

**ABSTRACT OF COST - SH 01**

**NAME OF WORK :- DPR for Construction of Ghats at left side bank ZONE N-III, Nanded.**

**29.01.2007**

ITEM	Description of Item	Quantity	Rate	Unit	Amount	Reference
<b>PWD DSR-2006-07</b>						
1.00	Excavation for foundation including shoring and strutting as necessary and disposing off excavated stuff as directed In earth, soils of all type sand, gravel, soft murum etc. complete (excluding dewatering if separately provided etc. complete) as directed by Engineer in charge for depth-of-1.5m.	68,363.00 CUM	134.05	CUM	Rs 9,164,060.00	Item no-751, P-270
2.00	Excavation for foundation In hard murum and boulders upto 0.3 cum. to 0.20 cum. size including shoring and strutting as necessary and disposing off excavated stuff as directed excluding dewatering if separately provided etc. complete as directed by Engineer in charge	569.00 CUM	155.05	CUM	Rs 88,223.00	Item no-753, P-270
3.00	Excavation for foundation in soft rock including shoring and strutting as necessary and disposing off excavated stuff as directed, excluding dewatering if separately provided etc. complete as directed by Engineer in charge	569.00 CUM	201.25	CUM	Rs 114,511.00	Item no-755, P-271
4.00	Excavation for foundation In hard rock by chiselling, wedged or line drilled including control blasting if necessary, shoring and strutting as necessary and disposing off excavated stuff as directed, or stacked etc. complete (excluding dewatering if separately provided) as directed by Engineer in charge.	341.00 CUM	494.10	CUM	Rs 168,488.00	Item no-757, P-271
5.00	Dewatering including diversion of stream, providing cofferdam, bunds etc. as may be necessary for foundation and other parts of work and bailing out and pumping out water below the actual initial natural water level for start of that particular component till completion of bridge etc. complete as directed by Engineer in charge. a) Raft, cut off wall	1,480.00 CUM	513.45	CUM	Rs 759,906.00	I.No-762(c) P.No-272
6.00	Dismantling carefully the stone masonry in lime or cement mortar including sorting out serviceable materials and stacking and disposing the unserviceable material upto a lead of 50 m. etc. complete as directed by Engineer-in-charge.	563.00 CUM	292.95	CUM	Rs 164,931.00	Item no-745, P-269

ITEM	Description of Item	Quantity	Rate	Unit	Amount	Reference
7.00	Providing and filling with approved Sand, shingle below raft including watering, compaction etc. complete as directed by Engineer in charge.	11,210.00 CUM	252.35	CUM	Rs 2,828,844.00	Item no-759, P-271
8.00	Providing dry trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm. to 20 cm. thick including hand packing and compacting complete	8,594.00 CUM	236.10	CUM	Rs 2,029,043.00	Item no-17 P.No-10
9.00	Providing selected hard murum filling including laying in layers of 15 cm. to 20 cm. thick layers including watering and compacting etc. complete as directed by Engineer in charge	5,605.00 CUM	174.75	CUM	Rs 979,474.00	Item no-737 P.No-266
10.00	Providing and laying in situ cement concrete in 1:5:10 of trap/ granite/ quartzite/ gneiss metal for foundation and bedding including bailing out water, form work, compacting, finishing if required and curing etc. complete.	3,737.00 CUM	1,241.65	CUM	Rs 4,640,046.00	I.No-32 P.No-16
11.00	Providing and laying in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete work in foundation like raft, grillages, strip foundation and footings of reinforced cement concrete columns and steel stanchion including bailing out water, form work, compaction and finishing, curing etc. complete. (Excluding steel reinforcement and structural steel)	7,542.00 CUM	2,747.40	CUM	Rs 20,720,891.00	I.No-46 P.No-19
12.00	Providing and laying in situ controlled reinforced cement concrete of M-20 for cut off walls, Walls ( of any thickness) including form work, scaffolding, compaction, by vibrating, finishing, curing etc. complete as directed by Engineer in charge. (7.60 bags/ Cum.)	1,822.00 CUM	3,252.45	CUM	Rs 5,925,964.00	I.No-764 P.No-273
13.00	Providing and casting in situ cement concrete M-20/ 1: 1½ :3 of trap/ granite/ quartzite/ gneiss metal for coping to plinth or parapet, moulded or chamfered as per drawings or as directed including centering, formwork, compacting, roughening them if special finish is to be provided, finishing if required and curing etc. complete.(7.60 Bag/ Cum.)	1,093.00 CUM	2,751.60	CUM	Rs 3,007,499.00	I.No-36 P.No-17

ITEM	Description of Item	Quantity	Rate	Unit	Amount	Reference
14.00	Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for steps including centering, form work, compacting, finishing the exposed faces with sufficient minimum thickness of 1:3 cement plaster to give a smooth and even surface or roughening them if special finish is to be provided and curing etc. complete.(7.60 Bag/Cum.)	502.00 CUM	2,626.65	CUM	Rs 1,318,578.00	I.No-33 P.No-16
15.00	Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete beams and lintels as per detailed designs and drawings, or as directed including, centering, form work, compaction and roughening the surface if special finishing to be provided and curing etc. complete. (Excluding reinforcement) (7.60 Bag/ Cum.)	15.00 CUM	3,632.55	CUM	Rs 54,488.00	I.No-52 P.No-21
16.00	Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete slabs and landings as per detailed designs and drawings, including, centering, form work, compacting and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement) (7.60 Bag/ Cum.)	54.00 CUM	3,216.75	CUM	Rs 173,705.00	I.No-54 P.No-22
17.00	Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete columns as per detailed designs and drawing, or as directed including centering, formwork, compacting and finishing the form surfaces with cement mortar 1:3 of sufficient minimum thickness, to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement) (7.60 Bag/ Cum.)	5.00 CUM	3,550.65	CUM	Rs 17,753.00	I.No-49 P.No-20

ITEM	Description of Item	Quantity	Rate	Unit	Amount	Reference
18.00	Providing and laying HYSD bars with cement polymer composite coating (CPCC) anticorrosive epoxy treatment for reinforcement for structure including cutting, bending hooking by machine, trying in position including binding wire, spacers, chairs, cover blocks as per detailed drawing including all leads and lifts etc. complete.	917.78 MT	40,143.60	MT	Rs 36,842,993.00	I.No-803 P.No-283
19.00	Providing earth work for embankment with approved materials obtained by excavation from departmental land or other sources including all lifts and leads upto 50 m, laying in layers of 20 cm. to 30 cm. thickness breaking clods, dressing to the required lines, curves, grade and section, watering and Compaction with power roller etc. complete as directed by Engineer in charge.	10,235.00 CUM	36.75	CUM	Rs 376,136.00	I.No-655 P.No-232
20.00	Providing uncoursed rubble masonry of trap/granite/ quartzite/ gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually, striking joints on unexposed faces and watering complete.	999.00 CUM	928.05	CUM	Rs 927,122.00	I.No-99 P.No-57
21.00	Providing coursed rubble masonry first sort of trap/ granite/ quartzite/ gneiss stones in cement mortar 1:6 in external wall of plinth including bailing out water manually, striking joints inside and watering.	649.00 CUM	1,237.80	CUM	Rs 803,332.00	I.No-103 P.No-57
22.00	Clearing and removing bushes, waiste trees etc. on bank of river including stacking etc. complete as directed by Engineer in charge.	35,212.00 SQM	2.85	SQM	Rs 100,354.00	I.No-K-50 P.No-41
23.00	Providing & fixing Stainless steel hand rails , blusters, post, Pergolas, railings & similar works etc. using Brush finished Stainless steel members ( Stainless Steel Grade 304 and finish no-4 ) including hold fasts, screws, nut bolts, fasteners, etc. with cutting, hoisting, fixing & argon welding etc. in position as per approved drawing and direction of Engineer in charge. ( work shall be executed through specialized agency only )	6,521.00 Kilogram	581.05	Per Kilogr am	Rs 3,789,027.00	Analysis of Rate S.No- 23

ITEM	Description of Item	Quantity	Rate	Unit	Amount	Reference
24.00	Providing and laying Rough Shahabad Stone Flooring 50 mm. to 60 mm.-thick and of required width in plain/ diamond pattern on a bed of 1:6 cement mortar including cement float, striking joints,pointing in cement mortar 1:3 curing and cleaning etc. complete.	4,540.00 SQM	211.05	SQM	Rs 958,167.00	I.No-158 P.No-85
25.00	Providing and fixing mudhugal granite Stone block, chisel dressed (two line chisel dressed) Flooring /paving with 70 mm. thick of sizes with hand cut edges and smooth chisel dressed on top ( top surface undulation not exceeding more than 3mm ) in required pattern, laid with the other stones, for paving, floors etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand ) with joints 20mm ( average ) wide filled with same mortar and 4mm deep recessed pointing with cement mortar 1:2 (1 cement : 2 stone dust ) including , cleaning, curing etc.all complete as per approved drawing and direction of Engineer in charge.	21,151.00 SQM	1,778.85	SQM	Rs 37,624,456.00	A.R. attached
26.00	Providing and laying chisel dressed (two line chisel dressed) granite Stone blocks in steps & risers with fine dressed edges of steps 70 mm. to 80 mm.-thick and of required width in plain/ diamond pattern on a bed of 1:4 cement mortar including cement float, striking joints,pointing in cement mortar 1:3 curing and cleaning etc. complete.	10,297.00 SQM	3,037.75	SQM	Rs 31,279,712.00	A.R. attached
27.00	Providing trap/ granite/ quartette/ gneiss rubble stone filling behind the abutment, returns or wings including all materials and hand packing and filling voids with spouts etc. complete as directed by Engineer in charge.	5,648.00 CUM	279.15	CUM	Rs 1,576,639.00	I.No-822 P.No-287
28.00	Providing and fixing of 450 mm dia Precast concrete. bollards Spherical shape Red/Grey shade (K.K manholes, Delhi or any equivalent Approved Make.) including excavating holes upto required size in all kinds of soil, and providing and fixing of required concrete Base of 1:3:4(1 cement:3 coarse sand: 4 graded stone) for fixing as per direction of engineer- in- charge, all complete as per direction of Engineer-in-charge.	394.00 Nos.	1,934.75	Each	Rs 762,292.00	Analysis of Rate S.No- 28

ITEM	Description of Item	Quantity	Rate	Unit	Amount	Reference
29.00	Add for providing richer mixes respectively at all level. ( 1 ) Providing M-30 grade RCC instead of M-20 or 1: 1½ :3 or grade RCC.	11033.00 CUM	457.30	CUM	Rs 5,045,391.00	Analysis of Rate S.No-29
30.00	Dismantling stone masonry in lime or cement including stacking the materials as directed with all leads and lifts complete. As directed by Engineer in charge	100.00 CUM	77.70	CUM	Rs 7,770.00	I.No-596 P.No-218
31.00	Removing lime or lean cement concrete including stacking the spoils as directed with all leads and lifts complete. As directed by Engineer in charge	150.00 CUM	51.45	CUM	Rs 7,718.00	I.No-597 P.No-218
32.00	Removing rich mix cement concrete including stacking the spoils as directed with all leads and lifts complete. As directed by Engineer in charge	100.00 CUM	130.20	CUM	Rs 13,020.00	I.No-598 P.No-218
33.00	Removing trap stone from floor without bed concrete including stacking the materials as directed with all leads, lifts complete	974.00 SQM	13.65	SQM	Rs 13,295.00	I.No-604 P.No-219
34.00	Removing Shahabad or Tandur stones/ cement tiles / marble mosaic tiles from floor without bed concrete including stacking the materials as directed with all leads, lifts complete.	460.00 SQM	13.65	SQM	Rs 6,279.00	I.No-605 P.No-219
35.00	Removing iron pipe railing having wooden reinforced cement concrete or cement concrete or iron posts and stacking the materials as directed.	130.00 Rg. M.	13.65	Rg. M.	Rs 1,775.00	I.No-611 P.No-220
36.00	Dismantling carefully the old cement concrete of reinforced cement concrete structure by chiselling or breaker including cutting reinforcement, steel bars, sorting out serviceable materials and stacking and disposing off unserviceable material upto lead of 50 m. etc. complete as directed by Engineer in charge.	50.00 CUM	292.95	CUM	Rs 14,648.00	I.No-745 P.No-269
<b>GRAND TOTAL</b>					<b>Rs 172,306,530.00</b>	

**DETAILS OF MEASUREMENT - SH 01**

29.01.2007

NAME OF WORK :- DPR for Construction of Ghats at left side bank ZONE N-III, Nanded.

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
			Meter	Meter	Meter		
<b>DETAILS OF GHATS INCLUDING THE PROMENADE &amp; SLOPING</b>							<b>TOTAL</b>
		<b>Nos.</b>	<b>Length</b>	<b>Breadth</b>	<b>AREA</b>		
1:	NAGINA GHAT~ G-5	1.00	72.50	35.50	2573.75	2573.75	sqm
2:	BANDA GHAT ~ G-3	1.00	73.50	42.00	3087.00		
		1.00	71.00	13.80	979.80		
		1.00	68.00	18.80	1278.40	5345.20	sqm
3:	GOVARDHAN GHAT ~ G-2	1.00	64.50	60.00	3870.00		
	connecting plateform	1.00	45.00	5.50	247.50	4117.50	sqm
4:	GHAT NO- G-6	1.00	25.00	79.00	1975.00		
		0.50	14.00	79.00	553.00		
		0.50	39.00	9.00	175.50		
	RAMPS	1.00	59.00	2.30	135.70		
		2.00	19.00	5.00	190.00	3029.20	sqm
5:	GHAT NO- G-7	1.00	61.50	25.00	1537.50		
	ramp area	1.00	8.20	27.80	227.96		
		1.00	6.40	20.00	128.00		
		1.00	5.00	4.50	22.50		
		1.00	9.20	9.60	88.32		
		1.00	2.50	4.80	12.00		
	Less green area	-1.00	8.00	1.80	-14.40		
		-1.00	7.00	1.80	-12.60		
		-1.00	12.00	1.40	-16.80	1972.48	sqm
6:	GHAT NO- G-8	1.00	35.00	65.50	2292.50		
	Ramp	2.00	26.40	2.30	121.44		
		2.00	24.00	2.30	110.40		
		2.00	14.80	2.30	68.08		
		2.00	19.50	2.30	89.70		
		1.00	8.20	2.30	18.86		
		2.00	12.50	2.30	57.50	2758.48	sqm
7:	Ghat No- G-4	1.00	33.00	73.00	2409.00		
	Spiral ramp floor area	1.00	155.00	2.50	387.50	2796.50	sqm
8:	Ghat No- G-1	1.00	44.80	32.00	1433.60		
		1.00	12.80	51.00	652.80	2086.40	sqm
9:	Ghat No- G-9	1.00	41.00	62.00	2542.00		
	Ramp	1.00	28.50	1.50	42.75		
		1.00	29.50	1.80	53.10		
		1.00	29.00	2.00	58.00		
		1.00	14.50	2.50	36.25		
		1.00	29.50	2.00	59.00		
		1.00	33.50	2.00	67.00		
		1.00	34.00	2.00	68.00		
		2.00	30.00	2.00	120.00		
	Etra for landing/steps	1.00	25.50	1.50	38.25		
		1.00	75.50	2.00	151.00		
		4.00	4.00	4.00	64.00	3299.35	sqm
	<b>Total</b>		<b>1430.80</b>	<b>769.70</b>	<b>27978.86</b>	<b>27978.86</b>	<b>sqm</b>

1.00 Excavation for foundation including shoring and strutting as necessary and disposing off excavated stuff as directed In earth, soils

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	<b><u>For R.C.C. wall foundation =1.50 (min) below NGL/FFL+ 0.63mthick filling depth = 1.50+ 0.3m(sand)+ 0.23(stone soling)+ 0.10(lean C.C.)</u></b>						
	<b><u>1: NAGINA GHAT~ G-5</u></b> <u>for bottom profile cutting of steps &amp; landing portion.....</u> ...as per calculation sheet no-5 below the existing ghat					4750.12 cum	
	<b><u>For R.C.C. wall foundation.....</u></b> for long. (Section "B"). end toe wall 0.30m thick at bank of river ( 1.0m depth for soil+1.30m for rocks)	1.00	35.00	1.70	1.00	59.50 cum	
	Long....intermediate promenade(Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	1.00	35.00	1.20	1.00	42.00 cum	
	Long....intermediate middle(Section "C") wall 0.20m thick	2.00	35.00	1.20	2.13	178.92 cum	
	cross...intermediate middle (Section "C.") wall 0.20m thick =31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2	1.00	72.50	1.20	2.13	185.31 cum	
	cross...both end wall (Section "A")	2.00	72.50	1.70	2.13	525.05 cum	
	<b><u>2: BANDA GHAT ~ G-3</u></b> <u>for bottom profile cutting of steps &amp; landing portion.....</u> ...as per calculation sheet no- iii below the ghat					7370.27 cum	
	<b><u>For R.C.C. wall foundation.....</u></b> for long. (Section "B"). end toe wall 0.30m thick at bank of river ( 1.0m depth for soil+1.30m for rocks)	1.00	73.50	1.70	1.00	124.95 cum	
	Long....intermediate promenade(Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	1.00	73.50	1.20	1.00	88.20 cum	
	Long....intermediate middle(Section "C") wall 0.20m thick	1.00	71.00	1.20	2.13	181.48 cum	
	cross...intermediate middle (Section "C.") wall 0.20m thick	2.00	68.00	1.20	2.13	347.62 cum	
	cross...both end wall (Section "A")	4.00	74.60	1.20	2.13	762.71 cum	
	Add for ramp R.R. wall =8*26.4+18+2*15+2*12.5+30*2.0	2.00	74.60	1.70	2.13	540.25 cum	
		1.00	344.20	0.95	1.00	326.99 cum	
	<b><u>3: GOVARDHAN GHAT ~ G-2</u></b> <u>for bottom profile cutting of steps &amp; landing portion.....</u> ...as per calculation sheet no- ii below the ghat					7932.50 cum	
	For levelling of Ground above +Lvl351.65	1.00	70.00	20.00	1.00	1400.00 cum	
	<b><u>For R.C.C. wall foundation.....</u></b>						

