysis Collecting sample and Physical & Chemical testing of Parameter from NABL approved laboratory: PH, Temprature, TSS, TDS, Inorganic dissolved solids, Alkalinity as CaCO3, total hardness as CaCO3, chloride as Cl, sulphate as SO4, Floride as F, Phosphate as PO4, Ammonical Nitrogen as N, Sodium as Na, TKN, BOD at 200 C, COD, Silica as SiO2, oil and grease, sulphide as S, phenolic compound.	each	5200.00
0186	Charges for Municipal Solid Waste Sample analysis - Collecting sample of Municipal Solid Waste (MSW) and analyze physical and chemical Characterization and composition of each component in %age in NABL approved laboratory: moisture content, total solids, volatile solids of total solids, fixed solids percent of total solids, organic carbon, COD and calorific value. Composition of each component in %age viz. Paper, Rubber, Leather & Synthetics, Metals, Inert, Plastics, Organics, Textiles, Wood & Others.	each	7000.00
0187	Charges for Geotechnical Survey below ground by boring method from 0 to 2 metre and submission of detailed report	each	2500.00
0188	Charges for Geotechnical Survey below ground by boring method from 0 to 4 metre and submission of detailed report	each	3750.00
0189	Charges for Geotechnical Survey below ground by boring method from 0 to 6 metre and submission of detailed report	each	5000.00

Code No	Description	Unit	Rate Rs.
0190	Charges for Geotechnical Survey below ground by boring method from 0 to 8 metre and submission of detailed report	each	6250.00
0191	Surveying, collecting sample and testing of stone metal samples from crushers/quarries from NABL approved	each	2800.00
0192	Surveying, collecting sample and testing of fine Aggregates from crushers/quarries from NABL approved	each	1400.00
0193	Surveying, collecting sample and testing of GSB from crushers/quarries from NABL approved	each	2800.00
0194	Surveying, collecting sample and testing of soil of borrow pits sample testing from NABL approved	each	4900.00
0195	Collecting water sample and testing Bacteriological Parameter from NABL approved laboratory as per CPHEEO manual: Total coliforms, faecal coliforms	each	1300.00
0196	Ambient Air Quality Monitoring- For parameters PM-2.5 & PM-10, SO ₂ , NO ₂ , CO from NABL approved laboratory and submission of report complete in all respect.	each	4100.00
0197	Ambient Noise Quality Monitoring - To Identify sources of noise, Duration and variations in noise over time etc. (day and night in Leq dBA) from NABL approved laboratory	each	1650.00
0198	conducting BBD Tests as per IRC: 81-1997 (Guidelines for Strengthening of Flexible Road Pavements) and pavement evaluation	each	3700.00
0199	Collecting sample and conducting California Bearing Ratio test	each	1300.00

B - LABOUR

Code No	Description	Unit	Rate Rs.
0201	Fitter (Grade I)	day	500.00
0202	Fitter (Grade II) or Assistant Fitter	day	400.00
0203	Mason (1st class)	day	500.00
0204	Mason (for plaster of paris work) 1st class	day	600.00
0205	Mason (for ornamental stone work) 1st class	day	600.00
0206	Mason (brick layer) 2nd class	day	400.00
0207	Mason (for plain stone work) 2nd class)	day	500.00
0208	Mason (IInd class)	day	400.00
0209	Carpenter I Class	day	500.00
0210	Carpenter II Class	day	450.00
0211	Carpenter (average)	day	475.00
0212	Blacksmith 1st class	day	500.00
0213	Blacksmith (IInd class)	day	400.00
0214	Glazier	day	500.00
0215	Painter	day	450.00
0216	Mazdoor/ helper	day	350.00
0217	Coolie	day	300.00
0218	Skilled Beldar	day	400.00
0219	White Washer	day	400.00
0221	Rock Breaker	day	400.00
0222	Rock Hole Driller	day	400.00
0225	Skilled torch operator for laying tack	day	350.00
0229	Bandhani	day	300.00
0230	Bhishti	day	300.00
0231	Mate / Supervisor	day	400.00
0232	Mali	day	350.00
0233	Mistry	day	500.00
0234	Chokidar	day	350.00
0236	Driver (for Road Roller, Concrete Mixer, Truck etc.)	day	500.00
0239	Medical Officer	day	1500.00
0240	Para medical personnel	day	800.00
0241	Applicator (A person who applies chemical for water proofing)	day	400.00
0242	Helper for Glass and other decoration work	day	350.00
0244	Skilled Craftsman	day	400.00

Code No	Description	Unit	Rate Rs.
0245	Expert Artist (For conservation of Fresco paintings and other decorative work)	day	700.00
0246	Expert Artist (Grade-II) (To assist expert artist)	day	500.00
0247	Supervisor for Chemical works	day	500.00
0248	Expert artist for Oil-painting/Glass work (Grade-I)	day	700.00
0249	Expert for Glass work (Grade-II)	day	400.00
0250	Hammal (Paldar) (For loading/ unloading heavy stone blocks including chain pully block and T&P for this purpose)	day	270.00
0257	Skilled Man for khamira	day	270.00
0258	Skilled craftsman for archaeological excavation	day	300.00
0260	Wireman/ lineman	day	500.00
0261	Plumber	day	400.00
0276	Socio economic surveyer	day	600.00
0277	Engineer/ Surveyer	day	2000.00

C – MATERIALS

Code No	Description	NUnit	Unit	Rate Rs.
0301	100mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	931.00
0302	150mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	1315.00
0303	200mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	1637.00
0304	250mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	2151.00
0305	300mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	2736.00
0306	350mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	3071.00
0307	400mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	3752.00
0308	450mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	4596.00
0309	500mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	5272.00
0310	600mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	6904.00
0311	700mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	9292.00
0312	800mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	12009.00
0313	900mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	14343.00
0314	1000mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	17736.00
0315	1100mm dia DI K-7 grade S&S pipe conforming to I.S. 8329		metre	24179.00
0321	100mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	1070.00
0322	150mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	1507.00
0323	200mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	1960.00
0324	250mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	2621.00
0325	300mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	3289.00
0326	350mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	3658.00
0327	400mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	4424.00
0328	450mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	5428.00
0329	500mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	6282.00
0330	600mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	8195.00
0331	700mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	10370.00
0332	800mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	12741.00
0333	900mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	15362.00
0334	1000mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	18900.00
0335	1100mm dia DI K-9 grade S&S pipe conforming to I.S. 8329		metre	23191.00
0341	100mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	1699.00
0342	150mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	2260.00
0343	200mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	2952.00
0344	250mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	3828.00

Code No	Description	NUnit	Unit	Rate Rs.
0345	300mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	4880.00
0346	350mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	6538.00
0347	400mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	7680.00
0348	450mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	9382.00
0349	500mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	11127.00
0350	600mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	14725.00
0351	700mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	19379.00
0352	800mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	23449.00
0353	900mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	29119.00
0354	1000mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	34101.00
0355	1100mm dia DI K-9 grade flanged pipe conforming to I.S. 8329		metre	42599.00
0361	S&S Centrifugally (Spun) C.I. Pipe class LA 100mm dia		metre	900.00
0362	S&S Centrifugally (Spun) C.I. Pipe class LA 125mm dia		metre	1120.00
0363	S&S Centrifugally (Spun) C.I. Pipe class LA 150mm dia		metre	1350.00
0364	S&S Centrifugally (Spun) C.I. Pipe class LA 200mm dia		metre	2300.00
0365	S&S Centrifugally (Spun) C.I. Pipe class LA 250mm dia		metre	3000.00
0366	S&S Centrifugally (Spun) C.I. Pipe class LA 300mm dia		metre	4050.00
0367	S&S Centrifugally (Spun) C.I. Pipe class LA 350mm dia		metre	4850.00
0368	S&S Centrifugally (Spun) C.I. Pipe class LA 400mm dia		metre	6400.00
0369	S&S Centrifugally (Spun) C.I. Pipe class LA 450mm dia		metre	7750.00
0370	S&S Centrifugally (Spun) C.I. Pipe class LA 500mm dia		metre	9000.00
0371	S&S Centrifugally (Spun) C.I. Pipe class LA 600mm dia		metre	12595.00
0391	C.I. "B" class flanged pipe		kg	72.00
0392	C.I. double flanged standard specials		kg	74.00
0393	C.I. double flanged non-standard specials		kg	76.00
0401	Specials S&S DI K-12 upto 300mm dia		kg	92.10
0402	Specials S&S DI K-12 above 300mm dia and upto 600mm dia		kg	97.00
0403	Specials S&S DI K-12 above 600mm dia and upto 800mm dia		kg	118.00
0404	Specials S&S DI K-12 above 800mm dia		kg	127.00
0411	Specials flanged DI K-12 upto 300mm dia		kg	94.10
0412	Specials flanged DI K-12 above 300mm dia and upto 600mm dia		kg	101.00
0413	Specials flanged DI K-12 above 600mm dia and upto 800mm dia		kg	124.00
0414	Specials flanged DI K-12 above 800mm dia		kg	138.00
0421	S & S.C.I. standard specials upto 300 mm dia (heavy class)		quintal	3600.00
0422	S & S.C.I. standard specials over 300 mm dia (heavy class)		quintal	3700.00

Code No	Description	NUnit	Unit	Rate Rs.
0425	Flanged C.I. standard specials upto 300 mm dia(heavy class)		quintal	5500.00
0426	Flanged C.I. standard specials over 300 mm dia(heavy class)		quintal	6000.00
0431	80 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	3207.00
0432	100 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	3801.00
0433	125 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	5226.00
0434	150 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	5939.00
0435	200 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	10689.00
0436	250 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	14490.00
0437	300 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	17816.00
0438	350 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	27318.00
0439	400 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	36107.00
0440	450 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	38720.00
0441	500 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	40145.00
0442	600 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	65325.00
0443	700 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	105920.00
0444	750 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	125440.00
0445	800 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	133601.00
0446	900 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	171520.00
0447	1000 mm dia CI butterfly valve PN 1.0 (Cat "B")		each	221120.00
0451	80 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	6522.00
0452	100 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	8713.00
0453	125 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	10973.00
0454	150 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	13233.00
0455	200 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	22033.00
0456	250 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	31314.00
0457	300 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	41238.00
0458	350 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	79359.00
0459	400 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	107800.00
0460	450 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	136526.00
0461	500 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	171253.00
0462	600 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	223046.00
0463	700 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	406975.00
0464	750 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	493718.00
0465	800 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	612232.00
0466	900 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	821431.00
0467	1000 mm dia CI Sluice valve PN 1.0 (Cat-A)		each	1041625.00
0471	80 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	3100.00

Code No	Description	NUnit	Unit	Rate Rs.
0472	100 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	4200.00
0473	125 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	5865.00
0474	150 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	7019.00
0475	200 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	12000.00
0476	250 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	18711.00
0477	300 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	23754.00
0478	350 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	36189.00
0479	400 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	46007.00
0480	450 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	56722.00
0481	500 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	71288.00
0482	600 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	105616.00
0483	700 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	199426.00
0484	750 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	222398.00
0485	800 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	271292.00
0486	900 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	355734.00
0487	1000 mm dia CI Sluice valve PN 1.0 (Cat-B)		each	548743.00
0491	80 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	7031.00
0492	100 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	8528.00
0493	125 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	11370.00
0494	150 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	14213.00
0495	200 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	32403.00
0496	250 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	40367.00
0497	300 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	55778.00
0498	350 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	82469.00
0499	400 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	88705.00
0500	450 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	131289.00
0501	500 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	140043.00
0502	600 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	207146.00
0503	700 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	288837.00
0504	750 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	326854.00
0505	800 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	376485.00
0506	900 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	582521.00
0507	1000 mm dia CI dual plate check valve PN 1.0 (Cat-A)		each	699098.00
0511	80 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	3207.00
0512	100 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	3801.00
0513	125 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	4544.00
0514	150 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	5926.00

Code No	Description	NUnit	Unit	Rate Rs.
0515	200 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	10689.00
0516	250 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	14490.00
0517	300 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	17816.00
0518	350 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	27318.00
0519	400 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	36107.00
0520	450 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	38720.00
0521	500 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	40145.00
0522	600 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	65325.00
0523	700 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	114688.00
0524	750 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	132096.00
0525	800 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	151936.00
0526	900 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	212480.00
0527	1000 mm dia CI dual plate check valve PN 1.0 (Cat-B)		each	276352.00
0531	80 mm dia CI Duckfoot Bend		each	1394.00
0532	100 mm dia CI Duckfoot Bend		each	1672.00
0533	125 mm dia CI Duckfoot Bend		each	2420.00
0534	150 mm dia CI Duckfoot Bend		each	3080.00
0535	200 mm dia CI Duckfoot Bend		each	4752.00
0536	250 mm dia CI Duckfoot Bend		each	7128.00
0537	300 mm dia CI Duckfoot Bend		each	10032.00
0538	350 mm dia CI Duckfoot Bend		each	14520.00
0539	400 mm dia CI Duckfoot Bend		each	18480.00
0541	80 mm dia CI Foot Valve		each	1300.00
0542	100 mm dia CI Foot Valve		each	1700.00
0543	125 mm dia CI Foot Valve		each	2700.00
0544	150 mm dia CI Foot Valve		each	4800.00
0545	200 mm dia CI Foot Valve		each	9514.00
0546	250 mm dia CI Foot Valve		each	14158.00
0547	300 mm dia CI Foot Valve		each	16034.00
0548	350 mm dia CI Foot Valve		each	30881.00
0549	400 mm dia CI Foot Valve		each	39907.00
0550	450 mm dia CI Foot Valve		each	43497.00
0551	500 mm dia CI Foot Valve		each	61761.00
0555	80 mm dia C.I. dismantling joint PN 1.0		each	1530.00
0556	100 mm dia C.I. dismantling joint PN 1.0		each	1715.00
0557	125 mm dia C.I. dismantling joint PN 1.0		each	1854.00
0558	150 mm dia C.I. dismantling joint PN 1.0		each	2874.00

Code No	Description	NUnit	Unit	Rate Rs.
0559	200 mm dia C.I. dismantling joint PN 1.0		each	4403.00
0560	250 mm dia C.I. dismantling joint PN 1.0		each	6257.00
0561	300 mm dia C.I. dismantling joint PN 1.0		each	8042.00
0562	350 mm dia C.I. dismantling joint PN 1.0		each	9734.00
0563	400 mm dia C.I. dismantling joint PN 1.0		each	12515.00
0564	450 mm dia C.I. dismantling joint PN 1.0		each	13905.00
0565	500 mm dia C.I. dismantling joint PN 1.0		each	17150.00
0566	600 mm dia C.I. dismantling joint PN 1.0		each	25956.00
0567	700 mm dia C.I. dismantling joint PN 1.0		each	38655.00
0571	80 mm dia C.I. D joint class-10		each	224.00
0572	100 mm dia C.I. D joint class-10		each	283.00
0573	125 mm dia C.I. D joint class-10		each	385.00
0574	150 mm dia C.I. D joint class-10		each	486.00
0575	200 mm dia C.I. D joint class-10		each	673.00
0576	250 mm dia C.I. D joint class-10		each	848.00
0577	300 mm dia C.I. D joint class-10		each	1110.00
0578	350 mm dia C.I. D joint class-10		each	1746.00
0579	400 mm dia C.I. D joint class-10		each	2203.00
0580	450 mm dia C.I. D joint class-10		each	3234.00
0581	500 mm dia C.I. D joint class-10		each	4103.00
0582	600 mm dia C.I. D joint class-10		each	5471.00
0591	80 mm dia C.I. D joint class-15		each	247.00
0592	100 mm dia C.I. D joint class-15		each	311.00
0593	125 mm dia C.I. D joint class-15		each	423.00
0594	150 mm dia C.I. D joint class-15		each	535.00
0595	200 mm dia C.I. D joint class-15		each	741.00
0596	250 mm dia C.I. D joint class-15		each	933.00
0597	300 mm dia C.I. D joint class-15		each	1221.00
0598	350 mm dia C.I. D joint class-15		each	1921.00
0599	400 mm dia C.I. D joint class-15		each	2424.00
0600	450 mm dia C.I. D joint class-15		each	3558.00
0601	500 mm dia C.I. D joint class-15		each	4513.00
0602	600 mm dia C.I. D joint class-15		each	6018.00
0611	80 mm dia C.I. transition coupling joint		each	428.00
0612	100 mm dia C.I. transition coupling joint		each	551.00
0613	125 mm dia C.I. transition coupling joint		each	763.00
0614	150 mm dia C.I. transition coupling joint		each	846.00

Code No	Description	NUnit	Unit	Rate Rs.
0615	200 mm dia C.I. transition coupling joint		each	1217.00
0616	250 mm dia C.I. transition coupling joint		each	1662.00
0617	300 mm dia C.I. transition coupling joint		each	2164.00
0618	350 mm dia C.I. transition coupling joint		each	3043.00
0619	400 mm dia C.I. transition coupling joint		each	3620.00
0620	450 mm dia C.I. transition coupling joint		each	4685.00
0621	500 mm dia C.I. transition coupling joint		each	5506.00
0631	80 mm dia C.I. puddle collar		each	2137.00
0632	100 mm dia C.I. puddle collar		each	2624.00
0633	125 mm dia C.I. puddle collar		each	3384.00
0634	150 mm dia C.I. puddle collar		each	4275.00
0635	200 mm dia C.I. puddle collar		each	6484.00
0636	250 mm dia C.I. puddle collar		each	8693.00
0637	300 mm dia C.I. puddle collar		each	11128.00
0638	350 mm dia C.I. puddle collar		each	14750.00
0639	400 mm dia C.I. puddle collar		each	17993.00
0640	450 mm dia C.I. puddle collar		each	21390.00
0641	500 mm dia C.I. puddle collar		each	27114.00
0651	150 mm dia SS Stainer cylindrical type		each	7170.00
0652	200 mm dia SS Stainer cylindrical type		each	11500.00
0653	250 mm dia SS Stainer cylindrical type		each	19480.00
0654	300 mm dia SS Stainer cylindrical type		each	26781.00
0655	350 mm dia SS Stainer cylindrical type		each	49655.00
0656	400 mm dia SS Stainer cylindrical type		each	53578.00
0657	450 mm dia SS Stainer cylindrical type		each	71785.00
0658	500 mm dia SS Stainer cylindrical type		each	85000.00
0661	125 mm dia expansion bellows		each	5701.00
0662	150 mm dia expansion bellows		each	6770.00
0663	200 mm dia expansion bellows		each	8730.00
0664	250 mm dia expansion bellows		each	11099.00
0667	400 mm dia expansion bellows		each	22567.00
0669	500 mm dia expansion bellows		each	31475.00
0670	600 mm dia expansion bellows		each	41030.00
0671	50 mm dia CI Kinetic Air Valve (Cat-A)		each	16532.00
0672	80 mm dia CI Kinetic Air Valve (Cat-A)		each	19308.00
0673	100 mm dia CI Kinetic Air Valve (Cat-A)		each	25616.00
0674	150 mm dia CI Kinetic Air Valve (Cat-A)		each	48107.00

Code No	Description	NUnit	Unit	Rate Rs.
0675	200 mm dia CI Kinetic Air Valve (Cat-A)		each	72031.00
0676	50 mm dia CI Kinetic Air Valve (Cat-B)		each	6414.00
0677	80 mm dia CI Kinetic Air Valve (Cat-B)		each	7126.00
0678	100 mm dia CI Kinetic Air Valve (Cat-B)		each	10689.00
0679	150 mm dia CI Kinetic Air Valve (Cat-B)		each	23200.00
0680	200 mm dia CI Kinetic Air Valve (Cat-B)		each	38007.00
0681	80 mm dia CI flanged ends single ball air valve		each	3600.00
0682	100 mm dia CI flanged ends single ball air valve		each	5100.00
0683	25 mm dia C.I. Air Valve		each	1188.00
0684	50 mm dia C.I. Air Valve		each	2000.00
0685	150 mm dia CI flanged ends single ball air valve		each	8000.00
0689	Water METER BOX- with Weather resistant PE/ GRP box, press fitted Lid fixing & built-in or external lock.		each	400.00
0690	Orifice flow equalizer (Brass) for 15 mm domestic water meter with seal wire & seal (Weight 110 gm +/- 5%)		each	150.00
0691	Nut & Tail peice for orifice flow equalizer 15 mm dia		each	49.20
0692	Multijet magnetic class-B ISI marked domestic water meter for 15mm dia		each	1025.00
0693	Multijet magnetic class-B ISI marked domestic water meter for 20mm dia		each	1603.00
0694	Multijet magnetic class-B ISI marked domestic water meter for 25mm dia		each	2494.00
0695	Orifice Flow Equalizer		each	159.00
0696	Zero velocity valves 600 mm dia		each	236455.00
0697	Air Cussion valve 150 mm dia		each	98755.00
0698	Multijet magnetic class-B ISI marked domestic water meter for 32mm dia		each	6190.00
0699	Multijet magnetic class-B ISI marked domestic water meter for 50mm dia		each	8017.00
0701	80 mm Electromagnetic Flow Meter for 80 mm dia line		each	71204.00
0702	100 mm Electromagnetic Flow Meter for 100 mm dia line		each	75955.00
0703	150 mm Electromagnetic Flow Meter for 150 mm dia line		each	88960.00
0704	200 mm Electromagnetic Flow Meter for 200 mm dia line		each	98343.00
0705	250 mm Electromagnetic Flow Meter for 250 mm dia line		each	144427.00
0706	300 mm Electromagnetic Flow Meter for 300 mm dia line		each	162361.00
0707	400 mm Electromagnetic Flow Meter for 400 mm dia line		each	370449.00
0708	450 mm Electromagnetic Flow Meter for 450 mm dia line		each	394204.00
0709	500 mm Electromagnetic Flow Meter for 500 mm dia line		each	472712.00
0710	600 mm Electromagnetic Flow Meter for 600 mm dia line		each	498842.00
0711	80 mm Bulk Flow Meter for 80 mm dia line		each	9594.00

Code No	Description	NUnit	Unit	Rate Rs.
0712	100 mm Bulk Flow Meter for 100 mm dia line		each	13100.00
0713	125 mm Bulk Flow Meter for 125 mm dia line		each	17789.00
0714	150 mm Bulk Flow Meter for 150 mm dia line		each	18648.00
0715	200 mm Bulk Flow Meter for 200 mm dia line		each	26585.00
0716	250 mm Bulk Flow Meter for 250 mm dia line		each	44033.00
0717	300 mm Bulk Flow Meter for 300 mm dia line		each	75886.00
0718	400 mm Bulk Flow Meter for 400 mm dia line		each	107880.00
0719	500 mm Bulk Flow Meter for 500 mm dia line		each	134850.00
0720	600 mm Bulk Flow Meter for 600 mm dia line		each	161819.00
0721	150 mm dia C.I. float valve system		each	9800.00
0722	200 mm dia C.I. float valve system		each	13200.00
0723	250 mm dia C.I. float valve system		each	20900.00
0724	300 mm dia C.I. float valve system		each	30800.00
0725	350 mm dia C.I. float valve system		each	48500.00
0726	400 mm dia C.I. float valve system		each	82200.00
0727	Pressure gauge -1 to + 1.0 kg/sq.cm. with isolation vave		each	1045.00
0728	Pressure gauge 0 to 4.0 kg/sq.cm. with isolation vave		each	982.00
0729	Pressure gauge 0 to 6.0 kg/sq.cm. with isolation vave		each	982.00
0730	Pressure gauge 0 to 10 kg/sq.cm. with isolation vave		each	982.00
0731	G.I. pipes 15 mm dia		metre	85.00
0732	G.I. pipes 20 mm dia		metre	115.00
0733	G.I. pipes 25 mm dia		metre	140.00
0734	Gl pipe 32 mm dia "B" class		metre	190.00
0735	G.I. pipes 40 mm dia		metre	250.00
0736	G.I. pipe 50 mm dia as per IS:1239		metre	275.00
0737	G.I. pipes 65 mm dia		metre	347.00
0738	G.I. pipes 80 mm dia		metre	429.00
0740	Gl pipe 150 mm dia "B" class		metre	992.00
0743	G.I. back (jam) nuts25 mm dia		each	10.00
0747	G.I. back (jam) nuts65 mm dia		each	20.00
0751	M.S. cap 100 mm dia for bore well		each	150.00
0752	M.S. cap 125 mm dia for bore well		each	165.00
0753	M.S. cap 150 mm dia for bore well		each	180.00
0754	M.S. cap 200 mm dia for bore well		each	200.00
0755	M.S. cap 250 mm dia for bore well		each	250.00
0756	M.S. clamp set made of 50 x6mm flat iron with nuts and bolts etc. for holding the riser pipe assembly of submersible pump set.		set	200.00

