

CHAPTER - 14 : DRAINAGE AND SEWERAGE				
Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
	Note : Rates given for all the items under sub-head 'Drainage' are applicable to work executed in soils above sub-soil water level. Extra allowance has to be made for work under sub-soil water level.			
	STONE WARE PIPES AND FITTINGS :			
141010	Providing, laying and jointing glazed stoneware pipes grade 'A' as per IS:651 including bends etc. with stiff mixture of cement mortar in the proportion of 1:1 (1cement : 1fine sand) including testing of joints etc. complete			
141011	100mm diameter	metre	150.72	0.022
141012	150mm diameter	metre	258.87	0.032
141013	200mm diameter	metre	396.31	0.043
141014	230mm diameter	metre	445.58	0.049
141015	250mm diameter	metre	590.72	0.054
141016	300mm diameter	metre	727.20	0.065
141017	400mm diameter	metre	1082.02	0.085
141020	Providing, laying and jointing half round salt glazed stone-ware pipes including bends etc with 1:1 cement and ordinary sand mortar including bends			
141021	100mm dia. S.W. pipe	metre	140.52	0.011
141022	150mm dia. S.W. pipe	metre	203.26	0.017
141023	200mm dia. S.W. pipe	metre	255.04	0.022
141024	250mm dia. S.W. pipe	metre	302.44	0.027
141025	300mm dia. S.W. pipe	metre	307.88	0.032
141030	Providing and laying cement concrete 1:4:8 (1cement: 4coarse sand: 8graded stone aggregate 40mm nominal size) all round S.W. pipes including bed concrete as per standard design			
141031	100mm diameter S.W. pipe	metre	220.33	0.250
141032	150mm diameter S.W. pipe	metre	269.45	0.306
141033	200mm diameter S.W. pipe	metre	314.11	0.356
141034	230mm diameter S.W. pipe	metre	343.89	0.390
141035	250mm diameter S.W. pipe	metre	363.24	0.412
141040	Providing and laying cement concrete 1:5:10 (1cement: 5coarse sand: 10graded stone aggregate 40mm nominal size) upto haunches of S.W. pipes including bed concrete as per standard design			
141041	100mm diameter S.W. pipe	metre	104.31	0.091
141042	150mm diameter S.W. pipe	metre	169.06	0.148
141043	200mm diameter S.W. pipe	metre	198.71	0.174
141044	230mm diameter S.W. pipe	metre	217.99	0.191
141045	250mm diameter S.W. pipe	metre	231.34	0.203

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
141046	300mm diameter S.W. pipe	metre	266.93	0.234
141047	400mm diameter S.W. pipe	metre	342.56	0.303
141050	Providing and fixing square-mouth S.W. gully trap grade 'A' complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300x300mm size (inside) the weight of cover to be not less than 4.50kg and frame to be not less than 2.70kg as per standard design			
141051	100x100mm size P type With F.P.S. bricks class designation 75	Each	1064.22	0.270
141052	100x100mm size P type With Sewer bricks confirming to IS:4885	Each	1184.68	0.270
141053	150x100mm size P type With F.P.S. bricks class designation 75	Each	1052.51	0.260
141054	150x100mm size P type With Sewer. bricks confirming to IS:4885	Each	1127.12	0.260
141055	180x150mm size P type With F.P.S. bricks class designation 75	Each	1061.16	0.250
141056	180x150mm size P type With Sewer bricks confirming to IS:4885	Each	1260.87	0.250
	NON PRESSURE PIPE (Factory Made)			
142010	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes including bends etc with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1cement: 2fine sand) including testing of joints etc. complete upto 800mm dia.			
142011	100mm dia. R.C.C. pipe	metre	172.27	0.005
142012	150mm dia. R.C.C. pipe	metre	212.71	0.006
142013	250mm dia. R.C.C. pipe	metre	308.80	0.009
142014	300mm dia. R.C.C. pipe	metre	369.69	0.011
142015	450mm dia. R.C.C. pipe	metre	524.38	0.024
142016	500mm dia. R.C.C. pipe	metre	750.00	0.026
142017	600mm dia. R.C.C. pipe	metre	942.98	0.032
142018	700mm dia. R.C.C. pipe	metre	1005.68	0.037
142019	800mm dia. R.C.C. pipe	metre	1160.06	0.042
142020	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes including bends etc with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1cement: 2fine sand) including testing of joints etc. complete above 800mm dia.			
142021	900mm dia. R.C.C. pipe	metre	1332.80	0.049
142022	1000mm dia. R.C.C. pipe	metre	1532.10	0.055
142023	1100mm dia. R.C.C. pipe	metre	1717.21	0.061
142024	1200mm dia. R.C.C. pipe	metre	1908.83	0.068
142030	Providing and laying non-pressure NP3 class (medium duty) R.C.C. pipes including bends etc with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1cement: 2fine sand) including testing of joints etc. complete up to 800mm			

