

SUB HEAD : 2.0
EARTH WORK

BCD Analysis of Rates 2022

BUILDING WORK 2.0 Earth Work

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.1	Earth work in surface excavation not exceeding 30 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including disposal of excavated earth upto 50 m and lift upto 1.5 m disposed soil to be levelled and neatly dressed :					
2.1.1	All Kinds of soil Details of cost for 100 sqm and average depth 15cm					
	Labour:					
	Beldar	per day	7.20	306.00	(0114)	2203.20
	Coolies	per day	6.00	318.00	(0115)	1908.00
						4111.20
	Add for water charges @ 1 %					41.11
	Total					4152.31 (X)
	Add GST 12% on "X"(multiplying factor 0.1405)					583.40
	Total					4735.71 (Y)
	Add for contractor's profit and over-heads @ 15% on "Y"					710.36
	Cost of 100 sqm					4862.67
	Add labour cess @ 1%					48.63
	Rate including labour cess					4911.30
				Say Rs	4911.30	per 100 sqm
2.2	Earth work in rough excavation, banking excavated earth in layer not exceeding 20cm in depth, breaking clods watering . rolling each layer with 1/2 tonne roller or wooden or steel rammers and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up in embankments for roads, flood banks , marginal banks and guide banks or filling up ground depressions, lead upto 50 m and lift upto 1.5 m.					
2.2.1	All Kinds of soil Details of cost for 10 cum					
	Labour:					
	Beldar	per day	5.90	306.00	(0114)	1805.40
	Coolies	per day	3.60	318.00	(0115)	1144.80
	Bhishti	per day	0.40	332.00	(0101)	132.80
	Chowkidar	per day	0.01	322.00	(0113)	2.58
	Roller charges (one roller does 1850 sq m of consolidation per day)					
	Hire charges	Per day	0.01	3000.00	(0003)	24.00
	Diesel	litre	0.14	80.87	(1235)	11.65
	Carriage of diesel	quintal	0.00144	16.39	(2342)	0.02
	sundries	LS	2.73	2.12	(9999)	5.79
	Total					3127.04
	Add for water charges 1 %					31.27
	Total					3158.31 X
	Add GST 12% on "X"(multiplying factor 0.1405)					443.74
	Total					3602.05 Y
	Add for contractor's profit and over-heads @ 15% on "Y"					473.75
	Cost of 10 cum					4075.80
	Cost of 1 cum					407.58
	Add labour cess @ 1%					4.08
	Rate including labour cess					411.66
				Say Rs	411.70	per cum


98
BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.3	Banking excavated earth in layers not exceeding 20 cm in depth, breaking clods, watering, rolling each layer with 1/2 tonne roller, or wooden or steel rammers, and rolling every 3rd and top-most layer with power roller of minimum 8 tonnes and dressing up ; in embankments for roads, flood banks, marginal banks, and guide banks etc . lead upto 50 m and lift upto 1.5m.					
2.3.1	All Kinds of soil					
	Details of cost for 10 cum					
	Labour:					
	Beldar	per day	2.2	306.00	(0114)	673.20
	Coolies	per day	3.6	318.00	(0115)	1144.80
	Bhishti	per day	0.4	332.00	(0101)	132.80
	Roller charges (one roller does 1850 sp m of consolidation per day)					
	Hire charges	Per day	0.008	3000.00	(0003)	24.00
	Chowkidar	per day	0.008	322.00	(0113)	2.58
	Diesel	litre	0.144	80.87	(1235)	11.65
	Carriage of diesel	quintal	0.00144	16.39	(2342)	0.02
	Sundries	LS	2.73	2.12	(9999)	5.79
	Total					1994.84
	Add for water charges @ 1 %					19.95
	Total					2014.79 X
	Add GST 12% on "X"(multiplying factor 0.1405)					283.08
	Total					2297.87 Y
	Add for contractor's profit and over-heads @ 15% on Y					344.68
	Cost of 10 cum					2359.47
	Cost of 1 cum					235.95
	Add labour cess @ 1%					2.36
	Rate including labour cess					238.31
	Say Rs					238.30 per cum
2.4	Deduct for not rolling with power roller of minimum 8 tonnes for banking excavated earth in layers not exceeding 20 cm in depth.					
	Details of cost for 10 cum					
	Labour:					
	Chowkidar	per day	0.008	322.00	(0113)	2.58
	Roller charges & hire charges	Per day	0.008	3000.00	(0003)	24.00
	Diesel	litre	0.144	80.87	(1235)	11.65
	Carriage of diesel	quintal	0.00144	16.39	(2342)	0.02
	Sundries	LS	1.820	2.12	(9999)	3.86
	Total					42.11
	Add for water charges @ 1%					0.42
	Total					42.53 X
	Add GST 12% on "X"(multiplying factor 0.1405)					5.98
	Total					48.51 Y
	Add for contractor's profit and over-heads @ 15% on Y					7.28
	Cost of 10 cum					55.78
	Cost of 1 cum					5.58
	Add labour cess @ 1%					0.06
	Rate including labour cess					5.64
	Say Rs					5.70 per cum

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.5	Deduct for not watering the excavated earth for banking.					
	Details of cost for 10 cum					
	Labour:					
	Bhishti	per day	0.4	332.00	(0101)	132.80
						132.80
	Add for water charges @ 1 %					1.33
	Total					134.13 X
	Add GST 12% on "X"(multiplying factor 0.1405)					18.84
	Total					152.97 Y
	Add for contractor's profit and over-heads @ 15% on Y					22.95
	Cost of 10 cum					175.92
	Cost of 1 cum					17.59
	Add labour cess @ 1%					0.18
	Rate including labour cess					17.77
	Say Rs				17.800	per cum
2.6	Earth work in excavation over areas (exceeding 30 cm in depth. 1.5 m in width as well as 10 sqm on. plan) including disposal of excavated earth , lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed.					
2.6.1	All Kinds of soil					
	Details of cost for 10 cum					
	Labour:					
	Mate	per day	0.80	325.00	(0128)	260.00
	Beldar	per day	8.00	318.00	(0115)	2544.00
	Total					2804.00
	Add for water charges @ 1%					28.04
	Total					2832.04 X
	Add GST 12% on "X"(multiplying factor 0.1405)					397.90
	Total					3229.94 Y
	Add for contractor's profit and over-heads @ 15% in y					484.49
	cost of 10 cum					3316.53
	Cost of 1 cum					331.65
	Add labour cess @ 1%					3.32
	Rate including labour cess					334.97
	Say Rs				335.000	per cum
2.7	Earth work in excavation over areas (exceeding 30 cm in depth, 1.5 in width as well as 10 sqm on plan) including disosal of excavated earth, lead upto 50 m and lift upto 1.5 m, disposed earth to be levelled and neatly dressed :					
2.7.1	<u>Ordinary rock.</u> Details of cost for 10 cum	per day	1.41	322.00	(0132)	454.02
	Excavators					
	Breakers	per day	3.18	322.00	(0133)	1023.96
	Hole drillers	per day	0.71	322.00	(0134)	228.62
	Beldar	per day	2.83	306.00	(0114)	865.98
	Coolies	per day	4.64	318.00	(0115)	1475.52
	Powder	kilogram	1.97	40.00	(0325)	78.80
	Fuse	each	2.00	15.00	(0326)	30.00
	Sundnes	1 time	4.15	2.12	(9999)	8.80
	Total					4165.70

Handwritten initials: P, X, L, 2

Handwritten signature: B

Handwritten mark: (B)

100

Handwritten signature: P/A

Handwritten mark: B

BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Add for water charges @ 1%					41.66
	Total					4207.36 X
	Add GST 12% on "X"(multiplying factor 0.1405)					591.13
	Total					4798.49 Y
	Add for contractor's profit and over-heads @ 15%on Y					719.77
	Cost of 10 cum					4927.13
	Cost of 1 cum					492.71
	Add labour cess @ 1%					4.93
	Rate including labour cess					497.64
	Say Rs			497.60		per cum

2.7.2 Hard rock (requiring blasting) Details of cost for 10 cum


Excavators	per day	2.12	322.00	(0132)	682.64
Breakers	per day	5.65	322.00	(0133)	1819.30
Hole drillers	per day	1.77	322.00	(0134)	569.94
Beldar	per day	2.65	306.00	(0114)	810.90
Coolies	per day	4.64	318.00	(0115)	1475.52
Powder	kilogram	3.93	40.00	(0325)	157.20
Fuse	each	4.00	15.00	(0326)	60.00
Sundries	1 time	6.20	2.12	(9999)	13.14
Total					5588.64
Add for water charges @ 1 %					55.89
Total					5644.53 X
Add GST 12% on "X"(multiplying factor 0.1405)					793.06
Total					6437.59 Y
Add for contractor's profit and over-heads @ 15% on " Y"					965.64
Cost of 10 cum					7403.23
Cost of 1 cum					740.32
Add labour cess @ 1%					7.40
Rate including labour cess					747.72
Say Rs				747.70	per cum

2.7.3 Hard rock (blasting prohibited)

Details of cost for 10 cum					
Excavators	per day	4.94	322.00	(0132)	1590.68
Breakers	per day	12.00	322.00	(0133)	3864.00
Stone Chiseller	per day	2.12	325.00	(0135)	689.00
Black smith II class	per day	0.35	369.00	(0103)	129.15
Beldar	per day	3.00	306.00	(0114)	918.00
Coolies	per day	5.70	318.00	(0115)	1812.60
Sundries	1 time	6.20	2.12	(9999)	13.14
Total					9016.57
Add for water charges (a) 1 %					90.17
Total					9106.74 X
Add GST 12% on "X"(multiplying factor 0.1405)					1279.50
Total					10386.23 Y
Add for contractor's profit and over-heads @ 15% on " Y"					1557.93
Cost of 10 cum					11944.17
Cost of 1 cum					1194.42
Add labour cess @ 1%					11.94

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Rate including labour cess					1206.36
			Say Rs		1206.40	per cum
2.8	Earth work in excavation in foundation trenches or drains(not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m . including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					
2.8.1	All Kinds of soil					
	Details of cost for 10 cum					
	Labour:					
	Mate	per day	0.80	325.00	(0128)	260.00
	Coolies	per day	8.20	318.00	(0115)	2607.60
	Total					2867.60
	Add for water charges (@ 1 %					28.68
	Total					2896.28 X
	Add GST 12% on "X"(multiplying factor 0.1405)					406.93
	Total					3303.20 Y
	Add for contractor's profit and over-heads @ 15% on "Y"					495.48
	Cost of 10 cum					3798.68
	Cost of 1 cum					379.87
	Add labour cess @ 1%					3.80
	Rate including labour cess					383.67
			Say Rs	383.70		per cum
2.9	Excavation work in foundation trenches or drains not exceeding 1.5 m in width or 10 sq.m on plan including dressing of sides and ramming of bottoms lift upto 1.5 m . including getting cut the excavated soil and disposal of surplus excavated soils as directed, wittun a lead of 50 m .					
2.9.1	Ordinary rock					
	Details of cost for 10cum					
	Labour :					
	Excavators	Per day	1.770	322.00	(0132)	569.94
	Breakers	Per day	3.530	322.00	(0133)	1136.66
	Hole drillers	Per day	1.060	322.00	(0134)	341.32
	Beldar	Per day	2.830	306.00	(0114)	865.98
	Coolies	Per day	4.820	318.00	(0115)	1532.76
	Materials:					
	Fuse	each	3.000	15.00	(0326)	45.00
	Powder	kilogram	2.250	40.00	(0325)	90.00
	Subdries	1time	5.200	2.12	(9999)	11.02
	Total					4592.68
	Add for water charges (@ 1 %					45.93
	Total					4638.61 X
	Add GST 12% on "X"(multiplying factor 0.1405)					651.72
	Total					5290.33 Y
	Add for contractor's profit ard over-heads @15% on "Y"					695.79
	Cost of 10 cum					5986.12
	Cost of 1 cum					598.61
	Add labour cess @ 1%					5.99
	Rate including labour cess					604.60
			Say Rs	604.60		per cum
2.9.2	Hard rock (requiring blasting)					
	Details of cost for 10cum					
	Labour :					
	Excavators	Per day	2.480	322.00	(0132)	798.56
	Breakers	Per day	6.000	322.00	(0133)	1932.00