Code No	Description	NUnit	Unit	Rate Rs.
0758	50mm dia G.I. flanged G.I. pipe B Class including rubber washer and bolts & nuts of 8 mm dia (3 metre pipe length)		each	1200.00
0759	75mm dia G.I. flanged G.I. pipe B Class including rubber washer and bolts & nuts of 8 mm dia (3 metre pipe length)		each	1650.00
0760	100mm dia G.I. flanged G.I. pipe B Class including rubber washer and bolts & nuts of 8 mm dia (3 metre pipe length)		each	2250.00
0771	G.I. elbows 15 mm dia		each	19.00
0772	G.I. elbows 20 mm dia		each	30.00
0773	G.I. elbows 25 mm dia		each	36.00
0774	G.I. elbows 32 mm dia		each	58.00
0781	G.I. plugs 15 mm dia		each	13.00
0782	G.I. plugs 20 mm dia		each	15.00
0783	G.I. plugs 25 mm dia		each	26.00
0784	G.I. plugs 32 mm dia		each	42.00
0803	G.I. tees (equal) 25 mm		each	42.00
0807	G.I. tees (equal) 65 mm		each	280.00
0811	G.I. Union 15 mm nominal bore		each	49.00
0812	G.I. Union 20 mm nominal bore		each	70.00
0813	G.I. Union 25 mm nominal bore		each	97.00
0814	G.I. Union 32 mm nominal bore		each	145.00
0815	G.I. Union 40 mm nominal bore		each	171.00
0816	G.I. Union 50 mm nominal bore		each	259.00
0817	G.I. Union 65 mm nominal bore		each	500.00
0818	G.I. Union 80mm nominal bore		each	698.00
0820	G.I. inlet connection		each	66.50
0822	Steel pipe 40 mm external dia as per IS:1239		metre	225.00
0823	100 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270		metre	750.00
0824	125 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270		metre	900.00
0825	150 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270		metre	1042.00
0826	200 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270		metre	1250.00
0827	250 mm dia ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270		metre	1450.00
0828	125 mm dia slotted ERW (Electric Resistance Welded) FE 410		metre	1052.00

Code No	Description	NUnit	Unit	Rate Rs.
	mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270			
0829	150 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270		metre	1052.00
0830	200 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270		metre	1260.00
0831	250 mm dia slotted ERW (Electric Resistance Welded) FE 410 mild steel screwed and socketed/ plain ended pipes, conforming to IS: 4270		metre	1260.00
0832	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 75mm dia conforming to I.S. 1729		each	950.00
0833	S.C.I. soil, waste and vent single socketed pipe 1.80 metres long: 100mm dia conforming to I.S. 1729		each	1150.00
0835	S.C.I. plain bend 75mm dia conforming to I.S. 1729		each	170.00
0836	S.C.I. plain bend 100mm dia conforming to I.S. 1729		each	250.00
0838	S.C.I. bend with access door 75mm dia conforming to I.S. 1729		each	200.00
0839	S.C.I. bend with access door 100mm dia conforming to I.S. 1729		each	252.00
0841	Sand cast iron heel rest bend 75mm dia conforming to I.S. 1729		each	220.00
0842	Sand cast iron heel rest bend 100mm dia conforming to I.S. 1729		each	250.00
0846	S.C.I. plain single equal junctions 75x75x75 mm dia conforming to I.S. 1729		each	265.00
0847	S.C.I. plain single equal junctions 100x100x100 mm dia conforming to I.S. 1729		each	350.00
0848	S.C.I. single equal junctions with access door 75x75x75 mm dia conforming to I.S. 1729		each	278.00
0849	S.C.I. single equal junctions with access door 100x100x100 mm dia conforming to I.S. 1729		each	376.00
0850	S.C.I. plain double equal junctions 75x75x75x75 mm dia conforming to I.S. 1729		each	346.00
0851	S.C.I. plain double equal junctions 100x100x100x100 mm dia conforming to I.S. 1729		each	520.00
0852	S.C.I. double equal junctions with access door 75x75x75x75 mm dia conforming to I.S. 1729		each	425.00
0853	S.C.I. double equal junctions with access door 100x100x100x100 mm dia conforming to I.S. 1729		each	550.00
0854	Sand cast iron S&S plain single unequal junctions : 100x100x75 mm dia conforming to I.S. 1729		each	370.00
0855	Sand cast iron S&S single unequal junctions: 100x100x75 mm dia conforming to I.S. 1729 with access door.		each	400.00

Code No	Description	NUnit	Unit	Rate Rs.
0856	Sand cast iron S&S plain double unequal junctions : 100x100x75x75 mm dia conforming to I.S. 1729		each	550.00
0857	Sand cast iron S&S double unequal junctions: 100x100x75x75 mm dia conforming to I.S. 1729 with access door.		each	575.00
0858	S.C.I. single equal invert branch of required degree 75x75x75 mm dia conforming to I.S. 1729		each	320.00
0859	S.C.I. single equal invert branch of required degree 100x100x100 mm dia conforming to I.S. 1729		each	410.00
0860	S.C.I. double equal invert branch of required degree 75x75x75x75 mm dia conforming to I.S. 1729		each	410.00
0861	S.C.I. double equal invert branch of required degree 100x100x100x100 mm dia conforming to I.S. 1729		each	550.00
0862	S.C.I. single unequal invert branch of required degree 100x100x75 mm dia conforming to I.S. 1729		each	495.00
0863	S.C.I. double unequal invert branch of required degree 100x100x75x75 mm dia conforming to I.S. 1729		each	570.00
0864	S.C.I. S&S, 76 mm offset for 75 mm dia conforming to I.S. 1729 pipe		each	225.00
0865	S.C.I. S&S, 76 mm offset for 100 mm dia conforming to I.S. 1729 pipe		each	265.00
0866	S.C.I. S&S, 114 mm offset for 75 mm dia conforming to I.S. 1729 pipe		each	300.00
0867	S.C.I. S&S, 114 mm offset for 100 mm dia conforming to I.S. 1729 pipe		each	383.00
0868	S.C.I. S&S, 152 mm offset for 75 mm dia conforming to I.S. 1729 pipe		each	358.00
0869	S.C.I. S&S, 152 mm offset for 100 mm dia conforming to I.S. 1729 pipe		each	455.00
0870	S.C.I. collar 75 mm dia conforming to I.S. 1729		each	105.00
0871	S.C.I. collar 100 mm dia conforming to I.S. 1729		each	145.00
0872	S.C.I. door pieces 75 mm dia conforming to I.S. 1729		each	295.00
0873	S.C.I. door pieces 100 mm dia conforming to I.S. 1729		each	400.00
0874	Slotted cowl (terminal guard) 75 mm dia conforming to I.S. 1729		each	150.00
0875	Slotted cowl (terminal guard) 100 mm dia conforming to I.S. 1729		each	200.00
0876	C.I. grating 100x100 mm		each	15.00
0877	C.I. grating 125x125 mm		each	25.00
0878	C.I. grating 150x150 mm		each	30.00
0879	C.I. grating 180x180 mm		each	35.00
0880	C.I. grating 150 mm dia. (Weighing not less than 440 gm)		each	28.00
0881	S.C.I. gully or nahani grating 100 mm dia		each	18.00
0882	C.I. cover and frame 300x300 mm inside		each	300.00

Code No	Description	NUnit	Unit	Rate Rs.
0883	C.I.cover without frame 300x300mm inside i.e.cover of 4.50 kg		each	225.00
0884	Rectangular cover 455x610 mm with frame (low duty)		each	1500.00
0885	Rectangular cover 455x610mm without frame (low duty)		each	1000.00
0886	500 mm dia cover with frame (medium duty)		each	4750.00
0887	500 mm dia cover without frame (medium duty) wt not less than 58 kg		each	2300.00
0888	500 mm dia cover without frame heavy duty) wt not less than 108 kg		each	4500.00
0891	C.C.I.(spun) socketed soil, waste and vent pipe 1.80 metres long:100mm dia conforming to I.S. 3989		each	1196.00
0892	C.C.I.(spun) socketed soil, waste and vent pipe 1.80 metres long:75mm dia conforming to I.S. 3989		each	1035.00
0893	S.C.I. S&S bend 100mm dia conforming to I.S. 3989		each	265.00
0894	S.C.I. S&S bend 75mm dia conforming to I.S. 3989		each	195.00
0895	S.C.I. S&S bends with access door 100mm dia conforming to I.S. 3989		each	290.00
0896	S.C.I. S&S bends with access door 75mm dia conforming to I.S. 3989		each	240.00
0897	S.C.I. S&S heel rest sanitary bend 100mm dia conforming to I.S. 3989		each	296.00
0898	S.C.I. S&S heel rest sanitary bend 75mm dia conforming to I.S. 3989		each	250.00
0899	S.C.I. S&S single equal junctions100x100x100 mm conforming to I.S. 3989		each	472.00
0900	S.C.I. S&S single equal junctions75x75x75 mm conforming to I.S. 3989		each	330.00
0901	S.C.I. S&S single equal junctions with access door 100x100x100 mm conforming to I.S. 3989		each	495.00
0902	S.C.I. S&S single equal junctions with access door 75x75x75 mm conforming to I.S. 3989		each	373.00
0903	S.C.I. S&S double equal junctions100x100x100x100 mm conforming to I.S. 3989		each	620.00
0904	S.C.I. S&S double equal junctions75x75x75x75 mm conforming to I.S. 3989		each	462.00
0905	S.C.I. S&S double equal junctions with access door 100x100x100x100 mm conforming to I.S. 3989		each	615.00
0906	S.C.I. S&S double equal junctions with access door 75x75x75x75 mm conforming to I.S. 3989		each	480.00
0907	S.C.I. S&S single unequal junctions100x100x75 mm conforming to I.S. 3989		each	570.00
0908	S.C.I. S&S single unequal junctions with access door 100x100x75 mm conforming to I.S. 3989		each	640.00
0909	S.C.I. S&S double unequal junctions100x100x75x75 mm conforming to I.S. 3989		each	800.00

Code No	Description	NUnit	Unit	Rate Rs.
0910	S.C.I. S&S double unequal junctions with access door 100x100x75x75 mm conforming to I.S. 3989		each	850.00
0911	S.C.I. S&S single equal invert branch of required degree 100x100x100 mm dia conforming to I.S. 3989		each	425.00
0912	S.C.I. S&S single equal invert branch of required degree 75x75x75 mm dia conforming to I.S. 3989		each	323.00
0913	S.C.I. S&S double equal invert branch of required degree 100x100x100x100 mm dia conforming to I.S. 3989		each	530.00
0914	S.C.I. S&S double equal invert branch of required degree 75x75x75x75 mm dia conforming to I.S. 3989		each	425.00
0915	S.C.I. S&S single unequal invert branch of required degree 100x100x75 mm dia conforming to I.S. 3989		each	545.00
0916	S.C.I. S&S double unequal invert branch of required degree 100x100x75x75 mm dia conforming to I.S. 3989		each	725.00
0917	S.C.I. S&S, 75 mm offset for 75 mm dia conforming to I.S. 3989 pipe		each	225.00
0919	S.C.I. S&S, 150 mm offset for 75 mm dia conforming to I.S. 3989 pipe		each	285.00
0920	S.C.I. S&S, 150 mm offset for 100 mm dia conforming to I.S. 3989 pipe		each	390.00
0921	C.C.I.(spun)S&S, Slotted Cowl (Terminal Guard) 100 mm conforming to I.S. 3989		each	210.00
0922	C.C.I.(spun)S&S, Slotted Cowl (Terminal Guard) 75 mm conforming to I.S. 3989		each	195.00
0923	C.C.I.(spun)S&S, collars 100 mm conforming to I.S. 3989		each	205.00
0924	C.C.I.(spun)S&S, collars 75 mm conforming to I.S. 3989		each	145.00
0925	Centrifugally cast (spun) iron S&S door pieces 100 mm dia conforming to I.S. 3989		each	405.00
0926	Centrifugally cast (spun) iron S&S door pieces 75 mm dia conforming to I.S. 3989		each	290.00
0927	Casing pipe 100 mm dia		metre	335.00
0928	Standard holdar bat clamps for sand cast iron or cast iron pipes 150 mm dia		each	25.00
0929	Sand Cast iron plain shoe 150 mm dia		each	310.00
0930	Centrifugally cast (spun) iron S&S 100 mm inlet and 100 mm outlet self cleaning trap		each	315.00
0931	Centrifugally cast (spun) iron S&S 100 mm inlet and 75 mm outlet self cleaning trap		each	300.00
0936	560 mm dia cover with frame (Heavy duty)		each	9000.00
0938	Water stops Serrated with central bulb (225 mm wide, 8-11 mm thick)		metre	211.00
0939	Water stops Dumb bell with central bulb		metre	165.00
0941	S.C.I. hand pump		each	670.00

Code No	Description	NUnit	Unit	Rate Rs.
0942	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 50 mm dia		each	170.00
0944	C.I. trap for standard urinal with vent arm with operating and other couplings in C.P.brass: 80 mm dia		each	225.00
0945	100 mm S.C.I. trap with vent heel		each	315.00
0946	100 mm S.C.I. trap with 100 mm inlet and 100 mm outlet		each	275.00
0947	100 mm S.C.I. trap with 100 mm inlet and 75 mm outlet		each	218.00
0951	80 mm dia Knife Gate Valve manual operated		each	5960.00
0952	100 mm dia Knife Gate Valve manual operated		each	7787.00
0953	125 mm dia Knife Gate Valve manual operated		each	9688.00
0954	150 mm dia Knife Gate Valve manual operated		each	11430.00
0955	200 mm dia Knife Gate Valve manual operated		each	19407.00
0956	250 mm dia Knife Gate Valve manual operated		each	25305.00
0957	300 mm dia Knife Gate Valve manual operated		each	30837.00
0958	350 mm dia Knife Gate Valve manual operated		each	46393.00
0959	400 mm dia Knife Gate Valve manual operated		each	63202.00
0960	450 mm dia Knife Gate Valve manual operated		each	87652.00
0961	500 mm dia Knife Gate Valve manual operated		each	110879.00
0962	600 mm dia Knife Gate Valve manual operated		each	150976.00
0963	700 mm dia Knife Gate Valve manual operated		each	234594.00
0964	750 mm dia Knife Gate Valve manual operated		each	260266.00
0965	800 mm dia Knife Gate Valve manual operated		each	278726.00
0966	900 mm dia Knife Gate Valve manual operated		each	363321.00
0967	1000 mm dia Knife Gate Valve manual operated		each	438492.00
0968	1200 mm dia Knife Gate Valve manual operated		each	594692.00
0969	80 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	7128.00
0970	100 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	8877.00
0971	125 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	9981.00
0972	150 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	11085.00
0973	200 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	12232.00
0974	250 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	26461.00
0975	300 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	32369.00
0976	350 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	42155.00
0977	400 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	52148.00
0978	450 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	60855.00
0979	500 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	68588.00
0980	600 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	114718.00
0981	700 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	162982.00

Code No	Description	NUnit	Unit	Rate Rs.
0982	750 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	212737.00
0983	800 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	234799.00
0984	900 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	278095.00
0985	1000 mm dia CI butterfly valve PN 1.0 (Cat "A")		each	363747.00
1001	M.S. Butt hinges 125x90x4 mm	10	nos	100.00
1003	M.S. heavy weight butt hinges 125x90x4.0mm IS : 1341 marked.	10	nos	200.00
1004	M.S. heavy weight butt hinges 100x75x3.5 mm IS: 1341 marked	10	nos	146.00
1005	M.S. heavy weight butt hinges 75x60x3.1 mm IS: 1341 marked	10	nos	84.00
1006	M.S. heavy weight butt hinges 50x40x2.5 mm IS : 1341 marked	10	nos	70.00
1011	Bright finished or black enamelled mild steel butt hinges 125x65x2.12 mm	10	nos	125.00
1012	Bright finished or black enamelled mild steel butt hinges 100x58x1.90 mm	10	nos	85.00
1013	Bright finished or black enamelled mild steel butt hinges 75x47x1.70 mm	10	nos	60.00
1014	Bright finished or black enamelled mild steel butt hinges 50x37x1.50 mm	10	nos	48.00
1047	Bright finished or black enamelled mild steel screws 50 mm	100	nos	65.00
1049	Bright finished or black enamelled mild steel screws 40 mm	100	nos	50.00
1050	Bright finished or black enamelled mild steel screws 30 mm	100	nos	40.00
1051	Bright finished or black enamelled mild steel screws 25 mm	100	nos	30.00
1052	Bright finished or black enamelled mild steel screws 20 mm	100	nos	25.00
1053	Bright finished or black enamelled mild steel bolts and nuts 50x6 mm		each	5.00
1061	Oxidised mild steel butt hinges 125x65x2.12 mm	10	nos	120.00
1062	Oxidised mild steel butt hinges 100x58x1.90 mm	10	nos	90.00
1063	Oxidised mild steel butt hinges 75x47x1.70 mm	10	nos	60.00
1064	Oxidised mild steel butt hinges 50x37x1.50 mm	10	nos	45.00
1065	Oxidised mild steel parliamentary hinges 150x125x27x2.8 mm	10	nos	340.00
1066	Oxidised mild steel parliamentary hinges 125x125x27x2.8 mm	10	nos	280.00
1067	Oxidised mild steel parliamentary hinges 100x125x27x2.8 mm	10	nos	216.00
1068	Oxidised mild steel parliamentary hinges 75x100x20x2.24 mm	10	nos	170.00
1069	Oxidised mild steel single acting spring hinges 150 mm		each	90.00
1070	Oxidised mild steel single acting spring hinges 125 mm		each	82.00
1071	Oxidised mild steel single acting spring hinges 100 mm		each	70.00
1072	Oxidised mild steel double acting spring hinges 150 mm		each	92.00

Code No	Description	NUnit	Unit	Rate Rs.
1073	Oxidised mild steel double acting spring hinges 125 mm		each	85.00
1074	Oxidised mild steel double acting spring hinges 100 mm		each	72.00
1075	Oxidised mild steel sliding door bolt 300x16 mm		each	65.00
1076	Oxidised mild steel sliding door bolt 250x16 mm		each	50.00
1077	Oxidised mild steel door latch 300x20x6 mm		each	35.00
1078	Oxidised mild steel door latch 250x20x6 mm		each	30.00
1079	Oxidised mild steel tower bolt (barrel type) 250x10 mm		each	30.00
1080	Oxidised mild steel tower bolt (barrel type) 200x10 mm		each	25.00
1081	Oxidised mild steel tower bolt (barrel type) 150x10 mm		each	22.00
1082	Oxidised mild steel tower bolt (barrel type) 100x10 mm		each	18.00
1083	Oxidised mild steel handles 125 mm		each	10.00
1084	Oxidised mild steel handles 100 mm		each	8.00
1085	Oxidised mild steel handles 75 mm		each	6.00
1094	Oxidised mild steel hasps and staples(safety type) 150 mm	10	nos	100.00
1095	Oxidised mild steel hasps and staples(safety type) 115 mm	10	nos	80.00
1096	Oxidised mild steel hasps and staples(safety type) 90 mm	10	nos	60.00
1097	Oxidised mild steel pull bolt lock (locking bolt) of size 85 mm x 42 mm with screws,bolts,nuts and washers complete		each	40.00
1098	Oxidised M.S. safety chain (weighing not less than 450 gms) for door		each	60.00
1099	Oxidised M.S. casement stay (straight peg type) 300 mm not less than 0.33 kg		each	18.00
1100	Oxidised M.S. casement stay (straight peg type) 250 mm not less than 0.28 kg		each	15.00
1101	Oxidised M.S.casement stay (straight peg type) 200 mm not less than 0.24 kg		each	14.00
1102	Oxidised mild steel screws 50 mm	100	nos	48.00
1103	Oxidised mild steel screws 40 mm	100	nos	38.00
1104	Oxidised mild steel screws 30 mm	100	nos	29.00
1105	Oxidised mild steel screws 25 mm	100	nos	18.00
1106	Oxidised mild steel screws 20 mm	100	nos	16.00
1107	Counter sunk ribbed head screw 25mm.	100	nos	65.00
1109	Powder coated M.S. butt hinges 100mm X58mmX1.9mm	10	nos	85.00
1110	Nickel plated mild steel piano hinges 1 mm thick 35 mm wide		metre	30.00
1111	Nickel plated mild steel piano hinges 1 mm thick 35 mm wide		metre	30.00
1114	Chromium plated brackets (curtain rods)		each	6.00
1115	Nickel plated M. S. piano hinges 50 mm (Over all width)		metre	33.00
1116	Nickel plated M. S. piano hinges 65 mm (Over all width)		metre	38.00
1117	Nickle plated M.S. pipe 20 mm dia.		metre	63.00

Code No	Description	NUnit	Unit	Rate Rs.
1118	Nickle plated M.S. Brackets for curtain rod 20 mm		each	4.00
1119	Nickle plated M.S. Brackets for curtain rod 25 mm		each	5.00
1131	Stainless steel butt hinges 125x64x1.9 mm IS : 12817 marked	10	nos	250.00
1132	Stainless steel butt hinges 100x58x1.9 mm IS : 12817 marked	10	nos	180.00
1133	Stainless steel butt hinges 75x47x1.8 mm IS : 12817 marked	10	nos	150.00
1134	Stainless steel butt hinges 50x37x1.5 mm IS : 12817 marked	10	nos	130.00
1135	Stainless steel butt hinges (heavy weight) 125x64x2.5 mm IS : 12817 marked	10	nos	330.00
1136	Stainless steel butt hinges (heavy weight) 100x60x2.5 mm IS : 12817 marked	10	nos	240.00
1137	Stainless steel butt hinges (heavy weight) 75x50x2.5 mm IS : 12817 marked	10	nos	195.00
1138	Stainless steel piano hinges 1mm thick 35mm wide		metre	50.00
1139	Stainless steel (SS 304 grade) adjustable friction window stay. 205 x 19mm		each	159.00
1140	Stainless steel (SS 304 grade) adjustable friction window stay 255 x 19mm		each	177.00
1141	Stainless steel (SS 304 grade) adjustable friction window stay. 355 x 19mm		each	226.00
1142	Stainless steel (SS 304 grade) adjustable friction window stay. 510 x 19mm		each	429.00
1143	Stainless steel (SS 304 grade) adjustable friction window stay. 710 x 19mm		each	786.50
1144	Stainless steel screws 50 mm	100	nos	240.00
1145	Stainless steel screws 40 mm	100	nos	195.00
1146	Stainless steal screws 30mm	100	nos	129.00
1147	Stainless steel screws 25mm	100	nos	70.00
1148	Stainless steel screws 20 mm	100	nos	95.00
1155	Flush pipe and spreaders G.I.for single set of one squatting plate urinal		each	167.00
1156	Flush pipe and spreaders G.I.for range of two squatting plates urinal		each	245.00
1157	Flush pipe and spreaders G.I.for range of three squatting plates urinal		each	300.00
1158	Flush pipe and spreaders G.I.for range of four squatting plates urinal		each	387.00
1160	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Single lipped urinal		each	465.00
1161	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of two lipped urinals		each	800.00
1162	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of three lipped urinals		each	1100.00

