Sr.No.	Item	Rate	Unit
6.1.9	Extra for earth work in hard soil (vide classification of soil item-B) as per specification and direction of E/I.	19.90	Per M^3
6.1.10	Extra for earth work in marshy soil , slushy and daldal (vide classification of soil item-F)	29.80	Per M^3
6.1.11.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of excavated materials so obtained (beyond 50 mtr away from the edge of the trench) with initial lead of 150 m and initial lifts of 1.5 mtr all complete as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	645.20	Per M^3
6.1.11.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock(Where blasting is not required) (vide classification of soil item C) disposal of excavated materials so obtained (beyond 50 mtr away from the edge of the trench) with initial lead of 150 m and initial lifts of 1.5 mtr all complete as per specifications and direction of E/I.	424.80	Per M^3
6.1.12	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is required and stacking properly in approved stack size in approved stack yard (beyond 50 M away from the edge of the trench in country side) with initial lead of 150M and initial lifts of 1.5 mtr all complete as per specifications and direction of E/I.	1099.30	Per M^3
6.1.13	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of same in country side by Truck (50M away from the edge of the trench)beyond initial lead of 150 m but up to 1 k.m with all lifts including loading, unloading, constructing and maintenance of haul roads etc.all complete as per specifications and direction of E/I.	302.40	Per M^3
6.1.14.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C)and disposal of soil by truck (50M away from the edge of the trench beyond initial lead of 150 mtr but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	763.40	Per M^3
6.1.14.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C) and disposal of soil by truck (50 M away from the edge of the trench beyond initial lead of 150 M but upto 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	480.30	Per M^3
6.1.15	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is needed and disposal of soil by truck (50M away from the edge of the trench beyond initial lead of 150M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	763.40	Per M^3
6.1.16	Earth work in filling in foundation trenches and back filling of masonry structures with suitable earth in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30 mtr and lift of 1.5M complete job as per specifications and direction of E/I.	86.10	Per M^3

Sr.No.	Item	Rate	Unit
6.1.17	Earth work in filling in foundation trenches and back filling of masonry structures with semi pervious or suitable earth in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits with initial lead of 30 mtr and initial lift of 1.5 mtr. complete job as per specifications and direction of E/I.	96.00	Per M^3
6.1.18	Extra for each subsequent lift upto 1 M over the initial lift of 1.5 M (for ordinary or hard soil) as per specification and direction of E/I.	9.90	Per M^3
6.1.19	Extra for each subsequent lead upto 25 M beyond the initial lead of 30 M (for ordinary or hard soil) as per specification and direction of E/I.	9.90	Per M^3
6.1.20	Extra for each subsequent lift upto 1 M over the initial lift of 1.5 M (for ordinary soft or hard rock) as per specification and direction of E/I.	14.90	Per M^3
6.1.21	Extra for each subsequent lead upto 25 Mtr beyond the initial lead of 30 M (for ordinary soft or hard rock) as per specification and direction of E/I.	14.90	Per M^3
6.1.22	Deleted		
6.1.23	deleted		
6.1.24.1	Fine dressing of the canals banks or embankment and turfing with 75 mm thick grass sod obtained within a lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.	1988.50	Per % M^2
6.1.24.2	Extra for each lead of 150 M over initial lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.	421.60	Per % M^2
6.1.25	Close timbering in trenches including strutting, shoring and packing cavities(wherever required)depth not exceeding 1.5M, complete as per specifications and direction of E/I.	135.10	Per M^2
6.1.26	Close timbering in trenches including strutting, shoring and packing cavities(wherever required)depth not exceeding 1.5 M, but upto 3.0M complete as per specifications and direction of E/I.	139.20	Per M^2
6.1.27	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150 mtr but within 1.00 K.M and all lifts by **Tipper** including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.	306.90	Per M^3
6.1.28	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond 1.00 K.M but up to 2 K.M away with all lifts by **Tipper** including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.	340.70	Per M^3
6.1.29	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of same in country side by **Tipper** (50M away from the edge of the trench)beyond initial lead of 150M but upto 1 k.m with all lifts including loading, unloading, constructing and maintenance of haul roads etc.all complete as per specifications and direction of E/I.	302.60	Per M^3
6.1.30.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C)and disposal of soil by **Tipper** (50 M away from the edge of the trench beyond initial lead of 150M but upto 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)	720.40	Per M^3

Sr.No.	Item	Rate	Unit
6.1.30.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (where blasting is not required) (vide classification of soil item C)and disposal of soil by **Tipper** (50 M away from the edge of the trench beyond initial lead of 150 mtr but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	437.30	Per M^3
6.1.31	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is needed and disposal of soil by **Tipper** (50 mtr away from the edge of the trench beyond initial lead of 150 M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.	720.40	Per M^3
6.1.32	Earth work in filling in foundation trenches or back filling of masonry structures with pervious soil in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits beyond 150 M lead but up to 1/2 K.M. with all lift and carriage by **Tipper** complete job as per specifications and direction of E/I.	392.70	Per M^3
6.1.33	Earth work in filling in foundation trenches or back filling of masonry structures with pervious soil in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits beyond 1/2 K.M lead but up to 1 K.M. with all lift and carriage by **Tipper** complete job as per specifications and direction of E/I.	387.00	Per M^3

CHAPTER VI

BARRAGE AND WEIR

6.1 EARTH WORK

Sl.no.	Description	Quantity	Unit	Rate	Amount	Ref.
6.1.1	Cutting of trees along with branches and their removal away from the work site and stacking the same as per specifications and direction of E/I.(Measurement of girth at a height of one metre above the ground level)	**Analysis same as Item 5.1.4**				
6.1.2	Uprooting of stumps and their removal, away from the work site as per specifications and direction of E/I.	**Analysis same as Item 5.1.5**				
6.1.3.1	Preparation of borrow areas by removing the grass and the jungles, bushes from the top before excavation as per specifications and direction of E/I.	**Analysis same as Item 5.1.2**				
6.1.3.2	Jungle clearance and weeding out shrubs including small tree up to 0.50 meter girth and their removal as per specifications and direction of E/I.	**Analysis same as Item 5.1.3**				
6.1.4	Removal of stone boulder of more than 300 mm size from alignment of the Barrage / Weir and stacking the same (beyond 50 M away from the edge of the foundation trenches in the country side) within initials lead of 150 M as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put =28.32 Cum	28.32	Cum			
	Unskilled mazdoor for removal and stacking	9	nos	242.00	2178.00	
					2178.00	
	Add Overhead charge & C.P@15%				326.7	
					2504.70	
	Add1% Cess				25.05	
					2529.75	89.33
	Say Rs			**89.30**	Per M^3	
6.1.5	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder up to 300 mm size and disposal of the same along with all organic materials (beyond 50M away from the edge of the foundation trenches in the country side) with initial lead of 150M and all lifts as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put =28.32 Cum					
	Unskilled mazdoor for dagbelling	0.50	nos	242.00	121.00	
	Unskilled mazdoor for for cutting earth as well as removing organic materials etc.	6	nos	242.00	1452.00	
	Unskilled mazdoor for preparation of sheet	1	nos	242.00	242.00	
	Unskilled mazdoor for disposal of earth and organic materials	9	nos	242.00	2178.00	
	Mate	0.25	nos	266.00	66.50	
					4059.50	
	Add Overhead charge & C.P@15%				608.925	
					4668.43	
	Add1% Cess				46.68	
					4715.11	166.49
	Say Rs			**166.50**	Per M^3	

6.1.6	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder up to 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150M but within 1.00 K.M and all lifts by Truck including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put =28.32 Cum					
A.	Unskilled mazdoor for dagbelling	0.50	nos	242.00	121.00	
	Unskilled mazdoor for for cutting earth as well as removing organic materials etc.	6	nos	242.00	1452.00	
	Unskilled mazdoor for preparation of sheet	1	nos	242.00	242.00	
	Mate	0.25	nos	266.00	66.50	
B.	Carriage of earth by 10 M.T capacity Truck					
	Carriage cost of earth for 1 k.m lead					
	Average lead	575	M			
	Truck capacity 8 MT (compacted earth)	4.8	Cum			
	Cycle time---- Average speed	16	km/hr			
	(a) Hauling time = Average lead x 60 x 2/1000 x Average speed	4.31	minutes			
	(b) Loading unloading turning and spollting time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = Loading unloading turning and spollting time / Total hauling time	0.93	trips			
	Material carried=trips x net capacity	4.48	M^3			
	Hourly use rate of truck (Vide Item no 3.26)	**843.00**	hr			
	Rate per 28.32 cum for carriage only= Use rate of truck x 28.32 / material carried			Rs	5331.18	
	(c). Construction and maintenance of haul road @ 5 % of Item (B)			Rs	266.56	
					7479.24	
	Add Overhead charge & C.P@15%				1121.89	
					8601.13	
	Add1% Cess				86.01	
					8687.14	306.75
	Say Rs			306.70	Per M^3	
6.1.7	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder up to 300 mm size and disposal of the same along with all organic materials in country side beyond 1.00 K.M but up to 2 K.M away with all lifts by Truck including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
A.	Unskilled mazdoor for dagbelling	0.50	nos	242.00	121.00	
	Unskilled mazdoor for for cutting earth as well as removing organic materials etc.	6	nos	242.00	1452.00	
	Unskilled mazdoor for preparation of sheet	1	nos	242.00	242.00	
	Mate	0.25	nos	266.00	66.50	
B.	Carriage of earth by 10 M.T capacity Truck					
	Carriage cost of earth for 2 k.m lead					
	Average lead	1500	M			
	Truck capacity 8 MT (compacted earth)	4.8	Cum			
	Cycle time---- Average speed	17	km/hr			
	(a) Hauling time = Average lead x 60 x 2/1000 x Average speed	10.59	minutes			