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
142031	300mm dia. R.C.C. pipe	metre	583.21	0.011
142032	400mm dia. R.C.C. pipe	metre	621.18	0.017
142033	450mm dia. R.C.C. pipe	metre	712.51	0.024
142034	500mm dia. R.C.C. pipe	metre	837.69	0.026
142035	600mm dia. R.C.C. pipe	metre	1159.73	0.032
142036	700mm dia. R.C.C. pipe	metre	1417.82	0.037
142037	800mm dia. R.C.C. pipe	metre	1616.72	0.042
142040	Providing and laying non-pressure NP3 class (medium duty) R.C.C. pipes including bends etc with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1cement: 2fine sand) including testing of joints etc. complete above			
142041	900mm dia. R.C.C. pipe	metre	1828.60	0.049
142042	1000mm dia. R.C.C. pipe	metre	2108.40	0.055
142043	1100mm dia. R.C.C. pipe	metre	2477.30	0.061
142044	1200mm dia. R.C.C. pipe	metre	2705.81	0.068
	MANHOLES			
143010	Constructing brick masonry manhole in cement mortar 1:4 (1cement: 4coarse sand) R.C.C. top slab with 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size), foundation concrete 1:4:8 mix (1cement: 4coarse sand: 8graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1cement: 3coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design			
143011	Inside size 90x80cm and 45cm deep including C.I. cover with frame (light duty) 455x610mm internal dimensions total weight of cover and frame to be not less than 38kg (weight of cover 23kg and weight of frame 15kg). With F.P.S. bricks class designation 7.5	Each	3940.81	2.920
143012	Inside size 90x80cm and 45cm deep including C.I. cover with frame (light duty) 455x610mm internal dimensions total weight of cover and frame to be not less than 38kg (weight of cover 23kg and weight of frame 15kg)With Sewer bricks confirming to IS:4885	Each	4240.17	2.920
143013	Inside size 120x90cm and 90cm deep including C.I. cover with frame (medium duty) 500mm internal diameter, total weight of cover and frame to be not less than 116kg (weight of cover 58kg and weight of frame 58kg). With F.P.S. bricks class designation 7.5	Each	9196.68	4.730