Code No	Description	NUnit	Unit	Rate Rs.
1163	G.I. flush pipe and C.P. brass spreader including C.P. connecting pipe Range of four lipped urinals		each	1500.00
1164	P.T.M.T. Waste Coupling 31/32MM		each	36.00
1165	P.T.M.T. Waste Coupling 38/40MM		each	50.00
1166	P.T.M.T. Bottle Trap 31/32MM		each	218.00
1167	P.T.M.T. Bottle Trap 38/40MM		each	228.00
1169	Double action hydraulic floor spring with brass cover plate		each	1450.00
1170	Double action hydraulic floor spring with stainless steel cover plate		each	1000.00
1171	6 mm dia. G.I. adjustable hangers including clips (upto 1.2 m length)		each	20.00
1172	Hanger rod 0.5 mm thick		each	10.00
1173	Intermediate cross channel (1.2 mtrs)		each	60.00
1174	Telescopic drawer channels 300mm long.		set	150.00
1175	Stainless steel roller for sliding arrangment in racks/ cupboards/ cabinets shutter.		each	9.00
1176	Magenatic catcher triple strip verticle type.		each	20.00
1177	Magenatic catcher double strip horizontal type.		each	14.00
1178	100 mm mostice lock with 6 levers for aluminium door.		each	340.00
1179	Kickers		metre	195.00
1182	Galvanised steel		tonne	48000.00
1183	Galvanised steel corrugated sheets		kg	52.00
1184	Corrugated sheet, 3 mm thick, "Thrie" beam section railing		kg	62.00
1186	Galvanised steel plain sheets		quintal	5568.00
1187	Galvanised M.S. sheet 0.5 mm thick pressed channel section of size 50x32 mm		metre	60.00
1189	Galvanised M.S. sheet 0.50 mm thick pressed stud. 48x34x36 mm		metre	75.00
1191	Precoated galvanised iron profile sheet 0.50 mm TCT		sqm	360.00
1192	Precoated galvanised steel plain ridges.		metre	300.00
1193	Precoated galvanised steel flashings/aprons.		metre	300.00
1194	Precoated galvanised steel gutter		metre	416.00
1195	Precoated galvanised steel north light curves.		metre	320.00
1196	Precoated galvanised steel barge board.		metre	300.00
1197	Precoated galvanised steel crimp curve		sqm	360.00
1198	Lightening Conductor of G.I. bar of 25mm dia& 2m long		each	800.00
1199	G.I. plate 600x600x6mm with Jointing material		each	1300.00
1200	G.I. strip 25mm wide & 5mm thick		metre	153.00
1201	Stainless steel kitchen sink - with drain board bowl depth 250 mm.		each	2600.00

Code No	Description	NUnit	Unit	Rate Rs.
1202	Stainlees steel kitchen sink - with drain board 510 x 1040mm bowl depth 225 mm.		each	2350.00
1203	Stainlees steel kitchen sink - with drain board 510 x 1040mm bowl depth 200 mm.		each	2300.00
1204	Stainless steel kitchen sink - with drain board 510x1040mm bowl depth 178 mm		each	2250.00
1205	Stainless steel kitchen sink - without drain board 610x510mm bowl depth 200 mm		each	1500.00
1206	Stainless steel kitchen sink - without drain board 610x460mm bowl depth 200 mm.		each	1250.00
1207	Stainless steel kitchen sink - without drain board 470x420mm bowl depth 178 mm		each	1100.00
1208	Salem Stainless steel AISI - 304 (18/8) Round basin 405mm X 355mm		each	1500.00
1209	Salem Stainless steel AISI - 304 (18/8) Wash basin 530mm X 345mm		each	1500.00
1210	Salem Stainless steel AISI - 304 (18/8) Orrisa pattern W.C. pan 724mm X 578mm		each	3600.00
1211	Rolling shutters of 80x0.90 mm laths		sqm	770.00
1212	Rolling shutters of 80x1.2 mm laths		sqm	880.00
1213	Rolling shutter made of 80x1.25 mm machine rolled laths		sqm	1345.00
1214	Top cover of Rolling shutters 0.90 mm thick		metre	300.00
1215	Top cover of Rolling shutters 1.20 mm thick		metre	320.00
1216	Top cover for rolling shutters 1.25 mm thick		metre	550.00
1217	27.5 cm long wire spring grade no 2 for rolling shutters		each	212.00
1218	Ball bearing for rolling shutters		each	280.00
1219	Extra for mechanical devices chain and cranked operation for operatingrolling shutters : exceeding 10.00 sq.m and upto 16.80 sq.m area of door		sqm	600.00
1220	Extra for mechanical devices chain and cranked operation for operating rolling shutters : exceeding 16.80 sq.m area of door		sqm	600.00
1221	Extra for providing grilled rolling shutters with 8 mm dia M.S. rod		sqm	225.00
1222	Mild steel conduit pipe (heavy type) ISI marked-20 mm dia.		metre	44.00
1223	Mild steel conduit pipe (heavy type) ISI marked-25 mm dia.		metre	56.00
1224	M.S. tube 40 mm dia		metre	190.00
1225	Column clamp 450x1070 m		each	1010.00
1226	Prop 2 m (2-3.5m)		each	665.00
1228	Adjustable span ESO+SI (2.35-3.40)		each	1550.00
1229	Adjustable span- ESOSI (2.35-3.40m)		each	1550.00
1230	Adjustable telescopic prop 3 m (2.02-3.75 m)		each	1000.00
1231	Adjustable telescopi prop 3m(2.02-3.75m)		each	1000.00

Code No	Description	NUnit	Unit	Rate Rs.
1232	Double clip (bridge clip)		each	75.00
1233	Beam clamp 300-380 mm (450-1070 mm)		each set	370.00
1235	Tie bolt 12 mm dia 100 mm length		each	40.00
1236	Tie bolt 12 mm dia 150 mm length		each	50.00
1237	Tie bolt 20 mm dia 150 mm length		each	60.00
1238	Tie bolt 20 mm dia 225 mm length		each	70.00
1239	Stainless steel cramps with nuts, bolts and washer for dry stone cladding.		each	90.00
1240	Stainless steel cramp		kg	360.00
1241	Stainless steel pin.		kg	155.00
1242	Galvanised wire mesh of average width of aperture 1.4 mm and nominal dia. of wire 0.63 mm		sqm	170.00
1243	Galvanised wire mesh of average width of aperture 1.18 mm nominal dia. wire 0.556 mm		sqm	270.00
1244	Stainless steel wire mesh of average width of aperture 1.56 mm and nominal dia. of wire 0.45 mm		sqm	315.00
1245	Mild steel tubes hot finished welded type		kg	42.00
1246	Mild steel tubes hot finished seamless type		kg	45.00
1247	Mild steel tubes electric resistant or inductionbutt welded		kg	60.00
1248	Pressed steel door frames (mild steel sheet 1.25mm) Profile "A"		metre	250.00
1249	Pressed steel door frames (mild steel sheet 1.25mm) Profile "B"		metre	280.00
1250	Pressed steel door frames (mild steel sheet 1.25mm) Profile "C"		metre	310.00
1251	Ready made steel door with necessary hinges, lugs and glazing clips excluding other fittings & their fixing		sqm	1850.00
1252	Factory made Steel glazed door,window/ ventilator, all members like as F7D, F4B, K11 and K12B etc.		kg	52.00
1253	Prefabricated steel garden bench/ jhula/ slides and other children play items of approved design and specifications made of MS pipe, Flates, rectangular hollow section or other steel sections duly welded and or nut bolted.		kg	59.00
1261	Bolts and nuts		kg	96.00
1262	GI bolt 10 mm Dia		each	15.00
1272	Galvanised steel bolts & nuts 6 mm dia and 25 mmlong round head with slots	10	nos	25.00
1273	Galvanised steel J or L hooks 8 mm dia	10	nos	100.00
1274	Galvanised steel bolts & nuts 10 mm dia and 125 mm long round head with slots		each	11.00
1275	Galvanised steel bolts 10 mm dia and 7 cm long with nuts		each	15.00

Code No	Description	NUnit	Unit	Rate Rs.
1277	Bolts and nuts upto 300 mm in length		quintal	7000.00
1278	Bolts and nuts above 300 mm in length		quintal	7500.00
1279	Mild stel bolts 6 mm dia and 25 mm long with hexagonal head	10	nos	27.00
1280	20 mm dia holding down bolts		quintal	5000.00
1281	Galvanised steel bolts & nuts 10 mm dia and 27 cm long both sides threaded with 4 galvanised steel nuts		each	22.00
1282	Mild steel hooks		each	30.00
1283	Mild steel rivets		kg	45.00
1284	Steel nails		kg	55.00
1285	Wire mesh (rabbit)		sqm	42.00
1286	Dash fastener 6 mm dia 50 mm long		each	8.00
1287	Dash hold fastener 12.5 mm dia, 40 mm long with 6 mm dia bolt		each	15.00
1288	Rawl plug 50 mm (designation 10 no.)		each	8.00
1289	Wedge expansion hold fastner 1/4" or 6 mm		each	12.00
1290	Wedge expansion hold fastner 3/8" or 10 mm		each	12.00
1291	Wedge expansion hold fastner 1/2" or 12 mm		each	28.00
1292	Expandable fastner with plastic sleeve and M.S. screws. 25 mm long		each	8.00
1293	Expandable fastner with plastic sleeve and M.S. screws. 32 mm long		each	9.00
1294	Expandable fastner with plastic sleeve and M.S. screws. 40 mm long		each	12.00
1295	Expandable fastner with plastic sleeve and M.S. screws. 50 mm long		each	13.00
1296	All drive screws (for gypsum board)	100	nos	50.00
1297	Mild Steel bars		tonne	38800.00
1298	Mild steel round bars for reinforcements		quintal	3580.00
1299	Mild steel round bar 12 mm dia and below		quintal	3675.00
1300	Mild steel round bar above 12 mm dia		quintal	3575.00
1302	Cold twisted bars (TMT Bars)		tonne	36900.00
1303	Twisted steel / deformed bars		quintal	3730.00
1304	Corrosion resistant Structural steel		tonne	38121.00
1307	Structural Steel		tonne	32928.00
1308	Structurals such as tees,angles channels and R.S. joists		quintal	3775.00
1309	Credit for Scrap Structural Steel		tonne	17100.00
1310	MS Flats upto 10 mm in thickness		quintal	3675.00
1311	Flats exceeding 10 mm in thickness		quintal	3775.00
1312	Mild steel plates		quintal	3900.00

Code No	Description	NUnit	Unit	Rate Rs.
1313	Mild steel sheets for tanks		quintal	3775.00
1315	Galvanised MS flat clamp		each	48.00
1316	Helical pipes 600mm diameter 0.7mm thickness		metre	6500.00
1317	Helical pipes 800mm diameter 0.8mm thickness		metre	8640.00
1318	M.S. Clamps		each	34.00
1319	M.S. Clamps		kg	48.00
1322	Steel drum 300 mm dia 1.2 m high/empty bitumen drum		each	485.00
1323	Steel helmet and cushion block on top of pile head during driving.		kg	57.00
1326	Strip seal expansion join		metre	6887.00
1327	Tie rods 20mm diameter		each	107.00
1328	Tube anchorage set complete with bearing plate, permanent wedges etc		each	2500.00
1329	Welded steel wire fabric		kg	60.00
1330	Wire mesh 50mm x 50mm size of 3mm wire		kg	60.00
1331	Mild steel expanded metal 20x60 mm strands		sqm	280.00
1332	Hard drawn steel wire fabric 75mm x 25mm		sqm	400.00
1333	Galvanised steel wire crates of mesh size 100 mm x 100 mm woven with 4mm dia. GI wire in rolls of required size.		sqm	175.00
1334	Nipples 12mm		each	15.00
1335	Seam bolts and nuts 6 mm dia and 25 mm long	10	nos	37.00
1337	SS wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm		sqm	250.00
1338	GI wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm		sqm	150.00
1339	Spring coil 12 mm dia for tie bolt		each	13.00
1340	Hard drawn GI wire chain link fabric Aperture 50x50mm and made of 3.15mm wire		sqm	200.00
1341	Hard drawn GI wire chain link fabric Aperture 75x75mm and made of 3.15 mm wire		sqm	175.00
1342	Hard drawn GI wire chain link fabric Aperture 100x100mm and made of 3.15mm wire		sqm	125.00
1343	Hard drawn GI wire chain link fabric Aperture 150x150mm and made of 3.15mm wire		sqm	115.00
1344	Iron pintels including welded pin		each	35.00
1345	GI U clips/ G.I. Staples		kg	40.00
1346	Steel beading		metre	15.00
1347	G.I. Limpet washer	100	nos	25.00
1348	G.I. plain washer thick	100	nos	33.00
1349	G.I. plain washer thin	100	nos	25.00

Code No	Description	NUnit	Unit	Rate Rs.
1350	G.I. plain washer for seam bolts	100	nos	25.00
1351	Mild steel sheets with bolts and nuts to rest on pintels		each	90.00
1352	Hard drawn steel wire		quintal	4600.00
1353	Surface box for stop cock		each	85.00
1354	Surface box for sluice valve		each	170.00
1355	Surface box for water meter		each	250.00
1357	C.I. bracket for wash basin and sinks		pair	58.00
1360	Clamps and M.S. stays including bolts and nuts for 100 mm pipe		each	30.00
1361	M.S.Holder bat clamp of approved design for 100 mm S.C.I. pipe		each	15.00
1362	M.S.Holder bat clamp of approved design for 75 mm S.C.I. pipe		each	13.00
1364	Clamps and M.S. stays including bolts and nuts for 50 mm pipe		each	24.00
1365	Clamps and M.S. stays including bolts and nuts for 75 mm pipe		each	30.00
1368	Mosquito proof coupling of approved design		each	28.00
1369	Connecting clips		each	6.00
1370	Hydraulic door closer bottle type M.S. body with necessary accessories and screws complete		each	303.00
1373	C.I.mouth, brass ferrule 15 mm dia		each	97.00
1374	C.I.mouth, brass ferrule 20 mm dia		each	138.00
1375	C.I.mouth, brass ferrule 25 mm dia		each	189.00
1377	C.I. shoes for the pile		kg	46.00
1380	Circular C.I. Box for ceiling fan		each	50.00
1381	Circular shape 560 mm dia Ductile Iron manhole frame & cover, Hinged Type, Heavy Duty with test load of 400 KN D-400 as per BS EN 124		set	4550.00
1382	MS Strip for making pipe		kg	45.00
1383	Cadmium plated full threaded steel screws (30x4 mm dia.)	100	nos	28.00
1384	12 mm M.S. 'U' beading		metre	12.00
1386	Hermetically sealed double glazed unit made with 6mm thick clear float glass both side having 12 mm air gap.		sqm	2108.00
1387	Binding wire		kg	48.00
1388	Binding wire		kg	48.00
1389	Barbed wire		kg	55.00
1397	Pully 25 mm dia		each	20.00
1398	Pully 40 mm dia		each	25.00
1399	Wheel 75 mm dia. 40 mm wide		each	62.00

Code No	Description	NUnit	Unit	Rate Rs.
1401	Brass butt hinges (light/ordinary type) : 125x70x4 mm	10	nos	580.00
1402	Brass butt hinges (light/ordinary type) : 100x70x4 mm	10	nos	390.00
1403	Brass butt hinges (light/ordinary type) : 75x40x2.5 mm	10	nos	210.00
1404	Brass butt hinges (light/ordinary type) : 50x40x2.5 mm	10	nos	115.00
1405	Brass butt hinges (heavy type) : 125x85x5.5 mm(.70)kg	10	nos	1442.00
1406	Brass butt hinges (heavy type) : 100x85x5.5 mm(.56)kg	10	nos	1153.00
1407	Brass butt hinges (heavy type) :75x65x4.0 mm(.20)kg	10	nos	600.00
1408	Brass parliamentary hinges 150x125x27x5 mm	10	nos	2000.00
1409	Brass parliamentary hinges 125x125x27x5 mm	10	nos	1800.00
1410	Brass parliamentary hinges 100x125x27x5 mm	10	nos	1500.00
1411	Brass parliamentary hinges75x100x20x3.2 mm	10	nos	1200.00
1412	Brass single acting spring hinges 150 mm		each	250.00
1413	Brass single acting spring hinges 125 mm		each	200.00
1414	Brass single acting spring hinges 100 mm		each	140.00
1415	Brass double acting spring hinges 150 mm		each	410.00
1416	Brass double acting spring hinges 125 mm		each	300.00
1417	Brass double acting spring hinges 100 mm		each	240.00
1418	Brass tower bolt (barrel type) 250x10 mm		each	160.00
1419	Brass tower bolt (barrel type) 200x10 mm		each	130.00
1420	Brass tower bolt (barrel type) 150x10 mm		each	100.00
1421	Brass tower bolt (barrel type) 100x10 mm		each	70.00
1422	Brass flush bolt 250 mm		each	110.00
1423	Brass flush bolt 150 mm		each	90.00
1424	Brass flush bolt 100 mm		each	60.00
1426	Brass handles 125 mm with plate 175x32 mm		each	120.00
1427	Brass handles 100 mm with plate 150x32 mm		each	110.00
1428	Brass handles75 mm with plate 125x32 mm		each	80.00
1429	Brass door latch 300x16x5 mm (0.380 kg)		each	110.00
1430	Brass door latch 250x16x5 mm (0.350 kg)		each	105.00
1431	Brass mortice latch and lock 100x65 mm with6 levers and a pair of brass lever handles		each	390.00
1432	Brass mortice latch 100x65mm with a pair of brass lever handles		each	300.00
1435	Brass 150 mm floor door stopper (0.357kg)		each	140.00
1436	Brass hard drawn hooks and eyes 300 mm	10	nos	580.00
1437	Brass hard drawn hooks and eyes 250 mm	10	nos	530.00
1438	Brass hard drawn hooks and eyes 200 mm	10	nos	500.00
1439	Brass hard drawn hooks and eyes 150 mm	10	nos	450.00

Code No	Description	NUnit	Unit	Rate Rs.
1440	Brass hard drawn hooks and eyes 100 mm	10	nos	400.00
1441	Brass casement window fastener		each	35.00
1442	Brass casement stays (straight peg type) 300 mm weighing not less than 0.33 kg		each	85.00
1443	Brass casement stays (straight peg type) 250 mm weighing not less than 0.28 kg		each	70.00
1444	Brass casement stays (straight peg type) 200 mm weighing not less than 0.24 kg		each	60.00
1445	Brass quadrant stays 300 mm		each	100.00
1446	Brass fanlight catch	10	nos	150.00
1447	Brass fanlight pivot	10	nos	189.00
1448	Brass chain with hook for fan light catch		each	20.00
1449	Brass hasps and staples (safety type) 300 mm	10	nos	600.00
1450	Brass hasps and staples (safety type) 115 mm	10	nos	500.00
1451	Brass hasps and staples (safety type) 90 mm	10	nos	400.00
1454	Brass Night latch		each	440.00
1457	Brass helical spring 150 mm		each	240.00
1459	Brass curtain rod 20 mm dia 1.25 mm thick		metre	82.00
1460	Brass curtain rod 25 mm dia 1.25 mm thick		metre	95.00
1461	Brass brackets (curtain rods) 20 mm		each	35.00
1462	Brass cupboard knob or ward robe knob 50 mm		each	28.00
1465	Chromium plated Brass butt hinges (heavy) type 75x65x4.0 mm	10	nos	620.00
1466	Chromium plated Brass butt hinges (light/ordinary) type 125x70x4 mm	10	nos	595.00
1467	Chromium plated Brass butt hinges (light/ordinary) type 100x70x4 mm	10	nos	530.00
1468	Chromium plated Brass butt hinges (light/ordinary) type 75x40x2.5 mm	10	nos	195.00
1469	Chromium plated Brass butt hinges (light/ordinary) type 50x40x2.5 mm	10	nos	140.00
1470	Chromium plated Brass handles 125 mm with plate 175 x32 mm		each	125.00
1471	Chromium plated Brass handles 100 mm with plate 150 x 32 mm		each	100.00
1472	Chromium plated Brass handles 75mm with plate 125x32 mm		each	90.00
1473	Chromium plated Brass mortice latch and lock 100x65 mm with 6 levers and a pair of brass lever handles		each	445.00
1474	Chromium plated brass casement window fastener		each	75.00
1475	Chromium plated Brass casement stays (straight peg type) 300 mm weighing not less than 0.33 kg		each	100.00

Code No	Description	NUnit	Unit	Rate Rs.
1476	Chromium plated Brass casement stays (straight peg type) 250 mmweighing not less than 0.28 kg		each	90.00
1477	Chromium plated Brass casement stays (straight peg type) 200 mmweighing not less than 0.24 kg		each	75.00
1486	Chromium plated Brass Night latch		each	532.00
1487	Chromium plated Brass Wardrobe Knobe 50 mm		each	35.00
1488	Chromium plated Brass curtain rod 12 mm dia 1.25mm thick		metre	160.00
1489	Chromium plated Brass curtain rod 20 mm dia 1.25mm thick		metre	190.00
1490	Chromium plated Brass curtain rod 25 mm dia 1.25mm thick		metre	330.00
1492	Brass 100mm mortice latch and lock with6 levers without pair of handles		each	180.00
1493	Brass cupboard lock 6 levers (best make of approved quality) 40 mm size		each	52.00
1494	Brass cupboard lock 6 levers (best make of approved quality) 50 mm size		each	60.00
1495	Brass cupboard lock 6 levers (best make of approved quality) 65 mm size		each	85.00
1496	Brass cupboard lock 6 levers (best make of approved quality) 75 mm size		each	100.00
1497	Nickled Chromium Brass cupboard lock 40 mm size		each	51.00
1498	Nickled Chromium Brass cupboard lock 50 mm size		each	66.00
1499	Nickled Chromium Brass cupboard lock 65 mm size		each	90.00
1500	Nickled Chromium Brass cupboard lock 75 mm size		each	110.00
1501	Brass hanging type door stopper 150 mm		each	67.00
1503	Chromium plated Brass pull bolt lock (locking bolt) of size 85 mmx42 mm with screws,bolts,nuts and washers complete		each	160.00
1505	Strainer brass 40 mm dia 1.5 metre long		each	500.00
1506	Cramp Gun metal 25x6x300 mm		each	65.00
1509	Pig lead		kg	70.00
1510	Copper pins 6 mm dia 7.5 cm long		each	9.00
1511	Copper plate		kg	256.00
1512	C.P.brass chain with 32 mm dia rubber plug		each	25.00
1513	C.P.brass chain with 40 mm dia rubber plug		each	26.00
1516	Brass screws 50 mm	100	nos	220.00
1517	Brass screws 40 mm	100	nos	170.00
1519	Brass screws 30 mm	100	nos	140.00
1520	Brass screws 25 mm	100	nos	100.00
1521	Brass screws 20 mm	100	nos	91.00
1523	Chromium plated Brass screws 50 mm	100	nos	340.00
1524	Chromium plated Brass screws 40 mm	100	nos	280.00

