# **EXCAVATION**

		Exca	vation
ITEM - CODE	DESCRIPTION	RATE	UNIT
EXBD-001	Excavation for foundation in including removing the excavated materials upto a distance of 50 metres beyond building area and lift as specified, stacking and spreading as directed including dewatering unless provided elsewhere, preparing the bed for the foundation and necessary backfilling, ramming, watering complete excluding shoring and strutting etc. complete.		
	<u>Note</u> : All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.		
	a) Earth soils of all types, sand gravel and soft murum	174.67	Cum.
	Lift upto 1.50 metres.		
	b) Hard murum	190.67	Cum.
	Lift upto 1.50 metres.		
	c) Hard murum and boulders	206.67	Cum.
	Lift upto 1.50 metres.		
EXBD-002	Excavation for foundation in are/old cement/lime masonry foundation including removing the excavated materials upto a distance of 50 metres beyond building area and lift as specified, stacking and spreading as directed including dewatering unless provided elsewhere, preparing the bed for the foundation and necessary backfilling with available earth, murum, ramming, watering complete excluding shoring and strutting etc. complete.		
	Notes:  1) All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.		
	2) The excavated hard rock shall be the contractor's property.		
	a) Soft rock	349.67	Cum.
	Lift upto 1.50 metres.		
	b) Hard rock by blasting	365.30	Cum.
	Lift upto 1.50 metres.		
	c) Hard rock by chiselling wedging	968.52	Cum.
	Lift upto 1.50 metres.		
	d) Laterite rock soft or hard	1089.67	Cum.
	Lift upto 1.50 metres.		
EXBD-003	Dewatering the excavated trenches and pools of water in the building area by using pumps and other devices, including disposing of the water to a safe distance as directed.		
	a) By using 3 H.P. Pumps.	50.00	1 Hr.

			vation
ITEM - CODE	DESCRIPTION	RATE	UNIT
	b) By using 5 to 9 H.P. Pumps.	71.00	1 Hr.
	c) By using 10 to 19 H.P. Pumps.	94.00	1 Hr.
EXBD-004	Filling in plinth and floors with approved excavated material in 15cm to 20cm layers including watering and compaction complete.		Cum.
EXBD-005	Filling in plinth and floors with contractor's murum in 15cm to 20cm layers including watering and compaction complete.	231.67	Cum.
	Providing dry trap/rubble stone soling 15 cm to 20 cm thick including hand packing and compacting etc. complete.	570.67	Cum.
	Providing and filling in the foundation with sand of approved quality including watering, compaction etc. complete.	1077.67	Cum.
EXBD-008	Providing soling using 80mm size trap metal in layers of 15cm each including filling voids with sand, ramming, watering etc. complete.	703.67	Cum.

# **PILE FOUNDATION**

ITEM – CODE	DESCRIPTION	RATE	UNIT
PF-001	Providing M-25 RCC cast in situ bored piles as per mix designs with a provision related to cement content as specified in IS 456 – 2000, each of load as per design and of specified diameter or as directed, placed through steel shell sunk to the required depth through all strata except rock, excluding provision of reinforcement, including placing concrete by tremie arrangement, compaction of concrete and withdrawal of shell including chipping, dressing of RCC piles cleaning the reinforcement etc. complete.		
	a) 325 mm diameter	1110.00	Rmt.
	b) 350 mm diameter	1137.00	Rmt.
	c) 400 mm diameter	1329.00	Rmt.
	d) 450 mm diameter	1419.00	Rmt.
	e) 475 mm diameter	1618.00	Rmt.
	f) 500 mm diameter	1729.00	Rmt.
	g) 525 mm diameter	1849.00	Rmt.
	h) 550 mm diameter	1953.00	Rmt.
	i) 600 mm diameter	2181.00	Rmt.
	j) 625 mm diameter	2402.00	Rmt.
	k) 650 mm diameter	2442.00	Rmt.
	1) 750 mm diameter	2865.00	Rmt.
	m) 800 mm diameter	3188.00	Rmt.
	n) 825 mm diameter	3332.00	Rmt.
	o) 900 mm diameter	4243.00	Rmt.
	p) 975 mm diameter	4837.00	Rmt.
	q) 1000 mm diameter	5106.00	Rmt.
	r) 1050 mm diameter	5555.00	Rmt.
PF-002	Providing M-30 RCC cast in situ bored piles as per mix designs with a provision related to cement content as specified in IS 456 – 2000, each of load as per design and of specified diameter or as directed, placed through steel shell sunk to the required depth through all strata except rock, excluding provision of reinforcement, including placing concrete by tremie arrangement, compaction of concrete and withdrawal of shell including chipping, dressing of RCC piles cleaning the reinforcement etc. complete.		

	Pile Foundation		dation
ITEM – CODE	DESCRIPTION	RATE	UNIT
	a) 325 mm diameter	1129.00	Rmt.
	b) 350 mm diameter	1198.00	Rmt.
	c) 400 mm diameter	1377.00	Rmt.
	d) 450 mm diameter	1675.00	Rmt.
	e) 475 mm diameter	1703.00	Rmt.
	f) 500 mm diameter	1781.00	Rmt.
	g) 525 mm diameter	1940.00	Rmt.
	h) 550 mm diameter	2083.00	Rmt.
	i) 600 mm diameter	2325.00	Rmt.
	j) 625 mm diameter	2592.00	Rmt.
	k) 650 mm diameter	2735.00	Rmt.
	1) 750 mm diameter	3310.00	Rmt.
	m) 800 mm diameter	3564.00	Rmt.
	n) 825 mm diameter	3583.00	Rmt.
	o) 900 mm diameter	4363.00	Rmt.
	p) 975 mm diameter	4916.00	Rmt.
	q) 1000 mm diameter	5369.00	Rmt.
	r) 1050 mm diameter	5801.00	Rmt.
PF-003	Providing M-35 RCC cast in situ bored piles as per mix designs with a provision related to cement content as specified in IS IS 2911(Part-I) (Section-II), each of load as per design and of specified diameter or as directed, placed through steel shell sunk to the required depth through all strata except rock, excluding provision of reinforcement, including placing concrete by tremie arrangement, compaction of concrete and withdrawal of shell including chipping, dressing of RCC piles cleaning the reinforcement etc. complete.		
	a) 325 mm diameter	1130.52	Rmt.
	b) 350 mm diameter	1160.80	Rmt.
	c) 400 mm diameter	1360.09	Rmt.
	d) 450 mm diameter	1458.34	Rmt.
	e) 475 mm diameter	1661.84	Rmt.
	f) 500 mm diameter	1777.87	Rmt.
	g) 525 mm diameter	1902.55	Rmt.
	h) 550 mm diameter	2011.77	Rmt.
	i) 600 mm diameter	2250.94	Rmt.
	j) 625 mm diameter	2477.89	Rmt.
	k) 650 mm diameter	2524.09	Rmt.
	1) 750 mm diameter	2974.29	Rmt.
	m) 800 mm diameter	3312.34	Rmt.
	n) 825 mm diameter	3464.24	Rmt.
	o) 900 mm diameter	4400.37	Rmt.
	p) 975 mm diameter	5021.69	Rmt.

	Pile Foundation.		dation
ITEM – CODE	DESCRIPTION	RATE	UNIT
	q) 1000 mm diameter	5300.29	Rmt.
	r) 1050 mm diameter	5769.20	Rmt.
PF-004	Chipping and dressing of the RCC piles upto 0.60 meter including cleaning reinforcement and removal of dismantled materials etc. for providing pile caps.	113.00	No.
PF-005	Providing Bentonite slurry process for various diameter of		
	piles	59.00	Rmt.
	a) Upto 650 mm dia.	74.00	Rmt.
DE 006	b) Above 650 mm dia.		
PF-006	Chiselling through pile sheets in hard strata like boulders, soft and hard rocks including removing and stacking the loose materials etc. complete and disposing of the unserviceable materials outside etc. complete.		
	1) upto and inclusive of 550 mm diameter	416.00	Ring Hour
	2) Beyond 550 mm and upto & inclusive of 750 mm dia	555.00	Ring Hour
	3) Beyond 750 mm and upto & inclusive of 900 mm dia	691.00	Ring Hour
	4) Beyond 900 mm and upto & inclusive of 1050 mm dia	1083.00	Ring Hour
PF-007	Carrying out load test for 1.5 times the proposed safe working load on the pile in driven position upto dia including construction of test cap, use of accessories and instruments including providing graphs as per IS code or Std. Specifications and dismantling the cap etc. and cleaning the site etc. complete.		
	a) upto 400 mm diameter	33782.00	No.
	b) above 400 mm to 550 mm diameter	40806.00	No.
	c) above 550 mm to 650 mm diameter	49417.00	No.
	d) above 650 mm to 750 mm diameter	58429.00	No.
	e) above 750 mm to 825 mm diameter	72201.00	No.
	f) above 825 mm to 900 mm diameter	81212.00	No.
	g) above 900 mm diameter	100022.00	No.
PF-008	Carrying out boring for dia bored RCC cast in situ piles including withdrawal of shell, removal of earth to distance of 50 m etc. complete.		
	a) for 325 to 400 mm diameter	318.00	Rmt.
	b) for 425 mm to 500 mm diameter	351.00	Rmt.
	c) for 525 mm to 600 mm diameter	365.00	Rmt.
	d) for 625 mm to 700 mm diameter	404.00	Rmt.
	e) for 725 mm to 1050 mm diameter	464.00	Rmt.

# **STRUCTURAL STEEL WORK**

	Str	uctural Steel	Work
ITEM - CODE	DESCRIPTION	RATE	UNIT
SSW-001	Providing & fabricating Structural Steel work in rolled sections like joist, Channels, angles, tees etc. as per detailed design and drawings or as directed including cutting, fabricating, hoisting, erecting, fixing in position making riveted /bolted /welded connections with connecting plates, braces etc. and including one coat of anticorrosive paint and over it two coats of painting of approved quality & shade complete.	61251.00	MT
SSW-002	Providing & fabricating Structural Steel work in rolled sections fixed with connecting plates or angle or angle cleats in main and cross beams, hip and jack rafters, purlins connecting to truss members and the like, as per detailed design and drawings or as directed including cutting, fabricating, hosting, erecting, fixing in position, making riveted/bolted/welded connections and one coat of anticorrosive paint followed by two coats of oil painting of approved quality and shade complete.	60341.00	MT
SSW-003	Providing Structural Steel work in single stanchions composed of R.S.J. channel etc. with caps bases, mild steel plates, angle brackets, cleats, gusset plates, anchor bolts etc. as per detailed design and drawings or as directed, including cutting, fabrication, hoisting, erecting fixing in position. Making riveted/bolted/welded connection and one coat of anticorrosive paint and over it two coats of oil painting of approved quality and shade complete.	56702.00	MT
SSW-004	Providing Structural Steel work in trusses, other similar trussed purlins and members with all bracing, gusset plates etc. as per detailed design and drawings or as directed, including cutting fabricating, hoisting, erecting fixing in position. Making riveted/bolted/welded connection and one coat of anticorrosive paint and over it two coats of oil painting of approved quality and shade complete.	71342.00	MT
SSW-005	Providing and Gas or Electrical welding as per IS Standard for structural steel sections, plates as per detailed drawing for less than 10 mm thick section.	3.00	cm
SSW-006	Providing and fixing 50 milimetre diameter heavy type galvanized iron pipe (IS Std) gate of approved drawing with all fixtures and fitting in two leaves with strong hold fast embedded in cement concrete block at top and bottom with locking arrangement including cutting bending, main holes and with one coat of primer complete.	2047.00	Sqm

# **PLAIN CEMENT CONCRETE**

	Plain Cement Concrete		ncrete
ITEM - CODE	DESCRIPTION	RATE	UNIT
PCC-001	Providing & laying in situ cement concrete in proportion of trap metal for foundation and bedding, including bailing out water manually, formwork, compacting and curing etc. complete.		
	(a) 1:5:10	2795.00	Cum
	(b) 1:4:8	3114.00	Cum
	(c) 1:3:6	3502.00	Cum
	(d) M-15	4097.00	Cum
	(e) M-20	4407.00	Cum
PCC-002	Providing and casting in situ cement concrete of trap metal for steps, including formwork, compacting, roughening the exposed faces if special finish is to be provided and curing etc. complete.		
	(a) M-15	4169.00	Cum
	(b) M-20	4810.00	Cum
PCC-003	Providing and casting in situ cement concrete of trap metal for coping to plinth or parapet, moulded or chamfered as per drawings or as directed, roughening the exposed faces if special finish is to be provided and curing etc. complete.		
	(a) M-15	4313.00	Cum
	(b) M-20	4613.00	Cum
PCC-004	Providing and casting in situ cement concrete of trap metal for bed block, foundation block and such other items, including bailing out water manually, formwork, compacting, roughening the exposed faces if specials finish is to be provided and curing etc. complete.		
	(a) M-15	4097.00	Cum
	(b) M-20	4407.00	Cum
PCC-005	Providing and casting in situ cement concrete of trap metal for plain or moulded sills, cornice jambs, block in course or architrares of required size and shape, including centering, formwork, compacting, roughening the exposed faces if special finish is to be provided and curing etc. complete.		
	(a) M-15	4349.00	Cum
	(b) M-20	4665.00	Cum
PCC-006	Providing and laying in situ cement concrete of trap / quartzite/gneiss metal for foundation and bedding including bailing out water manually, formwork, compaction and curing etc. complete. (using Portland pozzolona cement & flyash) etc. complete.		
	(a) M-15	4062.00	Cum
	(b) M-20	4372.00	Cum

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# REINFORCED CEMENT CONCRETE

	Reinforced Cement Concrete		
ITEM - CODE	DESCRIPTION	RATE	UNIT
RCC-001 /BLDG. WORK	Providing & casting in situ cement concrete of trap metal for RCC pile caps as per detailed designs and drawings, including bailing out water manually, centering, formwork, compacting, finishing & curing etc. complete. (Excluding steel reinforcement)		
	a) M-20	4383.00	Cum.
	b) M-25	4537.00	Cum.
DCC 002	c) M-30	4691.00	Cum.
RCC-002 /BLDG. WORK	Providing & casting in situ cement concrete of trap metal for RCC work like raft, grillage, strip, foundations & footing of RCC Columns and steel stanchions, including bailing out water manually, centering, formwork, compacting, finishing & curing etc. complete. (Excluding steel reinforcement)		
	a) M-20	4383.00	Cum.
	b) M-25	4537.00	Cum.
	c) M-30	4691.00	Cum.
RCC-003 /BLDG. WORK	Providing & casting in situ cement concrete of trap metal for RCC columns as per detailed designs & drawings or as directed, including centering, formwork, compacting, roughening the surface if special finish is to be provided and curing etc. complete.(Excluding steel reinforcement)  a) M-20	5472.00	
	b) M-25	5473.00 5663.00	Cum.
	c) M-30	5852.00	Cum.
RCC-004 / BLDG. WORK	Providing and casting in situ cement concrete of trap metal for RCC Beams and Lintels as per detailed drawings and designs or as directed, including centering formwork, compacting, roughening the surface if special finish is to be provided and curing etc. complete. (Excluding steel reinforcement)	0002100	O WATER
	a) M-20	5728.00	Cum.
	b) M-25 c) M-30	5882.00 6032.00	Cum. Cum.
RCC- 005(A) / BLDG. WORK	Providing and casting in situ cement concrete of trap metal for RCC Slabs and landings upto and inclusive of 15cm thickness as per detailed drawings and designs, including centering, formwork, compacting, finishing the surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete. (Excluding steel reinforcement)		
	a) M-20	6668.00	Cum.

	Reinforced Cement Concrete		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	b) M-25	6872.00	Cum.
	c) M-30	7082.00	Cum.
RCC- 005(B) / BLDG. WORK	Providing and casting in situ cement concrete of trap metal for RCC Slabs and landings above 15cm thickness as per detailed drawings and designs, including centering, formwork, compacting, finishing the surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete. (Excluding steel reinforcement)  a) M-20  b) M-25  c) M-30	6675.00 6880.00 7090.00	Cum. Cum. Cum.
RCC-006 / BLDG. WORK	Providing and casting in situ cement concrete of trap metal for RCC Chajja as per detailed designs and drawings, including centering, formwork, compacting, roughening the surface if special finish is to be provided and curing etc. complete. (Excluding steel reinforcement)  a) M-20  b) M-25  c) M-30	6840.00 7048.00 7244.00	Cum. Cum. Cum.
RCC-007 / BLDG. WORK	Providing & casting in situ cement concreteof trap metal for R.C.C. canopy as per detailed designs and formwork, compacting roughening the surface if special finish is to be provided & curing etc. complete. (Excluding steel reinforcement)  a) M-20 b) M-25 c) M-30	5996.00 6190.00 6386.00	Cum. Cum. Cum.
RCC-008 / BLDG. WORK	Providing & casting in situ cement concrete of trap metal for R.C.C. waist slabs, steps and parapet as per detailed drawings for staircases, including centering, formwork, compacting, roughening the surface if special finish is to be provided & curing etc. complete. (Excluding steel reinforcement)  a) M-20 b) M-25 c) M-30	6311.00 6508.00 6706.00	Cum. Cum. Cum.
RCC-009	Providing & casting in situ cement concrete of trap metal		

	Reinforced Cement Concrete		
ITEM - CODE	DESCRIPTION	RATE	UNIT
/ BLDG. WORK	for RCC pardi 75mm thick, including centering formwork, compacting roughening the surface if special finish is to be provided & curing etc. complete. (Excluding steel reinforcement)  a) M-20 b) M-25 c) M-30	6186.00 6375.00 6682.00	Cum. Cum. Cum.
RCC-010 /BLDG. WORK	Providing & casting in situ cement concrete of trap metal for R.C.C. fins 65 mm thick in position as shown in drawings or as directed by Engineer-in-charge, including centering formwork, compacting, roughening the surface if special finish is to be provided & curing etc. complete. (Excluding steel reinforcement)  a) M-20  b) M-25  c) M-30	6692.00 6890.00 7081.00	Cum. Cum. Cum.
RCC-011 / BLDG. WORK	Providing & fixing in position Steel bar reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams, columns, canopies, staircases, newels, chajjas, lintels, pardies, coping, fins, arches, etc. as per detailed designs, drawings and schedules, including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required etc. complete.  i) Mild steel bar	43452.00	M.T
	ii) HYSD steel bar iii) TMT Steel	 57251.00	M.T. M.T.
RCC-012 / BLDG WORK	Providing & fixing in position after hoisting precast 1:2 cement mortar reinforced jali 50 mm thick of approved design in cement mortar 1:3 & curing etc. complete. (including 6 mm dia. Mild steel bar reinforcement)	512.00	Sqm.
RCC-013 / BLDG WORK	Providing & placing plastic cover block of required size at the rate of 27 Nos. per 10 square metre to reinforcement to give a clear cover as per I.S.456-2000 in R.C.C. slabs etc. complete.	36.00	Cum.
RCC-014 / BLDG WORK	Providing & placing in position Plastic cover blocks of required size at 90 cm centre to centre to each main bottom bars and to stirrups at sides to give required clear cover from all sides as per I.S. 456-2000 in R.C.C. beams etc. complete.	47.00	Cum.
RCC-015 / BLDG WORK	Providing & placing in Plastic cover blocks of required size at 1.5 mtr. centre to centre near the edge of each site and at centre when the width is more than 75 cm to reinforcement to give a clean cover of 40 mm to 65 mm from all sides as per I.S. 456-2000 in R.C.C. columns etc. complete.	44.00	Cum.

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# **READY MIX CONCRETE**

Rea			ncrete
ITEM - CODE	DESCRIPTION	RATE	UNIT
RMC- 001 /BLDG. WORK	Providing and laying in situ Ready Mix Cement Concrete grade of trap / granite / quartzite / gneiss metal for RCC work in foundation like raft, grillage, strip foundation and footing of RCC column and steel stanchions including normal dewatering, formwork, compaction, finishing and curing including transporting from mix plant upto distance of 25 Km, pouring the concrete at work site for 1.5m lift above G.L. and 5.0m lift below GL, etc. complete (Excluding reinforcement and structural steel).		
	a) In RCC M-200	6351.50	Cum.
	b) In RCC M-250	6667.50	Cum.
	c) In RCC M-300	6781.00	Cum.
RMC- 002 /BLDG. WORK	Providing and casting in situ Ready Mix Cement Concrete Grade of trap / Granite / quartzite / gneiss metal of approved quality for RCC work as per detailed drawings and designs or as directed by Engineer-in-charge including normal dewatering, centering, formwork, compaction, finishing the form surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface wherever necessary or roughening if special finish is to be provided and curing including transporting from mix plant upto distance of 25 Km, pouring the concrete at work site for 1.5m lift above G.L. and 5.0m lift below GL, etc. complete (Excluding reinforcement and structural steel).		
	a) In RCC M-200 all types of columns	7863.50	Cum.
	b) In RCC M-250 all types of columns	8164.50	Cum.
	c) In RCC M-300 all types of columns	8279.00	Cum.
RMC- 003 /BLDG. WORK	Providing and casting in situ Ready Mix Cement Concrete Grade of trap / Granite / quartzite / gneiss metal of approved quality for RCC work as per detailed drawings and designs or as directed by Engineer-in-charge including normal dewatering, centering, formwork, compaction, finishing the form surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface wherever necessary or roughing if special finish is to be provided and curing including transporting from mix plant upto distance of 25 Km, pouring the concrete at work site for 1.5m lift above G.L. and 5.0m lift below GL, etc. complete (Excluding reinforcement and structural steel).		
	a) In RCC M-200 Beams / Braces / Lintels	7834.50	Cum.

	Ready Mix Concrete		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	b) In RCC M-250 Beams / Braces / Lintels	8135.50	Cum.
	c) In RCC M-300 Beams / Braces / Lintels	8250.00	Cum.
RMC- 004 /BLDG. WORK	Providing and casting in situ Ready Mix Cement Concrete Grade of trap / Granite / quartzite / gneiss metal of approved quality for RCC work as per detailed drawings and designs or as directed by Engineer-in-charge including normal dewatering, centering, formwork, compaction, finishing the form surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface wherever necessary or roughing if special finish is to be provided and curing including transporting from mix plant upto distance of 25 Km, pouring the concrete at work site for 1.5m lift above G.L. and 5.0m lift below GL, etc. complete (Excluding reinforcement and structural steel).		
	a) In RCC M-200 Slabs/Landings/Vertical Walls/Waist Slabs/Steps for Staircase	8238.50	Cum.
	b) In RCC M-250Slabs/Landings/Vertical Walls/Waist Slabs/Steps for Staircase	8535.50	Cum.
	c) In RCC M-300Slabs/Landings/Vertical Walls/Waist Slabs/Steps for Staircase	8643.00	Cum.
RMC- 005 /BLDG. WORK	Providing and casting in situ Ready Mix Cement Concrete Grade of trap / Granite / quartzite / gneiss metal of approved quality for RCC work as per detailed drawings and designs or as directed by Engineer-in-charge including normal dewatering, centering, formwork, compaction, finishing the form surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface wherever necessary or roughing if special finish is to be provided and curing including transporting from mix plant upto distance of 25 Km, pouring the concrete at work site for 1.5m lift above G.L. and 5.0m lift below GL, etc. complete (Excluding reinforcement and structural steel).		
	a) In RCC M-200 Chajjas/Parapets/Curtain Walls/Partition Walls/Pardies	8473.50	Cum.
	b) In RCC M-250 Chajjas/Parapets/Curtain Walls/Partition Walls/Pardies	8769.50	Cum.
	c) In RCC M-300 Chajjas/Parapets/Curtain Walls/Partition Walls/Pardies	8877.00	Cum.
RMC- 006 /BLDG. WORK	Providing and casting in situ Ready Mix Cement Concrete Grade of trap / Granite / quartzite / gneiss metal of approved quality for RCC work as per detailed drawings and designs or as directed by Engineer-in-charge including normal		

	Ready Mix Concrete		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	dewatering, centering, formwork, compaction, finishing the form surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface wherever necessary or roughing if special finish is to be provided and curing including transporting from mix plant upto distance of 25 Km, pouring the concrete at work site for 1.5m lift above G.L. and 5.0m lift below GL, etc. complete (Excluding reinforcement and structural steel).		
	a) In RCC M-200 Domes	8781.50	Cum.
	b) In RCC M-250 Domes	9073.50	Cum.
	c) In RCC M-300 Domes	9187.00	Cum.
	<ol> <li>Note:</li> <li>Add Rs. 10/ per Cum for transportation beyond 25Km for every additional lead of 1 Km.</li> <li>Beyond 1.5M above G.L. and 5.0M below G.L.</li> </ol>		
	concreting is to be done by pumping by the Company.  3) Additional rate of pumping:  a) Static Pump	175.00	Cum.
	b) Mobile Pump	250.00	Cum.

# **BRICK WORKS**

		Brick	Works
ITEM - CODE	DESCRIPTION	RATE	UNIT
BRK-001	Providing Second class Burnt Brick masonry with conventional / IS type bricks in cement mortar 1:6 in foundation and plinth of inner walls & external walls, including bailing out water manually, striking joints on unexposed faces, racking out joints on exposed faces and watering etc. complete.	3565.00	Cum.
BRK-002	Providing Second class Burnt Brick masonry with conventional / IS type bricks in cement mortar 1:6 in superstructure, including bailing out water manually, striking joints on unexposed faces, racking out joints, scaffolding etc. complete.	3872.00	Cum.
BRK-003	Providing Second class Burnt Brick masonry with conventional / IS type bricks in cement mortar 1:4 in half brick thick wall including mild steel longitudinal reinforcement of 2 bars of 6mm dia / 2 hoop iron strip 25mm x 1.6mm painted with anticorrosive paint at every third course properly bent and bonded at ends, scaffolding, raking out joints and watering etc. complete.	465.00	Sqm.
BRK-004	Providing Second class Burnt Brick masonry with conventional / IS type bricks in cement mortar 1:4, including scaffolding, raking out joints and watering in pillars of rectangular or square shapes as shown in the drawings etc. complete.	3476.00	Cum.
BRK-005	Providing Second class Burnt Brick masonry with conventional / IS type bricks in cement mortar 1:4, including scaffolding, raking out joints and watering in pillars of curved shape as shown in the drawings etc. complete.	4123.00	Cum.
BRK-006	Providing Second class Burnt Brick masonry in cement mortar 1:6 using flyash bricks in foundations and plinth of inner walls and external walls, including bailing out water manually, striking joints on unexposed faces, racking out joints on exposed faces and watering etc. complete.	3498.00	Cum.
BRK-007	Providing Second class Burnt Brick masonry in cement mortar 1:6 using flyash bricks in super structure including striking joints, racking out joints, watering and scaffolding etc. complete.	3631.00	Cum.
BRK-008	Providing Second class Burnt Brick masonry in cement mortar 1:4 using flyash bricks in half brick thick wall including mild steel longitudinal reinforcement of 2 bars of 6mm dia./2 hoop iron strips 25mm x 1.6mm at every third course, properly bent and bounded at ends scaffolding, racking out joints and watering etc. complete.	486.00	Sqm.

			Brick Works	
ITEM - CODE	DESCRIPTION	RATE	UNIT	
BRK-009	Providing Second class Burnt Brick masonry in cement mortar 1:4 using flyash bricks including scaffolding, racking joints and watering in pillar of as shown in the drawing etc. complete.			
	a) Rectangular or square	3564.00	Cum.	
	b) Curved	4208.00	Cum.	

# **STONE MASONRY**

			asonry
ITEM - CODE	DESCRIPTION	RATE	UNIT
STM-001	Providing un-coursed rubble masonry of trap stones in cement mortar 1:6 in foundation and plinth of inner wall including bailing out water manually, striking joints on unexposed faces and watering etc. complete.	2441.00	Cum.
STM-002	Providing un-coursed rubble masonry of trap stones in cement mortar 1:6 in super structure including racking out joints when plastering is to be done/ striking joints, watering and scaffolding etc. complete.	2637.00	Cum.
STM-003	Providing coursed rubble 2nd sort masonry using all stones of full height in each course of trap stones in cement mortar 1:6 in external walls of plinth, including striking joints, raking out joints, watering etc. complete.	3389.00	Cum.
STM-004	Providing coursed rubble 2nd sort masonry using all stones of full height in cement mortar 1:6 in super structure including racking out joints when plastering is to be done/ striking joints, watering and scaffolding etc. complete.	3796.00	Cum.
STM-005	Providing coursed rubble 1st sort masonry of trap stones in cement mortar 1:6 in superstructure external walls of plinth, including scaffolding, striking joints, raking out joints, watering etc. complete.	3084.00	Cum.
STM-006	Providing coursed rubble 1st sort masonry for pillar of trap stones in cement mortar 1:6 including pointing with cement mortar 1:3 scaffolding and watering etc. complete.	3146.00	Cum.
STM-007	Providing random rubble masonry 2nd sort of trap stones in cement mortar 1:6 in super structure including racking out joints when plastering is to be done on the inside / striking joints, watering and scaffolding etc. complete.	2217.00	Cum.

# **BLOCK MASONRY**

		Block Me	asonry
ITEM - CODE	DESCRIPTION	RATE	UNIT
BLK-001	Providing and laying I.S. standard cement concrete hollow block 100 X 200 X 400 mm in cement mortar 1:6 for super structure including raking of joints, when plastering is to be done/striking joints when plastering is not to be done, curing and scaffolding etc. complete.	313.00	Sqm.
BLK-002	Providing and laying I.S. standard cement concrete hollow block 200 X 200 X 400 mm in cement mortar 1:6 for super structure including raking out joints, when plastering is to be done/striking joints when plastering is not to be done, curing and scaffolding etc. complete.	623.00	Sqm.
BLK-003	Providing and constructing 1:5:8 cement concrete solid block 300 X 200 X 150 mm in cement mortar 1:6 for external walls including raking out joints, when plastering is to be done/striking joints when plastering is not to be done, curing and scaffolding etc. complete.	709.00	Sqm.
BLK-004	Providing and constructing 100mm thick siporex block partition in cement mortar 1:4 having mortar joint 6 mm thick including scaffolding, curing etc. complete.		

# **WATERPROOFING**

		Waterpr	oofing
ITEM - CODE	DESCRIPTION	RATE	UNIT
WP-001	Providing and laying damp proof course 50 mm thick M-20 cement concrete layer and bitumen using cement with approved water proofing compound at the rate of 1 kg. per 50 kg. of cement etc. complete.	221.00	Sqm.
WP-002	Providing and laying damp proof course 50 mm thick of Shahabad Stone and bitumen etc. complete.	380.00	Sqm.
WP-003	Providing and applying Bitumen layer at 2 kg/square meter over terrace structural slab including cleaning the surface for water proofing complete.	97.00	Sqm.
WP-004	Finishing the terrace slab integrally mixed with water proofing compound in cement mortar 1:3 proportion with 20mm thick layer, including curing, finishing using approved waterproofing compound at rate of 1 kg per 50 kg. of cement etc. complete.	83.00	Sqm.
WP-005	Providing and laying water proofing treatment of 112 mm av. thickness consisting of 12 mm thick layer in Cement Mortar 1:3 with water proofing compound at the rate of One Kilograme per bag of cement as base, constructing and laying brick bat coba in cement mortar 1:5 with waterproofing compound at the rate of One Kilogramme per bag of cement and having average thickness of 80mm and finishing with 20mm thick cement plaster layer in cement mortar 1:3 with approved water Proofing compound at the rate of One Kilogramme per cement bag, including all lead, lifts and laid to proper slope to drain of water entirely including Watta at the junction of parapet and work upto a height of 300 mm or as directed and including finishing the top layer of water proofing treatment with false marking of 30cm x 30cm or as directed and covering the whole treatment with seven year's guarantee, on requisite stamp paper etc. complete.	447.00	Sqm.
WP-006	Providing leak proof treatment by injection grouting method to old floor without removing tiles of W.C./Bath with approved water proofing compound and cement solution (fine sand, cement etc.) without breaking tiles making holes, refilling and making them water tight including making good the damages, cleaning etc. complete.	184.00	Sqm.
WP-007	Removing existing water proofing treatment from terrace including I.P.S./brick bat coba etc. without damages to structure, levelling and cleaning the surface for providing new specialized water proofing treatment complete as directed.	114.00	Cum.

		Waterpr	oofing
ITEM - CODE	DESCRIPTION	RATE	UNIT
WP-008	Providing waterproof plaster in W.C. and bath 20mm thick for dado in cement mortar 1:3 with neat finishing, floating using approved water proofing compound at the rate of One Kg. of cement.	195.00	Sqm.
WP-009	Providing waterproofing in W.C. and bath including brick bat coba in all positions consisting of specialized materials as per manufacturer's specifications and covering 7 years guarantee including all leads, lifts etc. complete.	2288.00	Cum.
WP-010	Providing waterproof bedding for flooring of bath and W.C. 25 mm thick in cement mortar 1:3 using 1 kg. of approved waterproofing compound per 50 kg. of cement, including levelling, curing etc. complete.	251.00	Sqm.
WP-011	Providing water proofing by Polymerized water proofing compound to the virgin slab in 3 coats with 7 years guarantee on court fee stamp paper of Rs.100/- including materials and labour and ponding test etc. complete (with the permission of S.E.)		
WP-012	Providing water proofing treatment by Polymerized water proofing compound to the Water tank, W.C. or toilet ducts in three coats with 7 years guarantee on court fee stamp paper of Rs.100/- including materials and labour and including ponding test etc. complete (with the permission of S.E.)		
WP-013	Providing and applying POLYSAFE-EC (Patent No.571) for external walls, slopping R.C.C. Roofs, in three coats to avoid water penetration, Ultra-Violet effects of Sun-rays, Fungus development and to protect the reinforcement from corrosion in atmospheric effects. Cleaning the surface of concrete by brushing with solvent and applying POLISAFE-EC Chemical coating with primer and after 24 Hours interval applying 1st cost, and after 24 Hour interval applying second, third and final coat of approved shade, colour, avoid smoking while painting including necessary scaffolding etc. complete (with the permission of S.E.)	298.00	Sqm.
WP-014	Providing waterproofing treatment as per IS 1346-1966 to generally inaccessible sloping RCC terrace slab with bitumen filler in all positions in five coarse consisting of applying old bitumen primer coat @ 2.5 litre/10 sqm. Hot bitumen layer @ 14.50 kg/10 sqm. and over the same layer of bitumen feit of type III grade as per IS 1332-1965 across slope with 10 cm. overlap commencing at the lowest level and again applying hot bitumen coarse @ 14.50 kg/10 sqm. including all lifts, leads and scaffoldings whenever necessary complete as directed with 5 year guarantee etc. complete.	168.00	Sqm.

# **EXPANSION JOINTS**

			Joints
ITEM - CODE	DESCRIPTION	RATE	UNIT
EXP-001	Providing expansion joints in R.C.C. framed structure (interior columns) with plain premoulded filler 25 mm thick, including fixing T.W. battens both faces and complete as directed.	1805.00	Sqm.
EXP-002	Providing expansion joints in R.C.C. framed structure (exterior columns) with plain premoulded filler 25 mm thick and 3 mm thick aluminium plate, hold fast, fixing T.W. battens on internal face, finishing etc. complete as directed.	2491.00	Sqm.
EXP-003	Providing expansion joints in R.C.C. framed structure (at floor level) with plain premoulded filler 25 mm thick and 3 mm thick aluminium plate, bitumen poured filler, fixing T.W. battens on internal face, finishing etc. complete as directed.	2520.00	Sqm.
EXP-004	Providing expansion joints in R.C.C. framed structure (at floor level) with plain premoulded filler 25 mm thick and 3 mm thick aluminium plate, bitumen poured filler fixing lead flushing on upper side, T.W. battens on internal face, finishing etc. complete as directed.	3396.00	Sqm.
EXP-005	Providing and fixing chicken mesh of 19 gauge with about 35 cm width at the junction of R.C.C. members and brick work, of approved quality including fixing mesh in position by necessary nailing in concrete or/B.B. masonry and or tying by binding wire etc. complete.	401.00	Sqm.

### **PLASTERING AND POINTING**

Plastering and Point			ointing
ITEM - CODE	DESCRIPTION	RATE	UNIT
PL-001	Providing internal cement plaster 6mm thick in a single coat in cement mortar 1:3 without neeru finish to concrete surface in all positions including scaffolding and curing.	86.00	Sqm.
PL-002	Providing internal cement plaster 6mm thick in a single coat in cement mortar 1:4 without neeru finish to concrete surface in all positions including scaffolding and curing.	83.00	Sqm.
PL-003	Providing internal cement plaster 12mm thick in a single coat in cement mortar 1:3 without neeru finish to concrete or brick surface in all positions including racking out joints, scaffolding and curing complete.	128.00	Sqm.
PL-004	Providing internal cement plaster 12mm thick in a single coat in cement mortar 1:4 without neeru finish to concrete or brick surface in all positions including racking out joints, scaffolding and curing complete.	114.00	Sqm.
PL-005	Providing internal cement plaster 12mm thick in a single coat in cement mortar 1:5 without neeru finish to concrete or brick surface in all positions including racking out joints, scaffolding and curing complete.	109.00	Sqm.
PL-006	Providing internal cement plaster 20mm thick in a single coat in cement mortar 1:3 without neeru finish to stone masonry surface in all positions including scaffolding, racking out joints, providing groove at joints of stone masonry and concrete members and curing complete.	152.00	Sqm.
PL-007	Providing internal cement plaster 20mm thick in two coats in cement mortar 1:4 without neeru finish to stone masonry surface in all positions including scaffolding, racking out joints, providing groove at joints of stone masonry and concrete members and curing complete.	175.00	Sqm.
PL-008	Providing internal cement plaster 20mm thick in two coats in cement mortar 1:5 without neeru finish to stone masonry surface in all positions including racking out joints, scaffolding & curing complete.	166.00	Sqm.
PL-009	Providing internal cement plaster 25mm thick in two coats in cement mortar 1:4 without neeru finish to concrete brick or stone surface in all positions including racking out joints, scaffolding & curing complete.	238.00	Sqm.

	Plastering and Pointing		
ITEM - CODE	DESCRIPTION	RATE	UNIT
PL-010	Providing sand face plaster externally in two coats using approved screened sand in all positions, including providing base coat of 15mm thick in cement mortar 1:4 mixing approved water proofing compound at the rate of 1 kg./ 50 kg. of cement and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment 8mm thick in cement mortar 1:4 and finishing the surface by taking out grains and curing for 14 days including preparing the surface, watering and scaffolding etc. complete.	317.00	Sqm.
PL-011	Providing rough cast cement plaster externally in two coats to concrete/ brick / stone masonry in all positions with base coat of 12 to 15 mm thick in cement mortar 1:4 mixing approved water proofing compound at the rate of 1 kg./ 50 kg. of cement and over it rough cast treatment 12mm thick in proportion 1:1½:3 including racking out joints, scaffolding and 14 days curing complete.	273.00	Sqm.
PL-012	Providing rough cast cement plaster externally in two coats with coloured cement finish to concrete/ brick / stone masonry in all positions with base coat of 12 to 15 mm thick in cement mortar 1:4 mixing approved water proofing compound at the rate of 1 kg./ 50 kg. of cement and over it rough cast treatment 12mm thick in proportion 1:1½ including racking out joints, scaffolding and 14 days curing complete.	289.00	Sqm.
PL-013	Providing neeru finish to plaster surface in all positions including scaffolding and curing complete.	28.00	Sqm.
PL-014	Providing neeru finish to plaster surface for providing neeru finishing to ceiling including scaffolding and curing complete.	28.00	Sqm.
PL-015	Providing exterior stone – crete facing of approved colour and dressing with base coat of 12 to 15 mm thick in cement mortar 1:3 using approved water proofing compound at the rate of 1 kg/50 kgs. of cement to brick /stone/ concrete surface in all positions including final coat for stone crete facing of thickness not less than 12mm in cement mortar 1:3 using coloured pigment including racking out joints, scaffolding and curing for 14 days complete.	383.00	Sqm.
PL-016	Providing flush grooved pointing with cement mortar 1:3 to brick masonry including scaffolding and curing complete.	75.00	Sqm.
PL-017	Providing flush grooved pointing with cement mortar 1:3 to stone masonry including scaffolding and curing complete.	64.00	Sqm.
PL-018	Providing tuck pointing with cement mortar 1:3 to stone/brick masonry including scaffolding and curing complete.	121.00	Sqm.
PL-019	Providing weathered pointing with cement mortar 1:3 to stone/brick masonry including scaffolding and curing complete.	107.00	Sqm.

	Plastering and Pointing		
ITEM - CODE	DESCRIPTION	RATE	UNIT
PL-020	Providing 'V' groove pointing with cement mortar 1:3 to stone/brick masonry including scaffolding and curing complete.	75.00	Sqm.
PL-021	Providing internal cement plaster 12mm thick in a single coat in cement mortar 1:3 without neeru finish to brick surface including scaffolding and curing complete using Portland Pozzolona cement and flyash etc. complete.	114.00	Sqm.
PL-022	Providing internal cement plaster 20mm thick in a two coats in cement mortar 1:4 without neeru finish to brick surface including scaffolding and curing complete using Portland Pozzolona cement and flyash etc. complete.	154.00	Sqm.
PL-023	Providing sand face plaster externally in two coats using approved screened sand in all positions, including preparing the surface, providing base coat of 15mm thick in cement mortar 1:4 mixing approved water proofing compound at the rate of 1 kg./ 50 kg. of cement and curing the same for not less than two days and keeping the surface of base coat rough to receive the sand faced treatment 8mm thick in cement mortar 1:4 and finishing the surface by taking out grains and curing for 14 days, scaffolding etc. complete using Portland Pozzolana cement and flysh etc. complete.	281.00	Sqm.

# **PAVING, FLOOR FINISH AND DADO**

	Paving, Floor Finish and Dado			
ITEM - CODE	DESCRIPTION	RATE	UNIT	
PFD-001	Providing and laying rough Shahabad stone Flooring 25 mm to 30mm thick and 30cm wide in plan/diamond pattern on a bed of cement mortar 1:6 including cement float, pointing in cement mortar 1:3, curing and cleaning etc. complete.	323.00	Sqm.	
PFD-002	Providing and laying rough Shahabad stone Flooring 40 mm to 50mm thick and 30cm wide in plain/diamond pattern on a bed of cement mortar 1:6 including cement float, pointing in cement mortar 1:3, curing and cleaning etc. complete.	346.00	Sqm.	
PFD-003	Providing and laying rough Shahabad stone Flooring 50 mm to 60mm thick and 30cm wide in plain/diamond pattern on a bed of cement mortar 1:6 including cement float, pointing in cement mortar 1:3, curing and cleaning etc. complete.	531.20	Sqm.	
PFD-004	Providing and laying rough Shahabad Stone Flooring 25mm to 30mm thick on a bed of sand including cement float, pointing in cement mortar 1:3, curing and cleaning etc. complete.	274.00	Sqm.	
PFD-005	Providing and laying in position polished Shahabad Stone flooring of approved quality 25mm to 30mm thick in plain/diamond pattern on a bed of cement mortar 1:6 including cement float, filling joints with neat cement slurry, curing, polishing and cleaning etc. complete.  Size 30 cm x 30 cm.	521.00	Sqm.	
PFD-006	Providing and laying in position polished Shahabad Stone flooring of approved quality 25mm to 30mm thick in plain/diamond pattern on a bed of cement mortar 1:6 including cement float, filling joints with neat cement slurry, curing, polishing and cleaning etc. complete.  Size 55 cm x 55 cm.	552.00	Sqm.	
PFD-007	Providing and laying in position polished Tandur Stone flooring of approved quality 25mm to 30mm thick in plain/diamond pattern on a bed of cement mortar 1:6 including cement float, filling joints with neat cement slurry, curing, polishing and cleaning etc. complete.  Size 30 cm x 30 cm	495.00	Sqm.	
PFD-008	Providing and laying in position polished Tandur Stone flooring of approved quality 25mm to 30mm thick in plain/diamond pattern on a bed of cement mortar 1:6 including cement float, filling joints with neat cement slurry, curing, polishing and cleaning etc. complete.  Size 55 cm x 55 cm	553.00	Sqm.	

	Paving, Floor Finish and Dado		
ITEM - CODE	DESCRIPTION	RATE	UNIT
PFD-009	Providing and laying in position polished Kota Stone flooring of approved quality 25mm to 30mm thick plain/diamond pattern on a bed of cement mortar 1:6 including cement float, filling joints with neat cement slurry, curing, polishing and cleaning etc. complete.  Size 30cm x 30 cm	820.00	Sqm.
PFD-010	Providing and laying in position polished Kota Stone flooring of approved quality 25mm to 30mm thick plain/diamond pattern on a bed of cement mortar 1:6 including cement float, filling joints with neat cement slurry, curing, polishing and cleaning etc. complete. (Size 55 cm x 55 cm.)	863.00	Sqm.
PFD-011	Providing and laying in position skirting or dado of polished Shahabad Stone slab of approved quality 25mm to 30mm thick on plaster in cement mortar 1:4, including cement float, filling joints with neat cement slurry, curing polishing add cleaning complete.	567.00	Sqm.
PFD-012	Providing and laying n position skirting or dado of polished Tandur Stone slab of approved quality 25mm to 30mm thick on plaster in cement mortar 1:4, including cement float, filling joints with neat cement slurry, curing polishing add cleaning complete.	538.00	Sqm.
PFD-013	Providing and laying in position skirting or dado of polished Kota Stone slab of approved quality 25mm to 30mm thick on plaster in cement mortar 1:4, including cement float, filling joints with neat cement slurry, curing polishing and cleaning complete.	901.00	Sqm.
PFD-014	Providing and laying cement concrete flooring 40mm thick with cement concrete M25 laid to proper line, level and slope in alternate bays including compaction, filling joints marking lines to give appearance of tiles 30cm x 30cm or other approved design, finishing smooth (with extra cement) in approved colour as directed and curing complete.	241.00	Sqm.
PFD-015	Providing and laying cement concrete flooring 50mm thick with cement concrete M25 laid to proper line, level and slope in alternate bays including compaction, filling joints marking lines to give appearance of tiles 30cm x 30cm or other approved design, finishing smooth (with extra cement) in approved colour as directed and curing complete.	278.00	Sqm.
PFD-016	Providing and laying white glazed tiles of 148.5 mm x 148.5 mm / 200 mm x 100 mm, 300 mm x 200 mm in size and 5 to 6 mm thick for flooring in required positions and laid on a bed of cement mortar 1:4 including neat cement float, filling joints with white cement slurry, curing and cleaning complete. (including all specials required like round edge titles, corner	795.00	Sqm.

	Paving, Floor Finish and Dado		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	cups etc.) (with white cement).		
PFD-017	Providing and fixing white glazed tiles of 148.5 mm x 148.5 mm / 200 mm x 100 mm, 300 mm x 200 mm in size and 5 to 6 mm thick for dado and skirting in required positions on plaster of cement mortar 1:4 including neat cement float, including filling joints with white cement slurry, curing and cleaning complete. (including all specials required like round edge titles, corner cups etc.)	859.00	Sqm.
PFD-018	Providing and laying coloured glazed tiles of 148.5 mm x 148.5mm / 200 mm x 100 mm, 300 mm x 200 mm in size and 5 to 6 mm thick for flooring in required positions and laid on a bed of cement mortar 1:4 including neat cement float, filling joints with white cement slurry, curing and cleaning complete. (including all specials required like round edge titles, corner cups etc.)	859.00	Sqm.
PFD-019	Providing and fixing coloured glazed tiles of 148.5 x 148.5 mm / 200 mm x 100 mm, 300 mm x 200 mm in size and 5 to 6 mm thick for dado and skirting in required positions on plaster of cement mortar 1:4 including neat cement float, including filling joints with white cement slurry, curing and cleaning complete. (Including all specials required like round edge titles, corner cups etc.)	923.00	Sqm.
PFD-020	Providing and laying white glazed tiles of 300 mm x 300 mm in size and 5 to 6 mm thick for flooring in required positions and laid on a bed of cement mortar 1:4 including neat cement float, filling joints with white cement slurry, curing and cleaning complete. (Including all specials required like round edge titles, corner cups etc.)	823.00	Sqm.
PFD-021	Providing and fixing white glazed tiles of 300 mm x 300 mm in size and 5 to 6 mm thick for dado and skirting in required positions on plaster of cement mortar 1:4 including neat cement float, including filling joints with white cement slurry, curing and cleaning complete. (Including all specials required like round edge tiles, corner cups etc.)	882.00	Sqm.
PFD-022	Providing and fixing coloured glazed tiles of 300 mm x 300 mm in size and 5 to 6 mm thick for flooring in required positions on plaster of cement mortar 1:4 including neat cement float, including filling joints with white cement slurry, curing and cleaning complete. (Including all specials required like round edge titles, corner cups etc.)	882.00	Sqm.
PFD-023	Providing and fixing coloured glazed tiles of 300 mm x 300 mm in size and 5 to 6 mm thick for dado and skirting in required positions on plaster of cement mortar 1:4 including neat cement float, including filling joints with white cement slurry, curing and cleaning complete. (Including all specials	941.00	Sqm.

	Paving, Floor Finish and Dado		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	required like round edge titles, corner cups etc.)		
PFD-024	Providing and fixing ceramic tiles of IS Std. And approved quality 30 x 30 cm size for flooring in required position laid on be of cement mortar 1:4 including cement float, filling joint with white/colour cement slurry, cleaning, curing, complete.	1017.00	Sqm.
PFD-025	Providing and fixing ceramic tiles of IS Std. And approved quality 20 x 20 cm size for flooring in required position laid on be of cement mortar 1:4 including cement float, filling joint with white/colour cement slurry, cleaning, curing, complete.	941.00	Sqm.
PFD-026	Providing and fixing ceramic tiles of IS Std. And approved quality 30 x 30 cm size for dado and skirting in required position with ready made adhesive mortar of approved quality in required position after making the wall portion in level in plaster of cement mortar 1:4 including joint filling with white/colour cement slurry, cleaning, curing complete.	1052.00	Sqm.
	Size: 30 x 30 cm.		
PFD-027	Providing and fixing ceramic tiles of IS Std. And approved quality 20 x 20 cm size for dado and skirting in required position with ready made adhesive mortar of approved quality in required position after making the wall portion in level in plaster of cement mortar 1:4 including joint filling with white/colour cement slurry, cleaning, curing complete.	982.00	Sqm.
	Size : 20 x 20 cm.		
PFD-028	Providing and laying gray cement base marble mosaic 25cm x 25cm and 20mm thick for flooring in required position set on a bed of 1:4 cement mortar including neat cement float, filling the joints with white cement slurry mixed with approved shade of pigment to match the colour of tiles, curing, polishing and rubbing complete with/without border.	444.00	Sqm.
PFD-029	Providing and fixing gray cement base marble mosaic 25cm x 25cm and 20mm thick of approved colour and pattern, white and coloured marble chips of size 6mm to 20mm for dado and skirting in required position set on a bed of 1:4 cement mortar including neat cement float, filling the joints with white cement slurry mixed with approved shade of pigment to match the colour of tiles, curing, polishing and rubbing complete with/without border.	401.00	Sqm.
PFD-030	Providing and laying gray cement base marble mosaic 25cm x 25cm and 20mm thick of approved colour and pattern, white	541.00	Sqm.