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	for long. (Section "B"). end toe wall 0.30m thick at bank of river ( 1.0m depth for soil+1.30m for rocks)	1.00	60.00	1.70	1.00	102.00 cum	
	Long....intermediate promenade(Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	1.00	60.00	1.20	1.00	72.00 cum	
	Long....intermediate middle(Section "C") wall 0.20m thick	2.00	60.00	1.20	2.13	306.72 cum	
	cross...intermediate middle (Section "C".) wall 0.20m thick	2.00	65.00	1.20	2.13	332.28 cum	
	cross...both end wall (Section "A")	1.00	69.00	1.70	2.13	249.85 cum	
		1.00	60.00	1.70	2.13	217.26 cum	
	Add for Change Room wall =2*3.3+2*4.8	3.00	16.20	1.20	1.00	58.32 cum	
	connecting platform between G1&G2 ... excavation for base slab	1.00	45.00	5.00	0.92	207.00 cum	
	long...both end wall	2.00	45.00	1.70	2.13	325.89 cum	
	cross closing wall	4.00	5.00	1.70	2.13	72.42 cum	
	<b><u>4: GHAT NO- G-6</u></b> <b><u>for bottom profile cutting of steps &amp;</u></b> <b><u>landing portion.....</u></b> ...as per calculation sheet no- vi below the ghat					4024.71 cum	
	RAMPS.. For av. cutting	1.00	58.00	3.00	1.50	261.00 cum	
		3.00	19.00	5.00	1.50	427.50 cum	
	<b><u>For R.C.C. wall foundation.....</u></b> for long. (Section "B"). end toe wall 0.30m thick at bank of river ( 1.0m depth for soil+1.30m for rocks)	1.00	42.00	1.70	1.00	71.40 cum	
	Long....intermediate promenade(Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	1.00	35.50	1.20	1.00	42.60 cum	
	Long....intermediate middle(Section "C") wall 0.20m thick	1.00	32.00	1.20	2.13	81.79 cum	
		1.00	28.50	1.20	2.13	72.85 cum	
		1.00	25.00	1.20	2.13	63.90 cum	
	cross...intermediate middle (Section "C".) wall 0.20m thick	1.00	82.00	1.20	2.13	209.59 cum	
	cross...both end wall (Section "A")	1.00	79.00	1.70	2.13	286.06 cum	
		1.00	88.00	1.70	2.13	318.65 cum	
	Add for Ramp wall =3*19+1*5	3.00	62.00	1.20	2.13	475.42 cum	
	Connecting ramp wall=59-3*5+2*2.4	1.00	48.80	1.20	2.13	124.73 cum	
	<b><u>5: GHAT NO- G-7</u></b> <b><u>for bottom profile cutting of steps &amp;</u></b> <b><u>landing portion.....</u></b> ...as per calculation sheet no- vii below the ghat					1979.58 cum	
	RAMPS.. For av. cutting ramp area	1.00	8.20	27.80	0.50	113.98 cum	
		1.00	6.40	20.00	0.50	64.00 cum	
		1.00	5.00	4.50	0.50	11.25 cum	
		1.00	9.20	9.60	0.50	44.16 cum	
		1.00	2.50	4.80	0.50	6.00 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Less green area	-1.00	8.00	1.80	0.50	-7.20 cum	
		-1.00	7.00	1.80	0.50	-6.30 cum	
		-1.00	12.00	1.40	0.50	-8.40 cum	
	<b>For R.C.C. wall foundation.....</b>						
	for long. (Section "B"). end toe wall 0.30m thick at bank of river ( 1.0m depth for soil+1.30m for rocks)	1.00	25.00	1.70	1.00	42.50 cum	
	Long....intermediate promenade(Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	1.00	25.00	1.20	1.00	30.00 cum	
	Long....intermediate middle(Section "C") wall 0.20m thick	2.00	25.00	1.20	2.13	127.80 cum	
	cross...intermediate middle (Section "C".) wall 0.20m thick	1.00	61.50	1.20	2.13	157.19 cum	
	cross...both end wall (Section "A")	2.00	61.50	1.70	2.13	445.38 cum	
	Add for Ramp wall =26.2+9.6+2.5+9.2+5.8+5+4.5+11+8 +8.2	1.00	90.00	1.20	2.13	230.04 cum	
	<b><u>6: GHAT NO- G-8</u></b>						
	<u>for bottom profile cutting of steps &amp; landing portion.....</u>						
	...as per calculation sheet no- 8( I ) below the ghat					5278.58 cum	
	...as per calculation sheet no- 8( ii ) below the Ramp for ghat					1237.89 cum	
	<b>For R.C.C. wall foundation.....</b>						
	for long. (Section "B"). end toe wall 0.30m thick at bank of river ( 1.0m depth for soil+1.30m for rocks)	1.00	35.00	1.70	1.00	59.50 cum	
	Long....intermediate promenade(Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	1.00	35.00	1.20	1.00	42.00 cum	
	Long....intermediate middle (Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	2.00	35.00	1.20	2.13	178.92 cum	
	cross...intermediate middle (Section "C".) wall 0.20m thick	1.00	65.50	1.20	2.13	167.42 cum	
	cross...both end wall (Section "A")	2.00	65.50	1.70	2.13	474.35 cum	
	Add for Ramp wall =2*26.0+5+5+23.5+6+2*19.5+4+5+2* 17.4	1.00	174.30	1.20	2.13	445.51 cum	
	<b><u>7: Ghat No- G-4</u></b>						
	<u>for bottom profile cutting of steps &amp; landing portion.....</u>						
	...as per calculation sheet no- 4( i ) below the ghat					4530.35 cum	
	...as per calculation sheet no- 4( ii ) below the Ramp for ghat					1312.31 cum	
	<b><u>For R.C.C. wall foundation.....Total</u></b>						
	<u>depth =1.50+0.82m (for fillings below the foundation) =2.32m</u>						

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	for long. (Section "B"). end toe wall 0.30m thick at bank of river ( 1.0m depth for soil+1.30m for rocks)	1.00	33.00	1.70	1.00	56.10 cum	
	Long....intermediate promenade(Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	1.00	33.00	1.20	1.00	39.60 cum	
	Long....intermediate middle(Section "C") wall 0.20m thick	3.00	33.00	1.20	2.13	253.04 cum	
	cross...intermediate middle (Section "C".) wall 0.20m thick	2.00	73.00	1.20	2.13	373.18 cum	
	cross...both end wall (Section "A")	2.00	73.00	1.70	2.13	528.67 cum	
	Add for spiral Ramp wall	2.00	180.00	1.20	2.13	920.16 cum	
	<b>8: Ghat No- G-1</b>						
	<u>for bottom profile cutting of steps &amp; landing portion.....</u>						
	...as per calculation sheet no- 1 below the ghat					3114.88 cum	
	<b><u>For R.C.C. wall foundation.....Total depth =1.50+0.82m (for fillings below the foundation) =2.32m</u></b>						
	for long. (Section "B"). end toe wall 0.30m thick at bank of river ( 1.0m depth for soil+1.30m for rocks)	1.00	32.00	1.70	1.00	54.40 cum	
	Long....intermediate promenade(Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	1.00	32.00	1.20	1.00	38.40 cum	
	Long....intermediate middle(Section "C") wall 0.20m thick	1.00	32.00	1.20	2.13	81.79 cum	
		4.00	44.80	1.20	2.13	458.04 cum	
	cross...intermediate middle (Section "C".) wall 0.20m thick	1.00	95.80	1.20	2.13	244.86 cum	
	cross...both end wall (Section "A")	2.00	95.80	1.70	2.13	693.78 cum	
	<b>9: Ghat No- G-9</b>					0.00	
	<u>for bottom profile cutting of steps &amp; landing portion.....</u>					0.00	
	...as per calculation sheet no- 1 below the ghat					5839.77 cum	
	...as per calculation sheet no- 8( ii ) below the Ramp for ghat					712.70 cum	
	<b><u>For R.C.C. wall foundation.....Total depth =1.50+0.82m (for fillings below the foundation) =2.32m</u></b>					0.00	
	for long. (Section "B"). end toe wall 0.30m thick at bank of river ( 1.0m depth for soil+1.30m for rocks)	1.00	41.00	1.70	1.00	69.70 cum	
	Long....intermediate promenade(Section "C") wall 0.20m thick ( 1.0m depth for soil+1.30m for rocks)	1.00	41.00	1.20	1.00	49.20 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Long....intermediate middle(Section "C") wall 0.20m thick	2.00	41.00	1.20	2.13	209.59	cum
	cross...intermediate middle (Section "C".) wall 0.20m thick	1.00	62.00	1.20	2.13	158.47	cum
	cross...both end wall (Section "A")	2.00	62.00	1.70	2.13	449.00	cum
	Add for Ramp wall =30+6.5+8+12+6+18+28.5+5+2*12+5 .5+2*12+28.6+33	1.00	229.10	1.20	2.13	585.58	cum
	Add for small portions ..L.S (on total of G1 to G9)	65107.53					cum
				5.00	%	3255.38	cum
					TOTAL	68362.90	cum
					<b>SAY</b>	<b>68,363.00</b>	cum
2.00	Excavation for foundation In hard murum and boulders upto 0.3 cum. to 0.20 cum. size including shoring and strutting as necessary and disposing off excavated st						
	<b>1: NAGINA GHAT~ G-5</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.50	29.75	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.50	21.00	cum
	<b>2: BANDA GHAT ~ G-3</b>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	73.50	1.70	0.50	62.48	cum
	Long....intermediate promenade wall 0.20m thick	1.00	73.50	1.20	0.50	44.10	cum
	<b>3: GOVARDHAN GHAT ~ G-2</b>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	60.00	1.70	0.50	51.00	cum
	Long....intermediate promenade wall 0.20m thick	1.00	60.00	1.20	0.50	36.00	cum
	<b>4: GHAT NO- G-6</b>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	42.00	1.70	0.50	35.70	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.50	1.20	0.50	21.30	cum
	<b>5: GHAT NO- G-7</b>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	25.00	1.70	0.50	21.25	cum
	Long....intermediate promenade wall 0.20m thick	1.00	25.00	1.20	0.50	15.00	cum
	<b>6: GHAT NO- G-8</b>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.50	29.75	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.50	21.00	cum
	<b>7: Ghat No- G-4</b>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	33.00	1.70	0.50	28.05	cum
	Long....intermediate promenade wall 0.20m thick	1.00	33.00	1.20	0.50	19.80	cum
	<b>8: Ghat No- G-1</b>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	32.00	1.70	0.50	27.20	cum
	Long....intermediate promenade wall 0.20m thick	1.00	32.00	1.20	0.50	19.20	cum
	<b>9: Ghat No- G-9</b>					0.00	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	for long... end toe wall 0.30m thick at bank of river	1.00	41.00	1.70	0.50	34.85 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	41.00	1.20	0.50	24.60 cum	
						0.00 cum	
	Add for small portions ..L.S	542.03 cum		5.00	%	27.10 cum	
					TOTAL	569.13 cum	
					<b>SAY</b>	<b>569.00 cum</b>	
3.00	Excavation for foundation in soft rock including shoring and strutting as necessary and disposing off excavated stuff as directed,						
	<b>1: NAGINA GHAT~ G-5</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.50	29.75 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.50	21.00 cum	
						0.00	
	<b>2: BANDA GHAT ~ G-3</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	73.50	1.70	0.50	62.48 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	73.50	1.20	0.50	44.10 cum	
						0.00	
	<b>3: GOVARDHAN GHAT ~ G-2</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	60.00	1.70	0.50	51.00 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	60.00	1.20	0.50	36.00 cum	
						0.00	
	<b>4: GHAT NO- G-6</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	42.00	1.70	0.50	35.70 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.50	1.20	0.50	21.30 cum	
						0.00	
	<b>5: GHAT NO- G-7</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	25.00	1.70	0.50	21.25 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	25.00	1.20	0.50	15.00 cum	
						0.00	
	<b>6: GHAT NO- G-8</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.50	29.75 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.50	21.00 cum	
						0.00	
	<b>7: Ghat No- G-4</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	33.00	1.70	0.50	28.05 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	33.00	1.20	0.50	19.80 cum	
						0.00	
	<b>8: Ghat No- G-1</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	32.00	1.70	0.50	27.20 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	32.00	1.20	0.50	19.20 cum	
						0.00	
	<b>9: Ghat No- G-9</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	41.00	1.70	0.50	34.85 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	41.00	1.20	0.50	24.60 cum	
						0.00 cum	
	Add for small portions ..L.S	542.03 cum		5.00	%	27.10 cum	
					TOTAL	569.13 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
						<b>SAY</b>	<b>569.00</b> cum
4.00	Excavation for foundation In hard rock by chiselling, wedged or line drilled including control blasting						
	<b>1: NAGINA GHAT~ G-5</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.30	17.85	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.30	12.60	cum
						0.00	
	<b>2: BANDA GHAT ~ G-3</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	73.50	1.70	0.30	37.49	cum
	Long....intermediate promenade wall 0.20m thick	1.00	73.50	1.20	0.30	26.46	cum
						0.00	
	<b>3: GOVARDHAN GHAT ~ G-2</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	60.00	1.70	0.30	30.60	cum
	Long....intermediate promenade wall 0.20m thick	1.00	60.00	1.20	0.30	21.60	cum
						0.00	
	<b>4: GHAT NO- G-6</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	42.00	1.70	0.30	21.42	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.50	1.20	0.30	12.78	cum
						0.00	
	<b>5: GHAT NO- G-7</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	25.00	1.70	0.30	12.75	cum
	Long....intermediate promenade wall 0.20m thick	1.00	25.00	1.20	0.30	9.00	cum
						0.00	
	<b>6: GHAT NO- G-8</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.30	17.85	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.30	12.60	cum
						0.00	
	<b>7: Ghat No- G-4</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	33.00	1.70	0.30	16.83	cum
	Long....intermediate promenade wall 0.20m thick	1.00	33.00	1.20	0.30	11.88	cum
						0.00	
	<b>8: Ghat No- G-1</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	32.00	1.70	0.30	16.32	cum
	Long....intermediate promenade wall 0.20m thick	1.00	32.00	1.20	0.30	11.52	cum
						0.00	
	<b>9: Ghat No- G-9</b>						
	for long... end toe wall 0.30m thick at bank of river	1.00	41.00	1.70	0.30	20.91	cum
	Long....intermediate promenade wall 0.20m thick	1.00	41.00	1.20	0.30	14.76	cum
						0.00	
	Add for small portions ..L.S	325.22	cum	5.00	%	16.26	cum
						<b>TOTAL</b>	<b>341.48</b> cum
						<b>SAY</b>	<b>341.00</b> cum
5.00	Dewatering including diversion of stream, providing cofferdam, bunds etc. as may be necessary for foundation and other parts of work and bailing out and pumping out						
	qutty of Hard muram					569.13	cum
	qutty of soft rock					569.13	cum

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	cutty of Hard rock					341.48	cum
					TOTAL	1479.73	cum
					SAY	<b>1480.00</b>	<b>cum</b>
6.00	Dismantling carefully the stone masonry in lime or cement mortar including sorting for existing structure	3.00	25.00	15.00	0.50	562.50	cum
					TOTAL	562.50	cum
					SAY	<b>563.00</b>	<b>cum</b>
7.00	Providing and filling with approved Sand, shingle below raft including watering, compaction etc. ... <u>Under floor ....below the base slab ....0.30m thick sand filling over ground</u>						
	<b>1: NAGINA GHAT~ G-5</b>						
	<u>Under floor ....below the base slab ....0.30m thick sand filling over ground</u> =31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	1.00	72.50	35.00	0.30	761.25	cum
	<u>Below the foundation</u> for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.30	17.85	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.30	12.60	cum
	Long....intermediate middle wall 0.20m thick	2.00	35.00	1.20	0.30	25.20	cum
	cross...intermediate middle wall 0.20m thick =31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2	1.00	72.50	1.20	0.30	26.10	cum
	cross...both end wall	2.00	72.50	1.70	0.30	73.95	cum
	<b>2: BANDA GHAT ~ G-3</b>						
	<u>Under floor ....below the base slab .... filling over ground</u>	1.00	73.50	42.00	0.30	926.10	cum
		1.00	71.00	13.80	0.30	293.94	cum
		1.00	68.00	18.80	0.30	383.52	cum
	<u>Below the foundation</u> for long... end toe wall 0.30m thick at bank of river	1.00	73.50	1.70	0.30	37.49	cum
	Long....intermediate promenade wall 0.20m thick	1.00	73.50	1.20	0.30	26.46	cum
	Long....intermediate middle wall 0.20m thick	1.00	71.00	1.20	0.30	25.56	cum
		2.00	68.00	1.20	0.30	48.96	cum
	cross...intermediate middle wall 0.20m thick =42+13.8+18.8=74.60m	4.00	74.60	1.20	0.30	107.42	cum
	cross...both end wall	2.00	74.60	1.70	0.30	76.09	cum
	Add for ramp R.R. wall =8*26.4+18+2*15+2*12.5+30*2.0	1.00	344.20	0.95	0.30	98.10	cum
	<b>3: GOVARDHAN GHAT ~ G-2</b>						
	<u>Under floor ....below the base slab .... filling over ground</u>	1.00	60.00	60.00	0.30	1080.00	cum
		1.00	45.00	5.00	0.30	67.50	cum
	<u>Below the foundation</u> for long... end toe wall 0.30m thick at bank of river	1.00	60.00	1.70	0.30	30.60	cum