102
D/A
B

BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Hole drillers	Per day	2.120	322.00	(0134)	682.64
	Beldar	Per day	2.650	306.00	(0114)	810.90
	Coolies	Per day	4.820	318.00	(0115)	1532.76
	Materials:					
	Powder	each	6.420	40.00	(0325)	256.80
	Fuse	kilogram	7.000	15.00	(0326)	105.00
	Subdries	1time	7.250	2.12	(9999)	15.37
	Total					6134.03
	Add for water charges (@ 1 %					61.34
	Total					6195.37 X
	Add GST 12% on "X"(multiplying factor 0.1405)					870.45
	Total					7065.82 Y
	Add for contractor's profit and over-heads @ 15% on "Y"					1059.87
	Cost of 10 cum					7255.24
	Cost of 1 cum					725.52
	Add labour cess @ 1%					7.26
	Rate including labour cess					732.78
	Say Rs 732.80					per cum
2.9.3	Hard rock (Blasting Prohibited)					
	Details of cost for 10cum					
	Labour :					
	Excavators	Per day	5.3	322.00	(0132)	1706.60
	Breakers	Per day	12.35	322.00	(0133)	3976.70
	Chisellers	Per day	2.12	325.00	(0135)	689.00
	Clacksmith II class	Per day	0.35	369.00	(0103)	129.15
	Beldar	Per day	3	306.00	(0114)	918.00
	Coolies	Per day	5.88	318.00	(0115)	1869.84
	Subdries	1time	6.9	2.12	(9999)	14.63
	Total					9303.92
	Add for water charges (@ 1 %					93.04
	Total					9396.96 X
	Add GST 12% on "X"(multiplying factor 0.1405)					1320.27
	Total					10717.23 Y
	Add for contractor's profit and over-heads @ 15% on "Y"					1607.58
	Cost of 10 cum					12324.82
	Cost of 1 cum					1232.48
	Add labour cess @ 1%					12.32
	Rate including labour cess					1244.80
	Say Rs 1244.80					per cum
2.10	Excavating trenches of required width for pipes cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out the excavated soil . and then returning the soil as required . in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed , within a lead of 50 m.					
2.10.1	All kinds of soil					

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.10.1.1	Pipes, cables etc, not exceeding 80mm dia. Details of cost for 180 m length of a pipe of an average dia. Say 40 mm. Slope assumed 1 in 200 Earth work and filling- Minimum depth of trench 60 cm. Average depth = $(0.6 + 1.5)/2 = 1.05$ Width for this depth 0.4 5m					
	180x0.45x1.05=85.05cum	cum	85.05	502.59	(2.8.1 + 2.26)	42745.08
	Cost of 180 m					42745.08
	Cost of 1 m					237.47
	Add labour cess @ 1%					2.37
	Rate including labour cess					239.84
				Say Rs 239.80		per cum
2.10.1.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300mm dia					
	Details of cost for 110 m length of a pipe of an average dia say 200mm. slope assumed 1 in 200 Earth work and filling- Minimum depth of trench $0.75 + 0.2 = 0.95$ m Average depth = $1.5 + 0.95/2 = 1.225$ m Width = $0.4 + 0.2 = 0.6$ m 110x0.06x 1.225= 80.85 cum 5% for collars=4. 04 cum - 84 89 cum	cum	84.89	502.59	(2.8.1 + 2.26)	42664.67
						<u>42664.67</u>
	Cost of 11 0 m					42664.67
	Cost of 1 m					387.86
	Add labour cess @ 1%					3.88
	Rate including labour cess					391.74
				Say Rs 391.70		per cum
2.10.1.3	Pipes . cables etc. exceeding 300m dia to 600mm dia.					
	Details of cost for 60 m lenq'n of a pipe of an average dia say 4 50 mm Slope assumed 1 in 200 Earth work and filling Minimum depth of trench $0.75 + 0.45 = 1.20$ m Average depth = $(1.5 + 1.2)/2 = 1.35$ m Width = $0.4 + 0.45 = 0.85$ m 60x0.85x1.35 = 68.85					
	cum 5% for collars =3.44 cum - 72.29	cum	72.29	502.59	(2.8.1 + 2.26)	36332.06
						<u>36332.06</u>
	Cost of 60 m					36332.06
	Cost of 1 m					605.53
	Add labour cess @ 1%					6.06
	Rate including labour cess					611.59
				Say Rs 611.60		per cum
2.11	Extra for excavating trenches for pipes, cables etc.in all kinds of soil for depth exceeding 1.5 m , but not exceeding 3 m.(Rate is over coresponding basic item for depth upto 1.5 meater.) Details of cost for 300 m . Length of pipe of an average dia . Say 200m.					
	Slope assumed 1 in 200	cum	362.25	502.59	(2.8.1 + 2.26)	182062.38



104



BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	100x0.6x1.75= 105.00 cum 200x0.6x2.00= 240.00 cum 345.00 cum collars 5% = 17.25 cum 362.25 cum 1/2x200x1.6x1 = 160 cum	cum	160.00	454.37	(2.6.1 + 2.26)	72699.60
	Extra for additional lift 1/2x200x0.6x1.5=135.00 cum collars 5%=.75cum 141.75 cum Cost of 300 m Cost of 1 m	cum	141.75	48.89	(2.27.1)	6930.77 <hr/> 261692.75 872.31 B
	Extra over item 2.10.1.2 ie. cost for one m length Extra cost per metre=B-A=C Percentage increase Over item 2.10.1.2=Cx100/A Cost of 1 m Add labour cess @ 1% Rate including labour cess	m	1.00	387.86	(2.10.1.2)	387.86 A 484.45 C 124.90 124.90 1.25 126.15
	Say Rs 126.20					per metre
2.12	*Extra for excavating trenches for pipes, cables etc.in all kinds of soil exceeding 3 m in depth , but not exceeding 4.5 m.(Rate is over corresponding basic item for depth upto 1.5 meater.) Details of cost for a 100 m . Length of a pipe of an average dia. Say 200 mm.					
	Details of cost for a 100 m . Length of a pipe of an average dia. Say 200 mm. Slope assumed 1 in 200 Earth work and filling- 1x100x0.6x2=120 cum collars 5% = 6 cum 126 cum	cum	126.00	502.59	(2.8.1 + 2.26)	63326.05
	Earth work -100x1.6x1.25=200cum Extra for additional lift 1x100x0.6x1.5 =90 cum 2x0.5x100x0.6x0.5=30 cum = 120 cum collars 5% = 6 cum = 126 cum cost of 100 m length of pipes cost for 1 m . Length of pipe	cum	200.00	454.37	(2.6.1 + 2.26)	90874.50 <hr/> 6160.69 160361.24 1603.61 B
	Extra over item 2.10.1.2 i.e cost for 1 m length of pipe upto 1.5 m depth B-A= C i.e Cx100/A =% Say Add labour cess @ 1% Rate including labour cess	m	1.00	387.86	(2.10.1.2)	387.86 A 1215.75 313.45 3.13 316.58
	Say					316.60 per metre

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.13.	Excavating trenches of required width for pipes cables, etc. including excavation for sockets, depth upto 1.5 m including getting out the excavated materials . returning the soil as required in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. stacking serviceable material for measurements and disposal of unserviceable material as directed, within a lead of 50 m:					
2.13.1	Ordinary rock :					
2.13.1.1	Pipes, cables etc. not exceeding 80 mm dia					
	Details of cost for 180 m length of a pipe of a average dia. Say 40 mm. slope assumed 1:200.					
	Excavation - quantity same as in item no 2.10.1	cum	85.05	598.61	(2.9.1)	50911.97
	Refilling, ramming and watering	cum	85.05	122.72	(2.26)	10437.28
	Extra labour for ramming of rock Beldar	per day	2.00	306.00	(0114)	612.00 (A)
	Add for water charges @ 1 % on A					6.12 (B)
	Total A+B					618.12 (X)
	Add GST 12% on "X"(multiplying factor 0.1405)					86.85
	Total					704.97 Y
	Add for contractors profit and overheads @ 15% on "y"					105.74
	Total					810.71
	Cost of 180 m					62159.96
	Cost of 1 m					345.33
	Add labour cess @ 1%					3.45
	Rate including labour cess					348.78
				Say Rs.	348.80	per metre length of pipe
2.13.1.2	Pipes, cables etc exceeding 80 mm dia but not exceeding 300 mm dia					
	Deatails of cost for 80 m length of pipe of an average dia . Say 200 mm					
	Slope assumed 1 in 200					
	Minimum depth of trench. $0.75+0.15+0.20=1.1\text{m}$					
	average depth= $(1.1+1.5)/2=1.3\text{m}$					
	Minimum width of trench.= $80 \times 0.3 \times 1.3=9.60\text{cum}$	cum	93.60	598.61	(2.9.1)	56030.10
	Refilling ramming and watering	cum	93.60	122.72	(2.26)	11486.53
	Extra labour for ramming of rock-Unskilled labour	per day	2.20	306.00	(0114)	673.20 (A)
	Add water charges @ 1% on A					6.73 (B)
	Total(A+B)					679.93 X
	Add GST 12% on "X"(multiplying factor 0.1405)					95.53
	Total					775.46 Y
	Add for contractors profit and overheads @ 15% on "y"					116.32
	Total					891.78
	Cost of 80 m length of pipe-					68408.41
	Add labour cess @ 1%					684.08
	Rate including labour cess					69092.49