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
143014	Inside size 120x90cm and 90cm deep including C.I. cover with frame (medium duty) 500mm internal diameter, total weight of cover and frame to be not less than 116kg (weight of cover 58kg and weight of frame 58kg). With Sewer bricks confirming to IS:4885	Each	10058.47	4.730
143020	Deduct for providing S.F.R.C. Cover and frame(Heavy duty,HD-20 grade designation) 560mm internal diameter conforming to IS:12592 in lieu of CI frame & Cover from item 143013 to 143014	Each	3047.00	0.000
143030	Constructing brick masonry manhole in cement mortar 1:4 (1cement: 4coarse sand) R.C.C. top slab with 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size), foundation concrete 1:4:8 mix (1cement: 4coarse sand: 8graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1:3 (1cement: 3coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design			
143031	Inside size 120x90cm and 90cm deep including C.I. cover with frame (heavy duty) 560mm internal diameter, total weight of cover and frame to be not less than 208kg (weight of cover 108kg and weight of frame 100kg). With F.P.S. bricks class designation	Each	12795.49	4.730
143032	Inside size 120x90cm and 90cm deep including C.I. cover with frame (heavy duty) 560mm internal diameter, total weight of cover and frame to be not less than 208kg (weight of cover 108kg and weight of frame 100kg). With Sewer bricks confirming to IS:4885	Each	13564.44	4.730
143033	Deduct from 143030 for providing S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to IS: 12592 in lieu of CI frame & cover	Each	6866.88	
143040	Extra for depth for manholes of size			
143041	Size 90x80cm .With F.P.S Bricks class designation	metre	2146.27	1.260
143042	Size 90x80cm .With Sewer bricks confirming to IS: 4885	metre	3063.66	1.260
143043	Size 120x90cm With F.P.S Bricks class designation	metre	2568.25	1.520
143044	Size 120x90cm With Sewer bricks confirming to IS: 4885	metre	3661.70	1.520

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
143050	Constructing brick masonry circular type manhole 0.91m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1cement: 4coarse sand), in side cement plaster 12mm thick with cement mortar 1:3 (1cement: 3coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1cement: 3coarse sand: 6graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design.0.91m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to IS: 12592, total weight of cover and frame to be not less than 182kg, fixed in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately)			
143051	With F.P.S Bricks class designation 7.5	Each	4181.99	2.750
143052	With Sewer bricks confirming to IS: 4885	Each	4714.37	2.750
143060	Extra depth for circular type manhole 0.91mm internal dia (at bottom) beyond 0.91 m to 1.67m			
143061	With F.P.S Bricks class designation 7.5	metre	1835.41	3.610
143062	With Sewer bricks confirming to IS: 4885	metre	2603.56	3.610
143070	Constructing brick masonry circular type manhole1.22m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1cement: 4coarse sand), in side cement plaster 12mm thick with cement mortar 1:3 (1cement: 3coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1cement: 3coarse sand: 6graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design. 1.68m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to IS: 12592, total weight of cover and frame to be not less than 182kg, fixed in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size). .. Contd. -			
	.. Contd. -- including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately)			
143071	With F.P.S Bricks class designation 7.5	Each	6935.93	5.390
143072	With Sewer bricks confirming to IS: 4885	Each	8155.42	5.390

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
143080	Extra depth for circular type manhole 1.22 m internal dia (at bottom) beyond 1.68m to 2.29 m			
143081	With F.P.S. Bricks class designation 7.5	metre	2378.49	6.270
143082	With Sewer bricks confirming to IS:4885	metre	3381.09	6.270
143090	Constructing brick masonry circular manhole 1.52m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1cement: 4coarse sand) inside cement plaster 12mm thick with cement mortar 1:3 (1cement: 3coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1cement: 3coarse sand: 6graded stone aggregate 40mm nominal size) and making necessary channel in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement all complete as per standard design.2.30m deep with S.F.R.C. cover and frame (heavy duty, HD-20 grade designation) 560mm internal diameter conforming to IS: 12592, total weight of cover and frame to be not less than 182kg, fixed in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately)			
143091	With F.P.S. bricks class designation 7.5	Each	13752.10	10.860
143092	With Sewer bricks confirming to IS:4885	Each	17210.39	10.860
143100	Extra depth for circular type manhole 1.52m internal dia (at bottom) beyond 2.30m			
143101	With F.P.S. bricks class designation 7.5	metre	5736.07	16.710
143102	With Sewer bricks confirming to IS:4885	metre	8328.72	16.710
143110	Providing M.S. foot rests including fixing in manholes with 20x20x10cm cement concrete blocks 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) as per standard design			
143111	With 20x20mm square bar	Each	166.15	0.009
143112	With 20mm diameter round bar	Each	136.53	0.009
143120	Replacement of M.S. foot rests in manholes/ septic tanks or wells etc including dismantling concrete blocks and fixing with 20x20x10cm cement concrete blocks 1:2:4 (1cement: 2coarse sand:4graded stone aggregate 20mm nominal size)			
143121	With 20x20mm square bar	Each	189.44	0.009
143122	With 20mm diameter round bar	Each	159.82	0.009
143130	Supplying and fixing C.I. cover without frame for manholes			
143131	455x610mm rectangular C.I. cover (light duty) the weight of the cover to be not less than 23kg	Each	1127.26	
143132	500mm diameter C.I. cover (medium duty) the weight of cover to be not less than 58kg	Each	2909.00	