	(b) Loading unloading turning and spoilting time=	60	minutes			
	Total hauling cycle time=	70.59	minutes			
	No of trip per working hour = Loading unloading turning and spoilting time / Total hauling time	0.85	trips			
	Material carried=trips x net capacity	4.08	M^3			
	Hourly use rate of truck	**843.00**	hr			
	Rate per 28.32 cum for carriage only= Use rate of truck x 28.32 / material carried			Rs	5851.41	
	© Construction and maintenance of haul road @ 5 % of Item (B)			Rs	292.57	
					8025.48	
	Add Overhead charge & C.P@15%				1203.82	
					9229.30	
	Add1% Cess				92.29	
					9321.60	329.15
	Say Rs			**329.20**	Per M^3	
6.1.8	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of the excavated earth so obtained (50 M away from the edge of the trench) with initial lead of 150M and initial lifts of 1.5M all complete as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put= 28.32 Cum					
	Unskilled mazdoor for cutting earth	6	nos	242.00	1452.00	
	Unskilled mazdoor for carrying	7	nos	242.00	1694.00	
	Head Mason	0.25	nos	330.00	82.50	
					3228.50	
	Add Overhead charge & C.P@15%				484.275	
					3712.78	
	Add1% Cess				37.13	
					3749.90	132.41
	Say Rs			**132.40**	Per M^3	
6.1.9	Extra for earth work in hard soil (vide classification of soil item-B) all complete as per specification and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put =28.32 Cum					
	Unskilled mazdoor	2	nos	242.00	484.00	
					484.00	
	Add Overhead charge & C.P@15%				72.60	
					556.60	
	Add1% Cess				5.57	
					562.17	19.85
			Say Rs	**19.90**	Per M^3	
6.1.10	Extra for earth work in marshy soil , slush and daldal (vide classification of soil item-F) all complete as per specification and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put= 28.32 Cum					
	Unskilled mazdoor for cutting	1.50	nos	242.00	363.00	
	Unskilled mazdoor for carrying	1.50	nos	242.00	363.00	
					726.00	
	Add Overhead charge & C.P@15%				108.90	
					834.90	
	Add1% Cess				8.35	
					843.25	29.78
			Say Rs	**29.80**	Per M^3	

6.1.11.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C) disposal of excavated materials so obtained (beyond 50M away from the edge of the trench) with initial lead of 150M and initial lifts of 1.5M all complete as per specifications and direction of E/I. **(Soft rock where blasting is required and approved by concerned Chief Engineer)**					
	Unit:- Per Cum					
	Assuming out put =10.00 Cum					
	Labour					
	Hammer man	2.75	nos	258.00	709.50	
	Unskilled mazdoor for all work	9.50	nos	242.00	2299.00	
	Mason Gr I	0.33	nos	330.00	108.90	
	Blaster	0.33	nos	408.00	134.64	
	Blasting material including excise, sales tax, carriage from Gomia to work site, storage etc.					
	Special Gelatin	2.00	Kg	1099.00	2198.00	
	Detonator	10	nos	7.40	73.99	
	Fuse coil	1	nos	15.61	15.61	
	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					5554.64	
	Add Overhead charge & C.P@15%				833.20	
					6387.84	
	Add1% Cess				63.88	
					6451.71	645.17
	Say Rs			645.20	Per M^3	
6.1.11.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock(Where blasting is not required) (vide classification of soil item C) disposal of excavated materials so obtained (beyond 50 M away from the edge of the trench) with initial lead of 150M and initial lifts of 1.5M all complete as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put=10.00 Cum					
	Labour					
	Hammer man	2.75	nos	258.00	709.50	
	Unskilled mazdoor for all work	11.50	nos	242.00	2783.00	
	Mason Gr I	0.50	nos	330.00	165.00	
					3657.50	
	Add Overhead charge & C.P@15%				548.625	
					4206.13	
	Add1% Cess				42.06	
					4248.19	424.82
	Say Rs			424.80	Per M^3	
6.1.12	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is required and stacking properly in approved stack size in approved stack yard (beyond 50 M away from the edge of the trench in country side) with initial lead of 150 m and initial lifts of 1.5M all complete as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=10.00 Cum					
A.	**Labour**					
	Hammer man	10.50	nos	258.00	2709.00	
	Unskilled mazdoor for all work	13.00	nos	242.00	3146.00	

	Mason Gr I	0.33	nos	330.00	108.90	
	Blaster	0.67	nos	408.00	272.00	
B.	**Blasting material including excise, sales tax, carriage from Gomia to work site, storage etc.**					
	Special Gelatin	2.75	Kg	1099.00	3022.25	
	Detonator	18	nos	7.40	133.18	
	Fuse coil	3	nos	15.61	46.83	
C.	**Tools and Plants**					
	Cost of hire charge of compressor, drilling equipment and other accessories				26.50	
					9464.66	
	Add Overhead charge & C.P@15%				1419.70	
					10884.36	
	Add1% Cess				108.84	
					10993.20	1099.32
	Say Rs			**1099.30**	Per M^3	
6.1.13	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of same in country side by Truck (50M away from the edge of the trench)beyond initial lead of 150M but up to 1 k.m with all lifts including loading, unloading, constructing and maintenance of haul roads etc.all complete as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put =28.32 Cum					
A.	Unskilled mazdoor for cutting earth	6	nos	242.00	1452.00	
	Unskilled mazdoor for carrying	1	nos	242.00	242.00	
	Head Mason	0.25	nos	330.00	82.50	
B.	Cost of carriage of 28.32 cum earth by Truck including loading and unloading					
	Carriage cost of earth for 1 k.m lead					
	Average lead	575	M			
	Truck dapacity 8 MT (compacted earth)	4.8	Cum			
	Cycle time---- Average speed	16	km/hr			
	(a) Hauling time =	4.31	minutes			
	(b) Loading unloading, turning and spoliting time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = Loading, unloading, turning and spollting time / Total hauling time	0.93	trips			
	Material carried=trips x net capacity	4.48	M^3			
	Hourly use rate of truck	**843.00**	hr			
	Rate per 28.32 cum for carriage only= Use rate of truck x 28.32 / material carried			Rs	5331.18	
C.	Construction and maintenance of haul road @ 5 % of Item (B)			Rs	266.56	
					7374.24	
	Add Overhead charge & C.P@15%				1106.14	
					8480.38	
	Add1% Cess				84.80	
					8565.18	302.44
	Say Rs			**302.40**	Per M^3	

6.1.14.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C)and disposal of soil by Truck (50M away from the edge of the trench) beyond initial lead of 150 M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)					
	Unit:- Per Cum					
	Assuming out put= 10.00 Cum					
A.	**Labour**					
	Hammer man	2.75	nos	258.00	709.50	
	Unskilled mazdoor for all work	4.00	nos	242.00	968.00	
	Mason Gr I	0.33	nos	295.00	97.35	
	Blaster	0.33	nos	408.00	134.64	
B.	Cost of carriage of 10 cum earth by Truck including loading and unloading					
	Carriage cost of earth for 1 k.m lead					
	Average lead=	575	M			
	Truck capacity 8 MT	6	cum			
	Swell factor	0.67				
	Net capacity=Truck capacity swell factor	4.02	Cum			
	Cycle time---- Average speed	16	km/hr			
	(a) Hauling time =Average leadx60x2/1000xAverage speed	4.31	minutes			
	(b) Loading unloading turning and spoilting time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = Loading unloading turning and spoilting time / Total hauling time	0.93	trips			
	Material carried=trips x net capacity	3.75	M^3			
	Hourly use rate of truck	**843.00**	hr			
	Rate per 10 cum for carriage only=Use rate of truckx10/material carried			Rs	2247.74	
	© Construction and maintenance of haul road @ 5 % of Item (B)			Rs	112.39	
C.	**Blasting material including excise, sales tax, carriage from Gomia to work site, storage etc.**					
	Special Gelatin	2.00	Kg	1099.00	2198.00	
	Detonator	10	nos	7.40	73.99	
	Fuse coil	1	nos	15.61	15.61	
	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					6572.21	
	Add Overhead charge & C.P@15%				985.83	
					7558.05	
	Add1% Cess				75.58	
					7633.63	763.36
	Say Rs			763.40	Per M^3	
6.1.14.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock(where blasting is not required) (vide classification of soil item C)and disposal of soil by Truck (50M away from the edge of the trench) beyond initial lead of 150 M but upto 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:- Per Cum					
	Assuming out put =10.00 Com-					

A.	Labour					
	Hammer man	2.75	nos	258.00	709.50	
	Unskilled mazdoor for all work	4.00	nos	242.00	968.00	
	Mason Gr I	0.33	nos	295.00	97.35	
B.	Cost of carriage of 10 cum earth by Truck including loading and unloading					
	Carriage cost of earth for 1 k.m lead					
	Average lead=	575	M			
	Truck capacity 8 MT	6	cum			
	Swell factor	0.67				
	Net capacity=Truck capacity X swell factor	4.02	Cum			
	Cycle time---- Average speed	16	km/hr			
	(a) Hauling time = Average lead X 60 X 2/1000 X Average speed	4.31	minutes			
	(b) Loading unloading turning and spollting time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = Loading unloading turning and spollting time / Total hauling time	0.93	trips			
	Material carried=tripsXnet capacity	3.75	M^3			
	Hourly use rate of truck	**843.00**	hr			
	Rate per 10 cum for carriage only=Use rate of truckx10/material carried			Rs	2247.74	
	© Construction and maintenance of haul road @ 5 % of Item (B)			Rs	112.39	
					4134.97	
	Add Overhead charge & C.P@15%				620.25	
					4755.22	
	Add1% Cess				47.55	
					4802.77	480.28
	Say Rs			**480.30**	Per M^3	
6.1.15	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is needed and disposal of soil by Truck (50M away from the edge of the trench beyond initial lead of 150 M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=10.0 Cum					
A.	Labour					
	Hammer man	2.75	nos	258.00	709.50	
	Unskilled mazdoor for all work	4.00	nos	242.00	968.00	
	Mason Gr I	0.33	nos	295.00	97.35	
	Blaster	0.33	nos	408.00	134.64	
B.	Cost of carriage of 10 cum earth by Truck including loading and unloading					
	Carriage cost of earth for 1 k.m lead					
	Average lead=	575	M			
	Truck capacity 8 MT	6	cum			
	Swell factor	0.67				
	Net capacity=Truck capacity X swell factor	4.02	Cum			
	Cycle time---- Average speed	16	km/hr			
	(a) Hauling time =Average leadx60x2/1000xAverage speed	4.31	minutes			
	(b) Loading unloding turning and spollting time=	60	minutes			
	Total hauling cycle time=	64.31	minutes			
	No of trip per working hour = Loading unloding turning and spollting time / Total hauling time	0.93	trips			
	Material carried=trips X net capacity	3.75	M^3			