Handwritten initials and marks: ϕ , X, L, 2, B, (A), 106, P/A, B

106

BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Cost of 1 m length of pipe			Say Rs. 863.70		863.66 per metre length of pipe
2.13.1.3	Pipes, cables etc exceeding 300 mm dia					
	Details of cost for 30 m length of pipe of an average dia . Say 450 mm					
	Slope assumed 1 in 200					
	Excavation - Minimum depth of trench					
	0.75+0.15+0.45=1.35m					
	Average depth=(i .35 + 1.5)/2=1.425 m					
	Width of trench = 0.9 m					
	30x0.9x1.425 = 38.475 cum					
	5% for collars = 1.924 cum/40.399cum	cum	40.399	598.61	(2.9.1)	24183.33
	Refilling , ramming and watering	cum	40.399	122.72	(2.26)	4957.74
	Extra labour for ramming for ramming rock Beldar	per day	0.94	306.00	(0114)	287.64 (A)
	Add for water charges @ 1 % on A					2.88 (B)
	Total(A+B)					290.52 X
	Add GST 12% on "X"(multiplying factor 0.1405)					40.82
	Total					331.33 Y
	Add for contractors profit and overheads @ 15% on "y"					49.70
	Total					381.03
	Cost of 30 m length of pipe					29522.10
	Cost of 1m length of pipe					984.07
	Add labour cess @ 1%					295.22
	Rate including labour cess					1279.29
	Cost of 1 m length of pipe			Say Rs. 1279.30		per metre length of pipe
2.13.2	Hard rock (requiring blasting)					
2.13.2.1	Pipes, cables etc. not exceeding 80 mm dia.					
	Details of cost for 180 m length of a pipe of an average dia. Say 40 mm					
	Slope assumed 1 in 200					
	Excavation					
	Same as in item no. 2.10.1.1					
		cum	85.05	732.80	(2.9.2)	62324.64
	Refilling, ramming and watering	cum	85.05	122.72	(2.26)	10437.28
	Extra labour for ramming of rock Beldar	per day	2.50	306.00	(0114)	765.00 (A)
	Add for water chares @1% on A					7.65 (B)
	Total(A+B)					772.65 X
	Add GST 12% on "X"(multiplying factor 0.1405)					108.56
	Total					881.21 Y
	Add for contractors profit and overheads @ 15% on "y"					132.18
	Total					1013.39
	Cost of 180m length of pipe					73775.31
	Cost of 1 m length of pipe					409.86
	Add labour cess @ 1%					4.10
	Rate including labour cess					413.96
	Cost of 1 m length of pipe			Say Rs. 414.00		per metre length of pipe
2.13.2.2	Pipes, cables etc. exceeding 80 mm dia, but not exceeding 300 mm dia.					
	Details of cost for 80 m length of a pipe of an average dia. Say 200 mm.					
	Slope assumed 1 in 200					

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Excavation-					
	Same as in item No. 2.13.1.2	cum	93.60	732.80	(2.9.2)	68590.08
	Refilling, ramming and watering	cum	93.60	122.72	(2.26)	11486.53
	Extra labour for ramming of rock-Beldar	per day	2.75	306.00	(0114)	841.50 (A)
	Add for water charges @ 1 % on A					8.42 (B)
	Total(A+B)					849.92 X
	Add GST 12% on "X"(multiplying factor 0.1405)					119.41
	Total					969.33 Y
	Add for contractors profit and overheads @ 15% on "y"					145.40
	Total					1114.73
	Cost of 80 m length of pipe					81191.34
	Cost of 1 m length of pipe					1014.89
	Add labour cess @ 1%					10.15
	Rate including labour cess					1025.04
	Cost of 1 m length of pipe					
	Say Rs.		1025.00			per metre length of pipe

2.13.2.3 Pipes, cables tec. Exceeding 300 mm dia.

Details of cost for 30 m length of a pipe of an average dia say 450 mm.
Slope assumed 1 in 200

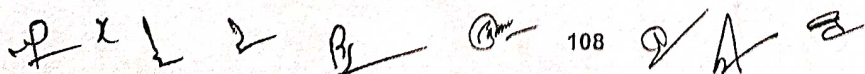
	Excavation-					
	Same as in item No. 2.13.1.3	cum	40.399	732.80	(2.9.2)	29604.39
	Refilling, ramming and watering	cum	40.399	122.72	(2.26)	4957.74
	Extra labour for ramming of rock Beldar	per day	1.17	306.00	(01 14)	358.02 (A)
	Add for water charges @ 1 % on A					3.58 (B)
	Total(A+B)					361.60 X
	Add GST 12% on "X"(multiplying factor 0.1405)					50.80
	Total					412.41 Y
	Add for contractors profit and overheads @ 15% on "y"					61.86
	Total					474.27
	Cost of 30 m length of pine					35575.52
	Cost of 1 m length of pipe					1185.85
	Add labour cess @ 1%					11.86
	Rate including labour cess					1197.71
	Say Rs.		1197.70			per metre length of pipe

2.13.3 Hard rock (blasting prohibited)

2.13.3.1 Pipe, cables etc. not exvceeding 80 mm dia.

Details of cost for 180 m length, of a pipe of an average dia say 40 mm.
Slope assumed 1 in 200

	Excavation-					
	Quantity same as in item 2.10.1.1	cum	85.05	1232.48	(2.9.3)	104822.57
	Refilling, ramming and watering	cum	85.05	122.72	(2.26)	10437.28
	Extra labour for ramming of rock Beldar	per day	2.50	306.00	(0114)	765.00 (A)
	Add for water charges @ 1 % on A					7.65 (B)
	Total(A+B)					772.65 X
	Add GST 12% on "X"(multiplying factor 0.1405)					108.56
	Total					881.21 Y
	Add for contractors profit and overheads @ 15% on "y"					132.18



108
A
B
BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Total					1013.39
	Cost of 180 m length of pipe					116273.24
	Cost of 1 m length of pipe					645.96
	Add labour cess @ 1%					6.46
	Rate including labour cess					652.42
	Say Rs. 652.40 per metre length of pipe					
2.13.3.2	Pipes, cables etc. exceeding 80 mm dia. But not exceeding 300 mm dia.					
	Details of cost for 80 m length of a pipe of an average dia say 200 mm.					
	Slope assumed 1 in 200					
	Excavation-					
	Quantily same as in item No. 2.13.1.2	cum	93.60	1232.48	(2.9.3)	115360.28
	Refilling, ramming and watering	cum	93.60	122.72	(2.26)	11486.53
	Extra labour for ramming of rock					
	Beldar	per day	2.50	306.00	(0114)	765.00 (A)
	Add for water charges @ 1 % on A					7.65 (B)
	Total(A+B)					772.65 (X)
	Add GST 12% on "X"(multiplying factor 0.1405)					108.56
	Total					881.21 Y
	Add for contractors profit and overheads @ 15% on "y"					132.18
	Total					1013.39
	Cost of 80 m length of pipe					127860.20
	Cost of 1 m length of pipe					1598.25
	Add labour cess @ 1%					15.98
	Rate including labour cess					1614.24
	Cost of 1 m length of pipe					1614.20
	Say Rs. 1614.20 per metre length of pipe					
2.13.3.3	Pipes, cables etc. exceeding 300 mm dia.					
	Details of cost for 30 m length of a pipe of an average dia. Say 450 mm.					
	Slope assumed 1 in 200					
	Excavation -					
	Quantity same as in item 2.13.1.3	cum	40.40	1232.48	(2.9.3)	49791.03
	Refilling, ramming ans watering	cum	40.40	122.72	(2.26)	4957.74
	Extra labour for ramming of rock					
	Beldar	per day	1.17	306.00	(0114)	358.02 (A)
	Add for water charges @ 1 % on A					3.58 (B)
	Total(A+B)					361.60 (X)
	Add GST 12% on "X"(multiplying factor 0.1405)					50.80
	Total					412.41 Y
	Add for contractors profit and overheads @ 15% on "y"					61.86
	Total					474.27
	Cost of 30 m length of pipe					55223.04
	Cost of 1 m lengtti of pipe					1840.77
	Add labour cess @ 1%					18.41
	Rate including labour cess					1859.18
	Cost of 1 m length of pipe					1859.20
	Say Rs. 1859.20 per metre length of pipe					

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.14	*Extra for excavating trenches for pieps, cables, etc.in ordinary/hard rock exceeding 1.5 m in depth but not exceeding 3 m.(Raate is over corresponding basic item for depth upto 1.5 metre.) Details of cost for 300 m length of a pipe of an . average dia. Say 200 mm. Slope assumed 1 in 200.					
	Excavation-					
	100x0.9x1.75 = 157.50					
	200x0.9x2.00 = 360.00					
	517.50 cum	cum	517.5	732.80	(2.9.2)	379224.00
	1/2x200x1.9x1 = 190 cum	cum	190	740.32	(2.7.2)	140661.28
	Refilling, ramming and watering 517.50+19.00 = 707.50 cum	cum	707.5	122.72	(2.26)	86823.94
	Extra for additional lift 1/2x300x0.9x1.5=202.50 cum	cum	202.5	87.65	(2.27.2)	17750.09
	Extra labour for ramming of rock Beldar	per day	16.5	306.00	(0114)	5049.00 (A)
	Add for water charges @ 1 % on A					50.49 (B)
	Total(A+B)					5099.49 (M)
	Add GST 12% on "M"(multiplying factor 0.1405)					716.48
	Total					5815.97 (N)
	Add for contractors profit and overheads @ 15% on "N"					872.40
	Total					6688.36
	Cost of 300 metre					631147.67
	Cost of 1 metre					2103.83 (X)
	Rate as per item 2.13.2.2	metre		1014.89	(2.13.2.2)	1014.89 (Y)
	Extra over item 2.13.2.2 Say X-Y = Z					1088.93 (Z)
	i.e. (Zx100)/ Y% = %					107.30
	Add labour cess @ 1%					1.07
	Rate including labour cess					108.37
	Say Rs. 108.40 per metre					
2.15	Extra for excavating trenches for pipes, cables, etc.in ordinary/hard rock exceeding 3m in depth but not exceeding 4.5 m. (Rate is over corresponding basic item. For depth upto 1.5 metre.)					
	Details of cost for a 100 m length of pipe of an average dia. Say 200 mm. Slope assuemd 1 in 200.					
	Max depth assumed 3.5 m.					
	Excavation					
	100x0.9x2=180	cum	180.00	732.80	(2.9.2)	131904.00
	100x1.9x1.25 = 237.5	cum	237.50	740.32	(2.7.2)	175826.59
	Extra for additional lift-					
	1x100x0.9x1.5 = 135					
	2x0.5x100x0.9x0.5 = 45					
	180 cum	cum	180.00	87.65	(2.27.2)	15777.86
	Refilling, ramming and watering 180+237.5 = 417.5 cum	cum	417.50	122.72	(2.26)	51235.33
	Extra labour for ramming of rock Beldar	per day	9.25	306.00	(0114)	2830.50 (A)


110
BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Add for water charges @ 1% on A					28.31 (B)
	Total					2858.81 (M)
	Add GST 12% on "M"(multiplying factor 0.1405)					401.66
	Total					3260.47 (N)
	Add for contractor's profit and overheads @ 15% on"N"					489.07
	Total					3749.54
	Cost of 100 metre					378493.32
	Cost of 1 metre					3784.93 (X)
	Extra over item 2.12 i.e. cost over item 2.13.2.2					
	say= Y	m length of pipe	1014.89		(2.13.2.2)	1014.89 (Y)
	X-Y = Z					2770.04 (Z)
	i.e.=(Z/y)x100 = %					272.94
	Add labour cess @ 1%					2.73
	Rate including labour cess					275.67
	Say Rs.			275.70	per metre	

2.16 Close timbering in trenches including strutting. Shoring and packing cavities (wherever required) complete. (Measurements to be taken of the face area timbered):

2.16.1 Depth not exceeding 1.5 m.

Details of cost for a trench 30 m long and 1.5 m deep area 2x30x1.5=90 sqm-

Materials:

