CHAPTER NO. 20

OUTLETS

Notes :-

(i) The term "discharge" wherever used in this Chapter means designed full supply discharge of the parent channel opposite the oulet.

(ii) The labour rates include the rehandling of materials within 100 ms.

(iii) For outlets on lined canals, the basic rate will be 20% extra over and above the rate for katcha canal.

Sr. No.	Description	Unit	Plains		Sub-Mountainous Region	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
20.1	Earth work for outlets :-					
(a)	Earth work for dismantling or construction of new pipe or barrel type outlets (including excavation refilling, consolidation and dressing) :-					
	(i) Channel discharge upto 1.5 cum per second.	job	227.36	-	227.36	-
	(ii) Channel discharge exceeding 1.5 cum/s. but upto 3 cum/s	job	362.22	-	362.22	-
	(iii) Channel discharge exceeding 3 cum/s. but upto 6 cum/s	job	567.66	-	567.66	-
	(iv) Channel discharge exceeding 6 cum/s. but upto 10 cum/s	job	896.06	-	896.06	-
Note :-	Channels with discharge over 10 cum/s are classified as branches and therefore their payments should be made based on actual measurements.					
(b)	Earth work involved in dismantling open flume A.P.M. or O.S.M. type outlets (including excavation, refilling, consolidation and dressing)					
	(i) With 'H' upto 0.5m	job	227.36	-	227.36	-
	(ii) With 'H' more than 0.5m but upto 0.9m	job	567.66	-	567.66	-
	(iii) With 'H' more than 0.9m but upto 1.10m	job	896.06	-	896.06	-
(c)	Earth work involved in dismantling gullet walls of outlets for adjusting 'Y' of A.P.M. or 'B' of open flume outlets :--					
	(i) With 'H' upto 0.5m	job	67.77	-	67.77	-

Sr. No.	Description		Unit	Plains		Sub-Mountainous Region	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(ii)	With 'H' more than 0.5m but upto 0.9m	job	211.77	-	211.77	-
	(iii)	With 'H' more than 0.9m but upto 1.10m	job	338.83	-	338.83	-
(d)	Earth work involved in constructing new O.F., A.P.M. or O.S.M. type outlets :--						
	(i)	With 'H' upto 0.5m	job	677.67	-	677.67	-
	(ii)	With 'H' more than 0.5m but upto 0.9m	job	1312.98	-	1312.98	-
	(iii)	With 'H' more than 0.9m but upto 1.10m	job	1948.29	-	1948.29	-
Note :-	(i)	Outlets with 'H' more than 1.10m will usually be located in main canal and branches, payment for these should be based on actual measurements.					
	(ii)	In case of dismantling, all earth work borrowed from outside for making up the deficiency in banks, if any, will be paid for separately in addition to above rates.					
	(iii)	The job rates given above include all operations for excavation, refilling and watering in layers, consolidation and dressing.					
20.2	Dismantling outlets including removal of dismantled material involving lead upto 100 ms.						
	(a)	Pipe or barrel type outlets.					
	(i)	Channel discharge upto 1.5 cum/s	each	211.77	-	211.77	-
	(ii)	Channel discharge above 1.5 cum/s but upto 3 cum/s	each	282.36	-	282.36	-
	(iii)	Channel discharge above 3 cum/s but upto 6 cum/s	each	317.66	-	317.66	-
	(iv)	Channel discharge above 6 cum/s but upto 10 cum/s	each	338.83	-	338.83	-
	(b)	Dismantling O.F., A.P.M. or O.S.M. type outlets consisting of total dismantling i.e., concrete R.C. slab and cement masonry.					
	(i)	With 'H' upto 0.5m	job	1185.92	-	1185.92	-

Sr. No.	Description		Unit	Plains		Sub-Mountainous Region	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(ii)	With 'H' more than 0.5m but upto 0.9m	job	2287.12	-	2287.12	-
	(iii)	With 'H' more than 0.9m but upto 1.10m	job	3388.33	-	3388.33	-
	(c)	Dismantling O.F., A.P.M. or O.S.M. type outlets involving dismantling cement masonry and removing of precast R.C. Slab :--					
	(i)	With 'H' upto 0.5m	job	847.08	-	847.08	-
	(ii)	With 'H' more than 0.5m but upto 0.9m	job	1821.23	-	1821.23	-
	(iii)	With 'H' more than 0.9m but upto 1.10m	job	2795.37	-	2795.37	-
	(d)	Dismantling tail cluster bifurcation :--					
	(i)	Complete dismantling including concrete and masonry.	job	2033.00	-	2033.00	-
	(ii)	Cement masonry only.	job	1482.39	-	1482.39	-
	(e)	Dismantling tail cluster trifurcation :--					
	(i)	Complete dismantling concrete as well as masonry.	job	2837.73	-	2837.73	-
	(ii)	Cement masonry only.	job	2033.00	-	2033.00	-
	(f)	Dismantling tail cluster quadrifurcation:-					
	(i)	Complete dismantling concrete as well as masonry.	job	3684.81	-	3684.81	-
	(ii)	Cement masonry only.	job	2668.31	-	2668.31	-
20.3	Making temporary A.P.M. block and fixing at site :--						
	(a)	In case of new outlets where no dismantling and reconstructing of gullet walls is involved.	job	157.02	278.49	157.02	278.49
	(b)	Extra for dismantling and reconstructing gullet walls where temporary A.P.M. block is to be fixed on existing outlet, without change in width of gullet i.e. 'B'					
	(i)	With 'H' upto 0.5m	job	206.64	569.37	206.64	569.37