	Paving, Floor Finish and Dado		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	and coloured marble chips of size 6mm to 20mm for flooring in required position set on a bed of 1:4 cement mortar including neat cement float, filling the joints with white cement slurry mixed with approved shade of pigment to match the colour of tiles, curing, polishing and rubbing complete with/without border.		
PFD-031	Providing and fixing white cement base marble mosaic 25cm x 25cm and 20mm thick of approved colour and pattern, white and coloured marble chips of size 6mm to 20mm for dado and skirting in required position set on a bed of 1:4 cement mortar including neat cement float, filling the joints with white cement slurry mixed with approved shade of pigment to match the colour of tiles, curing, polishing and rubbing complete with/without border.	567.00	Sqm.
PFD-032	Providing and laying machine cut white/coloured marble slab 60cm x 45 cm and 20mm thick of approved quality, vein and colour for flooring in required pattern on a bed of 1:6 cement mortar including neat cement float, filling joints with white/coloured cement slurry, curing, polishing and cleaning complete.	2366.00	Sqm.
PFD-033	Providing and laying machine cut white/coloured marble slab 60cm x 45 cm and 20mm thick of approved quality, vein and colour for dado and skirting in required pattern on a bed of 1:4 cement mortar including neat cement float, filling joints with white/coloured cement slurry, curing, polishing and cleaning complete.	2415.00	Sqm.
PFD-034	Providing and laying in situ marble mosaic of 10mm thickness with white and coloured marble chips of size 6mm in coloured cement in situation panels for flooring including under layer of 1:2:4 I.P.S. 30mm thick, providing aluminium strips to form panels, levelling, compaction, curing, polishing and cleaning complete.	496.00	Sqm.
PFD-035	Providing and laying in situ marble mosaic dado and skirting 6mm thickness with white and coloured marble chips of size 6mm upto 20mm with suitable panels on cement plaster 1:3, 20mm thick, including aluminium strips for forming panels, rounding of corners and junctions with flooring and walls, curing, polishing and cleaning complete.	530.00	Sqm.
PFD-036	Providing and laying in required positions flooring of tukada mosaic (broken mosaic tile pieces) of approved coloured and pattern, set in a bed of 1:4 cement mortar, including neat cement/coloured cement float, giving proper slopes, compaction, curing and finishing complete (including polishing).	424.00	Sqm.

	Paving, Floor Finish and Dado		
ITEM - CODE	DESCRIPTION	RATE	UNIT
PFD-037	Providing and fixing approved P.V.C. / Synthetic tiles flooring/dado & skirting of approved make and quality and required size with ready made adhesive (ISI mark quality) including cleaning surface before laying leveling the surface etc. complete.	432.00	Sqm.
PFD-038	Providing and laying polished Shahabad stone slabs 25mm to 30mm thick for treads and risers for steps and staircase in one piece with rounded nosing & engraving three lines for treads on bed of 1:4 cement mortar including neat cement float, filling joints with cement slurry, curing, polishing and cleaning complete.	594.00	Sqm.
PFD-039	Providing and laying rough Shahabad stone slabs 40mm to 50mm thick for treads for steps & staircase in one piece with rounded nosing for the treads on bed of 1:4 cement mortar including neat cement float, filling joints with cement slurry, curing, polishing and cleaning complete.	475.00	Sqm.
PFD-040	Providing and laying polished Tandur stone slabs 25mm to 30mm thick for treads and risers for steps and staircase in one piece with rounded nosing & engraving three lines for treads on bed of 1:4 cement mortar including neat cement float, filling joints with cement slurry, curing, polishing and cleaning complete.	569.00	Sqm.
PFD-041	Providing and laying polished Kotah stone slabs 25mm to 30mm thick for treads and risers for steps and staircase in one piece with rounded nosing & engraving three lines for treads on bed of 1:4 cement mortar including neat cement float, filling joints with cement slurry, curing, polishing and cleaning complete.	931.00	Sqm.
PFD-042	Providing and fixing black Kadappa stone for treads of size 20 to 30 mm thick machine polished, cutting rounding corners, groove on edges laying in position, jointing with neat cement slurry on cement mortar bedding in cement mortar 1:4 proportion, curing etc. complete.	613.00	Sqm.
PFD-043	Providing and laying white cement based marble mosaic tiles 20mm thick of approved colour and pattern with white and coloured marble chips of size 6mm to 20 mm for treads and risers of steps and staircases with nosing for the treads moulded as per drawing or as directed on a bed 1:4 including neat cement float, filling joints with neat coloured cement slurry to match the colour of tile, curing, polishing and cleaning complete.	479.00	Sqm.
PFD-044	Providing and laying white/approved colour marble slabs 20mm thick of approved quality, colour and veins for treads and risers of steps and staircases in one piece with round nozing & engraving three lines for treads on bed of 1:4 cement	2607.00	Sqm.

	Paving, Floor Finish and Dado		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	mortar including rounded nosing for the treads, neat cement float, filling joints with cement slurry to match colour of the slabs, curing, polishing and cleaning complete.		
PFD-045	Providing and laying precast polished chequered plain cement tiles of size 20cm x 32 cm and 20mm thick, plain cement tiles for treads and risers of steps and staircases with nosing of treads moulded as per drawing or as directed on bed of 1:4 cement mortar including neat cement float, filling joints with neat cement slurry, curing, polishing and cleaning complete.		
PFD-046	Providing and laying precast polished chequered colour cement tiles of size 20cm x 32 cm and 20 mm thick with nosing of treads moulded as per drawing or as directed on bed of 1:4 cement mortar including neat cement float, filling joints with cement slurry mixed with approved shade of pigment to match the colour of tiles, curing, polishing and cleaning complete.	488.00	Sqm.
PFD-047	Providing sills, jambs & frames of polished Tandur stone 25mm to 30mm thick, on a bed of C.M. 1:4 including neat cement float, filling joints with cement slurry, curing, polishing, rounding edges, cleaning complete.	494.00	Sqm.
PFD-048	Providing sills, jambs & frames of polished Kota stone 25mm to 30mm thick, on a bed of C.M. 1:4 including neat cement float, filling joints with cement slurry, curing, polishing, rounding edges, cleaning complete.	850.00	Sqm.
PFD-049	Providing sills & jams of polished Kadappa stone 25mm to 30mm thick, on a bed of C.M. 1:4 including neat cement float, filling joints with cement slurry, curing, polishing, rounding edges, cleaning complete.	585.00	Sqm.
PFD- 050(A)	Providing sills & jams of white/approved colour marble slabs 20mm thick of approved quality, vein and colour with machine polished surface on a bed of Cement Mortar 1:4 including neat cement float, filling joints with cement slurry to match the colour of the slabs, curing polishing and roundings edges, cleaning etc. complete.	2423.00	Sqm.
PFD- 050(B)	Providing sills & jams of white/approved colour marble slabs 18mm thick of approved quality, vein and colour with machine polished surface on a bed of Cement Mortar 1:4 including neat cement float, filling joints with cement slurry to match the colour of the slabs, curing polishing and roundings edges, cleaning etc. complete.	2180.00	Sqm.
PFD-051	Providing 25 to 30 mm thick partitions of polished black Kadappa stone of approved shape, quality and colour for urinals including cutting holes of required sizes in appropriate places to receive pipes etc. fixing in the cement mortar 1:3, curing and cleaning complete.	724.00	Sqm.

	Paving, Floor Fi		
ITEM - CODE	DESCRIPTION	RATE	UNIT
PFD-052	Providing and fixing Kadappa Stone slab for Kitchen platform of approved type and design 40 mm thick in cement mortar 1:4, including providing and fixing border patti on front edge, filling joints, curing, cleaning etc. complete.	774.00	Sqm.
PFD-053	Washing & cleaning natural surface of stone or any kind of marble.		
PFD-054	Providing Machine polishing to cement/marble mosaic tiled flooring or any other type of flooring including cleaning washing etc. complete as directed.	45.00	Sqm.
PFD-055	Providing Hand polishing to dado, skirting including cleaning, washing etc. complete as directed.	26.00	Sqm.
PFD-056	Providing wax polishing to floors and dado, preparing the surface, scaffolding etc. complete. (S.E.'s prior permission essential)	93.00	Sqm.
PFD-057	Providing and laying flooring of gray cement based marble mosaic tiles of 25 x 25 cm on a bed of and (1:1 1/2) lime mortar / 1:6 cement mortar including neat cement float, filling joints with neat cement slurry, curing, polishing and cleaning without border/with border, using 20 to 40% flyash etc. complete.	447.00	Sqm.
PFD-058	Providing and fixing vitrified tiles of IS standard and approved quality cm size for flooring in required position laid on bed of cement mortar 1:4 including cement float, filling joints with white/colour cement slurry, cleaning, curing etc. complete.		
	a) 600mm x 600mm	1094.00	Sqm.
	b) 900mm x 900mm	1785.00	Sqm.

# **WOOD FINISHES**

			inishes
ITEM - CODE	DESCRIPTION	RATE	UNIT
WDF-001	Providing and applying french polishing for required finish on previously polished wood including knoting, preparing the surface scaffolding etc. complete as directed.	33.00	Sqm.
WDF-002	Providing and applying french polishing to new wood work, including knoting, preparing the surface scaffolding etc. complete as directed.	56.00	Sqm.
WDF-003	Providing and applying Malamine polish of glossy/mat required finish of approved colour to woodwork by spray machine, including knotting and preparing the surface by scrapping, applying french polishing, scaffolding if required etc. complete. The work to be executed with prior approval to Superintending Engineer.	433.00	Sqm.
WDF-004	Providing and applying boiled linseed oil in one coat to old wood works including knoting, preparing the surface scaffolding etc. complete as directed.	10.00	Sqm.
WDF-005	Providing and applying boiled linseed oil in two coats to old wood works including knoting, preparing the surface scaffolding etc. complete as directed.	16.00	Sqm.
WDF-006	Providing and applying Wax polishing to the new wood work including knoting, preparing the surface scaffolding etc. complete as directed.	25.00	Sqm.
WDF-007	Providing and applying Wax polishing to the old wood works including knoting, preparing the surface scaffolding etc. complete as directed.	17.00	Sqm.
WDF-008	Providing and applying varnish in one coat on previously varnished wood works, including knoting, preparing the surface scaffolding etc. complete as directed.	16.00	Sqm.
WDF-009	Providing and applying coal tar in one coat on previously painted wood including knoting, preparing the surface scaffolding etc. complete as directed.	8.00	Sqm.
WDF-010	Providing and applying coal tar in two coats on previously painted wood including knoting, preparing the surface scaffolding etc. complete as directed.	14.00	Sqm.

# OIL PAINTING, COLOUR WASHING, DISTEMPERING

Oil Painting, Colour Washing, Distempering			pering
ITEM – CODE	DESCRIPTION	RATE	UNIT
OP-001	Providing and applying two coats of lead /zinc base oil paint/ bituminous paint of approved colour, shade and quality to new wood work and fibre boards including repairing the surface, knotting, scaffolding if necessary excluding primer coat complete.	46.00	Sqm.
OP-002	Providing and applying three coats of lead /zinc base oil paint/ bituminous paint of approved colour, shade and quality to new wood work and fibre boards including repairing the surface, knotting, scaffolding if necessary excluding primer coat complete.	68.00	Sqm.
OP-003	Providing and applying two coats of lead /zinc base oil paint/ bituminous paint of approved colour, shade and quality to old wood work and fibre boards previously painted by the surface, knotting, scaffolding if necessary excluding primer coat complete.	41.00	Sqm.
OP-004	Providing and applying three coats of lead /zinc base oil paint/ bituminous paint of approved colour, shade and quality to old wood work and fibre boards previously painted by the surface, knotting, scaffolding if necessary excluding primer coat complete.	63.00	Sqm.
OP-005	Providing and applying two coats of lead /zinc base oil paint/ bituminous paint of approved colour, shade and quality to new structural steel work and iron work in buildings, including scaffolding if necessary cleaning and preparing the surface excluding primer coat etc. complete.	45.00	Sqm.
OP-006	Providing and applying three coats of lead /zinc base oil paint/bituminous paint of approved colour, shade and quality to new structural steel work and iron work in buildings, including scaffolding if necessary cleaning and preparing the surface excluding primer coat etc. complete.	68.00	Sqm.
OP-007	Providing and applying two coats of aluminium paint of approved make to new and old structural steel work in buildings and workshops, including scaffolding, cleaning the surface (excluding primer coat) etc. complete.	33.00	Sqm.
OP-008	Providing and applying three coats of aluminium paint of approved make to new and old structural steel work in buildings and workshops, including scaffolding, if necessary cleaning, preparing the surface (excluding primer coat) etc. complete.	56.00	Sqm.

	Oil Painting, Colour Washing, Distempering		
ITEM – CODE	DESCRIPTION	RATE	UNIT
OP-009	Providing and applying two coats of synthetic enamel paint of approved colour and quality to new and old structural steel work and woodwork in buildings, including scaffolding, if necessary and preparing the surface by solvent degreasing & derusting by manual methods, cleaning and preparing the surface (excluding primer coat) etc. complete.	52.00	Sqm.
OP-010	Providing and applying three coats of synthetic enamel paint of approved colour and quality to new and old structural steel work and woodwork in buildings, including scaffolding, if necessary and preparing the surface by solvent degreasing & derusting by manual methods, cleaning and preparing the surface (excluding primer coat) etc. complete.	71.00	Sqm.
OP-011	Providing and applying two coats of flat oil paint of approved colour shade and quality to the old structural steel work and iron work (previously painted) in buildings, including scaffolding, if necessary cleaning the surface (excluding primer coat) etc. complete.	49.00	Sqm.
OP-012	Providing and applying three coats of flat oil paint of approved colour shade and quality to the old structural steel work and iron work (previously painted) in buildings, including scaffolding, if necessary cleaning the surface (excluding primer coat) etc. complete.	70.00	Sqm.
OP-013	Providing and applying two coats of flat oil paint of approved colour shade and quality to the plastered surface including scaffolding, if necessary cleaning the surface (excluding primer coat) etc. complete.	53.00	Sqm.
OP-014	Providing and applying three coats of flat oil paint of approved colour shade and quality to the plastered surface including scaffolding, if necessary cleaning the surface (excluding primer coat) etc. complete.	73.00	Sqm.
OP-015	Providing and applying two coats of water proof cement paint of approved manufacturer & colour to the plastered surface including scaffolding, preparing the surface, watering for two days complete.	34.00	Sqm.
OP-016	Providing and applying three coats of water proof cement paint of approved manufacturer & colour to the plastered surface including scaffolding, preparing the surface, watering for two days complete.	38.00	Sqm.
OP-017	Providing and applying one coat of seal cement primer of approved manufacturer & shade, including scaffolding, if necessary cleaning the surface etc. complete.	15.00	Sqm.

	Oil Painting, Colour Washing, Distempering		
ITEM – CODE	DESCRIPTION	RATE	UNIT
OP-018	Providing and applying one priming coat of approved quality, over steel and other metal surfaces, including preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter with wire brush, fine steel wool and sand paper, scaffolding etc. complete.	16.00	Sqm.
OP-019	Providing and applying one priming coat of approved quality to wood and wood based surface, including preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter by sand paper and scraping, scaffolding etc. complete.	19.00	Sqm.
OP-020	Providing and applying one priming coat of approved quality on concrete /masonry /asbestos cement /plastered surfaces, including scaffolding if necessary, preparing the surface by thoroughly cleaning oil, grease, dirt and other foreign matter sand papering etc. complete	17.00	Sqm.
OP-021	Providing and applying white wash of approved quality in two coats on old /new plastered or masonry surfaces and asbestos cement sheets, including scaffolding and preparing the surface by brushing and brooming down complete.	4.00	Sqm.
OP-022	Providing and applying colour wash of approved colour, shade and quality in two coats to new surface, including scaffolding, brushing and brooming down (excluding two coats of white wash as base coat to be paid separately) etc. complete.	5.00	Sqm.
OP-023	Providing and applying colour wash of approved colour, shade and quality in three coats to new surface, including scaffolding, brushing and brooming down (excluding two coats of white wash as base coat to be paid separately) etc. complete.	9.00	Sqm.
OP-024	Providing and applying colour wash of approved colour, shade and quality in two coats to old surface, including scaffolding, brushing and brooming down (excluding one coat of white wash as base coat to be paid separately) etc. complete.	4.00	Sqm.
OP-025	Providing and applying colour wash of approved colour, shade and quality in three coats to old surface, including scaffolding and preparing the surface by brushing and brooming down (excluding one coat of white wash as base coat to be paid separately) etc. complete.	10.00	Sqm.
OP-026	Providing and applying washable oil bound distemper of approved colour shade and quality to old/new surface in two coats, including scaffolding, preparing surface (excluding priming coat) complete.	31.00	Sqm.
OP-027	Providing and applying washable oil bound distemper of approved colour shade and quality to old/new surface in three coats, including scaffolding, preparing surface (excluding priming coat) complete.	48.00	Sqm.

Oil Painting, Colour Washing, Distemp			pering
ITEM – CODE	DESCRIPTION	RATE	UNIT
OP-028	Providing and applying plastic emulsion paint of approved colour, shade and quality to old/new surfaces in two coats, including scaffolding, preparing surfaces (excluding priming coat) complete.	53.00	Sqm.
OP-029	Providing and applying plastic emulsion paint of approved colour, shade and quality to old/new surfaces in three coats, including scaffolding, preparing surfaces (excluding priming coat) complete.	68.00	Sqm.
OP-030	Providing and applying primer coat of approved quality to old/new wall surfaces to receive oil bound distemper treatment, including scaffolding, preparing the surface as directed completed. (prior approval of S.E. shall be obtained)	16.00	Sqm.

## **WOOD WORK**

		Wood	Work
ITEM - CODE	DESCRIPTION	RATE	UNIT
WD-001	Providing and fixing country cut teak wood common rafters, purlins and purlin cleats, hip rafters, jack rafters, ridges, wall plates, post plates and posts for roofing etc. including scaffolding if necessary, all iron work and one primer coat complete.	71641.00	Cum.
WD-002	Providing and fixing hard wood of approved species for common rafters, purlins and purlin cleats, hip rafters, jack rafters, ridges, wall plates, post plates and posts for roofing etc. including scaffolding if necessary ,all iron work and one primer coat complete.		
WD-003	Providing and fixing country cut teak wood two way trellis work with battens or laths 2.5 cm x 1.2 cm and 5.0 cm x 5.0 cm openings, including frame of 8.0 cm x 5.0 cm vertical and horizontal scantlings and one coat of primer complete.	871.00	Sqm.
WD-004	Providing and fixing hard wood of approved species two way trellis work with battens or laths 2.5 cm x 1.2 cm and 5.0 cm x 5.0 cm openings, including frame of 8.0 cm x 5.0 cm vertical and horizontal scantlings and one coat of primer complete.		
WD-005	Providing and constructing Indian teak wood hand rail of 60 x 70 mm as per detailed drawings or as directed by the Engineer - in - charge, including french polishing complete.	597.00	Rmt.
WD-006	Providing and fixing in position P.V.C. hand rail of approved quality as per IS std. make and shade, as per detailed drawings or as directed by the Engineer-In-Charge, including french polishing complete (50 mm size).	222.00	Rmt.
WD-007	Providing and fixing 20 mm thick teak wood particle board, faced with teak wood Venner for pelmet boxes of 150 to 200 mm wide, to door or window frames, including 20 mm diameter aluminium curtain rod with sockets and finishing with french polishing (without top) complete.	1742.00	Sqm.
WD-008	Providing and fixing decorative teak plywood Veneer lining 4 mm thick with backing of countryteak wood frame work of battens 12 x 25 mm at 30 cm centre to centre fixed to walls and pillars, without skirting and cornice as per drawings, including necessary iron work and finishing the exposed wood with french polish complete.	773.00	Sqm.
WD-009	Providing and fixing jungle wood ballies of approved species 85 mm average diameter for common rafter, purlins, ridge, hip and valley rafters, jack rafter, wall plate, post plate, posts, etc. including all iron work, scaffolding if necessary and oiling in one coat complete.	76.00	Rmt.

	Wood Wo		
ITEM - CODE	DESCRIPTION	RATE	UNIT
WD-010	Providing and fixing 100 mm dia, country teak wood ballies for king post truss of 6.00 m' span as per drawings or as directed by Engineer-in-charge, including all iron work, scaffolding if necessary and oiling complete.	158.00	Rmt.
WD-011	Providing and fixing shutter to wall cupbaord made from 12 mm thick teak wood particle board and one face with approved colour laminated face bonded with phenol formaldehyde synthetic resin B.W.P. grade, including lipping, beading, iron oxidised fixtures and fastenings and painting primer one coat etc. complete.	1334.00	Sqm.
WD-012	Providing and fixing country teak wood planking 25 mm thick for flooring planed on both sides, tongued and grooved, including scaffolding if necessary and one coat of primer complete.	1764.00	Sqm.
WD-013	Providing and fixing country teak wood planking 50 mm thick for flooring planed on both sides, tongued and grooved, including scaffolding if necessary and one coat of primer complete.	3375.00	Sqm.
WD-014	Providing and fixing country cut teak wood joists and griders in timber floors of single, double or framed type including scaffolding if necessary and one coat of primer complete.	74408.00	Cum.
WD-015	Providing and fixing hard wood of approved species joists and grinders in timber floors of single, double or framed type, including scaffolding if necessary and one primer coat complete.		
WD-016	Providing and fixing country teak wood plank ceiling 20 mm thick planed on the underside toungued and grooved, including iron screws and scaffolding if necessary, including primer coat on underside and one coat tar on upperside complete.	1625.00	Sqm.
WD-017	Providing and fixing country cut teak wood framed collar beam/king post/ Queen post truss with all iron work, including scaffolding if necessary and primer coat complete.	76301.00	Cum.
WD-018	Providing and fixing hard wood of approved species frame collar beam/king post, queen truss with all iron work, including scaffolding if necessart and primer coat complete.		
WD-019	Providing and fixing country teak wood skirting 20 mm thick in required position of the size shown in the drawings including all mouldings as per drawings, rough grounds, rawl plugs if necessary and finishing with french polish etc.complete.		Sqm.
WD-020	Providing and fixing country cut teak wood eaves board 15 cm wide and 25 mm thick plain type, including scaffolding and primer in one coat complete.	365.00	Rmt.

ITEM - CODE	DESCRIPTION	RATE	UNIT
WD-021	Providing and fixing hard wood (seasoned and treated) leaves board 15 cm wide and 25 mm thick plain type, including scaffolding and primer in one coat complete.		
WD-022	Providing and fixing country teak wood eaves plate of size 10 cm wide and 20 mm thick, including scaffolding and primer in one coat complete.		Rmt.
WD-023	Providing and fixing Country cut Teak Wood barge board 22 cm wide and 20 mm thick plain type, including scaffolding and primer in one coat complete.		Rmt.
WD-024	Providing and fixing seasons & treated hard word of approved species barge board 22 cm wide and 20 mm thickness plain type, including scaffolding and primer in one coat complete.		

## **ROOFING**

		R	oofing
ITEM - CODE	DESCRIPTION	RATE	UNIT
RFG-001	Providing and fixing corrugated iron sheets of 0.63 mm thickness (22 B.W.G.) conforming IS.277/1969 for roofing without wind tiles, including fastening with galvanised iron screws and bolts and bitumen washers as per drawing complete.	562.00	Sq.Mtr.
RFG-002	Providing and fixing plain zinc sheeting of 1.00 mm thick (20 B.W.G.) over the ridge, hip or valley for galvanised corrugated iron sheets roofing, including fastening with galvanised iron screws and bolts and bitumen washers as per drawing complete.	389.00	Sq.Mtr.
RFG-003	Providing and fixing 6.00 mm thick asbestos cement corrugated (Big size) sheet roofing, conforming to I.S. 459-1970, including galvanised iron J or L hook bolts, galvanised iron and bituminous washers, galvanised iron cramp bolts and nuts and scaffolding complete.	443.00	Sq.Mtr.
RFG-004	Providing and fixing 6.00 mm thick asbestos cement corrugated (Trafford) sheet roofing, including galvanised iron J or L hook bolts, galvanised iron and bituminuous washers, galvanised iron cramp bolts and nuts and scaffolding complete.	356.00	Sq.Mtr.
RFG-005	Providing and fixing 6.00 mm thick asbestos cement ridge capping for roofing, conforming to I.S. 459-1970 including galvanised iron hook bolts, galvanised iron and bituminuous washers, galvanised iron cramp bolts and nuts and scaffolding complete.	346.00	Rmt
RFG-006	Providing and fixing valley gutter of 0.79 mm thick (22 B.W.G.) plain galvanised iron sheets 120 cm. Wide with teakwood planking of 20mm thick including two coats of coal tarring the upper surface of plank (excluding painting to under side of plank) complete.	2262.00	RMT
RFG-007	Providing and fixing valley gutter of 0.79 mm thick (22 B.W.G.) plain galvanised iron sheets 90 cm. Wide with teakwood planking of 20mm thick including two coats of coal tarring the upper surface of plank (excluding painting to under side of plank) complete.	1717.00	RMT
RFG-008	Providing and fixing asbestos cement cowl ventilators in asbestos cement sheet roofing at the required places, including all accessories and scaffolding if necessary.	124.00	No.
RFG-009	Providing and fixing false ceiling of plain asbestos cement sheets 4 mm thick, including scaffolding if necessary all iron work etc, complete(excluding frame work and teak wood runner to be paid separately)	1248.00	Sq.Mtr.
RFG-010	Providing and fixing false ceiling of teakwood particle board half perforated sheets 12mm thick, including scaffolding if necessary all iron work etc, complete(excluding frame work and teak wood runner to be paid seperately)	1086.00	Sq.Mtr.

		R	oofing
ITEM - CODE	DESCRIPTION	RATE	UNIT
RFG-011	Providing and fixing false ceiling of 15 to 20 mm thick decorative boards of fibre plaster of paris, including scaffolding if necessary, all architectural work like mouldings, cornices, curves, domes, cups as per detailed drawing and three coats of spray painting to baords etc. complete (excluding frame work, runners & mild steel suspenders to be paid separately)	468.00	Sq.Mtr.
RFG-012	Providing and fixing false ceiling of 12 mm thick acoustic boards of approved make, with shapes and sizes as per drawings, including scaffolding, all screws and fastening and finishing complete. (Excluding frame work and runner to be paid separately).	1053.00	Sq.Mtr.
RFG-013	Providing and fixing Mangalore tiled roofing with Class "AA" tiles, including fixing 50 x 25 mm horizontal teak wood battens, all iron works and oiling the battens and securing the last course of tiles near the eaves with mild steel flats of 40 mm x 3 mm or 10 mm dia. steel rod and 1.22 mm thick wire plaining the underside of battens including scaffolding if necessary etc. complete(excluding ridge and hip tiles).	547.00	Sq.Mtr.
RFG-014	Providing and fixing Mangalore tiled roofing with Class "AA" tiles, including securing the last course of tiles near the eaves with steel flats 40 mm x 3 mm and fixing by 112 mm long screw and fixing of 50 mm x 25 mm country teak wood sloping battens and fixing 50 mm x 25 mm country teak wood horizontal battens over the sloping battens including painting to all iron work and coal tarring the battens complete (excluding ridge and hip tiles)	601.00	Sq.Mtr.
RFG-015	Providing and fixing new Mangalore tiles with class "AA" tiles, including scaffolding to M.T. roofing excluding woodwork etc. complete.	225.00	Sq.Mtr.
RFG-016	Providing and fixing Mangalore type ridge and hip tiles class "AA" tiles, including scaffolding if necessary, pointing with coloured cement mortar and curing complete.	154.00	Rmt
RFG-017	Providing and fixing glass tiles of Mangalore type at required placed in Mangalore tile roof, including scaffolding, if necessary.	440.00	No.
RFG- 018(A)	Providing and dammering to roof with Two coat of bitumen (on new dungree cloth one coat on each side) including scaffolding etc. complete as directed.	74.00	Sq.Mtr.
RFG- 018(B)	Providing and dammering to roof one coat of Bitumen (without cloth) including scaffolding etc.	26.00	Sq.Mtr.
RFG-019	Providing and fixing glass crete roof in reinforced concrete member (0.05 x 0.75 meter) in size at 60 cm, center to center with 12 mm thick wired glass having thickness of 6 mm, including all accessories and required fixtures and fastenings, fitting complete(Excluding reinforced cement concrete member)	818.00	No.

			oofing
ITEM - CODE	DESCRIPTION	RATE	UNIT
RFG-020	Providing and fixing asbestos cement sheet of IS Std.(60 cm top width) and (23 cm bottom width) and (15 cm depth) valley gutters of approved size and make, including drop ends, stop ends necessary fixtures and fastening the same as per code of standard practice complete.	226.00	RMT
RFG-021	Providing and fixing 12mm dia mild steel bar upto 0.5 m length for anchor rods necessary threading nuts and bolts etc. complete.	55.00	No.
RFG-022	Providing and fixing 16mm dia mild steel bar upto 0.5 m length for anchor rods necessary threading nuts and bolts etc. complete.	83.00	No.
RFG-023	Providing and fixing manglore pattern cowl ventilator tiles in the required places in a manglore tile roof including scaffolding if necessary etc. complete.	81.00	No.
RFG-024	Providing and fixing C.C.T. wood battens 50x25 mm for manglore tile roof work with all iron works ,scaffolding etc. complete.	63.00	RMT
RFG-025	Providing and fixing C.C.T. wood battens 25x12 mm for manglore tile roof work with all iron works, scaffolding etc. complete.	24.00	RMT
RFG-026	Providing and fixing sky light in RCC roof including MS frame with all accessories and required fixtures and fastenings, fitting etc. complete.	1385.00	Sq.Mtr.
RFG-027	Providing and fixing PVC false ceiling consisting of 600mm x 600mm 3mm thick plain PVC sheet used as penel inser in a frame work made using anodised aluminium Tee section of sizes 1" x 1" (25 x 25mm, 19 gauge or 1mm thick) in square pattern of grid sizes of 2' x 2' (600 x 600 mm). The alluminium frame work is supported from the ceiling with the help of GI hook and GI wire/6mm MS rods of required sizes to maintain proper level etc. The alluminium frame work is supported on side wall with the used of alluminium 1" x 1" (25 x 25mm) angles. Complete as per direction of engineer, manufacturer's specifications and drawings.	1068.88	Sq.Mtr.

# DOOR, WINDOWS, VENTILATORS & PARTITIONS

	Door, Windows, Ventilators & Partitions.		
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-001	Providing and fixing country cut teak wood frame as per drawing for second class doors without ventilators, windows, fanlights etc. including all mouldings, rebating, holdfast and finishing with one coat of primer complete.	105610.00	Cum.
DW-002	Providing and fixing seasoned and treated non teak wood frame as per drawing for second class doors without ventilators, windows, fanlights etc. including all mouldings, rebating, holdfast and finishing with one coat of primer complete.	44968.00	Cum.
DW-003	Providing and fixing in position precast R.C.C. (as per IS 456-2000) M-40 frames for doors / windows / louver windows of section 125 x 50 mm with two tor steel bars of 8 mm / 10 mm diameter for compressed strength of 300 kg/square centimeter with wood like finish having 3 numbers of 12 guage M.S. galvanized plates on vertical members for fixing hinges with 4 numbers of threaded holes in each plate, 2 numbers of 12 mm dia holes on horizontal top members for tower bolts, 2 numbers of 16 mm dia holes on vertical members for fixing Aldrop or Tadi, 3 numbers of M.S. galvanized heavy duty hinges with 12 numbers G.I. machine screws of 3/16" x 3/8", 6 numbers of M.S. galavanised specially designed hold fast anchored with tor steel bars of vertical members etc. complete (with all lead) Excluding painting to the frame.	380.00	Rmt.
DW-004	Providing and fixing factory made precast door / window frames of cement concrete (as per IS-456-2000) M-40 grade of section 100 x 60 mm including reinforcement as per I.S. 6523 with polymeric blocks having screw holding capacity of 250 kg. Screw, fixed in position of R.C.C. frame as per requirement and as per specifications without fan light including holdfasts, carting and erecting in position and two coats of oil paint etc. complete.	452.00	Rmt.
DW-005	Providing and making of Alluminium frame works with all necessary Alluminium sections, fixtures and fastening required screws and nuts etc. of IS Std. tor outer frames, shutter frames using for Doors, windows and cupboards. (Only weight of Alluminium section) without powder coating, without wooden filler etc. complete.	436.00	Kg.
DW-006	Providing and applying coloured powder coating to the Alluminium section as per details given or direction (Colour sample to be got approved from Ex. Engineer before use)	387.00	Sqm.

	Door, Windows, Venti	lators & Par	titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-007	Providing and fixing anodized aluminium fully glazed doors including door frame with powder coating 5 mm thick sheet glass necessary fixtures, and fastenings, neoprene type rubber plain gaskets as per IS Std. & detailed drawing etc. complete (Sample to be got approved from Ex. Engineer before use)	3616.00	Sqm.
DW-008	Providing and fixing sintex or equivalent door frames made out of rigid PVC hollow, section DWUF-412 of size 38 mm x 32 mm with steel reinforcement ST-33 of size 14 x 33 mm meter cut and welded and tie rod at the bottom including fixing 100 mm long expandable screws in required number with wooden plugs fixed in walls as holdfasts and remaking damaged surface etc. complete (For Toilet Blocks & Windows).	303.00	Rmt.
DW-009	Providing and fixing sintex or equivalent door frames made out of rigid PVC hollow, section DWUF-405 of size 48 mm x 40 mm with steel reinforcement ST-22 of size 22 x 18 mm meter cut and welded and tie rod at the bottom including fixing 100 mm long expandable screws in required number with wooden plugs fixed in walls as holdfasts and remaking damaged surface etc. complete (For Toilet Blocks).	326.00	Rmt.
DW-010	Providing and fixing sintex or equivalent door frames made out of rigid PVC hollow, section BLR-53 of size 60 mm x 53 mm with steel reinforcement ST-53 of size 27 x 20 mm meter cut and welded and tie rod at the bottom including fixing 100 mm long expandable screws in required number with wooden plugs fixed in walls as holdfasts and remaking damaged surface etc. complete (For Internal Rooms).	445.00	Rmt.
DW-011	Providing and fixing C.T.W. double leaf second class fully panelled door without fanlights adopting sections and sizes as given in the standard specifications Volume II (1981) or as per detailed drawing including iron oxidised fixtures and fastenings and finishing the wood work with one coat of primer complete (without frame)	4336.00	Sqm.
DW-012	Providing and fixing C.T.W. single leaf second class fully panelled door without ventilator adopting sections and sizes as given in the standard specifications Volume II (1981) or as per detailed drawing including iron oxidised fixtures and fastenings and finishing the wood work with one coat of primer complete (without frame)	3897.00	Sqm.

	Door, Windows, Venti	lators & Par	titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-013	Providing and fixing double leaf paneled door shutters 35mm thick as per detailed drawings consisting of C.C.T.W. vertical styles and top rail and frizer rails of 100 mm x 35mm and lock rail 160 x35mm and bottom rail 250mm x 35mm and panels,12 mm thick 3 layered flat pressed teak wood particle board bonded with B.W.P. type exterior grade phenol formaldehyde synthetic resin with commercial veneers on both sides (conforming to I.S. 3097-1980) including iron oxidised fixtures and fastenings and T.W. beading at junctions of pannels inserted including finishing with one coat of primer complete. (sample to be got approved from Ex. Engineer before use)	3270.00	Sqm.
DW-014	Providing and fixing double leaf paneled door shutters 35mm thick as per detailed drawings consisting of C.C.T.W. vertical styles and top rail and frizer rails of 100 mm x 35mm and lock rail 160 x35mm and bottom rail 250mm x 35mm and panels,12 mm thick 3 layered flat pressed teak wood particle board bonded with B.W.P. type exterior grade phenol formaldehyde synthetic with one side decorative teak wood faced veneered and other side commercial ply (conforming to I.S. 3097-1980) including iron oxidised fixtures and fastenings and T.W. beading at junctions of pannels inserted including finishing with one coat of primer complete. (sample to be got approved from Ex. Engineer before use)	3163.00	Sqm.
DW-015	Providing and fixing single leaf paneled door shutter 35mm thick as per detailed drawing consisting of CTW styles, top rail, frieze rail of 100 x 35 mm and inserting panels of 12 mm thick leak wood particle board bonded with phenol formal dehyde synthetic resin grade generally conforming to I.S. 3097-1980 including iron oxidized fixtures and fastenings and finishing with one coat of wood primer etc. complete (without frame)	2780.00	Sqm.
DW-016	Providing and fixing C.T.W. double leaf second class partly panelled partly glazed door without ventilator adopting sections and sizes as given in the standard specifications Volume II (1981) or as per detailed drawing, including iron oxidised fixtures and fastenings and finishing the wood work with one coat of primer complete (without frame)	3621.00	Sqm.
DW-017	Providing and fixing C.T.W. single leaf second class partly panelled partly glazed door without ventilator adopting sections and sizes as given in the standard specifications Volume II (1981) or as per detailed drawing, including iron oxidised fixtures and fastenings and finishing the wood work with one coat of primer complete (without frame)	3196.00	Sqm.

	Door, Windows, Venti	lators & Par	titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-018	Providing and fixing C.T.W. double leaf 22mm thick second class plain planked door without ventilator adopting sections and sizes as given in the standard specifications Volume II (1981) or as per detailed drawing, including finishing the wood work with one coat of primer complete (without frame).	3121.00	Sqm.
DW-019	Providing and fixing C.T.W. single leaf 22 mm thick second class plain planked door without ventilator adopting sections and sizes as given in the standard specifications Volume II (1981) or as per detailed drawings, including finishing the wood work with one coat of primer complete. (Without frame) With iron oxidised, Aluminium with powder coating, fixtures and fastenings.	2999.00	Sqm.
DW-020	Providing and fixing C.C. Teak wood double leaf second class 22 mm thick false paneled door without fan light, fixing 10 mm thick scantling to give appearance of panels as per detailed drawing including iron oxidized, Aluminium with powder coating, fixtures & fastening and finishing the wood work with one coat of primer complete. (Without frame).	3121.00	Sqm.
DW-021	Providing and fixing C.C. Teak wood single leaf second class 22 mm thick false paneled door without fan light, fixing 10 mm thick scantling to give appearance of panels as per detailed drawing including iron oxidized, Aluminium with powder coating, fixtures & fastening and finishing the wood work with one coat of primer complete. (Without frame).	2999.00	Sqm.
DW-022	Providing and fixing teak wood single swing shutter part size panelled as per detailed drawings, including double acting brass spring hinges and finishing with french polishing complete (without frame)	2540.00	Sqm.
DW-023	Providing and fixing 25mm thick country teak wood single swing shutter part size panelled with obscured glass as per detailed drawings or as approved, including double acting brass spring hinges and finishing with french polishing complete (without frame)	2453.00	Sqm.
DW-024	Providing and fixing solid core flush door in single leaf 35mm thick decorative type of exterior grade as per detailed drawings or as approved face veneer on both faces venetians, all necessary beads, mouldings and lipping, brass oxidised fixtures and fastenings with mortise lock, chromium plated handles on both sides and finishing with french polishing complete. (without frame)	2297.00	Sqm.

Door, Windows, Ventilators & Partitions			titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-025	Providing and fixing solid core flush door in single leaf 35mm thick decorative type of exterior grade as per detailed drawings or as approved face veneer on both faces venetian, all necessary beads, moldings and lipping, brass oxidised fixtures and fastenings without mortise lock, chromium plated handles on both sides and finishing with french polishing complete. (without frame)	1531.00	Sqm.
DW-026	Providing and fixing 24 gauge Plain Aluminium Sheet on the face of door shutter including cutting to required size and fixing by screws including making good the damages if any to existing doors shutter and frame etc. complete as directed or as per detailed drawing.	473.00	Sqm.
DW-027	Providing and fixing 30mm thick single leaf door shutter of approved quality and make of 1.50 mm thick PVC sheets on both sides filled with 'PUF' (Poly urethene foam) with three numbers of bright finished brass Butt hunges (100 x70x4 mm size) with brass screws, M.S. Oxidised fixtures and fastenings such as one number of 16mm and 300 mm long aldrop, one number of 250 x 25x5mm door latch, two numbers of 100 mm and 200 mm long tower bolts and two numbers of 100 mm size handles and finished with one coat of approved primer etc. complete (Excluding door frame)	1763.00	Sqm.
DW-028	Providing and fixing 30mm thick single leaf door shutter of approved quality and make of 0.80 mm thick galvanised steel sheets on both sides filled with 'PUF' (Poly urethene foam) with three numbers of bright finished brass Butt hunges (100 x70x4 mm size) with brass screws, M.S. Oxidised fixtures and fastenings such as one number of 16mm and 300 mm long aldrop, one number of 250 x 25x5mm door latch, two numbers of 100 mm and 200 mm long tower bolts and two numbers of 100 mm size handles and finished with one coat of approved primer etc. complete (Excluding door frame)	2022.00	Sqm.
DW-029	Providing and fixing rolling steel shutter fabricated from 18/19 gauges steel laths with side guides, bottom rail, brackets, door suspension shaft, including rolling springs, locking arrangement and housing box at the top with one coat of red lead primer etc. complete.	2033.00	Sqm.
DW-030	Providing and fixing rolling steel shutter fabricated from 18/19 gauges steel laths with side guides, bottom rail, brackets, door suspension shaft, including rolling springs, locking arrangement including 3 ball bearings and housing box at the top with one coat of red lead primer etc. complete.	2120.00	Sqm.

	Door, Windows, Venti	lators & Par	titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-031	Providing and fixing rolling steel shutter fabricated from 18/19 gauges steel laths with side guides, bottom rail, brackets, door suspension shaft, including rolling springs, locking arrangement and mechanical gear operation arrangement and one coat of red lead primer etc. complete.	2042.00	Sqm.
DW-032	Providing and fixing collapsible steel gate in two leaves with channel pickets, pivoted flat bars, including top and bottom guide rollers, stoppers, handles, all fittings and accessories, locking arrangement and applying one coat of red lead primer etc. complete.	1977.00	Sqm.
DW-033	Providing and fixing C.T.W. second class fully glazed ventilator rectangular in shape adopting sections and sizes as given in Standard Specifications Volume II (1981) or as per drawing, including iron oxidised fixtures and fastening and finishing the wood work with one coat of primer complete (without frame and mild steel bars)		
	a) Ventilator	2519.00	Sqm.
DIV 024	b) Fanlight	2015.00	Sqm.
DW-034	Providing and fixing steel Louvered windows / ventilators (IS Std.) of various sizes as per detailed drawing without hot dip zinc coating including fabrication with approved type and quality all fixtures and fastening without teak wood boxing including finishing with one coat of primer and two coats of painting complete. (Sample to be got approved from Ex. Engineer before use)	1650.00	Sqm.
DW-035	Providing and fixing in position aluminium louvered windows / ventilators (IS Std.) of various size with powder coating as per detailed drawings and specifications including aluminium frames 80 x 38 mm box type 5 mm thick sheet glass louvers clips / rubber plain P.V.C. gaskets of approved quality etc. complete (Sample to be got approved from Ex. Engineer before use)	1803.00	Sqm.
DW-036	Providing and fixing country teak wood 25 mm thick double leaves second class windows (fully glazed) adopting sections and sizes as given in Standard Specifications Volume II (1981) with plain observed glass shutters without ventilators/fanlights as per detailed drawings, including iron oxidised fixtures and fastenings and finishing the wood work with one coat of primer complete (without frame and mild steel bars)	1986.00	Sqm.

	Door, Windows, Venti	lators & Par	titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-037	Providing and fixing country teak wood 30 mm thick double leaves second class windows (fully glazed) adopting sections and sizes as given in Standard Specifications Volume II (1981) with plain glass shutters without ventilators/fanlights as per detailed drawings, including iron oxidised fixtures and fastenings and finishing the wood work with one coat of primer complete (without frame and mild steel bars)	2444.00	Sqm.
DW-038	Providing and fixing country cut teak wood louvered windows with teak wood frame 60x 100 mm and glass louvers of approved quality with 16mm dia mild steel bars between louvers, including finishing wood work and iron work with one coat of primer complete.	5772.00	Sqm.
DW-039	Providing and fixing double leaves second class window with panelled shutters 35mm thick with panels 25mm thick without ventilator/ fanlights as per detailed drawings, including iron oxidised fixtures and fastening and finishing the wood with one coat of primer complete (without frame).	2596.00	Sqm.
DW-040	Providing and fixing steel windows of various sizes as per detailed drawing with hot dip zinc coating without / with ventilator including fabrication, glazing with non-acetinic / plain / obscured glass panels of approved type and quality, all fixtures and fastening without teak wood boxing and architraves and finishing with one coat of primer complete. (Sample to be got approved from Ex. Engineer before use)	2508.00	Sqm.
DW-041	Providing and fixing steel windows of various sizes as per detailed drawing with welded square bars 12 mm at 10 cm center to center with hot dip zinc coating without / with ventilator including fabrication, glazing with non-acetinic / plain / obscured glass panels of approved type and quality, all fixtures and fastening without teak wood boxing and architraves and finishing with one coat of primer complete. (Sample to be got approved from Ex. Engineer before use)	2612.00	Sqm.

	Door, Windows, Venti	lators & Par	titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-042	Providing and fixing steel windows made from preprinted cold rolled corrosion resistance steel profiles of required size and shape as per drawing and as directed by the Engineer-in-charge conforming to IS 513 properly glavanised having zinc coating minimum 150 GSM conforming to IS 277 pretreated and phosphated coated with epoxy primer having thickness 5 to 7 microns properly baked, finally coated with polyester paint 12 to 16 micron thickness and baked properly, protected with polyethylene film to avoid damages during handling including cotmer buckets, stiffener plates, hardware made of CRCA with zinc phosphating or powder coated high grade aluminium components, glass filled nylon joinery, high LTV resistance gaskets made of EPDM with specially sleeted screws and fasteners as approved by the Engineer in charge including fixing glass 4 mm thick guard bars 12 mm square bars hold fast, fixing in position, filling gaps all around window after conveying to all lifts and leads etc. complete (Prior approval from S.E.'s essential)		
	i) Double leaf without ventilator	3432.00	Sqm.
	ii) Double leaf with ventilator	3607.00	Sqm.
	iii) Double leaf with double leaf ventilator	4064.00	Sqm.
	iv) Double leaf with tripple leaf ventilator	4218.00	Sqm.
DW-043	Providing and fixing in position anodized extruded aluminium openable window of outer frame size 53 x 57 mm (or as required size with proportionate change in weight) of average weight @ 1.118 kg/Rmt and shutter of 53 x 57 mm (or as required size) of average weight of 0.30 kg/rmt (or as required) with plain sheet glass 5.5 mm thick with neoprene/rubber gasket with hinges, locking arrangement and wooden encasement wherever necessary etc. complete as directed by Engineer-in-charge.	4581.00	Sqm.
DW-044	Providing and fixing in position anodized extruded moulded aluminium fixed glass panel window having frame made out extruded tubular section of size 63 x 38 mm x 2.00 mm thickness (wt.1.054 kg/Rmt) mechanically assembled at corners with glazing, beading of angle 25 x 25 x 1.60mm thick (wt.0.21 kg/Rmt) including plain sheet glass 5.5mm thick with rubber gasket and wooden encasement wherever necessary etc. as per approved drawing and specification etc. complete as directed drawing and specification etc. complete as directed by Engineer-in-Charge.	2845.00	Sqm.

	Door, Windows, Ventilators & Partitions		
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW- 045(A)	Supplying and fixing in position anodized extruded modular aluminium section Two track sliding windows mounted on rectangular frame of size 63 x 38 x 2.00mm thick (1.054kg/Rmt) made up of two track drain bottom section of size 61 x 45 x 1.3mm thick (1.055kg/Rmt) and top and sides sections of size 61 x 31 x 1.3mm thick (0.659 kg/Rmt). The shutter should be of beraring bottom of size 40 x 18 x 1.20mm thick (0.417 kg/Rmt) top member of size 40 x 18 x 1.20mm thick (0.475 kg/Rmt) interlocking section size of 43 x 27 x 1.30 mm thick (0.558 kg/Rmt) and handle section of size 43 x 18 x 1.30 mm thick (0.424 kg/Rmt) selected quality 5.5mm thick clear glass to be fixed in shutter with neoprene gasket with approved quality PVC rollers necessary locks handles PVC lining and wooden encasement wherever necessary etc. complete as directed by Engineer in charge.	2657.00	Sqm.
DW- 045(B)	Supplying and fixing in position anodized extruded modular aluminium section Three track sliding windows mounted on rectangular frame of size 100 x 50 x 2.80mm thick (2.183kg/Rmt) made up of three track drain bottom section of size 92 x 31 x 1.1mm thick (0.911kg/Rmt) and top and sides sections of size 92 x 45 x 1.5mm thick (1.284 kg/Rmt). The shutter should be of beraring bottom of size 40 x 18 x 1.20mm thick (0.417 kg/Rmt) top member of size 40 x 18 x 1.20mm thick (0.475 kg/Rmt) interlocking section size of 43 x 27 x 1.30 mm thick (0.558 kg/Rmt) and handle section of size 43 x 18 x 1.30 mm thick (0.424 kg/Rmt) selected quality 5.5mm thick clear glass to be fixed in shutter with neoprene gasket with approved quality PVC rollers necessary locks handles PVC lining and wooden encasement wherever necessary etc. complete as directed by Engineer in charge.	4504.00	Sqm.
DW- 045(C)	Supplying and fixing in position anodized extruded modular aluminium section four track sliding windows mounted on rectangular frame of size 127 x 45 x 3.18mm thick (2.834kg/Rmt) made up of four track drain bottom section of size 122 x 45 x 1.3mm thick (1.829kg/Rmt) and top and sides sections of size 122 x 31 x 1.1mm thick (1.205 kg/Rmt). The shutter should be of beraring bottom of size 40 x 18 x 1.20mm thick (0.417 kg/Rmt) top member of size 40 x 18 x 1.20mm thick (0.475 kg/Rmt) interlocking section size of 43 x 27 x 1.30 mm thick (0.558 kg/Rmt) and handle section of size 43 x 18 x 1.30 mm thick (0.424 kg/Rmt) selected quality 5.5mm thick clear glass to be fixed in shutter with neoprene gasket with approved quality PVC rollers necessary locks handles PVC lining and wooden encasement wherever necessary etc. complete as directed by Engineer in charge.	5702.00	Sqm.

Door, Windows, Ventilators & Partitions			titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-046	Providing and fixing 16 mm dia. steel round bars at 100 mm c/c to windows/ventilators/fanlights, fixing mild steel Flats 40x 6mm in frame, cutting a recess to fit the flat exactly, including drilling the holes to flats to pass the bars through it 25mm inside in wooden frame including providing two central flats of 40 x 6mm by drilling holes.	903.00	Sqm.
DW-047	Providing and fixing 16 mm dia. steel round bars at 100 mm c/c to windows/ventilators/fanlights, fixing mild steel Flats 40x 6mm in frame, cutting a recess to fit the flat exactly, including drilling the holes to flats to pass the bars through it 25mm inside in wooden frame including providing one central flat of 40 x 6mm by drilling holes including one coat of primer etc. complete (when bar length exceeds 45cm and upto 75cm).	1046.00	Sqm.
DW-048	Providing and fixing 16 mm dia. steel round bars at 100 mm c/c to windows/ventilators/fanlights, fixing mild steel Flats 40x 6mm in frame, cutting a recess to fit the flat exactly, including drilling the holes to flats to pass the bars through it 25mm inside in wooden frame without central mild steel flats including providing one coat of primer etc. complete (No central flat to be provided upto 45cm bar length)	1187.00	Sqm.
DW-049	Providing and fixing 16mm dia mild steel bars to window at 100 mm center to center, including one coat of primer etc. complete (without M.S. flats).	656.00	Sqm.
DW-050	Providing and fixing partition 4mm thick Indian teak Veneer on both sides including C.T.W. frame of 70 x 35mm at 60 cm C/C on both ways, including finishing with French polishing complete (without skirting)	2027.00	Sqm.
DW-051	Providing and fixing partition 4mm thick Indian teak veneer on one side and commercial type plywood on the other side including C.T.W. frame of 70 x 35mm at 60cm C/C on both ways, including finishing with French polishing to Veneer face and oil painting/ french polishing to other face etc. complete (without skirting)	1850.00	Sqm.
DW-052	Providing and fixing country teakwood partly veneered and partly glazed portion with cc teakwood frame & vertical member of same size 70 x 35mm frame at 60mm centre to centre and decorative veneer of 4mm thick including french polishing etc. complete.	1791.00	Sqm.
DW-053	Providing and fixing partitions using 1.84 m height and 12mm thick teakwood particle board bonded with phenol formal dehyde synthetic resin including CTW vertical 70x70mm and bottom rail of 70 x 35 mm and covering batten of 30 x 10 mm at 1.22 metre apart on both ways or as directed including finishing with one coat of primer complete.	1111.00	Sqm.