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Long....intermediate promenade wall 0.20m thick	1.00	60.00	1.20	0.30	21.60	cum
	Long....intermediate middle wall 0.20m thick	2.00	60.00	1.20	0.30	43.20	cum
	cross...intermediate middle wall	2.00	65.00	1.20	0.30	46.80	cum
	cross...both end wall	1.00	69.00	1.70	0.30	35.19	cum
		1.00	60.00	1.70	0.30	30.60	cum
	Add for Change Room wall =2*3.3+2*4.8	3.00	16.20	1.20	0.30	17.50	cum
	connecting platform ... under floor	1.00	45.00	5.00	0.30	67.50	cum
	long...both end wall	2.00	45.00	1.70	0.30	45.90	cum
	long closing wall	4.00	5.00	1.70	0.30	10.20	cum
						0.00	
	<b>4: GHAT NO- G-6</b>						
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	85.00	33.50	0.30	854.25	cum
	RAMPS	1.00	59.00	2.40	0.30	42.48	cum
		3.00	19.00	5.00	0.30	85.50	cum
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick at bank of river	1.00	42.00	1.70	0.30	21.42	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.50	1.20	0.30	12.78	cum
	Long....intermediate middle wall 0.20m thick	1.00	32.00	1.20	0.30	11.52	cum
		1.00	28.50	1.20	0.30	10.26	cum
		1.00	25.00	1.20	0.30	9.00	cum
	cross...intermediate middle wall 0.20m thick	1.00	82.00	1.20	0.30	29.52	cum
	cross...both end wall	1.00	79.00	1.20	0.30	28.44	cum
		1.00	88.00	1.70	0.30	44.88	cum
	Add for Ramp wall =3*19+1*5	3.00	62.00	1.20	0.30	66.96	cum
	Connecting ramp wall=59-3*5+2*2.4						
		1.00	48.80	1.20	0.30	17.57	cum
						0.00	
	<b>5: GHAT NO- G-7</b>						
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	25.00	61.50	0.30	461.25	cum
	ramp area	1.00	8.20	27.80	0.30	68.39	cum
		1.00	6.40	20.00	0.30	38.40	cum
		1.00	5.00	4.50	0.30	6.75	cum
		1.00	9.20	9.60	0.30	26.50	cum
		1.00	2.50	4.80	0.30	3.60	cum
	Less green area	-1.00	8.00	1.80	0.30	-4.32	cum
		-1.00	7.00	1.80	0.30	-3.78	cum
		-1.00	12.00	1.40	0.30	-5.04	cum
						0.00	
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick at bank of river	1.00	25.00	1.70	0.30	12.75	cum
	Long....intermediate promenade wall 0.20m thick	1.00	25.00	1.20	0.30	9.00	cum
	Long....intermediate middle wall 0.20m thick	2.00	25.00	1.20	0.30	18.00	cum
	cross...intermediate middle wall 0.20m thick	1.00	61.50	1.20	0.30	22.14	cum
	cross...both end wall	2.00	61.50	1.70	0.30	62.73	cum
	Add for Ramp wall =26.2+9.6+2.5+9.2+5.8+5+4.5+11+8+8.2	1.00	90.00	1.20	0.30	32.40	cum
	<b>6: GHAT NO- G-8</b>						
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	35.00	65.50	0.30	687.75	cum

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	ramp area	2.00	26.40	2.30	0.30	36.43 cum	
		2.00	24.00	2.30	0.30	33.12 cum	
		2.00	14.80	2.30	0.30	20.42 cum	
		2.00	19.50	2.30	0.30	26.91 cum	
		1.00	8.20	2.30	0.30	5.66 cum	
		2.00	12.50	2.30	0.30	17.25 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.30	17.85 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.30	12.60 cum	
	Long....intermediate middle wall 0.20m thick	2.00	35.00	1.20	0.30	25.20 cum	
	cross...intermediate middle wall 0.20m thick	1.00	65.50	1.20	0.30	23.58 cum	
	cross...both end wall	2.00	65.50	1.70	0.30	66.81 cum	
	Add for Ramp wall =2*26.0+5+5+23.5+6+2*19.5+4+5+2* 17.4	1.00	174.30	1.20	0.30	62.75 cum	
	<b>7: Ghat No- G-4</b>					0.00	
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	33.00	73.00	0.30	722.70 cum	
	Add for spiral Ramp area	1.00	180.00	2.50	0.30	135.00 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	33.00	1.70	0.30	16.83 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	33.00	1.20	0.30	11.88 cum	
	Long....intermediate middle wall 0.20m thick	3.00	33.00	1.20	0.30	35.64 cum	
	cross...intermediate middle wall 0.20m thick	2.00	73.00	1.20	0.30	52.56 cum	
	cross...both end wall	2.00	73.00	1.70	0.30	74.46 cum	
	Add for spiral Ramp wall	2.00	180.00	1.20	0.30	129.60 cum	
	<b>8: Ghat No- G-1</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	32.00	44.80	0.30	430.08 cum	
		1.00	44.80	51.00	0.30	685.44 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	32.00	1.70	0.30	16.32 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	32.00	1.20	0.30	11.52 cum	
	Long....intermediate middle wall 0.20m thick	1.00	32.00	1.20	0.30	11.52 cum	
		4.00	44.80	1.20	0.30	64.51 cum	
	cross...intermediate middle wall 0.20m thick	1.00	95.80	1.20	0.30	34.49 cum	
	cross...both end wall	2.00	95.80	1.70	0.30	97.72 cum	
	<b>9: Ghat No- G-9</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	41.00	62.00	0.30	762.60 cum	
	Ramp	1.00	28.50	1.50	0.30	12.83 cum	
		1.00	29.50	1.80	0.30	15.93 cum	
		1.00	29.00	2.00	0.30	17.40 cum	
		1.00	14.50	2.50	0.30	10.88 cum	
		1.00	29.50	2.00	0.30	17.70 cum	
		1.00	33.50	2.00	0.30	20.10 cum	
		1.00	34.00	2.00	0.30	20.40 cum	
		2.00	30.00	2.00	0.30	36.00 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Etra for landing/steps	1.00	25.50	1.50	0.30	11.48	cum
		1.00	75.50	2.00	0.30	45.30	cum
		4.00	4.00	4.00	0.30	19.20	cum
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	41.00	1.70	0.30	20.91	cum
	Long....intermediate promenade wall 0.20m thick	1.00	41.00	1.20	0.30	14.76	cum
	Long....intermediate middle wall 0.20m thick	2.00	41.00	1.20	0.30	29.52	cum
	cross...intermediate middle wall 0.20m thick	1.00	62.00	1.20	0.30	22.32	cum
	cross...both end wall	2.00	62.00	1.70	0.30	63.24	cum
	Add for Ramp wall =30+6.5+8+12+6+18+28.5+5+2*12+5 .5+2*12+28.6+33	1.00	229.10	1.20	0.30	82.48	cum
						0.00	cum
	<b>TOTAL</b>					11,210.15	cum
	<b>SAY</b>					<b>11,210.00</b>	<b>cum</b>
8.00	Providing dry trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm. to 20 cm. thick including hand packing and compacting						
	<u>Under floor ...below the base slab ...0.23m thick stone soling/ filling over sand</u>						
	<b>1: NAGINA GHAT~ G-5</b>						
	<u>Under floor ...below the base slab ....0.23m thick stone soling/ filling over sand</u> =31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	1.00	72.50	35.00	0.23	583.63	cum
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.23	13.69	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.23	9.66	cum
	Long....intermediate middle wall 0.20m thick	2.00	35.00	1.20	0.23	19.32	cum
	cross...intermediate middle wall 0.20m thick						
	=31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	1.00	72.50	1.20	0.23	20.01	cum
	cross...both end wall=31.7+5*3.3+3*1.5+2*3+2*1.8+6 +4.2 =72.50m	2.00	72.50	1.70	0.23	56.70	cum
						0.00	
	<b>2: BANDA GHAT ~ G-3</b>						
	<u>Under floor ....below the base slab .... filling over ground</u>	1.00	73.50	42.00	0.23	710.01	cum
		1.00	71.00	13.80	0.23	225.35	cum
		1.00	68.00	18.80	0.23	294.03	cum
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick at bank of river	1.00	73.50	1.70	0.23	28.74	cum
	Long....intermediate promenade wall 0.20m thick	1.00	73.50	1.20	0.23	20.29	cum
	Long....intermediate middle wall 0.20m thick	1.00	71.00	1.20	0.23	19.60	cum
		2.00	68.00	1.20	0.23	37.54	cum

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	cross...intermediate middle wall 0.20m thick =42+13.8+18.8=74.60m	4.00	74.60	1.20	0.23	82.36 cum	
	cross...both end wall	2.00	74.60	1.70	0.23	58.34 cum	
	Add for ramp R.R. wall =8*26.4+18+2*15+2*12.5+30*2.0	1.00	344.20	0.95	0.23	75.21 cum	
	<b>3: GOVARDHAN GHAT ~ G-2</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	60.00	60.00	0.23	828.00 cum	
		1.00	45.00	5.00	0.23	51.75 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	60.00	1.70	0.23	23.46 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	60.00	1.20	0.23	16.56 cum	
	Long....intermediate middle wall 0.20m thick	2.00	60.00	1.20	0.23	33.12 cum	
	cross...intermediate middle wall	2.00	65.00	1.20	0.23	35.88 cum	
	cross...both end wall	1.00	69.00	1.70	0.23	26.98 cum	
		1.00	60.00	1.70	0.23	23.46 cum	
	Add for Change Room wall =2*3.3+2*4.8	3.00	16.20	1.20	0.23	13.41 cum	
	connecting platform ... under floor	1.00	45.00	5.00	0.23	51.75 cum	
	long...both end wall	2.00	45.00	1.70	0.23	35.19 cum	
	long closing wall	4.00	5.00	1.70	0.23	7.82 cum	
	<b>4: GHAT NO- G-6</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	85.00	33.50	0.23	654.93 cum	
	RAMPS	1.00	59.00	2.40	0.23	32.57 cum	
		3.00	19.00	5.00	0.23	65.55 cum	
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick at bank of river	1.00	42.00	1.70	0.23	16.42 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.50	1.20	0.23	9.80 cum	
	Long....intermediate middle wall 0.20m thick	1.00	32.00	1.20	0.23	8.83 cum	
		1.00	28.50	1.20	0.23	7.87 cum	
		1.00	25.00	1.20	0.23	6.90 cum	
	cross...intermediate middle wall 0.20m thick	1.00	82.00	1.20	0.23	22.63 cum	
	cross...both end wall	1.00	79.00	1.20	0.23	21.80 cum	
		1.00	88.00	1.70	0.23	34.41 cum	
	Add for Ramp wall =3*19+1*5	3.00	62.00	1.20	0.23	51.34 cum	
	Connecting ramp wall=59-3*5+2*2.4	1.00	48.80	1.20	0.23	13.47 cum	
	<b>5: GHAT NO- G-7</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	25.00	61.50	0.23	353.63 cum	
	ramp area	1.00	8.20	27.80	0.23	52.43 cum	
		1.00	6.40	20.00	0.23	29.44 cum	
		1.00	5.00	4.50	0.23	5.18 cum	
		1.00	9.20	9.60	0.23	20.31 cum	
		1.00	2.50	4.80	0.23	2.76 cum	
	Less green area	-1.00	8.00	1.80	0.23	-3.31 cum	
		-1.00	7.00	1.80	0.23	-2.90 cum	
		-1.00	12.00	1.40	0.23	-3.86 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	25.00	1.70	0.23	9.78 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Long....intermediate promenade wall 0.20m thick	1.00	25.00	1.20	0.23	6.90 cum	
	Long....intermediate middle wall 0.20m thick	2.00	25.00	1.20	0.23	13.80 cum	
	cross...intermediate middle wall 0.20m thick	1.00	61.50	1.20	0.23	16.97 cum	
	cross...both end wall	2.00	61.50	1.70	0.23	48.09 cum	
	Add for Ramp wall =26.2+9.6+2.5+9.2+5.8+5+4.5+11+8+8.2	1.00	90.00	1.20	0.23	24.84 cum	
	<b>6: GHAT NO- G-8</b>						
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	35.00	65.50	0.23	527.28 cum	
	ramp area	2.00	26.40	2.30	0.23	27.93 cum	
		2.00	24.00	2.30	0.23	25.39 cum	
		2.00	14.80	2.30	0.23	15.66 cum	
		2.00	19.50	2.30	0.23	20.63 cum	
		1.00	8.20	2.30	0.23	4.34 cum	
		2.00	12.50	2.30	0.23	13.23 cum	
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.23	13.69 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.23	9.66 cum	
	Long....intermediate middle wall 0.20m thick	2.00	35.00	1.20	0.23	19.32 cum	
	cross...intermediate middle wall 0.20m thick	1.00	65.50	1.20	0.23	18.08 cum	
	cross...both end wall	2.00	65.50	1.70	0.23	51.22 cum	
	Add for Ramp wall =2*26.0+5+5+23.5+6+2*19.5+4+5+2*17.4	1.00	174.30	1.20	0.23	48.11 cum	
	<b>7: Ghat No- G-4</b>						
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	33.00	73.00	0.23	554.07 cum	
	Add for spiral Ramp area	1.00	180.00	2.50	0.23	103.50 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	33.00	1.70	0.23	12.90 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	33.00	1.20	0.23	9.11 cum	
	Long....intermediate middle wall 0.20m thick	3.00	33.00	1.20	0.23	27.32 cum	
	cross...intermediate middle wall 0.20m thick	2.00	73.00	1.20	0.23	40.30 cum	
	cross...both end wall	2.00	73.00	1.70	0.23	57.09 cum	
	Add for spiral Ramp wall	2.00	180.00	1.20	0.23	99.36 cum	
	<b>8: Ghat No- G-1</b>					0.00	
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	32.00	44.80	0.23	329.73 cum	
		1.00	44.80	51.00	0.23	525.50 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	32.00	1.70	0.23	12.51 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	32.00	1.20	0.23	8.83 cum	
	Long....intermediate middle wall 0.20m thick	1.00	32.00	1.20	0.23	8.83 cum	
		4.00	44.80	1.20	0.23	49.46 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	cross...intermediate middle wall						
	0.20m thick	1.00	95.80	1.20	0.23	26.44 cum	
	cross...both end wall	2.00	95.80	1.70	0.23	74.92 cum	
	<b>9: Ghat No- G-9</b>						
	<u>Under floor</u> ...below the base slab						
	.... filling over ground	1.00	41.00	62.00	0.23	584.66 cum	
	Ramp	1.00	28.50	1.50	0.23	9.83 cum	
		1.00	29.50	1.80	0.23	12.21 cum	
		1.00	29.00	2.00	0.23	13.34 cum	
		1.00	14.50	2.50	0.23	8.34 cum	
		1.00	29.50	2.00	0.23	13.57 cum	
		1.00	33.50	2.00	0.23	15.41 cum	
		1.00	34.00	2.00	0.23	15.64 cum	
		2.00	30.00	2.00	0.23	27.60 cum	
	Etra for landing/steps	1.00	25.50	1.50	0.23	8.80 cum	
		1.00	75.50	2.00	0.23	34.73 cum	
		4.00	4.00	4.00	0.23	14.72 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick						
	at bank of river	1.00	41.00	1.70	0.23	16.03 cum	
	Long....intermediate promenade						
	wall 0.20m thick	1.00	41.00	1.20	0.23	11.32 cum	
	Long....intermediate middle wall						
	0.20m thick	2.00	41.00	1.20	0.23	22.63 cum	
	cross...intermediate middle wall						
	0.20m thick	1.00	62.00	1.20	0.23	17.11 cum	
	cross...both end wall	2.00	62.00	1.70	0.23	48.48 cum	
	Add for Ramp wall						
	=30+6.5+8+12+6+18+28.5+5+2*12+5						
	.5+2*12+28.6+33	1.00	229.10	1.20	0.23	63.23 cum	
						0.00 cum	
						<b>TOTAL</b> 8,594.44 cum	
						<b>SAY</b> <b>8,594.00 cum</b>	
9.00	Providing selected hard murum filling including laying in layers of 15 cm. to 20 cm. thick layers including watering and compacting etc.						
	<u>Under floor</u> ...below the base slab						
	...0.15m thick muram filling/						
	grouting for stone soling						
	=31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2						
	=72.50m	1.00	72.50	35.00	0.15	380.63 cum	
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick						
	at bank of river	1.00	35.00	1.70	0.15	8.93 cum	
	Long....intermediate promenade						
	wall 0.20m thick	1.00	35.00	1.20	0.15	6.30 cum	
	Long....intermediate middle wall						
	0.20m thick	2.00	35.00	1.20	0.15	12.60 cum	
	cross...intermediate middle wall						
	0.20m thick						
	=31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2						
	=72.50m	1.00	72.50	1.20	0.15	13.05 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	cross...both end wall= $31.7+5*3.3+3*1.5+2*3+2*1.8+6$ $+4.2 = 72.50m$	2.00	72.50	1.70	0.15	36.98 cum	
	<b>2: BANDA GHAT ~ G-3</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	73.50	42.00	0.15	463.05 cum	
		1.00	71.00	13.80	0.15	146.97 cum	
		1.00	68.00	18.80	0.15	191.76 cum	
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick at bank of river	1.00	73.50	1.70	0.15	18.74 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	73.50	1.20	0.15	13.23 cum	
	Long....intermediate middle wall 0.20m thick	1.00	71.00	1.20	0.15	12.78 cum	
		2.00	68.00	1.20	0.15	24.48 cum	
	cross...intermediate middle wall 0.20m thick $=42+13.8+18.8=74.60m$	4.00	74.60	1.20	0.15	53.71 cum	
	cross...both end wall	2.00	74.60	1.70	0.15	38.05 cum	
	Add for ramp R.R. wall $=8*26.4+18+2*15+2*12.5+30*2.0$	1.00	344.20	0.95	0.15	49.05 cum	
	<b>3: GOVARDHAN GHAT ~ G-2</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	60.00	60.00	0.15	540.00 cum	
		1.00	45.00	5.00	0.15	33.75 cum	
						0.00	
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick at bank of river	1.00	60.00	1.70	0.15	15.30 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	60.00	1.20	0.15	10.80 cum	
	Long....intermediate middle wall 0.20m thick	2.00	60.00	1.20	0.15	21.60 cum	
	cross...intermediate middle wall	2.00	65.00	1.20	0.15	23.40 cum	
	cross...both end wall	1.00	69.00	1.70	0.15	17.60 cum	
		1.00	60.00	1.70	0.15	15.30 cum	
	Add for Change Room wall $=2*3.3+2*4.8$	3.00	16.20	1.20	0.15	8.75 cum	
	connecting platform ... under floor	1.00	45.00	5.00	0.15	33.75 cum	
	long...both end wall	2.00	45.00	1.70	0.15	22.95 cum	
	long closing wall	4.00	5.00	1.70	0.15	5.10 cum	
	<b>4: GHAT NO- G-6</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	85.00	33.50	0.15	427.13 cum	
	RAMPS	1.00	59.00	2.40	0.15	21.24 cum	
		3.00	19.00	5.00	0.15	42.75 cum	
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick at bank of river	1.00	42.00	1.70	0.15	10.71 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.50	1.20	0.15	6.39 cum	
	Long....intermediate middle wall 0.20m thick	1.00	32.00	1.20	0.15	5.76 cum	
		1.00	28.50	1.20	0.15	5.13 cum	
		1.00	25.00	1.20	0.15	4.50 cum	
	cross...intermediate middle wall 0.20m thick	1.00	82.00	1.20	0.15	14.76 cum	
	cross...both end wall	1.00	79.00	1.20	0.15	14.22 cum	
		1.00	88.00	1.70	0.15	22.44 cum	
	Add for Ramp wall $=3*19+1*5$	3.00	62.00	1.20	0.15	33.48 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Connecting ramp wall=59-3*5+2*2.4	1.00	48.80	1.20	0.15	8.78 cum	
	<b>5: GHAT NO- G-7</b>					0.00	
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	25.00	61.50	0.15	230.63 cum	
	ramp area	1.00	8.20	27.80	0.15	34.19 cum	
		1.00	6.40	20.00	0.15	19.20 cum	
		1.00	5.00	4.50	0.15	3.38 cum	
		1.00	9.20	9.60	0.15	13.25 cum	
		1.00	2.50	4.80	0.15	1.80 cum	
	Less green area	-1.00	8.00	1.80	0.15	-2.16 cum	
		-1.00	7.00	1.80	0.15	-1.89 cum	
		-1.00	12.00	1.40	0.15	-2.52 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick						
	at bank of river	1.00	25.00	1.70	0.15	6.38 cum	
	Long....intermediate promenade						
	wall 0.20m thick	1.00	25.00	1.20	0.15	4.50 cum	
	Long....intermediate middle wall						
	0.20m thick	2.00	25.00	1.20	0.15	9.00 cum	
	cross...intermediate middle wall						
	0.20m thick	1.00	61.50	1.20	0.15	11.07 cum	
	cross...both end wall	2.00	61.50	1.70	0.15	31.37 cum	
	Add for Ramp wall						
	=26.2+9.6+2.5+9.2+5.8+5+4.5+11+8						
	+8.2	1.00	90.00	1.20	0.15	16.20 cum	
	<b>6: GHAT NO- G-8</b>						
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	35.00	65.50	0.15	343.88 cum	
	ramp area	2.00	26.40	2.30	0.15	18.22 cum	
		2.00	24.00	2.30	0.15	16.56 cum	
		2.00	14.80	2.30	0.15	10.21 cum	
		2.00	19.50	2.30	0.15	13.46 cum	
		1.00	8.20	2.30	0.15	2.83 cum	
		2.00	12.50	2.30	0.15	8.63 cum	
	<u>Below the foundation</u>						
	for long... end toe wall 0.30m thick						
	at bank of river	1.00	35.00	1.70	0.15	8.93 cum	
	Long....intermediate promenade						
	wall 0.20m thick	1.00	35.00	1.20	0.15	6.30 cum	
	Long....intermediate middle wall						
	0.20m thick	2.00	35.00	1.20	0.15	12.60 cum	
	cross...intermediate middle wall						
	0.20m thick	1.00	65.50	1.20	0.15	11.79 cum	
	cross...both end wall	2.00	65.50	1.70	0.15	33.41 cum	
	Add for Ramp wall						
	=2*26.0+5+5+23.5+6+2*19.5+4+5+2*						
	17.4	1.00	174.30	1.20	0.15	31.37 cum	
	<b>7: Ghat No- G-4</b>						
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	33.00	73.00	0.15	361.35 cum	
	Add for spiral Ramp area	1.00	180.00	2.50	0.15	67.50 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick						
	at bank of river	1.00	33.00	1.70	0.15	8.42 cum	
	Long....intermediate promenade						
	wall 0.20m thick	1.00	33.00	1.20	0.15	5.94 cum	
	Long....intermediate middle wall						
	0.20m thick	3.00	33.00	1.20	0.15	17.82 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	cross...intermediate middle wall 0.20m thick	2.00	73.00	1.20	0.15	26.28 cum	
	cross...both end wall	2.00	73.00	1.70	0.15	37.23 cum	
	Add for spiral Ramp wall	2.00	180.00	1.20	0.15	64.80 cum	
	<b>8: Ghat No- G-1</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	32.00	44.80	0.15	215.04 cum	
		1.00	44.80	51.00	0.15	342.72 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	32.00	1.70	0.15	8.16 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	32.00	1.20	0.15	5.76 cum	
	Long....intermediate middle wall 0.20m thick	1.00	32.00	1.20	0.15	5.76 cum	
		4.00	44.80	1.20	0.15	32.26 cum	
	cross...intermediate middle wall 0.20m thick	1.00	95.80	1.20	0.15	17.24 cum	
	cross...both end wall	2.00	95.80	1.70	0.15	48.86 cum	
	<b>9: Ghat No- G-9</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	41.00	62.00	0.15	381.30 cum	
	Ramp	1.00	28.50	1.50	0.15	6.41 cum	
		1.00	29.50	1.80	0.15	7.97 cum	
		1.00	29.00	2.00	0.15	8.70 cum	
		1.00	14.50	2.50	0.15	5.44 cum	
		1.00	29.50	2.00	0.15	8.85 cum	
		1.00	33.50	2.00	0.15	10.05 cum	
		1.00	34.00	2.00	0.15	10.20 cum	
		2.00	30.00	2.00	0.15	18.00 cum	
	Etra for landing/steps	1.00	25.50	1.50	0.15	5.74 cum	
		1.00	75.50	2.00	0.15	22.65 cum	
		4.00	4.00	4.00	0.15	9.60 cum	
	<u>Below the foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	41.00	1.70	0.15	10.46 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	41.00	1.20	0.15	7.38 cum	
	Long....intermediate middle wall 0.20m thick	2.00	41.00	1.20	0.15	14.76 cum	
	cross...intermediate middle wall 0.20m thick	1.00	62.00	1.20	0.15	11.16 cum	
	cross...both end wall	2.00	62.00	1.70	0.15	31.62 cum	
	Add for Ramp wall =30+6.5+8+12+6+18+28.5+5+2*12+5 .5+2*12+28.6+33	1.00	229.10	1.20	0.15	41.24 cum	
						0.00 cum	
						<b>TOTAL</b> 5,605.07 cum	
						<b>SAY</b> 5,605.00 cum	