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
143133	560mm diameter C.I. cover (heavy duty) the weight of cover to be not less than 108kg	Each	4269.12	
	Note : Normally CI covers should be provided only in the locations where chances of theft are negligible			
143140	Providing and fixing in position precast R.C.C. manhole cover and frame of required shape and approved quality. (As per IS 12592-1991)			
143141	LD- 2.5 rectangular shape 600x450mm internal dimensions	Each	922.97	
143142	LD- 2.5 square shape 450mm internal dimensions	Each	852.95	
143143	LD- 2.5 circular shape 450 mm internal diameter	Each	992.33	
143144	MD- 10 square shape 450mm internal dimensions	Each	1172.44	
143145	MD- 10 circular shape 500mm internal diameter	Each	1216.64	
143146	HD- 20 circular shape 560mm internal diameter	Each	1654.50	
143147	EHD- 35 circular shape 560mm internal dia.	Each	1824.85	
143150	Supplying, fitting & fixing in position reinforced cement polymer concrete (R.C.P.C.) manhole cover and frame to match with IS : 12592 with cement conc. 1:2:4 for embedding the manhole cover frame			
143151	a) 3 MT load bearing capacity manhole cover provided with 2 nos. lifter lock fitted with matching frame (Size of cover : 440 mm dia. x 50 mm thick and size of frame : 530 mm dia. x 100 mm thick)	Each	1038.53	
143152	b) 12 MT load bearing capacity manhole cover provided with 2 nos. lifter lock fitted with matching frame (Size of cover : 590 mm dia. x 75 mm thick and size of frame : 750 mm dia. x 150 mm thick)	Each	1245.57	
143153	c) 25 MT load bearing capacity manhole cover provided with 2 nos. lifter lock fitted with matching frame (Size of cover : 630 mm dia. x 100 mm thick and size of frame : 790 mm dia. x 185 mm thick)	Each	1442.93	
143160	Supplying and fixing C.I. cover 300x300mm without frame for gully trap (standard pattern) the weight of cover to be not less than 4.5kg	Each	283.21	
143170	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls, floors with cement concrete 1:2:4 mix (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) cement plastered on both sides with cement mortar 1:3 (1cement: 3coarse sand) finished with a floating coat of neat cement and making necessary channels for the drain etc. complete			
143171	For pipes 100 to 230mm diameter	Each	161.30	0.056
143172	For pipes 250 to 300mm diameter	Each	184.43	0.095
143173	For pipes 350 to 450mm diameter	Each	262.24	0.153