The material can be used four times on the same work and after use of material credit is given @ 75% of cost

Poling boards of 2nd class Kail wood planks

90x0.038 = 3.42 cum = 3420 dm² 10 cudm 342.00 260.00 (1198) 88920.00 (Y)

Walings-100mm x 100mm of 2nd class kail wood

in scantling 4x30x0.1 = 1.20 cum = 1 200 dm³ 10 cudm 120.00 260.00 (1197) 31200.00 (Y)

Safeda Balli struts (12.5 mm dia and 105 m long)

2x17x1.5 = 51 metre 51.00 40.00 (0302) 2040.00 (Y)

Carriage:

Poling boards - 3 42 cum

Walings = 1.20 cum

Balli struts tr/4x (0.125)³ x51 =0.3 cum
5.25 cum cum 5.25 187.35 (2204) 983.59 (A)

Deduct credit for materials after use at 75% of the cost of materials 3/4xY = X

(Y-X) 92357.69 (X)
29802.31 (Z)

This can be used four times the same work

therefore, cost for using once

Carpenter II class per day 0.25 29802.31 (Z) 7450.58 (B)

Beldar per day 0.50 369.00 (0112) 184.50

Sundries 1 time 1.00 306.00 (0114) 306.00

57.05

Add for water charges @ 1% 7998.13

Total 79.98

Add GST 12% on "M"(multiplying factor 0.1405) 8078.11 (M)

1134.97

Total 9213.08 (N)

Add for contractor's profit and over-heads @ 15% on "N" 1381.96

Cost of 90 sqm 10595.04

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Cost of 1 sqm					117.72
	Add labour cess @ 1%					1.18
	Rate including labour cess					118.90
			Say Rs.	118.90	Per sqm	
2.16.2	Depth exceeding 1.5 m but not exceeding 3 m.					
	Details of cost for a trench 30 m long and 1.5 m deep Area = 2x30x1.5 = 90 sqm					
	Materials:					
	Same as B vide item 2.16.1	sqm	1.00	7450.58	(2.16.1-B)	7450.58
	Labour:					
	Carpenter II class	per day	0.75	369.00	(0112)	276.75
	Beldar	per day	2.00	306.00	(0114)	612.00
	Sundries	1 time	15.55	2.12	(9999)	32.97
	Total					8372.30
	Add for water charges @ 1 %					83.72
	Total					8456.02 X
	Add GST 12% on "X"(multiplying factor 0.1405)					1188.07
	Total					9644.09 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					1446.61
	Cost of 90 sqm					11090.70
	Cost of 1 sqm					123.23
	Add labour cess @ 1%					1.23
	Rate including labour cess					124.46
			Say Rs.	124.50	Per sqm	
2.16.3	Depth exceeding 3m but not exceeding 4.5 m Details of cost for a trench of 30 m long and 1.5 m deep Area =2x30x1.5 = 90 sqm					
	Materials:					
	Same as B vide item no 2.16.1	sqm	1	7450.58	(2.16.1-B)	7450.58
	Labour:					
	Carpenter II class	per d3y	1.5	369.00	(0112)	553.50
	Beldar	per day	4	306.00	(0114)	1224.00
	Sundries	1 time	31.05	2.12	(9999)	65.83
	Total					9293.91
	Add for water charges @ 1 %					92.94
	Total					9386.85 X
	Add GST 12% on "X"(multiplying factor 0.1405)					1318.85
	Total					10705.70 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					1605.85
	Cost of 90 sqm					12311.55
	Cost of 1 sqm					136.80
	Add labour cess @ 1%					1.37
	Rate including labour cess					138.17
			Say Rs.	138.200	Per sqm	

2.17 Close timbering in case of shafts, wells, cesspits, manholes and the like including strutting, shoring and packing cavities (wherever required) complete (Measurements to be taken of the face area timbered):

Handwritten notes and signatures: ϕ x L 2 B₁ @ 112 ϕ A B

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.17.1	Depth not exceeding 1.5 m. Details of cost for a manhole 1.2mx1.0mx1.5m-Surface area 2 (1.2+1)x1.5=6.60 sqm					
	Materials:					
	Poling boards of 2nd class kail wood planks- 6x6x0.038 = 0.251 cum= 251 dm ³	10 cudm	25.1	260.00	(1198)	6526.00 (Y)
	Walings 2nd class kail wood scantiines					
	2x2x1.124x0.1x0.1= 0.045 cum					
	2x2x0.924x0.1x0.1= 0.037 cum					
	= 0.082 cum = 82 dm ³	10 cud m	8.2	260.00	(1197)	2132.00 (Y)
	Safeda Balli struts (125 mm dia and 1.5 m long)-					
	2x2x0.924 = 3.696					
	2x2x0.724 = 2.896					
	= 6.592 m	metre	6.59	40.00	(0302)	263.60 (Y)
	Carriage:					
	poling boards =0.251 cum					
	Walings =0.082 cum					
	Balli struts 22 (0.125) ⁴ -4x7x6.59=0.081cum					
	0.414 cum	cum	0.414	187.35	(2204)	77.56 (Y)
	Deduct credit for materials after use at 75% of the cost of materials 3/4 xY = X					
	(Y)-(X)					6749.37 (X)
						2249.79 (Z)
	Labour:					
	This can be used four times on the same work therefore cost for using once					
			0.25	2249.79	(Z)	562.45 (B)
	Carpenter II class	per day	0.06	369.00	(0112)	22.14
	Beldar	per day	0.12	306.00	(0114)	36.72
	Sundries	1 time	2.73	2.12	(9999)	5.79
						627.10
	Add for water charges @ 1 %					6.27
						633.37 (M)
	Add GST 12% on "M"(multiplying factor 0.1405)					88.99
						722.36 (N)
	Add for contractor's profit and over-heads @ 15% on "N"					108.35
						830.71
	Cost of 6.6 sqm					
	Cost of 1 sqm					125.87
	Add labour cess @ 1%					1.26
	Rate including labour cess					127.13
		Say		127.10		Per sqm

2.17.2 Depth exceeding 1.5 m but not exceeding 3 m

Details of cost for a manhole 1.2 mx1.0mx1.5m

Surface area = 2(1.2+1.0)x1.5=6.6 sqm

Materials:

Same as (B) in item No. 2.17.1

Labour:

Carpenter II class

Beldar

Sundries

Total

Add for water charges @ 1 %

Add GST 12% on "X"(multiplying factor 0.1405)

Total

800.36 (Y)

BCD/SOR_11th Edition_ 2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Add for contractor's profit and over-heads @ 15% on "y"					120.05
	Cost of 6.6 sqm					920.41
	Cost of 1 sqm					139.46
	Add labour cess @ 1%					1.39
	Rate including labour cess					140.85
	Say				140.80	Per sqm

2.17.3 Depth exceeding 3 m but not exceeding 4.5 m

Details of cost of a manhole

1.2 mx1.0x1.5m

Surface area = 2(1.2+1.0)x1.5=6.6 sqm-

Materials:

Same as (B) in item No. 2.1 7.1

	sqm	1.00	562.45	(2.17.1-B)	562.45
--	-----	------	--------	------------	--------

Labour:

Carpenter II class	per day	0.19	369.00	(0112)	70.11
--------------------	---------	------	--------	--------	-------

Beldar	per day	0.38	306.00	(0114)	116.28
--------	---------	------	--------	--------	--------

Sundries	1 time	8.06	2.12	(9999)	17.09
----------	--------	------	------	--------	-------

Total					765.93
--------------	--	--	--	--	--------

Add for water charges @ 1 %					7.66
-----------------------------	--	--	--	--	------

	Total				773.59 X
--	--------------	--	--	--	----------

Add GST 12% on "X" (multiplying factor 0.1405)					108.69
--	--	--	--	--	--------

	Total				882.28 (Y)
--	--------------	--	--	--	------------

Add for contractor's profit and over-heads @ 15% on "y"					132.34
---	--	--	--	--	--------

					1014.62
--	--	--	--	--	---------

Cost of 6.6 sqm					153.73
-----------------	--	--	--	--	--------

Cost of 1 sqm					1.54
---------------	--	--	--	--	------

Add labour cess @ 1%					155.27
----------------------	--	--	--	--	--------

Rate including labour cess					155.27
----------------------------	--	--	--	--	--------

	Say			155.30	Per sqm
--	------------	--	--	---------------	----------------

2.18 Close timbering over areas including strutting, shoring and packing, cavities (wherever required)

2.18.1 Depth not exceeding 1.5 m

Details of cost for an area 30m long and 1.5m deep

Area-30mx1.5m=45sqm

Materials:

Poling boards of II class Kail wood Plank = 250x38mm 45x0.038=1.71cum = 1.710dm ³	10cudm	171.00	260.00	(1198)	44460.00 (Y)
---	--------	--------	--------	--------	--------------

Walings of II class kail wood in scantling 100x100mm 30x0.1x0.1=0.30 cum = 300dm ³	10cudm	30.00	260.00	(1197)	7800.00 (Y)
--	--------	-------	--------	--------	-------------

Raking struts safeda balleis 125mm dia. 17x1.5=25.5 m	metre	25.50	40.00	(0302)	1020.00 (Y)
--	-------	-------	-------	--------	-------------

Carriage:

Poling boards =1.71cum					
------------------------	--	--	--	--	--

Walings =.30cum					
-----------------	--	--	--	--	--

Raking struts (p)x(0.125) ² /4 = 0.323cum					
--	--	--	--	--	--

2.323cum	cum	2.323	187.35	(2204)	435.21 (Y)
----------	-----	-------	--------	--------	------------

Deduct credit for materials after use at 75% of the cost of materials 3/4 Y = X					40286.41 (X)
---	--	--	--	--	--------------

					13428.80 (Z)
--	--	--	--	--	--------------

	Z =	Y - X			
--	-----	-------	--	--	--

This can be used four times on the same work					
--	--	--	--	--	--

Therefore cost for using once		0.25	13428.80	(Z)	3357.20 (B)
-------------------------------	--	------	----------	-----	-------------

Carpenter II class	per day	0.25	369.00	(0112)	92.25
--------------------	---------	------	--------	--------	-------

Beldar	per day	0.50	306.00	(0114)	153.00
--------	---------	------	--------	--------	--------

Sundries	1 time	31.46	2.12	(9999)	66.70
----------	--------	-------	------	--------	-------

Total					3669.15
--------------	--	--	--	--	---------

Handwritten marks: a large 'X' and some scribbles.

Handwritten signature: "Bf"

Handwritten mark: a circle with a dot inside.

114

Handwritten signature: "D/A"

Handwritten mark: a stylized 'B'.

BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Add for water charges @ 1%					36.69
	Total					3705.84 (M)
	Add GST 12% on "M"(multiplying factor 0.1405)					520.67
	Total					4226.51 (N)
	Add for contractor's profit and over-heads @ 15% on "N"					633.98
	Cost of 45 sqm					4860.49
	Cost of 1 sqm					108.01
	Add labour cess @ 1%					1.08
	Rate including labour cess					109.09
	Say				109.10	Per sqm

2.18.2 Depth exceeding 1.5 m but not exceeding 3 m Details of cost for an area 30 m long and 1.5 deep

Area = 30x1.5=45 sqm

Materials:

Same as (B) in item No. 2.18.1 sqm 1.00 3357.20 (2.18.1-B) 3357.20

Labour:

Carpenter II class per day 0.50 369.00 (0112) 184.50

Beldar per day 1.00 306.00 (0114) 306.00

Sundries 1 time 34.06 2.12 (9999) 72.21

Total 3919.91

Add for water charges @ 1 % Total 39.20

Add GST 12% on "X"(multiplying factor 0.1405) 3959.11 X

Total 556.25

Add for contractor's profit and over-heads @ 15% on "y" 4515.36 (Y)

Cost of 45 sqm 677.30

Cost of 1 sqm 5192.67

Add labour cess @ 1% 115.39

Rate including labour cess 1.15

Say Rs. 116.50 Per sqm

2.18.3 Depth exceeding 3 m but not exceeding 4.5 m. Details of cost for an area 30 m long and 1.5 deep Area = 30x1.5=45 sqm

Materials:

Same as (B) in item No. 2.18.1 sqm 1.00 3357.20 (2.18.1-B) 3357.20

Labour:

Carpenter II class per day 0.75 369.00 (0112) 276.75

Beldar per day 1.50 306.00 (0114) 459.00

Sundries 1 time 47.58 2.12 (9999) 100.87

Total 4193.82

Add for water charges @ 1 % Total 41.94

Add GST 12% on "X"(multiplying factor 0.1405) 4235.76 X

Total 595.12

Add for contractor's profit and over-heads @ 15% on "y" 4830.88 (Y)

Cost of 45 sqm 724.63

Cost of 1 sqm 5555.51

Add labour cess @ 1% 123.46

Rate including labour cess

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Add labour cess @ 1%					1.23
	Rate including labour cess					124.69
	Say Rs.					124.70 Per sqm
2.19	Extra for planking, strutting and packing materials for cavities i(in close timbering) if required to be left permanently in position (Face area of timber permanently left to be measured) Details of cost for a trench 30 m long and 1.5 m deep Area = 2x30x1.5 = 90 sqm					
	Materials:					
	Details for materials-					
	Same as (Y) in item 2.16.1	sqm	1.00	122160.0	(2.16.1-Y)	122160.00 (A)
	Carriage 1/2 of carriage of item 2.16.1	sqm	0.50	983.59	(2.16.1 -A)	491.80 (B)
	Less 1/8 of Y as timber is supposed to be used once before					15331.48
	Total					107320.33
	Add for water charges @ 1%					1073.20
	Total					108393.53 X
	Add GST 12% on "X"(multiplying factor 0.1405)					15229.29
	Total					123622.82 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					18543.42
	Cost of 90 sqm					142166.24
	Cost of 1 sqm					1579.62
	Add labour cess @ 1%					15.80
	Rate including labour cess					1595.42
	Say Rs.					1595.40 Per sqm
2.20	Open timbering in trenches including strutting and shoring complete (Measurements to be taken of the face area timbered).					
2.20.1	Depth not exceeding 1.5 m. Details of cost for a trench of tenth 30 m and 1.5 m deep surface area -2x30x1.5=90 sqm.					
	Materials:					
	Polling board 1.5 mx0.25mx0.038 m					
	2x40x1.5x0.25x0.038=1.14 cum = 1140 dm ³	10 cudm	114	260.00	(.1198)	29640.00 (Y)
	(Rate as per ii class kail wood plank)Waling 100mm x 100 mm- 4x30mx0.1mx0.1m = 1.20cum= 1200dm ³	10 cudm	120	260.00	(1197)	31200.00 (Y)
	(Rate per il class kail wood in scantling) Sareda Bailies struts(125 mm dia and 1 5 m long) 2x17x1.5=51 m	metre	51	40.00	(0302)	2040.00 (Y)
	Carriage.-					
	Polling board	cum	2.97	187.35	(2204)	556.43 (Y)
	Deducting credit for material after use @75% of the cost materials = 3/4 x Y = X					47577.32 (X)
	Z = Y - X					15302.68 (Z)
	Labour:					
	This can be used four times on the same work- there for cost for using once		0.25	15302.68	(Z)	3825.67 (B)
	Carpenter II class	per day	0.25	369.00	(0112)	92.25
	Beldar	per day	0.50	306.00	(0114)	153.00
	Sundries	1 time	19.76	2.12	(9999)	41.89
						4112.81
	Add for water charges @ 1%					41.13
	Total					4153.94 (M)

P x L 2 B

(B)

116

P A B

BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Add GST 12% on "M"(multiplying factor 0.1405)					583.63
	Total					4737.57 (N)
	Add for contractor's profit and over-heads @ 15% on "N"					710.63
	Cost of 90 sqm					5448.20
	Cost of 1 sqm					60.54
	Add labour cess @ 1%					0.61
	Rate including labour cess					61.15
	Say Rs.				61.100	Per sqm
2.20.2	Depth exceeding 1.5 m but not exceeding 3 m Details of cost of a trench of length 30 m and 1.5 m deep Surface area =2x30x1.5= 90 sqm.					
	Materials:					
	Same as (B) in item 2.20.1	sqm	1.00	3825.67	(2.20.1-B)	3825.67
	Labour:					
	Carpenter II class	per day	0.50	369.00	(0112)	184.50
	Beldar	per day	1.00	306.00	(0114)	306.00
	Sundries	1 time	33.15	2.12	(9999)	70.28
	Total					4386.45
	Add for water charges @ 1 %					43.86
	Total					4430.31 X
	Add GST 12% on "X"(multiplying factor 0.1405)					622.46
	Total					5052.77 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					757.92
	Cost of 90 sqm					5810.69
	Cost of 1 sqm					64.56
	Add labour cess @ 1%					0.65
	Rate including labour cess					65.21
	Say Rs.				Rs. 65.20	Per sqm
2.20.3	Depth exceeding 3 m but not exceeding 4. m. Details of cost for a trench of 30 m length and 1.5 m deep surface area =2x30x1.5= 90 sqm					
	Materials:					
	Sane as (B) in item 2.20.1	sqm	1.00	3825.67	(2.20.1-B)	3825.67
	Labour:					
	Carpenter II class	per day	1.00	369.00	(0112)	369.00
	Beldar	per day	1.75	306.00	(0114)	535.50
	Sundries	1 time	46.67	2.12	(9999)	98.94
	Total					4829.11
	Add for water charges @ 1 %					48.29
	Total					4877.40
	Add GST 12% on "X"(multiplying factor 0.1405)					685.27
	Total					5562.68 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					834.40
	Cost of 90 sqm					6397.08
	Cost of 1 sqm					71.08
	Add labour cess @ 1%					0.71
	Rate including labour cess					71.79
	Say Rs.				Rs. 71.80	Per sqm

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.21	Open timbering in case of shafts, wells, cesspits, manholes and the like including strutting and shoring complete (measurements to be taken of the face area timbered):					
2.21.1	Depth not exceeding 1.5 m Details of cost for a manhole 1.2 m x 1 m x 1.5 m. Surface area $2(1.2+1) \times 1.5 = 606$ sqm Materials: Polling boards of 2nd class kail wood planks 250 mm wide and 38 mm thick $6 \times 0.25 \times 1.5 \times 0.038 = 0.086$ cum = 86 dm ³ Walings - 2nd class kail wood inscantling 100mm x 100 mm $4 \times 1.2 \times 0.1 = 0.048$ cum = 48 dm ³ Safeda Balli struts 125 mm dia $4 \times 1.0 = 4.0$ $2 \times 1.2 = 2.4 = 6.40$ Carriage: Poling boards = 0.086 cum Walings = 0.048 cum Balli struts $2274 \times 7(0.125)^3 \times 6.4 = 0.079$ cum Deduct credit for materials after use -75% of the cost of materials $\frac{3}{4} x y = x$ Z = Y - X This can be used for items on the same work Therefore cost for using once Labour: Carpenter II class Beldar Sundries Total Add for water charges @ 1 % Total Add GST 12% on "M" (multiplying factor 0.1405) Total Add for contractor's profit and over-heads @ 15% Cost of 6.6 sqm Cost of 1 sqm Add labour cess @ 1% Rate including labour cess	10 cudm	8.600	260.00	(1198)	2236.00 (Y)
		10 cudm	4.800	260.00	(1197)	1248.00 (Y)
		metre	6.400	40.00	(0302)	256.00 (Y)
		cum	0.213	187.35	(2204)	39.91 (A)
						2834.93 (X)
						905.07 (Z)
			0.250	905.07	(Z)	226.27 (B)
		per day	0.030	369.00	(0112)	11.07
		per day	0.060	306.00	(0114)	18.36
		1 time	1.820	2.12	(S999)	3.86
						259.56
						2.60
						262.16 (M)
						36.83
						298.99 (N)
						44.85
						343.84
						52.10
						0.52
						52.62
				Say Rs.	Rs. 52.60	Per sqm

2.21.2	Depth exceeding 1.5 m but not exceeding 3 m Details of cost for manhole of length of 1.2 m width 1.0 m and depth 1.5 Surface area = $2(1.2+1) \times 1.5 = 6.6$ sqm. Materials: Same as (B) in item 2.21.1 Labour: Carpenter II class Beldar	som	1.000	226.27	(2.21.1-B)	226.27
		per day	0.060	369.00	(0112)	22.14
		per day	0.120	306.00	(0114)	36.72
			118			

BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Sundries	1 time	2.730	2.12	(9999)	5.79
	Total					290.92
	Add for water charges @ 1%					2.91
	Total					293.83 X
	Add GST 12% on "X" (multiplying factor 0.1405)					41.28
	Total					335.11 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					50.27
	Cost of 6.6 sqm					385.38
	Cost of 1 sqm					58.39
	Add labour cess @ 1%					0.58
	Rate including labour cess					58.97
	Say Rs.				Rs. 59.00	Per sqm

2.21.3 Depth exceeding 3 m but not exceeding 4.5 m Details of cost for manhole of length of 1.2 m width 1.0 m and depth 1.5

Surface area = $2(1.2+1.0) \times 1.5 = 6.6$ sqm.