10.00 Providing and laying in situ cement concrete in 1:5:10 of trap/ granite/ quartzite/ gneiss metal for foundation and bedding including bailing out water, form work, compacting,

**1: NAGINA GHAT~ G-5**

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	<u>Under floor</u> ...below the base slab ....0.10m thick cc base over muram filling/ grouting =31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	1.00	72.50	35.00	0.10	253.75 cum	
	<u>for base of foundation</u> for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.70	0.10	5.95 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.20	0.10	4.20 cum	
	Long....intermediate middle wall 0.20m thick	2.00	35.00	1.20	0.10	8.40 cum	
	cross...intermediate middle wall 0.20m thick =31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	1.00	72.50	1.20	0.10	8.70 cum	
	cross...both end wall=31.7+5*3.3+3*1.5+2*3+2*1.8+6 +4.2 =72.50m	2.00	72.50	1.70	0.10	24.65 cum	
	<b>2: BANDA GHAT ~ G-3</b>						
	<u>Under floor</u> ...below the base slab ....0.30m thick sand filling over ground	1.00	73.50	42.00	0.10	308.70 cum	
		1.00	71.00	13.80	0.10	97.98 cum	
		1.00	68.00	18.80	0.10	127.84 cum	
	<u>for base of foundation</u> for long... end toe wall 0.30m thick at bank of river	1.00	73.50	1.70	0.10	12.50 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	73.50	1.20	0.10	8.82 cum	
	Long....intermediate middle wall 0.20m thick	1.00	71.00	1.20	0.10	8.52 cum	
		2.00	68.00	1.20	0.10	16.32 cum	
	cross...intermediate middle wall 0.20m thick =42+13.8+18.8=74.60m	4.00	74.60	1.20	0.10	35.81 cum	
	cross...both end wall	2.00	74.60	1.70	0.10	25.36 cum	
	Add for ramp R.R. wall =8*26.4+18+2*15+2*12.5+30*2.0	1.00	344.20	0.95	0.10	32.70 cum	
	<b>3: GOVARDHAN GHAT ~ G-2</b>						
	<u>Under floor</u> ...below the base slab .... filling over ground	1.00	60.00	60.00	0.10	360.00 cum	
		1.00	45.00	5.00	0.10	22.50 cum	
	<u>for base of foundation</u> for long... end toe wall 0.30m thick at bank of river	1.00	60.00	1.70	0.10	10.20 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	60.00	1.20	0.10	7.20 cum	
	Long....intermediate middle wall 0.20m thick	2.00	60.00	1.20	0.10	14.40 cum	
	cross...intermediate middle wall	2.00	65.00	1.20	0.10	15.60 cum	
	cross...both end wall	1.00	69.00	1.70	0.10	11.73 cum	
		1.00	60.00	1.70	0.10	10.20 cum	
	Add for Change Room wall =2*3.3+2*4.8	3.00	16.20	1.20	0.10	5.83 cum	
	connecting platform ... under floor	1.00	45.00	5.00	0.10	22.50 cum	
	long...both end wall	2.00	45.00	1.70	0.10	15.30 cum	
	long closing wall	4.00	5.00	1.70	0.10	3.40 cum	
	<b>4: GHAT NO- G-6</b>						