Code No	Description	NUnit	Unit	Rate Rs.
1525	Chromium plated Brass screws 30 mm	100	nos	220.00
1526	Chromium plated Brass screws 25 mm	100	nos	180.00
1527	Chromium plated Brass screws 20 mm	100	nos	110.00
1531	Anodised Aluminium butt hinges 125x75x4 mm	10	nos	570.00
1532	Anodised Aluminium butt hinges 125x63x4 mm	10	nos	400.00
1533	Anodised Aluminium butt hinges 100x75x4 mm	10	nos	400.00
1534	Anodised Aluminium butt hinges 100x63x3.2 mm	10	nos	375.00
1535	Anodised Aluminium butt hinges 100x63x4 mm	10	nos	330.00
1536	Anodised Aluminium butt hinges 75x63x4 mm	10	nos	280.00
1537	Anodised Aluminium butt hinges 75x63x3.2 mm	10	nos	230.00
1538	Anodised Aluminium butt hinges 75x45x3.2 mm	10	nos	160.00
1540	Anodised Aluminium sliding door bolt 300x16 mm		each	150.00
1541	Anodised Aluminium sliding door bolt 250x16 mm		each	130.00
1542	Anodised Aluminium tower bolt (barrel type)300x10 mm	10	nos	590.00
1543	Anodised Aluminium tower bolt (barrel type)250x10 mm	10	nos	490.00
1544	Anodised Aluminium tower bolt (barrel type)200x10 mm	10	nos	390.00
1545	Anodised Aluminium tower bolt (barrel type)150x10 mm	10	nos	310.00
1546	Anodised Aluminium tower bolt (barrel type)100x10 mm	10	nos	230.00
1547	Anodised Aluminium handles 125 mm with plate 175 x 32 mm	10	nos	330.00
1548	Anodised Aluminium handles 100 mm with plate 150 x 32 mm	10	nos	280.00
1549	Anodised Aluminium handles 75mm with plate 125 x 32 mm	10	nos	235.00
1550	Aluminium round shape handle (anodised AC 15)		each	49.00
1551	Aluminium round shape handle (powder coated)		each	54.00
1552	Aluminium round shape handle (polyester powder coated).		each	59.00
1553	Anodised Aluminium kicking plate 50 cm long100x3.15 mm		each	110.00
1556	Anodised Aluminium hanging type door stopper		each	18.00
1557	Anodised Aluminium pull bolt lock (locking bolt) of size 85 mmx42 mm with screws,bolts,nuts and washers complete		each	41.00
1558	Anodised Aluminium Casement stay 250 mm		each	30.00
1561	600x120 mm glass shelf with anodised aluminium angle frame, C.P. brass brackets and guard rail of standard size		each	114.00
1562	Pair of Anodised Aluminium lever handles for 100mm mortice latch and lock		each	223.00
1563	Aluminium hanging floor door stopper with twin rubber & stopper		each	27.00
1564	Hydraulic door closer tubular type Aluminium section body		each	900.00
1565	Aluminium T or L sections		kg	220.00
1566	Aluminium tee channel (heavy duty) with rollers and stop end		metre	42.00
1567	Anodising 15 microns on aluminium sections		kg	40.00

Code No	Description	NUnit	Unit	Rate Rs.
1568	Anodising 25 microns on aluminium sections		kg	50.00
1573	Aluminium Strip 40 mm wide and 2 mm thick		kg	225.00
1575	Strips-Aluminium fluted 3.15mm thick and 150mm wide		metre	228.00
1576	Strips Aluminium fluted 3.15mm thick and 200mm wide metre		metre	323.00
1577	Aluminium single cleat of size 30x32x3		each	13.00
1578	Aluminium grip strip of size 50x12x2		each	10.00
1579	Aluminium U beading		kg	220.00
1581	Aluminium washer 2 mm thick 15 mm dia	100	nos	9.00
1583	Aluminium casement window fastner (Anodised AC 15)		each	40.00
1584	Aluminium casement window fastner (powder coated).		each	43.00
1585	Aluminium casement window fastner (polyester powder coated).		each	42.00
1587	Polyester powder coating 50 microns on aluminium sections		kg	68.00
1588	Epoxy powder coating 50 microns on aluminium sections.		kg	60.00
1589	Aluminium sheeting fixed with encapsulated lens type reflective sheeting in various size including lettering and signs as applicable		sqm	5568.00
1590	High Intensity retro reflective Type IV sign plate made out of 2.00 mm thick aluminium sheet face to be fully covered with blue/green high intensity grade retro reflective sheet and logo/matters, boarder made of with similar type of white sheeting after etching treatment of aluminium sheet, the black side is to be painted with epoxy grey paint. the plate is to be fixed on 40X40X5 mm angle iron frame with help of aluminium rivets.		sqm	8500.00
1601	Brass bib-cock 15 mm dia		each	170.00
1602	Brass bib-cock 20 mm dia		each	225.00
1603	Brass stop-cock 15 mm dia		each	190.00
1604	Brass stop-cock 20 mm dia		each	225.00
1605	C.P.brass tap 15 mm		each	124.00
1607	C.P. Brass bibcock 15 mm		each	300.00
1608	C.P. Brass long nose bibcock 15 mm		each	266.00
1609	C.P. Brass long body bibcock 15 mm		each	312.00
1610	C.P. Brass stop cock (concealed) 15 mm		each	312.00
1611	C.P. Brass angle valve 15 mm		each	349.00
1613	C.P. brass tap 15 mm with elbow operation lever		each	450.00
1614	Brass full way valve with C.I. wheel (screwed end) 25 mm dia		each	400.00
1615	Brass full way valve with C.I. wheel (screwed end) 32 mm dia		each	653.00
1616	Brass full way valve with C.I. wheel (screwed end) 40 mm dia		each	852.00
1617	Brass full way valve with C.I. wheel (screwed end) 50 mm dia		each	1564.00
1618	Brass full way valve with C.I. wheel (screwed end) 65 mm dia		each	2958.00

Code No	Description	NUnit	Unit	Rate Rs.
1619	Brass full way valve with C.I. wheel (screwed end) 80 mm dia		each	6255.00
1620	Gunmetal non-return valve-horizontal (screwed end) 25 mm dia		each	634.00
1621	Gunmetal non-return valve-horizontal (screwed end) 32 mm dia		each	1160.00
1622	Gunmetal non-return valve-horizontal (screwed end) 40 mm dia		each	1317.00
1623	Gunmetal non-return valve-horizontal (screwed end) 50 mm dia		each	2013.00
1624	Gunmetal non-return valve-horizontal (screwed end) 65 mm dia		each	4852.00
1625	Gunmetal non-return valve-horizontal (screwed end) 80 mm dia		each	6824.00
1627	Gunmetal non-return valve-vertical (screwed end) 25 mm dia		each	510.00
1628	Gunmetal non-return valve-vertical (screwed end) 32 mm dia		each	806.00
1629	Gunmetal non-return valve-vertical (screwed end) 40 mm dia		each	995.00
1630	Gunmetal non-return valve-vertical (screwed end) 50 mm dia		each	1679.00
1631	Gunmetal non-return valve-vertical (screwed end) 65 mm dia		each	2676.00
1632	Gunmetal non-return valve-vertical (screwed end) 80 mm dia		each	3726.00
1634	Shower rose C.P.brass for 15 to 20 mm inlet 100 mm dia		each	34.00
1635	Shower rose C.P.brass for 15 to 20 mm inlet 150 mm dia		each	48.00
1638	Flush pipe with union spreaders and clamps all in C.P. brass for single stall		each	246.00
1639	Flush pipe with union spreaders and clamps all in C.P. brass for double stall		each	400.00
1640	Flush pipe with union spreaders and clamps all in C.P. brass for range of three stall		each	502.00
1641	Flush pipe with union spreaders and clamps all in C.P. brass for range of four stall		each	562.00
1644	C.P.brass toilet paper holder of standard size		each	85.00
1646	C.P.brass trap 40 mm dia		each	120.00
1647	C.P. brass waste 32 mm		each	58.00
1648	C.P. brass waste 40 mm		each	64.00
1649	Gun metal cramp		kg	330.00
1650	15mm dia brass ferrul		each	97.00
1651	20mm dia brass ferrul		each	138.00
1652	25mm dia brass ferrul		each	189.00
1653	Pig lead		kg	70.00
1700	Rubber insertions for 50 mm dia pipe joints		each	12.00
1701	Rubber insertions for 80 mm dia pipe joints		each	16.50
1702	Rubber insertions for 100 mm dia pipe joints		each	17.50

Code No	Description	NUnit	Unit	Rate Rs.
1703	Rubber insertions for 125 mm dia pipe joints		each	18.70
1704	Rubber insertions for 150 mm dia pipe joints		each	21.20
1705	Rubber insertions for 200 mm dia pipe joints		each	25.40
1706	Rubber insertions for 250 mm dia pipe joints		each	34.00
1707	Rubber insertions for 300 mm dia pipe joints		each	42.70
1708	Rubber insertions for 350 mm dia pipe joints		each	52.70
1709	Rubber insertions for 400 mm dia pipe joints		each	69.10
1710	Rubber insertions for 450 mm dia pipe joints		each	87.90
1711	Rubber insertions for 500 mm dia pipe joints		each	102.00
1712	Rubber insertions for 600 mm dia pipe joints		each	133.00
1713	Rubber insertions for 700 mm dia pipe joints		each	168.00
1714	Rubber insertions for 750 mm dia pipe joints		each	171.00
1715	Rubber insertions for 800 mm dia pipe joints		each	175.00
1716	Rubber insertions for 900 mm dia pipe joints		each	180.00
1717	Rubber insertions for 1000 mm dia pipe joints		each	192.00
1718	Rubber insertions for 1100 mm dia pipe joints		each	202.00
1741	Ruber Gaskets for SW Pipe 100mm dia		each	18.00
1742	Ruber Gaskets for SW Pipe 150mm dia		each	20.00
1743	Ruber Gaskets for SW Pipe 200mm dia		each	25.00
1744	Ruber Gaskets for SW Pipe 250mm dia		each	40.00
1745	Ruber Gaskets for SW Pipe 300mm dia		each	45.00
1751	150mm Nominal dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	333.00
1752	200 mm Nominal dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	522.00
1753	250 mm Nominal dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	671.00
1754	300 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	868.00
1755	350 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1100.00
1756	400 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1354.00
1757	450 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1590.00
1758	500 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1999.00
1759	600 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	2835.00
1760	700 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	4500.00

Code No	Description	NUnit	Unit	Rate Rs.
1761	800 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	5825.00
1762	900 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	7420.00
1763	1000 mm Nominal Dia AC pipe (Mazza process) Class-1, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	9025.00
1766	150mm Nominal dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	410.00
1767	200 mm Nominal dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	675.00
1768	250 mm Nominal dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	850.00
1769	300 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1180.00
1770	350 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1480.00
1771	400 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1915.00
1772	450 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	2232.00
1773	500 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	2780.00
1774	600 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	4030.00
1775	700 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	4940.00
1776	800 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	6950.00
1777	900 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	8850.00
1778	1000 mm Nominal Dia AC pipe (Mazza process) Class-2, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	10800.00
1781	150mm Nominal dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	505.00
1782	200 mm Nominal dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	852.00
1783	250 mm Nominal dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1080.00
1784	300 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1515.00
1785	350 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	1915.00
1786	400 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	2495.00
1787	450 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI		metre	2952.00

Code No	Description	NUnit	Unit	Rate Rs.
1788	marked (IS 6908) with rubber gasket (IS 5382) 500 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	3640.00
1789	600 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	5220.00
1790	700 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	6790.00
1791	800 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	9210.00
1792	900 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	11550.00
1793	1000 mm Nominal Dia AC pipe (Mazza process) Class-3, ISI marked (IS 6908) with rubber gasket (IS 5382)		metre	14200.00
1801	200 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	1297.00
1802	250 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	2017.00
1803	315 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	3191.00
1805	400 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	5255.00
1806	450 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	6638.00
1807	500 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	8204.00
1809	630 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	12986.00
1810	800 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	20905.00
1811	900 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	26481.00
1812	1000 mm DN/ID HDPE Pipe of PE-100 grade material and pressure class PN 6 for sewer application as per IS 14333-1996		metre	32714.00
1821	150 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2		metre	300.00
1822	200 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2		metre	440.00

Code No	Description	NUnit	Unit	Rate Rs.
1823	250 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2		metre	746.00
1824	300 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2		metre	1087.00
1825	400 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2		metre	1666.00
1826	500 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2		metre	2608.00
1827	600 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2		metre	4020.00
1828	800 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2		metre	6753.00
1829	1000 mm DN/ID HDPE DWC (External Annular Corrugated and smooth internal walls) SN-8 as per IS 16098 part 2		metre	10441.00
1851	110 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328		metre	186.00
1852	160 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328		metre	395.00
1853	200 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328		metre	616.00
1854	250 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328		metre	946.00
1855	315 mm ID/ND PVC-U pipes (stiffness class SN 8) as per IS 15328		metre	1510.00
1861	90 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	143.00
1862	110 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	210.00
1863	125 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	275.00
1864	140 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	341.00
1865	160 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	440.00
1866	180 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	559.00
1867	200 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	693.00
1868	225 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	872.00
1869	250 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	1082.00
1870	280 mm dia U-PVC pipes with rubber ring (working pressure 6 kg / cm ²) as per IS: 4985		metre	1366.00
1871	315 mm dia U-PVC pipes with rubber ring (working pressure 6		metre	1750.00

Code No	Description	NUnit	Unit	Rate Rs.
	kg / cm ²) as per IS: 4985			
1881	90 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	339.00
1882	110 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	559.00
1883	125 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	654.00
1884	140 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	987.00
1885	160 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	1466.00
1886	180 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	1912.00
1887	200 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2406.00
1888	225 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	3833.00
1889	250 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	4668.00
1890	280 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	5317.00
1891	315 mm dia U-PVC equal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	5966.00
1901	125 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	796.00
1902	140 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	880.00
1903	140 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	890.00
1904	160 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	1089.00
1905	160 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	1229.00
1906	160 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	1518.00
1907	180 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	1370.00
1908	180 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2076.00
1909	180 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2136.00
1910	180 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2282.00
1911	200 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2170.00

Code No	Description	NUnit	Unit	Rate Rs.
1912	200 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2246.00
1913	200 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2136.00
1914	200 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2282.00
1915	200 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2330.00
1916	225 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2293.00
1917	225 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2430.00
1918	225 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2545.00
1919	225 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2832.00
1920	225 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2913.00
1921	225 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2956.00
1922	250 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2324.00
1923	250 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2406.00
1924	250 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2867.00
1925	250 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2993.00
1926	250 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	3104.00
1927	250 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	3282.00
1928	250 X 225 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	3439.00
1929	280 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2324.00
1930	280 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	2894.00
1931	280 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	3145.00
1932	280 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	3166.00
1933	280 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	3174.00
1934	280 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm)		each	3280.00

Code No	Description	NUnit	Unit	Rate Rs.
1935	confirming to IS:7834 280 X 225 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	3457.00
1936	280 X 250 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	3684.00
1937	315 X 110 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	4076.00
1938	315 X 125 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	4085.00
1939	315 X 140 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	4172.00
1940	315 X 160 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	4237.00
1941	315 X 180 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	4721.00
1942	315 X 200 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	4758.00
1943	315 X 225 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	4940.00
1944	315 X 250 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	5021.00
1945	315 X 280 mm dia U-PVC Unequal Tee (class III, 6kg/sqcm) confirming to IS:7834		each	5281.00
1951	125 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	302.00
1952	140 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	389.00
1953	140 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	389.00
1954	160 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	573.00
1955	160 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	518.00
1956	160 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	528.00
1957	180 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	769.00
1958	180 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	613.00
1959	180 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	684.00
1960	180 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	694.00
1961	200 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	906.00

Code No	Description	NUnit	Unit	Rate Rs.
1962	200 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	980.00
1963	200 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1085.00
1964	200 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1094.00
1965	200 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1194.00
1966	225 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1019.00
1967	225 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1113.00
1968	225 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1124.00
1969	225 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1130.00
1970	225 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1180.00
1971	225 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1208.00
1972	250 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1089.00
1973	250 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1186.00
1974	250 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1284.00
1975	250 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1317.00
1976	250 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1406.00
1977	250 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1507.00
1978	250 X 225 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1567.00
1979	280 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1296.00
1980	280 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1396.00
1981	280 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1493.00
1982	280 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1543.00
1983	280 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1565.00
1984	280 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm)		each	1677.00

Code No	Description	NUnit	Unit	Rate Rs.
	confirming to IS:7834			
1985	280 X 225 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1732.00
1986	280 X 250 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1736.00
1987	315 X 110 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1884.00
1988	315 X 125 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	1984.00
1989	315 X 140 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	2071.00
1990	315 X 160 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	2121.00
1991	315 X 180 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	2154.00
1992	315 X 200 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	2252.00
1993	315 X 225 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	2262.00
1994	315 X 250 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	2353.00
1995	315 X 280 mm dia U-PVC Reducer (class III, 6kg/sqcm) confirming to IS:7834		each	2461.00
2001	90 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	219.00
2002	110 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	378.00
2003	125 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	530.00
2004	140 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	725.00
2005	160 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	1041.00
2006	180 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	1457.00
2007	200 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	2069.00
2008	225 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	2941.00
2009	250 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	3981.00
2010	280 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	5888.00
2011	315 mm dia U-PVC double/ single socketed 90° bend (class III, 6kg/sqcm) confirming to IS:7834		each	8625.00

Code No	Description	NUnit	Unit	Rate Rs.
2021	90 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	172.00
2022	110 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	288.00
2023	125 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	397.00
2024	140 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	537.00
2025	160 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	762.00
2026	180 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	1060.00
2027	200 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	1481.00
2028	225 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	2051.00
2029	250 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	2794.00
2030	280 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	4222.00
2031	315 mm U-PVC double/ single socketed 45/22.5/11.25° bend (class III, 6kg/sqcm) confirming to IS:7834		each	5968.00
2041	90 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	28.00
2042	110 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	39.60
2043	125 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	110.00
2044	140 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	140.00
2045	160 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	157.00
2046	180 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	178.00
2047	200 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	195.00
2048	225 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	507.00
2049	250 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	517.00
2050	280 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	1071.00
2051	315 mm dia End Cap (class III, 6kg/sqcm) confirming to IS:7834		each	1144.00
2061	90 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming		each	469.00

Code No	Description	NUnit	Unit	Rate Rs.
	to IS:7834			
2062	110 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	587.00
2063	125 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	934.00
2064	140 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	1149.00
2065	160 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	1709.00
2066	180 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2127.00
2067	200 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2955.00
2068	225 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	3852.00
2069	250 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	5411.00
2070	280 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6819.00
2071	315 mm dia U-PVC equal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	10474.00
2101	125 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	1164.00
2102	140 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	1469.00
2103	140 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	1620.00
2104	160 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2008.00
2105	160 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	1933.00
2106	160 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2050.00
2107	180 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2380.00
2108	180 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2616.00
2109	180 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2687.00
2110	180 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2928.00
2111	200 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2752.00
2112	200 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2924.00

Code No	Description	NUnit	Unit	Rate Rs.
2113	200 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2948.00
2114	200 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	2963.00
2115	200 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	4033.00
2116	225 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	4376.00
2117	225 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	4591.00
2118	225 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	4651.00
2119	225 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	5229.00
2120	225 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	5818.00
2121	225 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	7116.00
2122	250 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	5131.00
2123	250 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	5237.00
2124	250 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	5434.00
2125	250 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	5240.00
2126	250 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	5539.00
2127	250 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	5815.00
2128	250 X 225 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6038.00
2129	280 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6098.00
2130	280 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6159.00
2131	280 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6221.00
2132	280 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6283.00
2133	280 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6346.00
2134	280 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6409.00
2135	280 X 225 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm)		each	6637.00

Code No	Description	NUnit	Unit	Rate Rs.
2136	confirming to IS:7834 280 X 250 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	7202.00
2137	315 X 110 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6068.00
2138	315 X 125 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6098.00
2139	315 X 140 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6139.00
2140	315 X 160 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6629.00
2141	315 X 180 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	6690.00
2142	315 X 200 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	7013.00
2143	315 X 225 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	7214.00
2144	315 X 250 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	7434.00
2145	315 X 280 mm dia U-PVC Unequal Tee (class V, 10kg/sqcm) confirming to IS:7834		each	8340.00
2151	125 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	310.00
2152	140 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	511.00
2153	140 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	529.00
2154	160 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	703.00
2155	160 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	526.00
2156	160 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	545.00
2157	180 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	881.00
2158	180 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	898.00
2159	180 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	969.00
2160	180 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	980.00
2161	200 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1025.00
2162	200 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1047.00

Code No	Description	NUnit	Unit	Rate Rs.
2163	200 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1177.00
2164	200 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1239.00
2165	200 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1330.00
2166	225 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1441.00
2167	225 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1594.00
2168	225 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1613.00
2169	225 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1705.00
2170	225 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1812.00
2171	225 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	1912.00
2172	250 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2082.00
2173	250 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2149.00
2174	250 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2241.00
2175	250 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2351.00
2176	250 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2372.00
2177	250 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2469.00
2178	250 X 225 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2509.00
2179	280 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2092.00
2180	280 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2115.00
2181	280 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2239.00
2182	280 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2381.00
2183	280 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2511.00
2184	280 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2592.00
2185	280 X 225 mm dia U-PVC Reducer (class V, 10kg/sqcm)		each	2615.00

Code No	Description	NUnit	Unit	Rate Rs.
	confirming to IS:7834			
2186	280 X 250 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	2771.00
2187	315 X 110 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	3161.00
2188	315 X 125 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	3254.00
2189	315 X 140 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	3349.00
2190	315 X 160 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	3387.00
2191	315 X 180 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	3461.00
2192	315 X 200 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	3535.00
2193	315 X 225 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	3646.00
2194	315 X 250 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	3756.00
2195	315 X 280 mm dia U-PVC Reducer (class V, 10kg/sqcm) confirming to IS:7834		each	3774.00
2201	90 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	347.00
2202	110 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	593.00
2203	125 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	873.00
2204	140 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	1197.00
2205	160 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	1756.00
2206	180 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	2827.00
2207	200 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	3495.00
2208	225 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	5029.00
2209	250 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	6785.00
2210	280 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	9288.00
2211	315 mm dia U-PVC double/ single socketed 90° bend (class V, 10kg/sqcm) confirming to IS:7834		each	14635.00
2221	90 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	266.00