	Door, Windows, Venti	lators & Par	titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-054	Providing and fixing partitions using 1.84 m height and 12mm thick teakwood one face particle and other teak veneer bonded with phenol formaldehyde synthetic resin including CTW vertical 70x70mm and bottom rail of 70 x 35 mm and covering batten of 30 x 10 mm at 1.22 metre apart on both ways or as directed including finishing with one coat of primer complete.	1230.00	Sqm.
DW-055	Providing and fixing partitions using 1.84 m height and 12mm thick teakwood with both faces teak veneer bonded with phenol formaldehyde synthetic resin including CTW vertical 70x70mm and top and bottom rail of 70 x 35 mm and covering batten of 30 x 10 mm at 1.22 metre apart on both ways or as directed including finishing with one coat of primer complete.	1389.00	Sqm.
DW-056	Providing, supplying and fixing in position anodized extruded aluminium partitions, partly glazed and partly laminated having frame made out of extruded tubular section of size 40 x 60mm with 12 mm thick three layered flat pressed leak wood particle board bonded with BWP type exterior grade phenolformaldehyede synthetic resin conforming to I.S. 12823-1990, laminated on both sides and 5mm thick selected quality flat glass panels fixed with aluminium glass clips 12 x 12 mm and rubber cushioning beading to glass partition as per approved drawing etc. complete ((Sample to be got approved from Ex. Engineer before use)	2276.00	Sqm.
DW-057	Providing, supplying and fixing in position anodized extruded aluminium partitions both side laminated having frame made out of extruded tubular section of size 40 x 65mm with 9 mm thick three layered flat pressed leak wood particle board bonded with BWP type exterior grade phenolformaldehyede synthetic resin conforming to I.S. 12823-1990, laminated on both sides and 5mm thick selected quality flat glass panels fixed with aluminium glass clips 12 x 12 mm as per approved drawing etc. complete ((Sample to be got approved from Ex. Engineer before use)	2910.00	Sqm.
DW-058	Providing and fixing in position anodized extruded aluminium partitions having frame of aluminium extruded tubular section of size 65 x 40mm thick with 12 mm thick three layered flat pressed leak wood particle board bonded with BWP type exterior grade phenol formaldehyde synthetic resin conforming to I.S. 12823-1990, laminated on both sides fixed with aluminium glazing clips 12 x 12 mm (conical) as per drawing etc. complete ((Sample to be got approved from Ex. Engineer before use)	3186.00	Sqm.

	Door, Windows, Ventilators & Partitions		
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-059	Providing and fixing in position C.C.T.W. brackets for weather shade of section 70 x 45 mm mortise and tenon joinery at 1.2. to 1.5 metre center to center or as directed and teak wood battens of required section, including fixing three numbers of iron nut and bolts to each bracket, necessary scaffolding and two coats of painting to wood work etc. complete.	63980.00	Cum.
DW-060	Providing and fixing 22 B.W.G. plain galvanized iron sheets on top of weather shed, including scaffolding, fixing by means of nut and bolts or as directed etc. complete as per detailed drawing (Brackets of 70 x 45 mm to be paid separately).	436.00	Sqm.
DW-061	Providing and fixing 4 mm thick plain A.C. sheets (of IS Std.) on top of the weather shed including scaffolding, fixing by means of nut and bolts or as directed etc. complete as per detailed drawing (Brackets of 70 x 45 mm to be paid separately).	270.00	Sqm.
DW-062	Providing Fibre reinforced Plastic Weather shed, comprising of stainless FRP sheet (of IS Std.) of thickness 2.5 to 3 mm with adequate reinforcement at edges moulded to the shape as per approved drawing including scaffolding, fixing with GI screws etc. complete.	1889.00	Sqm.
DW-063	Replacing by providing and fixing 3 mm thick plain sheet panels to doors and windows etc. including putty complete.	399.00	Sqm.
DW-064	Replacing by providing and fixing 3 mm thick ribbed glass panels to doors and windows etc. including putty complete.	427.00	Sqm.
DW-065	Providing and fixing clear / frosted glass panels 3mm thick for all size including putty, C.T.W. beading etc. complete.	361.00	Sqm.
DW-066	Providing and fixing UV proof plastic sheet panels of approved quality in required thickness of 3mm plain, clear or any colour or obscured (lining) in lieu of glass panels to doors/windows including providing and fixing clips, putty etc. complete. ((Sample to be got approved from Ex. Engineer before use)	559.00	Sqm.
DW-067	Providing and fixing acrylic plastic sheet (of IS Std.) panels of approved quality in required thickness 3 mm plain, clear or any colour or obscured linings in lieu of glass panels to doors/windows including providing and fixing clips, putty etc. complete.	625.00	Sqm.
DW-068	Providing and fixing acrylic plastic sheet (of IS Std.) panels of approved quality in required thickness 5 mm plain, clear or any colour or obscured linings in lieu of glass panels to doors/windows including providing and fixing clips, putty etc. complete.	1160.00	Sqm.
DW-069	Providing and fixing country teak wood skirting 20 mm thick, including necessary beading, rounding French polishing etc. complete.	1265.00	Sqm.

Door, Windows, Ventilators & Pa			titions
ITEM - CODE	DESCRIPTION	RATE	UNIT
DW-070	Providing and fixing country teak wood runner size 150 x 75 mm over partition, including rounding, fixing in the masonry where necessary beading on sides etc. complete.	808.00	Sqm.
DW-071	Providing and fixing teak wood cover moulding 45 x 20 mm over doors and windows in the required shape & size as per drawing, including all mouldings and finishing with French polishing etc. complete.	82.00	Rmt.
DW-072	Providing and fixing welded mesh of 75 x 25 mm and 2.54 mm thick (12 gauge) to teak wood frame work as per detailed drawings or as directed, including iron fastenings, one coat of primer, scaffolding etc. complete (Frame work of 70 x 45 mm and covering battens of 45 x 10 mm to be paid separately)	145.00	Sqm.
DW-073	Providing and fixing welded mesh of 50 x 25 mm and 2.54 mm thick (12 gauge) to teak wood frame work as per detailed drawings or as directed, including iron fastenings, one coat of primer, scaffolding etc. complete (Frame work of 70 x 45 mm and covering battens of 45 x 10 mm to be paid separately)	159.00	Sqm.
DW-074	Providing and fixing welded mesh of 25 x 25 mm and 2.54 mm thick (12 gauge) to teak wood frame work as per detailed drawings or as directed, including iron fastenings, one coat of primer, scaffolding etc. complete (Frame work of 70 x 45 mm and covering battens of 45 x 10 mm to be paid separately)	210.00	Sqm.
DW-075	Providing and fixing welded mesh of 50 x 50 mm and 2.54 mm thick (12 gauge) to teak wood frame work as per detailed drawings or as directed, including iron fastenings, one coat of primer, scaffolding etc. complete (Frame work of 70 x 45 mm and covering battens of 45 x 10 mm to be paid separately)	134.00	Sqm.
DW-076	Providing and fixing 25 mm XPM of 2.54 mm thick (12 gauge) to teak wood frame work as per detailed drawing or as directed including iron fastenings, one coat of primer, scaffolding etc. complete. (Frame work of 70 x 45 mm and covering battens of 45 x 10 mm to be paid separately)	140.00	Sqm.
DW-077	Providing and fixing 20 mm XPM of 2.54 mm thick (12 gauge) to teak wood frame work as per detailed drawing or as directed including iron fastenings, one coat of primer, scaffolding etc. complete. (Frame work of 70 x 45 mm and covering battens of 45 x 10 mm to be paid separately)	166.00	Sqm.
DW-078	Providing and fixing aluminium grill as per AL-104 section approved by AIAGMA decorative of various sizes as per detail drawing and specification etc. complete. (Prior permission to be obtained from S.E. before execution of this item).	1735.00	Sqm.

## **IRON WORK**

			Work
ITEM - CODE	DESCRIPTION	RATE	UNIT
IRON-001	Providing and fixing mild steel grill work for windows, ventilators weighing kg per sq.m. as per drawing, including necessary fixtures, welding and painting with one coat of anti-corrosive paint etc. complete.		
(i)	15 Kg per Sq.m.	741.00	Sqm.
IRON-002	Add for extra weight or deduct for less weight for fabricating such as cutting, shaping, riveting etc. mild steel for grill works including welding.	51.00	Sqm.
IRON-003	Providing and fixing mild steel grill railing weighing per sq.m. with C.C. teak wood hand rail of size 75 x 60 mm and sill of 75 x 25 mm for staircase, and varandah including fabricating, fixtures, erecting, painting grill work with one coat of anticorrosive paint and polishing the sill, hand rail with french polishing complete.		Sqm.
	(i) 15 Kg	1422.00	Sqm.
	(ii) 20 Kg	1672.00	Sqm.
	(iii) 30 Kg	2173.00	Sqm.
	(iv) 35 Kg	2425.00	Sqm.

### **WATER SUPPLY AND SANITARY FITTINGS**

	Water Supply an	d Sanitary F	ittings
ITEM - CODE	DESCRIPTION	RATE	UNIT
WS-001	Providing and laying in trenches mm diameter approved Galvanised iron pipe having embossed at every meter the ISI mark and name of the manufacturer, having mm outer diameter and kilogramme per meter weight with screwed sockets, joints, and necessary galvanised iron fittings as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including providing and applying two coats of oil paint with one coat of primer and necessary excavation and backfilling complete including removing existing pipe if necessary & conveying & stacking as directed.		
	(A) Medium type		
	a) 15mm diameter (outer dia. 21.32 mm & weight 1.27	156.00	Rmt
	kg/Rmt)	178.00	Rmt
	b) 20mm diameter (outer dia. 26.90 mm & weight 1.64 kg/Rmt)	226.00	Rmt
	c) 25mm diameter (outer dia. 33.70 mm & weight 2.52 kg/Rmt)	261.00 317.00	Rmt Rmt
	d) 32mm diameter (outer dia. 42.40 mm & weight 3.24 kg/Rmt)		
	e) 40mm diameter (outer dia. 48.30 mm & weight 3.73 kg/Rmt)		
	(B) Heavy type		_
	a) 15mm diameter (outer dia. 21.32 mm & weight 1.504 kg/Rmt)	198.00 220.00	Rmt Rmt
	b) 20mm diameter (outer dia. 26.90 mm & weight 1.953	311.00	Rmt
	kg/Rmt)	332.00	Rmt
	c) 25mm diameter (outer dia. 33.70 mm & weight 3.058 kg/Rmt)	376.00	Rmt
	d) 32mm diameter (outer dia. 42.40 mm & weight 3.93 kg/Rmt)	404.00	Rmt Rmt
	e) 40mm diameter (outer dia. 48.30 mm & weight 4.54 kg/Rmt)	709.00 1022.00	Rmt Rmt
	f) 50mm diameter (outer dia. 60.30 mm & weight 6.329 kg/Rmt)		
	g) 65mm diameter (outer dia. 76.10 mm & weight 8.065 kg/Rmt)		
	h) 80mm diameter (outer dia. 88.90 mm & weight 10.309 kg/Rmt)		
	i) 100mm diameter (outer dia 114.30mm & weight 15.152 kg/Rmt)		
WS-002	Providing and laying on walls/ceiling / floorsmm dia. approved Galvanised iron pipe having embossed at every meter		

	Water Supply and Sanitary Fittings.		ittings
ITEM - CODE	DESCRIPTION	RATE	UNIT
	the ISI mark and name of manufacturer, havingmm outer diameter and kilogramme per meter weight with screwed sockets, joints and necessary galganised iron fittings such as backnuts, elbows, bends, tees, reducers, enlargers, plugs, etc. including necessary drilling in holes in walls / slabs etc. and remaking good the demolished portion to restore the same in original condition neatly and applying primer and two coats of oil painting including necessary scaffolding including removing existing pipe if necessary & conveying & stacking as directed.		
	(A) Medium type		
	a) 15mm diameter (outer dia. 21.32 mm & weight 1.27 kg/Rmt) b) 20mm diameter (outer dia. 26.90 mm & weight 1.64 kg/Rmt) c) 25mm diameter (outer dia. 33.70 mm & weight 2.52 kg/Rmt) d) 32mm diameter (outer dia. 42.40 mm & weight 3.24 kg/Rmt) e) 40mm diameter (outer dia. 48.30 mm & weight 3.73 kg/Rmt) f) 50mm diameter (outer dia. 60.30 mm & weight 5.23 kg/Rmt) g) 65mm diameter (outer dia. 76.10 mm & weight 6.95 kg/Rmt) h) 80mm diameter (outer dia. 88.90 mm & weight 8.70 kg/Rmt)	167.00 195.00 231.00 277.00 304.00 389.00  558.00	Rmt Rmt Rmt Rmt Rmt Rmt Rmt
	(B) Heavy type		
	a) 15mm diameter (outer dia. 21.32 mm & weight 1.504 kg/Rmt) b) 20mm diameter (outer dia. 26.90 mm & weight 1.953 kg/Rmt) c) 25mm diameter (outer dia. 33.70 mm & weight 3.058 kg/Rmt) d) 32mm diameter (outer dia. 42.40 mm & weight 3.937 kg/Rmt) e) 40mm diameter (outer dia. 48.30 mm & weight 4.545 kg/Rmt) f) 50mm diameter (outer dia. 60.30 mm & weight 6.329 kg/Rmt) g) 80mm diameter (outer dia. 88.90 mm & weight 10.309 kg/Rmt) h) 100mm diameter (outer dia 114.30mm & weight 15.152 kg/Rmt)	211.00 221.00 258.00 319.00 339.00 378.00 786.00 1015.00	Rmt Rmt Rmt Rmt Rmt Rmt Rmt Rmt
WS-003	Providing and fixing in position Ultra Voilet stabilised PVC plumbing pipes of specified outer diameter of required		

	Water Supply an	and Sanitary Fittings		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	standard thickness confirming to IS 4985, including necessary fittings confirming to IS 7834, such as PVC bends, vees, reducers, clamps, plugs etc. necessary excavation trench, refilling necessary drilling holes in walls/slabs, and making the good the surface complete (For 10.00 Kg/Sqcm pressure) including defects liability period & bond for three years.			
	a) 15mm diameter	37.00	Rmt	
	b) 20mm diameter	45.00	Rmt	
	c) 25mm diameter	60.00	Rmt	
	d) 32mm diameter	72.00	Rmt	
	e) 40mm diameter	84.00	Rmt	
	f) 50mm diameter	97.00	Rmt	
	g) 60mm diameter	119.00	Rmt	
WS-004	Providing and fixing approved and tested water meter bearing ISI mark with non return valve including strainer, sockets, union nut and construction of of required and adequate size with MS fabricated frame and mild steel hinged cover with locking arrangement and lock etc. complete.			
	A) with brick masonary chamber			
	a) 15mm diameter water meter	2455.00	No.	
	b) 20mm diameter water meter	2992.00	No.	
	c) 25mm diameter water meter	3606.00	No.	
	B) without brick masonary chamber			
	a) 15mm diameter water meter	1352.00	No.	
	b) 20mm diameter water meter	1841.00	No.	
	c) 25mm diameter water meter	2302.00	No.	
WS-005	Providing and fixing mm dia. screw down bib/stop tap of brass of approved quality and make including necessary sockets, union nut, testing etc. complete.			
	i) 15mm dia.	157.00	No.	
	ii) 20mm dia.	208.00	No.	
	iii) 25mm dia.	292.00	No.	
WS-006	Providing and fixing screw down dia. wheeled stop tap of steel with chromium plating of approved quality and make bearing ISI Mark including necessary sockets, union nut, testing etc. complete.			
	i) 15mm dia.	159.00	No.	
	ii) 20mm dia.	214.00	No.	
	iii) 25mm dia.	283.00	No.	
	iv) 32mm dia.	314.00	No.	
	v) 40mm dia	408.00	No.	

	Water Supply an	and Sanitary Fittings		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	vi) 50mm dia.	452.00	No.	
	vii) 65mm dia.	487.00	No.	
	viii) 80mm dia.	516.00	No.	
WS-007	Providing and fixing steel with chorimium plating stop tap of approved quality and make with clutch/wheel including sockets/union nut and brick masonry chamber with cast iron frame and mild steel hinged cover with locking arrangement and lock.			
	i) 15mm dia.	828.00	No.	
	ii) 20mm dia.	844.00	No.	
	iii) 25mm dia.	875.00	No.	
WS-008	Providing and fixing brass stop tap of approved quality and make with crutch/wheel including sockets union nut and brick masonary chamber with cast iron frame and mild steel hinged cover with locking arrangement and lock etc. complete.			
	i) 15mm dia.	292.00	No.	
	ii) 20mm dia.	362.00	No.	
	iii) 25mm dia.	375.00	No.	
WS-009	Providing and fixing 15 mm dia. concussion push button type brass / gun metal self closing tap of approved make and quality including necessary socket, testing etc. complete.	201.00	No.	
WS-010	Providing and fixing half turn 25mm dia. steel with chromium plating flushing cock including necessary fitting etc. complete.	112.00	No.	
WS-011	Providing and fixing fittings and accessories such as ball cock, overflow pipe with mosquito proof coupling, scour, pipe with plug, manhole with cover and locking arrangement, connecting pipes and embedding intake and outflow pipes into the RCC water reservoir.	936.00	No.	
WS-012	Providing and fixing 45cm wide steel ladder of 40 x 6mm mild steel flat stringers and steps of 18 mm dia. mild steel bar including fixing it in M-15 cement concrete block 60 x 30 x 30cm and painting the ladder with antirust primer and 2 coats of oil paint.	512.00	Rmt	
WS-013	Providing and fixing Indian type white glazed earthenware 580mm water closet pan including "P trap, white earthenware foot rests, Cast iron soil and vent pipes, upto the outside face of the wall including 100mm dia. cast iron plug bend, cement concrete bedding, 10 litres fibre/UPVC high level flushing cistern of approved quality and make with fittings, inlet pipe with stop tap. brackets for fixing the cistern, 32mm dia. UPVC flush pipe with fittings and clamps, 20mm dia. galvanised iron overflow pipe with mosquito proof coupling, galvanised iron chain and pull, painting to the cistern and exposed pipes and cutting and making good the walls and floors.	4185.00	No.	

	Water Supply an	nd Sanitary Fittings		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
WS-014	Renewing Indian type white glazed earthenware 625mm water closet pan with "P" trap including cement concrete bedding and making good the damages, making connections to water supply and drainage and making good the defeciencies if any complete.	1197.00	No.	
WS- 015(A)	Providing and fixing Orissa type (of IS Std) earthenware 580 x 410mm water closet pan including "P" trap white earthenware foot rests, cast iron soil and vent pipes upto the outside face of the wall including 100mm diameter cast iron plug bend, cement concrete bedding, 10 liters capacity UPVC/Fibre flushing cistern of approved quality and make with fittings, inlet pipe with stop tap, brackets, for fixing the cistern 32mm dia. UPVC flush pipe with fittings and clamps, 20mm dia. galvanised iron overflow pipe with mosquito proof coupling, galvanised iron chain and pull, painting to the cistern and exposed pipes and cutting and making good the walls and floors etc. complete. (exclusing waterproof brick bat coba)			
	a) White glazed first class	6505.00	No.	
	b) Colour glazed first class	8888.00	No.	
WS- 015(B)	Providing and fixing Orissa type(of IS standard) earthenware 580 x 410 mm water closet pan including "P" trap, cast iron soil and vent pipes upto the outside face of the wall including 100mm dia. Cast iron plug bend, cement concrete bedding.			
	a) White glazed first class	4695.00	No.	
	b) Colour glazed first class	5021.00	No.	
WS-016	Providing and fixing European type white glazed (of IS Std.) earthenware WC Pan with Bekelite seat and lid with chromium plated brass hinges and rubber buffers including UPVC and soil/vent pipe upto the outside face of the wall, 10 litre enamelled low level flushing cistern with fittings, pipe and stop tap brackets for fixing cistern 32mm dia. UPVC flush pipe with fittings and clamps, 20mm dia UPVC overflow pipe, mosquito proof couplings, GI chain and pulley, cutting and making good to the walls and floors, testing etc. complete.	3448.00	No.	
WS-017	Providing and fixing European type white glazed (of IS Std.) earthenware WC Pan with Bekelite seat and lid with chromium plated brass hinges and rubber buffers including UPVC and soil/vent pipe upto the outside face of the wall, 10 litre fibre low low level tank flushing cistern with fittings, pipe and stop tap brackets for fixing cistern 32mm dia. UPVC flush pipe with fittings and clamps, 20mm dia UPVC overflow pipe, mosquito proof couplings, GI chain and pulley, painting of the cistern and exposed pipes and cutting and making good to the wall and floor, testing etc. complete.	3666.00	No.	

	Water Supply and Sanitary Fittings		
ITEM - CODE	DESCRIPTION	RATE	UNIT
WS-018	Providing and fixing European type coloured glazed (of IS Std.) earthenware WC Pan with Bekelite seat and lid with chromium plated brass hinges and rubber buffers including UPVC and soil/vent pipe upto the outside face of the wall, 10 litre UPVC low level tank flushing cistern 32mm dia. UPVC flush pipe with fittings, clamps 20mm dia. UPVC over flow pipe with mosquito proof couplings pointing to exposed pipe and cutting and making good to the wall and floor testing etc. complete.	3849.00	No.
WS-019	Providing and fixing European type white glazed (as per IS Std) earthenware coupled closet with syphonic trap with syphonic low level 10 litres White glazed cistern with black bakelite seat and lid with chromium plated brass hinges including UPVC soil and white glazed vent pipe upto the outside face of the wall including 100mm dia. UPVC plug bend, inlet pipe, stop tap etc. all fittings, cutting and making good to the walls and floor, testing etc. complete.	7363.00	No.
WS-020	Providing and fixing "Anglo Indian type" white glazed (as per IS Std) earthenware WC pan with backelite seat and lead with chromium plated brass hinges including UPVC soil and vent pipe upto the outside face of the wall and 100mm dia. UPVC plug bend, 10 litre UPVC low level flushing cistern, 32mm dia PVC flush pipe with fittings and clamps, 20mm dia. PVC over flow pipe with mosquito proof coupling, GI chain and pulley painting of cistern and exposed pipe and cutting and making good to the walls and floor, testing etc. complete.	3405.00	No.
WS-021	Providing and fixing "Anglo Indian type" (IS Std.) Orissa Pattern white glazed WC pan with backelite seat and lead with chromium plated brass hinges including UPVC soil and vent pipe upto the outside face of the wall and 100mm dia. UPVC plug bend, 10 litre UPVC low level flushing cistern, 32mm dia PVC flush pipe with fittings and clamps, 20mm dia. PVC over flow pipe with mosquito proof coupling, GI chain and pulley painting of cistern and exposed pipe and cutting and making good to the walls and floor, testing etc. complete.	3682.00	No.
WS-022	Providing and fixing glazed earthenware full stall type Urinal without flushing cistern with inlet pipes UPVC flush pipe, stop tap 32mm dia. with fittings, UPVC soil pipe, UPVC trap and soil pipe connection upto the outside face of the wall, making good to damaged surface, testing etc. complete.		
	a) coloured glazed	6198.00	No.
	b) White glazed	3967.00	No.
WS-023	Providing and fixing glazed earthenware full stall type Urinal without flushing cistern with inlet pipes UPVC flush pipe, stop tap 32mm dia. with fittings, UPVC soil pipe, UPVC trap and soil pipe connection upto the outside face of the wall,		

	Water Supply and Sanitary Fi		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	making good to damaged surface, testing etc. complete.		
	a) coloured glazed	8637.00	No.
	b) White glazed	6262.00	No.
WS-024	Providing and fixing glazed earthenware semi stall type Urinal (of IS Std.) without cistern with inlet pipes UPVC flush pipe with fittings and flushing arrangement including UPVC soil pipe, UPVC trap and soil pipe connection upto the outside face of the wall, making good to damaged surface, testing etc. complete.		
	a) coloured glazed	3389.00	No.
	b) White glazed	1603.00	No.
WS-025	Providing and fixing of approved quality and make white glazed earthenware lipped flat back type urinal with Fibre/UPVC 5 litres capacity flushing cistern with fittings, inlet pipe with stop tap, brackets for fixing the cistern 32mm dia. UPVC heavy type flush pipe with fittings etc. complete.	2182.00	No.
WS-026	Providing and fixing of approved quality and make group of two white glazed earthenware lipped flat back type urinal with Fibre/UPVC 5 litres capacity flushing cistern with fittings, inlet pipe with stop tap, brackets for fixing the cistern 32mm dia. UPVC heavy type flush pipe with fittings etc. complete.	2510.00	No.
WS-027	Providing and fixing earthenware Wash hand basin of size including cold water piller taps, brackets, rubber plugs and brass chain, stop tap, chromium plate bottle trap and necessary pipe connections including UPAC waste pipe and trap upto the outside face of the wall, making good the damaged surface testing etc. complete.		
	A) White glazed with Bottle Trap		
	a) 45 x 30cm	1395.00	No.
	b) 55 x 40cm	1952.00	No.
	c) 63 x 45cm	2022.00	No.
	B) Coloured glazed with Bottle trap		
	a) 45 x 30cm	1673.00	No.
	b) 55 x 40cm	2022.00	No.
	c) 63 x 45cm	2148.00	No.
WS-028	Providing & Fixing pedestal for WHB of approved size and quality testing etc. complete.		
	a) White glazed	882.00	No.
	b) Coloured glazed	1172.00	No.
WS-029	Providing & Fixing of approved quality and make white glazed		

	Water Supply an	y and Sanitary Fittings		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	earthenware sink including all connections of GI supply and UPVC waste pipe and trap upto the outside face of the wall, cold water chromium plated screw down bib tap, rolled steel or CI brackets, rubber plug with chain and stop tap, making good the damaged surface, chromium plated bottle trap testing etc. complete.			
	a) 600 x 450 x 200mm	2103.00	No.	
	b) 450 x 300 x 200mm	1771.00	No.	
WS-030	Providing & Fixing steel sink of size including all connections of GI supply and UPVC waste pipe and trap upto the outside face of the wall, cold water chromium plated screw down bib tap, rolled steel or CI brackets, rubber plug with chain and stop tap, making good the damaged surface, chromium plated bottle trap testing etc. complete.			
	a) 60 x 45 x 25cm	4303.00	No.	
	b) 40 x 30 x 25cm	3413.00	No.	
WS-031	Providing and fixing 10 cm dia. CI Nahani trap (long arm) including symet grating, bend, connecting piece of CI pipe upto the outside face of the wall, making good the damaged surface, testing etc. complete.	491.00	No.	
WS-032	Providing & Fixing 10mm dia. UPVC Nahani trap fixed with UPVC grating, UPVC plug bend and piece of UPVC pipe upto plug bend, scafolding etc. complete.	368.00	No.	
WS-033	Providing & laying 100mm dia. half round white galzed earthenware pipes in cement concrete 1:5:10 bedding including bends, giving necessary slope, pointing, making good the damaged surface testing etc. complete.	596.00	Rmt	
WS-034	Providing and laying salt glazed stone ware pipe of mm diameter including fittings such as bends tees, single junction, double junction, laying, jointing including excavation and refilling trenches complete			
	a) 100mm dia.	170.00	Rmt	
	b) 150mm dia.	246.00	Rmt	
	c) 225mm dia.	429.00	Rmt	
WS-035	Providing & fixing 75mm dia. cast iron Rain water pipes with lugs including rain water receiving recess with cast iron grating, plug bend, necessary fittings such as offsets, shoe including filling joints with spun yarn soaked in bitumen and cement mortar of 1:3 proportion fixing on wooden battens in walls, cement concrete M15 blocks of 30 x 30 cm in size including necessary scaffolding and painting the exposed faces with one coat of red lead oil paint and two coats of oil paint including removing the existing pipe if necessary and conveying and stacking as directed.	322.00	Rmt	

	Water Supply an	oly and Sanitary Fittings		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
WS-036	Providing and fixing diameter asbestos cement rain water pipes including rain water receiving recess, caste iron grating, necessary asbestos cement fittings such as bends, shoes, pipes on walls over mild steel brackets M.S. flat of 40 mm wide and 3 mm thick, necessary scaffolding, supported on ground by cement concrete M-15 blocks of 0.30 m. x 0.30 m. x 0.30 m. or laying in ground including necessary excavation, filling the trenches, filling joints with cement mortar 1:2, painting the exposed faces with two coats of paint complete (including removing the existing pipe if necessary, conveying & stacking in PWD chowky as directed).			
	a) 100mm	112.00	Rmt	
	b) 150mm	158.00	Rmt	
WS-037	Providing and fixing diameter cast iron waste water pipe with necessary fixtures and fittings such as bends, tees, single junction, double junction, slotted vent offsets, pipe over mild steel bracket M.S. flat of 40 mm wide and 3 mm thick on wall, supported on ground by cement concrete M-15 block of 0.30 m. x 0.30 m. x 0.30 m. or laying in the ground including excavation, filling the trench, filling joints with cement mortar 1:2 with two coats of anti-corrosive paint, scaffolding etc. complete.			
	a) 75mm dia.	359.00	Rmt	
	b) 100mm dia.	404.00	Rmt	
WS-038	Providing and fixing 100 mm diameter cast iron soil pipes with necessary fixtures and fittings such as bends, tees, single junction, double junction, slotted vent offsets, over mild steel brackets M.S. flat of 40 mm wide and 3 mm thick on walls or laying in the ground including excavaion, filling the trench, filling joints with cement mortar 1:2 with two coats of anti-corrosive paint, scaffolding etc. complete.	489.00	Rmt	
WS-039	Providing and fixing in position unplasticized poly venyl chloride (UPVC) ultra voilet rays stablilized outer diameter rain water pipe conforming to I.S. 4985 and I.S. 13592, including necessary fittings, such as UPVC gratings, bends, with door, UPVC clamps, over mild steel bracket M.S. flat of 40 mm wide and 3 mm thick on walls, horse shoes at bottom, rubber ring and making connections water tight with solvent cement including making holes in masonry concrete, redoing the same in cement mortar 1:3, curing, testing etc. complete.	£11.00	D	
	a) 110mm dia.	511.00	Rmt	
WS-040	b) 75mm dia.  Providing and fixing approved asbestos cement vent / waste water / waste water & soil pipe with necessary fixtrues and fittings such as bends, tees, single junction, double junction, slotted vent, offsets, over mild steel brackets M.S. flat of 40 mm wide and 3 mm thick on walls, supported on ground	465.00	Rmt	

	Water Supply an	and Sanitary Fittings		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	floors cement concrete M-15 block of 0.30 m. x 0.30 m. x 0.30			
	m., or laying in the ground including necessary excavation,			
	refilling trenches, filling joints with cement mortar 1:2,			
	painting with red lead oil base coat and two coats of anti-			
	corrosive paint, testing etc. complete.	111.00	D (	
	a) 63.50mm dia. vent pipe	111.00 126.00	Rmt	
	b) 75mm dia. waste water pipe	154.00	Rmt Rmt	
WS-041	c) 100mm dia. waste water & soil pipe Providing and fixing UPVC vent / waste water / waster	134.00	Kilit	
W 5-041	water & soild pipe conforming to I.S 13592 and I.S 4985			
	to withstand continuous internal hydraulic pressure of 4			
	kg/cm2 including necessary fittings, such as bends, tees, single			
	junctions, double junctions and joining with rubber rings and			
	lubricants, over mild steel bracket M.S. flat of 40 mm wide and			
	3 mm thick on walls or laying in ground including necessary			
	excavation, laying, refilling the trench, testing etc. complete.			
	a) 75mm dia.	261.00	Rmt	
	b) 90mm dia.	399.00	Rmt	
WS-042	Providing and fixing AC slotted / cowl dome in soil pipe			
	including necessary fitting material / adhesive complete.			
	a) 75mm dia	41.00	No.	
	b) 100mm dia.	78.00	No.	
WS-043	Providing & Fixng in position UPVC, Ultra voilet stabilised			
	outer diameter cowl dome confirming IS 4985 including			
	making joints with solvent / cement etc. complete.	46.00	NT	
	a) 75mm dia.	46.00	No.	
	b) 90mm dia.	61.00	No.	
WC 044	c) 110mm dia.	66.00	No.	
WS-044	Laying concrete pipes of IS NP2 class of required diameter in proper line, level and slope including necessary collars, testing,			
	excavation, laying, fixing with collars in cement mortar 1:1			
	and refilling the trench etc. complete.			
	a) 150mm dia.	383.00	Rmt	
	b) 225mm dia.	435.00	Rmt	
	c) 300mm dia.	487.00	Rmt	
WS-045	Providing and constructing Brick Masonry inspection chamber	<u> </u>	-	
	and 45 to 90cm in depth including 1:4:8 cement			
	concrete foundation, 1:2:4 cement concrete channels, brick			
	masonary, plastering from inside and outside as required in			
	cement mortar 1:3 and airtight RCC lid with frame fixed in			
	cement concrete 1:2:4 curing, testing etc. complete.			
	a) 60 x 45 cm	3339.00	No.	
	b) 90 x 45 cm	4216.00	No.	
WS-046	Providing and constructing Brick masonry interseptic chamber	4734.00	No.	
	90 x 45cm and 90cm to 150cm in depth including 1:4:8 cement			
	concrete foundation M-15 cement concrete chanels/salt glazed			
	stoneware intercepting trap with rodding pipe set in 1:4:8			

	Water Supply and Sanitary F		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	cement concrete block, brick masonry plastering inside and outside, airtight CI lid with frame fixed in cement concrete, curing testing etc. complete.		
WS-047	Providing and fixing 15 x 10cm of approved quality salt glazed stoneware gully trap in cement concrete 1:4:8 outside the building including symet grating in the sink, connecting glazed stoneware pipe, brick masonry chamber with RCC lid and Symet grating for the gully trap, testing etc. complete.	774.00	No.
WS-048	Providing soak pit of size 120 x 120 x 120cm including excavating and filling with brick bats, charcoal as per drawing etc. complete.	803.00	No.
WS-049	Providing and fixing 100 mm diameter Chromium plated brass shower rose to 15mm dia. GI pipes including necessary bends and sockets etc. complete.	305.00	No.
WS-050	Providing and fixing chromium plated aluminium towel rail 20mm dia. and 75cm long of required length and approved quality fixed on teak wood plate 3" x 3/8" including providing teak wood block in the brick work etc. complete.	114.00	No.
WS-051	Providing & fixing chromium plated towel rails 75cm long, 16mm dia. and of approved quality fixed on chromium plated bracket including providing teak wood gutties in masonry etc. complete.	114.00	No.
WS-052	Providing and fixing chromium plated peg rack fixed on 3" x 3/8" varnished teak wood plate 3' long including fixing teak wood blocks in masonry etc. complete.		
	a) with four pegs		
	b) with three pegs		
WS-053	Providing and fixing 450 x 550mm size superior type Belgium mirror with 16mm dia. nickel plates towel rod etc. complete.	764.00	No.
WS-054	Providing mirror of approved Indian quality copper plated with 100mm thick plywood backing and fixed in the masonry etc. complete as directed.	952.00	No.
WS-055	Providing and fixing Glass shelf 125mm wide and 60cm long with necessary chromium plated brackets providing teak wood gutties etc. complete.	251.00	No.
WS-056	Renewing high level 10 liters flushing cistern (as per IS Std.) of approved quality and make including removing the existing tank & disconnecting & reconnecting to water supply and drainage pipes and making good the deficiencies etc. complete.		
	a) Fibre/UPVC	1074.00	No.
	b) CI Flushing cistern	997.00	No.
WS-057	Providing and fixing reinforced cement concrete cover of approved quality and make of 311 (7.5cm) thick over manhole and inspection chamber including mild steel reinforcement,		

Water Supply and			ittings
ITEM - CODE	DESCRIPTION	RATE	UNIT
	curing testing etc. complete.		
	a) 1.15 x 0.6m size	656.00	No.
	b) 1.25m dia.	840.00	No.
WS-058	Providing hoisting and fixing in position sintex or equivalent high density polyethylene UV stabilized conforming to IS 12701, water shortage tank with necessary connections, testing etc. complete (prior approval of sample by Ex. Engineer is necessary before use).	8.00	Ltr.
WS-059	Conveying, hoisting and fixing the HDPE tanks at the terrace with all lead and lift and making necessary connections including fixing ladders as per Municipal Corporation requirement etc. complete.		
	A) Upto 5000 Litre capacity	2.00	Ltr.
	B) Above 5000 Litre capacity	2.00	Ltr.
WS-060	Cleaning the Septic tank upto 1.50 Cubic meter capacity or equivalent etc. complete.	1005.00	No.
	Add for extra one cubical capacity of Septic tank above 1.50 Cubic Meter Capacity etc. complete.	209.00	Cum.
WS-061	Providing and fixing hume pipe septic tank with pipe and cap including necessary excavation and laying etc. complete.		
	a) 900mm dia.	8115.00	No.
	b) 1200mm dia.	12623.00	No.

## **MISCELLANEOUS**

	Miscellaneous		
ITEM – CODE	DESCRIPTION	RATE	UNIT
MISCBD- 001	Providing and applying two coats of anticorrossive polymer "Rust-remover" coating to the steel surface by exposing the reinforcement removing dust, only residue and existing paint if any throughly and washing the surface with water etc. complete as directed.	102.00	Sqm.
MISCBD- 002	Providing and applying one coat polymer based bonding chemical poly safe plastone to concrete block surface including cleaning the existing surface by grinding/wire brushing etc. complete as directed	114.00	Sqm.
MISCBD- 003	Providing and applying 12.50 mm thick polymer polysafe plastone based cement mortar 1:3 with river screened sand in all positions by using approved polymer chemical as per IS standard to the manufacturers specifications and instructions and finishing the surface in smooth curing etc. complete as directed.	238.00	Sqm.
MISCBD- 003(a)	Providing and applying 25 mm thick polymer polysafe plastone based cement mortar 1:3 with river screened sand in all positions by using approved polymer chemical as per IS standard to the manufacturers specifications and instructions and finishing the surface in smooth curing etc. complete as directed.	432.00	Sqm.
MISCBD- 003(b)	Providing and applying 50 mm thick polymer polysafe plastone based cement mortar 1:3 with river screened sand in all positions by using approved polymer chemical as per IS standard to the manufacturers specifications and instructions and finishing the surface in smooth curing etc. complete as directed.	718.00	Sqm.
MISCBD- 003(C)	Providing and applying 75 mm thick polymer polysafe plastone based cement mortar 1:3 with river screened sand in all positions by using approved polymer chemical as per IS standard to the manufacturers specifications and instructions and finishing the surface in smooth curing etc. complete as directed.	1006.00	Sqm.
MISCBD- 004	Cleaning steel and concrete surface of columns, beams, ceiling etc. by compressed sandblasting including washing with pressured water including machinery, all lead, labour, scaffolding etc. complete.		
	a) By compressed sand blasting	113.00	Sqm.
	b) By manually	60.00	Sqm.
MISCBD- 005	Providing and erecting 1.5 metre high wire fencing with seven rows of barbed wire supported on mild steel <u>angles</u> (50 mm x 50 mm x 6mm) at 2.5 metres centre to centre including excavating pits for foundation, fixing posts in cement concrete blocks of size 45 x 45 x 45 cm. fastening the wire and painting the mild steel angles with one coat of red lead primer and two coats of painting etc. complete.	523.00	Rmt.

	Miscellaneou		
ITEM – CODE	DESCRIPTION	RATE	UNIT
MISCBD- 006	Providing and fixing <u>mild</u> steel grill <u>gate</u> with angle iron frame 65 mm x 65 mm x 10 mm with iron bars at 150 mm etc. centre to centre and diagonal flats as per the detailed drawing including hinges pivot blocks locking arrangement welding, reveting with oil painting in three coats of approved colour shade (Weight of <u>gate</u> 35 kg/sq.m.)	1942.00	Sqm.
MISCBD- 007	Providing Preconstructional Anti termite treatment by treating the bottom surface and the sides of excavation in soil with the plinth beam at the rate of 3 litres of emulsion concentrate of one percent concentration of CHLORPYRIFOS 20% F.C.ISI approved conforming(I.S. 8944) (i.e. by diluting 5 ltr. of chloropyrifoc 20% EC with 95 ltr. of water) and spraying by high volume sprayer per sq.mtr. surface area with 10 years guarantee bond as per I.S. 6313 (Part II 1981)	36.00	Sqm.
MISCBD- 008	Providing exhaustive Anti termite treatment to the wooden frames by drilling 6 mm holes at four corners or as directed on one side at downward angle of 45 degree at junction of wood work and masonary and in between as instructed by Engineer as per requirement at the rate of 60 ml of chlorpyrifos of 20% emulsion concentrate and filling with putty etc. with two years guarantee bond as per I.S. 6313 (Part III) of 1981	25.00	No.
MISCBD- 009	Providing exhaustive Anti termite treatment to the wooden beams by injecting antitermite emulsion at four corners or as directed on one side at downward angle of 45 degree at junction of wood work and masonary and in between as instructed by Engineer as per requirement at the rate of 80 ml of chlorpyrifos of 20% emulsion concentrate per joint as per requirent and filling with putty etc. with two years guarantee bond as per I.S. 6313 (Part III) of 1981.	14.00	Joint
MISCBD- 010	Providing exhaustive Anti termite treatment to the sides of flooring by injecting 1 % of chloropyrifol emulsion concentrate at the rate of 50 ml per hole of 6 mm dia. drilled at a distance of 30 cms centre to centre or more as per requirement and sealing the same with proper filling with two years guarantee bond as per I.S. 6313 (Part III) of 1981.	7.00	One Hole
MISCBD- 011	Providing exhaustive Antitermite treatment around the periphery by excavating trenches of 20 cms. Width and exposing the side of columns and plinth beams upto a depth of 300 mm by injecting one percent of cholordane emulsion concentrate at the rate of 2.25 litres per running metre or more as per requirement with two years guarantee bond as per I.S. 6313 (Part III) of 1981	23.00	Sqm.
MISCBD- 012	Providing general pest control services to the building to control the nuisance of cockcroaches, lizards, bedbugs and other insects etc. with four operations in a year and monthly check up.	12.00	Sqm.
MISCBD- 013	Providing general pest control services to all size inspection chambers to control nuisance of cockcroaches during the year	56.00	No.

	Miscellaneo		
ITEM – CODE	DESCRIPTION	RATE	UNIT
MISCBD- 014	with monthly check up.  Dismantling Mangalore tiled roof and ridge tiles with battens, ridge and barge boards, eaves boards etc. and stacking the materials as directed with all leads and lifts etc. complete, including removing wood work below.	36.00	Sqm.
MISCBD- 015	Dismantling and resetting Mangalore tiles from roof including refixing loose battens etc. complete.	25.00	Sqm.
MISCBD- 016	Dismantling G.I. And A.C. sheet roof covering and stacking them and where directed in the compound including scaffolding etc. complete.	9.00	Sqm.
MISCBD- 017	Dismantling G.I. And A.c. sheet roofing including purlins and rafters etc. including sorting out serviceable and unserviceable material and stacking them as and where directed in the compound, including scaffolding etc. complete.	23.00	Sqm.
MISCBD- 018	Dismantling R.S. girders of any size and span lowering the same and stacking neatly wherever directed in the compound, scaffolding etc. complete for all height.	1083.00	M.T.
MISCBD- 019	Dismantling planking from roof or ceiling and stacking them as directed with all leads and lifts etc. complete.	16.00	Sqm.
MISCBD- 020	Dismantling queen post truss from roof and stacking the materials as directed with all leads and lifts etc. complete.	207.00	No.
MISCBD- 021	Dismantling king post truss from roof and stacking the materials as directed with all leads and lifts etc. complete.	170.00	No.
MISCBD- 022	Dismantling other type of truss below 5 m. span from roof and stacking the materials as directed with all leads and lifts etc. complete.	146.00	No.
MISCBD- 023	Dismantling flat wooden or A.c. sheet ceiling with frame work including scaffolding, stacking the materials as directed with all leads and lifts etc. complete.	20.00	Sqm.
MISCBD- 024	Dismantling the tiles battens and dungree cloth, purlins, rafters, ridges etc. from roof, sorting out serviceable and unserviceable materials and stacking the same as and where directed in the compound scaffolding etc. complete.	38.00	Sqm.
MISCBD- 025	Dismantling battens from roof <u>including scaffolding if required</u> , and stacking them as directed with all leads and lifts etc. complete.	1.00	Rmt.
MISCBD- 026	Dismantling purlins from roof including including scaffolding if required, stacking them as directed with all leads and lifts etc. complete.	2.00	Rmt.
MISCBD- 027	Dismantling rafters from roof including including scaffolding if required, stacking the materials as directed with all leads and lifts etc. complete.	4.00	Rmt.

	Miscellaneo		
ITEM – CODE	DESCRIPTION	RATE	UNIT
MISCBD- 028	Dismantling doors and windows with frames and stacking the materials as directed with all leads, lifts etc. complete.	70.00	No.
MISCBD- 029	Dismantling doors and windows shutters without frames and stacking the materials as directed with all leads, lifts etc. complete.	25.00	No.
MISCBD- 030	Dismantling ventilators and small windows with frames and stacking the materials as directed with all leads, lifts etc. complete.	66.00	No.
MISCBD- 031	Dismantling ventilators and small windows shutters without frames and stacking the materials as directed with all leads, lifts etc. complete.	33.00	No.
MISCBD- 032	Dismantling wooden or A.C. partition including frames work and stacking the materials as directed with all leads, lifts etc. complete.	36.00	Sqm.
MISCBD- 033	Dismantling teak wood trellies work with frame including stacking the materials as directed with frame, all leads, lifts etc. complete.	19.00	Sqm.
MISCBD- 034	Dismantling cement or lime plaster including disposing off the spoils as directed with all leads, lifts etc. complete.	14.00	Sqm.
MISCBD- 035	Dismantling teak wood paneled/ partly / glazed /veneer partitions carefully without damaging the frame or panel and stacking the same as and where directed completed.	16.00	Sqm.
MISCBD- 036	Dismantling cement tiles or marble or polished shahabad floor or dado without bed concrete including stacking the material as directed with all leads, lifts etc. complete.	20.00	Sqm.
MISCBD- 037	Dismantling Shahabad or Tandur stones from floor without bed concrete including stacking the material as directed with all leads, lifts etc. complete.	19.00	Sqm.
MISCBD- 038	Dismantling brick bat coba including stacking the spoils as directed with all leads, lifts etc. complete.	107.00	Cum.
MISCBD- 039	Dismantling trap stone from floor without bed concrete including stacking the materials as directed with all leads, lifts etc. complete.	38.00	Sqm.
MISCBD- 040	Dismantling wire fenching with wooden post stacking the materials with all leads, lifts etc. complete.	1.00	Rmt.
MISCBD- 041	Dismantling wire fenching with iron/cement concrete fencing posts and stacking the materials as directed with all leads, lifts etc. complete.	5.00	Rmt.
MISCBD- 042	Dismantling iron pipe railing having wooden R.C.C. or cement concrete or iron posts and stacking the materials as directed.	5.00	Rmt.
MISCBD- 043	Removing old paint from steel and other metal surface with flame, cleaning and making the surface even and clean with scaffolding etc. complete.	32.00	Sqm.

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ITEM – CODE	DESCRIPTION	RATE	UNIT
MISCBD- 044	Scraping old paint from steel and other metal surface with hand scrapping, cleaning and making the surface even and scaffolding etc. complete.	10.00	Sqm.
MISCBD- 045	Dismantling water proofing treatment from terrace including Indian Patent stone Brick bat coba 15 to 18 cm. Thick without damages to structure, levelling and cleaning the surface for providing new water proofing treatment and stacking the debris upto a distance of 50m. complete as directed.	7.00	Sqm.
MISCBD- 046	Dismantling all types of existing water proofing treatment from terrace including Indian Patent stone Brick bat coba 15 to 18 cm. Thick without damages to structure, levelling and cleaning the surface for providing new water proofing tratment etc_complete as directed.	23.00	Sqm.
MISCBD- 047	Dismantling earthen stoneware pipes and stacking them as directed with all leads, lifts, complete.	4.00	Rmt.
MISCBD- 048	Dismantling cast iron or wrought iron as AC pipe and stacking them as directed with all leads, lifts, complete.	5.00	Rmt.
MISCBD- 049	Dismantling urinals pans or wash hand basins with frame, including disconnecting the sanitary and wate supply connections, removing the same carefully and stacking the serviceable materials as and where directed including throwing the unserviceable materials outside.	53.00	No.
MISCBD- 050	Dismantling W.C. pans including disconnecting the sanitary and water supply connections, removing and breaking flooring and bed concrete around pans and removing the pan carefully and throwing out the refusal outside etc. complete.	86.00	No.
MISCBD- 051	Dismantling carefully the existing structure of stone masonary in cement or lime mortar, including sorting out serviceable materials and stacking the dismantled material within 50 meter neatly as directed.	86.00	Cum.
MISCBD- 052	Dismantling carefully the existing structure of brick masonry in cement mortar or line mortar, including sorting out serviceable materials and stacking the dismantled material within 50 meter lead as directed.	86.00	Cum.
MISCBD- 053	Dismantling carefully the existing plain concrete, including stacking the materials neatly within 50 meter lead as directed.	290.00	Cum.
MISCBD- 054	Dismantling R.C.C. work including breaking concrete by chiselling, wedging etc. including cutting the reinforcement, stacking the serviceable materials and the debris separately upto a distance of 50 meter or spreading the debris as directed complete.	374.00	Cum.
MISCBD- 055	Dismantling wooden floor including beams and joists, including scaffolding if required, stacking the materials as directed with all leads lifts etc. complete.	24.00	Sqm.

	Miscellaneous		
ITEM – CODE	DESCRIPTION	RATE	UNIT
MISCBD- 056	Scraping out old white wash/colour wash by brushing and or scrapping by sand paper and preparing the wall surface smooth including necessary repairs to scratches, <u>disposing of rubbish within compound</u> etc. complete.	2.00	Sqm.
MISCBD- 057	Scraping the old surface with sand paper and coating it with mixture of whiting or glue and linseed oil including scaffolding, disposing of rubbish within compound etc. complete.	7.00	Sqm.
MISCBD- 058	Removing old paint from steel and other old surface preparing the surface by solvent degreasing and derusting by manual scraping, flame cleaning and chemical methods, hand scraping, scaffolding etc. complete.	23.00	Sqm.
MISCBD- 059	Cutting holes in brick masonry walls to receive ends of Girders of any size including scaffolding etc. complete.	23.00	No.
MISCBD- 060	Cutting holes of any size in stone masonry walls to receive ends of Girders of any size and making good the damages done including scaffolding complete.	33.00	No.
MISCBD- 061	Removing and Lowering the roof truss carefully without damaging the members and stacking as and where directed in the compound including scaffolding complete.	365.00	No.
MISCBD- 062	Lowering debris of the existing water proofing treatment from the terrace by any means without causing dust nuisance and damages to structure, stacking the same as and where directed including cleaning the site complete.	135.00	Cum.
MISCBD- 063	Providing and erecting chainlink fencing 1.6 mt. height with G.I. chainlink of size 50 x 50mm 8 gauge thick and fixed 75mm above ground level vertical MS angle of 40x40x6 mm size embedded in CC M-15 block of size 45x45x67 cms. At 1.75 mt. c/c with iron bar 16mm dia. as hold fast including welding link with angle frame at 30 cm. c/c nuts and bolts and horizontal MS angles at top and bottom of 25x25x5 mm size and vertical MS flat 35x5 mm and 25x5 mm horizontal including cross support of 40x40x6 mm angles both sides at every corner or bends embedded in C.C. M-15 block of size 45x45x67 cms. including 3 coats of oil painting etc. complete.	1167.00	Sqm.
MISCBD- 064	Providing and fixing PVC sheet wall panelling of thickness 5mm consisting of panels having size 1220 mm x 2440 mm stuck on inner frame work of 50mm wide strips of 5mm thick PVC sheet. The strips should have in their center a grove of 6mm width and 1mm depth for sinking the head of the screw used to fix the strips to the wall vertically at an equal interval of 10" between two PVC strips. The PVC strips shall be fixed to the wall using 65mm long MS screws through the groove in the strip by using PVC fasteners. The distance between two screws shall not be more than 200mm. A grove of 2mm may be left at joint of two panels for aesthetic looks. The exact size of the	1392.00	Sqm.

		Miscella	neous
ITEM – CODE	DESCRIPTION	RATE	UNIT
	panel and correspondingly of the greed may vary depending on the size of the wall. Optionally a strips of 5mm thick PVC sheet of width 75mm feathered at the edges shall be stuck at the places where two panels are joined, using solvent cement and as directed by Engineer.		