	Hourly use rate of truck	843.00	hr			
	Rate per 10 cum for carriage only=Use rate of truck X 10/material carried			Rs	2247.74	
	© Construction and maintenance of haul road @ 5 % of Item (B)			Rs	112.39	
C.	**Blasting material including excise, sales tax, carriage from Gomia to work site, storage etc.**					
	Special Gelatin	2.00	Kg	1099.00	2198.00	
	Detonator	10	nos	7.40	73.99	
	Fuse coil	1	nos	15.61	15.61	
D.	**Tools and Plants**					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					6572.21	
	Add Overhead charge & C.P@15%				985.83	
					7558.05	
	Add1% Cess				75.58	
					7633.63	763.36
	Say Rs			763.40	Per M^3	
6.1.16	Earth work in filling in foundation trenches and back filling of masonry structures with suitable earth in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30M and lift of 1.5M complete job as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor for cutting .	4.5	nos	242.00	1089.00	
	Unskilled mazdoor for carrying .	4	nos	242.00	968.00	
	Head mason	0.125	nos	330.00	41.25	
					2098.25	
	Add Overhead charge & C.P@15%				314.74	
					2412.99	
	Add1% Cess				24.13	
					2437.12	86.06
		Say	Rs	86.10	Per M^3	
6.1.17	Earth work in filling in foundation trenches and back filling of masonry structures with semi pervious or suitable earth in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits with initial lead of 30 M and initial lift of 1.5 M complete job as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor for cutting .	5.5	nos	242.00	1331.00	
	Unskilled mazdoor for carrying .	4	nos	242.00	968.00	
	Head mason	0.125	nos	330.00	41.25	
					2340.25	
	Add Overhead charge & C.P@15%				351.04	
					2691.29	
	Add1% Cess				26.91	
					2718.20	95.98
		Say	Rs	96.00	Per M^3	
6.1.18	Extra for each subsequent lift up to 1 M over the initial lift of 1.5 M (for ordinary or hard soil) as per specification and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor for cutting	1	nos	242.00	242.00	

					242.00	
	Add Overhead charge & C.P@15%				36.30	
					278.30	
	Add1% Cess				2.78	
					281.08	9.93
		Say	Rs	9.90	Per M^3	
6.1.19	Extra for each subsequent lead up to 25 M beyond the initial lead of 30 M (for ordinary or hard soil) as per specification and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor	1	nos	242.00	242.00	
	Add Overhead charge & C.P@15%				36.30	
					278.30	
	Add1% Cess				2.78	
					281.08	9.93
		Say	Rs	9.90	Per M^3	
6.1.20	Extra for each subsequent lift up to 1 M over the initial lift of 1.5 M (for ordinary soft or hard rock) as per specification and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor for cutting	1.5	nos	242.00	363.00	
	Add Overhead charge & C.P@15%				54.45	
					417.45	
	Add1% Cess				4.17	
					421.62	14.89
		Say	Rs	14.90	Per M^3	
6.1.21	Extra for each subsequent lead up to 25 M beyond the initial lead of 30 M (for ordinary soft or hard rock) as per specification and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
	Unskilled mazdoor	1.5	nos	242.00	363.00	
	Add Overhead charge & C.P@15%				54.45	
					417.45	
	Add1% Cess				4.17	
					421.62	14.89
		Say	Rs	14.90	Per M^3	
6.1.22	Deleted					
6.1.23	Deleted					
6.1.24.1	Fine dressing of the canals banks or embankment and turfing with 75 mm thick grass sode obtained within a lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.					
	Unit:-Per % Sqm					
	Assuming out put=100Sqm					
	Unskilled mazdoor for cutting	1.5	nos	242.00	363.00	
	Unskilled mazdoor for caring	1.5	nos	242.00	363.00	
	Unskilled mazdoor for dressing, placing turf and ramming	1	nos	242.00	242.00	
	Bhisti for carriage of water and sprikling	3	nos	243.00	729.00	
	Cost of watering till the growth				15.00	
					1712.00	
	Add Overhead charge & C.P@15%				256.80	
					1968.80	
	Add1% Cess				19.69	
					1988.49	1988.49
		Say	Rs	1988.50	Per % M^2	

6.1.24.2	Extra for each lead of 150 M over initial lead of 150 M including the cost of watering the grass surface till it acquires greenness as per specifications and direction of E/I.					
	Unit:-Per % Sqm					
	Assuming out put=100Sqm					
	Unskilled mazdoor for carring	1.50	nos	242.00	363.00	
					363.00	
	Add Overhead charge & C.P@15%				54.45	
					417.45	
	Add1% Cess				4.17	
					421.62	421.62
		Say	Rs	**421.60**	Per % M^2	
6.1.25	Close timbering in trenches including strutting, shoring and packing cavaties (whereve required) depth not exceding 1.5 M, complete as per specifications and direction of E/I. (Meassurement to be taken of the face area timbered)					
	Unit:-Per Sqm					
	Assuming out put=90 Sqm					
	Assuming 30 mtr long 1.5 mtr deep					
	Area= 2 x 30 x 1.5 = 90 sqm.					
	Poling Boards					
	Local wood/kail planks 90 x 0.38= 3.42 cum	3.42	cum	33253.00	113725.26	
	100 mm x100 mm					
	Local wood planks 4 x30x 0.1 x0.1 = 1.2 cum	1.2	Cum	33253.00	39903.60	
	Balli struts					
	Sal ballah 120 mm dia 1.5 m long 2 x17x1.5=51 mtr	51	mtr	28.60	1458.60	
	Total Cost of material				155087.46	
	Carriage					
	Cost of carriage of material including loading, unloading and stacking @ 1% of total of cost materials				1550.87	
	Total cost of material with carriage cost				156638.33	
	Deduct credit for materials 75 % of the cost of material				116315.60	
					40322.74	**(A)**
	This (A) can be used four times Therfore cost per use A/4				10080.68	
	Labour					
	Carpenter Gr II	0.5	nos	295.00	147.50	
	Unskilled mazdoor	1	nos	242.00	242.00	
	Total				10470.18	
	Add Overhead charge & C.P@15%				1570.53	
					12040.71	
	Add1% Cess				120.41	
					12161.12	**135.12**
		Say	Rs	**135.10**	Per M^2	
6.1.26	Close timbering in trenches including strutting, shoring and packing cavaties (whereve required) depth exceding 1.5M ,but upto 3.0 M complete as per specifications and direction of E/I. (Meassurement to be taken of the face area timbered)					
	Unit:-Per Sqm					
	Assuming out put=90 Sqm					
	Assuming 30 mtr long 1.5 mtr deep					
	Area= 2 x 30 x 1.5 = 90 sqm.					
	Poling Boards					
	Local wood planks 90 x 0.38= 3.42 cum	3.42	cum	33253.00	113725.26	
	100 mm x100 mm					
	Local wood planks 4 x30x 0.1 x0.1 = 1.2 cum	1.2	Cum	33253.00	39903.60	
	Balli struts					
	Sal ballah 120 mm dia 1.5 m long 2 x17x1.5=51 mtr	51	mtr	28.60	1458.60	

	Total Cost of material				155087.46	
	Cost of carriage of material including loading, unloading and stacking @ 1 % of total of cost materials				1550.87	
	Total cost of material with carriage cost				156638.33	
	Deduct credit for materials75 % of the cost of material				116315.60	
					40322.74	(A)
	This (A) can be used four times Therefore, cost per use A/4				10080.68	
	Labour					
	Carpenter Gr II	0.75	nos	295.00	221.25	
	Unskilled mazdoor	2	nos	242.00	484.00	
	Total				10785.93	
	Add Overhead charge & C.P@15%				1617.89	
					12403.83	
	Add1% Cess				124.04	
					12527.86	139.20
		Say	Rs	**139.20**	Per Sqm	
6.1.27	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond initial lead of 150 M but within 1.00 K.M and all lifts by Tipper including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
A.	Unskilled mazdoor for dagbelling	0.50	nos	242.00	121.00	
	Unskilled mazdoor for for cutting earth as well as removing organic materials etc.	6	nos	242.00	1452.00	
	Unskilled mazdoor for preparation of sheet	1	nos	242.00	242.00	
	Mate	0.25	nos	266.00	66.50	
					1881.50	
	Add Overhead charge & C.P@15%				282.23	
					2163.73	76.40
B.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manual means Vide item no 4.2	1	cum	194.10	194.10	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	33.40	33.40	**Lead x H_{ka}**
					227.50	227.5
						303.90
	Add 1% cess					3.04
						306.94
	Say Rs			**306.90**	Per M^3	
6.1.28	Earth work in stripping in all kinds of soil including moorum soil, soil mixed with kanker, pebbles, and boulder upto 300 mm size and disposal of the same along with all organic materials in country side beyond 1.00 K.M but up to 2 K.M away with all lifts by Tipper including loading, unloading and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
A.	Unskilled mazdoor for dagbelling	0.50	nos	242.00	121.00	
	Unskilled mazdoor for for cutting earth as well as removing organic materials etc.	6	nos	242.00	1452.00	
	Unskilled mazdoor for preparation of sheet	1	nos	242.00	242.00	
	Mate	0.25	nos	266.00	66.50	
					1881.50	