Code No	Description	NUnit	Unit	Rate Rs.
2222	110 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	464.00
2223	125 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	638.00
2224	140 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	870.00
2225	160 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	1261.00
2226	180 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	1754.00
2227	200 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	2467.00
2228	225 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	3460.00
2229	250 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	4703.00
2230	280 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	7102.00
2231	315 mm dia U-PVC double/ single socketed 45/22.5/11.25° bend (class V, 10kg/sqcm) confirming to IS:7834		each	10024.00
2241	90 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	68.70
2242	110 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	137.00
2243	125 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	177.00
2244	140 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	233.00
2245	160 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	407.00
2246	180 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	459.00
2247	200 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	890.00
2248	225 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	956.00
2249	250 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	1020.00
2250	280 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	1264.00
2251	315 mm dia End Cap (class V, 10kg/sqcm) confirming to IS:7834		each	1989.00
2261	U-PVC Single socketed rain water pipe confirming to IS : 13592 Class "A" 75 mm dia.		metre	80.00
2262	U-PVC Single socketed rain water pipe confirming to IS :		metre	150.00

Code No	Description	NUnit	Unit	Rate Rs.
	13592 Class "A" 110 mm dia.			
2263	Rubber (Seal) Ring for 75 mm dia uPVC pipe conforming to IS : 5382		each	17.20
2264	Rubber (Seal) Ring for 110 mm dia uPVC pipe conforming to IS : 5382		each	21.50
2265	uPVC coupler for uPVC drainage pipes 75 mm		each	36.40
2266	uPVC coupler for uPVC drainage pipes 110 mm		each	68.80
2267	uPVC pushfit coupler (single) 75 mm thick		each	42.20
2268	uPVC pushfit coupler (single) 110 mm thick		each	71.60
2269	uPVC single equal Tee (without door) 75x75x75 mm		each	80.20
2270	uPVC single equal Tee (without door) 110x110x110 mm		each	158.00
2271	uPVC single equal Tee (with door) 75x75x75 mm		each	92.20
2272	uPVC single equal Tee (with door) 110x110x110 mm		each	183.00
2281	uPVC bend 87.5o 75 mm		each	54.40
2282	uPVC bend 87.5o 110 mm		each	70.50
2285	uPVC plain shoe 75 mm		each	118.00
2286	uPVC plain shoe 110 mm		each	226.00
2287	uPVC pipe clip 75 mm		each	15.00
2288	uPVC pipe clip 110 mm		each	19.00
2341	20 mm dia HDPE pipe PN 10 (class PE-80)		metre	29.00
2342	25 mm dia HDPE pipe PN 10 (class PE-80)		metre	41.00
2343	32 mm dia HDPE pipe PN 10 (class PE-80)		metre	65.00
2347	20 mm dia MDPE pipe PN 12.5		metre	24.00
2348	25 mm dia MDPE pipe PN 12.5		metre	34.00
2349	32 mm dia MDPE pipe PN 12.5		metre	54.00
2351	Electro Fusion Tapping saddle with Moulded female threaded metal insert of SS304 material and integrated in the body(single piece) as per with Pressure rating of PN 12.5 and for drinking water applications		each	535.00
2352	Polypropylene Compression connector with Metal Insert Female Thread Adaptor with SS304 material, Polypropylene Nut / Cap, Packing bush, NBR "O" ring, pressure rating PN 12.5 and for drinking water applications		each	117.00
2353	Double Compression Elbow with Polypropylene Nut / Cap, packing bush, Clip Ring-POM (Acetylic resin), "O" ring – NBR, Pressure rating PN 12.5 for drinking water applications for user connection		each	55.00
2361	Poly propylene- Random - Co - Polymer (PPR) pipes SDR 7.4 - 16 Outer dia		metre	48.50
2362	Poly propylene - Random - Co - Polymer (PPR) pipes SDR 7.4 - 20mm Outer dia.		metre	53.50
2363	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4		metre	82.90

Code No	Description	NUnit	Unit	Rate Rs.
	- 25 mm outer dia.			
2364	Poly propylene - Random - Co - poymer (PPR) pipes SDR 7.4 - 32 mm Outer dia.		metre	133.00
2365	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 40mm Outer dia.		metre	200.00
2366	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 50mm Outer dia.		metre	313.00
2367	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 63mm Outer dia.		metre	482.00
2368	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 75mm Outer dia.		metre	705.00
2369	Poly propylene - Random - Co - polymer (PPR) pipes SDR 7.4 - 90mm Outer dia.		metre	1000.00
2370	Poly propylene - Random - Co - polymer (PPR) pipes SDR - 11 - 110mm Outer dia.		metre	1485.00
2371	Poly propylene - Random - Co - polymer (PPR) pipes SDR - 11- 160mm Outer dia.		metre	4244.00
2372	Chlorinated Polyvinyl - chloride (CPVC) pipe 15 mm outer dia.		metre	52.60
2373	Chlorinated Polyvinyl - chloride (CPVC) pipe 20 mm outer dia.		metre	82.60
2374	Chlorinated Polyvinyl - chloride (CPVC) pipe 25 mm outer dia.		metre	122.00
2375	Chlorinated Polyvinyl - chloride (CPVC) pipe 32 mm outer dia.		metre	191.00
2376	Chlorinated Polyvinyl - chloride (CPVC) pipe 40 mm outer dia.		metre	268.00
2377	Chlorinated Polyvinyl - chloride (CPVC) pipe 50 mm outer dia.		metre	432.00
2378	Chlorinated Polyvinyl - chloride (CPVC) pipe 62.5mm inner dia.		metre	990.00
2379	Chlorinated Polyvinyl - chloride (CPVC) pipe 75 mm inner dia.		metre	1287.00
2380	Chlorinated Polyvinyl - chloride (CPVC) pipe 100 mm inner dia.		metre	1831.00
2381	Chlorinated Polyvinyl - chloride (CPVC) pipe 150 mm inner dia.		metre	2870.00
2382	1216 mm PE-AL-PE Composit pressure pipe		metre	62.00
2383	1620 mm PE-AL-PE Composit pressure pipe		metre	78.00
2384	2025 mm PE-AL-PE Composit pressure pipe		metre	110.00
2385	2532 mm PE-AL-PE Composit pressure pipe		metre	157.00
2386	3240 mm PE-AL-PE Composit pressure pipe		metre	235.00
2387	4050 mm PE-AL-PE Composit pressure pipe		metre	330.00
2388	15 mm PTMT bib cock		each	75.00
2389	15 mm PTMT bib cockwith flange (fancy)		each	110.00
2390	15 mm PTMT bib cock long body with flange		each	122.00
2391	P.T.M.T. Bib cock with nozzle 15mm		each	84.00
2392	PTMT pillar cock		each	129.00

Code No	Description	NUnit	Unit	Rate Rs.
2394	P.T.M.T. Urinal cock 15mm dia		each	109.00
2395	PTMT push cock 15 mm dia.		each	65.00
2396	PTMT push cock 12 mm dia. 20 mm BSP		each	60.00
2397	15 mm dia PTMT stop cock(male thread)		each	75.00
2399	20 mm dia. PTMT stop cock		each	102.00
2400	P.T.M.T. Ball Cock 15mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball		each	105.00
2401	P.T.M.T. Ball Cock 20mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball		each	140.00
2402	P.T.M.T. Ball Cock 25mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball		each	300.00
2403	P.T.M.T. Ball Cock 40mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball		each	501.00
2404	P.T.M.T. Ball Cock 50mm Complete with Epoxy Coated Aluminium Rod & H.D. Ball		each	913.00
2405	P.T.M.T. Angle Stop cock with Flenge 15mm		each	102.00
2406	P.T.M.T. Swiveling shower 15mm		each	75.00
2408	P.T.M.T. Liquid Soap Container of 400ml capacity		each	107.00
2409	P.T.M.T. Towel Ring 215xd200x37mm		each	131.00
2410	P.T.M.T. Towel Rail (450MM)		each	141.00
2411	P.T.M.T. Towel Rail (600MM)		each	169.00
2412	P.T.M.T. Shelf 450x124x36mm		each	210.00
2413	P.T.M.T. Urinal Spreader 15MM		each	80.00
2414	P.T.M.T. Soap Dish/Holder 138x102x75mm		each	85.00
2415	P.T.M.T. Stop cock (concealed) 15mm		each	125.00
2416	Flushing Cistern P.V.C. 10 lts capacity (low level) (White) (with fittings, accessories and flush pipe)		each	600.00
2417	Flushing Cistern P.V.C. 10 lts capacity (low level) (Coloured) (with fittings, accessories and flush pipe)		each	675.00
2418	P.V.C. automatic flushing cistern 5 lts capacity		each	490.00
2419	P.V.C. automatic flushing cistern 10 lts capacity		each	530.00
2421	Semi Rigid PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings		each	20.00
2422	Semi Rigid PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings		each	25.00
2423	Flexible (coil shaped) PVC waste pipe for sink and wash basin 32 mm dia with length not less than 700 mm i/c PVC waste fittings		each	24.00
2424	Flexible (coil shaped) PVC waste pipe for sink and wash basin 40 mm dia with length not less than 700 mm i/c PVC waste fittings		each	26.00
2425	Unplasticised P.V.C.connection pipe with brass union 30 cm		each	22.00

Code No	Description	NUnit	Unit	Rate Rs.
	long 15 mm bore			
2426	Unplasticised P.V.C.connection pipe with brass union 30 cm long 20 mm bore		each	30.00
2427	Unplasticised P.V.C.connection pipe with brass union 45 cm long 15 mm bore		each	30.00
2428	Unplasticised P.V.C.connection pipe with brass union 45 cm long 20 mm bore		each	42.00
2429	H.P. or L.P. ball valve with polythene floats: 15 mm dia		each	210.00
2430	H.P. or L.P. ball valve with polythene floats: 20 mm dia		each	235.00
2431	H.P. or L.P. ball valve with polythene floats: 25 mm dia		each	363.00
2432	White plastic seat (solid)with lid C.P.brass hinges and rubber buffers		each	330.00
2433	Black plastic seat (solid) with lid C.P.brass hinges and rubber buffers		each	303.00
2434	15 mm nominal bore and 30 cm length PVC connection pipe with P.T.M.T. Nuts		each	32.00
2435	15 mm nominal bore and 45 cm length PVC connection pipe with P.T.M.T. Nuts		each	34.00
2436	P.T.M.T. extension nipple 15mm		each	19.00
2437	P.T.M.T. extension nipple 20mm		each	28.00
2438	P.T.M.T. extension nipple 25mm		each	40.00
2439	PTMT grating 100 mm dia.		each	21.00
2440	P.T.M.T. Grating square slit 150mm		each	50.00
2441	Plastic HDPE Circular Manhole Chamber internal diameter of 1000mm, structured wall corrugated DWC having a base and riser shaft of 1000mm internal diameter and top cone with cover opening of internal diameter of 600mm, total depth 2000mm and having provision for depth extension with provision with arrangement for 4 nos. connections at the base and of various diameter pipes.		each	38600.00
2442	Plastic HDPE Circular Manhole Chamber internal diameter of 1200mm, structured wall corrugated DWC having a base and riser shaft of 1200mm internal diameter and top cone with cover opening of internal diameter of 600mm, total depth 2000mm and having provision for depth extension with provision with arrangement for 4 nos. connections at the base and of various diameter pipes.		each	44600.00
2443	Plastic HDPE Circular Manhole middle column piece of internal diameter of 1000mm, height 250mm/ 500mm/ 750mm/ 1000mm, structured wall corrugated DWC.		metre	18500.00
2444	Plastic HDPE Circular Manhole middle column piece of internal diameter of 1200mm, height 250mm/ 500mm/ 750mm/ 1000mm, structured wall corrugated DWC.		metre	21500.00
2445	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 500 mm with arrangement for 4 nos. connections at the base to receive / connect various		each	4200.00

Code No	Description	NUnit	Unit	Rate Rs.
2446	diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 750 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm		each	6600.00
2447	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 1000 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm		each	9200.00
2448	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 1200 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm		each	11650.00
2449	Plastic HDPE Circular Inspection Chamber having internal diameter of 600mm and depth 1500 mm with arrangement for 4 nos. connections at the base to receive / connect various diameter pipes OD of 315mm having integrated base benching reinforced with horizontal and vertical ribs of minimum 20mm thick and a projection of 40mm		each	14100.00
2501	3 mm thick translucent white acrylic plastic sheet		sqm	570.00
2502	Neoprin/EPDM rubber gasket		metre	20.00
2503	Plastic cone 12 mm dia		each	15.00
2504	UV stabilised 2 mm thick plain FRP sheet.		sqm	470.00
2505	UV stabilised 2 mm thick corrugated FRP sheet.		sqm	540.00
2509	Factory made PVC rigid foam sheet 1mm thick		sqm	157.00
2525	Polyvinyle chloride sheet 400 micron thick		sqm	32.00
2541	A.P.P. modified polymeric felt (two layers) 1.5 mm thick		sqm	65.00
2542	A.P.P. modified polymeric felt (two layers) 2 mm thick		sqm	98.00
2543	A.P.P. modified 2 mm thick membrane reinforced with glass fibre matt		sqm	100.00
2544	A.P.P. modified 3 mm thick membrane reinforced with glass fibre matt		sqm	200.00
2545	A.P.P. modified 3 mm thick membrane reinforced with polyster matt		sqm	205.00
2551	50mmX42mmX2mm thick Factory made door frame of PVC extruded sections in white, grey or wooden finish		metre	150.00
2552	25mm thick factory made PVC flash foor shutter i/c carriage.		sqm	1700.00
2553	Factory made glass reinforced plastic door frame 90x45 mm i/c carriage.		metre	330.00

Code No	Description	NUnit	Unit	Rate Rs.
2554	30 mm thick factory made glass fiber reinforced plastic panel door shutter i/c carriage.		sqm	1700.00
2556	Factory made solid PVC door frame 60 x 30mm i/c carriage.		metre	290.00
2557	28mm factory made solid PVC panel door shutter i/c carriage.		sqm	2820.00
2558	30 mm thick factory made glass fiber reinforced plastic flush door shutter i/c carriage.		sqm	2000.00
2559	Factory made PVC rigid foam panelled shutter i/c carriage		sqm	2200.00
2560	Factory made PVC rigid foam panelled shutter as per IS : 4020 i/c carriage		sqm	2420.00
2561	24 mm thick Factory made shutters with frame, rails and panels of PVC extruded sections in white, grey or wooden finish		sqm	1395.00
2562	30 mm thick Factory made shutters with frame, rails and panels of PVC extruded sections in white, grey or wooden finish		sqm	1522.00
2563	48mmX40mmX1.5mm thick Factory made door frame of PVC extruded sections in white, grey or wooden finish		metre	135.00
2564	Factory made door frame PVC extruded sheet i/c carriage		metre	350.00
2587	Polyethylene water storage tank with cover and suitable locking arrangement		per litre	5.00
2588	PTMT handle 125x34x24mm		each	25.00
2589	PTMT handle 150x34x24mm		each	25.00
2590	PTMT butt hinges 75x60x10mm		each	35.00
2591	PTMT butt hinges 100x75x10mm		each	45.00
2592	PTMT Tower bolt 152x42x18mm		each	50.00
2593	PTMT Tower bolt 202x42x18mm		each	70.00
2594	PTMT door catcher 72x42mm		each	25.00
2595	Expanded polystyrene type N- Normal		sqm	140.00
2596	Expanded polystyrene type - SE		sqm	170.00
2597	PVC tap written "DANDER"		metre	15.00
2598	Second class kail/ local wood in scantling		cum	18000.00
2599	Second class kail wood in planks		cum	18500.00
2601	Superior class teak wood such as Dandeli, Balarshah or Malabar in planks	10	cudm	1100.00
2602	First class teak wood in scantling	10	cudm	880.00
2603	First class teak wood in planks	10	cudm	850.00
2604	Second class teak wood in scantling	10	cudm	600.00
2605	Second class teak wood in planks	10	cudm	650.00
2607	Extra for selected planks of first class teakwood	10	cudm	150.00
2608	Extra for selected planks of second class teakwood	10	cudm	100.00
2612	Second class deodar wood in planks	10	cudm	640.00

Code No	Description	NUnit	Unit	Rate Rs.
2614	Extra for selected planks of second class deodarwood	10	cudm	100.00
2615	First class kail/ local wood in planks	10	cudm	340.00
2616	Second class kail/ local wood in scantling	10	cudm	250.00
2617	Second class kail wood in planks	10	cudm	270.00
2622	Hollock wood in scantling	10	cudm	340.00
2623	Hollock wood in planks	10	cudm	390.00
2624	Sal wood in scantling	10	cudm	430.00
2625	Kiln seasoning of timber		cum	750.00
2626	Teak wood lipping of size 25x3 mm in pelmets		metre	15.00
2627	Lipping of 2nd class teak wood batten 25mm thick on Block board flush door		sqm of door area	290.00
2628	Fuel wood		quintal	400.00
2629	Ply wood 5 ply with commercial ply on both faces 6 mm thick		sqm	376.00
2631	2nd class teak wood lipping/ moulded beadibg or Taj beading of size 18X5mm		metre	27.00
2632	IInd class teak wood lipping 25 mm wide x 12 mm thick		metre	30.00
2636	Hollock ballies 125 mm diameter		metre	35.00
2640	Wooden ballies 2" Dia for bracing		each	48.00
2641	Wooden ballies 4" Dia		metre	50.00
2642	Safeda ballies 125 mm diameter		metre	35.00
2644	Wooden ballies 8" Dia and 9 m long		each	600.00
2645	Bamboo 25 mm dia 2.5 metre long		score	275.00
2648	Seesam wood in plank	10	cudm	680.00
2649	Babool wood	10	cudm	300.00
2651	Block board construction flush door with teak wood ply on both faces 35 mm thick		sqm	1800.00
2652	Block board construction flush door with teak wood ply on both faces 30 mm thick		sqm	1700.00
2653	Block board construction flush door with teak wood ply on both faces 25 mm thick		sqm	1500.00
2654	Block board construction flush door with commercial ply on both faces 35 mm thick		sqm	1000.00
2655	Block board construction flush door with commercial ply on both faces 30 mm thick		sqm	950.00
2656	Block board construction flush door with commercial ply on both faces 25 mm thick		sqm	900.00
2657	35 mm thick Block board construction flush door with teak ply on one side and commercial ply on other side		sqm	1250.00
2658	30 mm thick Block board construction flush door with teak ply		sqm	1000.00

Code No	Description	NUnit	Unit	Rate Rs.
	on one side and commercial ply on other side			
2659	For flush door shutters Extra for providing teak veneering on one side instead of commercial veneering		sqm	340.00
2660	25 mm thick Block board construction flush door with teak ply on one side and commercial ply on other side		sqm	900.00
2661	25 mm thick particle board		sqm	475.00
2662	25 mm thick melamine faced prelaminated three layer particle board		sqm	810.00
2665	25 mm prelaminated flush door both side decorative		sqm	750.00
2671	Veneered particle board with commercial veneering on both sides 12 mm thick		sqm	500.00
2677	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)12 mm thick		sqm	563.00
2678	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)18 mm thick		sqm	675.00
2679	Prelaminated particle board with one side decorative and other side balancing lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)25 mm thick		sqm	930.00
2680	Prelaminated particle board with both sides decorative lamination, flat pressed 3 layer & graded (medium density) Grade I, Type II conforming to IS : 12823 (exterior grade)12 mm thick		sqm	596.00
2681	6 mm teak ply BWR one side		sqm	490.00
2682	12 mm thick Acoustical Board		sqm	510.00
2683	12 mm thick one side laminated board Practical board (Phenol bonded)		sqm	690.00
2684	Flat pressed 3 layer particle board (medium density) Grade I :12 mm thick		sqm	250.00
2687	Extra for veneered particle board with : Teak veneering on one side and commercial veneered on other side		sqm	220.00
2688	Extra for veneered particle board with : Commercial veneering on both sides		sqm	125.00
2689	Extra for veneered particle board with : Teak veneering on both sides		sqm	450.00
2690	Flat pressed 3 layer and graded particle board (medium density) Grade 1 conforming to IS : 3087 - 18 mm thick		sqm	360.00
2691	Decorative plywood 4 mm		sqm	300.00
2692	Ply wood 5 ply with teak ply on one face and commercial ply on another face 9 mm thick		sqm	420.00
2693	Ply wood 5 ply with teak ply on both faces 9 mm thick		sqm	807.00

Code No	Description	NUnit	Unit	Rate Rs.
2694	Ply wood 5 ply with teak ply on one face and commercial ply on another face 9 mm thick		sqm	650.00
2695	Ply wood 7 ply with teak ply on one face and commercial ply on another face 9 mm thick		sqm	950.00
2696	12mm thick marine plywood conforming to IS:710		sqm	667.00
2697	12mm thick fire retardant plywood conforming to IS: 5509.		sqm	800.00
2698	Water proof ply 12mm thick.		sqm	517.00
2699	1.5mm thick decorative laminated sheet		sqm	500.00
2700	1.0mm thick decorative laminated sheet		sqm	250.00
2701	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of 12 mm thick plain type-I, medium density flat pressed three layer, graded particle board (FPT-I) as per IS:3087-1985 bonded with BWP type synthet		sqm	1650.00
2702	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of 12 mm thick both sides prelaminated type-I, medium density flat pressed three layer, graded particle board (FPT-I) as per IS:3087-1985 bonded with BWP type synthetic resin adhesive as per IS : 848 and pre-lamination conforming to IS : 12823 Grade 1, Type - II marked:		sqm	1780.00
2703	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of 12 mm thick one side prelaminated type-I, and other side balancing lamination, medium density flat pressed three layer, graded particle board (F		sqm	1729.00
2704	Factory made 30 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of sheet glass using 10 kg/ sqm glass panes		sqm	1419.00
2705	Factory made 35 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of galvanised wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm		sqm	1461.00
2706	Factory made 30 mm thick shutters with laminated veneer lumber styles rails as per TADS IS:1995 and panels of galvanised wire gauge with average width of aperture 1.4 mm on both directions with wire of dia 0.63 mm		sqm	1265.00
2707	Laminated veneer lumber confirming to TADSS IS:1995 manufactured in factory in frames of doors, windows	10	cudm	620.00
2708	White face insulating board:12 mm thick		sqm	250.00
2711	Natural colour insulating board:12 mm thick		sqm	220.00
2714	Flame retardent face insulating board: 12 mm thick		sqm	330.00
2717	Flame retardent face insulating, Impregnated fibre board 12 mm thick		sqm	350.00
2719	Standard quality hard board sheet 3 mm thick		sqm	144.00
2721	Standard quality hard board sheet 4.5 mm thick		sqm	300.00

Code No	Description	NUnit	Unit	Rate Rs.
2723	Coir veneered board 4mm thick		sqm	300.00
2724	Coir veneered board 6mm thick		sqm	400.00
2726	Coir veneered board 12mm thick		sqm	700.00
2727	Coir veneered board 18mm thick		sqm	1050.00
2731	Labour for making Square vision panel in Block board construction flush door		sqm of door area	140.00
2732	Labour for making Circular vision panel in Block board construction flush door		sqm of door area	150.00
2733	Labour for making Louvers in Decorative type Block board construction flush door		sqm of door area	325.00
2734	Labour for Rebate cutting in Block board construction flush door		sqm of door area	110.00
2735	Gypsum panel 666 X 500 X 100 mm size.		sqm	480.00
2736	Nylon sleeves & wooden screws (40mm)		each	2.00
2741	Shesham wood	10	cudm	680.00
2742	Nigeria wood	10	cudm	765.00
2743	Ghana wood	10	cudm	775.00
2744	Ivory coast	10	cudm	940.00
2745	Chir wood	10	cudm	325.00
2751	12mm thick Ply wood with commercial ply on both face		sqm	430.00
2752	12mm thick Ply wood with teak ply on one face and commercial ply on another face		sqm	825.00
2753	12mm thick Ply wood with teak ply on both face		sqm	1000.00
2800	Stone grit 6 mm and down size or pea sized gravel		cum	460.00
2801	Stone Aggregate (Single size) : 06 mm nominal size		cum	600.00
2802	Stone Aggregate (Single size) : 10 mm nominal size		cum	700.00
2803	Stone Aggregate (Single size) : 12.5 mm nominal size		cum	700.00
2804	Stone Aggregate (Single size) : 20 mm nominal size		cum	770.00
2805	Stone Aggregate (Single size) : 25 mm nominal size		cum	770.00
2806	Stone Aggregate (Single size) : 40 mm nominal size		cum	700.00
2821	Aggregates 10 mm to 5 mm		cum	630.00
2824	Aggregates 13.2 mm to 5.6 mm		cum	630.00
2825	Aggregates 13.2 mm to 10 mm		cum	700.00
2828	Aggregates 22.4 mm to 2.36 mm		cum	630.00