Materials:

Same as (B) in item 2.21.1 sqm 1 226.27 (2.21.1-B) 226.27

Labour:

Carpenter II class per day 0.1 369.00 (0112) 36.90

Beldar per day 0.2 306.00 (0114) 61.20

Sundries 1 time 3.64 2.12 (9999) 7.72

Total 332.09

Add for water charges @ 1% Total 335.41 X

Add GST 12% on "X" (multiplying factor 0.1405) 47.13

Total 382.54 (Y)

Add for contractor's profit and over-heads @ 15% on "y" 57.38

Cost of 6.6 sqm 439.92

Cost of 1 sqm 66.65

Add labour cess @ 1% 0.67

Rate including labour cess 67.32

Say Rs. 67.30 Per sqm

2.22 Open timbering over areas including strutting, shoring and use and waste of raking shores, complete (Measurements to be taken of the face area timbered)

2.22.1 Depth not exceeding 1.5

Details of cost for an area 30 m long and 1.5 m deep area = $30 \times 1.5 = 45$ sqm

Materials:

Poling boards of II class kail wood Planks 250 mm x 38 mm 10 cudm 57.00 260.00 (1198) 14820.00 (Y)

$40 \times 1.5 \times 0.25 \times 0.038 = 0.57$ cum = 570 dm³

Raking struts - safeda Bailies 125 mm dia 40x1.5=60m metre 60.00 40.00 (0302) 2400.00 (Y)

Carriage:

Poling boards = 0.57 cum

Bailies $40 \times 1.5 \times \frac{1}{4} \times (0.125)^2 = 0.74$ cum = 1.31 cum

BCD Analysis of Rates 2022


Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
		cum	1.31	187.35	(2204)	245.43 (Y)
	Deduct credit for materials after use at 75% of the cost of materials $\frac{3}{4} \times y = x$					12915.00 (X)
						4305.00 (Z)
	This can be used four times on the same work Therefore cost for using once		0.25	4305.00	(Z)	1076.25 (B)
	Labour:					
	Carpenter II class	per day	0.12	369.00	(0112)	44.28
	Beldar	per day	0.25	306.00	(0114)	76.50
	Sundries	1 time	19.76	2.12	(9999)	41.89
						1238.92
	Add for water charges @ 1 %					12.39
	Total					1251.31 (X)
	Add GST 12% on "X" (multiplying factor 0.1405)					175.81
	Total					1427.12 (Y)
	Add for contractor's profit and over-heads 15% on "Y"					214.07
	Cost of 45 sqm					1641.19
	Cost of 1 sqm					36.47
	Add labour cess @ 1 %					0.36
	Rate including labour cess					36.83
				Say	Rs. 36.80	Per sqm

2.22.2 Depth exceeding 1.5 m but not exceeding 3 m Details of cost for an area of 30 m long and 1.5 m deep area = $30 \times 1.5 = 45$ sqm

Materials:						
Same as (B) in item no 2.22.1	sqm	1.00	1076.25	(2.22.1-B)		1076.25 (B)
Labour:						
Carpenter II class	per day	0.25	369.00	(0112)		92.25
Ordinary labour	per day	0.50	306.00	(0114)		153.00
Sundries	1 time	33.15	2.12	(9999)		70.28
Total						1391.78
Add for water charges @ 1 %						13.92
Total						1405.70 X
Add GST 12% on "X" (multiplying factor 0.1405)						197.50
Total						1603.20 (Y)
Add for contractor's profit and over-heads @ 15% on "y"						240.48
Cost of 45 sqm						1843.68
Cost of 1 sqm						40.97
Add labour cess @ 1 %						0.41
Rate including labour cess						41.38
				Say	Rs. 41.40	Per sqm

2.22.3 Depth exceeding 3 m but not exceeding 4.5 m Details of cost for an area 30 in long and 1.5 m deep area = $30 \times 1.5 = 45$ sqm

Materials:						
Same as (B) in item no 2.22.1	sqm	1.00	1076.25	(2.22.1-B)		1076.25
Labour:						
Carpenter II class	per day	0.50	369.00	(0112)		184.50
Beldar	per day	0.88	306.00	(0114)		269.28
Sundries	1 time	47.58	2.12	(9999)		100.87
Total						1630.90


BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Add for water charges @ 1%					16.31
	Total					1647.21 X
	Add GST 12% on "X"(multiplying factor 0.1405)					231.43
	Total					1878.64 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					281.80
	Cost of 45 sqm					2160.44
	Cost of 1 sqm					48.01
	Add labour cess @ 1%					0.48
	Rate including labour cess					48.49
	Say				Rs. 48.50	Per sqm

2.23 Extra for planking and strutting in open timbering if required to be left permanently in position (face area of the timber permanently left to be measured).

Details of cost for a trench 30 m long and 1.5m deep surface area 2x30x1.5=90 sqm

Materials:

Same as (Y) in item no. 2.20.1	sqm	1.00	62880.00	(2.20.1-Y)	62880.00 (A)
Carriage 1/2 of the carriage of item no 2.20.1	sqm	0.50	556.43	(2.20.1-A)	278.22 (B)
Less 1/8th of (Y) as timber is supposed to be used once before	sqm	0.13	62880.00	(2.20.1-Y)	7860.00
					55020.00 (Z)
Add for water charges @ 1%					550.20
					55570.20 (M)
Add GST 12% on "M"(multiplying factor 0.1405)					7807.61
Total					63377.81 (N)
Add for contractor's profit and over-heads @ 15% on (N)					9506.67
Cost of 90 sqm					72884.49
Cost of 1 sqm					809.83
Add labour cess @ 1%					8.10
Rate including labour cess					817.93
Say				Rs. 817.90	Per sqm

2.24 Extra rates for quantities of works, executed:

2.24.1 In or under water and/or liquid mud, including pumping out water as required Extra due to slow progress and dewatering: 20% of the rate of item

(20% of the rate of the item. The extra metre percentage in rate is applicable in respect of depth each item but limited to quantities of work executed in

Cost of 1 metre depth	20.00%
Say	20.00%

2.24.2 In or under foul position, including pumping out water as required Extra due to slow progress and dewatering: 25% of the rate of item

BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
----------	-------------	------	-----	------	------------	----------

(25% of the rate of the item. This pertains to metre only such. Pumping of water as is envisaged depth at the time of tendering and don't include those that covered under contractual risk)

Cost of 1 metre depth 25.00%
Say 25.00%

Note for item no. 2.24:- The extra percentage rate is applicable in respect of each item but limited to quantities of work executed in these difficult conditions. The unit, namely, metre depth, to be considered for payment, shall be the depth measured from the sub soil water level up to the centre of gravity of the qty executed in difficult conditions. The depth shall be reckoned correct to 0.10 m, 0.05 m or more shall be taken as 0.10 m and less than 0.05 m ignored.

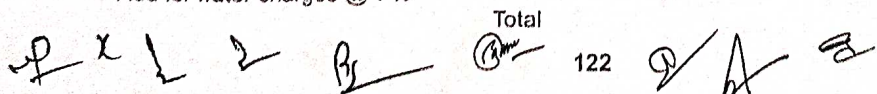
2.25(A) Excavating, supplying and filling of local earth (including royalty but excluding carriage cost) by mechanical transport upto a lead of 3km also including ramming and watering of the earth in layers not exceeding 20 cm in trenches, plinth, sides of foundation etc.complete. If local earth is available at more than 3 km lead the actual lead must be approved by competent authority. Carriage of material will be paid separately and calculated after deducting initial lead..

Details of cost for 10 cum						
2.6.1	Rate as per item no 2.6.1 of SH:2 EARTH WORK	cum	10.00	331.65	2.6.1	3316.53 A
Add ramming and watering of the earth in layers layers (Ref. item no 2.27)						
114	Beldar (1/2x0.89=0.45 day)	day	0.45	306.00	0114	137.70
101	Bhisti	day	0.35	332.00	0101	116.20
Carriage of materials						
	SH:1 CARRIAGE OF MATERIALS	cum	10.00	0.00		0.00 A
979	Royalty for good earth	cum	10.00	33.00	0979	330.00 W
TOTAL						3900.43
Add 1 % Water charges on "W-A"						5.84
TOTAL						3906.27 X
Add GST on "X-A" (multiplying factor 0.1405)						82.04
TOTAL						3988.31 Y
Add 15% CPOH on "Y-A"						87.58
TOTAL						4075.89 Z
Add Cess @ 1% on "Z-A"						40.76
Cost of 10 cum						4116.65
Cost of 1 cum						411.67
Say				Say	Rs. 411.70	

2.25 Pumping out water caused by springs, tidal or river seepage, broken water mains or drains and the like.

Details for 10.91kl-
Pumping hours 3 hrs. or 0.375 days.

Cost of pumping water with 3636.8 litres per hour capacity pump.						
		Per day	0.375	700.00	(0011)	262.50
	Beldar	per day	2.000	306.00	(0114)	612.00
Total						874.50
Add for water charges @ 1 %						8.75
Total						883.25 X


Total
122
BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Add GST 12% on "X"(multiplying factor 0.1405)					124.10
	Total					1007.34 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					151.10
	Cost of 10.91 KI					1158.44
	Cost of 1 KI					106.18
	Add labour cess @ 1%					1.06
	Rate including labour cess					107.24
				Say	Rs. 107.20	Per KI
2.26	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20 cm in depth: consolidating each deposited layer by ramming and watering lead					
	Upto 50m and lift upto 1.5m					
	Details of cost for 10 cum					
	Labour:					
	Mate	per day	0.200	325.00	(0128)	65.00
	Coolies	per day	2.500	318.00	(0115)	795.00
	Bhisthi	per day	0.200	332.00	(0101)	66.40
	Total					926.40
	Add for water charges @ 1 %					9.26
	Total					935.66 X
	Add GST 12% on "X"(multiplying factor 0.1405)					131.46
	Total					1067.12 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					160.07
	Cost of 10 cum					1227.19
	Cost of 1 cum					122.72
	Add labour cess @ 1%					1.23
	Rate including labour cess					123.95
				Say	Rs. 123.90	Per cum
2.27	Extra for every additional lift of 1.5 m or part there of in :					
2.27.1	All kinds of soil.					
	Details of cost of 10 cum					
	Labour:					
	Mate	per day	0.100	325.00	(0128)	32.50
	Beldar	per day	1.100	306.00	(0114)	336.60
	Total					369.10
	Add for water charges @ 1 %					3.69
	Total					372.79 X
	Add GST 12% on "X"(multiplying factor 0.1405)					52.38
	Total					425.17 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					63.78
	Cost of 10 cum					488.94
	Cost of 1 cum					48.89
	Add labour cess @ 1%					0.49
	Rate including labour cess					49.38

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
			Say	Rs. 49.40	Per cum	
2.27.2	Ordinary or hard rock Details of cost for 10 cum					
	Labour:					
	Mate	per day	0.20	325.00	(0128)	65.00
	Beldar	per day	1.95	306.00	(0114)	596.70
	Total					661.70
	Add for water charges @ 1 %					6.62
	Total					668.32 X
	Add GST 12% on "X"(multiplying factor 0.1405)					93.90
	Total					762.22 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					114.33
	Cost of 10 cum					876.55
	Cost of 1 cum					87.65
	Add labour cess @ 1%					0.88
	Rate including labour cess					88.53
	Say Rs.		88.60			per cum
2.28	Supplying and Filling in plinth with local sand and under floors including, watering, ramming consolidating and dressing complete. Details of cost for 10 cum					
	Materials:					
	Local sand	cum	10.00	141.85	(6501)	1418.50
	Carriage of Local sand	cum	10.00	0.00	(2335)	0.00
	Labour:					
	Beldar	per day	0.89	306.00	(0114)	272.34
	Coolies	per day	1.07	318.00	(0115)	340.26
	Bhishties	per day	0.35	332.00	(0101)	116.20
	Total					2147.30
	Add for water charges @ 1 %					21.47
	Total					2168.77 X
	Add GST 12% on "X"(multiplying factor 0.1405)					304.71
	Total					2473.49 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					371.02
	Cost of 10 cum					2844.51
	Cost of 1 cum					284.45
	Add labour cess @ 1%					2.84
	Rate including labour cess					287.29
	Say Rs.		287.30			per cum
2.29	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m					
2.29.1	All kinds of soil. Details of cost for 100 sqm.					
	Labour:					
	Beldar	per day	1.97	306.00	(0114)	602.82
	Coolies	per day	1.29	318.00	(0115)	410.22
			124			