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	85.00	33.50	0.10	284.75 cum	
	RAMPS	1.00	59.00	2.40	0.10	14.16 cum	
		3.00	19.00	5.00	0.10	28.50 cum	
	<u>for base of foundation</u>					0.00	
	for long... end toe wall 0.30m thick						
	at bank of river	1.00	42.00	1.70	0.10	7.14 cum	
	Long....intermediate promenade						
	wall 0.20m thick	1.00	35.50	1.20	0.10	4.26 cum	
	Long....intermediate middle wall						
	0.20m thick	1.00	32.00	1.20	0.10	3.84 cum	
		1.00	28.50	1.20	0.10	3.42 cum	
		1.00	25.00	1.20	0.10	3.00 cum	
	cross...intermediate middle wall						
	0.20m thick	1.00	82.00	1.20	0.10	9.84 cum	
	cross...both end wall	1.00	79.00	1.20	0.10	9.48 cum	
		1.00	88.00	1.70	0.10	14.96 cum	
	Add for Ramp wall =3*19+1*5	3.00	62.00	1.20	0.10	22.32 cum	
	Connecting ramp wall=59-3*5+2*2.4						
		1.00	48.80	1.20	0.10	5.86 cum	
	<b>5: GHAT NO- G-7</b>						
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	25.00	61.50	0.10	153.75 cum	
	ramp area	1.00	8.20	27.80	0.10	22.80 cum	
		1.00	6.40	20.00	0.10	12.80 cum	
		1.00	5.00	4.50	0.10	2.25 cum	
		1.00	9.20	9.60	0.10	8.83 cum	
		1.00	2.50	4.80	0.10	1.20 cum	
	Less green area	-1.00	8.00	1.80	0.10	-1.44 cum	
		-1.00	7.00	1.80	0.10	-1.26 cum	
		-1.00	12.00	1.40	0.10	-1.68 cum	
	<u>for base of foundation</u>						
	for long... end toe wall 0.30m thick						
	at bank of river	1.00	25.00	1.70	0.10	4.25 cum	
	Long....intermediate promenade						
	wall 0.20m thick	1.00	25.00	1.20	0.10	3.00 cum	
	Long....intermediate middle wall						
	0.20m thick	2.00	25.00	1.20	0.10	6.00 cum	
	cross...intermediate middle wall						
	0.20m thick	1.00	61.50	1.20	0.10	7.38 cum	
	cross...both end wall	2.00	61.50	1.70	0.10	20.91 cum	
	Add for Ramp wall						
	=26.2+9.6+2.5+9.2+5.8+5+4.5+11+8						
	+8.2	1.00	90.00	1.20	0.10	10.80 cum	
	<b>6: GHAT NO- G-8</b>						
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	35.00	65.50	0.10	229.25 cum	
	ramp area	2.00	26.40	2.30	0.10	12.14 cum	
		2.00	24.00	2.30	0.10	11.04 cum	
		2.00	14.80	2.30	0.10	6.81 cum	
		2.00	19.50	2.30	0.10	8.97 cum	
		1.00	8.20	2.30	0.10	1.89 cum	
		2.00	12.50	2.30	0.10	5.75 cum	
	<u>for base of foundation</u>						
	for long... end toe wall 0.30m thick						
	at bank of river	1.00	35.00	1.70	0.10	5.95 cum	
	Long....intermediate promenade						
	wall 0.20m thick	1.00	35.00	1.20	0.10	4.20 cum	
	Long....intermediate middle wall						
	0.20m thick	2.00	35.00	1.20	0.10	8.40 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	cross...intermediate middle wall 0.20m thick	1.00	65.50	1.20	0.10	7.86 cum	
	cross...both end wall	2.00	65.50	1.70	0.10	22.27 cum	
	Add for Ramp wall =2*26.0+5+5+23.5+6+2*19.5+4+5+2* 17.4	1.00	174.30	1.20	0.10	20.92 cum	
	<b>7: Ghat No- G-4</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	33.00	73.00	0.10	240.90 cum	
	Add for spiral Ramp area for base of foundation	1.00	180.00	2.50	0.10	45.00 cum 0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	33.00	1.70	0.10	5.61 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	33.00	1.20	0.10	3.96 cum	
	Long....intermediate middle wall 0.20m thick	3.00	33.00	1.20	0.10	11.88 cum	
	cross...intermediate middle wall 0.20m thick	2.00	73.00	1.20	0.10	17.52 cum	
	cross...both end wall	2.00	73.00	1.70	0.10	24.82 cum	
	Add for spiral Ramp wall	2.00	180.00	1.20	0.10	43.20 cum 0.00	
	<b>8: Ghat No- G-1</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	32.00	44.80	0.10	143.36 cum	
	for base of foundation	1.00	44.80	51.00	0.10	228.48 cum 0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	32.00	1.70	0.10	5.44 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	32.00	1.20	0.10	3.84 cum	
	Long....intermediate middle wall 0.20m thick	1.00	32.00	1.20	0.10	3.84 cum	
		4.00	44.80	1.20	0.10	21.50 cum	
	cross...intermediate middle wall 0.20m thick	1.00	95.80	1.20	0.10	11.50 cum	
	cross...both end wall	2.00	95.80	1.70	0.10	32.57 cum 0.00	
	<b>9: Ghat No- G-9</b>						
	<u>Under floor</u> ....below the base slab .... filling over ground	1.00	41.00	62.00	0.10	254.20 cum	
	Ramp	1.00	28.50	1.50	0.10	4.28 cum	
		1.00	29.50	1.80	0.10	5.31 cum	
		1.00	29.00	2.00	0.10	5.80 cum	
		1.00	14.50	2.50	0.10	3.63 cum	
		1.00	29.50	2.00	0.10	5.90 cum	
		1.00	33.50	2.00	0.10	6.70 cum	
		1.00	34.00	2.00	0.10	6.80 cum	
		2.00	30.00	2.00	0.10	12.00 cum	
	Etra for landing/steps	1.00	25.50	1.50	0.10	3.83 cum	
		1.00	75.50	2.00	0.10	15.10 cum	
		4.00	4.00	4.00	0.10	6.40 cum 0.00	
	for base of foundation						
	for long... end toe wall 0.30m thick at bank of river	1.00	41.00	1.70	0.10	6.97 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	41.00	1.20	0.10	4.92 cum	
	Long....intermediate middle wall 0.20m thick	2.00	41.00	1.20	0.10	9.84 cum	
	cross...intermediate middle wall 0.20m thick	1.00	62.00	1.20	0.10	7.44 cum	
	cross...both end wall	2.00	62.00	1.70	0.10	21.08 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Add for Ramp wall =30+6.5+8+12+6+18+28.5+5+2*12+5 .5+2*12+28.6+33	1.00	229.10	1.20	0.10	27.49 cum	
						0.00 cum	
						TOTAL 3,736.72 cum	
						SAY 3,737.00 cum	
11.00	Providing and laying in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete work in <b>foundation like raft, grillages, strip foundation and footings</b> of reinforced cement concrete columns						
	<b>1: NAGINA GHAT~ G-5</b>						
	<u>Under floor ...base slab ....0.20m thick RCC base over c.c.</u> =31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	1.00	72.50	35.00	0.20	507.50 cum	
	<u>For wall foundation</u> for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.50	0.30	15.75 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.00	0.25	8.75 cum	
	Long....intermediate middle wall 0.20m thick	2.00	35.00	1.00	0.25	17.50 cum	
	cross...intermediate middle wall 0.20m thick =31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	1.00	72.50	1.00	0.25	18.13 cum	
	cross...both end wall=31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	2.00	72.50	1.50	0.25	54.38 cum	
	<b>2: BANDA GHAT ~ G-3</b>						
	<u>base slab ....0.20m thick RCC base over c.c</u>	1.00	73.50	42.00	0.20	617.40 cum	
		1.00	71.00	13.80	0.20	195.96 cum	
		1.00	68.00	18.80	0.20	255.68 cum	
	<u>For wall foundation</u> for long... end toe wall 0.30m thick at bank of river	1.00	73.50	1.50	0.30	33.08 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	73.50	1.00	0.25	18.38 cum	
	Long....intermediate middle wall 0.20m thick	1.00	71.00	1.00	0.25	17.75 cum	
		2.00	68.00	1.00	0.25	34.00 cum	
	cross...intermediate middle wall 0.20m thick =42+13.8+18.8=74.60m	4.00	74.60	1.00	0.25	74.60 cum	
	cross...both end wall	2.00	74.60	1.50	0.25	55.95 cum	
	<b>3: GOVARDHAN GHAT ~ G-2</b>						
	<u>base slab ....0.20m thick RCC base over c.c</u>	1.00	60.00	60.00	0.20	720.00 cum	
		1.00	45.00	5.00	0.20	45.00 cum	
	<u>For wall foundation</u> for long... end toe wall 0.30m thick at bank of river	1.00	60.00	1.50	0.30	27.00 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	60.00	1.00	0.25	15.00 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Long....intermediate middle wall 0.20m thick	2.00	60.00	1.00	0.25	30.00 cum	
	cross...intermediate middle wall	2.00	65.00	1.00	0.25	32.50 cum	
	cross...both end wall	1.00	69.00	1.50	0.25	25.88 cum	
		1.00	60.00	1.50	0.25	22.50 cum	
	connecting platform ... under floor	1.00	45.00	5.00	0.20	45.00 cum	
	long...both end wall	2.00	45.00	1.50	0.25	33.75 cum	
	long closing wall	4.00	5.00	1.50	0.25	7.50 cum	
	<b>4: GHAT NO- G-6</b>					0.00	
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	85.00	33.50	0.20	569.50 cum	
	RAMPS	1.00	59.00	2.40	0.20	28.32 cum	
		3.00	19.00	5.00	0.20	57.00 cum	
	<u>For wall foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	42.00	1.50	0.30	18.90 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.50	1.00	0.25	8.88 cum	
	Long....intermediate middle wall 0.20m thick	1.00	32.00	1.00	0.25	8.00 cum	
		1.00	28.50	1.00	0.25	7.13 cum	
		1.00	25.00	1.00	0.25	6.25 cum	
	cross...intermediate middle wall 0.20m thick	1.00	82.00	1.00	0.25	20.50 cum	
	cross...both end wall	1.00	79.00	1.00	0.25	19.75 cum	
		1.00	88.00	1.50	0.25	33.00 cum	
	Add for Ramp wall =3*19+1*5	3.00	62.00	1.00	0.25	46.50 cum	
	Connecting ramp wall=59-3*5+2*2.4						
		1.00	48.80	1.00	0.25	12.20 cum	
	<b>5: GHAT NO- G-7</b>					0.00	
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	25.00	61.50	0.20	307.50 cum	
	ramp area	1.00	8.20	27.80	0.20	45.59 cum	
		1.00	6.40	20.00	0.20	25.60 cum	
		1.00	5.00	4.50	0.20	4.50 cum	
		1.00	9.20	9.60	0.20	17.66 cum	
		1.00	2.50	4.80	0.20	2.40 cum	
	Less green area	-1.00	8.00	1.80	0.20	-2.88 cum	
		-1.00	7.00	1.80	0.20	-2.52 cum	
		-1.00	12.00	1.40	0.20	-3.36 cum	
	<u>For wall foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	25.00	1.50	0.30	11.25 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	25.00	1.00	0.25	6.25 cum	
	Long....intermediate middle wall 0.20m thick	2.00	25.00	1.00	0.25	12.50 cum	
	cross...intermediate middle wall 0.20m thick	1.00	61.50	1.00	0.25	15.38 cum	
	cross...both end wall	2.00	61.50	1.50	0.25	46.13 cum	
	Add for Ramp wall =26.2+9.6+2.5+9.2+5.8+5+4.5+11+8 +8.2	1.00	90.00	1.00	0.25	22.50 cum	
	<b>6: GHAT NO- G-8</b>					0.00	
	<u>Under floor</u> ....below the base slab						
	.... filling over ground	1.00	35.00	65.50	0.20	458.50 cum	
	ramp area	2.00	26.40	2.30	0.20	24.29 cum	
		2.00	24.00	2.30	0.20	22.08 cum	
		2.00	14.80	2.30	0.20	13.62 cum	
		2.00	19.50	2.30	0.20	17.94 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
		1.00	8.20	2.30	0.20	3.77 cum	
		2.00	12.50	2.30	0.20	11.50 cum	
	<u>For wall foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	1.50	0.30	15.75 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	1.00	0.25	8.75 cum	
	Long....intermediate middle wall 0.20m thick	2.00	35.00	1.00	0.25	17.50 cum	
	cross...intermediate middle wall 0.20m thick	1.00	65.50	1.00	0.25	16.38 cum	
	cross...both end wall	2.00	65.50	1.50	0.25	49.13 cum	
	Add for Ramp wall =2*26.0+5+5+23.5+6+2*19.5+4+5+2* 17.4	1.00	174.30	1.50	0.25	65.36 cum	
	<b>7: Ghat No- G-4</b>						
	<u>base slab ....0.20m thick RCC base</u> <u>over c.c</u>	1.00	33.00	73.00	0.20	481.80 cum	
	Add for spiral Ramp area	1.00	180.00	2.50	0.20	90.00 cum	
	<u>For wall foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	33.00	1.50	0.30	14.85 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	33.00	1.00	0.25	8.25 cum	
	Long....intermediate middle wall 0.20m thick	3.00	33.00	1.00	0.25	24.75 cum	
	cross...intermediate middle wall 0.20m thick	2.00	73.00	1.00	0.25	36.50 cum	
	cross...both end wall	2.00	73.00	1.50	0.25	54.75 cum	
	Add for spiral Ramp wall	2.00	180.00	1.00	0.25	90.00 cum	
	<b>8: Ghat No- G-1</b>					0.00	
	<u>base slab ....0.20m thick RCC base</u> <u>over c.c</u>	1.00	32.00	44.80	0.20	286.72 cum	
		1.00	44.80	51.00	0.20	456.96 cum	
	<u>For wall foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	32.00	1.50	0.30	14.40 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	32.00	1.00	0.25	8.00 cum	
	Long....intermediate middle wall 0.20m thick	1.00	32.00	1.00	0.25	8.00 cum	
		4.00	44.80	1.00	0.25	44.80 cum	
	cross...intermediate middle wall 0.20m thick	1.00	95.80	1.00	0.25	23.95 cum	
	cross...both end wall	2.00	95.80	1.50	0.25	71.85 cum	
	<b>9: Ghat No- G-9</b>					0.00	
	<u>Under floor ....below the base slab</u> .... filling over ground	1.00	41.00	62.00	0.20	508.40 cum	
	Ramp	1.00	28.50	1.50	0.20	8.55 cum	
		1.00	29.50	1.80	0.20	10.62 cum	
		1.00	29.00	2.00	0.20	11.60 cum	
		1.00	14.50	2.50	0.20	7.25 cum	
		1.00	29.50	2.00	0.20	11.80 cum	
		1.00	33.50	2.00	0.20	13.40 cum	
		1.00	34.00	2.00	0.20	13.60 cum	
		2.00	30.00	2.00	0.20	24.00 cum	
	Etra for landing/steps	1.00	25.50	1.50	0.20	7.65 cum	
		1.00	75.50	2.00	0.20	30.20 cum	
		4.00	4.00	4.00	0.20	12.80 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	<u>For wall foundation</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	41.00	1.50	0.30	18.45 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	41.00	1.00	0.25	10.25 cum	
	Long....intermediate middle wall 0.20m thick	2.00	41.00	1.00	0.25	20.50 cum	
	cross...intermediate middle wall 0.20m thick	1.00	62.00	1.00	0.25	15.50 cum	
	cross...both end wall	2.00	62.00	1.50	0.25	46.50 cum	
	Add for Ramp wall =30+6.5+8+12+6+18+28.5+5+2*12+5 .5+2*12+28.6+33	1.00	229.10	1.00	0.25	57.28 cum	
						TOTAL	7541.81 sqm
						<b>SAY</b>	<b>7542.00 sqm</b>
12.00	Providing and laying in situ controlled reinforced cement concrete of M-20 for <b>cut off walls, Walls</b> ( of any thickness) including form work, scaffolding, compaction, by vibrating, finishing, curing etc. complete as directed by Engineer in charge. (7.60 bags/ Cum.)						
	<b>1: NAGINA GHAT~ G-5</b>						
	<u>For wall</u>				<u>Avg. Ht.</u>		
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	0.30	1.50	15.75 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	0.20	1.50	10.50 cum	
	Long....intermediate middle wall 0.20m thick	2.00	35.00	0.20	1.50	21.00 cum	
	cross...intermediate middle wall 0.20m thick						
	=31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	1.00	72.50	0.20	1.50	21.75 cum	
	cross...both end wall=31.7+5*3.3+3*1.5+2*3+2*1.8+6 +4.2 =72.50m	2.00	72.50	0.25	1.50	54.38 cum	
						0.00	
	<b>2: BANDA GHAT ~ G-3</b>						
	<u>For wall</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	73.50	0.30	1.50	33.08 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	73.50	0.20	1.50	22.05 cum	
	Long....intermediate middle wall 0.20m thick	1.00	71.00	0.20	1.50	21.30 cum	
		2.00	68.00	0.20	1.50	40.80 cum	
	cross...intermediate middle wall 0.20m thick =42+13.8+18.8=74.60m	4.00	74.60	0.20	1.50	89.52 cum	
	cross...both end wall	2.00	74.60	0.25	1.50	55.95 cum	
						0.00	
	<b>3: GOVARDHAN GHAT ~ G-2</b>						
	<u>For wall</u>					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	60.00	0.30	1.50	27.00 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	60.00	0.20	1.50	18.00 cum	
	Long....intermediate middle wall 0.20m thick	2.00	60.00	0.20	1.50	36.00 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	cross...intermediate middle wall	2.00	65.00	0.20	1.50	39.00	cum
	cross...both end wall	1.00	69.00	0.25	1.50	25.88	cum
		1.00	60.00	0.25	1.50	22.50	cum
	connecting platform ... under floor					0.00	cum
	long...both end wall	2.00	45.00	0.25	1.50	33.75	cum
	long closing wall	4.00	5.00	0.25	1.50	7.50	cum
	<b>4: GHAT NO- G-6</b>					0.00	
	For wall					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	42.00	0.30	1.50	18.90	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.50	0.20	1.50	10.65	cum
	Long....intermediate middle wall 0.20m thick	1.00	32.00	0.20	1.50	9.60	cum
		1.00	28.50	0.20	1.50	8.55	cum
		1.00	25.00	0.20	1.50	7.50	cum
	cross...intermediate middle wall 0.20m thick	1.00	82.00	0.20	1.50	24.60	cum
	cross...both end wall	1.00	79.00	0.25	1.50	29.63	cum
		1.00	88.00	0.25	1.50	33.00	cum
	Add for Ramp wall =3*19+1*5	3.00	62.00	0.25	1.50	69.75	cum
	Connecting ramp wall=59-3*5+2*2.4						
		1.00	48.80	0.25	1.50	18.30	cum
	<b>5: GHAT NO- G-7</b>					0.00	
	For wall					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	25.00	0.30	1.50	11.25	cum
	Long....intermediate promenade wall 0.20m thick	1.00	25.00	0.20	1.50	7.50	cum
	Long....intermediate middle wall 0.20m thick	2.00	25.00	0.20	1.50	15.00	cum
	cross...intermediate middle wall 0.20m thick	1.00	61.50	0.20	1.50	18.45	cum
	cross...both end wall	2.00	61.50	0.25	1.50	46.13	cum
	Add for Ramp wall =26.2+9.6+2.5+9.2+5.8+5+4.5+11+8 +8.2	1.00	90.00	0.25	1.50	33.75	cum
	<b>6: GHAT NO- G-8</b>					0.00	
	For wall					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	35.00	0.30	1.50	15.75	cum
	Long....intermediate promenade wall 0.20m thick	1.00	35.00	0.20	1.50	10.50	cum
	Long....intermediate middle wall 0.20m thick	2.00	35.00	0.20	1.50	21.00	cum
	cross...intermediate middle wall 0.20m thick	1.00	65.50	0.20	1.50	19.65	cum
	cross...both end wall	2.00	65.50	0.25	1.50	49.13	cum
	Add for Ramp wall =2*26.0+5+5+23.5+6+2*19.5+4+5+2* 17.4	1.00	174.30	0.25	1.50	65.36	cum
	<b>7: Ghat No- G-4</b>					0.00	
	For wall					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	33.00	0.30	1.50	14.85	cum
	Long....intermediate promenade wall 0.20m thick	1.00	33.00	0.20	1.50	9.90	cum
	Long....intermediate middle wall 0.20m thick	3.00	33.00	0.20	1.50	29.70	cum

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	cross...intermediate middle wall 0.20m thick	2.00	73.00	0.20	1.50	43.80 cum	
	cross...both end wall	2.00	73.00	0.25	1.50	54.75 cum	
	Add for spiral Ramp wall	2.00	180.00	0.25	1.50	135.00 cum	
	<b>8: Ghat No- G-1</b>					0.00	
	For wall					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	32.00	0.30	1.50	14.40 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	32.00	0.20	1.50	9.60 cum	
	Long....intermediate middle wall 0.20m thick	1.00	32.00	0.20	1.50	9.60 cum	
		4.00	44.80	0.20	1.50	53.76 cum	
	cross...intermediate middle wall 0.20m thick	1.00	95.80	0.20	1.50	28.74 cum	
	cross...both end wall	2.00	95.80	0.25	1.50	71.85 cum	
	<b>9: Ghat No- G-9</b>					0.00	
	For wall					0.00	
	for long... end toe wall 0.30m thick at bank of river	1.00	41.00	0.30	1.50	18.45 cum	
	Long....intermediate promenade wall 0.20m thick	1.00	41.00	0.20	1.50	12.30 cum	
	Long....intermediate middle wall 0.20m thick	2.00	41.00	0.20	1.50	24.60 cum	
	cross...intermediate middle wall 0.20m thick	1.00	62.00	0.20	1.50	18.60 cum	
	cross...both end wall	2.00	62.00	0.25	1.50	46.50 cum	
	Add for Ramp wall =30+6.5+8+12+6+18+28.5+5+2*12+5 .5+2*12+28.6+33	1.00	229.10	0.25	1.50	85.91 cum	
						0.00 cum	
						<b>TOTAL</b> 1,821.95 sqm	
						<b>SAY</b> 1,822.00 sqm	
13.00	Providing and casting in situ cement concrete M-20/ 1: 1½ :3 of trap/ granite/ quartzite/ gneiss metal for coping to plinth or parapet, moulded or chamfered as per drawings						
	<b>1: NAGINA GHAT~ G-5</b>						
	cross...both end wall as a retaining wall =31.7+5*3.3+3*1.5+2*3+2*1.8+6+4.2 =72.50m	2.00	72.50	0.25	1.60	58.00 cum	
	<b>2: BANDA GHAT ~ G-3</b>					0.00	
	cross...both end wall	2.00	74.60	0.25	2.00	74.60 cum	
	<b>3: GOVARDHAN GHAT ~ G-2</b>					0.00	
	cross...both end wall	1.00	69.00	0.25	1.50	25.88 cum	
		1.00	60.00	0.25	1.50	22.50 cum	
	back end wall	1.00	60.00	0.25	1.50	22.50 cum	
	connecting platform ... under floor						
	long...both end wall	2.00	45.00			0.00 cum	
	long closing wall	4.00	5.00	0.25	1.00	5.00 cum	
	<b>4: GHAT NO- G-6</b>					0.00	
	For wall					0.00	
	cross...both end wall	1.00	79.00	0.25	2.50	49.38 cum	
		1.00	88.00	0.25	2.50	55.00 cum	
	Add for Ramp wall =3*19+1*5	3.00	62.00	0.25	1.50	69.75 cum	
	Connecting ramp wall=59-3*5+2*2.4	1.00	48.80	0.25	1.50	18.30 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	<b>5: GHAT NO- G-7</b>					0.00	
	For wall					0.00	
	cross...both end wall	2.00	61.50	0.25	3.00	92.25 cum	
	Add for Ramp wall						
	=26.2+9.6+2.5+9.2+5.8+5+4.5+11+8						
	+8.2	1.00	90.00	0.25	1.50	33.75 cum	
	<b>6: GHAT NO- G-8</b>					0.00	
	For wall					0.00	
	cross...both end wall	2.00	65.50	0.25	1.70	55.68 cum	
	Add for Ramp wall						
	=2*26.0+5+5+23.5+6+2*19.5+4+5+2*						
	17.4	1.00	174.30	0.25	1.50	65.36 cum	
	<b>7: Ghat No- G-4</b>					0.00	
	For wall					0.00	
	cross...both end wall	2.00	73.00	0.25	2.00	73.00 cum	
	Add for spiral Ramp wall	2.00	180.00	0.25	1.50	135.00 cum	
	<b>8: Ghat No- G-1</b>					0.00	
	For wall					0.00	
	cross...both end wall	2.00	95.80	0.25	2.00	95.80 cum	
	<b>9: Ghat No- G-9</b>					0.00	
	For wall					0.00	
	cross...both end wall	2.00	62.00	0.25	1.80	55.80 cum	
	Add for Ramp wall						
	=30+6.5+8+12+6+18+28.5+5+2*12+5						
	.5+2*12+28.6+33	1.00	229.10	0.25	1.50	85.91 cum	
						0.00 cum	
	<b>TOTAL</b>					<b>1,093.45 cum</b>	
	<b>SAY</b>					<b>1,093.00 cum</b>	
14.00	Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for <b>steps</b> including centering, form work, compacting, finishing the exposed faces with ...						
	<b>1: NAGINA GHAT~ G-5</b>						
	promenade steps =4*0.5nos	2.00	35.00	0.115	0.45	3.62 cum	
	Total steps						
	=4+11+11+6+11+6+11+11=71nosx0.						
	50	35.50	35.00	0.15	0.30	55.91 cum	
	<b>2: BANDA GHAT ~ G-3</b>					0.00	
	promenade steps =4*0.5nos	2.00	51.00	0.115	0.45	5.28 cum	
	promenade to above steps						
	=8*0.5nos	4.00	24.50	0.130	0.45	5.73 cum	
	promenade to above steps						
	=8*0.5nos	4.00	17.00	0.130	0.45	3.98 cum	
	Total steps						
	=(2*27+2*27.5+26.5+30+11.4+2*14+						
	14.5+17.4+15.5=252.30m)=10nosx0.						
	50	5.00	252.30	0.165	0.30	62.44 cum	
	Total steps =(30+12.4)*6nosx0.50	3.00	42.40	0.165	0.30	6.30 cum	
	<b>3: GOVARDHAN GHAT ~ G-2</b>					0.00	
	promenade steps =4*0.5nos	2.00	60.00	0.115	0.45	6.21 cum	
	promenade to above steps						
	=8*0.5nos	4.00	60.00	0.100	0.45	10.80 cum	
	with change room steps60-						
	3*3.60=49.20m, & 10*0.5nos	5.00	49.20	0.150	0.30	11.07 cum	
	& 2*10*0.5nos	10.00	60.00	0.150	0.30	27.00 cum	
	Total End steps =7*0.5nos.	3.50	60.00	0.150	0.30	9.45 cum	
	<b>4: GHAT NO- G-6</b>					0.00	
	promenade steps =4*0.5nos	2.00	35.50	0.115	0.45	3.67 cum	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	promenade to above steps =5*0.5nos	2.50	34.00	0.150	0.30	3.83 cum	
	with end planter steps = 10*0.5nos	5.00	28.50	0.150	0.30	6.41 cum	
	steps =31.5-2*2.0=27.50m & steps =10*0.5nos	5.00	27.50	0.150	0.30	6.19 cum	
	with end planter steps = 10*0.5nos	5.00	26.00	0.150	0.30	5.85 cum	
		5.00	28.50	0.150	0.30	6.41 cum	
	with mid planter steps = 10*0.5nos	5.00	23.00	0.150	0.30	5.18 cum	
		5.00	21.00	0.150	0.30	4.73 cum	
	<b>5: GHAT NO- G-7</b>					0.00	
	promenade steps =4*0.5nos	2.00	25.00	0.115	0.45	2.59 cum	
	promenade to above steps =10*0.5nos	5.00	24.00	0.150	0.30	5.40 cum	
	with steps = 10*0.5nos	5.00	24.00	0.150	0.30	5.40 cum	
	with steps = 10*0.5nos	5.00	24.00	0.150	0.30	5.40 cum	
	with steps = 10*0.5nos	5.00	24.00	0.150	0.30	5.40 cum	
	with steps = 10*0.5nos	5.00	21.80	0.150	0.30	4.91 cum	
	with steps = 10*0.5nos	5.00	20.00	0.150	0.30	4.50 cum	
	<b>6: GHAT NO- G-8</b>					0.00	
	promenade steps =4*0.5nos	2.00	35.00	0.115	0.45	3.62 cum	
	promenade to above steps =20*0.5nos	10.00	35.00	0.150	0.30	15.75 cum	
	with steps = 4*10*0.5nos	20.00	35.00	0.150	0.30	31.50 cum	
	with steps = 6*0.5nos	3.00	35.00	0.150	0.30	4.73 cum	
	<b>7: Ghat No- G-4</b>					0.00	
	promenade steps =4*0.5nos	2.00	33.00	0.115	0.45	3.42 cum	
	promenade to above steps =20*0.5nos	10.00	33.00	0.150	0.30	14.85 cum	
	with steps = 2*10*0.5nos	10.00	21.00	0.150	0.30	9.45 cum	
	with steps = 3*10*0.5nos	15.00	33.00	0.150	0.30	22.28 cum	
	<b>8: Ghat No- G-1</b>					0.00	
	promenade steps =4*0.5nos	2.00	32.00	0.115	0.45	3.31 cum	
	promenade to above steps =3*10*0.5nos	15.00	32.00	0.150	0.30	21.60 cum	
	promenade to above steps =10*0.5nos	5.00	36.80	0.150	0.30	8.28 cum	
	with steps = 2*6*0.5nos	6.00	44.80	0.150	0.30	12.10 cum	
	<b>9: Ghat No- G-9</b>					0.00	
	promenade steps =4*0.5nos	2.00	41.00	0.115	0.45	4.24 cum	
	promenade to above steps =13*0.5nos	6.50	41.00	0.150	0.30	11.99 cum	
	promenade to above steps =20*0.5nos	10.00	41.00	0.150	0.30	18.45 cum	
	with steps = 4*10*0.5nos	20.00	41.00	0.150	0.30	36.90 cum	
						0.00 cum	
						TOTAL	502.49 cum
						<b>SAY</b>	<b>502.00 cum</b>