Code No	Description	NUnit	Unit	Rate Rs.
2830	Aggregates 25 mm to 10 mm		cum	700.00
2833	Aggregates 45 mm to 2.8 mm		cum	630.00
2834	Aggregates 45 mm to 22.4 mm		cum	630.00
2835	Aggregates 53 mm to 2.8 mm		cum	630.00
2836	Aggregates 53 mm to 22.4 mm		cum	535.00
2837	Aggregates 63 mm to 2.8 mm		cum	630.00
2838	Aggregates 63 mm to 45 mm		cum	525.00
2840	Aggregates 90 mm to 45 mm (hand broken)		cum	460.00
2841	Close graded Granular sub-base Material 2.36 mm		cum	450.00
2843	Close graded Granular sub-base Material 4.75mm to 2.36 mm		cum	450.00
2844	Close graded Granular sub-base Material 9.5 mm to 2.36 mm		cum	500.00
2845	Close graded Granular sub-base Material 9.5 mm to 4.75 mm		cum	500.00
2846	Close graded Granular sub-base Material 26.5 mm to 9.5 mm		cum	600.00
2848	Close graded Granular sub-base Material 53 mm to 9.5 mm		cum	600.00
2849	Aggregates 63 mm to 45 mm (hand broken)		cum	510.00
2851	Stone crusher dust finer than 3mm with not more than 10% passing 0.075 sieve.		cum	450.00
2852	Coarse graded Granular sub-base Material 2.36 mm & below		cum	630.00
2854	Coarse graded Granular sub-base Material 4.75 mm to 2.36 mm		cum	425.00
2855	Coarse graded Granular sub-base Material 9.5 mm to 4.75 mm		cum	465.00
2856	Coarse graded Granular sub-base Material 26.5 mm to 4.75 mm		cum	600.00
2859	Coarse graded Granular sub-base Material 53 mm to 26 .5mm		cum	550.00
2860	Pre-coated stone chips of 13.2 mm nominal size		cum	900.00
2861	Stone for masonry work		cum	550.00
2863	Random Rubble Stone		cum	500.00
2865	Boundary stone of size 15cmx10cmx120cm		each	60.00
2866	Through and bond stone		nos	15.00
2869	Locally available sand		cum	400.00
2870	Cost of Earth for RE wall fill as per MoRT&H clause 3100		cum	135.00
2871	Boulder with minimum size of 300 mm for Pitching at Site		cum	525.00
2872	Credit for excavated rock found suitable for use		cum	100.00
2873	Coarse sand		cum	900.00
2874	Fine sand		cum	900.00
2875	Moorum		cum	420.00

Code No	Description	NUnit	Unit	Rate Rs.
2876	Gravel/Quarry spall at Site		cum	420.00
2877	Granular Material or hard Moorum for GSB works at Site		cum	400.00
2878	Filter media/Filter Material as per Table 300-3 (MoRT&H Specification)		cum	650.00
2879	Earth		cum	40.00
2880	Selected earth		cum	50.00
2881	Bentonite		kg	3.10
2882	Whiting		quintal	500.00
2883	Dehradun white lime		quintal	520.00
2884	Unslaked lime		tonne	3000.00
2886	Plaster of Paris		kg	4.00
2887	Coal (steam)		quintal	500.00
2888	Empty gunny bag (empty cement bag)		each	2.00
2889	Geotextile filter		sqm	60.00
2902	8mm thick (mirror polished tiles machine cut edge) Raj Nagar white		sqm	500.00
2903	8 mm thick marble tiles (polished) Raj Nagar		sqm	360.00
2904	8 mm thick granite stone tiles (mirror polished of all shades)		sqm	650.00
2905	Marble Makrana 'Aganga' Upto to 1500 Cm2 Tiles		sqm	550.00
2906	Marble Makrana 'Aganga' 1501 Cm2 to 3600 Cm2 Tiles		sqm	650.00
2907	Marble Makrana 'Aganga' Above 3601 Cm2 Slabs		sqm	850.00
2908	Marble Rajnagar 1st quality/ Ageria with light spots Upto to 1500 Cm2 Tiles		sqm	335.00
2909	Marble Rajnagar 1st quality/ Ageria with light spots 1501 Cm2 to 3600 Cm2 Tiles		sqm	500.00
2910	Marble Rajnagar 1st quality/ Ageria with light spots Above 3601 Cm2 Slabs		sqm	600.00
2911	Marble Keseriaji/ Abu Ambaji (Green Marble) Upto to 1500 Cm2 Tiles		sqm	550.00
2912	Marble Keseriaji/ Abu Ambaji (Green Marble) 1501 Cm2 to 3600 Cm2 Tiles		sqm	650.00
2913	Marble Keseriaji/ Abu Ambaji (Green Marble) Above 3601 Cm2 Slabs		sqm	850.00
2914	Marble Bhaislana, Abu, Kishangarh Zebra (Black Marble) Upto to 1500 Cm2 Tiles		sqm	425.00
2915	Marble Bhaislana, Abu, Kishangarh Zebra (Black Marble) 1501 Cm2 to 3600 Cm2 Tiles		sqm	500.00
2916	Marble Bhaislana, Abu, Kishangarh Zebra (Black Marble) Above 3601 Cm2 Slabs		sqm	660.00
2917	Granite Jhunjhunu / Jalore (Red / Chocolate Colour) Upto to 1500 Cm2 Tiles		sqm	600.00

Code No	Description	NUnit	Unit	Rate Rs.
2918	Granite Jhunjhunu / Jalore (Red / Chocolate Colour) 1501 Cm2 to 3600 Cm2 Tiles		sqm	1345.00
2919	Granite Jhunjhunu / Jalore (Red / Chocolate Colour) Above 3601 Cm2 Slabs		sqm	1615.00
2920	Granite South (Red) Upto to 1500 Cm2 Tiles		sqm	880.00
2921	Granite South (Red) 1501 Cm2 to 3600 Cm2 Tiles		sqm	1400.00
2922	Granite South (Red) Above 3601 Cm2 Slabs		sqm	2690.00
2923	Granite Green / Black Upto to 1500 Cm2 Tiles		sqm	800.00
2924	Granite Green / Black 1501 Cm2 to 3600 Cm2 Tiles		sqm	1600.00
2925	Granite Green / Black Above 3601 Cm2 Slabs		sqm	3200.00
2927	Udaypur green marble slab plain 18mm thick		sqm	350.00
2935	Granite Black marble, 18 mm thick slab, above 0.2 sqm upto 0.5 sqm (areawise)		sqm	850.00
2937	Granite Black marble, 18 mm thick slab, above 1.0 sqm upto 2.0 sqm (areawise)		sqm	950.00
2945	Agaria White marble slab plain 18mm thick		sqm	800.00
2946	Black Zebra marble slab plain 18mm thick		sqm	370.00
2947	Pink marble slab plain 18mm thick		sqm	400.00
2948	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span upto 2m		sqm	500.00
2949	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span above 2m and upto 2.5m		sqm	530.00
2950	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span above 2.5m and upto 3.0m		sqm	600.00
2951	Fine grained stone slab of 90mm average thickness for roofing from approved quarry for span above 3m and upto 3.5m		sqm	650.00
2952	Table rubbed polished stone 18mm thick (75x50cm) Granite stone - 18mm thick		sqm	1050.00
2953	White sand stone block	10	cudm	60.00
2954	White sand stone slab 75 mm thick (un-dressed)		sqm	360.00
2955	White sand stone slab 40 mm thick (un-dressed)		sqm	300.00
2956	White sand stone slab 45 mm and 50 mm thick (un-dressed)		sqm	330.00
2957	Red sand stone block	10	cudm	55.00
2958	Red sand stone slab 40 mmthick (un-dressed)		sqm	240.00
2959	Red sand stone slab 30 mmthick (un-dressed)		sqm	220.00
2960	Red sand stone slab 45 mm and 50 mm thick (un-dressed)		sqm	250.00
2961	White sand stone gang saw cut 30mm thick.		sqm	435.00
2962	Red sand stone gang saw cut 30mm thick.		sqm	325.00
2963	Kota stone slab 20 mm to 25 mm thick (semi-polished) area 900-2000 sqcm		sqm	270.00
2964	Kota stone slab 25mm thick (rough cheseled)		sqm	200.00

Code No	Description	NUnit	Unit	Rate Rs.
2965	Kota stone slab 20 mm to 25 mm thick (semi-polished) area 2001-5000 sqcm		sqm	325.00
2967	Marble dust/ powder		cum	100.00
2968	Marble chips upto 4mm and downsize White & black		quintal	150.00
2971	Marble chips large size above 4 mm White & black		quintal	150.00
2973	White marble makrana second quality plain veined stone pieces for crazy flooring		quintal	130.00
2978	Cutting marble or sand stone slab upto 50 mm thick by mechanical device		metre	10.00
2981	75mm x 75mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry		metre	80.00
2982	100mm x 60mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry		metre	80.00
2983	100mm x 75mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry		metre	85.00
2984	125mm x 100mm Single paitam (rebated) stone doors windows and ventilator frames of approved quarry		metre	90.00
2985	100mm x 75mm Double paitam (rebated) stone doors windows and ventilator frames of approved quarry		metre	90.00
2986	125mm x 100mm Double paitam (rebated) stone doors windows and ventilator frames of approved quarry		metre	95.00
3001	R.C.C. pipes NP4 class 150 mm dia		metre	330.00
3002	R.C.C. pipes NP4 class 200 mm dia		metre	431.00
3003	R.C.C. pipes NP4 class 250 mm dia		metre	623.00
3004	R.C.C. pipes NP4 class 300 mm dia		metre	833.00
3005	R.C.C. pipes NP4 class 350 mm dia		metre	1294.00
3006	R.C.C. pipes NP4 class 400 mm dia		metre	1483.00
3007	R.C.C. pipes NP4 class 450 mm dia		metre	1815.00
3008	R.C.C. pipes NP4 class 500 mm dia		metre	2099.00
3009	R.C.C. pipes NP4 class 600 mm dia		metre	2847.00
3010	R.C.C. pipes NP4 class 700 mm dia		metre	3559.00
3011	R.C.C. pipes NP4 class 800 mm dia		metre	3917.00
3012	R.C.C. pipes NP4 class 900 mm dia		metre	4755.00
3013	R.C.C. pipes NP4 class 1000 mm dia		metre	5359.00
3014	R.C.C. pipes NP4 class 1100 mm dia		metre	6359.00
3015	R.C.C. pipes NP4 class 1200 mm dia		metre	8553.00
3016	R.C.C. pipes NP4 class 1400 mm dia		metre	10751.00
3017	R.C.C. pipes NP4 class 1600 mm dia		metre	13534.00
3018	R.C.C. pipes NP4 class 1800 mm dia		metre	17798.00
3019	R.C.C. pipes NP4 class 2000 mm dia		metre	23630.00

Code No	Description	NUnit	Unit	Rate Rs.
3021	R.C.C. pipes NP3 class 150 mm dia		metre	312.00
3022	R.C.C. pipes NP3 class 200 mm dia		metre	397.00
3023	R.C.C. pipes NP3 class 250 mm dia		metre	563.00
3024	R.C.C. pipes NP3 class 300 mm dia		metre	790.00
3025	R.C.C. pipes NP3 class 350 mm dia		metre	1197.00
3026	R.C.C. pipes NP3 class 400 mm dia		metre	1382.00
3027	R.C.C. pipes NP3 class 450 mm dia		metre	1676.00
3028	R.C.C. pipes NP3 class 500 mm dia		metre	2015.00
3029	R.C.C. pipes NP3 class 600 mm dia		metre	2580.00
3030	R.C.C. pipes NP3 class 700 mm dia		metre	3201.00
3031	R.C.C. pipes NP3 class 800 mm dia		metre	3652.00
3032	R.C.C. pipes NP3 class 900 mm dia		metre	4316.00
3033	R.C.C. pipes NP3 class 1000 mm dia		metre	5020.00
3034	R.C.C. pipes NP3 class 1100 mm dia		metre	5908.00
3035	R.C.C. pipes NP3 class 1200 mm dia		metre	7321.00
3036	R.C.C. pipes NP3 class 1400 mm dia		metre	9073.00
3037	R.C.C. pipes NP3 class 1600 mm dia		metre	11472.00
3038	R.C.C. pipes NP3 class 1800 mm dia		metre	15192.00
3039	R.C.C. pipes NP3 class 2000 mm dia		metre	19844.00
3041	R.C.C. pipes NP2 class 150 mm dia		metre	293.00
3042	R.C.C. pipes NP2 class 200 mm dia		metre	382.00
3043	R.C.C. pipes NP2 class 250 mm dia		metre	441.00
3044	R.C.C. pipes NP2 class 300 mm dia		metre	545.00
3045	R.C.C. pipes NP2 class 350 mm dia		metre	657.00
3046	R.C.C. pipes NP2 class 400 mm dia		metre	775.00
3047	R.C.C. pipes NP2 class 450 mm dia		metre	882.00
3048	R.C.C. pipes NP2 class 500 mm dia		metre	1150.00
3049	R.C.C. pipes NP2 class 600 mm dia		metre	1455.00
3050	R.C.C. pipes NP2 class 700 mm dia		metre	1750.00
3051	R.C.C. pipes NP2 class 800 mm dia		metre	2103.00
3052	R.C.C. pipes NP2 class 900 mm dia		metre	2754.00
3053	R.C.C. pipes NP2 class 1000 mm dia		metre	3167.00
3054	R.C.C. pipes NP2 class 1100 mm dia		metre	3994.00
3055	R.C.C. pipes NP2 class 1200 mm dia		metre	4611.00
3056	R.C.C. pipes NP2 class 1400 mm dia		metre	5246.00
3057	R.C.C. pipes NP2 class 1600 mm dia		metre	6398.00
3058	R.C.C. pipes NP2 class 1800 mm dia		metre	7942.00

Code No	Description	NUnit	Unit	Rate Rs.
3059	R.C.C. pipes NP2 class 2000 mm dia		metre	8864.00
3064	R.C.C. collars NP2 class 300 mm dia		each	104.00
3065	AC pipe 100 mm dia		metre	30.00
3066	AC pipe 150 mm dia		metre	45.00
3071	Composite fiberglass reinforced polymer manhole cover with frame 560mm Dia confirming to BSEN – 124 : 1994 - HD-20 Tonne		each	5160.00
3072	Composite fiberglass reinforced polymer manhole cover with frame 560mm Dia confirming to BSEN – 124 : 1994 - HD-35 Tonne		each	6317.00
3075	Circular 300 mm dia precast R.C.C. manhole cover with frame - M.D. - 10		each	30.00
3076	Circular 450 mm dia precast R.C.C. manhole cover - M.D. - 10		each	200.00
3077	Circular shape 450 mm dia precast R.C.C. manhole cover with frame - L.D. - 25		each	978.00
3078	Circular shape 450 mm dia precast R.C.C. manhole cover with frame - H.D. - 20		each	1345.00
3079	Circular shape 500 mm dia precast R.C.C. manhole cover with frame - M.D. - 10		each	1222.00
3080	Circular shape 560 mm dia SFRC manhole cover with frame - H.D. - 20		each	1589.00
3081	Circular shape 560 mm dia SFRC manhole cover with frame - E.H.D. - 35		each	1834.00
3082	Circular shape 560 mm dia SFRC manhole cover - H.D. - 20		each	978.00
3083	Circular shape 560 mm dia SFRC manhole cover - E.H.D. - 35		each	1222.00
3084	Rectangular shape 600x450 mm precast R.C.C. manhole cover with frame - L.D. - 25		each	803.00
3085	Square shape 350x350 mm precast R.C.C. manhole cover with frame - L.D. - 25		each	639.00
3086	Rectangular shape 500x500 mm precast R.C.C. manhole cover with frame - M.D. - 10		each	768.00
3087	Precast R.C.C. grating with frame 500x450 mm horizontal grating		each	803.00
3088	Precast R.C.C. grating with frame 450x100 mm vertical grating		each	373.00
3089	Plastic encapsulated CI/MS Foot Rest		each	160.00
3090	Precast terrazo tiles 22 mm thick (light shade)		sqm	200.00
3091	Precast terrazo tiles 22 mm thick (medium shade)		sqm	180.00
3092	Precast terrazo tiles 22 mm thick (dark shade)		sqm	170.00
3093	Chequered terrazo tiles 22 mm thick (light shade)		sqm	130.00
3094	Chequered terrazo tiles 22 mm thick (medium shade)		sqm	125.00
3095	Chequered terrazo tiles 22 mm thick (dark shade)		sqm	120.00

Code No	Description	NUnit	Unit	Rate Rs.
3099	Chequered precast cement concrete tiles 22mm thick using marble chips of size 6mm - Light shade using white		sqm	265.00
3100	Acid and alkali resistant tiles 300x300 mm size, 10 mm thick	10	nos	450.00
3101	Precast chequered cement tiles 22 mm thick Dark shade using ordinary cement		sqm	230.00
3102	Cobble stones in sizes 125x125x75mm		sqm	830.00
3103	Factory made Interlocking C.C. paver block M-30 Grade, 100 mm thick		sqm	350.00
3104	Factory made Interlocking C.C. paver block M-30 Grade, 80 mm thick		sqm	300.00
3105	Factory made Interlocking C.C. paver block M-30 Grade, 60 mm thick		sqm	250.00
3106	RCC vent shaft 9.10 m long of standard design complete		each	16080.00
3107	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 600 x 800 mm		sqm	1129.00
3108	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 1000 x 800 mm		sqm	1881.00
3109	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 1500 x 600 mm		sqm	2143.00
3110	Reinforced Ferro-Cement drain covers designed for 'A' class loading of size 2100 x 500 mm		sqm	2509.00
3111	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 600 x 800 mm		sqm	1254.00
3112	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 1000 x 800 mm		sqm	2090.00
3113	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 1500 x 600 mm		sqm	2381.00
3114	Reinforced Ferro-Cement drain covers designed for 'AA' class loading of size 2100 x 500 mm		sqm	2822.00
3115	Pre-cast RCC M30 esentric conical manhole piece ID 0.56m, OD 1.0m, vertical height 0.605m and wall thickness 125mm		each	4401.00
3116	Pre-cast RCC M30 esentric conical manhole piece ID 0.56m, OD 1.2m, vertical height 0.805m and wall thickness 125mm		each	6112.00
3117	Pre-cast RCC M30 esentric conical manhole piece ID 0.56m, OD 1.5m, vertical height 1.105m and wall thickness 125mm		each	8826.00
3118	Pre-cast RCC M-30 grade circular manhole extension piece ID 1.0m ID, height 0.3m wall thickness 125mm		each	1278.00
3119	Pre-cast RCC M-30 grade circular manhole extension piece ID 1.2m ID, height 0.3m wall thickness 125mm		each	1452.00
3120	Pre-cast RCC M-30 grade circular manhole extension piece ID 1.5m ID, height 0.3m wall thickness 125mm		each	1742.00
3121	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 600mm x 600mm		metre	3949.00
3122	Precast RCC M-40 grade Box culvert section designed for 'AA'		metre	4878.00

Code No	Description	NUnit	Unit	Rate Rs.
	class loading as per IRC specification size 750mm x 750mm			
3123	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1000mm x 1000mm		metre	7549.00
3124	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1000mm x 1250mm		metre	9523.00
3125	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1250mm x 1250mm		metre	10684.00
3126	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1250mm x 1500mm		metre	13936.00
3127	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1500mm x 1500mm		metre	15098.00
3128	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 1750mm x 1750mm		metre	19279.00
3129	Precast RCC M-40 grade Box culvert section designed for 'AA' class loading as per IRC specification size 2000mm x 2000mm		metre	23227.00
3130	Precast SFRC circular manhole spacer 560mm ID 100mm thick for raising manhole.		each	771.00
3131	Pre-cast RCC M-30 grade tree guard consisting of four panels of size 1800mm (Height) X 600mm (Width) X 35mm		set	1400.00
3132	Pre-cast RCC M-30 grade Cylindrical property chamber size 0.30m ID, 0.45m depth, 100mm wall and base thickness		each	1600.00
3133	Pre-cast RCC M-30 grade Cylindrical property chamber size 0.450m ID, 0.60m depth, 100mm wall and base thickness		each	2500.00
3134	Pre-cast RCC M-30 grade Cylindrical property chamber size 0.450m ID, 0.90m depth, 100mm wall and base thickness		each	3200.00
3135	Pre-cast RCC M-30 grade circular manhole cover frame (ID 0.56m, OD 0.86m, height 0.20m)		each	466.00
3136	Precast RCC M-30 bench consisting of 2 Nos. "L" shaped base support of thickness 100 mm back height 1000mm, front height 450 mm, base width 420mm and 5 Nos. RCC planks of size of 1500x100 x 50 mm and 1 Nos of 150x200x50mm		each	6080.00
3137	Factory made Interlocking C.C. paver block, 60 mm thick casted with rubber mould having min. strength 300 kg/ sq cm		sqm	350.00
3138	60 to 75 mm thick stone slab covering of required size		sqm	320.00
3139	40 to 50 mm thick stone slab covering of required size		sqm	195.00
3195	40mm thick Pre-cast CC M-20 Grade (Vibro-pressed) drain section block as per approved size and design of 'L' shape 'U' shape		metre	250.00
3196	60mm thick Pre-cast CC M-20 Grade (Vibro-pressed) drain section block as per approved size and design of 'L' shape 'U'		metre	300.00