Sr. No.	Description		Unit	Plains		Sub-Mountainous Region	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(ii)	With 'H' more than 0.5m but upto 0.9m	job	291.39	910.17	291.39	910.17
	(iii)	With 'H' more than 0.9m but upto 1.10m	job	421.48	1217.36	421.48	1217.36
	(c)	Extra over item No. 20.3 (a) in case of old outlets where dismantling and reconstructing of gullet walls is involved including change in width of gullet i.e., 'B' of the outlet upto 30 mm					
	(i)	H' upto 0.5m	job	283.65	859.76	283.65	859.76
	(ii)	H' more than 0.5m but upto 0.9m	job	494.16	1627.80	494.16	1627.80
	(iii)	H' more than 0.9m but upto 1.10m	job	735.27	2391.68	735.27	2391.68
20.4	Adjusting A.P.M to the correct 'Y' and fixing in position.						
	(a)	In case of new outlets where no dismantling and reconstructing of gullet walls is involved.	job	100.00	-	100.00	-
	(b)	Extra over item No. 20.4 (a) in case of outlets where dismantling and reconstructing of gullet walls is involved without change in width of gullet i.e., 'B' of the outlet	job	Same as for item No. 20.3(b)	-	Same as for item No. 20.3(b)	-
	(c)	Extra over item No. 20.4 (a) in case of old outlets where dismantling and reconstructing of gullet walls is involved including change in width of gullet i.e., 'B' of the outlet upto 30 mm	job	Same as for item No. 20.3(c)	-	Same as for item No. 20.3(c)	-
20.5	Adjusting check plates of open flume outlet to correct 'B' and fixing at site flush with the gullet walls :--						
	(a)	In case of new outlets where no dismantling and reconstructing of gullet walls is involved.	job	100.00	-	100.00	-
	(b)	Extra over item No. 20.5 (a) in case of old outlets where dismantling and reconstructing of gullet walls is involved without change in width of gullet walls i.e., 'B' of the outlet	job	Same as for item No. 20.3(b)	-	Same as for item No. 20.3(b)	-

Sr. No.	Description		Unit	Plains		Sub-Mountainous Region	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(c)	Extra over item No. 20.5 (a) in case of existing outlets where dismantling and reconstructing side walls is involved including change of 'B' upto 30 mm					
	(i)	H' upto 0.5m	job	322.37	941.15	322.37	941.15
	(ii)	H' more than 0.5m but upto 0.9m	job	610.25	1997.17	610.25	1997.17
	(iii)	H' more than 0.9m but upto 1.10m	job	870.67	2925.45	870.67	2925.45
Note :-	(i)	In case change in 'B' is more than 30mm curved approach shall have to be dismantled considerably and therefore payment may be made on the basis of the actual measurements.					
	(ii)	Rates for adjusting 'B' of an open flume outlet without check plates will be the same as per item Nos. 20.5 (c-i) to 20.5 (c-iii) as the case may be.					
20.6	Extra over item No. 20.3, 20.4 and 20.5 as the case may be, for adjusting of crest levels of O.F. and A.P.M. outlets with 1:2:4 cement concrete when lowering of crest level is involved :--						
	(a)	H' upto 0.5m	job	148.75	220.45	148.75	220.45
	(b)	H' more than 0.5m but upto 0.9m	job	223.13	277.29	223.13	277.29
	(c)	H' more than 0.9m but upto 1.10m	job	297.50	369.72	297.50	369.72
20.7	Extra over item No. 20.3, 20.4 and 20.5 as the case may be for adjusting crest level of O.F. and A.P.M. outlets with 1:2:4 cement concrete when raising of the crest level is involved.						
	(a)	H' upto 0.5m	job	111.56	183.27	111.56	183.27
	(b)	H' more than 0.5m but upto 0.9m	job	148.75	202.92	148.75	202.92
	(c)	H' more than 0.9m but upto 1.10m	job	223.13	295.35	223.13	295.35
20.8	Constructing, watching and removing bund in running water for outlets :--						