# **ROAD WORKS**

	Road Works		
ITEM – CODE	DESCRIPTION	RATE	UNIT
RD-001	Excavation for roadways in all types of soil, soft murum, hard murum, hard murum with boulders, in all conditions and nature, including clearing and stripping of the area, removal of vegetation, shrubs, taking spot levels, excavating to required depth, line, level and slope, leveling and dressing and consolidating the excavated surface, dewatering by all means upto any extent of water accumulated from any source, sorting out and stacking serviceable and unserviceable materials etc. complete including conveying the excavated material with all lifts and upto a lead of 50 mtr & its spreading or stacking as directed, etc. complete.  Note: All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.	190.00	Cum.
RD-002	Excavation <b>in soft rock</b> for general site grading below ground level in all conditions and nature, including clearing and stripping of the area, removal of vegetation, shrubs, taking spot levels, excavating to required depth, line, level and slope, leveling and dressing and consolidating the excavated surface, dewatering by all means upto any extent of water accumulated from any source, sorting out and stacking serviceable and unserviceable materials etc. complete including conveying the excavated material with all lifts and upto a lead of 50 mtr & its spreading or stacking as directed, etc. complete.  Note: All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.	352.67	Cum.
RD-003	Excavation for roadway in hard rock by blasting including dewatering by all means upto any extent, dressing to the required grade, camber and side slopes and conveying the excavated material with all lifts and lead and stacking etc. complete.  Notes:  1) All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.  2) The excavated hard rock shall be the contractor's property.	303.40	Cum.
RD-004	Excavation for roadway in hard rock/ manjra rock by wedging, chiseling or line drilling including dressing, sectioning to the required grade, camber and side slopes and conveying the excavated material with all lifts and lead, including boulders upto 5 cum and stacking etc. complete.  Notes:  1) All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.	968.52	Cum.

		Road Works		
ITEM – CODE	DESCRIPTION	RATE	UNIT	
	2) The excavated hard rock shall be the contractor's property.			
RD-005	Excavation for foundation / pipe trenches in slush muddy / marshy / slushy / soil, including use of poclain, labour for dewatering during execution including removing the excavated material up to a distance of 50 mtrs. and lifts as below, stacking and spreading as directed, preparing the bed by cleaning the mux, labour required for execution for shuttering item but excluding back filling etc. complete. Providing and fixing shuttering shall be paid separately.	371.67	Cum.	
RD-006A	"Providing earthwork in embankment with approved materials obtained <b>from Contractors own source</b> including all leads and lifts, laying in layers of 20 to 30cms in thickness, breaking clods, dressing to the required lines, curves, grades, and section with watering & compacting with vibratory power roller etc. complete with 95% P.D  Notes:-  1. All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.  2. The Environmental cess shall be recovered at Rs.1/m3 of gross volume computed without deductions as mentioned for the RA Bills or Final Bills.  3. P.D. Tests shall be carried out @ one test comprising of 3 specimens average result per 1000 m2 area.  4. Compaction upto 95% Modified P.D. and the laboratory soil dry density shall be not less than 1.6 g/cc. at Optimum moisture content.  5. The gross volume of the embankment shall reduced by 5% for RA Bills and 1% for Final Bill payments.	406.10	Cum.	
RD-006B	"Providing earthwork in embankment with approved materials obtained <b>from Contractors own source</b> including all leads and lifts, laying in layers of 20 to 30cms in thickness, breaking clods, dressing to the required lines, curves, grades, and section with watering & compacting with vibratory power rollers etc. complete with 97% M.P.D  Notes:-  1. All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.  2. The Environmental cess shall be recovered at Rs.1/m3 of gross volume computed without deductions as mentioned for the RA Bills or Final Bills.  3. P.D. Tests shall be carried out @ one test comprising of 3	407.00	Cum.	

		Road Works	
ITEM – CODE	DESCRIPTION	RATE	UNIT
	<ul> <li>specimens average result per 1000 m2 area.</li> <li>4. Compaction upto 97% Modified P.D. and the laboratory soil dry density shall be not less than 1.75 g/cc. at Optimum moisture content.</li> <li>5. The gross volume of the embankment shall reduced by 5% for RA Bills and 1% for Final Bill payments.</li> </ul>		
RD-006C		407.30	Cum.
RD-007A	"Providing earthwork in embankment with approved materials <b>obtained from the road cutting</b> with a lead of 1.00 KM including all lifts, laying in layers of 20 to 30 cms in thickness, breaking clods, dressing to the required lines, curves, grades, and section with watering and compacting with vibratory power rollers etc. complete with 95% P.D  Notes:-  1. All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.  2. The Environmental cess shall be recovered at Rs.1/m3 of gross volume computed without deductions as mentioned for the RA Bills or Final Bills.  3. P.D. Tests shall be carried out @ one test comprising of 3 specimens average result per 1000 m2 area.  4. Compaction upto 95% Modified P.D. and the laboratory soil dry density shall be not less than 1.6 g/cc. at Optimum moisture content.  5. The gross volume of the embankment shall reduced by 5% for RA Bills and 1% for Final Bill payments.	264.50	Cum.

	Road Works		
ITEM – CODE	DESCRIPTION	RATE	UNIT
RD-007B	Providing earthwork in embankment with approved materials <b>obtained from the road cutting</b> with a lead of 1.00 KM including all lifts, laying in layers of 20 to 30 cms in thickness, breaking clods, dressing to the required lines, curves, grades, and section with watering and compacting with vibratory power rollers etc. complete with 97% M.P.D. <b>Notes:-</b> 1. All payments towards the royalty, fees, taxes etc. shall be	265.25	Cum.
	<ul><li>borne by the contractor.</li><li>2. The Environmental cess shall be recovered at Rs.1/m3 of gross volume computed without deductions as mentioned for the RA Bills or Final Bills.</li></ul>		
	<ol> <li>P.D. Tests shall be carried out @ one test comprising of 3 specimens average result per 1000 m2 area.</li> <li>Compaction upto 97% Modified P.D. and the laboratory soil dry density shall be not less than 1.75 g/cc. at Optimum moisture content.</li> <li>The gross volume of the embankment shall reduced by 5%</li> </ol>		
	for RA Bills and 1% for Final Bill payments.		
RD-008	Picking the road surface including sectioning and removing the grass, shrubs etc. complete (murum surface).	4.30	Sqm.
RD-009	Picking the existing WBM road surface, removing all the caked mud, etc and exposing the metal surface, loosening the existing metal, disposing off the picked up material as directed, including watering, sectioning, grading, diversion of traffic, all labour, materials, use of tools etc complete."	7.60	Sqm.
RD-010	Picking the road surface including sectioning and removing the thin soil layer & exposing B.T. surface etc. complete.	10.90	Sqm.
RD-011	Watering and compaction of existing WBM road with vibratory roller including necessary labour, material. The test shall be conducted to ascertain the strength by way of conducting CBR Test as per IS 2720 (Part-16) at every 3000 Sq.m. or part of it and separate payment shall be paid for the test.	16.00	Sqm.
RD-012	Watering and compaction of embankment formed of material obtained from the road cutting / departmental land within a lead of 50 m. with vibratory roller to 95% P.D. including laying material in layers of 20 to 30 cm. The test shall be conducted to ascertain the strength by the way of conducting C.B.R. Test as per IS 2720 (Part-16) at every 3000 sq.m. or part of it and separate payment shall be paid for the test.	48.00	Cum.
RD-013	Providing and laying dry trap rubble stone soling of specified thickness including hand packing with 80mm metal and rubble chips, filling up the voids with stone grit, to the required line, curve, grade and section, watering and hand packing etc. complete.	949.95	Cum.

		Road Works	
ITEM – CODE	DESCRIPTION	RATE	UNIT
RD-014	Providing & Laying hard core with 80 mm oversize trap metal in layers of 150 mm thickness including filling voids with rubble chips and stone grit ramming, watering etc complete.	772.95	Cum.
RD-015	Supplying 60mm oversize trap metal at the roadside. The rubble shall be either handbroken or mechanically crushed to pieces so as to pass through mesh of 80mm internal dimension and retained on a square mesh of 50mm. The item includes all lead and lifts, conveying to site and stacking etc complete.	772.95	Cum.
RD-015A	Supplying 80mm oversize trap metal at the roadside. The rubble shall be either handbroken or mechanically crushed to pieces so as to pass through mesh of 80mm internal dimension and retained on a square mesh of 50mm. The item includes all lead and lifts, conveying to site and stacking etc complete.	799.95	Cum.
RD-016	Supplying 50mm size trap metal at the roadside. The rubble shall be either handbroken or mechanically crushed to pieces so as to pass through mesh of 60mm internal dimension and retained on a square mesh of 40mm. The item includes all lead and lifts, conveying to site and stacking etc complete.	813.95	Cum.
RD-017	Supplying 40mm size trap metal at the road side. The rubble shall be either hand broken or mechanically crushed to pieces so as to pass through mesh of 60mm internal dimension and retained on a square mesh of 40mm. The item includes all lead and lifts, conveying to site and stacking etc complete.	874.95	Cum.
RD-018	Providing, laying, spreading and compacting stone aggregates of specified sizes to water bound macadam as per clause 404 of M.O.R.T.&H. (2001) specifications, including spreading in uniform thickness, hand packing rolling with 3 wheeled steel / vibratory roller 8-10 tonnes camber, applying and brooming requisite type of screening, binding materials to fill up the interstics of coarse aggregates, watering and compacting to the required density making necessary earthen bund to protect edges, lighting, guarding, barricading and maintenance of diversion etc. complete.  a) By manual means		
	i) Grading - I (90 mm to 45 mm)	832.00	Cum.
	ii) Grading - II (63 mm to 45 mm)	1002.00	Cum.
	b) By mechanical means metal spreading is to be done by motor graders		
	i) Grading - I (90 mm to 45 mm)	638.00	Cum.
DD 010	ii) Grading - II (63 mm to 45 mm)	792.00	Cum.
RD-019	Supplying soft murum for blindage (Plasticity index < 6) at the road side including all lead and lifts and conveying to site and stacking etc. complete .The rate is inclusive of all types of taxes.	449.95	Cum.

		Road Works	
ITEM – CODE	DESCRIPTION	RATE	UNIT
RD-020	Supplying blindage of stone dust at the road side including all lead and lifts and conveying to site and stacking etc. complete. The rate is inclusive of all types of taxes.	334.00	Cum.
RD-021	Spreading of oversize and size metal (40 mm / 50 mm / 60 mm/80 mm) on the prepared surface by manually to the required thickness, line, level, grade, camber, sectioning etc. complete.	40.00	Cum.
RD-022	Spreading gravel / hard murum / soft murum and stone dust over the rubble soling, oversize and size metal layer / blindage on W.B.M. surface etc. complete.	24.00	Cum.
RD-023	Compacting the subgrade, soling, gravel, sand, softmurrum, oversize metal layer with vibratory power roller including all necessary, material, labour, watering etc. complete.	16.00	Sqm.
RD-024	Compacting the size metal layers with vibratory power roller including necessary labour, material and regular watering after dry rolling on metal surface and after spreading blindage on each layer, etc.	14.10	Sqm.
RD-025	Providing & laying granular sub-base (GSB) as per clause 401 of M.O.R.T.&H (2001) specifications of specified grading (Table 400-1 or 400-2) in specified thickness in layers. The item to include premixing the materials in plant, transportation to site, spreading in uniform layers with motor grader on a prepared subgrade, compacting with vibratory rollers till 98% of the maximum dry density (IS 2720 part-8) is achieved etc. Complete. The rate includes for tests on completion of each GSB layer. The strength of each GSB layer shall be evaluated by conducting CBR (IS 2720 Part 16 & 31) or Plate load test using 750mm dia. Plate, (IS 9214) for obtaining equivalent CBR value @ one test per 3000 m2 compacted surface area as per the Grading. The item includes for all necessary material, labour, diversions, taxes, royalty, cess etc complete.		
	a) For Grading-I of close-graded GSB material with minimum CBR value of 30% (As per IS 9214- 1979) to be obtained on top of the compacted layer. (Upper sub-base)	1240.30	Cum.
	b) For Grading-II of close-graded GSB material with minimum CBR value of 25% (As per IS 9214-1979) to be obtained on top of the compacted layer. (Intermediate sub-base)	1229.75	Cum.
	c) For Grading-III of close-graded GSB material with minimum CBR value of 20% to be obtained on top of the compacted layer. (Lower sub-base).	1259.60	Cum.
	d) For Grading-I of coarse-graded GSB material with minimum CBR value of 30% (As per IS 9214-1979) to be obtained on top of the compacted layer. (Upper sub-base)	1264.80	Cum.
	e) For Grading-II of coarse-graded GSB material with minimum CBR value of 25% (As per IS 9214-1979) to be obtained on top of the compacted layer (Intermediate sub-base)	1258.50	Cum.

	Road Works.		
ITEM – CODE	DESCRIPTION	RATE	UNIT
	f) For Grading-III of coarse-graded GSB material with minimum CBR value of 20% to be obtained on top of the compacted layer. (Lower sub-base).	1258.20	Cum.
RD-026	Providing & laying granular base of Wet mix macadam (WMM) as per clause 406 of M.O.R.T.&H (2001) specifications of specified grading (Table 400-11) in specified thickness in layers. The item to include premixing the materials in plant, transportation to site, spreading in uniform layers with paver on a prepared sub-base, compacting with vibratory rollers till 98% of the maximum dry density (IS 2720 Part-8) is achieved etc complete. The rate includes for tests on completion of each WMM layer. The strength of each WMM layer shall be evaluated by Plate load test with 750 mm dia plate. (IS 9214) for obtaining equivalent CBR value @ one test per 3000 m2 compacted surface area as per the Grading. The item includes for all necessary material, labour, diversions, taxes, royalty, cess etc complete.	1242.65	Cum.
RD-027	Providing and laying RCC NP2 class pipes mm dia of specified diameter in proper line, level, and slope, for making connection of water entrance chamber to the S.W.drain. The item to include all labour, supply of all materials and it's conveyance to site, fixing the spun pipes in collars, jointing in CM(1:2), curing etc. complete."		
	a) 100mm dia	341.00	Rmt.
	b) 150mm dia	410.00	Rmt.
	c) 225mm dia	551.00	Rmt.
	d) 300mm dia	783.00	Rmt.
	d) 350mm dia	936.00	Rmt.
RD-028	Providing and laying PVC half perforated pipes of mm diameter in proper line, level, and slope for sub surface drainage of road. The item to include all labour, supply of all materials and it's conveyance to site, jointing etc. complete.		
	a) 100mm dia		
	b) 150mm dia		
	c) 200mm dia		
RD-029	Dressing of side shoulders including excavation, cutting shrubs and bushes, spreading the excavated stuff and section into the required line, level and slope etc. complete	4.60	Sqm.
RD-030	Disposal of surplus excavated materials upto specified lead and all lifts including loading, unloading, stacking and spreading as directed by Engineer-in-charge etc. complete.		
	a) Upto 0.5 Km.	146.90	Cum.
	b) Lead beyond 0.5 km. upto 1.0 Km.	158.30	Cum.

	Road We		Works
ITEM – CODE	DESCRIPTION	RATE	UNIT
	c) Lead beyond 1.0 km. upto 1.5 Km.	169.50	Cum.
	d) Lead beyond 1.5 km. upto 2.0 Km.	180.10	Cum.
	e) Lead beyond 2.0 km. upto 2.5 Km.	190.45	Cum.
	f) Lead beyond 2.5 km. upto 3.0 Km.	201.55	Cum.
RD-031	Providing & Installing imported band drains / prefabricated vertical drains of 100 mm x 4 mm with base metallic plate as shoe at required spacing at site. The item includes cost of hiring & mobilisation required machinery at site. The band Drain /Prefabricated vertical drain shall be tested at IIT Bombay or approved lab at the rate of one test per 1000 Rmt or part thereof. All the tests shall be conducted as per the International testing standards given in the design / drawing.	<del></del> -	
RD-032	Providing dry rubble stone pitching 23 cm thick as directed, etc. complete.	135.25	Sqm.

## **ASPHALTING**

	Asphalting		nalting
ITEM – CODE	DESCRIPTION	RATE	UNIT
AS-001	Providing and applying bituminous tack coat @ by manual/ mechanical sprayer including supplying all materials, preparing the existing surface, heating bitumen and applying tack coat evenly on the surface etc. complete (using 60/70 grade bitumen) the rate is inclusive of all taxes.		
	a) @ 50kg/ 100 m2 over B.T. surface	21.15	Sqm.
	b) @ 100kg/100 m2 over WBM surface	39.30	Sqm.
AS-002	Providing and applying low viscosity liquid bituminous material such as bitumen emulsion or cut back or road tar complying to relevant IRC/IS code of approved type and grade by a self propelled or towed bitumen pressure sprayer as per clause No. 502 of Specifications for road and bridge works (M.O.R.T.& H.,2001). The item includes for preparation of the base, application of the prime coat, curing, relevant tests for quality control as enumerated in table 900-4, diversion of traffic, etc. complete. The rate shall include for all labour, materials, machinery, transportation, taxes etc. complete."		
	a) For low porosity surfaces such as WMM/WBM at an application rate of 0.6 to 0.9 kg/sqm.with kinematic viscosity of primer at 60 degree ranges between 30-60 centistokes	41.75	Sqm.
	b) For Medium porosity surfaces such as cement stabilised soil base at an application rate of 0.9 to 1.2 kg/sqm. with kinematic viscocity of primer at 60degree ranges between 70-140 centistokes.	55.10	Sqm.
	c) For high porosity surfaces such as gravel base at an application rate of 1.2 to 1.5 kg/m2 with kinematic viscosity of primer at 60degree ranges between 250-500 centistokes.	68.45	Sqm.
AS-003	Providing and applying low viscosity liquid bituminous material such as bitumen emulsion complying to IS 8887 of approved type and grade by a self propelled or towed bitumen pressure sprayer as per clause No. 503 of Specifications for road and bridge works (M.O.R.T.& H., 2001). The item includes for preparation of the base, application of the tack coat, curing, relevant tests for quality control as enumerated in table 900-4, diversion of traffic, etc. complete. The rate shall include for all labour, materials, machinery, transportation, taxes etc. complete.		
	a) For Normal bituminous surface at an application rate of 0.2 to 0.25 kg/sqm.	15.20	Sqm.
	b) For Granular surfaces treated with primer at an application rate of 0.25 to 0.30 kg/m2.	17.15	Sqm.

		Asph	alting
ITEM – CODE	DESCRIPTION	RATE	UNIT
	c) For Non-bituminous surface – Granular base (not primed) at an application rate of 0.35 to 0.40 kg/m2.	21.10	Sqm.
AS-004	Providing and constructing Bituminous Bound Macadam (BBM) surface 75 mm thickness including supplying all materials including metal, bitumen etc. spreading 40 mm hand broken trap metal 9 cum per 100 m2 and 20 mm trap metal at the rate of 1.5 cum/100 sqm., heating and spreading bitumen (excluding tack coat) at 250 kg./100 m2, spreading 12 mm size key aggregate at the rate of 1.8 cum/100 sqm and compaction with vibratory roller complete. Grade of bitumen shall be 60/70.		
	A) On WBM/WMM surface including existing surface. Excluding tack coat		
	i) 75mm thick.	202.25	Sqm
	B) On BT surface including tackcoat @ 50 Kg/100 Sq.m.		
	i) 75mm thick.	223.25	Sqm
	Note: Item also includes cleaning the road surface with wire brush/brooms and make it free from dust and water before applying/spreading tack coat .The tack coat shall be paid separately.		
AS-005	Providing and laying hot mix hot laid Lean Bituminous Macadam (LBM) with minimum 2.5% bitumen by weight of total mix including diversion of traffic, supply of all materials, heating bitumen and chips in drum mix plant, cleaning the road surface, laying bituminous macadam by sensor paver finisher including compacting with vibratory roller, transportation and cost of all materials, bitumen from refinery etc. complete. Grade of bitumen shall be 60/70. The rate is inclusive of all types of taxes.(Excluding tack coat).	5201.20	Cum.
AS-006	Providing and laying hot mix hot laid Bituminous Macadam (BM) as per clause 504 of MORTH (2001) specification for road & bridges with 3.3 to 3.5% bitumen by weight of total mix including diversion of traffic, supply of all materials, heating bitumen and chips in hot mix plant, cleaning the road surface, laying BM by sensor paver finisher including compacting with vibratory roller etc. complete. The grade of bitumen shall be 60/70 grade. The rate is inclusive of all types of taxes. (Excluding tack coat).	5994.35	Cum.
AS-007	Providing and laying hot mix hot laid Dense Graded Bituminous Macadam (DBM) of required thickness with minimum 4.5% bitumen by weight of total mix/ depending on job mix formula & as per clause 507 of MORTH (2001) specification for road & bridges including diversion of traffic, supply of all materials, heating bitumen and chips, mixing bitumen and chips with necessary filler material in batch type	6661.05	Cum.

	Asphalting		alting
ITEM – CODE	DESCRIPTION	RATE	UNIT
	or continuous type or drum mix type hot mix plant, laying dense bituminous macadam by paver finisher including compaction with vibratory roller etc. complete (excluding tack coat). The grade of bitumen shall be 60/70. The rate is inclusive of all types of taxes.		
AS-008	Providing and laying 20 mm thick hot mix hot laid pre-mix Seal Coat (SC) composed of 11.2 mm to .09 mm (type a) or 13.2 mm to .09 mm (type b) aggregate using 60/70 grade bitumen @ 22kg/10 sqm as per MORT&H-512 including supplying all materials, heating bitumen, mixing bitumen and chips in hot mix plant, laying the seal coat by sensor paver finisher including compaction with vibratory roller etc. complete. The grade of bitumen shall be 60/70. The rate is inclusive of all types of taxes.(Excluding tack coat)	155.10	Sqm.
AS-009	Providing and laying hot mix hot laid Asphaltic Concrete/bituminous concrete (AC/BC) with bitumen 5% to 7% by weight of total mix as per job mix formula as per clause 509 of MORTH (2001) specification for road & bridges including supplying all materials, heating bitumen and chips with necessary filler material mixing bitumen and chips in hot mix plant laying asphaltic concrete with sensor paver finisher including compaction with vibratory roller etc. complete (excluding tack coat). The grade of bitumen shall be 60/70. The rate is inclusive of all types of taxes. The job mix formula shall be conducted as per frequency specified by MORTH.	7665.85	Cum.
AS-010	Providing and laying Bituminous Penetration macadam (BPM) as per clause No. 505 of Specifications for road and bridge works (M.O.R.T.& H., 2001) of specified thickness. The item includes all labour, materials, heating, bitumen, transporting from refinery to site and spraying bitumen by mechanical means, spreading metal chips and compacting with 8-10 Tonne smooth steel wheel roller etc complete. (Excluding prime coat and tack coat)	394.35	Sqm.
	a) For 75mm compacted thickness with minimum bitumen content @ 6.8kg/sqm.		
AS-011	Providing and laying Bituminous Penetration macadam (BPM) as per clause No. 505 of Specifications for road and bridge works (M.O.R.T.& H., 2001) of specified thickness. The item includes all labour, materials, heating, bitumen, transporting from refinery to site and spraying bitumen by mechanical means, spreading metal chips and compacting with 8-10 Tonne smooth steel wheel roller etc complete. (Excluding prime coat and tack coat)	288.40	Sqm.
	b) For 50mm compacted thickness with minimum bitumen content @ 5.0kg/sqm.		

		Asph	alting
ITEM – CODE	DESCRIPTION	RATE	UNIT
AS-012	Providing and laying Mastic Asphalt with bitumen of 10/20 grade as per clause No. 515 of Specifications for road and bridge works (M.O.R.T.& H., 2001) of specified thickness. The item includes all labour, providing materials as per mix design and job mix formula. Preparation of the base, preparation of mastic asphalt, spreading, jointing, surface finishing, quality control as specified under various sub-clauses of main clause No.515. (Excluding prime coat and tack coat)		
	a) For 12mm compacted thickness with bitumen content @ 14%-17% by weight of total mix.	269.10	Sqm.
	b) For 20mm compacted thickness with bitumen content @ 14%-17% by weight of total mix.	450.50	Sqm.
	c) For 25mm compacted thickness with bitumen content @ 14%-17% by weight of total mix.	586.40	Sqm.

## **ROAD FURNITURE**

		Road Fur	niture
ITEM – CODE	DESCRIPTION	RATE	UNIT
RF-001	Providing PCC precast factory made kerb stone of 500x400x150 mm size in M-25 grade of concrete using design mix with minimum cement content as per IS 456 for moderate exposure condition including fixing in PCC 1:2:4, 250 mm thick, filling the joint with CM 1:3, pointing in CM (1:3) on exposed face etc. complete including painting in two coats of oil paint to exposed surfaces, one coat of primer and excavation and disposal of excavated material, making good the road etc. complete. The rate is inclusive of all types of taxes.	616.90	Rmt.
RF-001A	Providing PCC precast factory made kerb stone of 500x400x150 mm size for water entry without painting in M-25 grade of concrete using design mix with minimum cement content as per IS 456 for moderate exposure condition including fixing in PCC, 250 mm thick, filling the joint with CM (1:3), pointing in CM (1:3) on exposed face etc. complete and excavation and disposal of excavated material, making good the road etc. complete. The rate is inclusive of all types of taxes.	588.90	Rmt.
RF-001B	Providing PCC precast factory made set stone of 500x150x400 mm size in M-25 grade of concrete using design mix with minimum cement content as per IS 456 including fixing in PCC, 250 mm thick, filling the joint with CM (1:3), etc. complete including excavation and disposal of excavated material, making good the road etc. complete. The rate is inclusive of all types of taxes.	583.00	Rmt.
RF-002	Providing and fixing PCC pre-cast factory made water table of 500 x 400 x 100 mm size in M-25 grade of concrete using design mix with minimum cement content as per IS 456 including excavation, fixing in PCC M-10, bed 75 mm thick filling the joint in CM (1:3), curing, including excavation as required, disposal of excavated material, making good the road etc. complete. The rate is inclusive of all types of taxes.	284.25	Rmt.
RF-003	Providing and fixingmm thick factory made hydraulically pressed mechanically vibrated and compacted precast interlocking cement concrete paving blocks for traffic in grade of concrete pavement as IS 15658 specification including cost of all materials, manufacturing, curing, transportation of blocks to work site including loading, unloading and stacking as directed. Laying, paving blocks in position over prepared bed of sand of 50 mm thickness including necessary excavation in all stratas, spreading blindage of fine sand over the prepared bed, compacting blocks by plate vibrator with soft base, etc. complete.		
	a) 60mm thick for light traffic in M-35	588.50	Sqm.

		Road Furniture	
ITEM – CODE	DESCRIPTION	RATE	UNIT
	b) 80mm thick for minimum traffic in M-40	708.80	Sqm.
	c) 100mm thick for heavy traffic in M-50	889.60	Sqm.
RF-004	Providing and fixing precast RCC beams of size 150x150 mm over SW Drain in M-25 grade of concrete using design mix with minimum cement content as per IS 456 as per detailed design and drawings or as directed including steel centering, compaction, curing and finishing uneven and honey combed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface including providing & fixing steel reinforcement @ 60 Kg/M3. The rate is inclusive of all types of taxes.	230.60	Rmt.
RF-005	Providing and fixing precast RCC slab of 100 mm thickness in M-25 grade of concrete using design mix with minimum cement content as per IS 456 as per detailed design and drawings or as directed with fixing of 3 mm thick M.S. plate around the slab for inspection opening for S.W.drain including compaction, curing and finishing uneven and honey combed surface with cement mortar 1:3 of sufficient minimum thickness to give a smooth and even surface including reinforcement. The rate is inclusive of all types of taxes.	1511.65	Sqm.
RF-006	Providing and fixing 300 mm dia R.C.C. pipe of 0.7 m length filled with c.c 1:3:6 for boundary stones of standard size and shape as per drawing including fixing in block of standard size of c.c. 1:3:6 white washing including necessary survey, excavation, etc. complete. The rate is inclusive of all types of taxes.	849.75	No.
RF-007	Providing & fixing parabolic shape RCC precast-factory made M25 Grade kerb stone using design mix with minimum cement content as per IS 456 of size 500/200/850 mm as per detailed design and drawing including excavation, fixing in PCC of M-15grade bed 100 mm thick including side concreting, filling joints in cement mortar (1:3) disposal of excavated material, including painting in two coats of oil paints and one coat of primer to exposed faces, transportation to site, labour, providing & fixing steel reinforcement @ 60 Kg/M3, etc. complete. The rate inclusive of all type of taxes.	1650.40	Rmt.
RF-008	Providing & applying hot applied thermoplastic pavement white coloured marking paint with resin and 10% approved glass beads, etc., complete with three years guarantee for white lane marking spacing as per drawing for arrows for pedestrian crossings for abstraction approach marking, for directional markings at junction (white colour arrows as per drawing or as directed by Engineer-in-charge, etc. compete.	950.00	Sqm.
RF-009	Providing and applying hot applied thermo-plastic pavement yellow coloured marking paint with resin and 10% approved glass beads, etc, as specified in the drawing and 150 mm from the edge of road and central verge, etc, complete.	910.00	Sqm.

		Road Furniture		
ITEM – CODE	DESCRIPTION	RATE	UNIT	
RF-010	Providing and fixing RCC precast factory made RCC channel of M25 grade of cement concrete using design mix with minimum cement content as per IS 456 at super elevation in the median area of size 1570x400x160 mm thick with minimum cement content of 360 Kg/M3 including steel reinforcement @ 80 Kg/M3 as per drawing, transportation to site, etc complete or as directed by Engineer-in-charge.	691.85	No.	
RF-011	Providing and making water entrant chamber of (450 x 450 mm x 450 mm) size to drain out the water from channel provided at super elevation including necessary excavation, PCC for foundation in CC 1:3:6, brick work cement mortar (1:3), external and internal plastering in CM (1:3), coping in CC M-15, with RCC heavy duty grating as per design in drawing etc. complete.	3720.90	No.	
RF-012	Providing and fixing precast factory made RCC water entry kerb stone with slab of M25 grade of cement concrete using design mix with minimum cement content as per IS 456 of size 700x450x60 mm including steel reinforcement as per drawing, transportation to site, etc complete or as directed by Engineer-in-charge.			
RF-013	Providing and fixing RCC precast factory made RCC water entry slab cover 75 mm thick of M25 grade of cement concrete using design mix with minimum cement content as per IS 456 including steel reinforcement as per drawing, transportation to site, etc complete or as directed by Engineer-in-charge.			
RF-014	Providing & fixing precast factory made T type kerb stone of maximum outer size 500x250x350 mm in M 25 grade of cement concrete using design mix with minimum cement content as per IS 456 including excavation, fixing in PCC of M-10 grade, bed of 50 mm thick, filling the joint in cement mortar 1:3:6, curing including excavation, disposal of excavated material, making good the road, including transportation to site, one coat of primer and two coats of oil paint etc, complete.			
RF-015	Providing & laying pre-cast polished chequerred plain cement tiles of size 20x32 cm and 20 mm thick laid on bed of 1:4 cement mortor including neat cement float, filling joint with neat cement slurry, curing, polishing and cleaning, etc. complete.	488.00	Sqm.	
RF-016	Providing and laying rough shahabad stone flooring/paving 40mm to 50mm thick and 450x450 mm size plain/diamond pattern on a bed thick of C.M.(1:6) including cement float, pointing in C.M. (1:3) ,curing and cleaning etc. complete.	346.00	Sqm.	

		Road Furniture	
ITEM – CODE	DESCRIPTION	RATE	UNIT
RF-017	Planting large (flowering/shady trees) Colville's Glory/Pride of India/Indian Coral Tree/Temple Tree/Bamboo/Amallas (5 feet height) - digging pit with size 0.9x0.9x0.9 m removing and conveying unwanted stuff to a required distance as directed. Filling the pit with approved excavated material upto a height of 0.3 m and remaining height 0.6 m with fresh garden soil and mixing manure thoroughly well leveling as directed, watering previous night. Planting one or two year old healthy trees sapling as per specification. Maintaining till well established by watering, weeding, stirring of soil, replacing the causalities, etc. complete.		
RF-017A	Planting large (flowering/shady trees) Royal Palm (10 feet height) - digging pit with size 0.9x0.9x0.9 m removing and conveying unwanted stuff to a required distance as directed. Filling the pit with approved excavated material upto a height of 0.3 m and remaining height 0.6 m with fresh garden soil and manure thoroughly well leveling as directed, watering previous night. Planting one or two year old healthy trees sapling as per specification. Maintaining till well established by watering, weeding, stirring of soil, replacing the casualities, etc. complete.		
RF-018	Providing & laying in situ cement concrete of M-10 grade of trap metal for foundation and bedding, including bailing out water manually, formwork, compacting and curing, etc. complete.	3502.00	Cum.
RF-019	Providing and casting in situ cement concrete M20 of trap metal for bed block foundation and such other items, including bailing out water manually, form work, compacting, roughening the exposed faces if special finish is to be provided and curing etc. complete.	4407.00	Cum.
RF-020	Supplying on site garden soil seived 90% to pass through I.S. sieved of 10 mm size free from stones, rubbish like dried grass, roots and other such materials. The soil should be fresh from quarry. The colour of soil generally be red. <b>The loose soil shall be measured by farma.</b>		
RF-021	Providing & fixing M-15 grade RCC guard stone of 20x20x75 cm including fixing in ground and white washing etc. complete.	220.00	No.
RF-022	Providing and fixing everlast make frame and cover including rain water drain hole and inclusive of transportation, embossing of CIDCO numerals / letters with year of manufacturing, all fixtures and fittings. The work should be completed as per the directives of Engineer-in-charge etc. complete.		
	A) Rectangular Manhole cover with frame		
	1) Light (2.5 T)		
	i) 0.450 x 0.900 m.	13087.60	No.
	ii) 0.600 x 0.900 m.	14618.00	No.

	Road Furni		niture
ITEM – CODE	DESCRIPTION	RATE	UNIT
	iii) 1.170 x 1.170 m.	20802.20	No.
	2) Heavy (20 T)		
	i) 0.450 x 0.900 m.	19635.60	No.
	ii) 0.600 x 0.900 m.	22696.35	No.
	iii) 1.0 x 1.0 m.	75556.75	No.
	iv) 1.170 x 1.170 m.	81561.85	No.
	B) Circular Manhole frame and cover - Heavy (20 T)		
	1) Both Cover & Frame		
	i) Dia. 0.530 m.	19108.75	No.
	ii) Dia. 0.690 m.	20676.75	No.
	2) Only Cover		
	i) Dia. 0.530 m.	9073.25	No.
	ii) Dia. 0.690 m.	10076.75	No.
	C) Grating (Jali) with frame - Medium (10 T)		
	i) 0.450 x 0.450 m.	11331.45	No.
	ii) 0.500 x 0.600 m.	14969.20	No.
	iii) 0.600 x 1.170 m.	25631.60	No.

# **SIGNAGES**

		Siş	gnages
ITEM – CODE	DESCRIPTION	RATE	UNIT
SN-001	Providing and fixing & out of 16 guage (1.6 mm) thick mild sheet painted with one coat of zinc chromate stoveing primer and two coats at white stove enamel paint and red border on front side and gray store enamel on backside symbols with cut out of red retro reflective sheeting of engineering grade including one M.S. angle post size 65 X 65 X6.5mm, & 3.85 meter long. duly painted with synthetic emamel, alternate black and white bands of 25 mm of width including G.I. fixtures etc. and fixing the boards in 1:4:8 concrete block of size 60 x 60 x 75 cms including transportation etc. complete. IRC-67 of 2001		
	a) cautionary/warning sign boards		
	i) of size 90 cms. equilateral triangle	4177.00	No.
	ii) of size 60 cms equilateral triangle	3349.00	No.
	b) mandatory/ regulatory sign boards		
	i) of size 90 cms diametre	5371.00	No.
	ii) of size 60 cms diametre	4308.00	No.
SN-002	Providing and fixing informatory sign boards in square and rectangular shape of any size made out of 16 Guage (1.6mm) thick Mild Steel sheet painted with one coat of zinc chromate stoveing primer and two coats of green stove enamel paint on front side and grey stove enamel on back side and border message / symbols etc. with cutout of white retro reflective sheeting of engineering grade including M.S. angle frame of size 35 x 35 x 3 MM and two M.S. angle iron post of size 65 x 65 x 6mm, 3.65 metre long properly crossed brace with angle iron of size 50 x 50 x 5mm duly painted with alternate black and white bands of 25 cm width including G.I. fixtures, fixing the board in 1:4:8 concrete block of size 60 x 60 x 75 cm including transportation etc. complete. (The work to be executed with prior approval of Superintending Engineer) IRC-67 of 2001	7989.00	Sqm.
SN-003	Providing and fixing Cautionary warning sign board having shape of equilateral triangle of 90/60 cm size made out of 16 Guage (1.6mm) thick Aluminium sheet painted with one coat of zinc chromate stoveing primer and two coats of white stove enamel paint & red border on fron side and grey stove enamel on back side symbol with cutout of red retro reflective sheeting of engineering grade, including one M.S. angle post of size 65 x 65 x 6MM, 3.65 M long duly painted with synthetic enamel paint alternate black and white bank of 25 cm of including G.I. fixutres, fixing the board in 1:4:8 concrete block of size 60 x 60 x 75 cm including transportation etc. complete. (The work to be executed with prior approval of Superintending Engineer.) IRC-67 of 2001.		

		Signages	
ITEM – CODE	DESCRIPTION	RATE	UNIT
	i) size 90 cm triangle	3850.00	No.
	ii) size 60 cm triangle	3380.00	No.
SN-004	A) Providing Cautionary sign boards 90 cm. Equilateral triangle with apex point upward prepared on fibre reinforced plate 3.0 milimetre thick bonded with white retroreflective sheeting on Engineering frade having pressure sunsitie / heat activated adhesive retoreflective whick bake ground and red border and back side gray, retroreflective symbols, letters, numerals, arrows, one M.S. angle post of 65 x 65 x 6 milimetre size and 3.65 metre long, inflated bottom and drilled on top and painting posts with white and blck border of 25 cm, fitting board to post with 2 numbers of strong G.I. bolts and nuts including transportation & fixing in p.c.c. 1:4:8 etc. complete. (The work to be executed with prior approval of Superintending Engineer). IRC-67 of 2001.		
	a) i) cautionary sign boards 90 cm equilateral triangle	7437.00	No.
	ii) high intensity grade	8991.00	No.
	b) i) informatory sign boards of size 60x 80 cm	9649.00	No.
	ii) high intensity grade	11267.00	No.
	c) i) prohibitory sign boards having size 60 cms circular	7172.00	No.
	ii) high intensity grade	7330.00	No.
SN-005	Providing and fixing Road junction / information sign boards of size prepared fibre reinforced plate 4.0 millimeter thick on frame of 40 x40 mm angle thick for strengthening including bonded with blue retro-reflective sheeting of Engineering grade having pressure sensitive / heat activated adhesive retro-reflective with as per directed colour with retro-reflective symbols, letter, numbers, arrows with two M.S. angle post of 65 x 65 x 6 mm size and 3.65 metre long in one pieces with out joint inflow at bottom and drilled on top with bracing of 40 x 40 x 5 mm M.S. angle and painting with white and black border of 25mm, fixing in 1:4:8 cement concrete block of 60x60x75 cm size at site etc. complete.		
	i) a) Board size 1.20 x 0.90 metre	19671.00	No.
	b) High intensity grade	22479.00	No.
	ii) a) Board size 1.80 x 1.20 metre	42044.00	No.
	b) High intensity grade	49607.00	No.

## **RECLAMATION**

	Reclamation		nation
ITEM - CODE	DESCRIPTION	RATE	UNIT
RCL-001	Providing earthwork in embankment with approved materials obtained from cutting, including all leads and lifts, laying in layers of 100 to 120 cms in thickness, breaking clods, dressing to the required lines, curves, grades, and section with watering and compacting with static rollers etc. complete.	228.15	Cum.
	Notes:-		
	1. All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.		
	2. The Environmental cess shall be recovered at Rs.1/m3 of gross volume computed without deductions as mentioned for the RA Bills or Final Bills.		
	3. For Embankment of any height with watering and compaction without P.D. but laying in layers of 100 to 120 cms and the laboratory soil dry density shall be not less than 1.52g/cc. at Optimum moisture content. (In water logged areas)		
	4. The gross volume of the embankment shall reduced by 15% for RA Bills and 10% for Final Bill payments after one lapse of monsoon.		
RCL-002	Providing earthwork in embankment with approved materials obtained from contractor's own source including all leads and lifts, laying in layers, breaking clods, dressing to the required lines, curves, grades, and section with watering and compacting with static power rollers etc. Complete.	355.65	Cum.
	Notes:-		
	1. All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.		
	2. The Environmental cess shall be recovered at Rs.1/m3 of gross volume computed without deductions as mentioned for the RA Bills or Final Bills.		
	3. For Embankment of any height with watering and compaction without P.D. but laying in layers of 100 to 120 cms and the laboratory soil dry density shall be not less than 1.52g/cc. at Optimum moisture content. (In water logged areas)		
	4. The gross volume of the embankment shall reduced by 15% for RA Bills and 10% for Final Bill payments after one lapse of monsoon.		

## **SOIL INVESTIGATION**

		Soil Investi	gation
ITEM - CODE	DESCRIPTION	RATE	UNIT
SI-001	Taking trial bores (100mm) in soil of all sorts of soft murum, hard murum and boulder and in soft rock including all materials such as casing pipes and accessories oil grease, steel rods & such other material as required, including conveying such materials and machinery to site of work, preserving the loose samples in glass / plastic jar & core samples duly marked serially at site of work and conveying the same to the respective office as directed complete.	2180.00	RM.
SI-002	Taking trial bores (with diamond drill) in hard rock including all necessary material such as oil, grease, steel rods & such material and machinery to site of work and preserving the core samples duly marked serially and painting the footage on site of work and conveying the same to the respective office as directed complete.	1823.00	RM.
SI-003	Conducting lab CBR test as per IS2720 (Part-16) 1987 The item shall includes necessary cost for sample collection and transporting it to soil testing lab. The rate includes for testing of minimum 3 specimen. If the test results of initial 3 specimen deviate more than that specified in Table 2 of clause No. 3, 4, 6, 4 of IRC 37 (2000) then additional 3 specimen shall be got tested at no extra cost. The rate includes for all necessary ancillary tests mentioned in appendix "A" of IS 2720 (Part-16) viz. Proctor density test, swell pressure test etc. The appropriate surcharge Wt. shall be provided while testing the specimen. The item shall include all cost of necessary excavation at site. The test results shall be submitted in report form with observation sheet graph, tabular form and inference it any.	3060.00	No.
SI-004	Conducting Field CBR test as per IS 2720 (Part-31) 1990. The item shall include necessary cost of mobilisation, demobilisation of equipments, labour etc. at the specified site and for testing at minimum 3 spots. If the test results of initial 3 spots deviate more than that specified in Table 2 of clause No. 3, 4, 5, 6, 4 of IRC 37:2000 then additional 3 specimen shall be got tested at no extra cost. The rate includes for all necessary ancillary tests mentioned in appendix "A" of IS 2720 (Part-31) viz. particle size analysis, atterberges limit, insists moisture content. The rate includes necessary excavation of pits at site. The test results shall be submitted in a report form with observation sheet graphs, tabular form & inference if any.	4400.00	No.
SI-005	Carrying out soil lab tests as specified on undistributed & distributed soil samples for characterization of soil samples for characterization of soil profile at site lab & submission of lab observation sheet, graphs etc. as per IS 2720 (latest version) as directed by Engineer in charge (These tests are to be carried out at IIT, Mumbai)		

		Soil Investi	gation
ITEM - CODE	DESCRIPTION	RATE	UNIT
	1) Neutral moisture content	220.00	Test
	2) Wet & Dry Density	220.00	Test
	3) Lab Vane Shear Test	440.00	Test
	4) Tor Vane	440.00	Test
	5) Pocket Soil Penetrometer	330.00	Test
	6) Sieve Analysis	440.00	Test
	7) Hydrometer	440.00	Test
	8) Liquid and Plastic Limit	330.00	Test
	9) Shrinkage Limit	330.00	Test
	10) Specific Gravity	440.00	Test
	11) Relative Density	440.00	Test
	12) Unconfined Compressive Strength	990.00	Test
	A) TRIAXIAL		
	i) Unconsilated Undrained	1320.00	Test
	ii) Consolited Undrained	1430.00	Test
	iii) Consolited Drained	1540.00	Test
	iv) Consilidation	1430.00	Test
	v) Direct Shear Test	1265.00	Test
	B) Proctor Compaction Test	1203.00	
	i) Standard Proctor Compaction Test	1210.00	Test
	ii) Modified Proctor Compaction Test	1100.00	Test
	iii) California Bearing Ratio (Lab CBR)	1430.00	Test
	C) Permeability	1430.00	1031
	i) Constant Head Method	990.00	Test
	ii) Falling head Method	990.00	Test
	iii) Free Swell Index	440.00	Test
	iv) Swelling Pressure	1430.00	Test
	D) Chemical Analysis of Soil	1130.00	1050
	i) pH Value	440.00	Test
	ii) Chloride (cl)	550.00	Test
	iii) Sulphate (SO3)	550.00	Test
	E) Chemical Analysis of Water		
	i) pH Value	440.00	Test
	ii) Chloride (cl)	550.00	Test
	iii) Sulphate (SO3)	550.00	Test
	F) Test on Rock Samples		
	i) Unconfined Compressive Strenth	1430.00	Test
	ii) Dry Density	440.00	Test

		Soil Investigation		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	iii) Porosity	440.00	Test	
	iv) Water Absorption	440.00	Test	
	v) Specific Gravity	440.00	Test	
	vi) Modulus of Elasticity	4400.00	Test	
	vii) Point Load Index	1320.00	Test	
	viii) Brazilian Index	1320.00	Test	
SI-006	Providing TUNTAPPA core box of Jungle wood of size 1.25 x 0.55 x 0.15 m for preserving the rock core samples with all fixtures and fasternings and handles including locking arrangement with lock necessary painting and lettering etc. complete.	2528.00	No.	
SI-007	To carry out plate load test to determine modulus of sub-grade reaction (K-value) of unbound / semi-bound macadam (GSB, WMM, BBM) in field as per IS Code No. 9214-1979. The item includes to conduct one test per location. The test shall be conducted on 75cm. dia & 25mm thick plate with stiffening plates of smaller size of 60,45 & 30 cm. dia and 25mm thick each shall be used. Vertical movement shall be measured by three dial gauges placed at 120° preferably 4 dial gauges placed at 90°. The load shall be measured using 15 MT capacity proving ring / hydraulic jack with pressure gauge duly calibrated from time to time. The test results shall be submitted in a report form with observation sheets, graphs, tabular form & inferences if any.	9890.00	No.	
SI-008	Mobilisation of machinery equipment labour and personal at site to carry out plate load test / californiya bearing ratio test / Benkalmen beam test for finding bearing capacity of strata / CBR / deflection of road surface including demobilisation etc. Complete.	5560.00	Job	
SI-009	Shifting and locating instrument from one location to another Plate Load Test.			
	a) Shifting upto 300m	1075.00	Shift	
	b) 300m to 600m	1400.00	Shift	
	c) 600m & above	1985.00	Shift	
SI-010	Conducting Benkleman test as specified location by observing deflection at 50 m c/c for selected 500 m stretch for 1 km of road length or as directed by Engineer -in - charge., worst affected portion including additional 4 tests if peak results vary by more than 33% from mean as per IRC – 81 and submitting observation / results in format given in code etc. complete and as directed by Engineer in charge. The test to be carried out as per the procedure prescribed in IRC-81 (1997).	8785.00	Test	
SI-011	Conducting standard penetratation test of soil, sand by split spoon sample for diameter bore hole including labour &			

	Soil Inv		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	material etc. complete. (Equipment and materials is to be supplied by Department free of cost).		
	a) 75 mm	280.00	No.
	b) 100 mm	375.00	No.
	c) 150 mm	560.00	No.
SI-012	Carrying out vane shear test in bore holes as per IS 4434/1978 at any depth in existing borehole, as directed by Engineer in charge including cleaning the boreholes before conducting the test complete.		
	a) Lab Vane shear test	985.00	No.
	b) Field Vane shear Test	995.00	No.
SI-013	Carrying out field permeability test in the bore hole by either single or double packer method as per IS 5529 (Part-I & II) 1985 in bed rock, or hard rock at 1.5m c/c depth intervals either by constant head or variable head method	825.00	No.
SI-014	To carryout plate load test to determine safe bearing capacity of soil / strata as per IS Code No. 1888. The test shall be conducted on square plates of size 600 mm x 600 mm. & 25 mm thick. Vertical movement shall be measured by three dial gauges preferably four dial gauges at 90 degree. The loads shall be measured using 15 MT capacity proving ring / hydraulic jack and pressure gauge duly calibrated from time to time. The tests results shall be submitted in a report form with observation sheets, graphs, tabular form & inferences, if any.	14195.00	No.
SI-015	Preparation and submission of appraisal report for soil investigation work.	36630.00	No.

# **SURVEY**

		A	Survey
ITEM - CODE	DESCRIPTION	RATE	UNIT
SUR-001	Carrying out plane table survey for locating road, culverts, structure, Electrical / telephone lines, optical fibre cables, high tenssion pylons, U.G. Service Lines(if markers are available), water lines, gas lines, sewer lines, S.W.Drains etc.and preparation of computerized survey sheets with colour paper prints in five copies with computer diskets containing all drawings etc. complete.	3750.00	На.
SUR-002	Providing & Fixing grid pillars of 300mm dia & 900mm height (600mm below ground & 300mm above ground) RCC hume pipe filled with 1:3:6 concrete and with M.S. plate 150mm dia. with 4 nos. 8mm dia. 300mm long hold fast embedded on top including excavation, marking reference point at 50 m. / 100 m. grid or at suitable location as per the directive of engineer in charge.	1490.00	No.
SUR-003	Transferring B.M. to the area to be surveyed by fly back method or double treasure method and establishing the B.M. on existing permanent structure or on such monument which shall long last etc. complete.	2785.00	Km.
SUR-004	Demarcation of the Road / chanel / bridge alignment by traversing along the existing / proposed route with one second theodolite. Taking angles & distance at turning points including transfer of Co-ordinate from known point to survey area and as directed by Engineer-in-charge & providing 5 Nos. colour paper prints with drawing in soft copy format.	11105.00	Km.
SUR-005	Providing & fixing the C.C. stone at every 50m / 100m grid or at every turning points of size 150 x 150 x 600mm long, 300mm burried in C.C. 1:3:6 shall be painted by P.O. red colour and written the chinage / co-ordinate as directed etc. complete.	630.00	No.
SUR-006	Carrying out spot level survey on every 20 x 20m. grid Interval and including interpoleting controls at 0.5m interval and preparation & submission of drawings in colour paper prints in five copies & copy in soft format.	3000.00	На.
SUR-006A	Same as Item.No.SUR-006 on every 10 m x 10 m grid interval including interpoliting controls at 0.5m interval.	5600.00	На.
SUR-007	Providing and erecting 100 mm. dia. Hume pipe at 50/100 m. interval or at turning point for demarcation of boundary. 1000 mm. long filled with cc 1:3:6: painted with oil paint as directed.	1190.00	No.
SUR-008	Demarcation of plot of verious sizes as follows		
	a) from 10 Sq.M. To upto & including 100 Sq.M.	680.00	Per Plot
	b) 100 Sq.M. TO upto & including 300 Sq.M.	860.00	Per Plot
	c) 300 Sq.M. TO upto & including 500 Sq.M.	1050.00	Per Plot
	d) 500 Sq.M. TO upto & including 700 Sq.M.	1135.00	Per Plot
	e) 700 Sq.M. TO upto & including 1000 Sq.M.	1225.00	Per Plot

## **EXCAVATION**

	Excavation		
ITEM - CODE	DESCRIPTION	RATE	UNIT
EXSW- 001	Excavation for foundation to any depth in all types of earth, soils of all types such as sand, gravel, slush, soft murum, hard murum with or without boulders including shoring and strutting whichever necessary including disposing off the surplus materials within 50m, beyond the work site, stacking and spreading as directed. The item includes heavy dewatering by using pumps or manually, shoring, strutting and preparing the bed for foundation and necessary back filling etc. complete.	227.70	Cum.
	Note: All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.		
EXSW- 002	Excavation for foundation to any depth in soft rock including shoring and strutting whichever necessary including disposing off the surplus materials within 50m, beyond the work site, stacking and spreading as directed. The item includes heavy dewatering by using pumps or manually, shoring and strutting and preparing the bed for foundation and necessary back filling etc. complete.	349.67	Cum.
	Note: All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.		
EXSW- 003	Excavation for foundation in hard rock upto any depth with all lifts by open or controlled blasting including trimming and levelling the bed, removing the excavated materials upto a distance of 50m beyond the work site with all lifts, stacking the serviceable materials in measurable heaps as directed. The item includes heavy dewatering using pumps or manually, shoring and strutting and preparing the bed for foundation and necessary back filling etc. complete.	302.40	Cum.
	Notes :		
	1) All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.		
EMOM	2) The excavated hard rock shall be the contractor's property.	0.60.50	G
EXSW- 004	Excavation for foundation in hard rock upto any depth with all lifts by chiseling manually or by mechanical means such as hydraulic rock driller including wedging, line drilling etc. including trimming and levelling the bed, removing the excavated materials upto a distance of 50m beyond the work site with all lifts, stacking the serviceable materials in measurable heaps as directed. The item includes heavy dewatering using pumps or manually, shoring and strutting and preparing the bed for foundation and necessary back filling etc. complete.	968.52	Cum.
	Notes:  1) All payments toyyards the rayalty face toyas at a shall be		
L	1) All payments towards the royalty, fees, taxes etc. shall be		

	Excavation.		vation
ITEM - CODE	DESCRIPTION	RATE	UNIT
	borne by the contractor.  2) The excavated hard rock shall be the contractor's property.		
EXSW- 005	Providing and laying dry trap metal soling 15 cm. to 20 cm. thick including hand packing with metal, rubble chips, application of required murum/stone dust blindage and compaction including watering etc. complete with all leads, including necessary heavy dewatering either mechanically or manually etc. complete.	988.45	Cum.