	Add Overhead charge & C.P@15%				282.225	
					2163.73	76.40
B.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	194.10	194.10	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	66.80	66.80	Lead x H_{ka}
					260.90	260.9
						337.30
	Add 1% cess					3.37
						340.68
	Say Rs			**340.70**	Per M^3	
6.1.29	Earth work in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of same in country side by Tipper (50M away from the edge of the trench)beyond initial lead of 150M but up to 1 k.m with all lifts including loading, unloading, constructing and maintenance of haul roads etc.all complete as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
A.	Unskilled mazdoor for cutting earth	6	nos	242.00	1452.00	
	Unskilled mazdoor for carrying	1	nos	242.00	242.00	
	Head Mason	0.25	nos	330.00	82.50	
					1776.50	
	Add Overhead charge & C.P@15%				266.475	
					2042.98	72.14
B.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	194.10	194.10	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	33.40	33.40	Lead x H_{ka}
					227.50	227.5
						299.64
	Add 1% cess					3.00
						302.64
	Say Rs			**302.60**	Per M^3	
6.1.30.1	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock (vide classification of soil item C)and disposal of soil by Tipper (50 M away from the edge of the trench beyond initial lead of 150 M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I. (Soft rock where blasting is required and approved by concerned Chief Engineer)					
	Unit:-Per Cum					
	Assuming out put=10.00 Cum					
A.	**Labour**					
	Hammer man	2.75	nos	258.00	709.50	
	Unskilled mazdoor for all work	4.00	nos	242.00	968.00	
	Mason Gr I	0.33	nos	330.00	108.90	
	Blaster	0.33	nos	408.00	134.64	
					1921.04	
	Add Overhead charges &C.P@15%				288.16	
					2209.20	220.92
B.	**Blasting material including excise, sales tax, carriage from Gomia to work site, storage etc.**					
	Special Gelatin	2.00	Kg	1099.00	2198.00	
	Detonator	10	nos	7.40	73.99	

	Fuse coil	1	nos	15.61	15.61	
	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					2302.60	
	Add Overhead charge & C.P@15%				345.39	
					2647.99	264.80
C.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	194.10	194.10	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	33.40	33.40	**Lead x H_k**
					227.50	227.50
						713.22
	Add 1% cess					7.13
						720.35
	Say Rs			**720.40**	Per M^3	
6.1.30.2	Earth work in excavation of foundation trenches as per designed section in soft rock or ordinary rock(where blasting is not required) (vide classification of soil item C)and disposal of soil by Tipper (50 M away from the edge of the trench beyond initial lead of 150 M but up to 1 k.m away with all lifts including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.					
	Assuming 10cum					
	Labour					
	Hammer man	2.75	nos	258.00	709.50	
	Unskilled mazdoor for all work	4.00	nos	242.00	968.00	
	Mason Gr I	0.33	nos	330.00	108.90	
					1786.40	
	Add Overhead charge & C.P@15%				267.96	
					2054.36	205.44
	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	194.10	194.10	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	33.40	33.40	**Lead x H_{ka}**
					227.50	227.5
						432.94
	Add 1% cess					4.33
						437.27
	Say Rs			**437.30**	Per M^3	
6.1.31	Earth work in excavation of foundation trenches as per designed section in hard rock where blasting is needed and disposal of soil by Tipper (50M away from the edge of the trench beyond initial lead of 150 M but upto 1 k.m away with all lifts, including loading, unloading, construction and maintenance of haul roads as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=10.00 Cum					
A.	**Labour**					
	Hammer man	2.75	nos	258.00	709.50	
	Unskilled mazdoor for all work	4.00	nos	242.00	968.00	
	Mason Gr I	0.33	nos	330.00	108.90	
	Blaster	0.33	nos	408.00	134.64	
B.	**Blasting material including excise, sales tax, carriage from Gomia to work site, storage etc.**					
	Special Gelatin	2.00	Kg	1099.00	2198.00	
	Detonator	10	nos	7.40	73.99	

	Fuse coil	1	nos	15.61	15.61	
	Tools and Plants					
	Cost of hire charge of compressor, drilling equipment and other accessories				15.00	
					4223.64	
	Add Overhead charge & C.P@15%				633.55	
					4857.19	485.72
C.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	194.10	194.10	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	33.40	33.40	**Lead x H_k**
					227.50	227.50
						713.22
	Add 1% cess					7.13
						720.35
	Say Rs			**720.40**	Per M^3	
6.1.32	Earth work in filling in foundation trenches or back filling of masonry structures with pervious soil in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits beyond 150 M lead but up to 1/2 K.M. with all lift and carriage by Tipper complete job as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
A.	**Labour**					
	Unskilled mazdoor for stripping the borrow area	0.75	nos	242.00	181.50	
	Unskilled mazdoor for throwing the stripped earth from borrow area	0.75	nos	242.00	181.50	
	Unskilled mazdoor for cutting earth	9.50	nos	242.00	2299.00	
	Mate	1.00	nos	266.00	266.00	
B.	**Cost of compaction(vide itm no 6.1.38)**					
	Unskilled mazdoor	3	nos	242.00	726.00	
	Bhisti for carriage of water and sprinkling	3	nos	243.00	729.00	
	Total (A+B)				4383.00	
	Add Overhead charge & C.P	20	%		657.45	
					5040.45	177.98
C.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	194.10	194.10	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	16.70	16.70	**Lead x H_k**
					210.80	210.8
						388.78
	Add 1% cess					3.89
						392.67
	Say	Rs		**392.70**	Per M^3	
6.1.33	Earth work in filling in foundation trenches or back filling of masonry structures with pervious soil in layers not exceeding 150 mm thick well watered, rammed and fully compacted and finally dressed with earth obtained after cutting from borrow pits beyond 1/2 K.M lead but up to 1 K.M. with all lift and carriage by Tipper complete job as per specifications and direction of E/I.					
	Unit:-Per Cum					
	Assuming out put=28.32 Cum					
A.	**Labour**					
	Unskilled mazdoor for stripping the borrow area	0.75	nos	242.00	181.50	
	Unskilled mazdoor for throwing the stripped earth from borrow area	0.75	nos	242.00	181.50	
	Unskilled mazdoor for cutting earth	9.50	nos	242.00	2299.00	
	Mate	1.00	nos	266.00	266.00	

B.	**Cost of compaction(vide item no 6.1.38)**					
	Unskilled mazdoor	3	nos	242.00	726.00	
	Bhisti for carriage of water and sprinkling	3	nos	243.00	729.00	
	Total (A+B)				4383.00	
	Add Overhead charge & C.P@15%				657.45	
					5040.45	177.98
C.	Carriage of earth by 5.5 cum capacity Tipper					
	Taking output = 1 cum.km					
	Loading and Unloading of Earth By manuals means Vide item no 4.2	1	cum	171.80	171.80	
	Cost of Haulage vide item no 4.4(c)	1	cum.km	33.40	33.40	**Lead x H_k**
					205.20	205.2
						383.18
	Add 1% cess					3.83
						387.01
		Say	Rs	**387.00**	Per M^3	

Sr.No.	Item	Rate	Unit

6.2 DRILLING WORK

Sr.No.	Item	Rate	Unit
6.2.1.1	Core drilling of N x (53 mm To 75 mm) **(Internal dia To External dia)**size by Rotary core drilling machine up to 20 meters depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.	#VALUE!	Per M
6..2.1.2	Core drilling of N x **(Internal dia To External dia)** (53 mm To 75 mm) (Internal dia To External dia)size by Rotary core drilling machine up to 20 meters depth and up to 30 meters depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.	#VALUE!	Per M
6.2.2	Core drilling of 41mm To 75 mm (Internal dia To External dia) size by Rotary core drilling machine with T.C drill bit in all kinds of soil mixed with boulder, pebbles, shingles etc. including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction maintenance of core and sludge for foundation exploration only complete as per specifications and direction of E/I.	#VALUE!	Per M
6.2.3.1	Core drilling of B x (41 mm To 59 mm)(Internal dia To External dia) size by Rotary core drilling machine up to 20 meters depth and up to 30 meters depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.	#VALUE!	Per M
6.2.3.2	Core drilling of B x (Internal dia To External dia) (41 mm To 59 mm) size by Rotary core drilling machine up to 20 meters depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.	#VALUE!	Per M
6.2.4.	Drilling by Rotary core drilling machine of size 41 mm To 75 mm dia (Internal dia To External dia) with T.C drill bit for grout and test holes in all kinds of soil including moorum, hard soil mixed with pebbles, shingles and compacted soil up to 20 meter depth including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction finishing etc. till operation is completed as per specifications and direction of E/I.	#VALUE!	Per M
6.2.5	Drilling by Rotary drill machine of size 41 mm To 75 mm dia (Internal dia To External dia) with T.C drill BUT for grout and test holes in clay soft and decomposed rock upto 20 meter depth including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction finishing etc. till grouting, complete as per specifications and direction of E/I.	#VALUE!	Per M
6.2.6	Drilling B x (41 mm To 59 mm) (Internal dia To External dia) size dia test and grout holes in all kinds of hard rock including finishing etc. till grouting operation is completed as per specifications and direction of E/I.	#VALUE!	Per M
6.2.7	Drilling N x (53 mm To 75 mm) size dia test and grout holes in all kinds of hard rock including finishing etc. till grouting operation is completed as per specifications and direction of E/I.	#VALUE!	Per M