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
143180	Providing sand cast iron drop connection externally for 60cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid, sand cast iron drop pipe and bend encased all round with cement concrete 1:5:10 (1cement: 5fine sand: 10graded stone aggregate 40mm nominal size) with all centring and shuttering required, cutting holes in walls and making good the brick work in cement mortar 1:4 (1cement: 4 coarse sand) plastered with cement mortar 1:3 (1cement: 3coarse sand) on inside of the manhole wall lead caulked joints between sand cast iron pipes and fittings, stiff cement mortar 1:1 (1cement: 1fine sand) joints between sand cast iron tee and S.W. pipe, making required channels complete as per standard design and specifications			
143181	100mm dia. Sand cast iron drop connection	Each	2820.62	0.340
143182	150mm dia. Sand cast iron drop connection	Each	3841.12	0.460
143190	Extra for depths beyond 60cm of sand cast iron drop connection complete			
143191	For 100mm dia. Sand cast iron drop connection	Each	1182.07	0.210
143192	For 150mm dia. Sand cast iron drop connection	Each	1231.64	0.260
143200	Raising manhole cover and frame slab to required level including dismantling existing slab and making good the damage as required (Brick work for raising depth of manhole to be paid separately).(Assuming that the OLD slab is dismantled and not reused)			
143201	Rectangular manhole 90x80cm (Inside dimensions) with rectangular cover 600x450mm of grade LD- 2.5	Each	578.39	0.200
143202	Rectangular manhole 120x90cm (Inside dimensions) with circular cover 500mm dia of grade MD- 10	Each	914.86	0.320
143203	Rectangular manhole 120x90cm (Inside dimensions) with circular cover 560mm dia of grade HD- 20	Each	854.47	0.280
143204	Circular manhole 140cm dia (Inside dimensions) with circular cover 600mm dia of grade EHD- 35	Each	87.27	0.280
143210	Constructing brick masonry road gully chamber 50x45x60cm with bricks of class designation 7.5 in cement mortar 1:4 (1cement: 4 Coarse Sand) including 500x450mm precast R.C.C. horizontal grating with frame complete as per standard design			
143211	With F.P.S. bricks	Each	1945.72	0.930
143220	Constructing brick masonry road gully chamber 45x45x77.5cm with bricks of class designation 7.5 in cement mortar 1:4 (1cement: 4 Coarse Sand) with precast R.C.C. vertical grating complete as per standard design			
143221	With F.P.S. bricks	Each	2839.54	0.820

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
143230	Constructing brick masonry road gully chamber 110x50x77.5cm with bricks of class designation 7.5 in cement mortar 1:4(1cement: 4 Coarse Sand) including 500x450mm precast R.C.C. horizontal grating with frame and vertical grating complete as per standard design			
143231	With F.P.S. bricks	Each	3491.71	1.660
143240	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 7.5 class designation bricks in cement mortar 1:4 (1cement: 4 Coarse Sand) C.I. cover with frame (light duty) 455x610mm internal dimensions, total weight of cover with frame to be not less than 38kg (weight of cover 23kg and weight of frame 15kg) R.C.C. top slab with 1:2:4 mix (1cement: 2coarse sand: 4graded stone aggregate 20mm nominal size) foundation concrete 1:5:10 (1cement: 5fine sand: 10graded stone aggregate 40mm nominal size), inside plastering 12mm thick with cement mortar 1:3 (1cement: 3coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design			
143241	Inside dimensions 455x610mm and 45cm deep for single pipe line- With F.P.S. bricks	Each	2875.26	0.900
143242	Inside dimensions 500x700mm and 45cm deep for pipe line with one or two inlets- With F.P.S. bricks	Each	3007.25	1.020
143243	Inside dimensions 600x850mm and 45cm deep for pipe line with three or more inlets- With F.P.S. bricks	Each	3296.88	1.270
143250	Extra for depth beyond 45cm of brick masonry chamber.			
143251	For 455x610mm size (Inside dimensions) , With F.P.S. bricks	metre	1498.85	0.870
143252	For 500x700mm size (Inside dimensions), With F.P.S. bricks	metre	1633.30	0.950
143253	For 600x850mm size (Inside dimensions), With F.P.S. bricks	metre	1899.45	1.120