<b>I. No.</b>	<b>Item in Brief</b>	<b>No.</b>	<b>Length</b>	<b>Breadth</b>	<b>Height</b>	<b>Contents</b>	<b>unit</b>
15.00	Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete <b>beams and lintels</b> as per detailed designs and drawings, or as directed including, centering, form work, compaction and roughening the surface if special finishing to be provided and curing etc. complete. (Excluding reinforcement) (7.60 Bag/ Cum.)						
	<b>1: NAGINA GHAT~ G-5</b> Allround lintels...Change Room wall =2*3.3+2*3.3	4.00	13.20	0.30	0.25	3.96 cum	0.00
	<b>2: BANDA GHAT ~ G-3</b> Allround lintels...Change Room wall =2*3.3+2*4.8	3.00	16.20	0.30	0.25	3.65 cum	0.00
	<b>3: GOVARDHAN GHAT ~ G-2</b> Allround lintels...Change Room wall =2*3.3+2*4.8	3.00	16.20	0.30	0.25	3.65 cum	0.00
	<b>9: Ghat No- G-9</b> Allround lintels...Change Room wall =2*3.3+2*4.8	3.00	16.20	0.30	0.25	3.65 cum	0.00
						<b>TOTAL</b>	<b>14.90 cum</b>
						<b>SAY</b>	<b>15.00 cum</b>
16.00	Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete <b>slabs and landings</b> as per detailed designs and drawings, including, centering, form work, compacting and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement) (7.60 Bag/ Cum.)						
	<b>1: NAGINA GHAT~ G-5</b> Allround slab...Change Room wall =2*3.3+2*3.3	4.00	3.60	3.60	0.25	12.96 cum	
	<b>2: BANDA GHAT ~ G-3</b> Allround slab...Change Room wall =2*3.3+2*4.8	3.00	3.60	5.10	0.25	13.77	
	<b>3: GOVARDHAN GHAT ~ G-2</b> Allround slab...Change Room wall =2*3.3+2*4.8	3.00	3.60	5.10	0.25	13.77	
	<b>9: Ghat No- G-9</b> Allround slab...Change Room wall =2*3.3+2*4.8	3.00	3.60	5.10	0.25	13.77	0.00 cum
						<b>TOTAL</b>	<b>54.27 cum</b>
						<b>SAY</b>	<b>54.00 cum</b>

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
17.00	Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement <b>concrete columns</b> as per detailed designs and drawing, or as directed including centering, formwork, compacting and finishing the form surfaces with cement mortar 1:3 of sufficient minimum thickness, to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement) (7.60 Bag/ Cum.)						
	<b>1: NAGINA GHAT~ G-5</b>						
	Allround slab...Change Room =2*2nos	4.00	0.30	0.30	2.40	0.86 cum	
	<b>2: BANDA GHAT ~ G-3</b>					0.00	
	Allround slab...Change Room =2*3nos	6.00	0.30	0.30	2.40	1.30 cum	
	<b>3: GOVARDHAN GHAT ~ G-2</b>					0.00	
	Allround slab...Change Room =2*3nos	6.00	0.30	0.30	2.40	1.30 cum	
	<b>9: Ghat No- G-9</b>					0.00	
	Allround slab...Change Room =2*3nos	6.00	0.30	0.30	2.40	1.30 cum	
					TOTAL	4.75 sqm	
					<b>SAY</b>	<b>5.00 sqm</b>	
18.00	Providing and laying HYSD bars with cement polymer composite coating (CPCC) anticorrosive epoxy treatment for reinforcement for structure including cutting,bending hooking by machine,trying....						
	for portion of RCC as per i/no						
	I/no- 11 raft, strip foundation and footings	7541.81		@	80.00 Kg/m	603345.16 Kg	
	I/no- 12 ... cut off walls, Walls	1821.95		@	90.00 Kg/m	163975.05 Kg	
	I/no- 13 for ....coping to plinth or parapet	1093.00		@	90.00 Kg/m	98370.00 Kg	
	I/no- 14 for ... steps	502.00		@	90.00 Kg/m	45180.00 Kg	
	I/no- 15 for ....beams and lintels	15.00		@	100.00 Kg/m	1500.00 Kg	
	I/no- 16 for ....slabs and landings	54.00		@	90.00 Kg/m	4860.00 Kg	
	I/no- 17 for ....columns	5.00		@	110.00 Kg/m	550.00 Kg	
						0.00 Kg	
					TOTAL	917780.21 Kg	
					<b>SAY</b>	<b>917.78 M.T</b>	



I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	long...both end wall	1.34	45.00	1.70	2.13	218.35	cum
	long closing wall	0.67	20.00	1.20	2.13	34.25	cum
	<b>4: GHAT NO- G-6</b>						
	for long... end toe wall 0.30m thick at bank of river	0.67	42.00	1.70	2.30	110.03	cum
	Long....intermediate promenade wall 0.20m thick	0.67	35.50	1.20	2.30	65.65	cum
	Long....intermediate middle wall 0.20m thick	0.67	32.00	1.20	2.13	54.80	cum
		0.67	28.50	1.20	2.13	48.81	cum
		0.67	25.00	1.20	2.13	42.81	cum
	cross...intermediate middle wall 0.20m thick	0.67	82.00	1.20	2.13	140.43	cum
	cross...both end wall	0.67	79.00	1.20	2.13	135.29	cum
		0.67	88.00	1.20	2.13	150.70	cum
	Add for Ramp wall =3*19+1*5	2.01	62.00	1.20	2.13	318.53	cum
	Connecting ramp wall=59-3*5+2*2.3						
		0.67	48.60	1.20	2.13	83.23	cum
	<b>5: GHAT NO- G-7</b>						
	for long... end toe wall 0.30m thick at bank of river	0.67	25.00	1.70	2.30	65.49	cum
	Long....intermediate promenade wall 0.20m thick	0.67	25.00	1.20	2.30	46.23	cum
	Long....intermediate middle wall 0.20m thick	1.34	25.00	1.20	2.13	85.63	cum
	cross...intermediate middle wall 0.20m thick	0.67	61.50	1.20	2.13	105.32	cum
	cross...both end wall	1.34	61.50	1.70	2.13	298.41	cum
	Add for Ramp wall =26.2+9.6+2.5+9.2+5.8+5+4.5+11+8 +8.2	0.67	90.00	1.20	2.13	154.13	cum
						0.00	
	<b>6: GHAT NO- G-8</b>						
	for long... end toe wall 0.30m thick at bank of river	0.67	35.00	1.65	2.30	88.99	cum
	Long....intermediate promenade wall 0.20m thick	0.67	35.00	1.20	2.30	64.72	cum
	Long...intermediate middle wall 0.20m thick	1.34	35.00	1.20	2.13	119.88	cum
	cross...intermediate middle wall 0.20m thick	0.67	65.50	1.20	2.13	112.17	cum
	cross...both end wall	1.34	65.50	1.70	2.13	317.82	cum
	Add for Ramp wall =2*26.0+5+5+23.5+6+2*19.5+4+5+2* 17.4	0.67	174.30	1.20	2.13	298.49	cum
						0.00	
	<b>7: Ghat No- G-4</b>						
	for long... end toe wall 0.30m thick at bank of river	0.67	33.00	1.70	2.30	86.45	cum
	Long....intermediate promenade wall 0.20m thick	0.67	33.00	1.20	2.30	61.02	cum
	Long....intermediate middle wall 0.20m thick	2.01	33.00	1.20	2.13	169.54	cum
	cross...intermediate middle wall 0.20m thick	1.34	73.00	1.20	2.13	250.03	cum
	cross...both end wall	1.34	73.00	1.70	2.13	354.21	cum
	Add for Ramp wall =2*26.0+5+5+23.5+6+2*19.5+4+5+2* 17.4	1.34	180.00	1.20	2.13	616.51	cum
	<b>8: Ghat No- G-1</b>						
	for long... end toe wall 0.30m thick at bank of river	0.67	32.00	1.70	2.30	83.83	cum

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Long....intermediate promenade wall 0.20m thick	0.67	32.00	1.20	2.30	59.17	cum
	Long....intermediate middle wall 0.20m thick	0.67	32.00	1.20	2.13	54.80	cum
		2.68	44.80	1.20	2.13	306.88	cum
	cross...intermediate middle wall 0.20m thick	0.67	95.80	1.20	2.13	164.06	cum
	cross...both end wall	1.34	95.80	1.70	2.13	464.84	cum
	<b>9: Ghat No- G-9</b>						
	for long... end toe wall 0.30m thick at bank of river	0.67	41.00	1.70	2.30	107.41	cum
	Long....intermediate promenade wall 0.20m thick	0.67	41.00	1.20	2.30	75.82	cum
	Long....intermediate middle wall 0.20m thick	1.34	62.00	1.20	2.13	212.35	cum
	cross...intermediate middle wall 0.20m thick	0.67	62.00	1.20	2.13	106.18	cum
	cross...both end wall	1.34	62.00	1.70	2.13	300.83	cum
	Add for Ramp wall =30+6.5+8+12+6+18+28.5+5+2*12+5 .5+2*12+28.6+33	0.67	229.10	1.20	2.13	392.34	cum
						0.00	cum
						TOTAL	10235.15 cum
						<b>SAY</b>	<b>10235.00 cum</b>
20.00	Providing uncoursed rubble masonry of trap/granite/ quartzite/ gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually, striking joints on unexposed faces and watering complete.						
	<b>2: BANDA GHAT ~ G-3</b>						
	foundation for ramp R.R. wall =8*26.4+18+2*15+2*12.5+30*2.0	1.00	344.20	0.75	0.45	116.17	cum
		1.00	344.20	0.60	0.45	92.93	cum
		1.00	344.20	0.30	1.00	103.26	cum
						0.00	
	<b>4: GHAT NO- G-6</b>						
	foundation mid planter R.R. wall =2*2+2*3	4.00	10.00	0.75	0.45	13.50	cum
		4.00	10.00	0.60	0.45	10.80	cum
		4.00	10.00	0.30	1.00	12.00	cum
	foundation End planter R.R. wall =2*2+3	4.00	7.00	0.60	0.45	7.56	cum
		4.00	7.00	0.60	0.45	7.56	cum
		4.00	7.00	0.30	1.00	8.40	cum
						0.00	
	<b>5: GHAT NO- G-7</b>						
	Ramp middle Masonary wall =8+12+9+19+21+21	1.00	90.00	0.75	0.45	30.38	cum
		1.00	90.00	0.60	0.45	24.30	cum
		1.00	90.00	0.30	1.00	27.00	cum
	Planter wall =2*8+2*1.8	1.00	19.60	0.75	0.45	6.62	cum
		1.00	19.60	0.60	0.45	5.29	cum
		1.00	19.60	0.30	1.00	5.88	cum
	Planter wall =2*7+2*1.8	1.00	17.60	0.75	0.45	5.94	cum
		1.00	17.60	0.60	0.45	4.75	cum
		1.00	17.60	0.30	1.00	5.28	cum
	Planter wall =2*12+2*1.8	1.00	27.60	0.75	0.45	9.32	cum
		1.00	27.60	0.60	0.45	7.45	cum

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
		1.00	27.60	0.30	1.00	8.28	cum
	<b>6: GHAT NO- G-8</b>					0.00	
	Add for Ramp wall						
	=26.0+23.5+14+19.5+17.4	1.00	100.40	0.75	0.45	33.89	cum
		1.00	100.40	0.60	0.45	27.11	cum
		1.00	100.40	0.30	1.00	30.12	cum
	Planter wall =2*7+2*1.8	1.00	17.60	0.75	0.45	5.94	cum
		1.00	17.60	0.60	0.45	4.75	cum
		1.00	17.60	0.30	1.00	5.28	cum
	Planter wall =2*12+2*1.8	1.00	27.60	0.75	0.45	9.32	cum
		1.00	27.60	0.60	0.45	7.45	cum
		1.00	27.60	0.30	1.00	8.28	cum
	Planter wall =2*14+2*1.8	1.00	31.60	0.75	0.45	10.67	cum
		1.00	31.60	0.60	0.45	8.53	cum
		1.00	31.60	0.30	1.00	9.48	cum
	<b>7: Ghat No- G-4</b>					0.00	
	Add for Ramp wall external wall	4.00	15.00	0.75	0.45	20.25	cum
		4.00	15.00	0.60	0.45	16.20	cum
		4.00	15.00	0.30	1.00	18.00	cum
	Planter wall =2*4.5+2*1.8	2.00	12.60	0.75	0.45	8.51	cum
		2.00	12.60	0.60	0.45	6.80	cum
		2.00	12.60	0.30	1.00	7.56	cum
	Planter wall =2*3+2*1.8	2.00	9.60	0.75	0.45	6.48	cum
		2.00	9.60	0.60	0.45	5.18	cum
		2.00	9.60	0.30	1.00	5.76	cum
	Planter wall =2*9+2*1.8	2.00	21.60	0.75	0.45	14.58	cum
		2.00	21.60	0.60	0.45	11.66	cum
		2.00	21.60	0.30	1.00	12.96	cum
	<b>9: Ghat No- G-9</b>					0.00	
	Ramp...Planter wall =2*10+2*1.0	2.00	22.00	0.75	0.45	14.85	cum
		2.00	22.00	0.60	0.45	11.88	cum
		2.00	22.00	0.30	1.00	13.20	cum
	Planter wall =2*10+2*3.5	2.00	27.00	0.75	0.45	18.23	cum
		2.00	27.00	0.60	0.45	14.58	cum
		2.00	27.00	0.30	1.00	16.20	cum
	Planter wall =2*9+2*2.5	2.00	23.00	0.75	0.45	15.53	cum
		2.00	23.00	0.60	0.45	12.42	cum
		2.00	23.00	0.30	1.00	13.80	cum
	Planter wall =2*7+2*3.5	1.00	21.00	0.75	0.45	7.09	cum
		1.00	21.00	0.60	0.45	5.67	cum
		1.00	21.00	0.30	1.00	6.30	cum
	Planter wall =2*6+2*1.5	1.00	15.00	0.75	0.45	5.06	cum
		1.00	15.00	0.60	0.45	4.05	cum
		1.00	15.00	0.30	1.00	4.50	cum
	Planter wall =2*6+2*1.8	2.00	15.60	0.75	0.45	10.53	cum
	Planter	2.00	15.60	0.60	0.45	8.42	cum
		2.00	15.60	0.30	1.00	9.36	cum
						0.00	cum
						TOTAL	999.08 cum
						<b>SAY</b>	<b>999.00 cum</b>

21.00 Providing coursed **rubble masonry first sort** of trap/ granite/ quartzite/ gneiss stones in cement mortar 1:6 in external wall of plinth including bailing out water manually, striking joints inside and watering.