Sr.No.	Item	Rate	Unit
6.2.8.	Drilling Jack Hammer in hard of all kinds for grout holes up to 5 meter depth (for contact grouting) all complete including washing of holes for period not exceeding 10 minutes per hole as per specifications and direction of E/I.	#REF!	Per M
6.2.9	Drilling by wagon drill machine in hard of all kinds for grout holes up to 5 meter depth (for consolidation grouting) all complete including washing of holes for period not exceeding 10 minutes per hole as per specifications and direction of E/I.	#VALUE!	Per M

6.2 DRILLING WORK

Sl.no	Description	Quantity	Unit	Rate	Amount	Ref.
6.2.1.1	Core drilling of N x (53 mm To 75 mm) **(Internal dia To External dia)**size by Rotary core drilling machine up to 20 metres depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.					
	(I) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!				
	(ii).Average progress of core drilling has been found to be 1.5 metre in 3 hrs. Therefore cost of drilling /m= R/0.5	0.5	M		#VALUE!	
	(iii). Cost of Diamond bit for N x size at site Rs 'D'	IINPUT				
	Life of the bit = 10 metres	10	M			
	Cost of bit per metre = D/10				#VALUE!	
	(iv). Cost of (N x Size) Reaming shell at site = 'S'	IINPUT				
	Life of Reaming shell = 50 metres / shell	50	M/shell			
	Cost of shell per metre = S / 50				#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	
	(vi). Cost of core box, indexing marking placing in the core box and storing it properly. Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores I.e. total 15 metres.	15	M			
	Cost of core box = 'X'	IINPUT				
	Cost per meter= X/15				#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	
	Add 1% cess				#VALUE!	
					#VALUE!	
			Say Rs	#VALUE!	Per M	
6.2.1.2	Core drilling of N x **(Internal dia To External dia)** (53 mm To 75 mm) (Internal dia To External dia)size by Rotary core drilling machine up to 20 metres depth and up to 30 metres depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.					
	The rate for item 6.2.1.1 has been worked out for drilling up to 20 metres depth while drilling beyond 20 metres depth. The depth covered per hour gets reduced to 0.33 metres in place of 0.50 metre per hour, therefore affecting the cost of drilling as per item 8.2.1 ii.Hence cost of drilling per metre = R x 3					
	(I) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!				
	ii.Hence cost of drilling per metre = R /0.33	0.33	M		#VALUE!	
	(iii). Cost of Diamond bit for N x size at site Rs 'D'	IINPUT				

	Life of the bit = 10 metres	10	M			
	Cost of bit per metre = D/10				#VALUE!	
	(iv). Cost of (NxSize) Reaming shell at site = 'S'	IINPUT				
	Life of Reaming shell = 50 metres / shell	50	mtr/shell			
	Cost of shell per metre = S / 50				#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	
	(vi). Cost of core box, indexing marking placing in the core box and storing it properly. Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores i.e. total 15 metres.	15	M			
	Cost of core box = 'X '(	IINPUT				
	Cost per mrtre= X/15				#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
	Add 1% cess					#VALUE!
						#VALUE!
			Say Rs	#VALUE!	Per M	
	Note:- To the rates derived above following may be included as mobilization and demobilization charge depending on the value of work (I). Upton Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii).Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.2	Core drilling of 41mm To 75 mm (Internal dia To External dia) size by Rotary core drilling machine with T.C drill bit in all kinds of soil mixed with boulder, pebbles, shingles etc. including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction maintenance of core and sludge for foundation exploration only complete as per specifications and direction of E/I.					
	(I) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	**#VALUE!**				
	(ii).Average progress of core drilling has been found to be 2.50 metre per hour (As per actual observation). Therefore cost of drilling /m= Use rate of DCDM/2.5	2.5	mtr		#VALUE!	
	(iii). Cost of Tungsten Carbide bit at site Rs.	IINPUT				
	Assuming Life of the bit = 20 metres / bit	20				
	Cost of bit per metre = R/20				#VALUE!	
	(iv). Cost of Reaming shell at site ='N'	IINPUT				
	Life of Reaming shell = 100 metres / shell	100				
	Cost of shell per metre = N / 100				#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above (On the basis of item on 20(iii) page 125 of report of committee on control of R.V.Project)	40	%		#VALUE!	
	(vi). Cost of core box, indexing marking placing in the core box and storing it properly. Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores i.e. total 15 metres.	15	M			
	Cost of core box = 'CB'	IINPUT				
	Cost per meter= CB/15				#VALUE!	

	(vii). Lowering 50 m dia light duty G.I causing pipe and its extraction including cutting , threading an providing socket wherever necessary.					
	(a). Cost of 50 mm dia light duty G.I pipe= (assuming 50 % of light G.I pipe will be salvaged hence only 50 % cost should be taken)	INPUT			#VALUE!	
	(b) Unskilled mazdoor for raising (Extracting) the casing pipe	0.17	nos	242.00	40.33	
	Total (ii)+(iii)+(iv)+(v)+(vi)+(vii)				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
	Add 1% cess					#VALUE!
						#VALUE!
			Say Rs	#VALUE!	Per M	
	Note:- To the rates derived above following may be included as mobilization and demobilization charge depending on the value of work (I). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii).Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.3.1	Core drilling of B x (41 mm To 59 mm)(Internal dia To External dia) size by Rotary core drilling machine up to 20 metres depth and up to 30 metres depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.					
	(I) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	**#VALUE!**				
	(ii).Average progress of core drilling has been found to be 0.80 metre per hrs(as per actual observation at Latratu Dam site). Therefore cost of drilling /m= R/0.80	0.8	M		#VALUE!	
	(iii). Cost of Diamond bit or (Bxsize) at site Rs 'T'	IINPUT				
	Life of the bit = 10 metres	10				
	Cost of bit per metre = T/10				#VALUE!	
	(iv). Cost of (Bxsize) Reaming shell at site = 'TK'	IINPUT				
	Life of Reaming shell = 50 metres / shell	50				
	Cost of shell per metre = TK / 50				#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	
	(vi). Cost of core box, indexing marking placing in the core box and storing it properly. Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores I.e. total 15 metres.	15	M			
	Cost of core box = 'CB'	IINPUT				
	Cost per meter= CB/15				#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
	Add 1% cess					#VALUE!
						#VALUE!
			Say Rs	#VALUE!	Per M	

6.2.3.2	Core drilling of B x (Internal dia To External dia) (41 mm To 59 mm) size by Rotary core drilling machine up to 20 metres depth in all kinds of hard rock including finishing and maintenance of core (minimum 80 % core recovery in hard rock is essential) and sludge etc. for foundation exploration only complete as per specifications and direction of E/I.					
	The rate for item 8.2.3.1 has been worked out for drilling up to 20 metres depth while drilling beyond 20 metres depth. The depth covered per hour gets reduced to 0.50 metres in place of 0.80 metre per hour, therefor affecting the cost of drilling as per item 8.2.1 (ii). Hence cost of drilling per metre = R x 0.50					
	(I) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	**#VALUE!**				
	(ii).Average progress of core drilling has been found to be 0.50 metre per hrs(as per actual observation at Latratu Dam site). Therefore cost of drilling /m= R/0.50	0.5	mtr		#VALUE!	
	(iii). Cost of Diamond bit or (Bxsize) at site Rs 'T'	IINPUT				
	Life of the bit = 10 metres	10				
	Cost of bit per metre = T/10				#VALUE!	
	(iv). Cost of (Bxsize) Reaming shell at site = 'TK'	IINPUT				
	Life of Reaming shell = 50 metres / shell	50				
	Cost of shell per metre = TK / 50				#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	
	(vi). Cost of core box, indexing marking placing in the core box and storing it properly. Cost of good quality wooden core box 3 metres long x 0.85 metre wide x 0.15 metre deep with longitudinal compartment to accommodate 5 row of 3 metres long cores i.e. total 15 metres.	15	M			
	Coxt of core box = 'CB'	IINPUT				
	Cost per mrtre= CB/15				#VALUE!	
					#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
	Add 1% cess					#VALUE!
						#VALUE!
			Say Rs	#VALUE!	Per M	
	Note:- To the rates derived above following may be included as mobilization and demobilization charge depending on the value of work (I). Up to Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii).Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.4.	Drilling by Rotary core drilling machine of size 41 mm To 75 mm dia (Internal dia To External dia) with T.C drill bit for grout and test holes in all kinds of soil including moorum, hard soil mixed with pebbles, shingles and compacted soil up to 20 metre depth including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction finishing etc. till operation is completed as per specifications and direction of E/I.					