BCD Analysis of Rates 2022

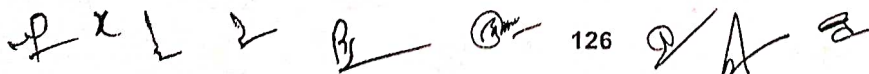
Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Total					1013.04
	Add for water charges @ 1 %					10.13
	Total					1023.17 X
	Add GST 12% on "X"(multiplying factor 0.1405)					143.76
	Total					1166.93 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					175.04
	Cost of 100 sqm					1341.96
	Add labour cess @ 1%					13.42
	Rate including labour cess					1355.38
	Say Rs.			1355.40		per 100 sqm
2.30	Ploughing the existing ground to a depth of 15 cm to 25 cm and watering the same:					
2.30.1	All kinds of soil. Details of cost for 100 sqm.					
	Labour:					
	Beldar	per day	2.75	306.00	(0114)	841.50
	Bhishti	per day	0.50	332.00	(0101)	166.00
	Total					1007.50
	Add for water charges @ 1%					10.08
	Total					1017.58 X
	Add GST 12% on "X"(multiplying factor 0.1405)					142.97
	Total					1160.54 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					174.08
	Cost of 100 sqm					1334.63
	Add labour cess @ 1%					13.35
	Rate including labour cess					1347.98
	Say Rs.			1348.00		per 100 sqm
2.31	Excavating holes upto 0.5 cum including getting out the excavated soil, then returning the soil as required in layer not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering etc, disposing of surplus excavated soil; as directed within a lead of 50 m and lift upto 1.5m.					
2.31.1	All kinds of soil.					
	Details of cost for 10 holes Earthwork 10 x 0.30 =3.0cum					
	cum	cum	3.00	383.70	(2.8.1)	1151.10 (A)
	Extra labour for filling and ramming	LS	13.52	2.12	(9999)	28.66 (B)
	Add for water charges @ 1 % on B					0.29 (C)
	Total					1180.05 (X)
	Add GST 12% on "X"(multiplying factor 0.1405)					4.07
	Total					1184.12 (Y)
	Add for contractor's profit and over - heads @ 15% on "Y"					177.62
	Total					1361.74
	Cost of 10 holes					1189.07
	Cost of 1 hole					118.91
	Add labour cess @ 1%					1.19
	Rate including labour cess					120.10
	Say			Rs.120.10		Per hole

BCD/SOR_11th Edition_2022



BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.31.2	Ordinary rock					
	Details of cost for 10 holes					
	Excavation 10 x 0.30 = 3.0 cum	cum	3.00	604.60	(2.9.1)	1813.80
	Extra labour for filling and ramming	1 time	13.52	2.12	(9999)	28.66
	Add for water charges @ 1% on B					0.29
	Total					28.95 (X)
	Add GST 12% on "X"(multiplying factor 0.1405)					4.07
	Total					33.02 (Y)
	Add for contractor's profit and over - heads @ 15% on "Y"					4.95
	Total					37.97
	Cost of 10holes					1851.77
	Cost of 1 hole					185.18
	Add labour cess @ 1%					1.85
	Rate including labour cess					187.03
	Say				Rs.187.00	Per hole
2.31.3	Hard rock(requiring blasting)					
	Details of cost for 10holes 10 x 0.30= 3.0 cum	cum	3.00	725.52	(2.9.2)	2176.57
	Extra labour for filling and ramming	1 time	13.52	2.12	(9999)	28.66
	Add for water charges @ 1 % on B					0.29
	Total					28.95 (X)
	Add GST 12% on "X"(multiplying factor 0.1405)					4.07
	Total					33.02 (Y)
	Add for contractor's profit and over - heads @ 15% on "Y"					4.95
	Total					37.97
	Cost of 10 holes					2214.54
	Add labour cess @ 1%					221.45
	Rate including labour cess					2.21
	Cost of 1 hole					223.66
	Say				Rs.223.70	Per hole
2.31.4	Hard rock (blasting prohibited)					
	Details of cost for 10 holes					
	Excavation 10 x 0.30= 3.0 cum	cum	3.00	1232.48	(2 9 3)	3697.45
	Extra labour for filling and ramming	1 time	13.52	2.12	(9999)	28.66
	Add for water charges @ 1 % on B					0.29
	Total					28.95 (X)
	Add GST 12% on "X"(multiplying factor 0.1405)					4.07
	Total					33.02 (Y)
	Add for contractor's profit and over - heads @ 15%					4.95
	Total					37.97
	Cost of 6 holes					3735.41
	Cost of 1 hole					622.57
	Add labour cess @ 1%					6.23
	Rate including labour cess					628.80
	Say				Rs.628.80	Per hole
	Note - Lead					
	(i)Carriage of excavated material beyond the first 50 m will be paid under carriage of materials vide sub head II.					



BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
----------	-------------	------	-----	------	------------	----------

(ii) Carriage by animal and mechanical transport will be reckoned in terms of nearest km. distance of 0.5 km or more, will be taken as 1 km. and distance of less than 0.5 km. ignored. However, when the total lead is less than 0.5 km. it will not be ignored but paid for separately in successive stages of 50 m. subject to the condition that the total rate worked out on these bases does not exceed the rate for initial lead of 1 km.

2.32 Clearing jungle including uprooting of rank vegetation .grass, brush wood, trees and saplings of girth upto 30 cm measured at a height of 1 m above ground level" and removal of rubbish upto a distance of 50 m outside the periphery of the area deared.

Details of cost for 100 sqm.						
Labour:						
Beldar	per day	1.080	306.00	(0114)		330.48
Coolie	per day	0.600	318.00	(0115)		190.80
Total						521.28
Add for water charges @ 1%						5.21
Total						526.49 X
Add GST 12% on "X"(multiplying factor 0.1405)						73.97
Total						600.47 (Y)
Add for contractor's profit and over-heads @ 15% on "y"						90.07
Cost of 100 sqm						690.53
Add labour cess @ 1%						6.91
Rate including labour cess						697.44
Say					Rs.697.40	per 100 sqm

Note:- If however, only grass is met with, the area a will be measured and paid for, under separate item.

2.33 Clearing grass and removal of the rubbish upto a distance of 50 m outside the periphery of the area cleared.

Details of cost for 100 sqm.						
Labour:						
Beldar	per day	0.600	306.00	(0114)		183.60
Coolies	per day	0.250	318.00	(0115)		79.50
Sundries	LS	1.820	2.12	(9999)		3.86
Total						266.96
Add for water charges @ 1 %						2.67
Total						269.63 X
Add GST 12% on "X"(multiplying factor 0.1405)						37.88
Total						307.51 (Y)
Add for contractor's profit and over-heads @ 15% on "y"						46.13
Cost of 100 sqm						353.64
Add labour cess @ 1%						3.54

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Rate including labour cess					357.18
			Say		Rs.357.20	per 100 sqm
2.34	Felling trees of the girth (measured at a height of 1 m above ground level) including cutting of trunks and branches removing the roots and stacking of serviceable material and disposal of unserviceable material:					
2.34.1	Beyond 30 cm girth upto and including 60 cm girth Details of cost of tree of 15 cm. in dia Ht. = av. 3m quantity of wood $3.14/4 \times 15 \times 15 \times 3 = 0.053$ cum. Add 20% for branches = 0.011 cum					
	Labour:					
	For cutting the tree and removing the roots from the soil and then filling the pit and depression.					
	Beldar	per day	0.33	306.00	(0114)	100.98
	Coolie	per day	0.17	318.00	(0115)	54.06
	Sundries	LS	2.73	2.12	(9999)	5.79
	Total					160.83
	Add for water charges @ 1 %					1.61
	Total					162.44 X
	Add GST 12% on "X" (multiplying factor 0.1405)					22.82
	Total					185.26 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					27.79
	Cost of 1 tree					213.05
	Add labour cess @ 1%					2.13
	Rate including labour cess					215.18
				Say	Rs.215.20	Each
2.34.2	Beyond 60 cm girth upto and including 120 cm girth					
	Details of cost of a tree					
	of av. firth = 90 cm					
	of av. dia. = 0.3 in					
	and length = 5 m					
	$22 \times 0.3 \times 0.3 \times 5 / 7 \times 4 = 0.35$ cum.					
	20% branches = 0.42 cum					
	Labour:					
	For cutting the tree and removing the roots from the soil and then filling the pit and depression.					
	Beldar	per day	1.5	306.00	(0114)	459.00
	Coolie	per day	0.75	318.00	(0115)	238.50
	Sundries	LS	5.46	2.12	(9999)	11.58
	Total					709.08
	Add for water charges @ 1 %					7.09
	Total					716.17 X
	Add GST 12% on "X" (multiplying factor 0.1405)					100.62
	Total					816.79 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					122.52
	Cost of 1 tree					939.31
	Add labour cess @ 1%					9.39

P
L
L
B
(B)

128

P
A
B

BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
----------	-------------	------	-----	------	------------	----------

Rate including labour cess						948.70
Say						Rs.948.70 Each
2.34.3 Beyond 120 cm girth upto and including						
240 cm girth						
Details of cost for a tree						
avg. girth = 180 cm						
and avg. length = 7 m						
22/7x4x0.6x0.6x7 = 1.98 cum						
20% branches = 0.40 cum/2.38 cum						
Labour:						
For cutting the tree and removing (he roots from . the soil and then filling the pit and depressions.						
	Beldar	per day	7	306.00	(0114)	2142.00
	Coolies	per day	3.5	318.00	(0115)	1113.00
	Sundries	LS	8.06	2.12	(9999)	17.09
	Total					3272.09
	Add for water charges @ 1 %					32.72
	Total					3304.81 X
	Add GST 12% on "X"(multiplying factor 0.1405)					464.33
	Total					3769.14 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					565.37
	Cost of 1 tree					4334.51
	Add labour cess @ 1%					43.35
	Rate including labour cess					4377.86
	Say					Rs.4377.90 Per tree

2.34.4 Above 240 cm girth						
Details of cost for a tree of average 300 cm.girth and length 10 m						
22/4x7x1x1x10 = 7.86 cum						
20% Branches = <u>1.57 cum</u>						
9.43 cum						
Labour:						
For cutting the tree and removing the roots from the soil and then filling the pits and depression.						
	Beldar	per day	14	306.00	(0114)	4284.00
	Coolies	per day	7	318.00	(0115)	2226.00
	Sundries	LS	26.91	2.12	(9999)	57.05
	Total					6567.05
	Add for water charges @ 1 %					65.67
	Total					6632.72 X
	Add GST 12% on "X"(multiplying factor 0.1405)					931.90
	Total					7564.62 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					1134.69
	Cost of 1 tree					8699.31
	Add labour cess @ 1%					86.99
	Rate including labour cess					8786.30
	Say					Rs.8786.30 Per tree