## **CONCRETE**

	Concrete		
ITEM – CODE	DESCRIPTION	RATE	UNIT
CONSW- 001	Providing and laying in situ cement concrete M20 grade using design mix with minimum cement content as per IS 456 with maximum water cement ratio 0.45 using maximum 25/30 mm size and down trap metal for foundation and bedding with all labours, materials, plant & equipments, shuttering form work, staging, including transporting, placing, vibrating with mechanical vibrator, finishing and curing etc. complete. The item also includes heavy dewatering by using pumps or manually. The cost also includes all types of taxes, sales tax, insurance, cess levied by local authority etc. complete.	4407.00	Cum.
CONSW- 002	Providing and casting M20 grade of concrete using design mix with minimum cement content as per IS 456 in situ controlled concrete using maximum 25mm/30mm size and down graded aggregate of trap metal for RCC abutments, walls, pardi, haunches etc. as per detailed drawing, with maximum water cement ratio of 0.45 ( for severe condition) as directed, with contractors labours, materials, plant & equipments, scafolding, shuttering, form work, staging including transporting, placing vibrating with mechanical surface vibrator and all lifts and leads, curing, adding required dosages (as per the manufacturers recommendations) of approved plasticiser as admixtures (excluding cost of reinforcement). The item includes heavy dewatering to any extent by any means. The cost also includes all types of taxes, exice duty, sales tax, insurance, cess levied etc.	6186.00	Cum.
CONSW- 003	Providing and casting M25 grade ofconcrete using design mix with minimum cement content as per IS 456 in situ controlled concrete using maximum 25mm/30mm size and down graded aggregate of trap metal for RCC raft foundation as per detailed drawing, with maximum water cement ratio of 0.50 (for moderate condition) as directed, with contractors labours, materials, plant & equipments, scaffolding, shuttering, form work, staging including transporting, placing vibrating with mechanical surface vibrator and all lifts and leads, curing, adding required dosages (as per the manufacturers recommendations) of approved plasticisers as admixtures (excluding cost of reinforcement). The item includes heavy dewatering by using pumps or manually. The cost also includes all types of taxes, sales tax, insurance, cess levied by local authority etc. complete.	4537.00	Cum.

	Concrete		
ITEM – CODE	DESCRIPTION	RATE	UNIT
CONSW- 004	Providing and casting M30 grade of concrete using design mix with minimum cement content as per IS 456 in situ controlled concrete using maximum 25mm/30mm size and down graded aggregate of trap metal for RCC raft foundation as per detailed drawing, with maximum water cement ratio of 0.45 (for severe condition) as directed, with contractors labours, materials, plant & equipments, scaffolding, shuttering, form work, staging including transporting, placing vibrating with mechanical surface vibrator and all lifts and leads, curing, adding required dosages (as per the manufacturers recommendations) of approved plasticiser as admixtures (excluding cost of reinforcement). The item includes heavy dewatering by using pumps or manually. The item includes performing NDT as directed. The cost also includes all types of taxes, sales tax, insurance, cess levied by local authority etc. complete.	4691.00	Cum.
CONSW- 005	Providing and casting M25 grade of concrete using design mix with minimum cement content as per IS 456 in situ controlled concrete using maximum 25mm/30mm size and down graded aggregate of trap metal for RCC abutments, walls, pardi, haunches etc. as per detailed drawing, with maximum water cement ratio of 0.50 (for moderate condition) as directed, with contractors labours, materials, plant & equipments, scaffolding, shuttering, form work, staging including transporting, placing vibrating with mechanical surface vibrator and all lifts and leads, curing, adding required dosages (as per the manufacturers recommendations) of approved plasticiser as admixtures (excluding cost of reinforcement). The item includes dewatering to any extent by any means.	6375.00	Cum.
CONSW- 006	Providing and casting M30 grade of concrete using design mix with minimum cement content as per IS 456 in situ controlled concrete using maximum 25mm/30mm size and down graded aggregate of trap metal for RCC abutments, walls, pardi, haunches etc. as per detailed drawing, with maximum water cement ratio of 0.45 (for severe condition) as directed, with contractors labours, materials, plant & equipments, scaffolding, shuttering, form work, staging including transporting, placing vibrating with mechanical surface vibrator and all lifts and leads, curing, adding required dosages (as per the manufacturers recommendations) of approved plasticiser as admixtures (excluding cost of reinforcement). The item includes heavy dewatering to any extent by any means.	6682.00	Cum.

ITEM – CODE	DESCRIPTION	RATE	UNIT
CONSW- 007	Providing and casting M25 grade of concrete using mix design with minimum cement content as per IS 456 in situ controlled concrete using maximum 25mm/30mm size and down graded aggregate of trap metal for RCC slab and approach slab etc. as per detailed drawing, with maximum water cement ratio of 0.50 (for moderate condition) as directed, with contractors labours, materials, plant & equipments, scafolding, shuttering, form work, staging including transporting, placing vibrating with mechanical surface vibrator and all lifts and leads, curing, adding required dosages (as per the manufacturers recommendations) of approved plasticiser as admixtures (excluding cost of reinforcement). The item includes heavy dewatering to any extent by any means.	6872.00	Cum.
CONSW- 008	Providing and casting M30 grade of concrete using design mix with minimum cement content as per IS 456 in situ controlled concrete using maximum 25mm/30mm size and down graded aggregate of trap metal for approach slab and RCC slab etc. as per detailed drawing, with maximum water cement ratio of 0.45 (for severe condition) as directed, with contractors labours, materials, plant & equipments, scafolding, shuttering, form work, staging including transporting, placing vibrating with mechanical surface vibrator and all lifts and leads, curing, adding required dosages (as per the manufacturers recommendations) of approved plasticiser as admixtures (excluding cost of reinforcement). The item includes heavy dewatering to any extent by any means. The cost also includes all types of taxes, excise duty, sales tax, insurance, cess levied etc.	7082.00	Cum.

## **STEEL WORKS**

		Steel	Works
ITEM - CODE	DESCRIPTION	RATE	UNIT
SW-001	Providing and placing, fixing in all RCC item of foundation, sub-structure and superstructures, M.S./H.Y.S.D./T.M.T. of various diameters as per IS 432 (latest version) of approved make for reinforcement in any position as per detailed drawing or as directed for all diameters including, cutting, bending in shape, fixing in position with galvanised binding wire of 17 guage or tack welding as per IS 9417 (latest version) as directed etc. complete including dewatering using pumps or manually during placing reinforcement and keeping dry during concreting of RCC members. The cost also includes all types of taxes, excise duty, sales tax, insurance, cess levied by local authority etc. complete.  Note: The quantity to be measured and paid for this item shall not include wastage in cutting. Actually installed and placed in		
	position steel shall be paid for including hooks, laps, bends, pins and chairs. No separate payment shall be made for binding wire or tack welding.		
	a) Mild Steel	43452.00	MT
	b)HYSD Steel		MT
	c)TMT Steel	57251.00	MT

## **MISCELLANEOUS**

			ineous
ITEM - CODE	DESCRIPTION	RATE	UNIT
MISCSW- 001	Providing and fixing 100 mm dia AC/PVC pipes for weep holes, staggered as per drawing or as directed by Engineer-In-Charge etc. complete.	107.00	Rmt.
MISCSW- 002	Providing trap rubble filling behind the walls/abutments/returns including filling voids with gravel, hand packing and compacting the rubble etc. complete.	397.00	Cum.
MISCSW- 003	Disposal of excavated material upto 0.5 km lead (dumping yard) including loading, unloading, transporting by mechanical or other means, stacking, spreading, levelling as directed by Engineer-in-charge etc. complete beyond initial lead of 50m.	146.90	Cum.
MISCSW- 004	Disposal of excavated material beyond 0.5 km and upto 1 km lead (dumping yard) including loading, unloading, transporting by mechanical or other means, stacking, spreading, leveling as directed by Engineer-in-charge etc. complete beyond initial lead of 50m.	158.30	Cum.
MISCSW- 005	Disposal of excavated material beyond 1 km and upto 1.5 km lead (dumping yard) including loading, unloading, transporting by mechanical or other means, stacking, spreading, levelling as directed by Engineer-in-charge etc. complete beyond initial lead of 50m.	169.50	Cum.
MISCSW- 006	Disposal of excavated material beyond 1.5 km and upto 3 km lead (dumping yard) including loading, unloading, transporting by mechanical or other means, stacking, spreading, leveling as directed by Engineer-in-charge etc. complete beyond initial lead of 50m.	180.10	Cum.
MISCSW- 007	Disposal of excavated material beyond 2.00 km and upto 2.5 km lead (dumping yard) including loading, unloading, transporting by mechanical or other means, stacking, spreading, leveling as directed by Engineer-in-charge etc. complete beyond initial lead of 50m.	190.45	Cum.
MISCSW- 008	Disposal of excavated material beyond 2.50 km and upto 3.0 km lead (dumping yard) including loading, unloading, transporting by mechanical or other means, stacking, spreading, leveling as directed by Engineer-in-charge etc. complete beyond initial lead of 50m.	201.55	Cum.

# **EXCAVATION**

		Exca	vation
ITEM - CODE	DESCRIPTION	RATE	UNIT
EXSL- 001	Excavation for pipe trenches/all type of foundations in earth, soil of all types, sand, gravel, soft murum, hard murum with boulders, soft rock, marine clay, soft soil etc. for lift upto 1.5 m. including removing the excavated material upto a distance of 50 m beyond the construction area, stacking and spreading as directed, including all lifts preparing the bed for bed concrete/foundations etc. complete including back filling, inclusive of heavy dewatering either manually or mechanically by all means upto any extent excluding shoring and strutting etc. complete.  Notes: All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.	230.70	Cum.
EXSL- 002	Add for every additional lift of 1.5 m. beyond initial lift of 1.5 m. For item no. <u>EXSL001</u> .	13.00	Cum.
EXSL- 003	Excavation for foundations/pipe trenches in hard rock by control blasting, wedging, line drilling, or any other type by using chemicals etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 m beyond the construction area, including backfilling, heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. including shoring and strutting, removing away the excavated material from site after taking measurement etc. complete. ( Upto 1.50m lift) (The rock thus available from excavation will be the property of contractor.  Notes:  1) All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.  2) The excavated hard rock shall be the contractor's property.	365.30	Cum.
EXSL- 004	Add for every additional lift of 1.5 m. beyond initial lift of 1.5 m. for item no. <u>EXSL003</u> .	20.00	Cum.
EXSL- 005	Excavation for foundation/pipe trenches in hard rock and concrete road by chiselling, wedging, line drilling by mechanical means with the help of hydraulic rock driller etc. including trimming and levelling the bed, removing the excavated material upto a distance of 50 meters beyond the area , including stacking as directed by Engineer-in-charge, heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, including backfilling, etc. complete.( Upto 1.50m lift)  Notes:  1) All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.	968.52	Cum.

	Excavat		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	2) The excavated hard rock shall be the contractor's property.		
EXSL- 006	Add for every additional lift of 1.5 m. beyond initial lift of 1.5 m. for item No. <u>EXSL005</u> .	20.00	Cum.
EXSL- 007	Excavation for foundation/pipe trenches in ash muddy/marshy/Slushy/soil including use of poclain, labour for dewatering during execution including removing the excavated material upto a distance of 50m and lifts as below, stacking, spreading as directed preparing the bed by cleaning the mud, labour required for execution for shuttering item but excluding back-filling, etc. complete.  lift 0 to 1.5 M	371.67	Cum.
EXSL- 008	Add for every additional lift beyond initial lift of 1.5m For Item No. <u>EXSL007</u>	20.00	Cum.
EXSL- 009	Providing dry trap/granite/quartzite/gneiss rubble stone soling 230 mm thick including hand packing with chips and compacting heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, etc. complete.	988.45	Cum.

# **CONCRETE**

ITEM - CODE	DESCRIPTION	RATE	UNIT
CONSL- 001	Providing transporting, lowering and placing of cast in situ cradels M-20 grade of concrete with minimum cement content as per IS 456 and/or as directed by Engineer-in-charge for all diameters of sewer line including providing lifting arrangement with all leads, transporting, lowering, laying in pipe trenches / foundation etc. complete including heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, while laying.	4407.00	Cum.

# **R.C.C. PIPES**

		R.C.C.	Pipes
ITEM - CODE	DESCRIPTION	RATE	UNIT
RCCP- 001	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 250 dia NP2 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.  Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.	596.00	Rmt.
RCCP- 002	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 300 dia NP2 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.  Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.	783.00	Rmt.
RCCP- 003	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 350 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.  Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.	1689.00	Rmt.
RCCP- 004	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 400 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.  Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.	1911.00	Rmt.
RCCP- 005	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 450 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes	2273.00	Rmt.

		R.C.C.	Pipes
ITEM - CODE	DESCRIPTION	RATE	UNIT
	(central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.		
	Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.		
RCCP- 006	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 500 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.	2522.00	Rmt.
	Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.		
RCCP- 007	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 600 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.	3310.00	Rmt.
	Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.		
RCCP- 008	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 700 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.	4442.00	Rmt.
	Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.		
RCCP- 009	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 800 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.  Note: The contractor has to make his own arrangement for	5282.00	Rmt.

		R.C.C.	Pipes
ITEM - CODE	DESCRIPTION	RATE	UNIT
RCCP- 010	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 900dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.  Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.	6084.00	Rmt.
RCCP- 011	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 1000 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.  Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.	7396.00	Rmt.
RCCP- 012	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 1100 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.  Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.	8636.00	Rmt.
RCCP- 013	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 1200 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes (central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.  Note: The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.	10072.00	Rmt.
RCCP- 014	Providing lowering, laying and jointing RCC, S/S pipes manufactured as per IS:458 (latest version) having ISI of 1400 dia NP3 class with rubber ring joints as directed in proper grade including cost of materials, rubber rings, all taxes	12056.00	Rmt.

		R.C.C. Pipes	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	(central and local) transportation, loading and unloading and hydraulic testing as per I.S. 458 (latest version) including necessary heavy dewatering by all means up to any extent etc. complete.		
	<b>Note</b> : The contractor has to make his own arrangement for testing the pipeline as per I.S. standard.		

## **MANHOLES / DROP ARRANGEMENTS**

	Manholes / Drop Arrangements.		
ITEM – CODE	DESCRIPTION	RATE	UNIT
MDA- 001	Providing and constructing BB masonry (IInd sort) circular/ concentric conical manhole with 1.22 mt dia at bottom and 0.53 mt. Dia. at top with 230 mm thick brick masonry (IInd sort) in C.M 1:3 and 20 mm thick smooth cement plaster in C.M. 1:2 from inside and outside, including curing providing and fixing copolymer, polypropylene, steel reinforcement PVC heavy duty step/ footrest of approved make conforming to an ASTM D-4101 specification to take load as per IS 5455 including providing foundation concrete in M-15 and 300 mm thick with benching and channelling, supplying and fixing RCC factory made steel fibre reinforced (SFRC) heavy duty manhole cover and frame with steel bearing of cover into the frame including shoring strutting etc. complete. As per design and drawing circulated by SE (ENV) in 2003 including heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, till the completion of work. (Depth upto 1.50 m. from top of frame to invert level of pipe.  Note: the contractor has to make his own arrangement for testing the man hole)	14136.90	No.
MDA- 002	Providing and constructing BB masonry (II <sup>nd</sup> sort) circular/concentric conical manhole with 1.22 m dia at bottom and 0.53 m Dia. at top with 230 mm thick brick masonry (II <sup>nd</sup> sort)in C.M.1:3 and 20 mm thick smooth cement plaster in C.M. 1:2 from inside and outside, including curing providing and fixing copolymer, polypropylene, steel reinfrocement PVC heavy duty step/ footrest of approved make conforming to an ASTM D-4101 specification to take load as per IS 5455 including providing foundation concrete in M-15 and 300 mm thick with benching and channeling, supplying and fixing RCC factory made steel fibre reinforced (SFRC) heavy duty manhole cover and frame with steel bearing of cover into the frame including shoring strutting etc. complete. as per design and drawing circulated by SE (ENV) in 2003 including heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, till the completion of work. (Depth upto 2.0 m. from top of frame to invert level of pipe.  Note: the contractor has to make his own arrangement for testing the man hole)	17307.80	No.
MDA- 003	Providing and constructing BB masonry (II <sup>nd</sup> sort) circular/concentric conical manhole with 1.53 m dia at bottom and 0.53m. dia at top with 230 mm thick brick masonry (II <sup>nd</sup> sort) inC.M. 1:3 and 20 mm thick smooth cement plaster in C.M	22995.40	No.

	Manholes / Drop Arrangements		
ITEM – CODE	DESCRIPTION	RATE	UNIT
	1:2 from inside and outside, including curing providing and fixing copolymer, polypropylene, steel reinforcement PVC heavy duty step/ footrest of approved make conforming to an ASTM D-4101 specification to take load as per IS 5455 including providing foundation concrete in M-15 and 300 mm thick with benching and channelling, supplying and fixing RCC factory made steel fibre reinforced (SFRC) heavy duty manhole cover and frame with steel bearing of cover into the frame including shoring strutting etc. complete.as per design and drawing circulated by SE (ENV) in 2003 including heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, till the completion of work. (Depth upto 2.15 m. from top of frame to invert level of pipe).		
	Note: The contractor has to make his own arrangement for testing the man hole.  a) Same as Item No.MDA-003. For additional extra	11479.10	Rmt.
	a) Same as Item No.MDA-003. For additional extra meter depth beyond 2.16m and up to 4.99 m.	114/9.10	KIIIt.
	b) Same as Item No.MDA-003.For additional extra meter depth from 5.00m to 9.0 m.	14862.50	Rmt.
	Note: the contractor has to make his own arrangement for testing the man hole)		
MDA- 004	Providing and constructing BB masonry (II <sup>nd</sup> sort) circular/concentric conical manhole with 1.83 m dia at bottom and 0.53 m. Dia. at top with 230 mm thick brick masonry (II <sup>nd</sup> sort) in C.M. 1:3 and 20 mm thick smooth cement plaster in C.M. 1:2 from inside and outside, including curing providing and fixing copolymer, polypropylene, steel reinforcement PVC heavy duty step/ footrest of approved make conforming to an ASTM D-4101 specification to take load as per IS 5455 including providing foundation concrete in M-15 and 300 mm thick with benching and channelling, supplying and fixing RCC factory made steel fibre reinforced (SFRC) heavy duty manhole cover and frame with steel bearing of cover into the frame including shoring strutting etc. complete. As per design and drawing circulated by SE (ENV) in 2003 including heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, till the completion of work. (Depth upto 2.28 m. from top of frame to invert level of pipe	29589.00	No.
	Note: the contractor has to make his own arrangement for testing the man hole)		
	a) Same as Item No.MDA-004.For additional extra meter depth from 2.29m to 4.99 m.	13108.20	Rmt.

	Manholes / Drop Arrangements.		
ITEM – CODE	DESCRIPTION	RATE	UNIT
	b) Same as Item No. MDA-004.For additional extra meter depth from 5.0m to 9.0 m.	16597.60	Rmt.
MDA- 005	Providing and constructing BB masonry (II <sup>nd</sup> sort) rectangular/ square cum trapezoidal manhole of size 1.53 x 1.53 m at bottom and 910 x 610 mm at top with 230 mm thick brick masonry (II <sup>nd</sup> sort)in C.M. 1:3 and 20 mm thick smooth cement plaster in C.M. 1:2 from inside and outside, including curing providing and fixing copolymer, polypropylene, steel reinforcement PVC heavy duty step/ footrest of approved make conforming to an ASTM D-4101 specification to take load as per IS 5455 including providing foundation concrete in M-15and 300 mm thick with benching and channelling, supplying and fixing RCC factory made steel fibre reinforced (SFRC) heavy duty manhole cover and frame with steel bearing of cover into the frame including shoring strutting etc. complete. As per design and drawing circulated by SE (ENV) in 2003 including heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, till the completion of work. (Depth upto 2.15 m. from to top of frame to invert level of pipe  Note: The contractor has to make his own arrangement for testing the man hole)	32936.65	No.
	a) Same as per Item No.MDA-005. For additional extra meter depth from 2.16m and up to 4.99m.	14291.00	Rmt.
	b) Same as per Item No. MDA-005. For additional extra meter depth from 5.0m up to 9.0 m.	19362.30	Rmt.
MDA- 006	Providing and constructing BB masonry (II <sup>nd</sup> sort) rectangular/ square cums trapezoidal manhole of size 1.83 x 1.53 m. at bottom and 910 x 610 mm at top with 230 mm thick brick masonry (II <sup>nd</sup> sort)in C.M. 1:3 and 20 mm thick smooth cement plaster in C.M. 1:2 from inside and outside, including curing providing and fixing copolymer, polypropylene, steel reinforcement PVC heavy duty step/ footrest of approved make conforming to an ASTM D-4101 specification to take load as per IS 5455 including providing foundation concrete in M-15 and 300 mm thick with benching and channelling, supplying and fixing RCC factory made steel fibre reinforced (SFRC) heavy duty manhole cover and frame with steel bearing of cover into the frame including shoring strutting etc. complete. As per design and drawing circulated by SE (ENV) in 2003 including heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, till the completion of work.(Depth upto 2.15 m. from top of frame to invert level of pipe.  Note: The contractor has to make his own arrangement for testing the man hole)	39303.15	No.
	a) Same as per Item No. MDA-006. For additional extra	15370.95	Rmt.

	Manholes / D	Drop Arrangements		
ITEM – CODE	DESCRIPTION  meter depth from 2.16m. up to 5.0 m.	RATE	UNIT	
	b) Same as per Item No. MDA-006. For additional extra meter depth from 5.0m up to 9.0 m.	20056.15	Rmt.	
MDA- 007	Providing and constructing BB masonry (II <sup>nd</sup> sort) rectangular/ square cums trapezoidal manhole of size 1.83 x 1.83 m. at bottom and 1.22 x 0.91m. at top with 230 mm thick brick masonry (II <sup>nd</sup> sort) in C.M. 1:3 and 20 mm thick smooth cement plaster in C.M. 1:2 from inside and outside, including curing providing and fixing copolymer, polypropylene, steel reinforcement PVC heavy duty step/ footrest of approved make conforming to an ASTM D-4101 specification to take load as per IS 5455 including providing foundation concrete in M-15 and 300 mm thick with benching and channeling, supplying and fixing RCC factory made steel fiber reinforced (SFRC) heavy duty manhole cover and frame with steel bearing of cover into the frame including shoring strutting etc. completes per design and drawing circulated by SE (ENV) in 2003 including heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, till the completion of work.(Depth upto 2.76 M. from top of frame upto inward level of pipe)  Note: The contractor has to make his own arrangement for testing the man hole)	66076.65	No.	
	a) Same as per Item No. MDA-007. For additional extra meter depth from 2.77m up to 4.99 m.	16442.65	Rmt.	
	b) Same as per Item No. MDA-007. For additional extra meter depth from 5.0m up to 9.90 m.	21279.33	Rmt.	
MDA-008	Providing and constructing BB masonry (II <sup>nd</sup> sort) rectangular/ square cums trapezoidal manhole of size 2.44 x 1.83 m. at bottom and 1.22 x 0.91m. at top with 230 mm thick brick masonry (II <sup>nd</sup> sort)in C.M. 1:3 and 20 mm thick smooth cement plaster in C.M. 1:2 from inside and outside, including curing providing and fixing copolymer, polypropylene, steel reinforcement PVC heavy duty step/ footrest of approved make conforming to an ASTM D-4101 specification to take load as per IS 5455 including providing foundation concrete in M-15 and 300 mm thick with benching and channeling, supplying and fixing RCC factory made steel fiber reinforced (SFRC) heavy duty manhole cover and frame with steel bearing of cover into the frame including shoring strutting etc. completes per design and drawing circulated by SE (ENV) in 2003 including heavy dewatering upto any extent by mechanical means with the help of pumping machinery with the desired H.P. all lifts, till the completion of work. (Depth upto 2.76 m. from top of frame	81774.95	No.	

	Manholes / D	Prop Arrangements		
ITEM – CODE	DESCRIPTION	RATE	UNIT	
	upto inward level of pipe)			
	<b>Note:</b> The contractor has to make his own arrangement for testing the man hole)			
	a) Same as per Item No. MDA-008. For additional extra meter depth from 2.77m up to 4.99 m.	18642.55	Rmt.	
	b) Same as per Item No. MDA-008.For additional extra meter depth from 5.0m to 9.0 m.	24156.45	Rmt.	
MDA-009	Extra rate over and above for Item no. MDA-005 to MDA-006. Providing scrapper manhole arrangement by providing 300 mm deep silt chamber as per the drawing circulated by SE (ENV) in 2003 and as directed by Engineer-in-charge			
	a) For size 1.53 x 1.53 m. scrapper manhole depth from 2.16 m. to 4.99 m.	5390.60	No.	
	b) For size 1.53 x 1.53 m. scrapper manhole depth from 5.0 m. to 9.0 m.	6710.80	No.	
	c) For size 1.83 x 1.53 m. scrapper manhole depth from 2.16 m. to 5.0 m.	5771.30	No.	
	d) For size 1.83 x 1.53 m. scrapper manhole depth from 5.0 m. to 9.0 m.	7170.00	No.	
MDA-010	Extra rate over and above for Item no. MDA-007 to MDA-008. Providing scrapper manhole arrangement by providing 300 mm deep silt chamber as per the drawing circulated by SE (ENV) in 2003 and as directed by Engineer-in-charge			
	a) For size 1.83 x 1.83 m. scrapper manhole Depth from 2.77 m. to 4.99 m.	7121.80	No.	
	b) For size 1.83 x 1.83 m. scrapper manhole Depth from 5.0 m. to 9.0 m.	8560.50	No.	
	c) For size 2.44 x 1.83 m. scrapper manhole Depth from 2.77 m. to 5.0 m.	8666.70	No.	
	d) For size 2.44 x 1.83 m. Scrapper manhole Depth from 5.0 m. to 9.0 m.	10312.65	No.	
MDA-011	Providing RCC spun ventilating shaft 7.30 m in height, uniformly tapered from 29 cms at bottom to 10 cm at top including constructing flue chamber of size 450 mm x 450 mm x 300 mm or as per detail design and drawing or as directed including construction BB masonry in CM 1:3 plastered from inside and outside in CM 1:3, PCC bedding in M-20 grade of 150 mm thickness for vent shaft and flue chamber including RCC precast slab of 75 mm thick for the flue chamber connecting the vent shaft to manhole by 150 mm dia NP2 class RCC pipes with collar joint or as directed with required length of pipe as directed with CC M-20, 150 mm thick bedding including heavy dewatering upto any extent, by manually or mechanically including excavation with shoring and strutting			

	Manholes / D	Prop Arrangements		
ITEM – CODE	DESCRIPTION	RATE	UNIT	
	etc. complete as per specifications and design and drawing including curing etc. complete.			
MDA-012	Providing 250 mm dia stoneware / RCC pipe in vertical drop of 0.60 m including 250 mm dia stoneware pipes fixed in brick masonry of the manhole at required level and providing 250 mm dia stoneware right angle bend 250 x 250 x 250 mm SW double tee junction including cutting, jointing and felleting as per standard specifications encased in half brick thick set in cement mortor 1:2 all round the pipes, double tee bend and extra brick work below bend upto the foundations of the manhole and tapering portion of the manhole plastering the exposed surfaces, after racking out the joints of the masonry, to a depth of 20 mm thick in CM 1:1 and neat cement rendering so as to give smooth surface including plugging the opening etc. complete with necessary dewatering mechanically or manually upto any extent as directed by Engineer-in-charge (depth upto 0.6 m).	3068.00	No.	
MDA-013	Providing 300 mm dia stoneware / RCC pipe in vertical drop of 0.60 m including 300 mm dia stoneware pipes fixed in brick masonry of the manhole at required level and providing 300 mm dia stoneware right angle bend 300 x 300 x 300 mm SW double tee junction including cutting, jointing and felleting as per standard specifications encased in half brick thick set in cement mortor 1:2 all round the pipes, double tee bend and extra brick work below bend upto the foundations of the manhole and tapering portion of the manhole plastering the exposed surfaces, after racking out the joints of the masonry, to a depth of 20 mm thick in CM 1:1 and neat cement rendering so as to give smooth surface including plugging the opening etc. complete with necessary dewatering mechanically or manually upto any extent as directed by Engineer-in-charge (depth upto 0.6 m).	3669.00	No.	
MDA-014	Providing 400 mm dia stoneware /RCC pipe in vertical drop of 0.60 m including 400 mm dia stoneware pipes fixed in brick masonry of the manhole at required level and providing 400 mm dia stoneware right angle bend 400 x 400 x 400 mm SW double tee junction including cutting, jointing and felleting as per standard specifications encased in half brick thick set in cement mortor 1:2 all round the pipes, double tee bend and extra brick work below bend upto the foundations of the manhole and tapering portion of the manhole plastering the exposed surfaces, after racking out the joints of the masonry, to a depth of 20 mm thick in CM 1:1 and neat cement rendering so as to give smooth surface including plugging the opening etc. complete with necessary dewatering mechanically or manually upto any extent as directed by Engineer-in-charge (depth upto 0.6 m).	5061.00	No.	
MDA-015	Providing 500 mm dia stoneware / RCC pipe in vertical drop of 0.60 m including 500 mm dia stoneware pipes fixed in brick masonry of the manhole at required level and providing 500	5486.00	No.	

	Manholes / D	rop Arrange	ments
ITEM – CODE	DESCRIPTION	RATE	UNIT
	mm dia stoneware right angle bend 500 x 500 x 500 mm SW double tee junction including cutting, jointing and felleting as per standard specifications encased in half brick thick set in cement mortor 1:2 all round the pipes, double tee bend and extra brick work below bend upto the foundations of the manhole and tapering portion of the manhole plastering the exposed surfaces, after racking out the joints of the masonry, to a depth of 20 mm thick in CM 1:1 and neat cement rendering so as to give smooth surface including plugging the opening etc. complete with necessary dewatering mechanically or manually upto any extent as directed by Engineer-in-charge (depth upto 0.6 m).		
MDA-016	Providing 600 mm dia stoneware/RCC pipe in vertical drop of 0.60m including 600 mm dia stoneware pipes fixed in brick masonry of the manhole at required level and providing 600 mm dia stoneware right angle bend 600 x 600 x 600 mm SW double tee junction including cutting, jointing and felleting as per standard specifications encased in half brick thick set in cement mortor 1:2 all round the pipes, double tee bend and extra brick work below bend upto the foundations of the manhole and tapering portion of the manhole plastering the exposed surfaces, after racking out the joints of the masonry, to a depth of 20 mm thick in CM 1:1 and neat cement rendering so as to give smooth surface including plugging the opening etc. complete with necessary dewatering mechanically or manually upto any extent as directed by Engineer-in-charge (depth upto 0.6 m).	6313.00	No.
MDA-017	Same as per Item no. <u>MDA12</u> as above additional height of drop arrangement masonry manhole as directed by Engineer-in-charge etc. complete (depth above 0.6 to required depth as per drawing).	780.00	(50 cm Depth)
MDA-018	Same as per Item no. <u>MDA13</u> as above additional height of drop arrangement masonry manhole as directed by Engineer-incharge etc. complete (depth above 0.6 to required depth as per drawing).	896.00	(50 cm Depth)
MDA-019	Same as per Item no. <u>MDA14</u> as above additional height of drop arrangement masonry manhole as directed by Engineer-incharge etc. complete (depth above 0.6 to required depth as per drawing).	1102.00	(50 cm Depth)
MDA-020	Same as per Item no. <u>MDA15</u> as above additional height of drop arrangement masonry manhole as directed by Engineer-incharge etc. complete (depth above 0.6 to required depth as per drawing).	1217.00	(50 cm Depth)
MDA-021	Same as per Item no. <u>MDA16</u> as above additional height of drop arrangement masonry manhole as directed by Engineer-incharge etc. complete (depth above 0.6 to required depth as per drawing).	1401.00	(50 cm Depth)

## **MISCELLANEOUS**

	Miscellaneous			
ITEM - CODE	DESCRIPTION	RATE	UNIT	
MISCSL- 001	Refilling in the pipe trenches/all pipe foundations as directed with approved murum obtained from excavated material in 15 cm to 20cm layers with all leads and all lifts including watering and compaction etc. complete.	60.00	Cum.	
MISCSL- 002	Filling in pipe trenches/on all type of foundations with approved murum obtained from approved quarry arranged by the contractor, laying in 15 cm to 20 cm layers including loading, transporting, unloading upto given site, stacking, spreading, levelling as directed and laying in layers of 15 cm to 20 cm including watering and compaction layer by layer with the help of mechanical rammer with all leads and lifts etc. complete (Environmental cess @ Rs. 1.00/cu.m. of gross quantity without standard deduction will be deducted from the contractor's bill.	641.00	Cum.	
MISCSL- 003	Disposal of surplus excavated materials upto specified lead and all lifts including loading, unloading, stacking and spreading as directed by Engineer-in-Charge etc. complete Lead Upto 0.5 Km	146.90	Cum.	
MISCSL- 004	Disposal of surplus excavated materials upto specified lead and all lifts including loading, unloading, stacking and spreading as directed by Engineer-in-Charge etc. complete Lead beyond 0.5 km but Upto 1.0 Km	158.30	Cum.	
MISCSL- 005	Disposal of surplus excavated materials upto specified lead and all lifts including loading, unloading, stacking and spreading as directed by Engineer-in-Charge etc. complete Lead beyond 1.0 km but Upto 1.5 Km	169.50	Cum.	
MISCSL- 006	Disposal of surplus excavated materials upto specified lead and all lifts including loading, unloading, stacking and spreading as directed by Engineer-in-Charge etc. complete Lead beyond 1.5 km but Upto 2.0 Km	180.10	Cum.	
MISCSL- 007	Disposal of surplus excavated materials upto specified lead and all lifts including loading, unloading, stacking and spreading as directed by Engineer-in-Charge etc. complete Lead beyond 2.0 km but Upto 2.5 Km	190.45	Cum.	
MISCSL- 008	Disposal of surplus excavated materials upto specified lead and all lifts including loading, unloading, stacking and spreading as directed by Engineer-in-Charge etc. complete Lead beyond 2.0 km but Upto 3.0 Km	201.55	Cum.	

## **STEEL**

			Steel
ITEM - CODE	DESCRIPTION	RATE	UNIT
S-001	Providing and placing, fixing in all RCC item of foundation, sub-structure and superstructures HYSD/TMT bar reinforcement of various diameters as per IS 1786 (1985) of Fe 415 approved make for reinforcement in any position as per detailed drawing or as directed for all diameters including, cutting, bending in shape, fixing in position with galvanized binding wire of 17 guage or tack welding as per IS 9417 (latest version) as directed etc. complete including dewatering using pumps or manually during placing reinforcement and keeping dry during concreting of RCC members. The cost also includes all types of taxes, excise duty, sales tax, insurance, cess levied by local authority etc.  Note: The quantity to be measured and paid for this item shall not include wastage in cutting. Actually installed and placed in position steel shall be paid for including hooks, laps, bends, pins and chairs. No separate payment shall be made for binding wire or tack welding.		
	a) HYSD Steel		M.T.
	b) TMT Steel	57251.00	M.T.
S-002	Providing and placing, fixing in all RCC item of foundation, sub-structure and superstructures Mild steel reinforcement of various diameters as per IS 432 - 1982 (latest version) of approved make for reinforcement in any position as per detailed drawing or as directed for all diameters including, cutting, bending in shape, fixing in position with galvanized binding wire of 17 gauge or tack welding as per IS 9417 (latest version) as directed etc. complete including dewatering using pumps or manually during placing reinforcement and keeping dry during concreting of RCC members. The cost also includes all types of taxes, excise duty, sales tax, insurance, cess levied by local authority etc.  Note: The quantity to be measured and paid for this item shall not include wastage in cutting. Actually installed and placed in position steel shall be paid for including hooks, laps, bends, pins and chairs. No separate payment shall be made for binding wire or tack welding.	43452.00	M.T.

# **EXCAVATION**

	Excavation			
ITEM - CODE	DESCRIPTION	RATE	UNIT	
EXWS- 001	Excavation for pipe trenches in including removing the excavated materials upto a distance of 50 metres and lift as specified, stacking and spreading as directed including dewatering unless provided elsewhere, preparing the bed for the foundation and necessary backfilling, ramming, watering complete excluding shoring and strutting etc. complete.			
	<b>Notes</b> : All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.			
	a) Earth soils of all types, sand gravel and soft murum Lift upto 1.50 metres	173.67	Cum.	
	b) Hard Murum Lift upto 1.50 metres	189.67	Cum.	
	c) Hard Murum with boulders. Lift upto 1.50 metres	206.67	Cum.	
EXWS- 002	Excavation for pipe trenches / foundation in hard strataincluding removing the excavated materials upto a distance of 50 metres and lift as specified, stacking and spreading as directed including dewatering unless provided elsewhere directed the bed for the foundation and necessary backfilling with available earth, murum, ramming, watering complete excluding shoring and strutting etc. complete.			
	Notes :			
	1) All payments towards the royalty, fees, taxes etc. shall be borne by the contractor.			
	2) The excavated hard rock shall be the contractor's property.			
	a) Soft Rock Lift upto 1.50 metres	352.67	Cum.	
	b) Hard Rock by blasting Lift upto 1.50 metres	303.40	Cum.	
	c) Hard Rock by chiselling wedging Lift upto 1.50 metres	968.52	Cum.	
	d) Laterite rock masses mechanically Lift upto 1.50 metres	1089.67	Cum.	
EXWS- 003	Dewatering the excavated trenches and pools of water by using pumps and other devices, including disposing of the water to a safe distance as directed.			
	i) By using 3 H.P. Pumps	50.00	Hr.	
	ii) By using 5 to 9 H.P. Pumps	71.00	Hr.	

	Excavation.		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	iii) By using 10 to 19 H.P. Pumps	94.00	Hr.
EXWS- 004	Filling in plinth and floors with approved excavated material in 15 cm to 20 cm layers including watering and compaction complete.	47.00	Cum.
EXWS- 005	Filling in plinth and floors with contractor's murum in 15cm to 20cm layers including watering and compaction complete.	231.67	Cum.
EXWS- 006	Providing dry trap / rubble stone soling 15cm to 20 cm thick including hand packing and compacting etc. complete.	570.67	Cum.
EXWS- 007	Providing and filling in the foundation with sand of approved quality including watering, compaction etc. complete.	1077.67	Cum.
EXWS- 008	Providing soling using 80mm size trap metal in layers of 15cm each including filling voids with sand, ramming, watering etc. complete.	703.67	Cum.

# C.I. / D.I. PIPES

		C.I. / D.I. Pipes		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
CIDIP- 001	a. Providing and Supplying ISI mark C.I. S/S Pipes of following class and diameter including all taxes (Central and Local) insurance, railway freight, unloading from railway wagon, loading into trucks, transport to departmental stores/site, unloading stacking etc. complete. (Suitable for Tyton/Pig lead joints)  (WITH EXCISE DUTY)			
	A) Class 'LA'			
	i. 80mm	900.00	Rmt.	
	ii 100mm	1128.00	Rmt.	
	iii. 125mm	1425.00	Rmt.	
	iv. 150mm	1831.00	Rmt.	
	v. 200mm	2636.00	Rmt.	
	vi. 250mm	3555.00	Rmt.	
	vii. 300mm	4594.00	Rmt.	
	viii. 350mm	4537.00	Rmt.	
	ix. 400mm	5522.00	Rmt.	
	x. 450mm	6658.00	Rmt.	
	xi. 500mm	7696.00	Rmt.	
	xii. 600mm	10253.00	Rmt.	
	xiii. 700mm	13232.00	Rmt.	
	xiv. 750mm	14820.00	Rmt.	
	xv. 800mm	16589.00	Rmt.	
	xvi. 900mm	20206.00	Rmt.	
	xvii. 1000mm	24274.00	Rmt.	
	B) Class 'A'			
	i. 80mm	956.00	Rmt.	
	ii 100mm	1193.00	Rmt.	
	iii. 125mm	1552.00	Rmt.	
	iv. 150mm	1912.00	Rmt.	
	v. 200mm	2763.00	Rmt.	
	vi. 250mm	3735.00	Rmt.	
	vii. 300mm	4833.00	Rmt.	
	viii. 350mm	6043.00	Rmt.	
	ix. 400mm	7410.00	Rmt.	
	x. 450mm	8976.00	Rmt.	
	xi. 500mm	10292.00	Rmt.	
	xii. 600mm	13744.00	Rmt.	

		C.I. / D.I. Pipes	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	xiii. 700mm	17911.00	Rmt.
	xiv. 750mm	19896.00	Rmt.
	xv. 800mm	22241.00	Rmt.
	xvi. 900mm	27072.00	Rmt.
	xvii. 1000mm	32562.00	Rmt.
	C) Class 'B'		
	i. 80mm	1016.00	Rmt.
	ii 100mm	1272.00	Rmt.
	iii. 125mm	1670.00	Rmt.
	iv. 150mm	2058.00	Rmt.
	v. 200mm	2987.00	Rmt.
	vi. 250mm	4039.00	Rmt.
	vii. 300mm	5237.00	Rmt.
	viii. 350mm	6554.00	Rmt.
	ix. 400mm	7567.00	Rmt.
	x. 450mm	9689.00	Rmt.
	xi. 500mm	11136.00	Rmt.
	xii. 600mm	14671.00	Rmt.
	xiii. 700mm	19165.00	Rmt.
	xiv. 750mm	21583.00	Rmt.
	xv. 800mm	24058.00	Rmt.
	xvi. 900mm	29330.00	Rmt.
	xvii. 1000mm	35189.00	Rmt.
	(WITHOUT EXCISE DUTY)		
	A) Class 'LA'		
	i. 80mm	844.00	Rmt.
	ii 100mm	1058.00	Rmt.
	iii. 125mm	1270.00	Rmt.
	iv. 150mm	1718.00	Rmt.
	v. 200mm	2484.00	Rmt.
	vi. 250mm	3348.00	Rmt.
	vii. 300mm	4317.00	Rmt.
	viii. 350mm	3948.00	Rmt.
	ix. 400mm	4806.00	Rmt.
	x. 450mm	5794.00	Rmt.
	xi. 500mm	6698.00	Rmt.
	xii. 600mm	8921.00	Rmt.
	xiii. 700mm	11514.00	Rmt.
	xiv. 750mm	12897.00	Rmt.
	xv. 800mm	14435.00	Rmt.

		C.I. / D.I	. Pipes
ITEM - CODE	DESCRIPTION	RATE	UNIT
	xvi. 900mm	17582.00	Rmt.
	xvii. 1000mm	21122.00	Rmt.
	B) Class 'A'		
	i. 80mm	852.00	Rmt.
	ii 100mm	1063.00	Rmt.
	iii. 125mm	1383.00	Rmt.
	iv. 150mm	1703.00	Rmt.
	v. 200mm	2461.00	Rmt.
	vi. 250mm	3327.00	Rmt.
	vii. 300mm	4306.00	Rmt.
	viii. 350mm	5384.00	Rmt.
	ix. 400mm	6602.00	Rmt.
	x. 450mm	7998.00	Rmt.
	xi. 500mm	9170.00	Rmt.
	xii. 600mm	12245.00	Rmt.
	xiii. 700mm	15958.00	Rmt.
	xiv. 750mm	17725.00	Rmt.
	xv. 800mm	19815.00	Rmt.
	xvi. 900mm	24119.00	Rmt.
	xvii. 1000mm	29010.00	Rmt.
	Class 'B'		
	i. 80mm	905.00	Rmt.
	ii 100mm	1134.00	Rmt.
	iii. 125mm	1489.00	Rmt.
	iv. 150mm	1834.00	Rmt.
	v. 200mm	2661.00	Rmt.
	vi. 250mm	3598.00	Rmt.
	vii. 300mm	4666.00	Rmt.
	viii. 350mm	5840.00	Rmt.
	ix. 400mm	6742.00	Rmt.
	x. 450mm	8631.00	Rmt.
	xi. 500mm	9921.00	Rmt.
	xii. 600mm	13070.00	Rmt.
	xiii. 700mm	17085.00	Rmt.
	xiv. 750mm	19229.00	Rmt.
	xv. 800mm	21435.00	Rmt.
	xvi. 900mm	26132.00	Rmt.
	xvii. 1000mm	31352.00	Rmt.
CIDIP- 002	Lowering laying and jointing with SBR Pipes of various classes with CI/MS diameter in proper position, grade and a	rubber gaskets C.I. S.S. specials of following	Tuilt.

			C.I. / D.I. Pipes.	
ITEM - CODE		DESCRIPTION	RATE	UNIT
		neer-in-Charge including conveyance of material from		
		s to site of work, including cost of jointing materials and		
		er rings labour, giving hydraulic testing etc. complete.		
	+	: only SBR Rubber gaskets to be used		
	a)	C.I. 'L.A.' Class / Mortar Inlined DI K-7/K-9	50.00	D 4
	1. ii.	80 mm	59.00	Rmt.
	11. iii.	100 mm	73.00	Rmt.
	+	125mm	79.00	Rmt.
	iv.	150mm	104.00	Rmt.
	vi.	200mm	135.00	Rmt.
		250mm	152.00	Rmt.
	vii. viii.	300mm	186.00	Rmt.
	┪.	350mm	230.00	Rmt.
	1X.	400mm		Rmt.
	X.	450 mm	243.00	Rmt.
	X1.	500mm	280.00	Rmt.
	xii.	600 mm	373.00	Rmt.
	X111.	700 mm	525.00	Rmt.
	xiv.	750 mm	574.00	Rmt.
	XV.	800 mm	674.00	Rmt.
	XV1.	900 mm	846.00	Rmt.
	xvii.	1000 mm	1026.00	Rmt.
	<b>B</b> )	C.I. 'A' Class		
	i.	80 mm	56.00	Rmt.
	ii.	100 mm	66.00	Rmt.
	iii.	125mm	79.00	Rmt.
	iv.	150mm	86.00	Rmt.
	v.	200mm	110.00	Rmt.
	vi.	250mm	146.00	Rmt.
	vii.	300mm	163.00	Rmt.
	viii.	350mm	200.00	Rmt.
	ix.	400mm	231.00	Rmt.
	X.	450 mm	245.00	Rmt.
	xi.	500mm	298.00	Rmt.
	xii.	600 mm	398.00	Rmt.
	xiii.	700 mm	556.00	Rmt.
	xiv.	750 mm	610.00	Rmt.
	XV.	800 mm	698.00	Rmt.
	xvi.	900 mm	882.00	Rmt.
	xvii.	1000 mm	1058.00	Rmt.

		C.I. / D.I. Pipes.	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	c) C. I. 'B' Class	50.00	<b>D</b> .
	i. 80 mm	59.00	Rmt.
	ii. 100 mm	71.00	Rmt.
	iii. 125mm	86.00	Rmt.
	iv. 150mm	96.00	Rmt.
	v. 200mm	124.00	Rmt.
	vi. 250mm	164.00	Rmt.
	vii. 300mm	175.00	Rmt.
	viii. 350mm	225.00	_
	ix. 400mm	255.00	Rmt.
	x. 450 mm	262.00	Rmt.
	xi. 500mm	316.00	Rmt.
	xii. 600 mm	423.00	Rmt.
	xiii. 700 mm	588.00	Rmt.
	xiv. 750 mm	650.00	Rmt.
	xv. 800 mm	737.00	Rmt.
	xvi. 900 mm	918.00	Rmt.
	xvii. 1000 mm	1082.00	Rmt.
CIDIP- 003	Providing D.I.K-9 grade pipes with internal cement mortar lining including all taxes, insurance, railway freight, unloading from railway wagon, loading into truck, transport to departmental stores/site, unloading, stacking, etc. complete (IS: 8329-2000 Latest Version)		
	(WITH EXCISE DUTY)		
	i) 100mm	1145.00	Rmt.
	ii) 150mm	1670.00	Rmt.
	iii) 200mm	2076.00	Rmt.
	iv) 250mm	2768.00	Rmt.
	v) 300mm	3519.00	Rmt.
	vi) 350mm	4405.00	Rmt.
	vii) 400mm	5208.00	Rmt.
	viii) 450 mm	6288.00	Rmt.
	ix) 500mm	7308.00	Rmt.
	x) 600 mm	9664.00	Rmt.
	xi) 700 mm	12403.00	Rmt.
	xii) 750 mm	14102.00	Rmt.
	xiii) 800 mm	15339.00	Rmt.
	xiv) 900 mm	18933.00	Rmt.
	xv) 1000 mm	22098.00	Rmt.

	,	C.I. / D.I. Pipes		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	(WITHOUT EXCISE DUTY)			
	i) 100mm	1041.00	Rmt.	
	ii) 150mm	1518.00	Rmt.	
	iii) 200mm	1888.00	Rmt.	
	iv) 250mm	2516.00	Rmt.	
	v) 300mm	3200.00	Rmt.	
	vi) 350mm	4010.00	Rmt.	
	vii) 400mm	4730.00	Rmt.	
	viii) 450 mm	5716.00	Rmt.	
	ix) 500mm	6644.00	Rmt.	
	x) 600 mm	8773.00	Rmt.	
	xi) 700 mm	11276.00	Rmt.	
	xii) 750 mm	12819.00	Rmt.	
	xiii) 800 mm	13949.00	Rmt.	
	xiv) 900 mm	17212.00	Rmt.	
	xv) 1000 mm	20089.00	Rmt.	
004	lining including all taxes, insurance, railway freight, unloading from railway wagon, loading into truck, transport to departmental stores/site, unloading, stacking, etc. complete (IS: 8329-2000 Latest Version).			
	(WITH EXCISE DUTY)			
	i) 100mm	977.00	Rmt.	
	ii) 150mm	1434.00	Rmt.	
	iii) 200mm	1692.00	Rmt.	
	iv) 250mm	2242.00	Rmt.	
	v) 300mm	2826.00	Rmt.	
	vi) 350mm	3480.00	Rmt.	
	vii) 400mm	4143.00	Rmt.	
	viii) 450 mm	5000.00	Rmt.	
	ix) 500mm	5859.00	Rmt.	
	x) 600 mm	7717.00	Rmt.	
	xi) 700 mm	10409.00	Rmt.	
	xii) 750 mm	12097.00	Rmt.	
	xiii) 800 mm	13989.00	Rmt.	
	xiv) 900 mm	16779.00	Rmt.	
	xv) 1000 mm	19646.00	Rmt.	
	(WITHOUT EXCISE DUTY)			
	i) 100mm	888.00	Rmt.	
	ii) 150mm	1304.00	Rmt.	