	(I) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!				
	(ii).Average progress of core drilling has been found to be 2.50 metre per hour (As per actual observation). Therefore cost of drilling /m= D/2.5	2.5	M		#VALUE!	
	(iii). Cost of Tungsten Carbide bit at site Rs.T.C	IINPUT				
	Assuming Life of the T.C bit = 20 metres	20				
	Cost of bit per metre = T.C/20				#VALUE!	
	(iv). Cost of Reaming shell at site = 'RS'	IINPUT				
	Assuming Life of Reaming shell = 100 metres	100				
	Cost of shell per metre = RS / 100				#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	
	(vi). Lowering 50 metre dia light duty G.I casing pipe and its extraction including cutting, threading and providing socket wherever necessary.**(vide T.E.C Item no 12.1.61)**	1	M	#VALUE!	#VALUE!	
	Analysis (vide T.E.C Item no 12.1.61) Supplying labour, materials and equipment for lowering 100 mm G.I.pipe (casing) up to 12 m depth for protecting the sides from filling during the process of drilling as per specification and direction of E/I. (G.I casing to be supplied					
	i. Carriage of pipe for an average lead of 50 K.M from store to site (12 mtr. In length as per carriage schedual					
	ii. Cutting two pipe in four pieces) lowering of pipe is made in length of 3 metre)					
	iii. Making thread in cut pieces	**4**	**nos**	**INPUT**	**#VALUE!**	
	iv. Supplying and fitting two extra socket	**2**	**nos**	**INPUT**	**#VALUE!**	
	v. Red lead and jute etc. for scoket fixing				**3.00**	
	vi. Plumber Gr I	**0.5**	**nos**	**265.00**	**132.50**	
					#VALUE!	
	Add Overhead charge & C.P @15%				**#VALUE!**	
					#VALUE!	
	Add 1% cess				#VALUE!	
					#VALUE!	#VALUE!
	Say		**Rs**	**#VALUE!**	**Per mtr**	
	(a). Cost of 50 mm dia light duty G.I pipe= (assuming 50 % of light G.I pipe will be salvaged hence only 50 % cost should be taken)	1.00	mtr	INPUT	#VALUE!	
	(b). Labour for cutting, threading and inserting etc.	0.08		242.00	19.36	
	(c) Unskilled mazdoor for raising (Extracting) the casing pipe	0.17	nos	242.00	41.14	
	(d). Clearing the pipe					
	Final Rate (ii)+(iii)+(iv)+(v)+(vi)+(vii)				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
	Add 1% cess					#VALUE!
						#VALUE!
			Say Rs	#VALUE!	Per M	
	Note:- To the rates derived above following may be included as mobilisation and domobilisation charge depanding on the valu of work (I). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii).Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					

6.2.5	Drilling by Rotary drill machine of size 41 mm To 75 mm dia (Internal dia To External dia) with T.C drill BUT for grout and test holes in clay soft and decomposed rock upto 20 metre depth including reaming (to facilitate smooth lowering of casing pipe) lowering of casing pipes and its extraction finishing etc. till grouting, complete as per specifications and direction of E/I.					
	(I) Hourly use rate of rotary core drilling machine and diesel pump (Vide item no 3.4)	#VALUE!				
	(ii).Average progress of core drilling has been found to be1.50 metreper hour (As per actual observation at Latrau Dam site). Therefore cost of drilling /m= R/1.5	1.5	M		#VALUE!	
	(iii). Cost of Tungaton Carbide bit at site Rs.	IINPUT				
	Assuming Life of the T.C bit = 20 metres	20				
	Cost of bit per metre = T.C/20				#VALUE!	
	(iv). Cost of Reaming shell at site = 'RS'	IINPUT				
	Assuming Life of Reaming shell =100 metres	100				
	Cost of shell per metre = RS / 100				#VALUE!	
	(v). Shifting cost of the machine from one hole to another @ 40 % of item no (ii). Above	40	%		#VALUE!	
	(vi). Lowering 50 metre dia light duty G.I casing pipe and its extraction including cutting, threading and providing socket wherever necessary.	1	mtr	#VALUE!	#VALUE!	
	(a). Cost of 50 mm dia light duty G.I pipe= (assuming 50 % of light G.I pipe will be salvaged hence only 50 % cost should be taken)	1.00	M	160.70	80.35	
	(b). Labour for cutting, threading and inserting etc.	0.08		184.00	14.72	
	© Unskilled mazdoor for raising (Extracting) the casing pipe	0.17	nos	184.00	31.28	
	(d). Clearing the pipe					
	Final Rate (ii)+(iii)+(iv)+(v)+(vi)+(vii)				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
	Add 1% cess					#VALUE!
						#VALUE!
			Say Rs	#VALUE!	Per M	
	Note:- To the rates derived above following may be included as mobilisation and domobilisation charge depanding on the valu of work (I). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii).Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.6	Drilling B x (41 mm To 59 mm) (Internal dia To External dia) size dia test and grout holes in all kinds of hard rock including finishing etc. till grouting operation is completed as per specifications and direction of E/I.					
	(A). 40% drilling is done by wagon drill machine. Hehce cost of drilling per metre by wagon drill vide item no 8.2.9 x 0.4 =				#VALUE!	

	(B). 60 % drilling is done by diamond core drilling machine because beyond filled up portion of cut off trench diamond core drilling machine is utilised in place of wagon drill for deeper depth machince. Drilling for the purpose of test and grout holes take place only in fissures and fractured rock. Hence cost of drilling per metre by Diamond core drilling= 0.60 x Rate of B x Size drilling by Rotary core drilling machine. Cost of core box, indexing, marking etc.) vide item 8.2.3.1. Total cost of drilling per metre				#VALUE!	
	Total				#VALUE!	#VALUE!
	Add 1% cess	1	%			#VALUE!
						#VALUE!
			Say Rs	#VALUE!	Per M	
	Note:- To the rates derived above following may be included as mobilisation and domobilisation charge depanding on the valu of work (I). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii).Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.7	Drilling N x (53 mm To 75 mm) size dia test and grout holes in all kinds of hard rock including finishing etc. till grouting operation is completed as per specifications and direction of E/I.					
	(One a fission and Zeological condition as per report received from zeological and actual obervation)					
	(A). 40% drilling is done by wagon drill machine. Hence cost of drilling per metre by wagon drill vide item no 8.2.9 x 0.4 =				#VALUE!	
	(B). 60 % drilling is done by diamond core drilling machine because beyond filled up portion of cut off trench diamond core drilling machine is utilised in place of wagon drill for deeper depth machince. Drilling for the purpose of test and grout holes take place only in fissures and fractured rock. Hence cost of drilling per metre by Diamond core drilling= 0.60 x Rate of N x Size drilling by Rotary core drilling machine. Cost of core box, indexing, marking etc.) vide item 8.2.1.2. Total cost of drilling per metre				#VALUE!	
	Total				#VALUE!	#VALUE!
	Add 1% cess				#VALUE!	#VALUE!
						#VALUE!
			Say Rs	#VALUE!	Per M	
	Note:- To the rates derived above following may be included as mobilisation and domobilisation charge depanding on the valu of work (I). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii).Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.8	Drilling Jack Hammer in hard of all kinds for grout holes upto 5 metre depth (for contact grouting) all complete including washing of holes for period not exceeding 10 minutes per hole as per specifications and direction of E/I.					

	(A) Cost of drilling. Use rate of Jack Hammer (52 lbs) (vide item 3.2)	#REF!				
	Average rate of drilling 35 mm hole per hour-- 2.3 metre	2.3	M			
	Hence rate of drilling per metre = Use rate of Jack Hammer/2.3				#REF!	
	(B). Cost of drill rod per metre of drilling. Drilling with Jack Hammer . Cost of 5.6 metre drill rod at site including cost of bit 'P'. Bit life 130 metre	#VALUE!				
	(a). Rate per metre of drill rod and bit= P/130				#VALUE!	
	(b). Sharping charge of bit @Rs 1.00 per m				1.00	
	Use rate of drill roads with bit / M= (a+b)				#VALUE!	
	(C). Labour, lighting and scaffolding etc. = 60 % of use rate of drill rods with bit per metre				#VALUE!	
	(D). Ventilation and work shap charges = = 40 % of use rate of drill rods with bit per metre				#VALUE!	
	(E). Washing the hole					
	Total				#REF!	
	Add Overhead charge & C.P@15%				#REF!	
					#REF!	#REF!
	Add 1% cess				#REF!	#REF!
					#REF!	#REF!
			Say Rs	#REF!	Per M	
	Note:- To the rates derived above following may be included as mobilisation and domobilisation charge depanding on the valu of work (I). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii).Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					
6.2.9	Drilling by wagon drill machine in hard of all kinds for grout holes upto 5 metre depth (for consolidation grouting) all complete including washing of holes for period not exceeding 10 minutes per hole as per specifications and direction of E/I.					
	(On the basis of item on 20 page 125 of report of committee on control of R.V.Project vil II)					
	(I) Hourly use rate of Wagon drilling machine and diesel pump. (vide item 3.5)	#VALUE!				
	(ii).Average progress of core drilling has been found to be 6 metre per hour 50 % progress due to source limitation etc. . The rate of drilling /hr= Use rate of wagon drill M/C=R/3				#VALUE!	
	(iii). Cost of drill steel per metre of drilling					
	(a). Drill steel used with wagon drill					
	The following drill equipments will be required for 10 metre deep drill holes with one wagon drill.					
	Shank adopter	1	no	IINPUT	#VALUE!	
	Coupling sleeves	4	no	IINPUT	#VALUE!	
	Extension rod 1 x 3.00metre	1	no	IINPUT	#VALUE!	
	Extension rod 1 x 2.50 metre	1	no	IINPUT	#VALUE!	
	Extension rod 1 x 2.00 metre	1	no	IINPUT	#VALUE!	
	Extension rod 1 x 1.50 metre	1	no	IINPUT	#VALUE!	
	Extension rod 1 x 1.00 metre	1	no	IINPUT	#VALUE!	
					#VALUE!	
	Economic lift=460 metre	460				
	Cost of drill steel per metre of drilling				#VALUE!	
	(b).Cost of 4 point drill bit at site= R.S (Vide item no 3.5h)	IINPUT				
	Total life of bit 130 metre	130				
	Cost of bit/ metre of drilling= R.S/130				#VALUE!	