**1: NAGINA GHAT~ G-5**

for 3nos Change Room wall  
=2\*3.3+2\*4.8

3.00 13.20 0.30 2.50 29.70 cum

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Less opening	-3.00	1.00	0.30	2.00	-1.80	cum
	<b>2: BANDA GHAT ~ G-3</b>					0.00	
	foundation for ramp R.R. wall =8*26.4+18+2*15+2*12.5+30*2.0	1.00	344.20	0.30	1.50	154.89	cum
	for 3nos Change Room wall =2*3.3+2*4.8	3.00	16.20	0.30	2.50	36.45	cum
	Less opening	-3.00	1.00	0.30	2.00	-1.80	cum
	<b>3: GOVARDHAN GHAT ~ G-2</b>					0.00	
	for 3nos Change Room wall =2*3.3+2*4.8	3.00	16.20	0.30	2.50	36.45	cum
	Less opening	-3.00	1.00	0.30	2.00	-1.80	cum
	<b>4: GHAT NO- G-6</b>					0.00	
	foundation mid planter R.R. wall =2*2+2*3	4.00	10.00	0.30	1.50	18.00	cum
	foundation End planter R.R. wall =2*2+3	4.00	7.00	0.30	1.50	12.60	cum
	<b>5: GHAT NO- G-7</b>					0.00	
	Ramp middle Masonary wall =8+12+9+19+21+21	1.00	90.00	0.30	1.50	40.50	cum
	Planter wall =2*8+2*1.8	1.00	19.60	0.30	1.50	8.82	cum
	Planter wall =2*7+2*1.8	1.00	17.60	0.30	1.50	7.92	cum
	Planter wall =2*12+2*1.8	1.00	27.60	0.30	1.50	12.42	cum
	<b>6: GHAT NO- G-8</b>					0.00	
	Add for Ramp wall =26.0+23.5+14+19.5+17.4	1.00	100.40	0.30	1.50	45.18	cum
	Planter wall =2*7+2*1.8	1.00	17.60	0.30	1.50	7.92	cum
	Planter wall =2*12+2*1.8	1.00	27.60	0.30	1.50	12.42	cum
	Planter wall =2*14+2*1.8	1.00	31.60	0.30	1.50	14.22	cum
	<b>7: Ghat No- G-4</b>					0.00	
	Add for Ramp wall external wall	4.00	15.00	0.30	1.50	27.00	cum
	Planter wall =2*4.5+2*1.8	2.00	12.60	0.30	1.50	11.34	cum
	Planter wall =2*3+2*1.8	2.00	9.60	0.30	1.50	8.64	cum
	Planter wall =2*9+2*1.8	2.00	21.60	0.30	1.50	19.44	cum
	<b>9: Ghat No- G-9</b>					0.00	
	Ramp...Planter wall =2*10+2*1.0	2.00	22.00	0.30	1.50	19.80	cum
	Planter wall =2*10+2*3.5	2.00	27.00	0.30	1.50	24.30	cum
	Planter wall =2*9+2*2.5	2.00	23.00	0.30	1.50	20.70	cum
	Planter wall =2*7+2*3.5	1.00	21.00	0.30	1.50	9.45	cum
	Planter wall =2*6+2*1.5	1.00	15.00	0.30	1.50	6.75	cum
	Planter wall =2*6+2*1.8	2.00	15.60	0.30	1.50	14.04	cum
	Ghat... planter =2*4+2*1.8	2.00	11.60	0.30	1.50	10.44	cum
	Ghat... planter =2*8+2*3	1.00	22.00	0.30	1.50	9.90	cum
	for 3nos Change Room wall =2*3.3+2*4.8	3.00	16.20	0.30	2.50	36.45	cum
	Less opening	-3.00	1.00	0.30	2.00	-1.80	cum
	<b>TOTAL</b>					<b>648.54</b>	<b>cum</b>
	<b>SAY</b>					<b>649.00</b>	<b>cum</b>
22.00	Clearing and removing bushes, waiste trees etc. on bank of river including						
	<b>1: NAGINA GHAT~ G-5</b>						
	for total area	1.00	80.00	50.00		4000.00	sqm
	<b>2: BANDA GHAT ~ G-3</b>					0.00	
	for total area	1.00	80.00	75.00		6000.00	sqm
	<b>3: GOVARDHAN GHAT ~ G-2</b>					0.00	
	for total area	1.00	60.00	60.00		3600.00	sqm
		1.00	60.00	4.50		270.00	
	connecting platform ...	1.00	55.00	5.50		302.50	sqm
	<b>4: GHAT NO- G-6</b>					0.00	
	4: Ghat No- G-5	1.00	40.00	90.00		3600.00	sqm

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
		0.50	14.00	90.00		630.00 sqm	
		0.50	39.00	9.00		175.50 sqm	
	RAMPS	1.00	65.00	4.00		260.00 sqm	
		2.00	25.00	6.00		300.00 sqm	
	<b><u>5: GHAT NO- G-7</u></b>					0.00	
		1.00	61.50	25.00		1537.50 sqm	
	ramp area	1.00	8.20	27.80		227.96 sqm	
		1.00	6.40	20.00		128.00 sqm	
		1.00	5.00	4.50		22.50 sqm	
		1.00	9.20	9.60		88.32 sqm	
		1.00	2.50	4.80		12.00 sqm	
	Less green area	-1.00	8.00	1.80		-14.40 sqm	
		-1.00	7.00	1.80		-12.60 sqm	
		-1.00	12.00	1.40		-16.80 sqm	
	<b><u>6: GHAT NO- G-8</u></b>					0.00	
		1.00	65.50	40.00		2620.00 sqm	
	ramp area	2.00	26.40	2.30		121.44 sqm	
		2.00	24.00	2.30		110.40 sqm	
		2.00	14.80	2.30		68.08 sqm	
		2.00	19.50	2.30		89.70 sqm	
		1.00	8.20	2.30		18.86 sqm	
		2.00	12.50	2.30		57.50 sqm	
	<b><u>7: Ghat No- G-4</u></b>					0.00	
		1.00	80.00	35.00		2800.00 sqm	
	ramp area	1.00	200.00	5.00		1000.00 sqm	
	<b><u>8: Ghat No- G-1</u></b>					0.00	
		1.00	32.00	44.80		1433.60 sqm	
		1.00	44.80	51.00		2284.80 sqm	
	<b><u>9: Ghat No- G-9</u></b>					0.00	
		1.00	41.00	62.00		2542.00 sqm	
		1.00	28.50	33.50		954.75 sqm	
						0.00 sqm	
						TOTAL	35211.61 sqm
						<b>SAY</b>	<b>35212.00</b> sqm

23.00 Providing & fixing Stainless steel hand rails , blusters, post, Pergolas, railings & similar works etc. using Brush finished Stainless steel members ( Stainless Steel Grade 304 and finish no-4 ) including hold fasts, screws, nut bolts, fasteners, etc. with cutting, hoisting, fixing & argon welding etc. in position as per approved drawing and direction of Engineer in charge. ( work shall be executed through specialized agency only )

**1: NAGINA GHAT~ G-5**

at both side of ghat

2.00	78.00 m	156.00 m
1.00	35.00 m	35.00 m

**2: BANDA GHAT ~ G-3**

at both side of ghat

2.00	75.00 m	150.00 m
1.00	73.40 m	73.40 m

**3: GOVARDHAN GHAT ~ G-2**

at both side of ghat

2.00	44.50 m	89.00 m
1.00	60.00 m	60.00 m

**4: GHAT NO- G-6**

at both side of ghat

2.00	85.00 m	170.00 m
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**5: GHAT NO- G-7**

at both side of ghat

2.00	61.50 m	123.00 m
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I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	<b>6: GHAT NO- G-8</b>					-	
	at both side of ghat	2.00	65.50 m		131.00 m		
	<b>7: Ghat No- G-4</b>					-	
	at both side of ghat	2.00	73.00 m		146.00 m		
	<b>8: Ghat No- G-1</b>					-	
	at both side of ghat	2.00	95.80 m		191.60 m		
	<b>9: Ghat No- G-9</b>					-	
	at both side of ghat	2.00	62.00 m		124.00 m		
					<u>TOTAL</u>	<u>1,449.00 m</u>	
	3.75kg/m Weight of 3mm thick 50mm dia pipe	@	3.75	kg/m		5,433.75	Kg
	add for Clamps & nut bolts etc @1.0m apart	@	0.75	kg/m		1,086.75	Kg
					<u>TOTAL</u>	<u>6520.50</u>	<u>Kg</u>
					<b>SAY</b>	<b>6521.00</b>	<b>Kg</b>
24.00	Providing and laying Rough Shahabad Stone Flooring 50 mm. to 60 mm.-thick and of required width in plain/ diamond pattern on a bed of 1:6 cement mortar						
	<b>1: NAGINA GHAT~ G-5</b>						
	over parapet walls	2.00	78.00	0.25		39.00	sqm
	at Top +355.0 level... flooring	1.00	35.00	5.00		175.00	sqm
	for change room	3.00	3.00	4.50		40.50	sqm
	<b>2: BANDA GHAT ~ G-3</b>					0.00	
	over parapet walls	2.00	74.60	0.25		37.30	sqm
	atTop +356.000 level... flooring	1.00	68.00	5.00		340.00	sqm
	Add cpoing for ramp R.R. wall =8*26.4+18+2*15+2*12.5+30*2.0	1.00	344.20	0.35		120.47	sqm
	for change room	3.00	3.00	4.50		40.50	sqm
	<b>3: GOVARDHAN GHAT ~ G-2</b>					0.00	
	parapet coping over cross...both end wall as a retaining wall	1.00	49.00	0.25		12.25	sqm
		1.00	40.00	0.25		10.00	sqm
	Back end wall	1.00	60.00	0.25		15.00	sqm
	End Landing	1.00	60.00	5.50		330.00	sqm
	connecting plateform ...	1.00	45.00	4.50		202.50	sqm
	for change room	3.00	3.00	4.50		40.50	sqm
	<b>4: GHAT NO- G-6</b>					0.00	
	parapet coping over cross...both end wall as a retaining wall	1.00	79.00	0.25		19.75	sqm
		1.00	88.00	0.25		22.00	sqm
	Back end wall	1.00	25.00	0.25		6.25	sqm
	coping mid planter R.R. wall =2*2+2*3	4.00	10.00	0.40		16.00	sqm
	End planter R.R. wall =2*2+3	4.00	7.00	0.40		11.20	sqm
	<b>5: GHAT NO- G-7</b>					0.00	
	parapet coping over cross...both end wall as a retaining wall	2.00	61.50	0.25		30.75	sqm
	Add for Ramp R.C.C wall =26.2+9.6+2.5+9.2+5.8+5+4.5+11+8 +8.2	1.00	90.00	0.25		22.50	sqm
	Ramp middle Masonary wall =8+12+9+19+21+21	1.00	90.00	0.40		36.00	sqm
	Planter wall =2*8+2*1.8	1.00	19.60	0.40		7.84	sqm
	Planter wall =2*7+2*1.8	1.00	17.60	0.40		7.04	sqm
	Planter wall =2*12+2*1.8	1.00	27.60	0.40		11.04	sqm
	<b>6: GHAT NO- G-8</b>					0.00	
	parapet coping over cross...both end wall as a retaining wall	2.00	65.50	0.25		32.75	sqm

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	Add for Ramp wall =26.0+23.5+14+19.5+17.4	1.00	100.40	0.40		40.16 sqm	
	Planter wall =2*7+2*1.8	1.00	17.60	0.40		7.04 sqm	
	Planter wall =2*12+2*1.8	1.00	27.60	0.40		11.04 sqm	
	Add parapet over Ramp wall =26.0+5+2+5+9+6+5+5+11+4+9+5+1 7.4	1.00	109.40	0.30		32.82 sqm	
	<b>7: Ghat No- G-4</b>					0.00	
	parapet coping over cross...both end wall as a retaining wall	2.00	73.00	0.25		36.50 sqm	
	Add for Ramp wall	1.00	180.00	0.40		72.00 sqm	
	Add for Ramp wall external wall	4.00	15.00	0.40		24.00 sqm	
	Planter wall =2*4.5+2*1.8	2.00	12.60	0.40		10.08 sqm	
	Planter wall =2*3+2*1.8	2.00	9.60	0.40		7.68 sqm	
	Planter wall =2*9+2*1.8	2.00	21.60	0.40		17.28 sqm	
	at back side at top level	1.00	33.00	20.00		660.00 sqm	
	<b>8: Ghat No- G-1</b>					0.00	
	parapet coping over cross...both end wall as a retaining wall	2.00	95.80	0.25		47.90 sqm	
	at back side at top level	1.00	44.80	20.00		896.00 sqm	
	<b>9: Ghat No- G-9</b>					0.00	
	parapet coping over cross...both end wall as a retaining wall	2.00	62.00	0.25		31.00 sqm	
	Add for Ramp wall =30+6.5+8+12+6+18+28.5+5+2*12+5 .5+2*12+28.6+33	1.00	229.10	0.25		57.28 sqm	
	Ramp...Planter wall =2*10+2*1.0	2.00	22.00	0.40		17.60 sqm	
	Planter wall =2*10+2*3.5	2.00	27.00	0.40		21.60 sqm	
	Planter wall =2*9+2*2.5	2.00	23.00	0.40		18.40 sqm	
	Planter wall =2*7+2*3.5	1.00	21.00	0.40		8.40 sqm	
	Planter wall =2*6+2*1.5	1.00	15.00	0.40		6.00 sqm	
	Planter wall =2*6+2*1.8	2.00	15.60	0.40		12.48 sqm	
	Ghat... planter =2*4+2*1.8	2.00	11.60	0.40		9.28 sqm	
	Ghat... planter =2*8+2*3	1.00	22.00	0.40		8.80 sqm	
	at back side at top level	1.00	41.00	20.00		820.00 sqm	
	for change room	3.00	3.00	4.50		40.50 sqm	
	<b>TOTAL</b>					4539.98 sqm	
	<b>SAY</b>					<b>4540.00</b> sqm	

25.00 Providing and laying chisel dressed (two line chisel dressed) granite Stone block Flooring with 70 mm. to 80 mm.-thick stone and of required size laid in plain/ diamond pattern on a bed of 1:6 cement mortar including cement float, striking joints, pointing in cement mortar 1:3 curing and cleaning etc. complete.

**1: NAGINA GHAT~ G-5**

for flooring ... submerged plate form	1.00	20.00					
			35.00			700.00 sqm	
promenaded	1.00	10.00		35.00		350.00 sqm	
landings	3.00	1.50		35.00		157.50 sqm	
	2.00	3.00		35.00		210.00 sqm	
	1.00	6.00		35.00		210.00 sqm	
	1.00	5.00		35.00		175.00 sqm	

**2: BANDA GHAT ~ G-3**

for flooring ... submerged plate form	1.00	73.50					
			20.00			1470.00 sqm	
promenaded	1.00	73.50		10.00		735.00 sqm	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	landings	1.00	73.50	3.60		264.60 sqm	
		3.00	71.00	1.80		383.40 sqm	
		3.00	68.00	1.80		367.20 sqm	
	Ramps	6.00	29.50	2.00		354.00 sqm	
		3.00	19.00	2.00		114.00 sqm	
		1.00	20.00	1.80		36.00 sqm	
	add for small landings	10.00	2.00	1.80		36.00 sqm	
	<b>3: GOVARDHAN GHAT ~ G-2</b>					0.00	
	flooring....subseable plateform	1.00	60.00	20.00		1200.00 sqm	
	flooring....promenade	1.00	60.00	10.00		600.00 sqm	
	landing...front of change room	1.00	60.00	8.50		510.00 sqm	
	landings	3.00	60.00	1.30		234.00 sqm	
	<b>4: GHAT NO- G-6</b>					0.00	
	flooring....subseable plateform	1.00	39.00	18.50		721.50 sqm	
	flooring....promenade	1.00	35.00	11.50		402.50 sqm	
	landing...	1.00	33.50	7.00		234.50 sqm	
	landings	1.00	31.75	3.00		95.25 sqm	
	landings	1.00	30.50	3.00		91.50 sqm	
	landings	1.00	29.50	5.00		147.50 sqm	
	landings	1.00	28.00	6.00		168.00 sqm	
	landings	1.00	26.00	4.00		104.00 sqm	
	RAMPS	1.00	59.00	2.30		135.70 sqm	
		2.00	19.00	5.00		190.00 sqm	
	<b>5: GHAT NO- G-7</b>					0.00	
	flooring....subseable plateform	1.00	25.00	20.00		500.00 sqm	
	flooring....promenade	1.00	25.00	14.00		350.00 sqm	
	landing...	4.00	25.00	1.50		150.00 sqm	
	ramp area	1.00	8.20	27.80		227.96 sqm	
		1.00	6.40	20.00		128.00 sqm	
		1.00	5.00	4.50		22.50 sqm	
		1.00	9.20	9.60		88.32 sqm	
		1.00	2.50	4.80		12.00 sqm	
	Less green area	-1.00	8.00	1.80		-14.40 sqm	
		-1.00	7.00	1.80		-12.60 sqm	
		-1.00	12.00	1.40		-16.80 sqm	
	<b>6: GHAT NO- G-8</b>					0.00	
	flooring....subseable plateform	1.00	35.00	20.00		700.00 sqm	
	flooring....promenade	1.00	35.00	14.50		507.50 sqm	
	landing...	5.00	35.00	1.50		262.50 sqm	
	ramp area	2.00	26.40	2.00		105.60 sqm	
		2.00	24.00	2.00		96.00 sqm	
		2.00	14.80	2.00		59.20 sqm	
		2.00	19.50	2.00		78.00 sqm	
		1.00	8.20	2.00		16.40 sqm	
		2.00	12.50	2.00		50.00 sqm	
	<b>7: Ghat No- G-4</b>					0.00	
	flooring....subseable plateform	1.00	33.00	20.00		660.00 sqm	
	flooring....promenade	1.00	33.00	11.50		379.50 sqm	
	landing...	6.00	33.00	3.00		594.00 sqm	
	spiral ramp area	1.00	180.00	2.50		450.00 sqm	
	<b>8: Ghat No- G-1</b>					0.00	
	flooring....subseable plateform	1.00	32.00	20.00		640.00 sqm	
	flooring....promenade	1.00	33.00	5.00		165.00 sqm	
	landing...	3.00	33.00	2.00		198.00 sqm	
	landing...	1.00	44.80	21.00		940.80 sqm	
	landing...	1.00	44.80	10.50		470.40 sqm	
	landing...	1.00	44.80	15.00		672.00 sqm	
	<b>9: Ghat No- G-9</b>					0.00	
	flooring....subseable plateform	1.00	41.00	20.00		820.00 sqm	
	flooring....promenade	1.00	41.00	8.00		328.00 sqm	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	landing...	3.00	41.00		2.00	246.00	sqm
	landing...	2.00	41.00		1.50	123.00	sqm
	Ramp	1.00	28.50		1.50	42.75	sqm
		1.00	29.50		1.80	53.10	sqm
		1.00	29.00		2.00	58.00	sqm
		1.00	14.50		2.50	36.25	sqm
		1.00	29.50		2.00	59.00	sqm
		1.00	33.50		2.00	67.00	sqm
		1.00	34.00		2.00	68.00	sqm
		2.00	30.00		2.00	120.00	sqm
	Etra for landing/steps	1.00	25.50		1.50	38.25	sqm
		1.00	75.50		2.00	151.00	sqm
		4.00	4.00		4.00	64.00	sqm
						0.00	sqm
	TOTAL					21151.38	sqm
	SAY					<b>21151.00</b>	sqm

26.00 Providing and laying chisel dressed (two line chisel dressed) granite Stone blocks in steps & risers with fine dressed edges of steps 70 mm. to 80 mm.-thick and of required width in plain/ diamond pattern on a bed of 1:4 cement mortar including cement float, striking joints, pointing in cement mortar 1:3 curing and cleaning etc. complete.