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
143260	Constructing grease trap 80x40x46cm (inside) with one brick thick brick masonry wall with inlet and outlet drain with bricks of class designation 7.5 in cement mortar 1:4 (1cement: 4fine sand) plastered 12mm thick with 1:4 (1cement: 4coarse sand) finished with a floating coat of neat cement on inside and exposed surfaces having two stone/ R C Concrete baffled walls 34.5cm deep and third one 19cm deep, each 40mm thick and 45cm long embedded 2.5cm on either side in brick masonry, 40mm thick 100x60cm stone/ R C C cover and 7.5cm thick bed concrete 1:5:10 (1cement: 5fine sand: 10graded stone aggregate 40mm nominal size) with 40mm flooring in cement concrete 1:2:4 (1cement: 2coarse sand: 4graded stone aggregate 12.5mm nominal size) with a floating coat of neat cement including all earth excavation, refilling and disposal of surplus earth complete as per standard design			
143261	With F.P.S. bricks	Each	1074.75	1.020
143270	Making soak pit 2.5m diameter 3.0m deep with 45x45cm dry brick honey comb shaft with bricks of class designation 7.5 and S.W. drain pipes 100mm diameter, 1.8m long complete as per standard design, including excavation complete			
143271	With F.P.S. bricks	Each	11196.28	
143272	Extra for every cm depth above 3.0 m as per site conditions if required	cm depth	37.32	
143280	Constructing soak pit 1.20x1.20x1.20m filled with brickbats including S.W. drain pipe 100mm diameter and 1.20m long complete as per standard design including excavation complete	Each	1235.19	
143281	Extra for every cm depth above 1.20 m as per site conditions if required	cm depth	10.29	
143290	Providing and fixing S.W. intercepting trap in manholes with stiff mixture of cement mortar 1:1 (1cement: 1fine sand) including testing of joints etc. complete			
143291	100mm dia.	Each	222.25	0.200
143292	150mm dia.	Each	284.81	0.300
	MISCELLANEOUS			
144010	Cutting holes upto 30x30cm in walls including making good the same.(In OLD work only when specially ordered)			
144011	With F.P.S. bricks	Each	92.17	

Item No.	Description	Unit	Rate (Rs.)	Cement Qty.(qtl.)
144020	Cutting holes upto 15x15cm in R.C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:1.5:3 (1cement: 1.5 coarse sand: 3graded stone aggregate 20mm nominal size) including finishing complete so as to make it leak proof.(In OLD work only when specially ordered)	Each	95.51	0.020
144030	Making holes upto 20x20cm and embedding pipes upto 150mm diameter in masonry and filling with cement concrete 1:2:4 (1cement: 2 coarse sand: 4graded stone aggregate 20mm nominal size) including disposal of malba.(In OLD work only when specially ordered)	Each	40.43	0.010
144040	Providing and fixing spun R.C.C. tapering vent shaft 450mm (clear dia. At the base and 150/125 mm dia at the top 9.10 metres over all length with cowl including necessary excavation and concrete,	Each	4857.25	
144050	Supplying, fitting & fixing in position C.I. Jali with frame with cement concrete 1:2:4 including all lead			
144051	300 mm x 600 mm jali weighing 23 Kg	Each	1794.03	0.050
144052	450 mm x 600 mm jali weighing 56 Kg	Each	3555.65	0.080
144060	Supplying, fitting & fixing in position Polyelastomer Grating & R.C.P.C. Frame with hinge arrangement with cement conc. 1:2:4			
144061	a) 12 MT load bearing capacity Polyelastomer rectangular grating with R.C.P.C. frame (Size of grating : 450 mm x 380 mm x 50 mm thick, size of frame : 600 mm x 550 mm x 160 mm)	Each	1687.58	0.001
144062	b) 3 MT load bearing capacity Polyelastomer rectangular grating with R.C.P.C. frame (Size of grating : 380 mm x 290 mm x 25 mm thick size of frame : 480 mm x 410 mm x 90 mm)	Each	1311.72	0.001
144063	c) 1 MT load bearing capacity Polyelastomer rectangular grating with R.C.P.C. frame (Size of grating : 290 mm x 210 mm x 25 mm thick size of frame : 360 mm x 300 mm x 65 mm)	Each	895.24	0.001
	New Items To Be Added By Zonal Railways			
145010				
145020				
145030				
145040				