	(c).Sharpening charge @ 1.00 per metre				1.00	
	(iv). Cost of shifting of wagon drill @ 40 % of item (iii).				#VALUE!	
	(v). Lightening, ventilation and workshop charge @ 40 % of item (iii)				#VALUE!	
	(iv).Washing hole					
	Total				#VALUE!	
	Add Overhead charge & C.P@15%				#VALUE!	
					#VALUE!	#VALUE!
	Add 1% cess	1	%			#VALUE!
						#VALUE!
			Say Rs	#VALUE!	Per M	
	Note:- To the rates derived above following may be included as mobilization and demobilization charge depending on the value of work (I). Upto Rs 5 lakhs @ 10 % subject to maximum of Rs 37500 /- only (ii).Above Rs 5 lakhs Upto Rs 10 lakhs @ 7.5 % subject to maximum of Rs 50000 /- only (iii). Above Rs 10 lakhs @ 5 % subject to maximum of Rs 75000 /- only					

Sr.No.	Item	Rate	Unit

6.3. CONCRETE WORK

Sr.No.	Item	Rate	Unit
6.3.1	Providing and laying P.C.C with nominal mix of (1: 4 : 8) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)** (Rate of Coarse aggregates Gr III Taken)		
	Patna Urban	3488.70	Per M^3
	Patna	3488.70	Per M^3
	Muzaffarpur	3488.70	Per M^3
	Darbhanga	3488.70	Per M^3
	Bhagalpur	3468.20	Per M^3
	Munger	3468.20	Per M^3
	Saharsa	3488.70	Per M^3
	Purnea	3488.70	Per M^3
	Gaya	3423.00	Per M^3
	Saran	3468.20	Per M^3
6.3.2	Providing and laying P.C.C M-100 with nominal mix of (1: 3 : 6) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr IV Taken)**		
	Patna Urban	3884.80	Per M^3
	Patna	3884.80	Per M^3
	Muzaffarpur	3884.80	Per M^3
	Darbhanga	3884.80	Per M^3
	Bhagalpur	3858.10	Per M^3
	Munger	3858.10	Per M^3
	Saharsa	3884.80	Per M^3
	Purnea	3884.80	Per M^3
	Gaya	3799.30	Per M^3
	Saran	3858.10	Per M^3

Sr.No.	Item	Rate	Unit
6.3.3	Providing and laying P.C.C or R.C.C M-150 with nominal mix of (1:2:4) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm to 10 mm Taken)**		
	Patna Urban	4769.60	Per M^3
	Patna	4769.60	Per M^3
	Muzaffarpur	4769.60	Per M^3
	Darbhanga	4769.60	Per M^3
	Bhagalpur	4731.20	Per M^3
	Munger	4731.20	Per M^3
	Saharsa	4769.60	Per M^3
	Purnea	4769.60	Per M^3
	Gaya	4646.60	Per M^3
	Saran	4731.20	Per M^3
6.3.4	Providing and laying P.C.C or R.C.C M-200 with nominal mix of (1:1.5:3) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm to 10 mm Taken)**		
	Patna Urban	5389.00	Per M^3
	Patna	5389.00	Per M^3
	Muzaffarpur	5389.00	Per M^3
	Darbhanga	5389.00	Per M^3
	Bhagalpur	5340.00	Per M^3
	Munger	5340.00	Per M^3
	Saharsa	5389.00	Per M^3
	Purnea	5389.00	Per M^3
	Gaya	5232.10	Per M^3
	Saran	5340.00	Per M^3
6.3.5	Providing and laying P.C.C or R.C.C M-250 with nominal mix of (1:1:2) in various components of Barrage foundation with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates 20 mm To 10 mm Taken)**		
	Patna Urban	6828.70	Per M^3
	Patna	6828.70	Per M^3
	Muzaffarpur	6828.70	Per M^3
	Darbhanga	6828.70	Per M^3
	Bhagalpur	6756.30	Per M^3

Sr.No.	Item	Rate	Unit
	Munger	6756.30	Per M^3
	Saharsa	6828.70	Per M^3
	Purnea	6828.70	Per M^3
	Gaya	6596.80	Per M^3
	Saran	6756.30	Per M^3
6.3.6	Providing and laying P.C.C M-75 with nominal mix of (1: 4 : 8) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design) (Rate of Coarse aggregates Gr IV Taken)**		
	Patna Urban	3544.40	Per M^3
	Patna	3544.40	Per M^3
	Muzzaffarpur	3544.40	Per M^3
	Darbhanga	3544.40	Per M^3
	Bhagalpur	3523.90	Per M^3
	Munger	3523.90	Per M^3
	Saharsa	3544.40	Per M^3
	Purnea	3544.40	Per M^3
	Gaya	3478.70	Per M^3
	Saran	3523.90	Per M^3
6.3.7	Providing and laying P.C.C M-100 with nominal mix of (1: 3 : 6) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)** (Rate of Coarse aggregates Gr III Taken)		
	Patna Urban	3890.20	Per M^3
	Patna	3890.20	Per M^3
	Muzzaffarpur	3890.20	Per M^3
	Darbhanga	3890.20	Per M^3
	Bhagalpur	3863.50	Per M^3
	Munger	3863.50	Per M^3
	Saharsa	3890.20	Per M^3
	Purnea	3890.20	Per M^3
	Gaya	3804.60	Per M^3
	Saran	3863.50	Per M^3

Sr.No.	Item	Rate	Unit
6.3.8	Providing and laying P.C.C or R.C.C M-150 with nominal mix of (1:2:4) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per design)** (Rate of Coarse aggregates 20 mm to 10 mm Taken)		
	Patna Urban	4799.90	Per M^3
	Patna	4799.90	Per M^3
	Muzaffarpur	4799.90	Per M^3
	Darbhanga	4799.90	Per M^3
	Bhagalpur	4761.50	Per M^3
	Munger	4761.50	Per M^3
	Saharsa	4799.90	Per M^3
	Purnea	4799.90	Per M^3
	Gaya	4676.80	Per M^3
	Saran	4761.50	Per M^3
6.3.9	Providing and laying P.C.C or R.C.C M-200 with nominal mix of (1:1.5:3) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)** (Rate of Coarse aggregates 20 mm to 10 mm Taken)		
	Patna Urban	5419.20	Per M^3
	Patna	5419.20	Per M^3
	Muzaffarpur	5419.20	Per M^3
	Darbhanga	5419.20	Per M^3
	Bhagalpur	5370.30	Per M^3
	Munger	5370.30	Per M^3
	Saharsa	5419.20	Per M^3
	Purnea	5419.20	Per M^3
	Gaya	5262.40	Per M^3
	Saran	5370.30	Per M^3
6.3.10	Providing and laying P.C.C or R.C.C M-250 with nominal mix of (1:1:2) in various components of Barrage superstructure with approved quality of gravel coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)** (Rate of Coarse aggregates 20 mm to 10 mm Taken)		
	Patna Urban	6858.90	Per M^3
	Patna	6858.90	Per M^3
	Muzzaffarpur	6858.90	Per M^3
	Darbhanga	6858.90	Per M^3
	Bhagalpur	6786.60	Per M^3

Sr.No.	Item	Rate	Unit
	Munger	6786.60	Per M^3
	Saharsa	6858.90	Per M^3
	Purnea	6858.90	Per M^3
	Gaya	6627.10	Per M^3
	Saran	6786.60	Per M^3
6.3.11	Providing and laying R.C.C M-150 with nominal mix of (1: 2 : 4) in deck slab with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)**		
	Patna Urban	4800.20	Per M^3
	Patna	4800.20	Per M^3
	Muzaffarpur	4800.20	Per M^3
	Darbhanga	4800.20	Per M^3
	Bhagalpur	4761.80	Per M^3
	Munger	4761.80	Per M^3
	Saharsa	4800.20	Per M^3
	Purnea	4800.20	Per M^3
	Gaya	4677.10	Per M^3
	Saran	4761.80	Per M^3
6.3.12	Providing and laying R.C.C M-200 with nominal mix of (1:1.5:3) in deck slab with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened excluding cost of shuttering or form work as well as reinforcement its cutting, bending, binding, and placing but including necessary tools and plants, vibrating, curing, royalty and all taxes etc. complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)**(Rate of Coarse aggregates 20 mm to 10 mm Taken)		
	Patna Urban	5419.20	Per M^3
	Patna	5419.20	Per M^3
	Muzaffarpur	5419.20	Per M^3
	Darbhanga	5419.20	Per M^3
	Bhagalpur	5370.30	Per M^3
	Munger	5370.30	Per M^3
	Saharsa	5419.20	Per M^3
	Purnea	5419.20	Per M^3
	Gaya	5262.40	Per M^3
	Saran	5370.30	Per M^3
6.3.13	Providing and laying mass concrete of M-100 with nominal mix of (1:3:6) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc. as well as royalty and all taxes etc.but excluding the cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr IV Taken)**		
	Patna Urban	#VALUE!	Per M^3
	Patna	#VALUE!	Per M^3
	Muzaffarpur	#VALUE!	Per M^3

Sr.No.	Item	Rate	Unit
	Darbhanga	#VALUE!	Per M^3
	Bhagalpur	#VALUE!	Per M^3
	Munger	#VALUE!	Per M^3
	Saharsa	#VALUE!	Per M^3
	Purnea	#VALUE!	Per M^3
	Gaya	#VALUE!	Per M^3
	Saran	#VALUE!	Per M^3
6.3.14	Providing and laying mass concrete of M-150 with nominal mix of (1:2:4) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc. as well as royalty and all taxes etc.but excluding the cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)**		
	Patna Urban	#VALUE!	Per M^3
	Patna	#VALUE!	Per M^3
	Muzzafferpur	#VALUE!	Per M^3
	Darbhanga	#VALUE!	Per M^3
	Bhagalpur	#VALUE!	Per M^3
	Munger	#VALUE!	Per M^3
	Saharsa	#VALUE!	Per M^3
	Purnea	#VALUE!	Per M^3
	Gaya	#VALUE!	Per M^3
	Saran	#VALUE!	Per M^3
6.3.15	Providing and laying mass concrete of M-200 with nominal mix of (1:1.5:3) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc. as well as royalty and all taxes etc.but excluding the cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)**		
	Patna Urban	#VALUE!	Per M^3
	Patna	#VALUE!	Per M^3
	Muzaffarpur	#VALUE!	Per M^3
	Darbhanga	#VALUE!	Per M^3
	Bhagalpur	#VALUE!	Per M^3
	Munger	#VALUE!	Per M^3
	Saharsa	#VALUE!	Per M^3
	Purnea	#VALUE!	Per M^3
	Gaya	#VALUE!	Per M^3
	Saran	#VALUE!	Per M^3
6.3.16	Providing and laying mass concrete of M-250 with nominal mix of (1:1:2) in Barrage with approved quality of graded coarse aggregate of required grades as per design and approved quality sand of requisite F.M washed and screened including vibrating, curing etc. as well as royalty and all taxes etc.but excluding the cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)**		
	Patna Urban	#VALUE!	Per M^3