Code No	Description	NUnit	Unit	Rate Rs.
3197	shape 80mm thick Pre-cast CC M-20 Grade (Vibro-pressed) drain section block as per approved size and design of 'L' shape 'U' shape		metre	400.00
3198	Precast RCC M-15 grade pillar of size 300mm x 300mm x 900mm height		each	1000.00
3199	Precast RCC M-15 grade pillar of size 150mm x 150mm x 450mm height		each	180.00
3201	Cement Concrete Jali 50 mm thick		sqm	180.00
3202	Cement Concrete Jali 40 mm thick		sqm	160.00
3203	Cement Concrete Jali 25 mm thick		sqm	130.00
3205	Non - Asbestos multi purpose fibre cement board 6mm thick.		sqm	220.00
3206	Non - Asbestos multi purpose fibre cement board 8mm thick.		sqm	250.00
3208	Non - Asbestos fibre cement corrugated sheet 6mm thick.		sqm	225.00
3209	Non - Asbestos fibre cement close fitting adjustable ridge.		metre	245.00
3210	Non - Asbestos fibre cement corrugate serrated adjustable ridge.		metre	225.00
3211	Non - Asbestos fibre cement plain wing adjustable ridge.		metre	225.00
3212	Non - Asbestos fibre cement unserrated adjustable ridge for hips.		metre	230.00
3213	Non - Asbestos fibre cement corrugated apron piece.		metre	190.00
3214	Non - Asbestos fibre cement eaves filler piece.		each	130.00
3215	Non - Asbestos fibre cement north light curves.		metre	260.00
3216	Non - Asbestos fibre cement ventilator curves.		each	310.00
3217	Non - Asbestos fibre cement barge boards 6 mm thick.		metre	280.00
3218	Non - Asbestos fibre cement ridge finial.		pair	125.00
3219	Non - Asbestos fibre cement special north light curves.		each	350.00
3220	Non - Asbestos fibre cement S type louvers.		each	210.00
3237	Portland Cement		tonne	5000.00
3238	Pre-packed cement based polymer concrete of strength 45 Mpa at 28 days		kg	12.00
3239	Cement OPC		tonne	5200.00
3240	Cement PPC		tonne	5000.00
3241	White Cement		tonne	14000.00
3242	Water proofing cement paint		kg	38.00
3243	Acid Proof cement		tonne	8150.00
3244	Cement primer		litre	45.00
3247	sulphur resistant/sulphate resistant cement		tonne	6000.00
3251	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 600mm x 600mm		sqm	882.00

Code No	Description	NUnit	Unit	Rate Rs.
3252	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 800mm x 800mm		sqm	934.00
3253	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 600mm x 1200mm		sqm	1114.00
3254	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 800mm x 1200mm		sqm	1443.00
3255	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 896mm x 1215mm		sqm	1442.00
3256	Ceramic glazed vitrified tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 1000mm x 2000mm		sqm	3231.00
3261	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 250mm x 375mm		sqm	371.00
3262	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 300mm x 450mm		sqm	445.00
3263	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 200mm x 600mm		sqm	493.00
3264	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 300mm x 600mm		sqm	523.00
3265	Mat & Glossy Ceramic tiles of colour standard white, grey, ivory, fume, red brown, light green, light blue, and other light shades 1st quality Size 250mm x 1000mm		sqm	691.00
3271	Heavy duty vitrified digital polished tiles 1st quality Size 298mm x 298mm		sqm	351.00
3301	100 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)		each	83.02
3302	150 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)		each	166.03
3303	200 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)		each	276.71
3304	230 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)		each	403.20
3305	250 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)		each	474.37
3306	300 mm DN/ID SW pipes as per IS: 651:1980 (60 cm long)		each	592.96
3310	S.W. gully trap P type 100x100 mm		each	66.00
3312	S.W. gully trap P type 150x100 mm		each	105.00
3314	S.W. gully trap P type 180x150 mm		each	194.00
3317	Stone ware spouts 100 mm dia 60 cm long		each	35.00
3318	S.W. intercepting trap 100 mm dia		each	174.00
3319	S.W. intercepting trap 150 mm dia		each	244.00

Code No	Description	NUnit	Unit	Rate Rs.
3322	White vitreous china laboratry sink 450x300x150 mm		each	803.00
3323	White vitreous china laboratry sink 600x450x200 mm		each	1525.00
3324	Vitreous china Surgeon type wash basin of size 660x460 mm		each	980.00
3325	Vitreous china flat back wash basin 450x300 mm		each	325.00
3326	Vitreous china flat back wash basin 550x400 mm		each	545.00
3327	Vitreous china flat back wash basin 630x450 mm		each	707.00
3328	Vitreous china angle back wash basin 600x480 mm		each	653.00
3329	Vitreous china angle back wash basin 400x400 mm		each	420.00
3330	Vitrous china pedestal for wash basin		each	638.00
3331	Vitreous china toilet paper holder of standard size		each	100.00
3332	Vitreous china 10 litres low level cistern without fittings		each	750.00
3333	Vitreous china 10 litres low level cistern with fittings		each	1300.00
3334	Vitreous china indian type w.c. pan size 580 mm		each	351.00
3335	Vitreous china orrisa type w.c. pan size 580 mm		each	780.00
3336	Coloured Orissa pattern W.C. pan 580x440 mm		each	980.00
3337	Coloured Pedestal type W.C. pan 580x440 mm (European type)		each	900.00
3338	Coloured (other than black) solid P.V.C. seat in European W.C. pan		each	405.00
3339	Coloured Vitreous china 10 lit. low level cistern		each	1100.00
3340	White Vitreous china 10 lit. (full flush) capacity controlled low level flushing cistern with all fittings		each	800.00
3341	Coloured Vitreous china 10 lit. (full flush) capacity controlled low level flushing cistern with all fittings		each	1200.00
3342	Vitros china lipped front urinal		each	460.00
3343	Vitros china squatting plate urinal		each	738.00
3344	White vitreous china clay half stall urinal flat back 580x380x350 mm or angle back 450x375x350 mm with waste fittings as per IS : 2556		each	907.00
3345	Vitreous china pedestal type water closet		each	670.00
3346	White vitreous china dual purpose closet (Anglo Indian W.C.) suitable for use as sequatting pan or European type water closet as per manufacturer's specifications		each	957.00
3347	Vitreous china foot rests 250x125x25 mm		pair	97.00
3348	Vitreous china foot rests 250x130x30 mm		pair	96.00
3349	Ceramic Glazed Tiles Ist quality minimum thickness 5mm in all colours shades and designs except burgundy, bottle green, black		sqm	244.88
3350	Ceramic Glazed Tiles Ist quality 300 x 300mm in all shades and designs of White, Ivory, grey, Fuem Red brown etc.		sqm	266.40
3351	Ceramic Glazed Tiles Ist quality 300 x 300 in all shades		sqm	310.28

Code No	Description	NUnit	Unit	Rate Rs.
	designs except White, Ivory, Grey, Fuem Red Brown etc.			
3352	Ceramic Glazed Tiles 1st quality 400 x 400 in all shades designs White, Ivory, Grey, Fuem Red Brown etc.		sqm	395.80
3353	Ceramic Glazed Tiles 1st quality 400 x 400 in all shades designs except White, Ivory, Grey, Fuem Red Brown etc.		sqm	432.70
3354	Polished porcelain floor tile 450x450mm		sqm	732.00
3355	Polished porcelain floor tile 600x600mm		sqm	754.00
3356	Polished porcelain floor tile 800x800mm		sqm	915.00
3357	Polished porcelain floor tile 100x100 cm		sqm	1238.00
3359	Fire clay kitchen sink: 600x450x250 mm		each	1300.00
3360	Decorative glazed border tile 75 mm wide		metre	200.00
3361	Decorative glazed Motive tile size 200x200 mm		each	95.00
3362	Decorative glazed Motive tile size 200x300 mm		each	115.00
3363	White glazed fire clay draining board 600x450x25 mm		each	472.00
3367	Glass sheet (Pin headed) 4 mm thick		sqm	195.00
3368	Float glass sheet of nominal thickness 4 mm (weight not less than 10kg/sqm).		sqm	270.00
3369	Float glass sheet of nominal thickness 5.5 mm.(weight not less than 13.50 kg/sqm).		sqm	450.00
3370	Float glass sheet of nominal thickness 8 mm		sqm	675.00
3372	Frosted glass sheet of nominal thickness 4 mm (weighing not less than 10 kg/sqm)		sqm	280.00
3375	Glass strip 40 mm wide 4 mm thick		metre	14.00
3381	Circular shape 450 mm dia Mirror with Plastic moulded frame		each	448.00
3382	Rectangular shape 453x357 mm Mirror with Plastic moulded frame		each	296.00
3383	Ovel shape 450x350 mm (outer dimensions) Mirror with Plastic moulded frame		each	339.00
3384	Mirror of superior make glass 60x45 cm		each	301.00
3385	Rectangular shape 1500x450 mm Mirror with Plastic moulded frame		each	700.00
3387	Resin Bonded Glass wool 16 kg/m³ 50 mm thick		sqm	105.00
3388	Resin Bonded Glass wool 24 kg/m³ 50 mm thick		sqm	150.00
3389	Fibre glass tissue reinforcement Type II Grade I		sqm	80.00
3390	Fiber glass reinforced plastic chajja.		sqm	3000.00
3391	Glass reinforced Gyp sum (GRG) board 8.5 mm thick		sqm	250.00
3392	Fibre glass cloth		sqm	40.00
3394	Glue		kg	70.00
3401	Bricks class 100 1st grade	1000	nos	3600.00
3402	F.P.S. bricks class designation75	100	nos	3400.00

Code No	Description	NU it	Unit	Rate Rs.
		0		
3404	F.P.S. bricks tile class designation 100	100 0	nos	4000.00
3405	F.P.S. bricks tile class designation 75	100 0	nos	3700.00
3407	F.P.S. clay fly ash bricks class designation 75	100 0	nos	3500.00
3408	Modular bricks class designation 75	100 0	nos	3700.00
3409	Modular bricks of class designation 75	100 0	nos	3700.00
3410	Machine moulded FPS bricks of class designation 125	100 0	nos	4000.00
3411	Machine moulded tile bricks of class designation 125	100 0	nos	3600.00
3412	Machine moulded perforated FPS bricks of class designation 125	100 0	nos	4150.00
3413	Machine moulded modular perforated bricks of class designation 125	100 0	nos	3800.00
3414	Extruded burnt flyash clay sewer bricks conforming to I.S 4885 - 1988	100 0	nos	3900.00
3415	Fly ash lime bricks (FALG Bricks) conforming to I.S. 12894-1989	100 0	nos	2400.00
3416	Calcium Silicate Bricks machine moulded confirming to I.S. 4139 - 1989	100 0	nos	4200.00
3417	Mechanised Autoclaved flyash lime bricks.	100 0	nos	4300.00
3418	Autoclaved aerated cement (AAC) blocks i/c carriage		cum	3200.00
3420	Mangalore ridge tiles x.....mm and 20mm thick.		each	25.00
3421	Manglore tiles x.....mm 20mm thick.		each	8.00
3422	Pressed clay tiles	100 0	nos	9000.00
3423	Brick Aggregate (Single size) : 63 mm nominal size		cum	420.00
3425	Brick Aggregate (Single size) : 40 mm nominal size		cum	480.00
3427	Brick Aggregate (Single size) : 20 mm nominal size		cum	500.00
3428	Brick bats		cum	400.00
3429	Hard crete		litre	37.00
3432	Surkhi		cum	400.00
3433	Fly ash conforming to IS: 3812 (Part II & I) at HMP Plant / Batching Plant / Crushing Plant		cum	325.00
3434	Flyash		cum	10.00
3435	Royalty for sludge		cum	90.00
3436	Grass (Doob)		kg	10.00

Code No	Description	NUnit	Unit	Rate Rs.
3437	Grass (Fine)		kg	25.00
3438	Hedge plants		each	20.00
3439	Sapling 2 m high 25 mm dia		each	120.00
3440	Flowering Plants		each	35.00
3441	Shrubs		each	12.00
3443	Sludge / Farm yard manure		cum	500.00
3444	Pesticide		kg	500.00
3445	Cost of Water		kilo litre	90.00
3446	Wedelia trilobata (SunFlower Family) 300mm height in poly bags /earthen pots		each	15.00
3447	Alternanthera green (Parrot Leaf) 300mm height in poly bags /earthen pots		each	60.00
3448	Iresine herbstii (Blood Leaf) 300mm height in poly bags /earthen pots		each	15.00
3449	Ophiopogon Black (Lily Turf, Mondograss) 300mm height in poly bags /earthen pots		each	20.00
3450	Asparagus myerii (Fox Tail) 300mm height in poly bags /earthen pots		each	50.00
3451	Lantana sellowiana 300mm height in poly bags /earthen pots		each	7.00
3452	Rhoeo spathacea 'Compacta' (Oyster, Boat Lily) 300mm height in poly bags /earthen pots		each	15.00
3453	Golden duranta 300mm height in poly bags /earthen pots		each	20.00
3454	Pennisetum setaceum (Fountain Grass) 300mm height in poly bags /earthen pots		each	17.00
3455	Ficus panda 900mm height in poly bags / earthen pots		each	180.00
3456	Tecoma capensis (Ratanjot) 900mm height in poly bags / earthen pots		each	50.00
3457	Clerodendron inermii (Choti Aari) 900mm height in poly bags / earthen pots		each	50.00
3458	Tabernaemontana variegated (Chandni) 900mm height in poly bags / earthen pots		each	50.00
3459	Hamelia patens (Firebush, Thal Kamal) 900mm height in poly bags / earthen pots		each	25.00
3460	Hibiscus variegated (Guddal) 900mm height in poly bags / earthen pots		each	35.00
3461	Rhaphis excelsa with 3-4 suckers (Lady Palm) 600mm height in pots		each	250.00
3462	Furcaria with 10-12 leaves (cactus) 600mm height in pots		each	400.00
3463	Agave with 10-12 leaves (Kamal Cactus) 600mm height in pots		each	550.00
3464	Phonenix sylvertris (Date Palm) 600mm height in pots		each	1000.00

Code No	Description	NUnit	Unit	Rate Rs.
3465	Plumeria alba (Champa) 2 M height minimum		each	350.00
3466	Gulmohar(Delonix regia) 2 M height minimum		each	200.00
3467	Neem(Azadirachta indica) 2 M height minimum		each	60.00
3468	Jacaranda mimosifolia (Neelli Gulmohar) 2 M height minimum		each	60.00
3469	Bauhinia blakeana (Arckid) 2 M height minimum		each	80.00
3470	Erythrina variegata (Lantern Tree) 2 M height minimum		each	60.00
3471	Bottle Brush(Callistemon Lanciolatous) 2 M height minimum		each	100.00
3472	Mangifera indica (Mango) 2 M height minimum		each	120.00
3473	Yucca 2 M height minimum		each	350.00
3474	Bignonia Venusta 2 M height minimum		each	35.00
3475	Quis quallis indica (Madhu Malti) 2 M height minimum		each	25.00
3476	Morning glory (Ipomea) 2 M height minimum		each	35.00
3477	Vernonium (Parda Bel) 2 M height minimum		each	35.00
3478	Bougain villea 2 M height minimum		each	35.00
3479	Plumeria alba (Champa) 3 M height minimum		each	120.00
3480	Gulmohar(Delonix regia) 3 M height minimum		each	60.00
3481	Neem(Azadirachta indica) 3 M height minimum		each	60.00
3482	Jacaranda mimosifolia (Neelli Gulmohar) 3 M height minimum		each	60.00
3483	Bauhinia blakeana (Arckid) 3 M height minimum		each	45.00
3484	Erythrina variegata (Lantern Tree) 3 M height minimum		each	675.00
3485	Bottle Brush(Callistemon Lanciolatous) 3 M height minimum		each	60.00
3486	Mangifera indica (Mango) 3 M height minimum		each	55.00
3487	Yucca 3 M height minimum		each	525.00
3488	Well deoiled neem cake duly packed in used gunny bags.		cum	340.00
3489	1500 Microns thick 6 m wide HDPE Geo membrane		sqm	250.00
3490	Synthetic clay liner		sqm	265.00
3491	Caw dung		cum	500.00
3492	Synthetic fibre 6 mm / 12 mm (125 gram)		pack of 125g	45.00
3493	HDPE sheet 2.5mm thick		sqm	280.00
3499	Flexcoat (EMCE COLOR FLEX)		kg	315.00
3500	Primar (Premix)		kg	235.00
3501	Enamel paint		litre	155.00
3502	Floor enamel paint in all shades except green		litre	122.00
3505	Roofing paint for iron sheets in red colour		litre	120.00
3506	Synthetic enamel paint in black or chocolate shade		litre	170.00
3507	Synthetic enamel paint in all shades except black or chocolate		litre	150.00

Code No	Description	NUnit	Unit	Rate Rs.
	shade			
3508	Paint		litre	150.00
3509	Pavement Marking Paint		litre	170.00
3512	Primer for cement paint		litre	70.00
3513	Water based cement paint		litre	40.00
3514	Aluminium primer		litre	85.00
3515	Aluminium paint		litre	130.00
3517	Acid proof paint (chocolate or black)		litre	140.00
3518	Black japan		litre	60.00
3519	Special Primer		litre	100.00
3520	Metal Primer		litre	90.00
3523	Red oxide Zinc chromate primer		litre	65.00
3525	White lead		kg	80.00
3526	Distemper primer		litre	59.00
3527	Dry distemper		kg	30.00
3528	Oil bound washable distemper/ Acrylic distemper		kg	40.00
3529	Multi surface paint		litre	255.00
3530	Acrylic exterior paint		litre	170.00
3531	Premium Acrylic exterior paint		litre	203.00
3532	Textured exterior paint		litre	230.00
3534	Epoxy compound with accessories for preparing epoxy mortar		kg	670.00
3535	Epoxy primer		kg	480.00
3536	Epoxy paint		litre	240.00
3537	Fire retardant paint		litre	269.00
3539	Primer (for gypsum board)		litre	73.00
3540	Pink primer (for wood)		litre	85.00
3541	Plastic emulsion paint		litre	200.00
3543	Wax polish (ready made)		kg	250.00
3544	Ordinary varnish		litre	70.00
3545	Superior copal varnish		litre	120.00
3546	Superior spar varnish		litre	130.00
3547	Melamine polish		litre	290.00
3548	Black colour dark shade pigment		kg	60.00
3549	Red, chocolate, orange, buff or yellow (red oxide of iron) light shade pigment		kg	50.00
3550	Green or blue medium shade pigment		kg	50.00
3551	Shellac		kg	300.00
3552	Spirit		litre	50.00

Code No	Description	NUnit	Unit	Rate Rs.
3553	Oil type wood preservative		litre	70.00
3555	Water proofing materials		kg	25.00
3557	Copper acetate		kg	300.00
3558	Hydrochloric acid		kg	15.00
3559	Copper chloride		kg	280.00
3560	Copper nitrate		kg	205.00
3561	Ammonium chloride		kg	15.00
3562	Premixed super white gypsum plaster.		kg	5.00
3571	Analytical Balance (Quotation not available for 1.0mg accuracy)		no	25000.00
3572	Autoclave		no	17500.00
3573	Dissolved Oxygen Sampler		no	15000.00
3574	Drying Oven (Hot Air)		no	15000.00
3575	Hot Plates		no	4625.00
3576	Incubator 20 °C (BOD)		no	4500.00
3577	Microscope, Binocular with oil immersion and movable stage counting cell		no	18000.00
3578	Membrane Filter Assembly		no	2200.00
3579	Muffle Furnace		no	15000.00
3580	PH Meter portable		no	3500.00
3581	Refrigerator (165 ltr.)		no	6000.00
3582	Sludge Sampler (Quotation not available)		no	3500.00
3583	Soxhlet extraction unit (Quotation not available)		no	15000.00
3584	Turbidity meter		no	12000.00
3585	Vacuum pump		no	6000.00
3586	Water bath (thermostat controlled)		no	6000.00
3587	Glasswares and analytical chemicals as required (Lump sum).		no	20000.00
3601	Ceiling sections		metre	50.00
3602	Perimetre channel		metre	30.00
3603	Intermediate channel		metre	52.00
3604	Ceiling angle		metre	20.00
3605	Soffit cleat		each	4.00
3606	Joint filler		kg	25.00
3607	Joint finisher		kg	24.00
3608	Joint tape roll		roll	105.00
3609	Wall form panel 1250x500 mm		each	720.00
3610	Corner angle 45x45x5 mm 1.50 m long		each	210.00
3611	100 mm channel shoulder 2.5 m long		each	750.00

Code No	Description	NUnit	Unit	Rate Rs.
3612	Single clip		each	62.00
3613	Wall form panel 1250x450 mm		each	650.00
3614	Corner angle 45x45x5 m 2.50 m long		each	265.00
3616	Perimeter channel having one flange of 20mm and another flange of 30mm with thickness of 0.55mm and web of length 27mm.		metre	22.00
3617	Ceiling sections 0.55 mm thick having a knurled web of 51.55mm and two flanges of 26mm each with lips of 10.55mm.		metre	35.00
3618	Main T ceiling sections 24x38x0.3 mm (3 metre long)		each	101.00
3619	Perimeter wall angle 21x21 mm (3 metre long)		each	75.00
3620	Intermediate cross channel (1.6 mtrs)		each	64.00
3621	Adjustment clip		each	5.00
3622	Soffit cleat		each	3.00
3623	Gypsum board		sqm	275.00
3624	8 mm thick tapered edge calcium silicate board .		sqm	250.00
3625	10 mm thick calcium silicate board.		sqm	388.00
3626	12.5 mm thick Glass fibre reinforced Gypsum board.		sqm	195.00
3628	Hard board 6 mm thick		sqm	120.00
3629	Plain ceiling tiles (BWP type phenol formaldehyde synthetic resin bonded) (600x600x12 mm)		each	120.00
3631	12 thick particle board ceiling tile		sqm	112.00
3632	Bonding plaster for Gypsum panel.		kg	21.00
3633	Compressible Fibre Board(20mm thick)		sqm	650.00
3634	Designing of facia panel and its accessories, fabrication and supply of Geo grid strip and casting accessories to be used in facia panel		sqm	1500.00
3635	Carriage of facia panel to site of work and its erection		sqm	400.00
3636	Putty for wood work		kg	30.00
3638	Plug		each	8.00
3711	Super plastisizer admixture IS marked as per 9103-1999		kg	50.00
3714	Blasting Powder		kg	35.00
3715	Blasting Fuse (Fuse Wire)		each	15.00
3716	Gelatin 80%		kg	200.00
3718	Electric Detonators @ 1 detonator for 1/2 gelatin stick of 125 gms each	100	nos	2000.00
3720	Delineators from ISI certified firm as per the standard drawing given in IRC - 79		each	275.00
3722	HTS strand		tonne	56000.00
3723	Pre moulded Joint filler, 25 mm thick for expansion joint.		sqm	450.00

Code No	Description	NUnit	Unit	Rate Rs.
3724	Reflectorising glass beads		kg	95.00
3725	Joint Sealant Compound		kg	481.00
3726	Quick setting compound		kg	150.00
3727	High polymer modified quickset tile adhesive.		kg	9.00
3728	Polymer modified cementation coating		kg	25.00
3729	Silicon sealant.		cartridge	100.00
3730	Hot applied thermoplastic compound		litre	90.00
3731	Curing compound		liter	30.00
3736	Geotextile 120 gsm membrane		sqm	32.00
3742	Polymer modified cementation coating		kg	140.00
3746	Spun yarn		kg	36.00
3747	Spun yarn		kg	36.00
3748	Jute Rassi		kg	70.00
3749	Masking tape.		metre	2.30
3750	Bhusa		quintal	300.00
3753	Chlorpyrifos E.C. 20%		litre	160.00
3754	Bleaching powder		kg	17.50
3757	Dowel bar made of 25mm MS round steel bar		kg	40.00
3758	Plastic sheath, 1.25 mm thick for dowel bars		sqm	30.00
3759	Separation Membrane of impermeable plastic sheeting 125 micron thick		sqm	25.00
3760	Sheathing duct 85mm dia		metre	160.00
3768	Bearing (Elastomeric bearing assembly consisting of 7 internal layers of elastomer bonded to 6 nos. internal reinforcing steel laminates by the process of vulcanisation,)		cc	0.60
3772	Bearing (Pot type bearing assembly consisting of a metal piston supported by a disc, PTFE pads providing sliding surfaces against stainless steel mating together with cast steel assemblies/fabricated structural steel assemblies duly painted with all components		nos	60625.00
3783	Direction and place identifications retro-reflectrised sign as per IRC:67 made of high intensity grade sheeting vide clause 807.3, fixed over aluminium sheeting 2 mm thick size upto 0.9 sqm and as per approved drawing.		sqm	135.00
3784	Direction and place identifications retro-reflectrised sign as per IRC:67 made of high intensity grade sheeting vide clause 807.3, fixed over aluminium sheeting 2 mm thick size above 0.9 sqm and as per approved drawing.		sqm	931.00
3785	Single Molded twin Shank Cat's eye made of polycarbonate and ABS moulded body and reflective panels with micro prismatic lens shall support a load of 16000 kg complying to Specifications of Category A of MORTH The height, width		each	135.00