		C.I. / D.I. Pipes		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	iii) 200mm	1538.00	Rmt.	
	iv) 250mm	2038.00	Rmt.	
	v) 300mm	2569.00	Rmt.	
	vi) 350mm	3164.00	Rmt.	
	vii) 400mm	3766.00	Rmt.	
	viii) 450 mm	4545.00	Rmt.	
	ix) 500mm	5326.00	Rmt.	
	x) 600 mm	7015.00	Rmt.	
	xi) 700 mm	9463.00	Rmt.	
	xii) 750 mm	10997.00	Rmt.	
	xiii) 800 mm	12717.00	Rmt.	
	xiv) 900 mm	15264.00	Rmt.	
	xv) 1000 mm	17860.00	Rmt.	
CIDIP- 005	Providing and Making lead caulked joint with molten lead to Cast Iron Pipes and / or specials of all classes and fitting of following dia including cost of lead and all jointing material, labour, hydraulic testing etc. complete. Note: Only 75% rate shall be payable till satisfactory Hydraulic testing given.			
	i) 80 mm	657.00	Joint	
	ii) 100 mm	812.00	Joint	
	iii) 125mm	968.00	Joint	
	iv) 150mm	1200.00	Joint	
	v) 200mm	1750.00	Joint	
	vi) 250mm	2126.00	Joint	
	vii) 300mm	2564.00	Joint	
	viii) 350mm	2906.00	Joint	
	ix) 400mm	3389.00	Joint	
	x) 450 mm	4707.00	Joint	
	xi) 500mm	5060.00	Joint	
	xii) 600 mm	6501.00	Joint	
	xiii) 700 mm	7637.00	Joint	
	xiv) 750 mm	8675.00	Joint	
	xv) 800 mm	9316.00	Joint	
	xvi) 900 mm	9936.00	Joint	
	xvii) 1000 mm	10594.00	Joint	
CIDIP- 006	Providing and Supplying ISI standard CI double flanged pipes including all taxes (Central and Local), railway freight, insurance, unloading from railway wagon, loading into truck transport to stores / site, unloading etc. complete as directed by Engineer-in-Charge.			

		C.I. / D.I. Pipes		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	i) 80 mm	1419.00	Rmt.	
	ii) 100 mm	1753.00	Rmt.	
	iii) 125 mm	2284.00	Rmt.	
	iv) 150 mm	2849.00	Rmt.	
	v) 200 mm	4371.00	Rmt.	
	vi) 250 mm	5890.00	Rmt.	
	vii) 300 mm	7573.00	Rmt.	
	viii) 350 mm	9885.00	Rmt.	
	ix) 400 mm	12053.00	Rmt.	
	x) 450 mm	14473.00	Rmt.	
	xi) 500 mm	16986.00	Rmt.	
	xii) 600 mm	24162.00	Rmt.	
	xiii) 700 mm	32371.00	Rmt.	
	xiv) 750 mm	35221.00	Rmt.	
CIDIP- 007	Providing and Supplying ISI standard CI flanged S&S Specials including all taxes (Central and Local) railway freight, insurance, unloading from railway wagon, loading into truck transport to departmental store site, unloading stacking etc. complete.			
	a) D/F Specials			
	i) 80 mm to 300 mm dia.	73.60	Kg.	
	ii) 350 mm to 600 mm dia.	78.20	Kg.	
	iii)Above 600 mm dia.	83.90	Kg.	
	b) S/S Specials / Socketed Branch Flanged Specials			
	i) 80 mm to 300 mm dia.	71.30	Kg.	
	ii) 350 mm to 600 mm dia.	75.90	Kg.	
	iii)Above 600 mm dia.	80.50	Kg.	
	c) Plain Ended / Plain Ended Branch Flanged Specials			
	i) 80 mm to 300 mm dia.	69.00	Kg.	
	ii) 350 mm to 600 mm dia.	75.90	Kg.	
	iii)Above 600 mm dia.	80.50	Kg.	
CIDIP- 008	Providing and Supplying ISI standard MS specials of required thickness with 3 coats of approved make epoxy pain (Shalimar, Ciba or Mahindra & Mahindra make) from inside and outside including all taxes (Central and Local), octroi, inspection charges, transportation to stores / site, and stacking etc. complete.			
	a) Machine ends suitable fro PSC pipes of all diameters as per detailed drawing with 10mm thick x 0.7 M long barrel welded to it.	76.50	Kg.	
	b) Only flanges with machining and drilling holes, etc.	74.30	Kg.	

		C.I. / D.I.	Pipes	
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	complete more than 40mm thick.			
	c) Double flanged specials of all diameters.	72.10	Kg.	
	d) All socketed specials or socketted branch flanged specials of all diameters.	72.10	Kg.	
	e) Plain ended specials or plain ended branch flanged specials of all diameters.	72.10	Kg.	
	f) MS barrels (pipe pieces) locally manufactured (for small quantities)	70.00	Kg.	
CIDIP- 009	Providing and Making flanged joints to flanged C.I./M.S. pipes of all classes / specials etc. including cost of all jointing materials (rubber packing, nut bolts, etc.), labour, hydraulic testing etc. complete.  Note: Only 75% rate shall be payable till satisfactory hydraulic testing is given.			
	i) 80 mm	174.00	Joint	
	ii) 100 mm	301.00	Joint	
	iii) 125 mm	314.00	Joint	
	iv) 150 mm	603.00	Joint	
	v) 200 mm	627.00	Joint	
	vi) 250 mm	897.00	Rmt.	
	vii) 300 mm	931.00	Rmt.	
	viii) 350mm	1213.00	Rmt.	
	ix) 400mm	1511.00	Rmt.	
	x) 450 mm	1848.00	Rmt.	
	xi) 500mm	1912.00	Rmt.	
	xii) 600 mm	2052.00	Rmt.	
	xiii) 700 mm	3093.00	Rmt.	
	xiv) 750 mm	3179.00	Rmt.	
	xv) 800 mm	4398.00	Rmt.	
	xvi) 900 mm	4560.00	Rmt.	
	xvii) 1000 mm	4721.00	Rmt.	
CIDIP- 010	Erecting and hoisting in position and jointing, testing M.S./C.I. D/F pipes and specials in vertical position including cost of all jointing materials (rubber packing, nut bolts, etc.) labour, scaffolding, hydraulic testing etc. complete.  Note: Only 75% rate shall be payable till satisfactory hydraulic testing is given.			
	i) 80 mm	193.00	Joint	
	ii) 100 mm	326.00	Joint	
	iii) 125mm	344.00	Joint	
	iv) 150mm	640.00	Joint	
	v) 200mm	680.00	Joint	

		C.I. / D.I. Pipes		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	vi) 250mm	970.00	Joint	
	vii) 300mm	1025.00	Joint	
	viii) 350mm	1331.00	Joint	
	ix) 400mm	1655.00	Joint	
	x) 450 mm	2022.00	Joint	
	xi) 500mm	2115.00	Joint	
	xii) 600 mm	2323.00	Joint	
	xiii) 700 mm	3445.00	Joint	
	xiv) 750 mm	3576.00	Joint	
	xv) 800 mm	4843.00	Joint	
	xvi) 900 mm	5098.00	Joint	
	xvii) 1000 mm	5373.00	Joint	
011	type including excavation, breaking and removing exiting pipes, lowering, laying of specials and pipes in their position, refilling, closing the water supply in that area, dewatering and restarting the water supply, etc. complete as directed by Engineer-in-Charge for flowing diameters of existing pipeline, irrespective of diameter of branch line (the number of joints involved will be paid separately depending upon the nature of joints and required pipes, valves and specials will be supplied free of cost at stores).  Note: Only 85% rate shall be payable till satisfactory hydraulic testing is given.			
	i) 80 mm	1756.00	No.	
	ii) 100 mm	2028.00	No.	
	iii) 125mm	2247.00	No.	
	iv) 150mm	2375.00	No.	
	v) 200mm	2431.00	No.	
	vi) 250mm	2874.00	No.	
	vii) 300mm	3338.00	No.	
	viii) 350mm	3846.00	No.	
	ix) 400mm	4756.00	No.	
	x) 450 mm	5215.00	No.	
	xi) 500mm	6574.00	No.	
	xii) 600 mm	12215.00	No.	
	xiii) 700 mm	15061.00	No.	
	xiv) 750 mm	19102.00	No.	
	xv) 800 mm	24916.00	No.	
	xvi) 900 mm	32934.00	No.	
	xvii) 1000 mm	46383.00	No.	
CIDIP- 012	Dismantling dead pipeline of M.S. R.C.C. C.I. P.S.C. and G.I./A.C. P.V.C. S.W. H.D.P.L. pipe including cost of			

		C.I. / D.I. Pipes		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	necessary excavation and refilling of trenches breaking the			
	joints, lifting the pipes and stacking to the place as directed by			
	Engineer-in-Charge with all leads and lifts including cleaning			
	the surface, etc. complete.			
	a) For M.S./R.C.C./C.I./P.S.C.	146.00	D (	
	i. 80 mm		Rmt.	
	ii. 100 mm	161.00	Rmt.	
	iii. 125 mm	164.00	Rmt.	
	iv. 150 mm	168.00	Rmt.	
	v. 200 mm	186.00	Rmt.	
	vi. 250 mm	205.00	Rmt.	
	vii. 300 mm	222.00	Rmt.	
	viii. 350 mm	251.00	Rmt.	
	ix. 400 mm	273.00	Rmt.	
	x. 450 mm	309.00	Rmt.	
	xi. 500 mm	324.00	Rmt.	
	xii. 600 mm	397.00	Rmt.	
	xiii. 700 mm	465.00	Rmt.	
	xiv. 750 mm	522.00	Rmt.	
	b) For G.I. / A.C. / P.V.C. / S.W. / H.D.P.E.			
	i. 80 mm	87.00	Rmt.	
	ii. 100 mm	96.00	Rmt.	
	iii. 125mm	99.00	Rmt.	
	iv. 150mm	101.00	Rmt.	
	v. 200mm	111.00	Rmt.	
	vi. 250mm	123.00	Rmt.	
	vii. 300mm	133.00	Rmt.	
	viii. 350mm	150.00	Rmt.	
	ix. 400mm	164.00	Rmt.	
	x. 450 mm	186.00	Rmt.	
	xi. 500mm	194.00	Rmt.	
	xii. 600 mm	238.00	Rmt.	
	xiii. 700 mm	279.00	Rmt.	
	xiv. 750 mm	313.00	Rmt.	
CIDIP-	Providing and Constructing two taps standpost as per type	7960.00	No.	
013	design with excavation 15 cm thick PCC 1:3:6 bedding 20mm		110.	
	thick PCC 1:2:4 concrete for platform of 1.75 M dia. With side			
	curb and bucket rest, 80mm dia, heavy duty G.I. pipe central			
	post duly filled therein with C.C. 1:2:4, 5 M long, 20mm dia.			
	Medium G.I. pipe fixed vertically upto 15 mm dia self closing			
	water taps. One brass ferrule etc. complete together with all			
	labour and material charges as per drawing and as directed by			
	Engineer-in-Charge when good foundation in available. Rate			

		C.I. / D.I. Pipes	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	includes draining arrangement by excavating open gutters.		
	a) As above but when precast RCC platform or precast standpost is issued free of cost at departmental stores including cost of transportation and fixing etc. complete.	4752.00	No.
CIDIP- 014	Providing and Constructing two taps standpost as per type design with excavation 30cm thick boulder filling 15 cm thick PCC in 1:3:6, 20 mm thick RCC 1:2:4 platform of 1.75 M dia with side curb and bucket rest, 80mm dia heavy duty GI pipe central post duly filled therein with C.C. 1:2:4, 5 M long, 20mm dia. medium G.I. pipe fixed horizontally and providing and fixing two 15mm dia self closing water taps, one brass ferrule etc. complete together with all labour and material charges as per drawing and as directed by Engineer-in-Charge when good foundation is available. Rate includes draining arrangement by excavating open gutters.	8197.00	No.
	a) As above but when precast RCC platform or precast standpost is issued free of cost at depart mental stores including cost of transportation and fixing etc. complete.	4871.00	No.
CIDIP- 015	Providing and Supplying ISI standard D.I. specials & fitting with sealing rubber gasket for S.B.R, complete with cast iron follower gland and mild steel nut bolt's coated or otherwise protected from rusting and suitable for D.I. Pipes including cost of all labours, materials, transportation upto Depart-mental store/site loading and unloading including all taxes etc.		
	For all types of specials, bends tees etc.		
	i. 80 mm. to 300 mm.	107.00	Kg.
	ii. 350 mm & above	130.00	Kg.

# PIPE APPURTENANCES

	Pipe Appurter			ances
ITEM - CODE		DESCRIPTION	RATE	UNIT
PA-001	Provi	ding and supplying ISI mark CI D/F reflux valves (non-		
	return	valves), railway freight, inspection charges unloading		
		railway wagon, loading into truck, transportation upto		
		tmental stores/site, unloading, stacking etc. complete.		
		x valves as per I.S.5312 Part I (1984) (ithout by pass arrangement – PN – 1.		
	i. vv	50mm	3308.00	No.
	ii.	65 mm.	3873.00	No.
	iii.	80 mm.	4078.00	No.
	iv.	100 mm.	5694.00	No.
	V.	125 mm.	8130.00	No.
	vi.	150 mm.	9844.00	No.
	vii.	200 mm.	17694.00	No.
	viii.	250 mm.	30194.00	No.
	ix.	300 mm.	41374.00	No.
	X.	350 mm.	68478.00	No.
	xi.	400 mm.	94273.00	No.
	xii. xiii.	450 mm.	111059.00	No.
	xiii.	500 mm. 600 mm.	181880.00 266900.00	No.
	XIV.	700 mm.	468495.00	No.
	xvi.	750 mm.	-	No.
	XVII.	800 mm.	_	No.
	xviii.		-	No.
	xix.	1000 mm.	-	No.
	XX.	1100 mm.	-	No.
	xxi.	1200 mm.	-	No.
	<u>b)</u>	With by pass arrangement – PN – 1.		
	i.	80 mm.	4709.00	No.
	ii.	100 mm.	6708.00	No.
	iii.	125 mm.	9134.00	No.
	iv.	150 mm.	10848.00 20224.00	No.
	v. vi.	200 mm. 250 mm.	33057.00	No.
	Vii.	300 mm.	44373.00	No.
	Viii.	350 mm.	72752.00	No.
	iX.	400 mm.	97627.00	No.
	X.	450 mm.	114222.00	No.
	xi.	500 mm.	185408.00	No.
	xii.	600 mm.	270477.00	No.
	xiii.	700 mm.	709220.00	No.
	xiv.	750 mm.	776307.00	No.
	XV.	800 mm.	843396.00	No.
	xvi.	900 mm.	920068.00	No.

		F	Pipe Appurten		
ITEM - CODE		DESCRIPTION	RATE	UNIT	
	xvii.	1000 mm.	1073413.00	No.	
	<u>c)</u>	Without by pass arrangement – PN - 1.6			
	i.	50 mm.	3227.00	No.	
	ii.	65 mm.	3486.00	No.	
	iii.	80 mm.	5718.00	No.	
	iv.	100 mm.	7323.00	No.	
	V.	125 mm.	10203.00	No.	
	vi.	150 mm.	11419.00	No.	
	vii.	200 mm.	24284.00	No.	
	viii.	250 mm.	38986.00	No.	
	ix.	300 mm.	54474.00	No.	
	X.	350 mm.	93820.00	No.	
	xi.	400 mm.	108424.00	No.	
	xii.	450 mm.	127927.00	No.	
	xiii.	500 mm.	207834.00	No.	
	xiv.	600 mm.	305384.00	No.	
	XV.	700 mm.	369010.00	No.	
	xvi.	750 mm.	423608.00	No.	
	xvii.	800 mm.	481972.00	No.	
		900 mm.	609995.00	No.	
	xix.	1000 mm.	753081.00	No.	
	XX.	1100 mm.	911227.00	No.	
	xxi.	1200 mm.	1084436.00	No.	
	d)	With by pass arrangement – PN - 1.6			
	i.	50 mm.	3312.00	No.	
	ii.	65 mm.	3727.00	No.	
	iii.	80 mm.	5484.00	No.	
	iv.	100 mm.	7092.00		
	V.	125 mm.	9911.00	No.	
	vi.	150 mm.	12030.00	No.	
	vii.	200 mm.	24298.00	No.	
	viii.	250 mm.	36715.00	No.	
	ix.	300 mm.	51028.00	No.	
	X.	350 mm.	85713.00	No.	
	xi.	400 mm.	112272.00	No.	
	xii.	450 mm.	131355.00	No.	
	xiii.	500 mm.	217216.00	No.	
	xiv.	600 mm.	311049.00	No.	
	XV.	700 mm.	375853.00	No.	
	xvi.	750 mm.	431463.00	No.	
	xvii.	800 mm.	490910.00	No.	
	xviii.	900 mm.	621308.00	No.	
	xix.	1000 mm.	767046.00	No.	
	XX.	1100 mm.	928125.00	No.	
	xxi.	1200 mm.	1104545.00	No.	
PA-002		ding double flange sluice valve confirming for IS: 2906 /			
	11404(	6 including worn gear arrangements as per test pressure			

	Pipe Appurtenanc		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	stainless steel spindle, caps including all taxes, transportation		
	etc. complete.		
	a) Sluice valves – PN – 1 – without bypass	1201.00	
	i. 50 mm.	4391.00	No.
	ii. 65 mm.	4985.00	No.
<del>                                     </del>	iii. 80 mm.	5116.00	No.
	iv. 100 mm.	6812.00	No.
	v. 125 mm.	8521.00	No.
	vi. 150 mm.	10217.00	No.
	vii. 200 mm.	19333.00	No.
	viii. 250 mm.	29913.00	No.
	ix. 300 mm.	37695.00	No.
	x. 350 mm.	53477.00	No.
	xi. 400 mm.	72101.00	No.
	xii. 450 mm.	88187.00	No.
	xiii. 500 mm.	113477.00	No.
	xiv. 600 mm.	167606.00	No.
	xv. 700 mm.	300430.00	No.
	xvi. 750 mm.	342603.00	No.
	xvii. 800 mm.	427239.00	No.
	xviii. 900 mm.	550860.00	No.
	xix. 1000 mm.	814189.00	No.
	xx. 1100 mm.	1078533.00	No.
	xxi. 1200 mm.	1280269.00	No.
	b) Sluice valves – PN – 1 – with bypass		
	i. 50 mm.	4391.00	No.
	ii. 65 mm.	4985.00	No.
	iii. 80 mm.	5116.00	No.
	iv. 100 mm.	6812.00	No.
	v. 125 mm.	8521.00	No.
	vi. 150 mm.	12374.00	No.
	vii. 200 mm.	21854.00	No.
	viii. 250 mm.	33263.00	No.
	ix. 300 mm.	40982.00	No.
	x. 350 mm.	58087.00	No.
	xi. 400 mm.	77248.00	No.
	xii. 450 mm.	93275.00	No.
	xiii. 500 mm.	120104.00	No.
	xiv. 600 mm.	174198.00	No.
	xv. 700 mm.	310617.00	No.
	xvi. 750 mm.	351996.00	No.
	xvii. 800 mm.	437316.00	No.
	xviii. 900 mm.	561585.00	No.
	xix. 1000 mm.	826615.00	No.

			Pipe Appurtenances	
ITEM - CODE		DESCRIPTION	RATE	UNIT
	XX.	1100 mm.	1093680.00	No.
	xxi.	1200 mm.	1293675.00	No.
	c) Sl	uice valves – PN – 1.6 – without bypass		
	i.	50 mm.	5803.00	No.
	ii.	65 mm.	6371.00	No.
	iii.	80 mm.	7265.00	No.
	iv.	100 mm.	9636.00	No.
	V.	125 mm.	12024.00	No.
	vi.	150 mm.	11893.00	No.
	vii.	200 mm.	24101.00	No.
	viii.	250 mm.	37382.00	No.
	ix.	300 mm.	49699.00	No.
	X.	350 mm.	72811.00	No.
	xi.	400 mm.	99720.00	No.
	xii.	450 mm.	123737.00	No.
	xiii.	500 mm.	160146.00	No.
	xiv.	600 mm.	243982.00	No.
	XV.	700 mm.	524772.00	No.
	xvi.	750 mm.	579078.00	No.
	xvii.	800 mm.	672599.00	No.
	xviii.	900 mm.	813137.00	No.
	xix.	1000 mm.	1183325.00	No.
	XX.	1100 mm.	1285723.00	No.
	xxi.	1200 mm.	1721030.00	No.
	d)	Sluice valves – PN – 1.6 – with bypass		
	i.	50 mm.	5803.00	No.
,	ii.	65 mm.	6371.00	
	iii.	80 mm.	7265.00	No.
	iv.	100 mm.	9636.00	No.
	V.	125 mm.	12024.00	No.
	vi.	150 mm.	14014.00	No.
	vii.	200 mm.	26755.00	No.
	viii.	250 mm.	40969.00	No.
	ix.	300 mm.	53299.00	No.
	X.	350 mm.	77866.00	No.
	xi.	400 mm.	105441.00	No.
	xii.	450 mm.	129463.00	No.
	xiii.	500 mm.	167602.00	No.
	xiv.	600 mm.	251533.00	No.
	XV.	700 mm.	538550.00	No.
	22 V .			
	xvi	750 mm	589319 00 1	Nο
	xvi.	750 mm. 800 mm.	589319.00 682470.00	No.

	Pipe Appurtenance		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	xix. 1000 mm.	1195568.00	No.
	xx. 1100 mm.	1297614.00	No.
	xxi. 1200 mm.	1734270.00	No.
PA-003	Providing double flanged short body pattern type manually operated Butterfly Valve having body, disc and end cover in graded cast iron to IS-210 Gr. CF 200 generally confirming in BS 5155, Synthetic rubber faced ring secured on disc by retaining ring with stainless steel screw stub shaft of stainless steel riding in teflon bearing excluding C.C. foundation/structural steel support confirming to IS- 13095-1991.		
	a) Butterfly Valve - PN – 1 (with bypass)	7000000	
	i. 80 mm.	5808.00	No.
	ii. 100 mm.	7424.00	No.
	iii. 125 mm.	8467.00	No.
	iv. 150 mm.	10944.00	No.
	v. 200 mm.	14586.00	No.
	vi. 250 mm.	18230.00	No.
	vii. 300 mm.	28844.00	No.
	viii. 350 mm.	58665.00	No.
	ix. 400 mm.	63023.00	No.
	x. 450 mm.	72811.00	No.
	xi. 500 mm.	79947.00	No.
	xii. 600 mm. xiii. 700 mm.	98727.00	No.
		159784.00	No.
	xiv. 750 mm.	198334.00 218214.00	No.
	xv. 800 mm. xvi. 900 mm.	301378.00	
		t	No.
	xvii. 1000 mm.	358723.00	No.
	xviii. 1100 mm.	581758.00	No.
	xix. 1200 mm.	550499.00	No.
	xx. 1400 mm.	839367.00 1042954.00	No.
	xxi. 1500 mm.	1042934.00	No.
	b) Butterfly Valve PN - 1.6 (with bypass) i. 80 mm.	6444.00	No.
	ii. 100 mm.	8537.00	No.
	iii. 125 mm.	9317.00	No.
	iv. 150 mm.	12585.00	No.
	v. 200 mm.	16776.00	No.
	vi. 250 mm.	20965.00	No.
	vii. 300 mm.	33171.00	No.
	viii. 350 mm.	67464.00	No.
	ix. 400 mm.	72476.00	No.
	x. 450 mm.	83733.00	No.
	xi. 500 mm.	91939.00	No.
	xii. 600 mm.	113537.00	No.
	xiii. 700 mm.	183751.00	No.

	Pipe Appurtenances.		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	xiv. 750 mm.	228084.00	No.
	xv. 800 mm.	249867.00	No.
	xvi. 900 mm.	346586.00	No.
	xvii. 1000 mm.	448404.00	No.
	xviii. 1100 mm.	727199.00	No.
	xix. 1200 mm.	688125.00	No.
	xx. 1400 mm.	1049209.00	No.
	xxi. 1500 mm.	1294878.00	No.
PA-004	Lowering, laying and jointing in position following C.I.D.F Reflux valves, Butterfly valves and Sluice valves including cost of all labour jointing material, including nut bolts and giving satisfactory hydraulic testing, etc. complete. (Rate for all class of valves.)  Note: Only 75% rate is payable till satisfactory hydraulic testing is given.		
	i) 50 mm.	689.00	No.
	ii) 65 mm.	1036.00	No.
	iii) 80 mm.	1440.00	No.
	iv) 100 mm.	1881.00	No.
	v) 125 mm.	2342.00	No.
	vi) 150 mm.	2957.00	No.
	vii) 200 mm.	3076.00	No.
	viii) 250 mm.	4008.00	No.
	ix) 300 mm.	4158.00	No.
	x) 350 mm.	5124.00	No.
	xi) 400 mm.	6182.00	No.
	xii) 450 mm.	7354.00	No.
	xiii) 500 mm.	7616.00	No.
	xiv) 600 mm.	8083.00	No.
	xv) 700 mm.	8714.00	No.
	xvi) 750 mm.	9598.00	No.
	xvii) 800 mm.	11438.00	No.
	xviii) 900 mm.	12136.00	No.
	xix) 1000 mm.	14307.00	No.
	xx) 1100 mm.	16521.00	No.
	xxi) 1200 mm.	18153.00	No.
PA-005	Providing and supplying Air Valves as per IS-10845 and MJP's	10155.00	110.
	standard specifications of approved make and quality of following diameters including all taxes (Central and local), railway freight, inspection charges, unloading from railway wagons, loading into truck, transportation upto departmental stores/site, unloading and stacking etc. complete.  a) Air Valve Single Ball Flanged/Screwed		
	Type – PN – 1.	615.00	Me
	i) 12/15 mm.	615.00	No.
	ii) 20 mm.	741.00	No.
	iii) 25 mm.	1022.00	No.

	Pipe Appurten		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	iv) 32 mm.	1116.00	No.
	v) 40 mm.	1228.00	No.
	vi) 50 mm.	1349.00	No.
	b) Air Valve Single Ball Flanged/Screwed Type – PN – 1.6		
	i) 12/15 mm.	719.00	No.
	ii) 20 mm.	1022.00	No.
	iii) 25 mm.	1228.00	No.
	iv) 32 mm.	1324.00	No.
	v) 40 mm.	1418.00	No.
	vi) 50 mm.	1851.00	No.
PA-006	Providing and supplying Air Valves as per IS-10845 and MJP's standard specifications double orifice type combined with screw down isolating valve, small orifice elastic ball resting on a gun meta. Orifice nipple, large orifice vulcanite ball seating on moulded seat ring, inlet face and drilled, including all taxes (Central and local), insurance, third party inspection charges, loading, unloading, transportation upto departmental stores/site, etc. complete.  Air Valve Double Ball Flanged Type – PN – 1.		
	i. 50mm	5673.00	No.
	ii. 65mm	6619.00	No.
	iii. 80mm	7561.00	No.
	b) Air Valve Double Ball Flanged Type - PN - 1.6		
	i. 50mm	7515.00	No.
	ii. 65mm	8509.00	No.
	iii. 80mm	10530.00	No.
PA-007	Providing and supplying Air valves as per IS-10845 and MJP's standard specifications double orifice type combined with isolating sluice valve, mounted in horizontal position and operated by wheel gearing, small orifice elastic ball resting on a gun metal orifice nipple, large orifice vulcanite ball seating on moulded seat ring, inlet face and drilled, including all taxes (Central and local), insurance, third party inspection charges, loading, unloading, transportation upto departmental storer/site, etc. complete.		
	Air Valve Double Ball Flanged Type – PN – 1.	0.7.64.00	3.7
	i.) 100 mm.	9561.00	No.
	ii.) 150 mm.	17425.00	No.
	iii.) 200 mm.	29304.00	No.
	Air Valve Double Ball Flanged Type – PN – 1.6	14617.00	<b>X</b> ↑
	i.) 100 mm.	14617.00	No.
	ii.) 150 mm.	20593.00	No.
PA-008	iii.) 200 mm.  Providing and supplying Kinetic Double Orifice type Air Valves as per MJP's standard specifications combined with screw down isolating valve, small orifice elastic ball resting on	34633.00	No.

o (( u	DESCRIPTION  a gun metal orifice nipple, large orifice vulcanite ball seating	RATE	UNIT
o (( u	an matal orifica ninnla larga orifica vulganita ball scoting		
u (0			
u u	on moulded seat ring, inlet face and drilled, including all taxes		
1	Central and local), insurance, third party charges, loading,		
	unloading, transportation upto departmental stores/site, etc.		
	complete.		
	a) Kinetic Air Valve Flanged Type – PN – 1. 40mm	9516.00	No.
1.		11729.00	No.
11	00	15304.00	No.
	11. 80mm b) Kinetic Air Valve Flanged Type – PN – 1.6	13304.00	NO.
i.		11280.00	No.
i	i. 50mm	13903.00	No.
1	ii. 80mm	18176.00	No.
	Providing and supplying Kinetic Double Orifice type Air	18170.00	INU.
	Valves as per MJP's standard specifications having small		
	prifice elastic ball resting on a gun metal orifice nipple, large		
I I	prifice vulcanite ball seating on moulded seat ring, with built-in		
	Kinetic features, isolating sluice valve mounted in horizontal		
	position and operated by wheel gearing, inlet face and drilled,		
1	ncluding all taxes (Central and local), insurance, third party		
	nspection charges, loading, unloading transportation upto		
	departmental stores/site, etc. complete.		
a	a) Kinetic Air Valve Flanged Type – PN – 1.		
i)	) 40 mm.	20610.00	No.
	i) 50 mm.	38804.00	No.
ii	ii) 80 mm.	56659.00	No.
b	o) Kinetic Air Valve Flanged Type – PN – 1.6		
i)		24427.00	No.
ii	i) 150 mm. ii) 200 mm.	45993.00	No.
ii	ii) 200 mm.	67161.00	No.
	Lowering, laying and fixing in proper alignment and position		
	all types of C.I. air valves as directed by Engineer-in-charge		
	ncluding cost of conveyance from stores to site of work, cost		
	of all material and giving satisfactory hydraulic testing, etc.		
l I	complete. (for all class of valves).		
a   i	, , , , , , , , , , , , , , , , , , , ,	110.00	No.
	i) 20 mm.	140.00	No.
- I	ii) 25 mm.	180.00	No.
	v) 32 mm.	199.00	No.
<del> </del>	v) 32 mm.	213.00	No.
	vi) 50 mm.	231.00	No.
	vii) 65 mm.	243.00	No.
	viii) 80 mm.	255.00	No.
	x) 100 mm.	285.00	No.
	x) 125 mm.	345.00	No.
	xi) 150 mm.	383.00	No.

	1	Pipe Appurtenances	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	xii) 200 mm.	421.00	No.
	b) Air Valve Double Ball (PN – 1 and PN-1.6)		
	i) 15 mm.	120.00	No.
	ii) 20 mm.	149.00	No.
	iii) 25 mm.	180.00	No.
	iv) 32 mm.	205.00	No.
	v) 40 mm.	238.00	No.
	vi) 50 mm.	275.00	No.
	vii) 65 mm.	317.00	No.
	viii) 80 mm.	379.00	No.
	ix) 100 mm.	400.00	No.
	x) 125 mm.	441.00	No.
	xi) 150 mm.	603.00	No.
	xii) 200 mm.	664.00	No.
	c) Kinetic Air Valve (PN – 1 and PN-1.6)		
	i) 40 mm.	273.00	No.
	ii) 50 mm.	315.00	No.
	iii) 65 mm.	345.00	No.
	iv) 80 mm.	379.00	No.
	v) 100 mm.	417.00	No.
	vi) 125 mm.	455.00	No.
	vii) 150 mm.	652.00	No.
	viii) 200 mm.	711.00	No.
PA-011	Providing erecting Cast Steel / Spheroidal Graphite (S.G.) Iron D/F Sluice Valves / Butterfly Valves with jointing to pipe work (including all hardware and packing) water works quality, having non-rising spindle with hand wheel and without bypass arrangement, spindle of stainless of steel as per requirement, excluding C.C. foundation / Structural steel support.		
	For Rating Class 150 (Working Pressure 20 Kg/Cm <sup>2</sup> and		
	Test Pressure 30 Kg/cm <sup>2</sup> )		
	a) Sluice Valves	14656.00	<b>)</b> 7
	i) 80 mm.	14656.00	No.
	ii) 100 mm.	19540.00	No.
	iii) 150 mm.	29311.00	No.
	iv) 200 mm.	45713.00	No.
	v) 250 mm.	65786.00	No.
	vi) 300 mm.	84173.00	No.
	vii) 350 mm.	112230.00	No.
	viii) 400 mm.	187281.00	No.
	ix) 450 mm.	255524.00	No.
	x) 500 mm.	300616.00	No.
	xi) 600 mm.	343203.00	No.
	b) Butterfly Valves		
	i) 300 mm.	105843.00	No.
	ii) 350 mm.	112835.00	No.
	iii) 400 mm.	126737.00	No.

	Pipe Appurtenances		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	iv) 450 mm.	135014.00	No.
	v) 500 mm.	156289.00	No.
	vi) 600 mm.	175884.00	No.
PA-012	Providing erecting Cast Steel D/F Sluice Valves / Butterfly Valves with jointing to pipe work (including all hardware and packing) water works quality having non-rising spindle with hand wheel and without bypass arrangement, spindle of stainless steel as per requirement, excluding C.C. foundation / structural steel support.  For Rating Class 300 (Working Pressure 52 Kg/Cm² and Test Pressure 78 Kg/Cm²)		
	a) Sluice Valves		
	i) 80 mm.	15776.00	No.
	ii) 100 mm.	24908.00	No.
	iii) 150 mm.	37976.00	No.
	iv) 200 mm.	59558.00	No.
	v) 250 mm.	64292.00	No.
	vi) 300 mm.	108382.00	No.
	vii) 350 mm.	182788.00	No.
	viii) 400 mm.	266657.00	No.
	ix) 450 mm.	321057.00	No.
	x) 500 mm.	500178.00	No.
	xi) 600 mm.	756005.00	No.
	b) Butterfly Valves		
	i) 300 mm.	129129.00	No.
	ii) 350 mm.	137659.00	No.
	iii) 400 mm.	154619.00	No.
	iv) 450 mm.	164717.00	No.
	v) 500 mm.	190673.00	No.
	vi) 600 mm.	214579.00	No.
PA-013	Providing erecting Cast Steel / Spheroidal Graphite (S.G.) Iron D/F Reflux Valves Single Door with jointing to pipe work (including all hardware and packing) water works quality with jointing to pipe without bypass arrangement, with gunmental seats excluding C.C. foundation / structural steel support.		
	For Rating Class 150 (Working Pressure 20 Kg/Cm2 and		
	Test Pressure 30 Kg/cm2)	10227.00	Ν̈́
	i) 80 mm. Dia	10227.00	No.
	ii) 100 mm. Dia	15661.00	No.
	iii) 150 mm. Dia	26530.00	No.
	iv) 200 mm. Dia	50442.00	No.
	v) 250 mm. Dia	87831.00	No.
DA 014	vi) 300 mm. Dia	115713.00	No.
PA-014	Providing erecting Cast Steel / D/F Reflux Valves Single Door with jointing to pipe work (including all hardware and packing) water works quality with jointing to pipe without bypass arrangement, with gunmetal seat excluding C.C. foundation /		

	Pipe Appurtenance		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	structural steel support.		
	For Rating Class 300 (Working Pressure 52 Kg/Cm <sup>2</sup> and		
	Test Pressure 78 Kg/cm <sup>2</sup> )	15227.00	) T
	i) 80 mm. Dia	15237.00	No.
	ii) 100 mm. Dia	21477.00	No.
	iii) 150 mm. Dia	35717.00	No.
	iv) 200 mm. Dia	63275.00	No.
	v) 250 mm. Dia	114555.00	No.
DA 015	vi) 300 mm. Dia	139478.00	No.
PA-015	Providing erecting Kinetic Double Orifice Cast Steel Air		
	Valves with an isolating Sluice Valve mounted in horizontal		
	position operated by wheel gear suitable for working pressure		
	of Class 150 rating (20 Kg/cm2)	20546.00	N
	i) 80 mm. Dia ii) 100 mm. Dia	29546.00	No.
		41185.00	No.
		78920.00	No.
DA 016	1,	102014.00	No.
PA-016	Providing erecting Kinetic Double Orifice Cast Steel Air		
	Valves with an isolating Sluice Valve mounted in horizontal		
	position operated by wheel gear suitable for working pressure of Class 300 rating (52 kg/cm2)		
	i) 80 mm. Dia	35996.00	No.
	ii) 100 mm. Dia	41148.00	No.
	iii) 150 mm. Dia	96157.00	No.
	iv) 200 mm. Dia	116071.00	No.
PA-017	Providing and Fixing in position air valve shaft including	110071.00	110.
171-017	providing and fixing GI Medium Class or 6 mm thick M.S.		
	Pipe Shaft 2.70 M long over branch flange of air valve tee,		
	providing PCC block of M-150 concrete 150mm thick around		
	the air valve tee including encasing of vertical shaft in PCC M-		
	150 as shown in type design together with providing and		
	making flanged shown in type design together with providing		
	and making flanged joints wherever required and fixing of air		
	valve over the shaft excluding cost of air valve and branch		
	flanged air valve tee, etc. complete as per type design and as		
	directed by Engineer-in-Charge for following diameters of pipe		
	lines.		
	A) Foundation on Murum and Harder Strata		
	i) Upto 150 mm dia pipe line	4636.00	No.
	ii) 200 to 400 mm dia pipe line	5431.00	No.
	iii) 450 to 900 mm dia pipe line	11045.00	No.
	iv) 1000 to 1200 mm dia pipe line	13870.00	No.
	B) Foundation in B.C. Soil or Any Other Soil		
	i) Upto 150 mm dia pipe line	5492.00	No.
	ii) 200 to 400 mm dia pipe line	6625.00	No.
	iii) 450 to 900 mm dia pipe line	12616.00	No.
	iv) 1000 to 1200 mm dia pipe line	15821.00	No.
PA-018	Providing and supplying C.I.D/F angle type spring loaded		

	I	Pipe Appurtenances	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	pressure relief valves of approved make and quality including		
	all taxes (Central and local), octroi, inspection charges,		
	transportation to departmental stores, etc. complete.  a) Pressure relief valves Type – PN – 1		
	i) 25 mm.	4234.00	No.
	ii) 40 mm.	5517.00	No.
	iii) 50 mm.	7145.00	No.
	iv) 80 mm.	10837.00	No.
	v) 100 mm.	15170.00	No.
	vi) 125 mm.	20684.00	No.
	vii) 150 mm.	23635.00	No.
	viii) 200 mm.	52194.00	No.
	ix) 250 mm.	73367.00	No.
	x) 300 mm.	96757.00	No.
	b) Pressure relief valve Type - TN - 1.6		
	i) 25 mm.	5294.00	No.
	ii) 40 mm.	6893.00	No.
	iii) 50 mm.	8914.00	No.
	iv) 80 mm.	13543.00	No.
	v) 100 mm.	18958.00	No.
	vi) 125 mm.	25849.00	No.
	vii) 150 mm.	29544.00	No.
	viii) 200 mm.	65238.00	No.
	ix) 250 mm.	91707.00	No.
	x) 300 mm.	121226.00	No.
PA-019	Lowering, laying and fixing in proper alignment and position		
	all types of C.I.D./F angle type spring loaded pressure relief		
	valves including all cost of all material, labour, cost of		
	conveyance from stores to site of work & giving satisfactory		
	hydraulic testing, etc. complete. (For all class of valves.)	206.00	N
	i) 25 mm.	206.00	No.
	ii) 40 mm. iii) 50 mm.	273.00	No.
		316.00	No.
	iv) 80 mm. v) 100 mm.	378.00 415.00	No.
	vi) 125 mm.	462.00	No.
	vii) 150 mm.	652.00	No.
	viii) 200 mm.	712.00	No.
	ix) 250 mm.	831.00	No.
	x) 300 mm.	949.00	No.
PA-020	Cutting and champhering of C.I. pipes of following diameters	717.00	110.
111 020	including cost of all materials and labour involved, etc.		
	complete as directed by Engineer-in-charge (for all class of		
	pipes).		

	I	Pipe Appurtenances	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	i) 80 mm.	33.00	One Cut
	ii) 100 mm.	39.00	One Cut
	iii) 150 mm.	59.00	One Cut
	iv) 200 mm.	76.00	One Cut
	v) 250 mm.	109.00	One Cut
	vi) 300 mm.	129.00	One Cut
	vii) 350 mm.	131.00	One Cut
	viii) 400 mm.	167.00	One Cut
	ix) 450 mm.	194.00	One Cut
	x) 500 mm.	232.00	One Cut
	xi) 600 mm.	283.00	One Cut
	xii) 700 mm.	333.00	One Cut
	xiii) 750 mm.	398.00	One Cut
	xiv) 800 mm.	435.00	One Cut
	xv) 900 mm.	479.00	One Cut
	xvi) 1000 mm.	521.00	One Cut
PA-021	Providing and supplying I.S.I. mark rubber gasket suitable for C.I. or D.I. pipe of all class for tyton joints including all taxes (Central and local) inspection charges, transportation to departmental stores/site, etc. complete.  a) S.B.R. Gaskets for C.I. / D.I. Pipes		
	i) 80 mm.	39.00	No.
	ii) 100 mm.	43.00	No.
	iii) 150 mm.	60.00	No.
	iv) 200 mm.	102.00	No.
	v) 250 mm.	133.00	No.
	vi) 300 mm.	187.00	No.
	vii) 350 mm.	214.00	No.
	viii) 400 mm.	298.00	No.
	ix) 450 mm.	325.00	No.
	x) 500 mm.	444.00	No.
	xi) 600 mm.	615.00	No.
	xii) 700 mm.	1095.00	No.
	xiii) 750 mm.	1138.00	No.
	xiv) 800 mm.	1179.00	No.
	xv) 900 mm.	1705.00	No.
	xvi) 1000 mm.	2190.00	No.
	b) Sealing 'O' Rings of SBR (For CID Joints)		
	i) 80 mm.	45.00	Set
	ii) 100 mm.	53.00	Set
	iii) 125 mm.	64.00	Set
	iv) 150 mm.	75.00	Set
	v) 200 mm.		Set
	vi) 250 mm.		Set
	vii) 300 mm.		Set
	viii) 350 mm.		Set

	Pipe Appurtenances		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	ix) 400 mm.		Set
	x) 450 mm.		Set
	xi) 500 mm.		Set
	xii) 600 mm.		Set
	c) Flat Flanged Gaskets moulded out of SBR (For Flanged		
	Joints)		
	i) 80 mm.	82.00	No.
	ii) 100 mm.	109.00	No.
	iii) 125 mm.	129.00	No.
	iv) 150 mm.	177.00	No.
	v) 200 mm.	219.00	No.
	vi) 250 mm.	307.00	No.
	vii) 300 mm.	326.00	No.
	viii) 350 mm.	393.00	No.
	ix) 400 mm.	487.00	No.
	x) 450 mm.	532.00	No.
	xi) 500 mm.	623.00	No.
	xii) 600 mm.	838.00	No.
PA-022	Providing and fixing in position and jointing high performance C.I. Air valves for water combination type (Kinetic air valve along with automatic air valves) double ball, double orifice with stainless steel ball, tamper proof air vents rolling seal mechanism for air release and anti vacuum application designed for 16 kg. per sq.cm. working pressure andtested for 20 kg. per sq.cm. pressure. (Rate to include cost of gaskets, bolt, nut and any other materials required for jointing and its transportation etc. including all toyes and duties except catroi)		
	transportation etc. including all taxes and duties except octroi).  1. C.I. ARV FLFF PN 16 50 mm Dia.	9513.00	No.
	2. C.I. ARV FLFF PN 16 80 mm Dia.	13201.00	No.
	3. C.I. ARV FLFF PN 16 100 mm Dia.	21226.00	No.
	4. C.I. ARV FLFF PN 16 150 mm Dia.	35528.00	No.
	5. C.I. ARV FLFF PN 16 200 mm Dia.	43035.00	No.

# **MECHANICAL JOINTS / FITTINGS**

	Mechanical Joints / Fitting		
ITEM - CODE	DESCRIPTION	RATE	UNIT
J&F-001	Supply of C.I. mechanical compression flanged / socket tailpiece (Popularly known as ITM flanged / socket tailpiece) suitable for making flanged connection with the plain barrel of C.I. spun pipes (as per IS - 1536/2001) and D.I. pipes (as per IS - 8329/2000). The tailpiece to be supplied complete with sealing rubber gasket of S.B.R., C.I. follower glands and M.S. nut bolts. The whole assembly should be mechanically and hydraulically tested to the provisions as laid down in IS: 1538/1993.		
	i) 80 mm.	1302.00	No.
	ii) 100 mm.	1419.00	No.
	iii) 125 mm.	1786.00	No.
	iv) 150 mm.	2555.00	No.
	v) 200 mm.	3310.00	No.
	vi) 250 mm.	4993.00	No.
	vii) 300 mm.	5589.00	No.
	viii) 350 mm.	7372.00	No.
	ix) 400 mm.	9623.00	No.
	x) 450 mm.	11295.00	No.
	xi) 500 mm.	14193.00	No.
	xii) 600 mm.	18200.00	No.
	xiii) 700 mm.	24823.00	No.
	xiv) 750 mm.	30164.00	No.
J&F-002	Supply of C.I. mechanical compression collar coupling suitable for C.I. spun pipes (as per IS - 1536/2001) and D.I. pipes (as per IS - 8329/2000) complete with sealing rubber gasket of SBR, C.I. follower glands and M.S. nut bolts. The whole assembly should be mechanically and hydraulically tested to the provision as laid down in IS - 1538/1993.		
	i) 80 mm.	784.00	No.
	ii) 100 mm.	841.00	No.
	iii) 125 mm.	1121.00	No.
	iv) 150 mm.	1512.00	No.
	v) 200 mm.	1726.00	No.
	vi) 250 mm.	2767.00	No.
	vii) 300 mm.	3541.00	No.
	viii) 350 mm.	4364.00	No.
	ix) 400 mm.	6792.00	No.
	x) 450 mm.	7626.00	No.
	xi) 500 mm.	10422.00	No.
	xii) 600 mm.	13000.00	No.
	xiii) 700 mm.	16984.00	No.
	xiv) 750 mm.	19928.00	No.
J&F-003	Supply of C.I. Mechanical Joint Double Socket 90 <sup>o</sup> (1/4) Bends as dimensionally described in Table-14 of IS-13382/1992 complete with sealing rubber gasket of S.B.R. (dimensionally		

	Mechanic	nical Joints / Fittings		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	described in IS-12820/1989) with follower gland and mild steel			
	nut bolts coated or otherwise protected from rusting and suitable			
	for C.I. pipes.	2221.00	<b>N</b> T	
	i) 80 mm.	2231.00	No.	
	ii) 100 mm. iii) 125 mm.	2587.00 3022.00	No.	
		4751.00	No.	
	,	6305.00	No.	
	v) 200 mm. vi) 250 mm.	9385.00	No.	
	vii) 300 mm.	11422.00	No.	
	viii) 350 mm.	18911.00	No.	
	ix) 400 mm.	25775.00	No.	
	x) 450 mm.	32899.00	No.	
	xi) 500 mm.	40940.00	No.	
	xii) 600 mm.	57862.00	No.	
	xii) 700 mm.	91333.00	No.	
	xiv) 750 mm.	103733.00	No.	
J&F-004	Supply of C.I. Mechanical Joint Double Socket 450(1/8) Bends	103733.00	110.	
JCC1 004	as dimensionally described in Table-15 of IS-13382/1992			
	complete with sealing rubber gasket of S.B.R. (dimensionally			
	described in IS-12820/1989) with cast iron follower gland and			
	mild steel nut bolts coated or otherwise protected from rusting			
	and suitable for C.I. pipes.			
	i) 80 mm.	2071.00	No.	
	ii) 100 mm.	2306.00	No.	
	iii) 125 mm.	2914.00	No.	
	iv) 150 mm.	4002.00	No.	
	v) 200 mm.	5271.00	No.	
	vi) 250 mm.	7733.00	No.	
	vii) 300 mm.	9330.00	No.	
	viii) 350 mm.	15564.00	No.	
	ix) 400 mm.	19205.00	No.	
	x) 450 mm.	26788.00	No.	
	xi) 500 mm.	29845.00	No.	
	xii) 600 mm.	41324.00	No.	
	xiii) 700 mm.	58888.00	No.	
	xiv) 750 mm.	77879.00	No.	
J&F-005	Supply of C.I. Mechanical Joint Double Socket 22.50(1/6)			
	Bends as dimensionally described in Table-16 of IS-			
	13382/1992 complete with sealing rubber gasket of S.B.R.			
	(dimensionally described in IS-12820/1989) with cast iron			
	follower gland and mild steel nut bolts coated or otherwise			
	protected from rusting and suitable for C.I. pipes.	1000 00	NΤα	
	i) 80 mm. ii) 100 mm.	1988.00	No.	
	ii) 100 mm. iii) 125 mm.	2213.00 2657.00	No.	
	iv) 150 mm.	3757.00	No.	
	IV) 130 IIIII.	3/3/.00	INU.	

	Mechanic	nical Joints / Fittings		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	v) 200 mm.	4711.00	No.	
	vi) 250 mm.	7124.00	No.	
	vii) 300 mm.	8599.00	No.	
	viii) 350 mm.	13576.00	No.	
	ix) 400 mm.	17404.00	No.	
	x) 450 mm.	22017.00	No.	
	xi) 500 mm.	25658.00	No.	
	xii) 600 mm.	33998.00	No.	
	xiii) 700 mm.	51142.00	No.	
	xiv) 750 mm.	56318.00	No.	
J&F-006	Supply of C.I. Mechanical Joint Double Socket 11.250(1/32) Bends as dimensionally described in Table-17 of IS-13382/1992 complete with sealing rubber gasket of S.B.R. (dimensionally described in IS-12820/1989) with cast iron follower gland and mild steel nut bolts coated or otherwise protected from rusting and suitable for C.I. pipes.			
	i) 80 mm.	1969.00	No.	
	ii) 100 mm.	2162.00	No.	
	iii) 125 mm.	2348.00	No.	
	iv) 150 mm.	3672.00	No.	
	v) 200 mm.	4522.00	No.	
	vi) 250 mm.	6685.00	No.	
	vii) 300 mm.	7407.00	No.	
	viii) 350 mm.	11689.00	No.	
	ix) 400 mm.	15834.00	No.	
	x) 450 mm.	19985.00	No.	
	xi) 500 mm.	21784.00	No.	
	xii) 600 mm.	29863.00	No.	
	xiii) 700 mm.	40258.00	No.	
	xiv) 750 mm.	44912.00	No.	
J&F-007	Supply of C.I. Mechanical Joint All Socket Tees as	11912.00	110.	
	dimensionally described in Table-18 of IS-13382/1992			
	complete with sealing rubber gasket of S.B.R. (dimensionally			
	described in IS-12820/1989) with cast iron follower gland and			
	mild steel nut bolts coated or otherwise protected from rusting			
	and suitable for C.I. pipes.	2016.00	NI.	
	i) 80 x 80 x 80 mm. dia.	3016.00	No.	
	ii) 100 x 100 x 80 mm. dia.	3243.00	No.	
	iii) 100 x 100 x 100 mm. dia.	3596.00	No.	
	iv) 150 x 150 x 80 mm. dia.	5037.00	No.	
	v) 150 x 150 x 100 mm. dia.	5108.00	No.	
	vi) 150 x 150 x 150 mm. dia.	6335.00	No.	
	vii) 200 x 200 x 80 mm. dia.	6075.00	No.	
	viii) 200 x 200 x 100 mm. dia.	6142.00	No.	
	ix) 200 x 200 x 150 mm. dia.	7316.00	No.	
	x) 200 x 200 x 200 mm. dia.	8050.00	No.	
	(xi) 250 x 250 x 80 mm. dia.	8555.00	No.	