2.35 Supplying chemical emulsion in sealed containers including delivery as specified.

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
2.35.1	Chlorpyriphos/Lindone emulsifiable concentrate of 20%					
	Details of cost of 100 litres					
	Chlorpyriphos E.C. 20%	litre	100	150.00	(7022)	15000.00
	Carriage of chemical	quintal	1	16.39	(2342)	16.39
	Total					15016.39
	Add for water charges @ 1%					150.16
	Total					15166.55 X
	Add GST 12% on "X" (multiplying factor 0.1405)					2130.90
	Total					17297.45 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					2594.62
	Cost of 100 litres					19892.07
	Cost of 1 litre					198.92
	Add labour cess @ 1%					1.99
	Rate including labour cess					200.91
	Say					Rs.200.90 per litre
2.37.	Diluting and injecting chemical emulsion for POSTCONSTRUCTIONAL anti-termites treatment (including the cost of chemical emulsion)					
2.37.1	Along external wall where the apron is not provided using chemical emulsion @ 7.5 liters / sqm of the vertical-surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete Details of cost for 10 metres.					
2.37.1.1	With chlorpyriphos/Lindone E.C. 20% with 1% concentration					
	Materials:					
	Chlorpyriphos 1% concentration = $10.0 \times 0.30 \times 7.5 = 22.5$ litres					
	Chlorpyriphos 20% E.C. required $22.5 \div 20 = 1.125$ litres	litre	1.125	150.00	(7022)	168.75
	Labour:					
	Beldar (for excavating channel) rodding in channel, spraying the emulsion and refilling the same	per day	0.330	306.00	(0114)	100.98
	Sundries, rent of sprayer etc.	1 time	13.520	2.12	(9999)	28.66
	Total					298.39
	Add for water charges @ 1 %					2.98
	Total					301.37 X
	Add GST 12% on "X" (multiplying factor 0.1405)					42.34
	Total					343.72 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					51.56
	Cost of 10 m					395.27
	Cost of 1 m					39.53
	Add labour cess @ 1%					0.40
	Rate including labour cess					39.93
	Say					Rs.39.90 per metre


130


BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
----------	-------------	------	-----	------	------------	----------

2.37.2 Along the external wall below concrete or masonry apron using chemical emulsion @ 2.55 litres per linear metre including drilling and plugging holes etc.

2.37.2.1 With chlorpyriphos E.C. 20% with 1% concentration Details of cost for 10 metres.

Materials:

Chlorpyriphos 1% Concentration = $10 \times 2.25 = 22.5$ litres

Chlorpyriphos 20% required $22.5 \div 20 = 1.125$ litres

Materials:

Beldar (for drilling holes and injecting chemical) per day	0.40	306.00	(0114)		122.40
--	------	--------	--------	--	--------

Sundries and rent of a sprayer and mortar and making good the holes	LS	35.88	2.12	(9999)	76.07
---	----	-------	------	--------	-------

Total					367.22
-------	--	--	--	--	--------

Add for water charges @ 1 %					3.67
-----------------------------	--	--	--	--	------

Total					370.89 X
-------	--	--	--	--	----------

Add GST 12% on "X" (multiplying factor 0.1405)					52.11
--	--	--	--	--	-------

	Total				423.00 (Y)
--	-------	--	--	--	------------

Add for contractor's profit and over-heads @ 15% on "y"					63.45
---	--	--	--	--	-------

Cost of 10 m					486.45
--------------	--	--	--	--	--------

Cost of 1 m					48.65
-------------	--	--	--	--	-------

Add labour cess @ 1%					0.49
----------------------	--	--	--	--	------

Rate including labour cess					49.14
----------------------------	--	--	--	--	-------

NOTE: Analysis of rates for other chemicals will be similar to above				Say	Rs.49.10 per metre
--	--	--	--	-----	--------------------

2.37.3 Treatment of soil under existing floors using chemical emulsion @ one litre per hole. 300 mm apart including drilling and plugging 12 mm diameter holes with cement mortar 1:2 (1 cement 2 coarse sand) to match the existing floor.

2.37.3.1 With Chlorpyriphos EC 20% with 1% concentration Details of cost for 9 sqm (3 metre x 3 metre)

No. of holes - 100 nos.

Materials:

Chlorpyriphos 1% required 100×1 litre = 100 litres

Chlorpyriphos 20% required $100 \times 20 = 2000$ litres

litres

Chlorpyriphos 20% E.C. = $100 \div 20 = 5.0$ litres	litre	5.00	150.00	(7022)	750.00
---	-------	------	--------	--------	--------

Labour:

(For making holes & spraying)

Beldar	per day	2.00	306.00	(0114)	612.00
--------	---------	------	--------	--------	--------

Mason IInd class	per day	0.50	369.00	(0124)	184.50
------------------	---------	------	--------	--------	--------

Sundries, rent of sprayer and mortar	LS	35.88	2.12	(9999)	76.07
--------------------------------------	----	-------	------	--------	-------

Total					1622.57
-------	--	--	--	--	---------

Add for water charges @ 1 %					16.23
-----------------------------	--	--	--	--	-------

Total					1638.80 X
-------	--	--	--	--	-----------

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Add GST 12% on "X"(multiplying factor 0.1405)					230.25
	Total					1869.05 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					280.36
	Cost of 9 sqm					2149.40
	Cost of 1 sqm					238.82
	Add labour cess @ 1%					2.39
	Rate including labour cess					241.21
			Say		Rs.241.20	per sqm

NOTE: Analysis of rates for other chemicals will be similar to above

2.37.4 Treatment of existing masonry using chemical emulsion @ one litre per hole at 300 mm interval including drilling holes at 45 degree and plugging them with cement mortar 1:2(1 cement:2 coarse sand) to the full depth of the hole.

2.37.4.1 With chlorpyrifos EC 20% with 1% concentration Details of cost for 10 metres						
Materials:						
No. of holes $10.0 + 0.30 = 33.33 - 1 = 34.33$ holes						
Say 34 holes						
chlorpyrifos 1% concentration required = $34 \times 1.0 = 34.00$ litres						
chlorpyrifos 20% E.C. required $34.00 - 20 \div 1.70$ litres						
chlorpyrifos 20% concentrates	litre	1.7	150.00	(7022)		255.00
Labour:						
Beldar (for making holes at 45 deg. And spraying the emulsion)	per day	0.3	306.00	(0114)		91.80
Mason IInd class	per day	0.05	369.00	(0124)		18.45
Sundries, rent of pump etc.	1 time	17.94	2.12	(9999)		38.03
Total						403.28
Add for water charges @ 1 %						4.03
Total						407.31 X
Add GST 12% on "X"(multiplying factor 0.1405)						57.23
Total						464.54 (Y)
Add for contractor's profit and over-heads @ 15% on "y"						69.68
Cost of 10 m						534.22
Cost of 1 m						53.42
Add labour cess @ 1%						0.53
Rate including labour cess						53.95
			Say		Rs.54.00	per m

NOTE Analysis of rates for other chemicals will be similar to above points

2.37.5 Treatment at points of contact of wood work by chemical emulsion chlordane. (in oil or kerosene based solution) @ 0.5 litres per hole by drilling 6 mm dia holes at downward angle of 45 degree at 150 mm centre to centre and sealing the same. Details of cost for 10 metres


132
A
B

BCD/SOR_11th Edition_2022

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Materials:					
	No. of holes $10.00 \times 15 = 66.67 + 1 = 67.67$					
	holes Say 68 holes					
	Chlorpyriphos/Lindone 1 % concentration required = $68 \times 0.5 = 34.00$ litres					
	Chlorpyriphos/Lindone 20% E.C. required	litre	1.70	150.00	(7022)	255.00
	34.00-20 = 1.70 litres					
	Kerosene oil = $34.00 - 1.70 = 32.30$ litres	litre	32.30	50.00	(0771)	1615.00
	Materials: Carpenter 2nd class (For making holes and plugging the same)	per day	0.20	369.00	(0112)	73.80
	Beldar for injecting chemical	per day	0.20	306.00	(0114)	61.20
	Sundries	1 time	6.90	2.12	(9999)	14.63
	Total					2019.63
	Add for water charges @ 1%					20.20
	Total					2039.83 X
	Add GST 12% on "X" (multiplying factor 0.1405)					286.60
	Total					2326.42 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					348.96
	Cost of 10 m					2675.39
	Cost of 1 m					267.54
	Add labour cess @ 1%					2.68
	Rate including labour cess					270.22

Say Rs.270.20 per metre

2.38 Deduct for disposed soil not levelled and neatly dressed.

Details of cost for 10 cum.

LABOUR:

Mate	day	0.08	325.00	128	26.00
------	-----	------	--------	-----	-------

Beldar /

Cooli	day	0.8	318.00	115	254.40
-------	-----	-----	--------	-----	--------

TOTAL

280.40

Add Water Charges @ 1%

2.80

TOTAL

283.20 X

Add GST 12% on "X" (multiplying factor

0.1405)

39.79

Total

322.99 (Y)

Add for contractor's profit and over-heads

48.45

@ 15% on "y"

Cost of 10 cum

371.44

Cost of 1 cum

37.14

Add labour cess @ 1%

0.37

Rate including labour cess

37.51

Say Rs.37.50 cum

2.39 Supply and stacking of Fly ash conforming to IRC- 58 at site, excluding carriage, loading , unloading & stacking up to any lead (measured stacks will be reduced by 20% for payment).

Details of cost for 1.00 cum.

Ref :- Based on DAR Item No : 1.1.1 A) ii)

Material and carriage

Fly ash	cum	1.00	7.45	1980	7.45
---------	-----	------	------	------	------

Available free of cost at thermal power plant

BCD Analysis of Rates 2022

Item No.	Description	Unit	Qty	Rate	Rate Code.	Cost Rs.
	Carriage of flyash	cum	1.00	0.00	2262	0.00
	1st lead 0 to 5 km					
	TOTAL					7.45
	Add Water Charges @ 1%					0.07
	TOTAL					7.52 X
	Add GST 12% on "X"(multiplying factor 0.1405)					1.06
	Total					8.58 (Y)
	Add for contractor's profit and over-heads @ 15% on "y"					1.29
	Cost of 1 cum					9.87
	Add labour cess @ 1%					0.10
	Rate including labour cess					9.97
	Say				Rs.10.00	cum

2.40 Filling with available fly ash and earth (excluding rock) in trenches or embankment in layers (each layer should not exceed 15 cm), with intermediate layer of compacted earth (Soil density of 98%) after every four layers of compacted depth of fly ash, sides & top layer of filling shall be done with earth having total minimum compacted thickness 30 cm or as decided by Engineer – in-charge, including compacting each layer by rolling/ ramming and watering , all complete as per drawing and direction of Engineer -in - charge.

Details of cost for 10 cum.

Ref :- Based on Item No : 2.25

LABOUR:

Mate	day	0.2	325.00	128	65.00	
Coolie	day	2.5	318.00	115	795.00	
Bhisti	day	0.2	332.00	101	66.40	
	TOTAL				926.40	
	Add Water Charges @ 1%				9.26	
	TOTAL				935.66 X	
	Add GST 12% on "X"(multiplying factor 0.1405)				131.46	
	Total				1067.12 (Y)	
	Add for contractor's profit and over-heads @ 15% on "y"				160.07	
	Cost of 10 cum				1227.19	
	Cost of 1 cum				122.72	
	Add labour cess @ 1%				1.23	
	Rate including labour cess				123.95	
	Say				Rs.123.90	cum


134
BCD/SOR_11th Edition_2022