Sr. No.	Description		Unit	Plains		Sub-Mountainous Region	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(a)	For adjusting 'B' 'Y' or crest level of the O.F. and A.P.M. types for plains and for dismantling or constructing pipe or barrel type outlets for sub mountainous region :--					
	(i)	For channels with designed F.S. depth up to 0.5m	job	447.17	553.82	491.88	598.54
	(ii)	For channels with designed F.S. depth above 0.5m but upto 0.9m	job	762.33	967.64	838.56	1043.87
	(iii)	For channels with designed F.S. depth above 0.9m but upto 1.10m	job	1382.80	1718.76	1521.08	1857.04
	(b)	For constructing complete O.F. or A.P.M. type outlets in running water :--					
	(i)	For channels with designed F.S. depth up to 0.5m	job	991.64	1247.62	991.64	1247.62
	(ii)	For channels with designed F.S. depth above 0.5m but upto 0.9m	job	1343.42	1695.39	1343.42	1695.39
	(iii)	For channels with designed F.S. depth above 0.9m but upto 1.10m	job	2214.08	2811.35	2214.08	2811.35
	(c)	For dismantling or constructing pipe outlets :--					
	(i)	For channels with designed F.S. depth up to 0.5m	job	447.17	553.82	447.17	553.82
	(ii)	For channels with designed F.S. depth above 0.5m but upto 0.9m	job	479.46	626.11	479.46	626.11
	(iii)	For channels with designed F.S. depth above 0.9m but upto 1.10m	job	778.08	964.72	778.08	964.72
20.9	Adjusting 'B' of tail cluster by dismantling and rebuilding throat walls.		per outlet	211.56	476.72	211.56	476.72
20.10	Extra labour for dressing bricks on O.F. and A.P.M. type outlets :-						
	(i)	H' upto 0.5m	per outlet	480.00	-	480.00	-
	(ii)	H' more than 0.5m but upto 0.9m	per outlet	960.00	-	960.00	-
	(iii)	H' more than 0.9m but upto 1.10m	per outlet	1520.00	-	1520.00	-

Sr. No.	Description	Unit	Plains		Sub-Mountainous Region	
			Labour Rate	Through Rate	Labour Rate	Through Rate
1	2	3	4	5	6	7
20.11	Repairing damaged reducing collar of hume pipe outlets.	per outlet	148.75	177.89	163.63	192.76
20.12	Laying iron pipes for outlets upto 150 mm diameter.	m	30.00	-	33.00	-
20.13	Laying re-inforced cement concrete pipes for outlets and culverts including joining ends and fixing collar with cement mortar 1:2 :--					
	(a) upto 150 mm inside diameter.	m	22.09	28.94	24.30	31.15
	(b) above 150 mm but upto 300 mm inside dia.	m	49.58	63.28	54.54	68.24
	(c) above 300 mm but upto 600 mm inside dia.	m	123.96	163.17	136.36	175.57
	(d) above 600 mm but upto 900 mm inside dia.	m	247.92	312.78	272.71	337.57
Note :-	The through rates for item No. 20.13 are applicable when the joints are plugged with cement mortar 1:2.					
20.14	Hoisting and placing precast R.C. Slab or stones in position on outlets or W.C culverts.	per outlet or culvert	160.00	-	176.00	-
20.15	Providing APM cast iron block complete in all respects including supply of pig iron, casting and pattern making, as per ISI specifications no. 7986-1976					
	(a) Standard Bt of module= 0.20 ft Minimum weight of module= 65 kg	job	-	2925.00	-	2925.00
	(b) Standard Bt of module= 0.25 ft Minimum weight of module= 68 kg	job	-	3060.00	-	3060.00
	(c) Standard Bt of module= 0.32 ft Minimum weight of module= 72 kg	job	-	3240.00	-	3240.00
	(d) Standard Bt of module= 0.40 ft Minimum weight of module= 76 kg	job	-	3420.00	-	3420.00
	(e) Standard Bt of module= 0.50 ft Minimum weight of module= 80 kg	job	-	3600.00	-	3600.00
	(f) Standard Bt of module= 0.80 ft Minimum weight of module= 84 kg	job	-	3780.00	-	3780.00

Sr. No.	Description		Unit	Plains		Sub-Mountainous Region	
				Labour Rate	Through Rate	Labour Rate	Through Rate
1	2		3	4	5	6	7
	(g)	Standard Bt of module= 1.0 ft Minimum weight of module= 90 kg	job	-	4050.00	-	4050.00
Note:-	(i)	Above rates are inclusive of pattern making, casting and finishing (complete in all respects).					
	(ii)	Size of Bt is standard as per ISI code 7986 – 1976 para 6.3.2.					
	(iii)	Minimum Weight of module can vary by 2%.					