Code No	Description	NUnit	Unit	Rate Rs.
	and length shall not exceed 50 mm, 100 mm and 100 mm			
3786	Fabricated sign board made of board base of A.C.P / transparent PVC acrylic sheet 3 mm thick fixed on MS hollow rectangular section size 50mmx25mm, letters made of acrylic material sheet 3 mm thick fixed with LED lights with all accessories		sqm	73.00
3787	ASA (Acrylic styrene Acrylortrite) cat's eye		each	175.00
3788	Cat's eye made of aluminium alloy size 75x100x22mm having 21 biconvex lenses embedded in circular disk of AS plastic on each side		each	105.00
3789	L type bollard		each	1078.00
3790	SWISS type bollard		each	1152.00
3791	Hazard Marker		each	388.00
3792	SWISS type Hazard Marker		each	522.00
3797	Sand bags (Cost of sand and Empty cement bag)		nos	9.00
3799	Cabel for 5 level water level indicator		metre	50.00
3800	Water level indicator with 5 level indications, prons and cabling upto length of 5 metre		set	8000.00
3801	Capacitance type level indicator-transmitter for measuring liquid microprocessor based with 6 digit LCD display for 0-3 m depth		set	19676.00
3802	Capacitance type level indicator-transmitter for measuring liquid microprocessor based with 6 digit LCD display for 0-6 m depth		set	25656.00
3803	Capacitance type level indicator-transmitter for measuring liquid microprocessor based with 6 digit LCD display for 0-10 m depth		set	34029.00
3811	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 2 MT capacity, 6 m lift and 7 m span		set	280790.00
3812	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 2 MT capacity, 6 m lift and 9 m span		set	322900.00
3813	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 3 MT capacity, 6 m lift and 7 m span		set	344020.00
3814	Electrically opeared overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 3 MT capacity, 6 m lift and 9 m span		set	391480.00

Code No	Description	NUnit	Unit	Rate Rs.
3815	Electrically operated overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 5 MT capacity, 6 m lift and 7 m span		set	401220.00
3816	Electrically operated overhead hoist (EOH) single bridge girder carrying two wheels with chain pulley block load chain, hand chain encased gears, trolley trolley track, wheels, axle & shaft, swivel type lifting hook for 5 MT capacity, 6 m lift and 9 m span		set	439590.00
3819	Set of Extra length of lifting chain and operating electrical cable of EOT crane upto 5MT		metre	700.00
3820	Set of Extra length of lifting chain and operating hand chain of HOT crane upto 5MT		metre	700.00
3821	Mono Rail single girder crane for 1 Tonne capacity for lift upto 9 m with chain pulley block and travelling trolley excluding girder.		set	18550.00
3822	Mono Rail single girder crane for 2 Tonne capacity for lift upto 9 m with chain pulley block and travelling trolley excluding girder.		set	23900.00
3823	Mono Rail single girder crane for 3 Tonne capacity for lift upto 9 m with chain pulley block and travelling trolley excluding girder.		set	29350.00
3824	Vacuum feed gas chlorinator with all accessories for 1 Kg/Hr capacity		set	359268.00
3825	Vacuum feed gas chlorinator with all accessories for 2 Kg/Hr capacity		set	366453.00
3826	Vacuum feed gas chlorinator with all accessories for 3 Kg/Hr capacity		set	370046.00
3827	Chlorine tonner with rollers complete		set	143529.00
3828	Chlorine leak detector with two sensors		each	60000.00
3829	Self contained compressed breathing apparatus complete		each	38000.00
3830	safety shower with eye wash		each	10500.00
3831	Emergency toner repair kit		each	36000.00
3832	Protective clothing such as PVC over all gloves, rubber boots		each	6500.00
3900	Bitumenous washer	100	nos	22.00
3903	Kerosene oil		litre	35.00
3904	LDO for steam curing		litre	45.00
3905	Commercial LPG in cylinder.		kg	65.00
3908	Bitumen VG-grade 30		tonne	38650.00
3910	Paving bitumen S-90 of approved quality		tonne	35550.00
3911	Bitumen (modified graded PMB-40)		tonne	38550.00
3913	Bitumen (modified graded CRMB-60)		tonne	34006.00
3916	Bitumen primer for bitumen membrane		litre	89.00

Code No	Description	NUnit	Unit	Rate Rs.
3917	Pre-moulded asphalt filler board		sqm	85.00
3918	Bitumen (emulsion)		tonne	26395.00
3920	Blown type petroleum bitumen of penetration 85/25 of approved quality		tonne	34561.00
3921	Bitumen hot sealing compound : grade A		kg	27.00
3922	Bitumen solution primer of approved quality		litre	50.00
3924	Bitumen felt fibre base (vegetable or animal):Type 2 grade 1		sqm	70.00
3926	Bitumen felt :Type 3 grade 1		sqm	70.00
3927	Coal Tar		litre	30.00
3928	Anticorrosive bituminous paint (black)		litre	96.00
3929	Oxygen Cylinder		each	485.00
3930	DA Cylinder		each	650.00
3931	Linseed oil (double boiled)		litre	150.00
3932	Mobil Oil		litre	260.00
3933	High Speed Diesel		litre	63.28
4001	3-6 months Slaked lime		quintal	784.00
4004	Coconut oil		litre	115.00
4007	Jhikki		cum	2750.00
4008	Lapti		kg	22.00
4010	Malmal cloth		metre	33.00
4015	Stone Slab 3.3 to 5.5 mtr. (100-150mm thick) (as per existing matching to particular temple site)		sqm	1650.00
4023	Wacker-290 (Chemical)		kg	770.00
4024	Wacker-Ceilent		kg	1100.00
4025	Solvent (Mintrolium)		litre	192.50
4026	Protekta-Guard		litre	128.70
4027	Protekta-Base		litre	247.50
4028	Protekta-G.A.		litre	412.50
4029	Protekta-Micro Emulsion		litre	487.30
4073	Hirmich		kg	99.00
4074	Washing soap		each	44.00
4101	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 200 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi		metre	545.00
4102	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 250 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi		metre	788.00

Code No	Description	NUnit	Unit	Rate Rs.
4103	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 300 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi		metre	974.00
4104	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 400 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi		metre	1462.00
4105	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 500 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pi		metre	4686.00
4106	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 600-700 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receivin		metre	7309.00
4108	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 800-1000 mm dia (ID) HDPE pipe including excavaion, shoring/ struting, preparation, maintaing the thrust and receivi		metre	14618.00
4111	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 450 -700mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving		metre	12019.00
4112	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 800-1000 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving		metre	14710.00
4113	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1100-1200 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receivin		metre	16114.00
4114	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1400-1600 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receivin		metre	18527.00
4115	Horizontal directinal drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 1800-2000 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receivin		metre	21600.00
4116	Horizontal directinal drilling (by trenchless technology) of		metre	37633.00

Code No	Description	NUnit	Unit	Rate Rs.
	suitable dia hole below natural ground level in rock and pushing 450-700 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of depth			
4117	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 800-1000 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dept		metre	45452.00
4118	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1100-1200 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep		metre	53063.00
4119	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1400-1600 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep		metre	61229.00
4120	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in rock and pushing 1800-2000 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep		metre	70200.00
4121	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing upto 300 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep		metre	5481.00
4122	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 310-350 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep		metre	7918.00
4123	Horizontal directinal drilliing (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pushing 360-450 mm dia MS pipe (ID)/ RCC pipe (OD) including excavaion, shoring/ struting, preparation, maintaing the thrust and receiving pit of dep		metre	9744.00
4131	Extra for excavation in all type of soil of driven/ exit pit beyond 3 metre depth, required for pushing/ pulling of MS/HDPE/RCC pipe in trenchless technology, with proper protection at three sides with shoring sheets/ wooden planks and ISMB's, maintaining, back filling, necessary de-watering.		per pit per metre	20000.00
4132	Extra for excavation in rocks of driven/ exit pit beyond 3 metre depth, required for pushing/ pulling of MS/HDPE/RCC pipe in trenchless technology, with proper protection at three sides with shoring sheets/ wooden planks and ISMB's, maintaining, back filling, necessary de-watering.		per pit per metre	40000.00
4201	75 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	154.00

Code No	Description	NUnit	Unit	Rate Rs.
4202	90 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	160.00
4203	110 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	235.00
4204	125 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	304.00
4205	140 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	383.00
4206	160 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	498.00
4207	180 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	629.00
4208	200 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	775.00
4209	225 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	984.00
4210	250 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	1208.00
4211	280 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	1516.00
4212	315 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	1919.00
4213	355 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	2852.00
4214	400 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	3688.00
4215	450 mm dia HDPE pipe PE-100 PN6 for potable water as per IS 4984		metre	4664.00
4221	75 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	97.50
4222	90 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	166.00
4223	110 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	386.00
4224	125 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	558.00
4225	140 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	690.00
4226	160 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	972.00
4227	180 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	1380.00
4228	200 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	1879.00
4229	225 mm dia HDPE equal "Tee" PE-100 PN6 for potable water		each	2614.00

Code No	Description	NUnit	Unit	Rate Rs.
	as per IS 4984			
4230	250 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	3628.00
4231	280 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	5076.00
4232	315 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	6028.00
4233	355 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	8537.00
4234	400 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	12310.00
4235	450 mm dia HDPE equal "Tee" PE-100 PN6 for potable water as per IS 4984		each	17539.00
4241	75 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	107.00
4242	90 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	171.00
4243	110 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	236.00
4244	125 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	349.00
4245	140 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	482.00
4246	160 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	714.00
4247	180 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	1010.00
4248	200 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	1378.00
4249	225 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	1977.00
4250	250 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	2721.00
4251	280 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	3764.00
4252	315 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	5451.00
4253	355 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	7640.00
4254	400 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	11190.00
4255	450 mm dia HDPE Bend 90 degree PE-100 PN6 for potable water as per IS 4984		each	15946.00
4261	75 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	33.10

Code No	Description	NUnit	Unit	Rate Rs.
4262	90 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	49.20
4263	110 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	91.50
4264	125 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	112.00
4265	140 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	142.00
4266	160 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	230.00
4267	180 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	237.00
4268	200 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	366.00
4269	225 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	478.00
4270	250 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	588.00
4271	280 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	741.00
4272	315 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	848.00
4273	355 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	1197.00
4274	400 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	1846.00
4275	450 mm dia HDPE End Plug PE-100 PN6 for potable water as per IS 4984		each	2322.00
4281	110mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 100mm dia		each	665.00
4282	140/160 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 125mm dia		each	727.00
4283	200mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 200mm dia		each	865.00
4284	250mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 250mm dia		each	1000.00
4285	315 mm HDPE Stub End (LNPE) with MS Galvanised Slip on flange Suitable for connecting Valve of 300mm dia		each	1100.00
4301	80 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	8011.00
4302	100 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	10703.00
4303	125 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	13098.00
4304	150 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	15257.00
4305	200 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	24215.00
4306	250 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	38464.00

Code No	Description	NUnit	Unit	Rate Rs.
4307	300 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	50654.00
4308	350 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	97481.00
4309	400 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	132415.00
4310	450 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	167702.00
4311	500 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	210358.00
4312	600 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	317472.00
4313	700 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	499907.00
4314	750 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	606456.00
4315	800 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	633175.00
4316	900 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	849529.00
4317	1000 mm dia DI Sluice valve PN 1.0 "Cat-A"		each	1077256.00
4321	80 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	4627.00
4322	100 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	5982.00
4323	125 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	7163.00
4324	150 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	8344.00
4325	200 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	13242.00
4326	250 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	23459.00
4327	300 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	31447.00
4328	350 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	42153.00
4329	400 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	46133.00
4330	450 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	82130.00
4331	500 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	83292.00
4332	600 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	118408.00
4333	700 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	249221.00
4334	750 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	302340.00
4335	800 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	315660.00
4336	900 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	544526.00
4337	1000 mm dia DI Sluice valve PN 1.0 "Cat-B"		each	579382.00
4341	80 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	8755.00
4342	100 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	10701.00
4343	125 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	11941.00
4344	150 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	13616.00
4345	200 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	21463.00
4346	250 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	32503.00
4347	300 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	39761.00
4348	350 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	51781.00
4349	400 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	64055.00

Code No	Description	NUnit	Unit	Rate Rs.
4350	450 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	74751.00
4351	500 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	109999.00
4352	600 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	140913.00
4353	700 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	200198.00
4354	750 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	261315.00
4355	800 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	288414.00
4356	900 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	341597.00
4357	1000 mm dia DI butterfly valve PN 1.0 "Cat-A "		each	446808.00
4361	80 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	4009.00
4362	100 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	4751.00
4363	125 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	6532.00
4364	150 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	7423.00
4365	200 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	13362.00
4366	250 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	18113.00
4367	300 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	22270.00
4368	350 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	34147.00
4369	400 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	45133.00
4370	450 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	48400.00
4371	500 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	50181.00
4372	600 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	81656.00
4373	700 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	141279.00
4374	750 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	164440.00
4375	800 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	173704.00
4376	900 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	226510.00
4377	1000 mm dia DI butterfly valve PN 1.0 "Cat-B"		each	299305.00
4401	80 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	8530.00
4402	100 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	10828.00
4403	125 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	14884.00
4404	150 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	16843.00
4405	200 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	27451.00
4406	250 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	43420.00
4407	300 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	55919.00
4408	350 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	125016.00
4409	400 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	178062.00
4410	450 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	195313.00
4411	500 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	300646.00
4412	600 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-A"		each	389411.00

Code No	Description	NUnit	Unit	Rate Rs.
4421	80 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	10036.00
4422	100 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	12738.00
4423	125 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	17511.00
4424	150 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	19815.00
4425	200 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	32296.00
4426	250 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	51082.00
4427	300 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	65787.00
4428	350 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	147077.00
4429	400 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	209485.00
4430	450 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	229780.00
4431	500 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	353701.00
4432	600 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-A"		each	458131.00
4441	80 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	4699.00
4442	100 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	6124.00
4443	125 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	9884.00
4444	150 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	10219.00
4445	200 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	15350.00
4446	250 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	23902.00
4447	300 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	29608.00
4448	350 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	45133.00
4449	400 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	58079.00
4450	450 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	73223.00
4451	500 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	95504.00
4452	600 mm dia DI Resilient Seated Sluice Valve PN 1.0 "Cat-B"		each	138726.00
4461	80 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	4699.00
4462	100 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	6124.00
4463	125 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	10404.00
4464	150 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	11355.00
4465	200 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	17056.00
4466	250 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	26557.00
4467	300 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	33404.00
4468	350 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	54160.00
4469	400 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	69695.00
4470	450 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	89495.00
4471	500 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	117715.00
4472	600 mm dia DI Resilient Seated Sluice Valve PN 1.6 "Cat-B"		each	173407.00
4501	100mm diameter D/F DI Plunger valve (Flow Control Valve)		each	181726.00

Code No	Description	NUnit	Unit	Rate Rs.
	PN 1.6 class			
4502	150mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class		each	201917.00
4503	200mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class		each	262491.00
4504	250mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class		each	353351.00
4505	300mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class		each	401810.00
4506	350mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class		each	449259.00
4507	400mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class		each	681458.00
4508	450mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class		each	787462.00
4509	500mm diameter D/F DI Plunger valve (Flow Control Valve) PN 1.6 class		each	959088.00
4521	100mm diameter D/F DI Pressure Reducing Valve		each	43292.00
4522	150mm diameter D/F DI Pressure Reducing Valve		each	58198.00
4523	200mm diameter D/F DI Pressure Reducing Valve		each	82546.00
4524	250mm diameter D/F DI Pressure Reducing Valve		each	118594.00
4525	300mm diameter D/F DI Pressure Reducing Valve		each	154997.00
4526	350mm diameter D/F DI Pressure Reducing Valve		each	255360.00
4527	400mm diameter D/F DI Pressure Reducing Valve		each	326623.00
4581	Spur Gear box for operating valve size 80mm to 150mm		each	7720.00
4582	Spur Gear box for operating valve size 200mm to 300mm		each	11580.00
4583	Spur Gear box for operating valve size 350mm to 600mm		each	20072.00
4584	Spur Gear box for operating valve size 700mm to 900mm		each	29337.00
4585	Spur Gear box for operating valve 1000mm to 1200mm		each	46321.00
4586	Electrical Actuator for operating valve of size 80mm to 150mm		each	43292.00
4587	Electrical Actuator for operating valve of size 200mm to 300mm		each	57956.00
4588	Electrical Actuator for operating valve of size 350mm to 600mm		each	83734.00
4589	Electrical Actuator for operating valve of size 700mm to 900mm		each	130775.00
4590	Electrical Actuator for operating valve of size 1000mm to 1200mm		each	185284.00
4591	810 cum per hour Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve and with all required accessories		set	233099.00
4592	1600 cum per hour Air Blowers coupled with suitable capacity		set	359041.00

Code No	Description	NUnit	Unit	Rate Rs.
	415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve and with all required accessories			
4593	2200 cum per hour Air Blowers coupled with suitable capacity 415V 3 phase 50Hz AC induction motor complete with base frame, suction air filter, silencer, pressure relief valve, delivery non return valve and with all required accessories		set	391070.00
4601	80 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	10370.00
4602	100 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	12915.00
4603	125 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	14522.00
4604	150 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	16129.00
4605	200 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	25423.00
4606	250 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	38500.00
4607	300 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	47097.00
4608	350 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	61334.00
4609	400 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	75873.00
4610	450 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	88543.00
4611	500 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	130294.00
4612	600 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-A"		each	166912.00
4621	80 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	11986.00
4622	100 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	14927.00
4623	125 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	16784.00
4624	150 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	18641.00
4625	200 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	29383.00
4626	250 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	44497.00
4627	300 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	54433.00
4628	350 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	70888.00
4629	400 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	87692.00
4630	450 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	102334.00
4631	500 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	150589.00
4632	600 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-A"		each	192910.00
4641	80 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	5883.00
4642	100 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	7130.00
4643	125 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	9357.00
4644	150 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	11138.00
4645	200 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	18113.00
4646	250 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	23161.00
4647	300 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	32662.00
4648	350 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	36225.00

Code No	Description	NUnit	Unit	Rate Rs.
4649	400 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	50775.00
4650	450 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	63721.00
4651	500 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	72451.00
4652	600 mm dia DI Resilient Seated Butterfly Valve PN 1.0 "Cat-B"		each	88604.00
4661	80 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	7991.00
4662	100 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	10913.00
4663	125 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	13683.00
4664	150 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	15626.00
4665	200 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	19802.00
4666	250 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	25550.00
4667	300 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	34439.00
4668	350 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	48549.00
4669	400 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	67833.00
4670	450 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	83511.00
4671	500 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	118002.00
4672	600 mm dia DI Resilient Seated Butterfly Valve PN 1.6 "Cat-B"		each	151410.00
4701	80 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	7913.00
4702	100 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	9597.00
4703	125 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	12794.00
4704	150 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	15994.00
4705	200 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	26318.00
4706	250 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	41991.00
4707	300 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	50958.00
4708	350 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	91491.00
4709	400 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	99816.00
4710	450 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	147737.00
4711	500 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	157587.00
4712	600 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	233096.00
4713	700 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	325020.00
4714	750 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	367801.00
4715	800 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	423529.00
4716	900 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	655496.00
4717	1000 mm dia DI dual plate check valve PN 1.0 (Cat-A)		each	759946.00
4721	80 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	3847.00
4722	100 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	4751.00
4723	125 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	5973.00

Code No	Description	NUnit	Unit	Rate Rs.
4724	150 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	7423.00
4725	200 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	13362.00
4726	250 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	18113.00
4727	300 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	22270.00
4728	350 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	34147.00
4729	400 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	45133.00
4730	450 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	48400.00
4731	500 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	50181.00
4732	600 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	81656.00
4733	700 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	217353.00
4734	750 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	252984.00
4735	800 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	267237.00
4736	900 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	348477.00
4737	1000 mm dia DI dual plate check valve PN 1.0 (Cat-B)		each	427579.00
4741	100mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating "Cat-A"		each	10248.00
4742	150mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating "Cat-A"		each	12098.00
4743	200mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating "Cat-A"		each	18423.00
4744	250mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating "Cat-A"		each	23163.00
4751	100mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating "Cat-A"		each	10333.00
4752	150mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating "Cat-A"		each	12200.00
4753	200mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating "Cat-A"		each	18577.00
4754	250mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating "Cat-A"		each	23358.00
4761	100mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating "Cat-B"		each	3905.00
4762	150mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating "Cat-B"		each	6342.00
4763	200mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating "Cat-B"		each	9898.00
4764	250mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.0 rating "Cat-B"		each	16319.00
4771	100mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating "Cat-B"		each	4296.00
4772	150mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating "Cat-B"		each	6977.00

Code No	Description	NUnit	Unit	Rate Rs.
4773	200mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating "Cat-B"		each	10888.00
4774	250mm diameter DI Resilient Seated Dual Plate Check Valves in accordance with EN 12334 of PN 1.6 rating "Cat-B"		each	17951.00
4781	50 mm dia DI Kinetic Air Valve (Cat-A)		each	16209.00
4782	80 mm dia DI Kinetic Air Valve (Cat-A)		each	16617.00
4783	100 mm dia DI Kinetic Air Valve (Cat-A)		each	20502.00
4784	150 mm dia DI Kinetic Air Valve (Cat-A)		each	28403.00
4785	200 mm dia DI Kinetic Air Valve (Cat-A)		each	29510.00
4791	50 mm dia DI Kinetic Air Valve (Cat-B)		each	6414.00
4792	80 mm dia DI Kinetic Air Valve (Cat-B)		each	7126.00
4793	100 mm dia DI Kinetic Air Valve (Cat-B)		each	10689.00
4794	150 mm dia DI Kinetic Air Valve (Cat-B)		each	23754.00
4795	200 mm dia DI Kinetic Air Valve (Cat-B)		each	25600.00
4801	80 mm dia DI Duckfoot Bend		each	1442.00
4802	100 mm dia DI Duckfoot Bend		each	1854.00
4803	125 mm dia DI Duckfoot Bend		each	2472.00
4804	150 mm dia DI Duckfoot Bend		each	3193.00
4805	200 mm dia DI Duckfoot Bend		each	4841.00
4806	250 mm dia DI Duckfoot Bend		each	7828.00
4807	300 mm dia DI Duckfoot Bend		each	10814.00
4808	350 mm dia DI Duckfoot Bend		each	16866.00
4809	400 mm dia DI Duckfoot Bend		each	22804.00
8888	Percentage		%	1.00
9999	LS Provision		ls	1.00