	Mechanical Joints / Fitting			ittings
ITEM - CODE	DESCRI	PTION	RATE	UNIT
	xii) 250 x 250 x 100 mm. dia.		8744.00	No.
	xiii) 250 x 250 x 150 mm. dia.		10435.00	No.
	ivx) 250 x 250 x 200 mm. dia.		11025.00	No.
	xv) 250 x 250 x 250 mm. dia.		12366.00	No.
	xvi) 300 x 300 x 80 mm. dia.		9381.00	No.
	xvii) 300 x 300 x 100 mm. dia.		9591.00	No.
	xviii) 300 x 300 x 150 mm. dia.		12301.00	No.
	ixx) 300 x 300 x 200 mm. dia.		12708.00	No.
	xx) 300 x 300 x 250 mm. dia.		13455.00	No.
	xxi) 300 x 300 x 300 mm. dia.		14849.00	No.
J&F-008	Supply of C.I. Mechanical Join Tees dimensionally described i complete with sealing rubber ga described in IS-12820/1989) wit	n Table-19 of IS-13382/1992 asket of S.B.R. (dimensionally		
	mild steel nut bolts coated or other			
	and suitable for C.I. pipes.			
	1) 80 x 80 x 80 mm. dia.		2954.00	No.
	2) 100 x 100 x 80 mm. dia.		3241.00	No.
	3) 100 x 100 x 100 mm. dia.		3429.00	No.
	4) 150 x 150 x 80 mm. dia.		4892.00	No.
	5) 150 x 150 x 100 mm. dia.		5013.00	No.
	6) 150 x 150 x 150 mm. dia.		5970.00	No.
	7) 200 x 200 x 80 mm. dia.		5741.00	No.
	8) 200 x 200 x 100 mm. dia.		6124.00	No.
	9) 200 x 200 x 150 mm. dia.		7053.00	No.
	10) 200 x 200 x 200 mm. dia.		8087.00	No.
	11) 250 x 250 x 80 mm. dia.		8108.00	No.
	12) 250 x 250 x 100 mm. dia.		8532.00	No.
	13) 250 x 250 x 150 mm. dia.		10125.00	No.
	14) 250 x 250 x 200 mm. dia.		10595.00	No.
	15) 250 x 250 x 250 mm. dia.		10970.00	No.
	16) 300 x 300 x 80 mm. dia.		9519.00	No.
	17) 300 x 300 x 100 mm. dia.		9705.00	No.
	18) 300 x 300 x 150 mm. dia.		11205.00	No.
	19) 300 x 300 x 200 mm. dia.		11300.00	No.
	20) 300 x 300 x 250 mm. dia.		12470.00	No.
	21) 300 x 300 x 300 mm. dia.		15283.00	No.
	22) 350 x 350 x 80 mm. dia.		13314.00	No.
	23) 350 x 350 x 100 mm. dia.		14159.00	No.
	24) 350 x 350 x 150 mm. dia.		15234.00	No.
	25) 350 x 350 x 200 mm. dia.		17752.00	No.
	26) 350 x 350 x 300 mm. dia.		18187.00	No.
	27) 350 x 350 x 350 mm. dia.		20812.00	No.
	28) 400 x 400 x 80 mm. dia.		17404.00	No.
	29) 400 x 400 x 100 mm. dia.		18449.00	No.
	30) 400 x 400 x 150 mm. dia.		20541.00	No.
	31) 400 x 400 x 200 mm. dia.		20955.00	No.

	Mechanical Joints / Fittings			ittings
ITEM - CODE	DI	ESCRIPTION	RATE	UNIT
	32) 400 x 400 x 300 mr	m. dia.	25253.00	No.
	33) 400 x 400 x 400 mr	m. dia.	28915.00	No.
	34) 450 x 450 x 80 mm	n. dia.	20758.00	No.
	35) 450 x 450 x 100 mr	m. dia.	21805.00	No.
	36) 450 x 450 x 200 mr	m. dia.	25573.00	No.
	37) 450 x 450 x 300 mm	m. dia.	32269.00	No.
	38) 450 x 450 x 350 mr	m. dia.	34049.00	No.
	39) 450 x 450 x 450 mr		36984.00	No.
	40) 500 x 500 x 100 mr	m. dia.	23355.00	No.
	41) 500 x 500 x 250 mr	m. dia.	31936.00	No.
	42) 500 x 500 x 300 mr	m. dia.	33086.00	No.
	43) 500 x 500 x 400 mr	m. dia.	39892.00	No.
	44) 500 x 500 x 500 mr	m. dia.	48162.00	No.
	45) 600 x 600 x 100 mr	m. dia.	33376.00	No.
	46) 600 x 600 x 300 mr	m. dia.	45831.00	No.
	47) 600 x 600 x 400 mr	m. dia.	52215.00	No.
	48) 600 x 600 x 500 mr	m. dia.	56505.00	No.
	49) 600 x 600 x 600 mr	m. dia.	69377.00	No.
	50) 700 x 700 x 100 mr	m. dia.	44235.00	No.
	51) 700 x 700 x 200 mr	m. dia.	51246.00	No.
	52) 700 x 700 x 350 mr	m. dia.	61922.00	No.
	53) 700 x 700 x 400 mr	m. dia.	66526.00	No.
	54) 750 x 750 x 150 mr	m. dia.	52759.00	No.
	55) 750 x 750 x 250 mr	m. dia.	60506.00	No.
	56) 750 x 750 x 750 mr	m. dia.	116081.00	No.
J&F-009	described in Table-21 of rubber gasket of S.B.F. 12820/1989) with cast in	Is-13382/1992 complete with sealing R. (dimensionally described in Ison follower gland and mild steel nut e protected from rusting and suitable		
	1) 100 x 80 mm. dia.		2092.00	No.
	2 150 x 80 mm. dia.		3292.00	No.
	3) 150 x 100 mm. dia.		3485.00	No.
	4) 200 x 100 mm. dia.		4011.00	No.
	5) 200 x 150 mm. dia.		4387.00	No.
	6) 250 x 150 mm. dia.		5994.00	No.
	7) 250 x 200 mm. Dia	1.	5848.00	No.
	8) 300 x 150 mm. dia.	•	7372.00	No.
	9) 300 x 200 mm. dia.		7384.00	No.
	10) 300 x 250 mm. dia.		7510.00	No.
	11) 350 x 200 mm. Dia		10612.00	No.
	12) 350 x 250 mm. dia.	•	10646.00	No.
	13) 350 x 300 mm. dia.	•	10520.00	No.
	14) 400 x 250 mm. dia.		16029.00	No.
	15) 400 x 300 mm. dia.		14200.00	No.
	16) 400 x 350 mm. dia.		14295.00	No.

	Mechanical Joints / Fitte		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	17) 450 x 300 mm. dia.	17751.00	No.
	18) 450 x 350 mm. dia.	17740.00	No.
	19) 450 x 400 mm. dia.	17519.00	No.
	20) 500 x 350 mm. dia.	21339.00	No.
	21) 500 x 400 mm. dia.	21014.00	No.
	22) 500 x 450 mm. dia.	20483.00	No.
	23) 600 x 400 mm. dia.	30985.00	No.
	24) 600 x 450 mm. dia.	30156.00	No.
	25) 600 x 500 mm. dia.	28313.00	No.
	26) 700 x 500 mm. dia.	42533.00	No.
	27) 700 x 600 mm. dia.	38601.00	No.
	28) 750 x 600 mm. dia.	45846.00	No.
	29) 750 x 700 mm. dia.	42377.00	No.
	30) 800 x 450 mm. dia.	63072.00	No.
	31) 800 x 700 mm. dia.	54144.00	No.
J&F-010	Supply of C.I. Flanged Outlets as described in Table – 24 of IS-13382/1992 which modifies the flanges, flanged end of branch flanged equal to tee to an outlet of washout of pipeline without asking for specially patterned washout tee and suitable for C.I. pipes.		
	1) 300 x 150 mm. dia.		
	2) 350 x 150 mm. dia.		
	3) 400 x 200 mm. dia.		
	4) 450 x 200 mm. dia.		
	5) 500 x 200 mm. dia.		
	6) 600 x 200 mm. dia.		
	7) 700 x 200 mm. dia.		
	8) 750 x 250 mm. dia.		

# M.S. PIPES

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
MSP-001	SAW procu weld on au ends freigl truck comp speci	afacturing, providing and supplying spirally welded/ERW/// fabricated M.S. pipes (Commercial Quality) including arements of plates, gas cutting to required size rolling, tack ing assembling in suitable lengths to form pipes, welding atomatic welding machine and forming 'V' edge on both of pipes including all taxes (Central and local), railway int, insurance unloading from railway wagon, loading into transport top stores/site, unloading, stacking, etc. elete as per IS – 3589 and IS – 5504 as applicable as per fications (No negative tolerance in thickness is issible).  Dia of Pipe: 219.10 mm (O.D.)	(Without Excise Duty)	
	i)	Thickness of pipe: 4.8 mm	1527.00	Rmt.
	ii)	5.6 mm	1775.00	Rmt.
	iii)	6.4 mm	2021.00	Rmt.
	iv)	7.00 mm	2204.00	Rmt.
	(v)	7.90 mm	2477.00	Rmt.
	vi)	8.20 mm	2567.00	Rmt.
	vii)	8.70 mm	2717.00	Rmt.
	viii)	9.50 mm	2955.00	Rmt.
	<b>b</b> )	Dia of Pipe: 273.10 mm (O.D.) Thickness of pipe:		
	i)	4.8 mm	1912.00	Rmt.
	ii)	5.6 mm	2224.00	Rmt.
	iii)	6.4 mm	2533.00	Rmt.
	iv)	7.2 mm	2842.00	Rmt.
	v)	7.8 mm	3071.00	Rmt.
	vi)	8.7 mm	3414.00	Rmt.
	vii)	9.3 mm	3641.00	Rmt.
	c)	Dia of Pipe: 323.90 mm (O.D.) Thickness of pipe:		
	i)	5.6 mm	2646.00	Rmt.
	ii)	6.4 mm	3016.00	Rmt.
	iii)	7.1 mm	3339.00	Rmt.
	iv)	7.9 mm	3706.00	Rmt.
	v)	8.4 mm	3934.00	Rmt.
	vi)	8.7 mm	4071.00	Rmt.
	vii)	9.5 mm	4433.00	Rmt.
	d)	<b>Dia of Pipe: 355.7 mm (O.D.)</b>		
		Thickness of pipe:		
	i)	5.6 mm	2909.00	Rmt.
	ii)	6.4 mm	3317.00	Rmt.
	iii)	7.1 mm	3672.00	Rmt.
	iv)	7.9 mm	4077.00	Rmt.

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	v)	8.7 mm	4480.00	Rmt.
	vi)	9.5 mm	4880.00	Rmt.
	e)	Dia of Pipe: 406.00 mm (O.D.)		
	1.	Thickness of pipe:	2227.00	ъ .
	i)	5.6 mm	3327.00	Rmt.
	ii)	6.4 mm	3796.00	Rmt.
	iii)	7.1 mm	4203.00	Rmt.
	iv)	7.9 mm	4668.00	Rmt.
	v)	8.7 mm	5130.00	Rmt.
	vi) vii)	9.5 mm	5590.00	Rmt.
		10.00 mm.	5878.00	Rmt.
	f)	Dia of Pipe: 457.00 mm (O.D.) Thickness of pipe:		
	i)	5.6 mm	3751.00	Rmt.
	ii)	6.4 mm	4280.00	Rmt.
	iii)	7.1 mm	4741.00	Rmt.
	iv)	7.9 mm	5267.00	Rmt.
	v)	8.7 mm	5788.00	Rmt.
	vi)	9.5 mm	6310.00	Rmt.
	vii)	10.00 mm.	6635.00	Rmt.
	<b>g</b> )	Dia of Pipe: 508.00 mm (O.D.)		
	6/	Thickness of pipe:		
	i)	5.6 mm	4177.00	Rmt.
	ii)	6.4 mm	4765.00	Rmt.
	iii)	7.1 mm	5278.00	Rmt.
	iv)	7.9 mm	5864.00	Rmt.
	v)	8.7 mm	6447.00	Rmt.
	vi)	9.5 mm	7030.00	Rmt.
	vii)	10.00 mm.	7392.00	Rmt.
	h)	Dia of Pipe: 559.00 mm (O.D.)		
		Thickness of pipe:	1500.00	
	<u>i)</u>	5.6 mm	4600.00	Rmt.
	ii)	6.4 mm	5248.00	Rmt.
	iii)	7.1 mm	5816.00	Rmt.
	iv)	7.9 mm	6462.00	Rmt.
	v)	8.7 mm	7105.00	Rmt.
	vi)	9.5 mm	7748.00	Rmt.
	vii)	10.00 mm.  Dia of Pipe: 610.00 mm (O.D.)	8148.00	Rmt.
	1)	Thickness of pipe:		
	i)	5.6 mm	5024.00	Rmt.
	ii)	6.4 mm	5734.00	Rmt.
	iii)	7.1 mm	6353.00	Rmt.
	iv)	7.9 mm	7059.00	Rmt.
	v)	8.7 mm	7764.00	Rmt.
	vi)	9.5 mm	8468.00	Rmt.
	vii)	10.0 mm	8906.00	Rmt.

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	viii)	12.00 mm.	10651.00	Rmt.
	j)	Dia of Pipe: 660.00 mm (O.D.)		
	,	Thickness of pipe:		
	i)	5.6 mm	5439.00	Rmt.
	ii)	6.4 mm	6209.00	Rmt.
	iii)	7.1 mm	6881.00	Rmt.
	iv)	7.9 mm	7646.00	Rmt.
	v)	8.7 mm	8411.00	Rmt.
	vi)	9.5 mm	9172.00	Rmt.
	vii)	10.0 mm	9648.00	Rmt.
	k)	Dia of Pipe: 711.00 mm (O.D.)		
		Thickness of pipe:		
	i)	5.6 mm	5863.00	Rmt.
	ii)	6.4 mm	6693.00	Rmt.
	iii)	7.1 mm	7417.00	Rmt.
	iv)	7.9 mm	8244.00	Rmt.
	v)	8.7 mm	9069.00	Rmt.
	vi)	9.5 mm	9892.00	Rmt.
	vii)	10.0 mm	10405.00	Rmt.
	viii)	12.00 mm.	12449.00	Rmt.
	<b>l</b> )	Dia of Pipe: 762.00 mm (O.D.) Thickness of pipe:		
	i)	5.6 mm	6288.00	Rmt.
	ii)	6.4 mm	7178.00	Rmt.
	iii)	7.1 mm	7955.00	Rmt.
	iv)	7.9 mm	8842.00	Rmt.
	v)	8.7 mm	9727.00	Rmt.
	vi)	9.5 mm	10610.00	Rmt.
	vii)	10.0 mm	11161.00	Rmt.
	m)	Dia of Pipe: 813.00 mm (O.D.)	11101.00	Turi.
	'	Thickness of pipe:		
	i)	5.6 mm	6711.00	Rmt.
	ii)	6.4 mm	7662.00	Rmt.
	iii)	7.1 mm	8492.00	Rmt.
	iv)	7.9 mm	9440.00	Rmt.
	v)	8.7 mm	10387.00	Rmt.
	vi)	9.5 mm	11330.00	Rmt.
	vii)	10.0 mm	11919.00	Rmt.
	viii)	12.00 mm.	14266.00	Rmt.
	n)	Dia of Pipe: 864.00 mm (O.D.)	11200.00	1
		Thickness of pipe:		
	i)	5.6 mm	7135.00	Rmt.
	ii)	6.4 mm	8146.00	Rmt.
	iii)	7.1 mm	9030.00	Rmt.
	111)	7.9 mm	10038.00	Rmt.

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	v)	8.7 mm	11045.00	Rmt.
	vi)	9.5 mm	12048.00	Rmt.
	vii)	10.0 mm	12675.00	Rmt.
	0)	Dia of Pipe: 914.00 mm (O.D.) Thickness of pipe:		
	i)	5.6 mm	7550.00	Rmt.
	ii)	6.4 mm	8622.00	Rmt.
	iii)	7.1 mm	9558.00	Rmt.
	iv)	7.9 mm	10624.00	Rmt.
	v)	8.7 mm	11690.00	Rmt.
	vi)	9.5 mm	12754.00	Rmt.
	vii)	10.0 mm	13418.00	Rmt.
	p)	Dia of Pipe: 965.00 mm (O.D.)		
	:)	Thickness of pipe: 5.6 mm	7975.00	Rmt.
	i) ii)			
	iii)	6.4 mm	9107.00	Rmt.
	<del></del>	7.1 mm 7.9 mm	10095.00 11223.00	Rmt.
	iv)	8.7 mm		
	v)	9.5 mm	12348.00 13473.00	Rmt.
	vi) vii)	10.0 mm	14175.00	
			141/3.00	Rmt.
	q)	Dia pf Pipe: 1016.00 mm (O.D.) Thickness of pipe:		
	i)	5.6 mm	8398.00	Rmt.
	ii)	6.4 mm	9590.00	Rmt.
	iii)	7.1 mm	10632.00	Rmt.
	iv)	7.9 mm	11821.00	Rmt.
	v)	8.7 mm	13008.00	Rmt.
	vi)	9.5 mm	14193.00	Rmt.
	vii)	10.0 mm	14932.00	Rmt.
	viii)	12.00 mm.	17883.00	Rmt.
	r)	Dia of Pipe: 1067.00 mm (O.D.) Thickness of pipe:		
	i)	5.6 mm	8822.00	Rmt.
	ii)	6.4 mm	10075.00	Rmt.
	iii)	7.1 mm	11170.00	Rmt.
	iv)	7.9 mm	12419.00	Rmt.
	v)	8.7 mm	13666.00	Rmt.
	vi)	9.5 mm	14911.00	Rmt.
	vii)	10.0 mm	15689.00	Rmt.
	s)	Dia of Pipe: 1118.00 mm (O.D.)	13007.00	MIII.
	3)	Thickness of pipe:		
	i)	5.6 mm	9247.00	Rmt.
	ii)	6.4 mm	10559.00	Rmt.
	iii)	7.1 mm	11706.00	Rmt.
	iv)	7.9 mm	13016.00	Rmt.

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	v)	8.7 mm	14325.00	Rmt.
	vi)	9.5 mm	15631.00	Rmt.
	vii)	10.0 mm	16446.00	Rmt.
	t)	Dia of Pipe: 1168.00 mm (O.D.) Thickness of pipe:		
	i)	5.6 mm	9661.00	Rmt.
	ii)	6.4 mm	11034.00	Rmt.
	iii)	7.1 mm	12234.00	Rmt.
	iv)	7.9 mm	13603.00	Rmt.
	v)	8.7 mm	14970.00	Rmt.
	vi)	9.5 mm	16335.00	Rmt.
	vii)	10.0 mm	17188.00	Rmt.
	u)	Dia of Pipe: 1219.00 mm (O.D.)		
	·.	Thickness of pipe:	11710.00	D 4
	i)	6.4 mm	11519.00	Rmt.
	ii)	7.1 mm	12772.00	Rmt.
	iii)	7.9 mm	14201.00	Rmt.
	iv)	8.7 mm	15629.00	Rmt.
	v)	9.5 mm	17055.00	Rmt.
	vi)	10.00 mm.	17945.00	Rmt.
	vii)	12.00 mm.	21498.00	Rmt.
	v)	Dia of Pipe: 1296.00 mm (O.D.) Thickness of pipe:		
	i)	9.50 mm	18141.00	Rmt.
	ii)	9.98 mm	19049.00	Rmt.
	iii)	10.00 mm	19087.00	Rmt.
		Dia of Pipe: 1321.00 mm (O.D.)	13007.00	Turivi
		Thickness of pipe:		
	i)	6.4 mm	12487.00	Rmt.
	ii)	7.1 mm	13846.00	Rmt.
	iii)	7.9 mm	15397.00	Rmt.
	iv)	8.7 mm	16946.00	Rmt.
	v)	9.5 mm	18492.00	Rmt.
	vi)	10.00 mm.	19459.00	Rmt.
	x)	Dia of Pipe: 1422.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.1 mm	14910.00	Rmt.
	ii)	7.9 mm	16581.00	Rmt.
	iii)	8.7 mm	18250.00	Rmt.
	iv)	9.5 mm	19917.00	Rmt.
	v)	10.00 mm.	20957.00	Rmt.
	vi)	12.00 mm.	25114.00	Rmt.
	y)	Dia of Pipe: 1473.00 mm (O.D.) Thickness of pipe:		
	i)	9.5 mm	20637.00	Rmt.
L	11)	7.J 111111	20037.00	MIII.

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	ii)	9.98 mm.	21672.00	Rmt.
	z)	Dia of Pipe: 1524.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.1 mm	15986.00	Rmt.
	ii)	7.9 mm	17777.00	Rmt.
	iii)	8.7 mm	19567.00	Rmt.
	iv)	9.5 mm	21355.00	Rmt.
	v)	10.00 mm.	22472.00	Rmt.
	vi)	11.90 mm	26708.00	Rmt.
	vii)	12.00 mm.	26930.00	Rmt.
	aa)	Dia of Pipe: 1550.00 mm (O.D.)		
		Thickness of pipe:		
	i)	10.00 mm.	22858.00	Rmt.
	ii)	11.00 mm.	25127.00	Rmt.
	ab)	Dia of Pipe: 1576.00 mm (O.D.)		
		Thickness of pipe:		
	i)	9.5 mm	22089.00	Rmt.
	ii)	10.00 mm	23243.00	Rmt.
	ac)	Dia of Pipe: 1626.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.1 mm	17060.00	Rmt.
	ii)	7.9 mm	18973.00	Rmt.
	iii)	8.7 mm	20885.00	Rmt.
	iv)	9.5 mm	22793.00	Rmt.
	v)	10.00 mm.	23985.00	Rmt.
	vi)	12.00 mm.	28748.00	Rmt.
	ad)	Dia of Pipe: 1650.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	19254.00	Rmt.
	ii)	8.7 mm	21194.00	Rmt.
	iii)	9.5 mm	23132.00	Rmt.
	iv)	10.00 mm.	24342.00	Rmt.
	v)	12.00 mm.	29175.00	Rmt.
	ae)	Dia of Pipe: 1700.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	19841.00	Rmt.
	ii)	8.7 mm	21840.00	Rmt.
	iii)	9.5 mm	23837.00	Rmt.
	iv)	10.00 mm.	25084.00	Rmt.
	v)	12.00 mm.	30065.00	Rmt.
	af)	Dia of Pipe: 1750.00 mm (O.D.) Thickness of pipe:		
	i)	7.9 mm	20427.00	Rmt.
	ii)	8.7 mm	22485.00	Rmt.
	iii)	9.5 mm	24542.00	Rmt.
	iv)	10.00 mm.	25826.00	Rmt.
	v)	12.00 mm.	30956.00	Rmt.
L	[V]	14.00 IIIII.	1 20220.00	MIIIt.

	•		M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
		Dia of Pipe: 1800.00 mm (O.D.)		
	i) I	Thickness of pipe: 7.9 mm	21013.00	Rmt.
	ii)	8.7 mm	23131.00	Rmt.
	iii)	9.5 mm	25247.00	Rmt.
	iv)	10.00 mm.	26569.00	Rmt.
	v)	12.00 mm.	31846.00	Rmt.
	ah)	Dia of Pipe: 1850.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	21599.00	Rmt.
	ii)	8.7 mm	23777.00	Rmt.
	iii)	9.5 mm	25951.00	Rmt.
	iv)	10.00 mm.	27310.00	Rmt.
	v)	12.00 mm.	32737.00	Rmt.
	ai)	Dia of Pipe: 1900.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	22186.00	Rmt.
	ii)	8.7 mm	24422.00	Rmt.
	iii)	9.5 mm	26658.00	Rmt.
	iv)	10.00 mm.	28053.00	Rmt.
	v)	12.00 mm.	33627.00	Rmt.
	aj)	Dia of Pipe: 1950.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	22773.00	Rmt.
	ii)	8.7 mm	25068.00	Rmt.
	iii)	9.5 mm	27362.00	Rmt.
	iv)	10.00 mm.	28795.00	Rmt.
	v)	12.00 mm.	34517.00	Rmt.
	ak)	Dia of Pipe: 2000.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	23359.00	Rmt.
	ii)	8.7 mm	25713.00	Rmt.
	iii)	9.5 mm	28067.00	Rmt.
	iv)	10.00 mm.	29537.00	Rmt.
	v)	12.00 mm.	35408.00	Rmt.
	al)	Dia of Pipe: 2050.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	23946.00	Rmt.
	ii)	8.7 mm	26359.00	Rmt.
	iii)	9.5 mm	28771.00	Rmt.
	iv)	10.00 mm.	30279.00	Rmt.
	v)	12.00 mm.	36299.00	Rmt.
	am)	Dia of Pipe: 2100.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	24530.00	Rmt.

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	ii)	8.7 mm	27005.00	Rmt.
	iii)	9.5 mm	29477.00	Rmt.
	iv)	10.00 mm.	31021.00	Rmt.
	v)	12.00 mm.	37190.00	Rmt.
	an)	Dia of Pipe: 2150.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	25117.00	Rmt.
	ii)	8.7 mm	27651.00	Rmt.
	iii)	9.5 mm	30181.00	Rmt.
	iv)	10.00 mm.	31763.00	Rmt.
	v)	12.00 mm.	38080.00	Rmt.
	ao)	Dia of Pipe: 2200.00 mm (O.D.)		
		Thickness of pipe:		
	i)	7.9 mm	25703.00	Rmt.
	ii)	8.7 mm	28297.00	Rmt.
	iii)	9.5 mm	30887.00	Rmt.
	iv)	10.00 mm.	32505.00	Rmt.
	v)	12.00 mm.	38970.00	Rmt.
	ap)	Dia of Pipe: 2250.00 mm (O.D.) Thickness of pipe:		
	i)	7.9 mm	26290.00	Rmt.
	ii)	8.7 mm	28942.00	Rmt.
	iii)	9.5 mm	31592.00	Rmt.
	iv)	10.00 mm.	33247.00	Rmt.
	v)	12.00 mm.	39861.00	Rmt.
	aq)	Dia of Pipe: 2300.00 mm (O.D.) Thickness of pipe:		
	i)	7.9 mm	26877.00	Rmt.
	ii)	8.7 mm	29587.00	Rmt.
	iii)	9.5 mm	32297.00	Rmt.
	iv)	10.00 mm.	33990.00	Rmt.
	v)	12.00 mm.	40751.00	Rmt.
	ar)	Dia of Pipe: 2350.00 mm (O.D.)		
		Thickness of pipe:	27462.00	<b>D</b> .
	i)	7.9 mm	27462.00	Rmt.
	ii)	8.7 mm	30233.00	Rmt.
	iii)	9.5 mm	33002.00	Rmt.
	iv)	10.00 mm. 12.00 mm.	34731.00 41643.00	Rmt.
	v)		41043.00	Rmt.
	as)	Dia of Pipe: 2400.00 mm (O.D.) Thickness of pipe:		
	i)	7.9 mm	28049.00	Rmt.
	ii)	8.7 mm	30879.00	Rmt.
	iii)	9.5 mm	33707.00	Rmt.
	iv)	10.00 mm.	35474.00	Rmt.
	v)	12.00 mm.	42533.00	Rmt.

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	at)	Dia of Pipe: 2450.00 mm (O.D.)		
	1.	Thickness of pipe:	20627.00	-
	i)	7.9 mm	28635.00	Rmt.
	ii)	8.7 mm	31525.00	Rmt.
	iii)	9.5 mm	34413.00	Rmt.
	iv) v)	10.00 mm. 12.00 mm.	36215.00 43424.00	Rmt. Rmt.
	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	12.00 mm.	43424.00	Kiiit.
	au)	Dia of Pipe: 2500.00 mm (O.D.)		
		Thickness of pipe:	20222	
	i)	7.9 mm	29222.00	Rmt.
	ii)	8.7 mm	32170.00	Rmt.
	iii)	9.5 mm	35117.00	Rmt.
	iv)	10.00 mm.	36959.00	Rmt.
	v)	12.00 mm.	44314.00	Rmt.
	vi)	16.00 mm.	58990.00	Rmt.
MSP-002		ufacturing, providing and supplying spirally welded/ERW/	(Without	
		7/ fabricated M.S. pipes (Commercial Quality) including	Excise	
		urements of plates, gas cutting to required size rolling, tack	Duty)	
		ing assembling in suitable lengths to form pipes, welding		
		atomatic welding machine and forming 'V' edge on both		
		of pipes including all taxes (Central and local), railway		
		ht, insurance unloading from railway wagon, loading into t, transport top stores/site, unloading, stacking, etc.		
		blete as per IS – 3589 and IS – 5504 as applicable as per		
		fications (No negative tolerance in thickness is		
	1 *	issible).		
	1*	Dia of Pipe: 200.00 mm (I.D.) (with Excise Duty)		
		Thickness of pipe:		
	i)	5.00 mm	1522.00	Rmt.
	ii)	6.00 mm	1829.00	Rmt.
	iii)	7.00 mm	2151.00	Rmt.
	iv)	8.00 mm.	2470.00	Rmt.
	v)	9.00 mm.	2792.00	Rmt.
	vi)	10.00 mm.	3117.00	Rmt.
	<b>b</b> )	Dia of Pipe: 250.00 mm (I.D.)		
		Thickness of pipe:		
	i)	5.00 mm	1892.00	Rmt.
	ii)	6.00 mm	2280.00	Rmt.
	iii)	7.00 mm	2670.00	Rmt.
	iv)	8.00 mm.	3063.00	Rmt.
	v)	9.00 mm.	3460.00	Rmt.
	vi)	10.00 mm.	3859.00	Rmt.
	(c)	Dia of Pipe: 300.00 mm (I.D.)	2007.00	Miiit.
		Thickness of pipe:		
L		intention of hipe	<u> </u>	

	M.S. Pipe		Pipes	
ITEM - CODE		DESCRIPTION	RATE	UNIT
	i)	5.00 mm	2264.00	Rmt.
	ii)	6.00 mm	2725.00	Rmt.
	iii)	7.00 mm	3190.00	Rmt.
	iv)	8.00 mm.	3657.00	Rmt.
	v)	9.00 mm.	4129.00	Rmt.
	vi)	10.00 mm.	4601.00	Rmt.
	d)	<b>Dia of Pipe: 350.00 mm (I.D.)</b>		
		Thickness of pipe:	2624.00	_
	i)	5.00 mm	2634.00	Rmt.
	ii)	6.00 mm	3170.00	Rmt.
	iii)	7.00 mm	3709.00	Rmt.
	iv)	8.00 mm.	4250.00	Rmt.
	v)	9.00 mm.	4795.00	Rmt.
	vi)	10.00 mm.	5344.00	Rmt.
	e)	Dia of Pipe: 400.00 mm (I.D.)		
	1.	Thickness of pipe:	2006.00	D (
	i)	5.00 mm	3006.00	Rmt.
	ii)	6.00 mm	3616.00	Rmt.
	iii)	7.00 mm	4229.00 4845.00	Rmt.
	iv)	8.00 mm.	5464.00	Rmt.
	v)	9.00 mm.	6085.00	Rmt.
	vi)	10.00 mm.	0083.00	Rmt.
	f)	Dia of Pipe: 450.00 mm (I.D.) Thickness of pipe:		
	i)	5.00 mm	3376.00	Rmt.
	ii)	6.00 mm	4060.00	Rmt.
	iii)	7.00 mm	4748.00	Rmt.
	iv)	8.00 mm.	5439.00	Rmt.
	v)	9.00 mm.	6131.00	Rmt.
	vi)	10.00 mm.	6828.00	Rmt.
	g)	Dia of Pipe: 500.00 mm (I.D.)	0020.00	Kiiit.
	5)	Thickness of pipe:		
	i)	5.00 mm	3748.00	Rmt.
	ii)	6.00 mm	4506.00	Rmt.
	iii)	7.00 mm	5268.00	Rmt.
	iv)	8.00 mm.	6032.00	Rmt.
	v)	9.00 mm.	6800.00	Rmt.
	vi)	10.00 mm.	7570.00	Rmt.
	h)	Dia of Pipe: 550.00 mm (I.D.)		
	′	Thickness of pipe:		
	i)	5.00 mm	4119.00	Rmt.
	ii)	6.00 mm	4951.00	Rmt.
	iii)	7.00 mm	5787.00	Rmt.
	iv)	8.00 mm.	6626.00	Rmt.

			Pipes	
ITEM - CODE		DESCRIPTION	RATE	UNIT
	v)	9.00 mm.	7468.00	Rmt.
	vi)	10.00 mm.	8313.00	Rmt.
	i)	Dia of Pipe: 600.00 mm (I.D.)		
	1	Thickness of pipe:	4400.00	
	i)	5.00 mm	4490.00	Rmt.
	ii)	6.00 mm	5397.00	Rmt.
	iii)	7.00 mm	6307.00	Rmt.
	iv)	8.00 mm	7220.00	Rmt.
	v)	9.00 mm.	8135.00	Rmt.
	vi)	10.00 mm.	9054.00	Rmt.
	vii)	12.00 mm.	10901.00	Rmt.
	<b>j</b> )	Dia of Pipe: 650.00 mm (I.D.) Thickness of pipe:		
	i)	5.00 mm	4862.00	Rmt.
	ii)	6.00 mm	5841.00	Rmt.
	iii)	7.00 mm	6826.00	Rmt.
	iv)	8.00 mm	7813.00	Rmt.
	(v)	9.00 mm.	8804.00	Rmt.
	vi)	10.00 mm.	9797.00	Rmt.
	vii)	12.00 mm.	11792.00	Rmt.
	k)	Dia of Pipe:700.00 mm (I.D.)	11772.00	Killt.
		Thickness of pipe:		
	i)	5.00 mm	5232.00	Rmt.
	ii)	6.00 mm	6288.00	Rmt.
	iii)	7.00 mm	7346.00	Rmt.
	iv)	8.00 mm	8408.00	Rmt.
	v)	9.00 mm.	9471.00	Rmt.
	vi)	10.00 mm.	10538.00	Rmt.
	vii)	12.00 mm.	12682.00	Rmt.
	<b>l</b> )	Dia of Pipe:750.00 mm (I.D.)		
		Thickness of pipe:		
	i)	5.00 mm	5604.00	Rmt.
	ii)	6.00 mm	6734.00	Rmt.
	iii)	7.00 mm	7866.00	Rmt.
	iv)	8.00 mm	9001.00	Rmt.
	v)	9.00 mm.	10140.00	Rmt.
	vi)	10.00 mm.	11281.00	Rmt.
	vii)	12.00 mm.	13572.00	Rmt.
	m)	Dia of Pipe:800.00 mm (I.D.)		
	1	Thickness of pipe:	505100	
	i)	5.00 mm	5974.00	Rmt.
	ii)	6.00 mm	7179.00	Rmt.
	iii)	7.00 mm	8384.00	Rmt.
	iv)	8.00 mm	9595.00	Rmt.

			Pipes	
ITEM - CODE		DESCRIPTION	RATE	UNIT
	v)	9.00 mm.	10807.00	Rmt.
	vi)	10.00 mm.	12024.00	Rmt.
	vii)	12.00 mm.	14463.00	Rmt.
	n)	Dia of Pipe:850.00 mm (I.D.)		
	-\-	Thickness of pipe:	(24( 00	D .
	i)	5.00 mm	6346.00	Rmt.
	ii)	6.00 mm	7624.00	Rmt.
	iii)	7.00 mm	8905.00 10189.00	Rmt.
	iv)	8.00 mm	11475.00	Rmt.
	v)	9.00 mm.	12765.00	Rmt.
	vi)	10.00 mm.	15353.00	Rmt.
	vii)	12.00 mm.	13333.00	Rmt.
	0)	Dia of Pipe:900.00 mm (I.D.)		
	i)	Thickness of pipe: 5.00 mm	6717.00	Rmt.
	ii)	6.00 mm	8069.00	Rmt.
	iii)	7.00 mm	9424.00	Rmt.
	iv)	8.00 mm	10782.00	Rmt.
	v)	9.00 mm.	12143.00	Rmt.
	vi)	10.00 mm.	13508.00	Rmt.
	vii)	12.00 mm.	16244.00	Rmt.
	p)	Dia of Pipe:950.00 mm (I.D.)	10244.00	KIIIt.
	P)	Thickness of pipe:		
	i)	5.00 mm	7088.00	Rmt.
	ii)	6.00 mm	8515.00	Rmt.
	iii)	7.00 mm	9943.00	Rmt.
	iv)	8.00 mm	11376.00	Rmt.
	v)	9.00 mm.	12811.00	Rmt.
	vi)	10.00 mm.	14249.00	Rmt.
	vii)	12.00 mm.	17134.00	Rmt.
	<b>q</b> )	Dia of Pipe:1000.00 mm (I.D.)	3,35,000	TCIII.
	11/	Thickness of pipe:		
	i)	5.00 mm	7458.00	Rmt.
	ii)	6.00 mm	8959.00	Rmt.
	iii)	7.00 mm	10463.00	Rmt.
	iv)	8.00 mm	11970.00	Rmt.
	v)	9.00 mm.	13479.00	Rmt.
	vi)	10.00 mm.	14992.00	Rmt.
	vii)	12.00 mm.	18026.00	Rmt.
	r)	Dia of Pipe:1050.00 mm (I.D.)		
	´	Thickness of pipe:		
	i)	5.00 mm	7830.00	Rmt.
	ii)	6.00 mm	9405.00	Rmt.
	iii)	7.00 mm	10983.00	Rmt.

			S. Pipes	
ITEM - CODE		DESCRIPTION	RATE	UNIT
	iv)	8.00 mm	12563.00	Rmt.
	v)	9.00 mm.	14147.00	Rmt.
	vi)	10.00 mm.	15733.00	Rmt.
	vii)	12.00 mm.	18916.00	Rmt.
	s)	Dia of Pipe:1100.00 mm (I.D.) Thickness of pipe:		
	i)	5.00 mm	8201.00	Rmt.
	ii)	6.00 mm	9850.00	Rmt.
	iii)	7.00 mm	11501.00	Rmt.
	iv)	8.00 mm	13157.00	Rmt.
	v)	9.00 mm.	14815.00	Rmt.
	vi)	10.00 mm.	16476.00	Rmt.
	vii)	12.00 mm.	19808.00	Rmt.
	t)	Dia of Pipe:1150.00 mm (I.D.)		
		Thickness of pipe:		
	i)	5.00 mm	8572.00	Rmt.
	ii)	6.00 mm	10296.00	Rmt.
	iii)	7.00 mm	12021.00	Rmt.
	iv)	8.00 mm	13751.00	Rmt.
	v)	9.00 mm.	15483.00	Rmt.
	vi)	10.00 mm.	17218.00	Rmt.
	viii)	12.00 mm.	20698.00	Rmt.
	u)	Dia of Pipe:1200.00 mm (I.D.)		
		Thickness of pipe:		
	i)	5.00 mm	8942.00	Rmt.
	ii)	6.00 mm	10740.00	Rmt.
	iii)	7.00 mm	12541.00	Rmt.
	iv)	8.00 mm	14344.00	Rmt.
	v)	9.00 mm.	16151.00	Rmt.
	vi)	10.00 mm.	17960.00	Rmt.
	vii)	12.00 mm.	21588.00	Rmt.
	v)	Dia of Pipe:1250.00 mm (I.D.)		
		Thickness of pipe:		
	i)	6.00 mm	11186.00	Rmt.
	ii)	7.00 mm	13061.00	Rmt.
	iii)	8.00 mm	14938.00	Rmt.
	iv)	9.00 mm.	16819.00	Rmt.
	v)	10.00 mm.	18702.00	Rmt.
	vi)	12.00 mm.	22479.00	Rmt.
	w)	Dia of Pipe:1300.00 mm (I.D.)		
		Thickness of pipe:		
	i)	6.00 mm	11632.00	Rmt.
	ii)	7.00 mm	13579.00	Rmt.
	iii)	8.00 mm	15531.00	Rmt.

			Pipes	
ITEM - CODE		DESCRIPTION	RATE	UNIT
	iv)	9.00 mm.	17487.00	Rmt.
	v)	10.00 mm.	19444.00	Rmt.
	vi)	12.00 mm.	23369.00	Rmt.
	x)	Dia of Pipe:1350.00 mm (I.D.)		
		Thickness of pipe:	1110000	
	i)	7.00 mm	14100.00	Rmt.
	ii)	8.00 mm	16126.00	Rmt.
	iii)	9.00 mm	18155.00	Rmt.
	iv)	10.00 mm.	20186.00	Rmt.
	v)	12.00 mm.	24260.00	Rmt.
	<b>y</b> )	Dia of Pipe:1400.00 mm (I.D.)		
	·	Thickness of pipe:	14610.00	D .
	i)	7.00 mm	14619.00	Rmt.
	ii)	8.00 mm	16720.00	Rmt.
	iii)	9.00 mm	18822.00 20928.00	Rmt.
	iv)	10.00 mm.	25150.00	Rmt.
	v)	12.00 mm.	23130.00	Rmt.
	z)	Dia of Pipe:1450.00 mm (I.D.) Thickness of pipe:		
	i)	7.00 mm	15138.00	Rmt.
	ii)	8.00 mm	17313.00	Rmt.
	iii)	9.00 mm	19490.00	Rmt.
	iv)	10.00 mm.	21672.00	Rmt.
	iv)	12.00 mm.	26041.00	Rmt.
	aa)	Dia of Pipe:1500.00 mm (I.D.)	20011.00	Kiiit.
		Thickness of pipe:		
	i)	7.00 mm	15659.00	Rmt.
	ii)	8.00 mm	17907.00	Rmt.
	iii)	9.00 mm	20159.00	Rmt.
	iv)	10.00 mm.	22414.00	Rmt.
	v)	12.00 mm.	26931.00	Rmt.
	ab)	Dia of Pipe:1550.00 mm (I.D.)		
		Thickness of pipe:		
	i)	7.00 mm	16178.00	Rmt.
	ii)	8.00 mm	18501.00	Rmt.
	iii)	9.00 mm	20826.00	Rmt.
	iv)	10.00 mm.	23156.00	Rmt.
	v)	12.00 mm.	27822.00	Rmt.
	ac)	Dia of Pipe:1600.00 mm (I.D.)		
		Thickness of pipe:		
	i)	7.00 mm	16697.00	Rmt.
	ii)	8.00 mm	19094.00	Rmt.
	iii)	9.00 mm	21495.00	Rmt.
	iv)	10.00 mm.	23898.00	Rmt.

	į		M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	v)	12.00 mm.	28712.00	Rmt.
	ad)	Dia of Pipe:1650.00 mm (I.D.)		
		Thickness of pipe:		
	i)	8.00 mm	19688.00	Rmt.
	ii)	9.00 mm	22161.00	Rmt.
	iii)	10.00 mm	24640.00	Rmt.
	iv)	12.00 mm.	29602.00	Rmt.
	ae)	Dia of Pipe:1700.00 mm (I.D.)		
		Thickness of pipe:	20201.00	
	<u>i)</u>	8.00 mm	20281.00	Rmt.
	ii)	9.00 mm	22830.00	Rmt.
	iii)	10.00 mm	25382.00	Rmt.
	v)	12.00 mm.	30493.00	Rmt.
	af)	Dia of Pipe:1750.00 mm (I.D.)		
		Thickness of pipe:		
	i)	8.00 mm	20875.00	Rmt.
	ii)	9.00 mm	23499.00	Rmt.
	iii)	10.00 mm	26124.00	Rmt.
	iv)	12.00 mm.	31384.00	Rmt.
	ag)	Dia of Pipe:1800.00 mm (I.D.)		
		Thickness of pipe:		
	i)	8.00 mm	21469.00	Rmt.
	ii)	9.00 mm	24166.00	Rmt.
	iii)	10.00 mm	26866.00	Rmt.
	iv)	12.00 mm.	32276.00	Rmt.
	ah)	Dia of Pipe:1850.00 mm (I.D.)		
		Thickness of pipe:		
	i)	8.00 mm	22062.00	Rmt.
	ii)	9.00 mm	24835.00	Rmt.
	iii)	10.00 mm	27609.00	Rmt.
	iv)	12.00 mm.	33166.00	Rmt.
	ai)	Dia of Pipe:1900.00 mm (I.D.)		
	1.	Thickness of pipe:	22(5(.00	·
	i)	8.00 mm	22656.00	Rmt.
	ii)	9.00 mm	25502.00	Rmt.
	iii)	10.00 mm	28350.00	Rmt.
	iv)	12.00 mm.	34057.00	Rmt.
	aj)	Dia of Pipe:1950.00 mm (I.D.)		
		Thickness of pipe:	22251.00	D. 4
	i)	8.00 mm	23251.00	Rmt.
	ii)	9.00 mm	26170.00	Rmt.
	iii)	10.00 mm	29093.00	Rmt.

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	iv)	12.00 mm.	34947.00	Rmt.
	ak)	Dia of Pipe:2000.00 mm (I.D.)		
	1.	Thickness of pipe:	22044.00	<b>D</b>
	i)	8.00 mm	23844.00	Rmt.
	ii)	9.00 mm	26837.00	Rmt.
	iii)	10.00 mm	29834.00 35838.00	Rmt.
	iv)	12.00 mm.	47878.00	Rmt.
	v)	16.00 mm.	4/8/8.00	Rmt.
	al)	Dia of Pipe: 2050.00 mm (I.D.)		
	i)	Thickness of pipe: 8.00 mm	24438.00	Rmt.
	ii)	9.00 mm	27506.00	Rmt.
	iii)	10.00 mm	30577.00	Rmt.
	iv)	12.00 mm.	36728.00	Rmt.
	vi)	16.00 mm.	49066.00	Rmt.
	VI)	10.00 Hilli.	47000.00	Kilit.
	am)	Dia of Pipe:2100.00 mm (I.D.)		
		Thickness of pipe:		
	i)	8.00 mm	25032.00	Rmt.
	ii)	9.00 mm	28174.00	Rmt.
	iii)	10.00 mm	31319.00	Rmt.
	iv)	12.00 mm.	37618.00	Rmt.
	v)	16.00 mm.	50253.00	Rmt.
	an)	Dia of Pipe:2150.00 mm (I.D.)		
	1	Thickness of pipe:	27.07.00	
	i)	8.00 mm	25625.00	Rmt.
	ii)	9.00 mm	28842.00	Rmt.
	iii)	10.00 mm	32061.00	Rmt.
	iv)	12.00 mm.	38509.00	Rmt.
	v)	16.00 mm.	51440.00	Rmt.
	ao)	Dia of Pipe:2200.00 mm (I.D.)		
	1	Thickness of pipe:	2(210.00	_
	i)	8.00 mm	26219.00	Rmt.
	ii)	9.00 mm	29509.00	Rmt.
	iii)	10.00 mm	32804.00	Rmt.
	iv)	12.00 mm.	39399.00	Rmt.
	v)	16.00 mm.	52627.00	Rmt.
	ap)	Dia of Pipe:2250.00 mm (I.D.)		
	1.,	Thickness of pipe:	2(012.00	D .
	i)	8.00 mm	26813.00	Rmt.
	ii)	9.00 mm	30177.00	Rmt.
	iii)	10.00 mm	33545.00	Rmt.
	iv)	12.00 mm.	40290.00	Rmt.
	v)	16.00 mm.	53815.00	Rmt.

			M.S.	Pipes
ITEM - CODE		DESCRIPTION	RATE	UNIT
	aq)	Dia of Pipe:2300.00 mm (I.D.)		
		Thickness of pipe:		
	i)	8.00 mm	27407.00	Rmt.
	ii)	9.00 mm	30846.00	Rmt.
	iii)	10.00 mm	34288.00	Rmt.
	iv)	12.00 mm.	41180.00	Rmt.
	v)	16.00 mm.	55002.00	Rmt.
	ar)	Dia of Pipe:2350.00 mm (I.D.)		
		Thickness of pipe:		
	i)	8.00 mm	28001.00	Rmt.
	ii)	9.00 mm	31514.00	Rmt.
	iii)	10.00 mm	35029.00	Rmt.
	iv)	12.00 mm.	42072.00	Rmt.
	v)	16.00 mm.	56190.00	Rmt.
	as)	Dia of Pipe:2400.00 mm (I.D.)		
	asj	Thickness of pipe:		
	i)	8.00 mm	28594.00	Rmt.
	ii)	9.00 mm	32182.00	Rmt.
	iii)	10.00 mm	35772.00	Rmt.
	iv)	12.00 mm.	42962.00	Rmt.
	(v)	16.00 mm.	57379.00	Rmt.
	at)	Dia of Pipe:2450.00 mm (I.D.)	27373.00	Kiiit.
		Thickness of pipe:		
	i)	8.00 mm	29188.00	Rmt.
	ii)	9.00 mm	32849.00	Rmt.
	iii)	10.00 mm	36514.00	Rmt.
	iv)	12.00 mm.	43853.00	Rmt.
	v)	16.00 mm.	58566.00	Rmt.
	au)	Dia of Pipe:2500.00 mm (I.D.)		Terre.
		Thickness of pipe:		
	i)	8.00 mm	29782.00	Rmt.
	ii)	9.00 mm	33517.00	Rmt.
	iii)	10.00 mm	37257.00	Rmt.
	iv)	12.00 mm.	44743.00	Rmt.
	v)	16.00 mm.	59753.00	Rmt.