Sr.No.	Item	Rate	Unit
	Patna	#VALUE!	Per M^3
	Muzaffarpur	#VALUE!	Per M^3
	Darbhanga	#VALUE!	Per M^3
	Bhagalpur	#VALUE!	Per M^3
	Munger	#VALUE!	Per M^3
	Saharsa	#VALUE!	Per M^3
	Purnea	#VALUE!	Per M^3
	Gaya	#VALUE!	Per M^3
	Saran	#VALUE!	Per M^3
6.3.17	Providing and laying dry pitching with precast cement concrete block 600 mm x 600 mm x 300 mm size of M-75 with nominal mix of (1:4:8) in floor and flank wall with approved quality of graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M washed and screened including necessary form work, tools and plants, vibrating, curing as well royalty and all taxes complete job as per specifications and direction of E/I. **(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr III Taken)**		
	Patna Urban	4720.20	Per M^3
	Patna	4720.20	Per M^3
	Muzaffarpur	4720.20	Per M^3
	Darbhanga	4720.20	Per M^3
	Bhagalpur	4699.70	Per M^3
	Munger	4699.70	Per M^3
	Saharsa	4720.20	Per M^3
	Purnea	4720.20	Per M^3
	Gaya	4654.50	Per M^3
	Saran	4699.70	Per M^3
6.3.18	Providing and laying dry pitching with precast cement concrete block 600 mm x 600 mm x 300 mm size of M-100 with nominal mix of (1:3:6) in floor and flank wall with approved quality of graded coarse aggregate of required grade (as per design) and approved quality of sand of requisite F.M washed and screened including necessary form work, tools and plants, vibrating, curing as well royalty and all taxes complete job as per specifications and direction of E/I. (Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr III Taken)		
	Patna Urban	6328.60	Per M^3
	Patna	6328.60	Per M^3
	Muzaffarpur	6328.60	Per M^3
	Darbhanga	6328.60	Per M^3
	Bhagalpur	6301.50	Per M^3
	Munger	6301.50	Per M^3
	Saharsa	6328.60	Per M^3
	Purnea	6328.60	Per M^3
	Gaya	6241.70	Per M^3
	Saran	6301.50	Per M^3
6.3.19	Centering and shuttering in major Barrage work involving mass concrete including cost of form work, their carriage from work shop to work site, errection with the help of suitable crane and stripping etc. complete job as per specifications and direction of E/I.	#VALUE!	Per M^2
6.3.20	Providing shuttering including strutting. Propping etc. and its removal after use in foundation work as per specifications and direction of E/I.	587.20	Per M^2

Sr.No.	Item	Rate	Unit
6.3.21	Providing shuttering including strutting. Propping etc. and its removal after use in superstructure portion of various components of dam work as per specifications and direction of E/I.	587.20	Per M^2
6.3.22	Providing centering including strutting. Propping etc. and removing after use in deck slab as per specifications and direction of E/I.	674.80	Per M^2
6.3.23	Providing M.S reinforcement(Plain steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.		
	(a).Dia of bar 6 mm	65203.00	Per M.T
	(B).Dia of bar above 6 mm to 12 mm	65203.00	Per M.T
	(B).Dia of bar above 14 mm to 50 mm	65203.00	Per M.T
6.3.24	Providing M.S reinforcement (Tor steel) as per approved design , drawing, removal of rust, cutting, bending, binding, including supplying annealed wire, placing M.S rods in position complete job as per specifications and direction of E/I.		
(a)	**T.M.T.GRADE Fe-415-** 8 mm	#VALUE!	Per M.T
(b)	T.M.T.GRADE Fe-415- 10 mm	#VALUE!	Per M.T
(c)	T.M.T.GRADE Fe-415- 12 mm	#VALUE!	Per M.T
(d)	T.M.T.GRADE Fe-415- 16 mm	#VALUE!	Per M.T
(e)	T.M.T.GRADE Fe-415- 20 mm	7947.00	Per M.T
(f)	T.M.T.GRADE Fe-415- 25 mm	#VALUE!	Per M.T
(g)	T.M.T.GRADE Fe-415- 28 mm	7947.00	Per M.T
(h)	T.M.T. GRADE Fe-415- 32 mm	#VALUE!	Per M.T
(i)	**T.M.T.GRADE Fe-500-** 8 mm	58358.10	Per M.T
(j)	T.M.T. GRADE Fe-500- 10 mm	57077.60	Per M.T
(k)	T.M.T.GRADE Fe-500- 12 mm	56430.00	Per M.T
(l)	T.M.T. Fe-500- 16 mm	56819.00	Per M.T
(m)	T.M.T. Fe-500- 20 mm	56430.00	Per M.T
(n)	T.M.T. Fe-500- 25 mm	56430.00	Per M.T
(o)	T.M.T. Fe-500- 28 mm	56430.00	Per M.T
(p)	T.M.T. Fe-500- 32 mm	56430.00	Per M.T
(q)	T.M.T. Fe-500- 36 mm	#VALUE!	Per M.T
6.3.25	Grouting for Dam foundation per bags of cement all complete as per specifications and direction of E/I.		
	Patna Urban	400.80	Per Bags of cement
	Patna	400.80	Per Bags of cement
	Muzaffarpur	400.80	Per Bags of cement
	Darbhanga	400.80	Per Bags of cement
	Bhagalpur	394.80	Per Bags of cement
	Munger	394.80	Per Bags of cement
	Saharsa	400.80	Per Bags of cement
	Purnea	400.80	Per Bags of cement
	Gaya	381.30	Per Bags of cement
	Saran	394.80	Per Bags of cement

Sr.No.	Item	Rate	Unit
6.3.26	Providing and laying mass concrete of M-100 with nominal mix of (1:3:6) in flow and non-over flow of dam section with approved quality of qraded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating,precooling etc. as well as royalty and all taxes etc.but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I.(**With Batching Plant, Transit Mixer And Concrete Pump)(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates Gr IV Taken)**		
	Patna Urban	2989.00	Per M^3
	Patna	2989.00	Per M^3
	Muzaffarpur	2989.00	Per M^3
	Darbhanga	2989.00	Per M^3
	Bhagalpur	2962.20	Per M^3
	Munger	2962.20	Per M^3
	Saharsa	2989.00	Per M^3
	Purnea	2989.00	Per M^3
	Gaya	2903.20	Per M^3
	Saran	2962.20	Per M^3
6.3.27	Providing and laying mass concrete of M-150 with nominal mix of (1:2:4) in over flow and non-over flow sectopm of dry intake, structures and bridges etc with approved quality of qraded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating,precooling etc. as well as royalty and all taxes etc.but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. **(With Batching Plant, Transit Mixer And Concrete Pump)(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)**		
	Patna Urban	3868.30	Per M^3
	Patna	3868.30	Per M^3
	Muzaffarpur	3868.30	Per M^3
	Darbhanga	3868.30	Per M^3
	Bhagalpur	3829.90	Per M^3
	Munger	3829.90	Per M^3
	Saharsa	3868.30	Per M^3
	Purnea	3868.30	Per M^3
	Gaya	3745.20	Per M^3
	Saran	3829.90	Per M^3
6.3.28	Providing and laying mass concrete of M-200 with nominal mix of (1:1.5 :3) in Dam and Spillways with approved quality of qraded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating,precooling etc. as well as royalty and all taxes etc.but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. **(With Batching Plant, Transit Mixer And Concrete Pump)(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)**		
	Patna Urban	4489.40	Per M^3
	Patna	4489.40	Per M^3
	Muzaffrpur	4489.40	Per M^3
	Darbhanga	4489.40	Per M^3
	Bhagalpur	4440.40	Per M^3
	Munger	4440.40	Per M^3
	Saharsa	4489.40	Per M^3

Sr.No.	Item	Rate	Unit
	Purnea	4489.40	Per M^3
	Gaya	4332.40	Per M^3
	Saran	4440.40	Per M^3
6.3.29	Providing and laying mass concrete of M-250 with nominal mix of (1: 1 : 2) in Dam , Spillways and Head works with approved quality of qraded coarse aggregate and approved quality sand of requisite F.M washed and screened including vibrating,precooling etc. as well as royalty and all taxes etc.but excluding cost of form work etc. wherever provided and removed after use, all complete as per specifications and direction of E/I. **(With Batching Plant, Transit Mixer And Concrete Pump)(Taking Rate of approved quality of aggregate as per Design)(Rate of Coarse aggregates 20 mm To 10 mm Taken)**		
	Patna Urban	5880.20	Per M^3
	Patna	5880.20	Per M^3
	Muzaffarpur	5880.20	Per M^3
	Darbhanga	5880.20	Per M^3
	Bhagalpur	5808.50	Per M^3
	Munger	5808.50	Per M^3
	Saharsa	5880.20	Per M^3
	Purnea	5880.20	Per M^3
	Gaya	5650.40	Per M^3
	Saran	5808.50	Per M^3