# **FABRICATION OF M.S. PIPES AND SPECIALS**

	Fabrication of M.S.	Pipes and S <sub>I</sub>	pecials
ITEM - CODE	DESCRIPTION	RATE	UNIT
FAB-001	Fabrication pipes from steel plates supplied free of cost and stacking the same in the fabricator's yard. The rate to include cutting the plate, rolling, tack welding, assembling in suitable lengths to form pipes, welding on automatic welding machines and forming 'V' edge for both ends of pipe.		
	a) 5 to 8 mm	9005.00	MT
	b) 8 to 12 mm	7062.00	MT
	c) 12 to 16 mm	5297.00	MT
	d) 16 to 20 mm	4767.00	MT
	e) 20 to 25 mm	4590.00	MT
FAB-002	Fabricating one piece cants, short pipes (Shorter than one strake length) from the steel plates supplied free of cost of and stacking the same in fabricator's yard. The rate to include cutting the plates, rolling, tack welding either on automatic welding machine or manually and forming 'V' edge to both ends of pipes		
	a) 5 to 8 mm	12359.00	MT
	b) 8 to 12 mm	8121.00	MT
	c) 12 to 25 mm	5827.00	MT
FAB-003	Fabricating composite bends from steel plates supplied free of cost and stacking the same in the fabricator's yard. The rate to include cutting the plates, rolling, tacking drums, assembling the same form bend of suitable length, welding either on automatic welding machine or manually and forming, 'V' edge to both ends of bend but the rate excluding the circumferential butt welding required for assembling cants to form necessary composite bend. Circumferential butt welding will be paid separately under Item No. 11 (a) However, the rate under this item will include the cost of longitudinal but welding of pipes strakes.		
	a) 5 to 8 mm	14830.00	MT
	b) 8 to 12 mm	9887.00	MT
	c) 12 to 16 mm	7768.00	MT
EAD 004	d) 16 to 25 mm	7239.00	MT
FAB-004	Fabricating tapers from steel plates supplied free of cost and stacking the same in the fabricator's yard. The rate to include cutting the plates, rolling, tack welding, welding either on automatic welding machine or manually and forming, 'V' edge to both ends of tapers but the rate excluding the circumferential butt welding required for assembling cants to form necessary tapers. Circumferential but welding will be paid separately under Section M.S. Pipes Laying Item No. 7 (a) However, the rate under this item will include the cost of longitudinal but welding to form drums the rate shall also include the cost of fabrication of stifferner rings and gusstes and mounting the	11476.00	MT

	Fabrication of M.S.	Pipes and Specials		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	same on tapers, tack and chain welding, etc. as directed by Engineer-in-charge.			
FAB-005	Fabricating specials and fixtures from steel materials supplied free of cost (welding will be paid separately except for category vi (a) and (b) below The weight for payment under this item shall be calculated on the basis of finished material neglecting the bolt holes wherever provided.)			
	i) Saddle pieces, loose stiffener rings, pressure type blank flanges, ladders, platforms and any other minor fixtures. The rate to include cutting, bending, tack welding, etc. complete.	4590.00	M.T.	
	ii) 'Y' branches. 'T' branches. The rates to include cutting, bending, tack welding, etc, complete.	9711.00	M.T.	
	iii) Dished closures such as dones. The rate to include cutting, cold pressuring, and tack welding, etc. complete.	15007.00	M.T.	
	iv) Dished closures such as manhole cover. The rate to include cutting cold pressuring and tack welding only. The rate also to include drilling holes including grinding wherever necessary, with supply of bolts, nuts, washers, etc. complete as per drawing.	16067.00	M.T.	
	v) Flat manhole covers. The rate to include cutting, tack welding, the rate also to include drilling holes including grinding wherever necessary with supply of bolts, nuts, washers, etc. complete as per drawing.	10417.00	M.T.	
	<ul><li>vi) Flange rings below 40 mm thick. The rate to include gas</li><li>a) Cutting, tack welding to form ring, drilling holes including grinding wherever necessary, etc. complete.</li></ul>	16949.00	M.T.	
	b) Flange rings below 40 mm thick. The rate to include gas Flange rings 40 mm and above thick. The rate to include gas cutting, tack welding to form ring, drilling holed including grinding wherever necessary, etc. complete.	22069.00	M.T.	
	vii.) Machining of flange ring for cut upto 2 mm.  a) Including handling, assembling, alignment the ring on			
	<ul><li>i) machine, etc. complete. As directed by Engineer-in-charge.</li><li>i) for thickness of flange ring below 40mm.</li></ul>	971.00	Sqm.	
	ii) For thickness of flange ring 40 mm and above.	1483.00	Sqm.	
	b) Extra over and above (vii) (a) for machining beyond 2 mm for every additional cut of 2 mm or part thereof.	741.00	Sqm.	
	<ul> <li>i) Stress relieving of flange rings as specified and directed.</li> <li>ii) Plug plates 150 mm. dia, and the thickness of plate from 14 mm to 25 mm as per drawing. The rate to include gas cutting, drilling holes, cost of G.I. plugs, rolling to required curvature and threading, etc. complete.</li> </ul>	3531.00 67.00	Sqm. Each	
FAB-006	Providing, fabricating and fixing expansion joints for pipelines as per the drawing. The rate to include machining the strakes and steel ring as shown in the drawing and welding on either			

	Fabrication of M.S. Pipes and Specials			
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	automatic welding machine or manually. Rate includes plates and flats rubber for expansion joint and all other materials such as synthetic specifications, grease, bolts and nuts, etc. including local handling all types of taxes and duties etc. complete. Expansion joints suitable for pipe diameters.			
	i) 300 mm dia.	21887.00	Each	
	ii) 400 mm dia.	31585.00	Each	
	iii) 450 mm dia.	41085.00	Each	
	iv) 500 mm dia.	55084.00	Each	
	v) 600 mm dia.	64711.00	Each	
	vi) 700 mm dia.	80556.00	Each	
	vii) 750 mm dia.	88773.00	Each	
	viii) 800 mm dia.	103312.00	Each	
	ix) 900 mm dia.	119952.00	Each	
	x) 1000 mm dia.	143629.00	Each	
FAB-007	xi) 1200 mm dia.  Fabricating ring girder as per drawing and specifications from	190757.00 5827.00	Each M.T.	
	M.S. channels, flats, plates, etc. supplied free of cost and assembling the same on the ring girder strake and tack welding as per directions.			
FAB-008	Fabricating ring girder supports (stools) as per drawing and specifications complete with top plates, base plates, side flats for fixing rollers wherever necessary, grease box covers, rag bolts, grid road etc. from steel material supplied free of cost and stacking the same in fabricators yard.	7945.00	M.T.	
FAB-009	Fabricating and assembling M.S. roller as per drawing. The rate to include machining, assembling and fixing the same to the side flats provided below the top plates of R.C. supports (stools) greasing including providing anti-theft measures M.S. rounds will be supplied free of cost. All other materials such as bright stainless steel pins etc. shall be supplied by the fabricator at his cost.	17293.00	M.T.	
FAB-010	Blast cleaning the surface of the old or new pipeline internally to remove all rust etc. complete, including providing sand, machinery, labour, cutting of pipes at required places and rewelding the same etc. complete as directed by Engineer-in-Charge. (Pipes pieces if required for rewelding of old pipeline shall be paid separately).	77.00	Sqm.	
FAB-011	Cleaning of old or new pipeline internally with mechanical cleaning machine having steel scraper blades with required passes including removing all rust, scaling etc. including cutting of pipes at required places, rewelding the same including cost of all materials and labour, etc. complete (Pipes pieces if required for rewelding of old pipeline shall be paid separately).	77.00	Sqm.	
FAB-012	Cleaning of old pipeline internally by using swabbing method by passing polyurethane foam "pig" with required hydraulic	91.00	Sqm.	

	Pipes and S <sub>I</sub>	es and Specials	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	pressure, cutting of pipes at required places, rewelding the same including cost of all materials and labour, etc. complete. (Pipe pieces if required for rewelding of old pipeline shall be paid separately).  Note: Water for this purpose shall be supplied by the Department free of cost at fixed point within 5 km, lead and all arrangements for filling section and creating hydraulic pressure on Polyurethane Pig shall be done by Contractor at his own cost.		
FAB-013	Blast cleaning the surface of the old or new pipeline externally to remove all rust including providing sand machinery etc. complete as directed by Engineer-in-Charge.	91.00	Sqm.
FAB-014	Providing and Applying primer and one coat of red oxide of iron paint, internally, to blast cleaned surface of the pipes.	25.00	Sqm.
FAB-015	Providing and Applying primer and one coat of red oxide of iron paint, internally, including cleaning the surface of the pipes with steel scrappers, wire brushes, and metal cleaning solution, etc.	43.00	Sqm.
FAB-016	Fabricating and Fixing insulated flange rings assembly as per drawing from steel material, supplied free of cost. The rate to include fabrication of tail pipe (about 0.6M long) fabrications of flange rings, machining, drilling holes, including grinding wherever necessary and welding. The rate above to include nuts, bolts, washers, etc. but shall not include supply and fixing of backbite / PVC rings, cylinders and rubber packing.  For Pipe Dia.		
	i) From 300 mm Upto 450 mm dia	2138.00	Each
	ii) Above 450 mm Upto 750 mm dia.	4155.00	Each
	iii) Above 750 mm. Upto 1000 mm dia.	6184.00	Each
	iv) Above 1000 mm. Upto 1250 mm dia.	10817.00	Each
	v) Above 1250 mm Upto 1500 mm dia.	14722.00	Each
	vi) Above 1750 mm Upto 2000 mm dia.	17999.00	Each
FAB-017	Providing and applying primer and one coat of red oxide of iron paint, externally, to blast cleaned surface of the pipes.		Sqm.
FAB-018	Providing and applying primer and once coat of red oxide of iron paint, externally, including cleaning the surface of the pipes with steel scrappers, wire brushes and metal cleaning solution etc. complete.		Sqm.
FAB-019	Providing and applying covering coat of gray graphite or approved quality including dusting the surface etc. complete.	31.00	Sqm.
FAB-020	Providing and applying one coat of zinc rich epoxy primer to the internal surface of pipe line at site.	66.00	Sqm.
FAB-021	Providing and applying primer first coat of intertol 49 W emaline 05/58 pipe coat or any other equivalent approved paint to the internal surface of pipeline at site.		Sqm.
	a) 2 <sup>nd</sup> coat	41.00	Sqm.
	b) 3 <sup>rd</sup> coat	40.00	Sqm.

CIDCO SCHEDULE OF RATES : 2012-2013	

# **M.S. PIPES LAYING**

		M.S. Pipe 1	Laying
ITEM - CODE	DESCRIPTION	RATE	UNIT
MSPL-001	Lowering, laying in position to correct line and level including		
	M.S. pipes with / without any out coating in trenches upon		
	prepared formation. The rate to include loading, unloading		
	hoisting, marginal cutting wherever required, assembling and		
	tack welding, and iron portion upto 500 mm etc. completed as		
	specified.		
	a.) 5 mm to 8 mm thick	202.00	<b>D</b> .
	i) Upto 250 mm. Dia.	282.00	Rmt.
	Ii) Above 250 mm. Upto 500 mm. dia.	332.00	Rmt.
	iii) Above 500 mm. Upto 750 mm. dia.	381.00	Rmt.
	iv) Above 750 mm. Upto 1000 mm. dia.	431.00	Rmt.
	v) Above 1000 mm. Upto 1250 mm. dia.	482.00	Rmt.
	b.) Above 8 mm upto 12 mm thick	7-100	<b>T</b>
	i) From 750 mm. Upto 1000 mm. dia.	574.00	Rmt.
	ii) Above 1000 mm. Upto 1250mm. dia.	640.00	Rmt.
	iii) Above 1250 mm. Upto 1500mm. dia.	706.00	Rmt.
	iv) Above 1500 mm. Upto 1750 mm. dia.	774.00	Rmt.
	v) Above 1750 mm. Upto 2000mm. dia.	840.00	Rmt.
	vi) Above 2000 mm. Upto 2250 mm. dia.	906.00	Rmt.
	vii) Above 2250 mm. Upto 2500mm. dia.	974.00	Rmt.
	c.) Above 12 mm upto 16 mm thick	0.64.00	<b>T</b>
	i) From 2000mm. Upto 2250 mm. dia.	864.00	Rmt.
	ii) Above 2250mm. Upto 2500mm. dia.	932.00	Rmt.
	iii) Above 2500 mm. Upto 2750 mm. dia.	996.00	Rmt.
	iv) Above 2750 mm. Upto 3000 mm. dia.	1060.00	Rmt.
	v) Above 3000 mm. Upto 3250 mm. dia.	1124.00	Rmt.
	vi) Above 3250 mm. Upto 3500 mm. dia.	1189.00	Rmt.
	d.) Above 16 mm upto 20 mm thick		
	i) From 2500 mm. Upto 2750 mm. dia.	1306.00	Rmt.
	ii) Above 2750 mm. Upto 3000 mm. dia.	1378.00	Rmt.
	iii) Above 3000 mm. Upto 3250 mm. dia.	1450.00	Rmt.
	iv) Above 3250 mm. Upto 3500 mm. dia.	1522.00	Rmt.
	v) Above 3500 mm. Upto 3750 mm. dia.	1595.00	Rmt.
	vi) Above 3750 mm. Upto 4000 mm. dia.	1668.00	Rmt.
	e.) Above 20 mm upto 25 mm thick		_
	i) From 3500 mm. Upto 3750 mm. dia.	1778.00	Rmt.
	ii) Above 3750 mm. Upto 4000 mm. dia.	1880.00	Rmt.
MSPL-	Lowering laying in position to correct line and level including		
002	M.S. pipes with / without any outcoating such as distance		
	pieces, straps, bends, tapert, etc. in trenches upon prepared		
	formation. THe rate to include loading, unloading hoisting,		
	marginal cutting wherever required, assembling and tack		
	welding, and transportation upto 500 mm etc. complete.		
	<ul><li>a.) 5 mm to 8 mm thick</li><li>i) Upto 250 mm. dia.</li></ul>	394.00	Rmt.

			M.S. Pipe I	Laying
ITEM - CODE		DESCRIPTION	RATE	UNIT
	ii)	Above 250 mm. Upto 500 mm. dia.	462.00	Rmt.
	iii)	Above 500 mm. Upto 750 mm. dia.	534.00	Rmt.
	iv)	Above 750 mm. Upto 1000 mm. dia.	603.00	Rmt.
	v)	Above 1000 mm. Upto 1250 mm. dia.	673.00	Rmt.
	<b>b.</b> )	Above 8 mm to 12 mm thick		
	i)	From 750 mm. Upto 1000 mm. dia.	804.00	Rmt.
	ii)	Above 1000 mm. Upto 1250mm. dia.	897.00	Rmt.
	iii)	Above 1250 mm. Upto 1500mm. dia.	989.00	Rmt.
	iv)	Above 1500 mm. Upto 1750 mm. dia.	1082.00	Rmt.
	v)	Above 1750 mm. Upto 2000mm. dia.	1177.00	Rmt.
	vi)	Above 2000 mm. Upto 2250 mm. dia.	1269.00	Rmt.
	vii)	Above 2250 mm. Upto 2500mm. dia.	1362.00	Rmt.
	<b>c.</b> )	Above 12 mm to 16 mm thick		
	i)	From 2000mm. Upto 2250 mm. dia.	1252.00	Rmt.
	ii)	Above 2250mm. Upto 2500mm. dia.	1304.00	Rmt.
	iii)	Above 2500 mm. Upto 2750 mm. dia.	1394.00	Rmt.
	iv)	Above 2750 mm. Upto 3000 mm. dia.	1483.00	Rmt.
	v)	Above 3000 mm. Upto 3250 mm. dia.	1574.00	Rmt.
	vi)	Above 3250 mm. Upto 3500 mm. dia.	1664.00	Rmt.
	<b>d.</b> )	Above 16 mm to 20 mm thick		
	i)	From 2500 mm. Upto 2750 mm. dia.	1796.00	Rmt.
	ii)	Above 2750 mm. Upto 3000 mm. dia.	1877.00	Rmt.
	iii)	Above 3000 mm. Upto 3250 mm. dia.	2031.00	Rmt.
	iv)	Above 3250 mm. Upto 3500 mm. dia.	2132.00	Rmt.
	v)	Above 3500 mm. Upto 3750 mm. dia.	2232.00	Rmt.
	vi)	Above 3750 mm. Upto 4000 mm. dia.	2333.00	Rmt.
	e.)	Above 20 mm to 25 mm thick		
	i)	From 3500 mm. Upto 3750 mm. dia.	2488.00	Rmt.
	ii)	Above 3750 mm. Upto 4000 mm. dia.	2631.00	Rmt.
MSPL-		ering laying in position to correct line and level including		
003		pipes with / without any outcoating, on pedestals or chairs		
		piers, trestles etc. The rate to include loading, unloading		
		ing, marginal cutting wherever required, assembling and		
		welding, transportation upto 500 m.etc. complete.		
	<b>a.</b> )	5 mm to 8 mm thick		_
	i)	Upto 250 mm. Dia.	337.00	Rmt.
	ii)	Above 250 mm. Upto 500 mm. dia.	396.00	Rmt.
	iii)	Above 500 mm. Upto 750 mm. dia.	457.00	Rmt.
	iv)	Above 750 mm. Upto 1000 mm. dia.	517.00	Rmt.
	v)	Above 1000 mm. Upto 1250 mm. dia.	578.00	Rmt.
	<b>b.</b> )	Above 8 mm upto 12 mm thick	600.00	<b>D</b> :
	i)	From 750 mm. Upto 1000 mm. dia.	689.00	Rmt.
	ii)	Above 1000 mm. Upto 1250mm. dia.	768.00	Rmt.
	iii)	Above 1250 mm. Upto 1500mm. dia.	848.00	Rmt.
	iv)	Above 1500 mm. Upto 1750 mm. dia.	928.00	Rmt.
	v)	Above 1750 mm. Upto 2000mm. dia.	1009.00	Rmt.
	vi)	Above 2000 mm. Upto 2250 mm. dia.	1089.00	Rmt.

			M.S. Pipe 1	Laying
ITEM - CODE		DESCRIPTION	RATE	UNIT
	vii)	Above 2250 mm. Upto 2500mm. dia.	1167.00	Rmt.
	c.)	Above 12 mm upto 16 mm thick		
	i)	From 2000mm. Upto 2250 mm. dia.	994.00	Rmt.
	ii)	Above 2250mm. Upto 2500mm. dia.	1042.00	Rmt.
	iii)	Above 2500 mm. Upto 2750 mm. dia.	1194.00	Rmt.
	iv)	Above 2750 mm. Upto 3000 mm. dia.	1273.00	Rmt.
	v)	Above 3000 mm. Upto 3250 mm. dia.	1350.00	Rmt.
	vi)	Above 3250 mm. Upto 3500 mm. dia.	1416.00	Rmt.
	<b>d.</b> )	Above 16 mm upto 20 mm thick		
	i)	From 2500 mm. Upto 2750 mm. dia.	1566.00	Rmt.
	ii)	Above 2750 mm. Upto 3000 mm. dia.	1653.00	Rmt.
	iii)	Above 3000 mm. Upto 3250 mm. dia.	1740.00	Rmt.
	iv)	Above 3250 mm. Upto 3500 mm. dia.	1826.00	Rmt.
	v)	Above 3500 mm. Upto 3750 mm. dia.	1913.00	Rmt.
	vi)	Above 3750 mm. Upto 4000 mm. dia.	2001.00	Rmt.
	e.)	Above 20 mm upto 25 mm thick		
	i)	From 3500 mm. Upto 3750 mm. dia.	2133.00	Rmt.
	ii)	Above 3750 mm. Upto 4000 mm. Dia.	2256.00	Rmt.
MSPL-	Lowe	ering and laying in position to correct line and level		
004		ding M.S. Specials such as distance pieces, straps, bends,		
	tapers	s, etc. on pedestals or chairs up on piers or trestles. The		
	rate t	to include loading unloading hoisting, marginal cutting		
	where	ever required, assembling and tack welding, and including		
	transp	portation upto 500 m. etc. complete as specified.		
	a.)	5 mm to 8 mm thick		
	i)	Upto 250 mm. dia.	472.00	Rmt.
	ii)	Upto 500 mm. dia.	556.00	Rmt.
	iii)	Upto 750 mm. dia.	639.00	Rmt.
	iv)	Above 750 mm. Upto 1000 mm. dia.	724.00	Rmt.
	v)	Above 1000 mm. Upto 1250 mm. dia.	807.00	Rmt.
	<b>b.</b> )	Above 8 mm to 12 mm thick		
	i)	From 750 mm. Upto 1000 mm. dia.	965.00	Rmt.
	ii)	Above 1000 mm. Upto 1250mm. dia.	1076.00	Rmt.
	iii)	Above 1250 mm. Upto 1500mm. dia.	1188.00	Rmt.
	iv)	Above 1500 mm. Upto 1750 mm. dia.	1299.00	Rmt.
	v)	Above 1750 mm. Upto 2000mm. dia.	1412.00	Rmt.
	vi)	Above 2000 mm. Upto 2250 mm. dia.	1525.00	Rmt.
	vii)	Above 2250 mm. Upto 2500mm. dia.	1635.00	Rmt.
	c.)	Above 12 mm to 16 mm thick		
	i)	From 2000mm. Upto 2250 mm. dia.	1503.00	Rmt.
	ii)	Above 2250mm. Upto 2500mm. dia.	1563.00	Rmt.
	iii)	Above 2500 mm. Upto 2750 mm. dia.	1672.00	Rmt.
	iv)	Above 2750 mm. Upto 3000 mm. dia.	1781.00	Rmt.
	v)	Above 3000 mm. Upto 3250 mm. dia.	1889.00	Rmt.
	vi)	Above 3250 mm. Upto 3500 mm. dia.	1998.00	Rmt.
	d.)	Above 16 mm to 20 mm thick		

			M.S. Pipe Laying		
ITEM - CODE		DESCRIPTION	RATE	UNIT	
	i)	From 2500 mm. Upto 2750 mm. dia.	2195.00	Rmt.	
	ii)	Above 2750 mm. Upto 3000 mm. dia.	2314.00	Rmt.	
	iii)	Above 3000 mm. Upto 3250 mm. dia.	2437.00	Rmt.	
	iv)	Above 3250 mm. Upto 3500 mm. dia.	2555.00	Rmt.	
	v)	Above 3500 mm. Upto 3750 mm. dia.	2679.00	Rmt.	
	vi)	Above 3750 mm. Upto 4000 mm. Dia.	2802.00	Rmt.	
	e.)	Above 20 mm to 25 mm thick			
	i)	Above 20 mm upto 25 mm thick. From 3500 mm. Upto 3750 mm. dia.	2988.00	Rmt.	
	ii)	Above 20 mm upto 25 mm thick. Above 3750 mm. Upto 4000 mm. dia.	3157.00	Rmt.	
MSPL-		sporting within 500 meters, laying in position to correct			
005	line	and level M.S. pips with / without any outcoating, on			
	1 .	ared bedding intrenches including marginal cutting			
		rever required, assembling tack welding, the same. The rate			
		ncluding loading, unloading, hoisting, etc. complete as			
		ified.			
	a.)	5 mm to 8 mm thick			
	i)	Upto 250 mm. dia.	289.00	Rmt.	
	ii)	Above 250 mm. Upto 500 mm. dia.	340.00	Rmt.	
	iii)	Above 500 mm. Upto 750 mm. dia.	391.00	Rmt.	
	iv)	Above 750 mm. Upto 1000 mm. dia.	442.00	Rmt.	
	v)	Above 1000 mm. Upto 1250 mm. dia.	493.00	Rmt.	
	<b>b.</b> )	Above 8 mm to 12 mm thick			
	i)	From 750 mm. Upto 1000 mm. dia.	589.00	Rmt.	
	ii)	Above 1000 mm. Upto 1250mm. dia.	656.00	Rmt.	
	iii)	Above 1250 mm. Upto 1500mm. dia.	724.00	Rmt.	
	iv)	Above 1500 mm. Upto 1750 mm. dia.	793.00	Rmt.	
	v)	Above 1750 mm. Upto 2000mm. dia.	860.00	Rmt.	
	vi)	Above 2000 mm. Upto 2250 mm. dia.	928.00	Rmt.	
	vii)	Above 2250 mm. Upto 2500mm. dia.	996.00	Rmt.	
	<b>c.</b> )	Above 12 mm to 16 mm thick			
	i)	From 2000mm. Upto 2250 mm. dia.	915.00	Rmt.	
	ii)	Above 2250mm. Upto 2500mm. dia.	955.00	Rmt.	
	iii)	Above 2500 mm. Upto 2750 mm. dia.	1021.00	Rmt.	
	iv)	Above 2750 mm. Upto 3000 mm. dia.	1087.00	Rmt.	
	v)	Above 3000 mm. Upto 3250 mm. dia.	1153.00	Rmt.	
	vi)	Above 3250 mm. Upto 3500 mm. dia.	1219.00	Rmt.	
	<b>d.</b> )	Above 16 mm to 20 mm thick			
	i)	From 2500 mm. Upto 2750 mm. dia.	1334.00	Rmt.	
	ii)	Above 2750 mm. Upto 3000 mm. dia.	1408.00	Rmt.	
	iii)	Above 3000 mm. Upto 3250 mm. dia.	1483.00	Rmt.	
	iv)	Above 3250 mm. Upto 3500 mm. dia.	1558.00	Rmt.	
	v)	Above 3500 mm. Upto 3750 mm. dia.	1632.00	Rmt.	
	vi)	Above 3750 mm. Upto 4000 mm. dia.	1708.00	Rmt.	
	e.)	Above 20 mm to 25 mm thick			
	i)	From 3500 mm. Upto 3750 mm. dia.	1817.00	Rmt.	

			M.S. Pipe Laying	
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	ii) Above 3750 mm. Upto 4000 mm. dia.	1922.00	Rmt.	
MSPL-	Transporting within 500 meters, laying in position to correct			
006	line and level M.S. Specials pips with / without any outcoating,			
	such as distance pieces, straps, bends, tapers, etc. on prepared			
	bedding in trenches including marginal cutting wherever			
	required, assembling tack welding, the same. The rate to			
	including loading, unloading, hoisting, etc. complete as specified.			
	a.) 5 mm to 8 mm thick			
	i) Upto 250 mm. dia.	406.00	Rmt.	
	ii) Above 250 mm. Upto 500 mm. dia.	475.00	Rmt.	
	iii) Above 500 mm. Upto 750 mm. dia.	548.00	Rmt.	
	iv) Above 750 mm. Upto 1000 mm. dia.	618.00	Rmt.	
	v) Above 1000 mm. Upto 1250 mm. dia.	691.00	Rmt.	
	b.) Above 8 mm to 12 mm thick			
	i) From 750 mm. Upto 1000 mm. dia.	824.00	Rmt.	
	ii) Above 1000 mm. Upto 1250mm. dia.	919.00	Rmt.	
	iii) Above 1250 mm. Upto 1500mm. dia.	1013.00	Rmt.	
	iv) Above 1500 mm. Upto 1750 mm. dia.	1109.00	Rmt.	
	v) Above 1750 mm. Upto 2000mm. dia.	1288.00	Rmt.	
	vi) Above 2000 mm. Upto 2250 mm. dia.	1345.00	Rmt.	
	vii) Above 2250 mm. Upto 2500mm. dia.	1394.00	Rmt.	
	c.) Above 12 mm to 16 mm thick			
	i) From 2000mm. Upto 2250 mm. dia.	1282.00	Rmt.	
	ii) Above 2250mm. Upto 2500mm. dia.	1387.00	Rmt.	
	iii) Above 2500 mm. Upto 2750 mm. dia.	1428.00	Rmt.	
	iv) Above 2750 mm. Upto 3000 mm. dia.	1521.00	Rmt.	
	v) Above 3000 mm. Upto 3250 mm. dia.	1616.00	Rmt.	
	vi) Above 3250 mm. Upto 3500 mm. dia.	1708.00	Rmt.	
	d.) Above 16 mm to 20 mm thick	1055.00	D4	
	<ul><li>i) From 2500 mm. Upto 2750 mm. dia.</li><li>ii) Above 2750 mm. Upto 3000 mm. dia.</li></ul>	1855.00	Rmt.	
	ii) Above 2750 mm. Upto 3000 mm. dia. iii) Above 3000 mm. Upto 3250 mm. dia.	1972.00 2078.00	Rmt.	
	iv) Above 3500 mm. Upto 3500 mm. dia.	2181.00	Rmt. Rmt.	
	v) Above 3500 mm. Upto 3750 mm. dia.	2286.00	Rmt.	
	vi) Above 3750 mm. Upto 4000 mm. dia.	2391.00	Rmt.	
	e.) Above 20 mm to 25 mm thick	2371.00	IXIII.	
	i) From 3500 mm. Upto 3750 mm. dia.	2543.00	Rmt.	
	ii) Above 3750 mm. Upto 4000 mm. dia.	2692.00	Rmt.	
MSPL-	Welding in all positions with required number of runs, for M.S.	_ = = = .00		
007	pipes internally and / or externally including gauging wherever			
	necessary fixing appurtenances and outer accessories in			
	connection with pipe laying work as per specification.			
	A) Butt Joints : Plate thickness			
	i) 4 mm	131.00	Rmt.	
	ii) 5 mm	198.00	Rmt.	
	iii) 6 mm	465.00	Rmt.	

	M.S. Pipe Layi		Laying
ITEM - CODE	DESCRIPTION	RATE	UNIT
	iv) 7 mm	519.00	Rmt.
	v) 8 mm	651.00	Rmt.
	vi) 10 mm	798.00	Rmt.
	vii) 12 mm	854.00	Rmt.
	viii) 14 mm	1018.00	Rmt.
	ix) 16 mm	1232.00	Rmt.
	x) 18 mm	1334.00	Rmt.
	xi) 20 mm	1599.00	Rmt.
	xii) 22 mm	2008.00	Rmt.
	xiii) 25 mm	2725.00	Rmt.
MSPL- 008	Welding in all positions with required number of runs, for M.S. pipes internally and / or externally including gauging wherever necessary fixing appurtenances and outer accessories in connection with pipe laying work as per specification.		
	B) Lap joints with convex fillet welds Lag Lengths		
	i) 5 mm	183.00	Rmt.
	ii) 6 mm	234.00	Rmt.
	iii) 8 mm	310.00	Rmt.
	iv) 10 mm	347.00	Rmt.
	v) 12 mm	519.00	Rmt.
	vi) 14 mm	705.00	Rmt.
	vii) 16 mm	776.00	Rmt.
	viii) 18 mm	941.00	Rmt.
	ix) 20 mm	1062.00	Rmt.
	x) 22 mm	1419.00	Rmt.
	xi) 25 mm	1723.00	Rmt.
MSPL- 009	Shifting and aligning ring girders including removing tack welds and re-tacking in the correct position etc. complete as per specification for the pipes of following diameter.		
	i) From 1000 mm Upto 1250 mm dia.	355.00	Rmt.
	ii) Above 1250 mm. Upto 1500mm. dia.	435.00	Rmt.
	iii) Above 1500 mm. Upto 1750 mm. dia.	513.00	Rmt.
	iv) Above 1750 mm. Upto 2000mm. dia.	592.00	Rmt.
	v) Above 2000 mm. Upto 2250 mm. dia.	670.00	Rmt.
	vi) Above 2250 mm. Upto 2500 mm. dia.	749.00	Rmt.
	vii) Above 2500 mm. Upto 2750 mm. dia.	827.00	Rmt.
	viii) Above 2750 mm. Upto 3000 mm. dia.	908.00	Rmt.
	ix) Above 3000 mm. Upto 3250 mm. dia.	987.00	Rmt.
	x) Above 3250 mm. Upto 3500 mm. dia.	1065.00	Rmt.
	xi) Above 3500 mm. Upto 3750 mm. dia.	1144.00	Rmt.
	xii) Above 3750 mm. Upto 4000 mm. dia.	1229.00	Rmt.
MSPL- 010	Transporting within 500 meters and fixing in position stools, base plates, roller sets, grease box covers, etc. including welding wherever necessary. The rate also to include fixing stools, base plates, etc. in true line and level, connecting the base plate to anchor bolts by flush welding including cutting		
	the bolts, if required, assembling and aligning C.I. or M.S.		

		M.S. Pipe 1	Laying
ITEM - CODE	DESCRIPTION	RATE	UNIT
	roller sets of any size including oiling, greasing, etc. The rate		
	also to include gouting anchor bolts, welding of two halves of		
	grease box covers as directed by ENginer-inCharge, for pipes		
	of following dia.	120000	
	i) From 1000 mm Upto 1250 mm dia.	1299.00	Each
	ii) Above 1250 mm. Upto 1500mm. dia.	1405.00	Each
	iii) Above 1500 mm. Upto 1750 mm. dia.	1511.00	Each
	iv) Above 1750 mm. Upto 2000mm. dia.	1617.00	Each
	v) Above 2000 mm. Upto 2250 mm. dia.	1723.00	Each
	vi) Above 2250 mm. Upto 2500 mm. dia.	1829.00	Each
	vii) Above 2500 mm. Upto 2750 mm. dia.	1935.00	Each
	viii) Above 2750 mm. Upto 3000 mm. dia.	2041.00	Each
	ix) Above 3000 mm. Upto 3250 mm. dia.	2147.00	Each
	x) Above 3250 mm. Upto 3500 mm. dia.	2253.00	Each
	xi) Above 3500 mm. Upto 3750 mm. dia.	2378.00	Each
	xii) Above 3750 mm. Upto 4000 mm. dia.	2463.00	Each
MSPL-	Transporting within 500 meters and aligning, fixing in position		
011	and tack welding expansion joints suitable for pipeline of		
	diameters.		
	i) From 1000 mm Upto 1250 mm dia.	4395.00	Each
	ii) Above 1250 mm. Upto 1500mm. dia.	4558.00	Each
	iii) Above 1500 mm. Upto 1750 mm. dia.	4723.00	Each
	iv) Above 1750 mm. Upto 2000mm. dia.	4887.00	Each
	v) Above 2000 mm. Upto 2250 mm. dia.	9238.00	Each
	vi) Above 2250 mm. Upto 2500 mm. dia.	9445.00	Each
	vii) Above 2500 mm. Upto 2750 mm. dia.	9650.00	Each
	viii) Above 2750 mm. Upto 3000 mm. dia.	9793.00	Each
	ix) Above 3000 mm. Upto 3250 mm. dia.	10063.00	Each
	x) Above 3250 mm. Upto 3500 mm. dia.	10270.00	Each
	xi) Above 3500 mm. Upto 3750 mm. dia.	10474.00	Each
	xii) Above 3750 mm. Upto 4000 mm. dia.	10682.00	Each
MSPL-	Transporting within 500 meters aligning and fixing in position		
012	and tack welding only, including marginal cutting, supplying		
	and providing rubber packing etc. when necessary.		
	A) Minor fixtures such as manhole cove, pressure and non-	7868.00	M.T.
	pressure type blank flanges, loose rings, small pipes to		
	form saddle bypass arrangement, plug plates, ladders,		
	platform, stiffener rings, etc.	2007.00	MT
	B) Minor fixtures such as tees, domes, 'Y' branches,	3997.00	M.T.
MCDI	insulating flange rings assembly, etc.		
MSPL-	Gas Cutting (either square cut or V cut) pipes, plates, etc. of		
013	thickness.	50.00	D <sub>m</sub> 4
	i) Upto 5 mm. dia	59.00	Rmt.
-	ii) Above 5 mm. Upto 10 mm dia	84.00	Rmt.
	iii) Above 10 mm. Upto 14 mm dia.	109.00	Rmt.
	iv) Above 14 mm Upto 18 mm. dia.	124.00	Rmt.
	v) Above 18 mm Upto 22 mm. dia.	172.00	Rmt.

	M.S. Pipe Laying		
ITEM - CODE	DESCRIPTION	RATE	UNIT
	vi) Above 22 mm.	230.00	Rmt.
	Gas cutting holes upto 50 mm dia (for plugs)		
	Thickness of Shell		
	a) 5mm to 12 mm	65.00	No.
	b) Above 12 mm	90.00	No.
MSPL- 014	Providing M.S. bar mesh prepared out of 16 mm dia. M.S. bar at 15 cm. c/c both ways, welded to flanged ring including tack welding of bars and fixing the same with nuts and bolts on open faces of outlet / inlet pipes in the sump or reservoir, etc. complete as directed by Engineer-in-Charge.	1192.00	Sqm.
MSPL- 015	Providing permanent test points on the pipe line as per drawing and as directed by Engineer-in-Charge including providing and fixing sluice valves, road boxes for sluice valves of size 80 mm to 250 mm in one brick masonry chamber 300 mm x 300 mm clear C.M. 1:5 with 12 mm thick 1:3 cement plaster both inside and outside on M-100 c/c, 150 mm thick etc. complete as specified and directed.	2675.00	No.
MSPL- 016	Supplying transporting, the S.P. fire hydrants including duck foot bend, S.V. and S.V. road box, painting the hydrant, fixing the saddle piece, supplying, and laying required length of C.I. pipeline and jointing the same spun yarn, molten lead lincluding caulking, fixing the S.V. road box in one brick masonry chamber in 1:5 C.M. with 12 mm thick 1:3 cement plaster both inside and outside on 1:3:6 C.C. 150 mm thick etc. complete specified and directed. (As per I.S. 900/1965 Revised)	13090.00	No.
MSPL- 017	Hydraulic testing of M.S. pipeline to specified pressure including cost of all materials and labour and water for testing for the length upto 1 km, using recipracating type pumps which should be able to provide specified test pressure gauges and other necessary equipments, labour, operating charges, etc. required for testing. THe rate under this item shall also inleude cost of retesting, if necessary.		
	i) Upto 600 mm dia. (I.D.)	37248.00	Km.
	ii) Above 600 mm. upto 750 mm dia. (I.D.)	37303.00	Km.
	iii) Above 750 mm. upto 900 mm dia. (I.D.)	37389.00	Km.
	iv) Above 900 mm. upto 1050 mm dia. (I.D.)	37518.00	Km.
	v) Above 1050 mm. upto 1200 mm dia. (I.D.)	37646.00	Km.
	vi) Above 1200 mm. upto 1500 mm dia. (I.D.)	37899.00	Km.
	vii) Above 1500 mm. upto 1800 mm dia. (I.D.)	38272.00	Km.
	viii) Above 1800 mm. upto 2250 mm dia. (I.D.)	38898.00	Km.
	ix) Above 2250 mm. upto 2500 mm dia. (I.D.)	39354.00	Km.
	x) Above 2500 mm. dia. (I.D.)	39809.00	Km.
	Extra work initial Km.		
	i) Upto 600 mm dia. (I.D.)	189.00	Km.
	ii) Above 600 mm. upto 750 mm dia. (I.D.)	270.00	Km.
	iii) Above 750 mm. upto 900 mm dia. (I.D.)	402.00	Km.
	iv) Above 900 mm. upto 1050 mm dia. (I.D.)	531.00	Km.

	,	M.S. Pipe Laying		
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	v) Above 1050 mm. upto 1200 mm dia. (I.D.)	684.00	Km.	
	vi) Above 1200 mm. upto 1500 mm dia. (I.D.)	1010.00	Km.	
	vii) Above 1500 mm. upto 1800 mm dia. (I.D.)	1528.00	Km.	
	viii) Above 1800 mm. upto 2250 mm dia. (I.D.)	2344.00	Km.	
	ix) Above 2250 mm. upto 2500 mm dia. (I.D.)	2919.00	Km.	
	x) Above 2500 mm. dia. Upto 2750 mm dia (I.D.)	3530.00	Km.	
	xi) Above 2750 mm. dia. Upto 3000 mm dia (I.D.)	4167.00	Km.	
MSPL- 018	Providing and Applying with mechanical arrangement 1:3 proportion cement sand gunite, 40 to 50 mm thick to M.S. pipe surface under 2.1 Kg. per sq. cm. To 2.80 Kg. per sq. cm. Pressure including removing the loose materials as directed by Engineer-in-Charge and including scrapping the surface with wire brushes, degreasing, cleaning by compressed air and providing fixing BRC fabric no. 14 as reinforcement, curing for 21 days, disposing off the rebound materials within a lead of 50 M, etc. complete as directed by Engineer-in-Charge.	416.00	Sqm.	
MSPL- 019	Providing and Applying pipe coating of fibres, coaltar and solvent based rubber modified bituminous primer of density 0.92 gms/cu cm and viscosity of 1000-20000 cps @ 150 gms/sqm followed by seven layers (4 mm thick) of polythene polymerised bitumen and polyester of local 7 layers) pipe cost 4 mm should conform to requirement of IS-10221 and AWWA C-203 for per-fabricated tapes including covering cost on pipe coating. Rates shall include cost of material coating and wrapping over the pipes, handling charges, preparation of pipe surface, all labour, material, etc. complete.  Note: Pipe coating is to be done at laying work site only.	448.00	Sqm.	
MSPL- 020	Providing and Applying with mechanical arrangement cement sand gunite of 50 mm thickness to floors, walls, floor slabs or any other structure under 2.1 kg. per sqcm. To 2.80 kg. per sqcm. Pressure including removing the loose materials on surface, cleaning with compressed air, degreasing, etc. including scaffolding and curing for 21 days, providing and fixing BRC fabric no. 14 but excluding cost of reinforcement, if any any removing rebound materials within a lead of 50 M, etc. complete as directed by Engineer-in-Charge. (For GSRs and buildings)	363.00	Sqm.	
MSPL- 021	Providing and Applying with mechanical arrangement cement sand gunite of 50 mm thickness to floors, walls, roof slabs or any other structure under 2.1 kg. per sqcm. To 2.80 kg. per sqcm. Pressure including removing the loose materials on surface, cleaning with compressed air, degreasing, etc. including scaffolding and curing for 21 days, providing and fixing BRC fabric no. 14 but excluding cost of reinforcement, if any and removing rebound materials within a lead of 50 M, for staging and bottom of bottom slab, etc. complete as directed as directed by Engineer-in-Charge (For RCC ESRs)  Providing and Making inner cement mortar lining to M.S.	476.00	Sqm.	

	M.S. Pipe Laying.		
ITEM - CODE	DESCRIPTION	RATE	UNIT
022	Pipes with mechanical devices in cement mortar 1:1 proportion, including cost of all materials, labour, special sand required, machinery, power generation, all equipments and taking necessary access openings and manholes, cuts at suitable intervals as directed by Engineer-in-Charge and rewelding the same after done with doubler plates pipes including necessary excavation, refilling concrete breaking and remaking if any, breaking guniting and remaking the same, repainting wherever required with epoxy paint in 3 coats, all dewatering including emptying the pipeline and refilling the same after done with (water to be supplied by department free of cost within 5 km. lead at fixed point and all other arrangements to be done by agency), including carrying out "C" value performance test of pipeline, complete job as per the directions of the Engineer-in-Charge.		
	i) 9mm thick for pipes upto 700 mm dia.	326.00	Sqm.
	ii) 12mm thick for pipes upto 700 mm dia.	377.00	Sqm.
MSPL- 023	Providing and applying of elastomeric (450% elongation), thermoplastic, fire retardant, coating skin tensile strength 18 to 21 kg/cm², antifungal antibacterial anticorrosive, graft copolymer coating on smooth plastered surface. 100 Micron dyufilm thickness of self bonding with plastered surface and 100 Micron of top cost. For sewage treatment plant (R.C.C. Tank inside coating) and water treatment plant.		Sqm
MSPL- 024	Providing and applying external and internal coating for steel structures in sewage treatment ploant/water treatment plant with elastomeric (450% elongation), thermoplastic, fire retardant, coating skin tensile strength 18 to 21 kg/cm², antifungal antibacterial, anticorrosive, graft co-polymer. 50 Micron DFT of self bonding ith steel, 50 Micron DFT of inner coat and 50 Micron DFT of top coat.		Sqm
MSPL- 025	Providing and applying of elastomeric (450% elongation), thermoplastic, fire retardant, coating skin tensile strength 18 to 21 kg/cm², antifungal antibacterial anticorrosive, graft copolymer coating on external pipe lines in un laid/laid condition after proper cleaning, 50 Micron DFT of self bonding grade with metal surface, 50 Micron DFT of self bonding grade with metal surface, 50 Micron DFT inner coat and 50 Micron DFT of top coat.		Sam
	<ul><li>a) Water and sewage pipe lines (external) in unlaid condition.</li><li>b) Water and sewage pipe lines (external) in laid condition.</li></ul>	663.00	Sqm Sqm
MSPL- 026	Providing and applying of elastomeric (450% elongation), thermoplastic, fire retardant, coating skin tensile strength 18 to 21 kg/cm2, antifungal antibacterial anticorrosive, graft copolymer coating on internal surface of pipe lines. 100 Micron DFT of site bonding grade with steel surface and 100 Micron DFT of top coat.		Бүш

	M.S. Pipe Laying			aying
ITEM - CODE	DESCRIPTION		RATE	UNIT
	a) Pipe line in unlaid condition		814.00	Sqm
	b) Pipe line in laid condition		869.00	Sqm
MSPL- 027	Providing and applying of elastomeric (45 thermoplastic, fire retardant, coating skin tensi 21 kg/cm2, antifungal antibacterial anticorrepolymer coating on cleaned steel reinforcement micron DFT with self bonding trade of bar coating	le strength 18 to osive, graft cot bars. 80 to 100		
	a) 6mm dia		29598.00	M.T.
	b) 8mm dia.		22648.00	M.T.
	c) 10mm dia.		17947.00	M.T.
	d) 12mm dia.		14933.00	M.T.
	e) 16mm dia.		11182.00	M.T.
	f) 20mm dia.		9100.00	M.T.
	g) 25mm dia.		7187.00	M.T.
	h) 32mm dia.		5759.00	M.T.
	i) 40mm dia.		4373.00	M.T.
MSPL- 028	Providing and applying HDPE coating for M.S as well as externally including cost of HDPE pipe grade, labour, scrapping the pipe surface w degreasing, cleaning by compressed air and surffinishing incluiding cost of loading, unloading pipe at factory etc. complete as directed by Engi	powder mouding vith wire brushes, face grinding and and handling of ineer-in-charge.		
		ting thickness micron		
	1. 0 2000 2	2000	1508.00	Sqm
	2. 2000 1000 3	000	1893.00	Sqm
	3. 3000 1000 4	1000	2176.00	Sqm
	4. 3000 2000 5	5000	2501.00	Sqm

## **CHAMBERS**

		Chambers	
ITEM - CODE	DESCRIPTION	RATE	UNIT
CH-001	Valve chamber with precast R.C.C. Covers.		
	Providing and Constructing B.B. masonry valve chamber with		
	15 cm thick 1:3:6 proportion PCC bedding, excluding		
	excavation, B.B.Masonry in C.M. 1:5 Proportion precast RCC		
	frame and cover, etc. complete as directed by Engineer-in-		
	Charge.		
	(Note: Wall thickness: 0.23 M for depth of 1.2 M and 0.35 M		
	for balance depth exceeding 1.2 M)	4702.00	3.7
	A. As Above of 60 x 45 cm internal size and depth upto 0.9	4793.00	No.
	M with precast R.C.C. slab cover.	1024.00	20
	a. Add for every increase in depth of 30 cm or part thereof	1024.00	30 cm
	D. A. Alama af 00 m 45 m internal air and doubt muta 1.2	7072.00	depth
	B. As Above of 90 x 45 cm internal size and depth upto 1.2	7073.00	No.
	M with precast R.C.C. slab cover.  a. Add for every increase in depth of 30 cm or part thereof	1223.00	30 cm
	a. Add for every increase in depth of 30 cm or part thereof	1223.00	depth
	C. As Above of 90 x 60 cm internal size and depth upto 1.2	7696.00	No.
	M with precast R.C.C. slab cover.	7070.00	110.
	a. Add for every increase in depth of 30 cm or part thereof	1364.00	30 cm
	a. That for every increase in depth of 50 cm of part increas	1501.00	depth
	D. As Above of 90 x 90 cm internal size and depth upto 1.2	9223.00	No.
	M with precast R.C.C. slab cover.		
	a. Add for every increase in depth of 30 cm or part thereof	1540.00	30 cm
			depth
	E. As Above of 90 cm internal size and depth upto 1.2 M	6991.00	No.
	with precast R.C.C. slab cover.		
	a. Add for every increase in depth of 30 cm or part thereof	1320.00	30 cm
			depth
	F. As Above of 1.2 x 1.2 M internal size and depth upto 1.2	12367.00	No.
	M with precast R.C.C. slab cover.		
	a. Add for every increase in depth of 30 cm or part thereof	1980.00	30 cm
		10002.00	depth
	G. As Above of 1.5 x 1.5 M internal size and depth upto 1.5	18083.00	No.
	M with precast R.C.C. slab cover.	2420.00	20 200
	a. Add for every increase in depth of 30 cm or part thereof	2420.00	30 cm
CH-002	Valve chamber with cast iron manhole frame and covers.		depth
C11-002	Providing and Constructing B.B. Masonry valve chamber with		
	15 m thick 1:3:6 proportion PCC bedding, excluding		
	excavation, B.B. masonry in C.M. 1:5 proportion 12 mm thick		
	cement plaster in C.M. 1:4 proportion on both sides with		
	providing and fixing C.I. manhole frame and cover in RCC		
	1:2:4 coping or RCC 1:2:4 proportion x 15 cm thick slab, etc.		
	complete as directed by Engineer-in-Charge. (Note: Wall		
	thickness: 0.23 M for depth of 1.2 M and 0.35 M for balance		
	depth exceeding 1.2M).		

		Chambers	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	A. As above of 60 x 45 cm internal size and depth upto 0.9 M with 60 x 45 cm size CI manhole frame and cover of 40 Kg.	7370.00	No.
	a. Add for every increase in depth of 30 cm or part thereof	1045.00	30 cm depth
	B. As above of 90 x 45 cm internal size and depth upto 0.9 M with 90 x 45 cm size CI manhole frame and cover of 40 Kg.	9162.00	No.
	a. Add for every increase in depth of 30 cm or part thereof	1223.00	30 cm depth
	C. As above of 90 x 60 cm internal size and depth upto 0.9 M with 90 x 60 cm size CI manhole frame and cover of 40 Kg.	10423.00	No.
	a. Add for every increase in depth of 30 cm or part thereof	1307.00	30 cm depth
	D. As above of 90 x 90 cm internal size and depth upto 1.2 M with 53 cm size CI manhole frame and cover of 90 Kg. Fixed in RCC Slab.	14358.00	No.
	a. Add for every increase in depth of 30 cm or part thereof	1531.00	30 cm depth
	E. As above of 1.2 x 1.2 M internal size and depth upto 1.2 M with 53 cm dia CI manhole frame and cover of 90 Kg. Fixed in RCC Slab.	17050.00	No.
	a. Add for every increase in depth of 30 cm or part thereof	1980.00	30 cm depth
	F. As above of 1.5 x 1.5 M internal size and depth upto 1.5 M with 53 cm dia CI manhole frame and cover of 90 Kg. Fixed in RCC Slab.	22078.00	No.
	a. Add for every increase in depth of 30 cm or part thereof	2497.00	30 cm depth
CH-003	Valve chamber with precase steel fibre reinforced concrete frame and covers (S.F.R.C frame and covers)  Providing and Constructing B.B. Masonry valve chamber with 15cm thick 1:3:6 proportion PCC bedding, excluding excavation, B.B. Masonry in C.M. 1:5 Proportion precast S.F.R.C. frame and cover, etc. complete as directed by ENgineer-in-Charge.  (Note: Wall thickness: 0.23 M for depth of 1.2 M and 0.35 M for balance depth exceeding 1.2 M)		·
	A. As above of 60x45 cm internal size and depth upto 0.9M with S.F.R.C. frame and cover.	6820.00	No.
	a. Add for every increase in depth of 30 cm or part thereof.	1024.00	30 cm depth
	B. As above of 90x45 cm internal size and depth upto 1.2M with S.F.R.C. frame and cover.	9760.00	No.
	a. Add for every increase in depth of 30 cm or part thereof.	1223.00	30 cm depth

		Chambers	
ITEM - CODE	DESCRIPTION	RATE	UNIT
	C. As above of 90x60 cm internal size and depth upto 1.2M with S.F.R.C. frame and cover.	10780.00	No.
	a. Add for every increase in depth of 30 cm or part thereof.	1325.00	30 cm depth
	D. As above of 90x90 cm internal size and depth upto 1.2 M with S.F.R.C. frame and cover.	12870.00	No.
	a. Add for every increase in depth of 30 cm or part thereof.	1531.00	30 cm depth
	E. As above of 1.2 x. 1.2 M internal size and depth upto 1.2 M with S.F.R.C. frame and cover of size 540 mm dia. fixed in RCC slab.	15950.00	No.
	a. Add for every increase in depth of 30 cm or part thereof.	1947.00	30 cm depth
	F. As above of 1.5 x. 1.5 M internal size and depth upto 1.2 M with S.F.R.C. frame and cover of size 540 mm dia. fixed in RCC slab.	21306.00	No.
	a. Add for every increase in depth of 30 cm or part thereof.	2503.00	30 cm depth
CH-004	Providing and fixing in position M.S. Air valve boxes fabricated with 2 mm thick M.S. plate. 30'30'3 mm size M.S. angle frame, concre-ting in M-150 for fixing the box in position; applying two coats of oil paint, painting chainage, locking arragement, etc. complete as directed by Engineer-in-charge.		
	a) For single ball air valve	2198.00	No.
	b) for double ball air valve	3000.00	No.
CH-005	Providing and fixing C.I. road box including loading, unloading and carting to site of work including all necessary excavation in all types of strata and fixing in murum packing, etc. complete		
	a) 100mmx225mm (20kg)	1476.00	No.
	b) 225 mmx300 mm (40 kg)	2899.00	No.
CH-006	Providing and fixing in position steel fibre reinforced concrete (S.F.R.C.) frame and covers of approved make including loading unloading, transportation, all taxes, etc. complete as directed by Engineer-in-charge (20 tones capacity)		
	a) 540 mm dia.	2633.00	No.
	b) 560 mm dia.	3628.00	No.
	c) 90 x 45 cm size	2633.00	No.
	d) 90 x 60 cm size	2853.00	No.
	e) 60 x 90 cm size	2606.00	No.
CH-007	f) 60 x 45 cm size  Providing and fixing inteterceting sewer trap including concrete bedding, etc. complete.	2258.00	No.
	a) 150 x 100 mm	365.00	No.
	b) 100 x 100 mm	263.00	No.
CH-008	Providing and fixing in position S.W. bends of various size, etc. complete.	22.30	- 1.2.

			Chambers	
ITEM - CODE	DESCRIPTION	RATE	UNIT	
	a) 100 mm	116.00	No.	
	b) 150 mm	138.00	No.	
CH-009	Providing and fixing 'Y' junction and labour, etc. complete Saddle junction			
	a) 100 x 100 mm	141.00	No.	
	b) 150 x 150 x 100 mm	163.00	No.	
	c) 300 x 300 x 300 mm	191.00	No.	
	d) 300 x 300 x 100 mm	163.00	No.	
CH-010	Providing and fixing in position A.C. soil ventilators/slotted as necessary and as directed by Engineer-in-charge etc. complete.			
	a) 80 mm	138.00	No.	
	b) 100 mm	167.00	No.	
	c) 150 mm	237.00	No.	
CH-011	Providing and fixing A.C. soil pipe or down take pipe with all required fittings, taking hole, etc. complete (as per manufacturer's code of practice)			
	a) 80 mm	241.00	No.	
	b) 100 mm	287.00	No.	
	c) 150 mm	450.00	No.	
CH-012	Providing and fixing Cast Iron soil pipe of 1.8 M length including taking out holes and all required fittings, etc. complete S/S			
	a) 80 mm	834.00	No.	
	b) 100 mm	947.00	No.	
CH-013	Providing and fixing Cast Iron soil pipe of 1.8 M length including taking out holes and all required fittings, etc. complete D/S			
	a) 80 mm	900.00	No.	
	b) 100 mm	1044.00	No.	