**1: NAGINA GHAT~ G-5**

Total steps

for steps

=4+11+11+6+11+6+11+11=71nos 71.00 35.00 0.30 745.50 sqm

risers =5+12+12+7+12+7+12+12

=79nos

0.15

414.75 sqm

add for small turning steps

50.00 sqm

**2: BANDA GHAT ~ G-3**

promenade steps =4nos

4.00 73.50 0.450

132.30 sqm

risers

4.00 73.50 0.115

33.81 sqm

promenade to above steps =8nos

8.00 24.50 0.475

93.10 sqm

risers

8.00 24.50 0.130

25.48 sqm

promenade to above steps =8nos

8.00 17.00 0.475

64.60 sqm

risers

8.00 17.00 0.130

17.68 sqm

Total steps

=(2\*27+2\*27.5+26.5+30+11.4+2\*14+ 10.00 252.30 0.30 756.90 sqm

14.5+17.4+15.5=252.30m) risers 10.00 252.30 0.165 416.30 sqm

Total steps =(30+12.4)\*6nos 6.00 42.40 0.30 76.32 sqm

risers 6.00 42.40 0.165 41.98 sqm

add for small turning steps

50.00 sqm

**3: GOVARDHAN GHAT ~ G-2**

promenade steps =4nos

4.00 60.00 0.45

108.00 sqm

risers

4.00 60.00 0.12

28.80 sqm

promenade to above steps =8nos

8.00 60.00 0.45

216.00 sqm

risers

8.00 60.00 0.12

57.60 sqm

with change room steps60-

3\*3.60=49.20m, & 10nos 10.00 49.20 0.300 147.60 sqm

risers 10.00 49.20 0.150 73.80 sqm

& 2\*10nos 20.00 60.00 0.300 360.00 sqm

risers 20.00 60.00 0.150 180.00 sqm

Total End steps =7nos. 7.00 60.00 0.300 126.00 sqm

risers 7.00 60.00 0.150 63.00 sqm

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	add for small turning steps					50.00 sqm	
	<b>4: GHAT NO- G-6</b>					0.00	
	promenade steps =4 nos	4.00	35.50	0.45		63.90 sqm	
	risers	4.00	35.50	0.12		17.04 sqm	
	promenade to above steps						
	=5*0.5nos	5.00	34.00	0.30		51.00 sqm	
	risers	5.00	34.00	0.150		25.50 sqm	
	with end planter steps = 10*0.5nos						
		10.00	28.50	0.30		85.50 sqm	
	risers	10.00	28.50	0.150		42.75 sqm	
	steps =31.5-2*2.0=27.50m & steps						
	=10*0.5nos	10.00	27.50	0.30		82.50 sqm	
	risers	10.00	27.50	0.150		41.25 sqm	
	with end planter steps = 10*0.5nos						
		10.00	26.00	0.30		78.00 sqm	
	risers	10.00	26.00	0.150		39.00 sqm	
		10.00	28.50	0.30		85.50 sqm	
	risers	10.00	28.50	0.150		42.75 sqm	
	with mid planter steps = 10*0.5nos						
		10.00	23.00	0.30		69.00 sqm	
	risers	10.00	23.00	0.150		34.50 sqm	
		10.00	21.00	0.30		63.00 sqm	
	risers	10.00	21.00	0.150		31.50 sqm	
	add for small turning steps					20.00 sqm	
	<b>5: GHAT NO- G-7</b>					0.00	
	promenade steps =4*nos	4.00	25.00	0.45		45.00 sqm	
	risers	4.00	25.00	0.115		11.50 sqm	
	promenade to above steps =10nos	10.00	24.50	0.30		73.50 sqm	
	risers	10.00	24.50	0.150		36.75 sqm	
	with steps = 10nos	10.00	23.60	0.30		70.80 sqm	
	risers	10.00	23.60	0.150		35.40 sqm	
	with steps = 10nos	10.00	24.00	0.30		72.00 sqm	
	risers	10.00	24.00	0.150		36.00 sqm	
	with steps = 10nos	10.00	21.80	0.30		65.40 sqm	
	risers	10.00	21.80	0.150		32.70 sqm	
	with steps = 10nos	10.00	20.00	0.30		60.00 sqm	
	risers	10.00	20.00	0.150		30.00 sqm	
	<b>6: GHAT NO- G-8</b>					0.00	
	promenade steps =4nos	4.00	35.00	0.45		63.00 sqm	
	risers	4.00	35.00	0.115		16.10 sqm	
	promenade to above steps =20nos	20.00	35.00	0.30		210.00 sqm	
	risers	20.00	35.00	0.150		105.00 sqm	
	with steps = 4*10nos	40.00	35.00	0.30		420.00 sqm	
	risers	40.00	35.00	0.150		210.00 sqm	
	with steps = 6nos	6.00	35.00	0.30		63.00 sqm	
	risers	6.00	35.00	0.150		31.50 sqm	
	<b>7: Ghat No- G-4</b>					0.00	
	promenade steps =4*0.5nos	4.00	33.00	0.45		59.40 sqm	
	risers	4.00	33.00	0.115		15.18 sqm	
	promenade to above steps						
	=20*0.5nos	20.00	33.00	0.30		198.00 sqm	
	risers	20.00	33.00	0.150		99.00 sqm	
	with steps = 2*10*0.5nos	20.00	21.00	0.30		126.00 sqm	
	risers	20.00	21.00	0.150		63.00 sqm	
	with steps = 3*10*0.5nos	30.00	33.00	0.30		297.00 sqm	
	risers	30.00	33.00	0.150		148.50 sqm	
	<b>8: Ghat No- G-1</b>					0.00	
	promenade steps =4nos	4.00	32.00	0.45		57.60 sqm	
	risers	4.00	32.00	0.115		14.72 sqm	

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
	promenade to above steps =3*10nos	30.00	32.00	0.30		288.00 sqm	
	risers	30.00	32.00	0.150		144.00 sqm	
	promenade to above steps =10nos	10.00	36.80	0.30		110.40 sqm	
	risers	10.00	36.80	0.150		55.20 sqm	
	with steps = 2*6nos	12.00	44.80	0.30		161.28 sqm	
	risers	12.00	44.80	0.150		80.64 sqm	
	<b>9: Ghat No- G-9</b>					0.00	
	promenade steps =4nos	4.00	41.00	0.45		73.80 sqm	
	risers	4.00	41.00	0.115		18.86 sqm	
	promenade to above steps =13nos	13.00	41.00	0.30		159.90 sqm	
	risers	13.00	41.00	0.150		79.95 sqm	
	promenade to above steps =20nos	20.00	41.00	0.30		246.00 sqm	
	risers	20.00	41.00	0.150		123.00 sqm	
	with steps = 4*10*0.5nos	40.00	41.00	0.30		492.00 sqm	
	risers	40.00	41.00	0.150		246.00 sqm	
						0.00 sqm	
						<b>TOTAL</b>	10297.28 sqm
						<b>SAY</b>	<b>10297.00 sqm</b>

27.00 Providing trap/ granite/ quartette/ gneiss rubble stone filling behind the abutment, returns or wings including all materials and hand packing

					Avg. Ht.		
	<b>1: NAGINA GHAT~ G-5</b>						
	Below the submerged plate form						
	Inside of water along with Toe wall	1.00	35.00	10.00	1.50	525.00 cum	
						0.00	
	<b>2: BANDA GHAT ~ G-3</b>						
	Below the submerged plate form						
	Inside of water along with Toe wall	1.00	73.50	10.00	1.50	1102.50 cum	
						0.00	
	<b>3: GOVARDHAN GHAT ~ G-2</b>						
	Below the submerged plate form						
	Inside of water along with Toe wall	1.00	60.00	10.00	1.50	900.00 cum	
						0.00	
	<b>4: GHAT NO- G-6</b>						
	Below the submerged plate form						
	Inside of water along with Toe wall	1.00	42.00	10.00	1.50	630.00 cum	
						0.00	
	<b>5: GHAT NO- G-7</b>						
	Below the submerged plate form						
	Inside of water along with Toe wall	1.00	25.00	10.00	1.50	375.00 cum	
						0.00	
	<b>6: GHAT NO- G-8</b>						
	Below the submerged plate form						
	Inside of water along with Toe wall	1.00	35.00	10.00	1.50	525.00 cum	
						0.00	
	<b>7: Ghat No- G-4</b>						
	Below the submerged plate form						
	Inside of water along with Toe wall	1.00	33.00	10.00	1.50	495.00 cum	
						0.00	
	<b>8: Ghat No- G-1</b>						
	Below the submerged plate form						
	Inside of water along with Toe wall	1.00	32.00	10.00	1.50	480.00 cum	
						0.00	
	<b>9: Ghat No- G-9</b>						
	Below the submerged plate form						
	Inside of water along with Toe wall	1.00	41.00	10.00	1.50	615.00 cum	
						0.00 cum	
						<b>TOTAL</b>	5647.50 cum
						<b>SAY</b>	<b>5648.00 cum</b>

I. No.	Item in Brief	No.	Length	Breadth	Height	Contents	unit
28.00	Providing and fixing of 450 mm dia Precast concrete. bollards Spherical shape Red/Grey shade (K.K manholes, Delhi or any equivalent Approved Make.) including excavating holes upto required size in all kinds of soil, and providing and fixing of required concrete Base of 1:3:4(1 cement:3 coarse sand: 4 graded stone) for fixing as per direction of engineer- in- charge, all complete as per direction of Engineer in-charge.						
	<b>1: NAGINA GHAT~ G-5</b> Bollard @ 1.0m appart with Ghat width	1.00	35.00			36.00 Nos	
	<b>2: BANDA GHAT ~ G-3</b> Bollard @ 1.0m appart with Ghat width	1.00	74.00			75.00 Nos	
	<b>3: GOVARDHAN GHAT ~ G-2</b> Bollard @ 1.0m appart with Ghat width	1.00	60.00			61.00 Nos	
	<b>4: GHAT NO- G-6</b> Bollard @ 1.0m appart with Ghat width	1.00	42.00			43.00 Nos	
	<b>5: GHAT NO- G-7</b> Bollard @ 1.0m appart with Ghat width	1.00	25.00			26.00 Nos	
	<b>6: GHAT NO- G-8</b> Bollard @ 1.0m appart with Ghat width	1.00	35.00			36.00 Nos	
	<b>7: Ghat No- G-4</b> Bollard @ 1.0m appart with Ghat width	1.00	33.00			34.00 Nos	
	<b>8: Ghat No- G-1</b> Bollard @ 1.0m appart with Ghat width	1.00	32.00			33.00 Nos	
	<b>9: Ghat No- G-9</b> Bollard @ 1.0m appart with Ghat width	1.00	41.00			42.00 Nos	
						0.00	
						<b>TOTAL</b>	<b>394.00 Nos</b>
						<b>SAY</b>	<b>394.00 Nos</b>
29.00	Add for providing richer mixes respectively at all level. ( I ) Providing M-30 grade RCC instead of M-20 or 1: 1½ :3 or grade RCC. For qutty same as item no- I/no- 11 raft, strip foundation and footings I/no- 12 ... cut off walls, Walls I/no- 13 for ....coping to plinth or parapet I/no- 14 for ... steps I/no- 15 for ....beams and lintels I/no- 16 for ....slabs and landings I/no- 17 for ....columns	1.00	7541.81			7541.81 cum	
		1.00	1821.95			1821.95 cum	
		1.00	1093.45			1093.45 cum	
		1.00	502.00			502.00 cum	
		1.00	14.90			14.90 cum	
		1.00	54.00			54.00 cum	
		1.00	5.00			5.00 cum	
						<b>TOTAL</b>	<b>11033.10 cum</b>

<b>I. No.</b>	<b>Item in Brief</b>	<b>No.</b>	<b>Length</b>	<b>Breadth</b>	<b>Height</b>	<b>Contents</b>	<b>unit</b>
						<b>SAY</b>	<b>11033.00</b> cum
30.00	Dismantling stone masonry in lime or cement including stacking the materials as directed with all leads and lifts complete. As directed by Engineer in charge	LS	1.00	100.00	1.00	1.00	100.00 cum 0.00 cum
						<b>TOTAL</b>	<b>100.00</b> cum
						<b>SAY</b>	<b>100.00</b> cum
31.00	Removing lime or lean cement concrete including stacking the spoils as directed with all leads and lifts complete. As directed by Engineer in charge	LS	1.00	150.00	1.00	1.00	150.00 cum 0.00 cum
						<b>TOTAL</b>	<b>150.00</b> cum
						<b>SAY</b>	<b>150.00</b> cum
32.00	Removing rich mix cement concrete including stacking the spoils as directed with all leads and lifts complete. As directed by Engineer in charge	LS	1.00	100.00	1.00	1.00	100.00 cum 0.00 cum
						<b>TOTAL</b>	<b>100.00</b> cum
						<b>SAY</b>	<b>100.00</b> cum
33.00	Removing trap stone from floor without bed concrete including stacking the materials as directed with all leads, lifts complete						
	<b>1: NAGINA GHAT~ G-5</b>						
	Existing ghat area	1.00	13.50	35.00			472.50 sqm
		1.00	23.50	6.00			141.00 sqm
	<b>2: BANDA GHAT ~ G-3</b>						0.00
	Existing ghat area	1.00	9.00	40.00			360.00 sqm
							0.00 sqm
						<b>TOTAL</b>	<b>973.50</b> sqm
						<b>SAY</b>	<b>974.00</b> sqm
34.00	Removing trap stone from floor without bed concrete including stacking the materials as directed with all leads, lifts complete						
	<b>1: NAGINA GHAT~ G-5</b>						
	at river side ....Existing ghat area	1.00	13.50	10.00			135.00 sqm
		1.00	23.50	10.00			235.00 sqm
	<b>2: BANDA GHAT ~ G-3</b>						0.00
	at river side ....Existing ghat area	1.00	9.00	10.00			90.00 sqm
							0.00 sqm
						<b>TOTAL</b>	<b>460.00</b> sqm
						<b>SAY</b>	<b>460.00</b> sqm
35.00	Removing iron pipe railing having wooden reinforced cement concrete or cement concrete or iron posts and stacking the materials as directed.						
	<b>1: NAGINA GHAT~ G-5</b>						
	Existing ghat railings	2.00	25.00				50.00 m
	<b>2: BANDA GHAT ~ G-3</b>						0.00

<b>I. No.</b>	<b>Item in Brief</b>	<b>No.</b>	<b>Length</b>	<b>Breadth</b>	<b>Height</b>	<b>Contents</b>	<b>unit</b>
	Existing ghat railings	2.00	40.00			80.00 m	
						0.00 m	
						TOTAL	130.00 m
						<b>SAY</b>	<b>130.00 m</b>

36.00 Dismantling carefully the old cement concrete of reinforced cement concrete structure by chiselling or breaker including cutting reinforcement, steel bars, sorting out serviceable materials and stacking and disposing off unserviceable material upto lead of 50 m. etc. complete as directed by Engineer in charge.

**1: NAGINA GHAT~ G-5**

taken small qutty

L.S.

20.00 cum

**2: BANDA GHAT ~ G-3**

taken small qutty

L.S.

0.00

30.00 cum

0.00 cum

TOTAL 50.00 cum

**SAY 50.00 cum**

**ANALYSIS OF RATE - SH 01**

NAME OF WORK :- DPR for Construction of Ghat at left side bank ZONE N-III, Nanded.

29.01.2007

ITEM	Description of Item	Rate	Unit
1.00	Excavation for foundation including shoring and strutting as necessary and disposing off excavated stuff as directed In earth, soils of all type sand, gravel, soft murum etc. complete (excluding dewatering if separately provided etc. complete) as directed by Engineer in charge for depth-of-1.5m.		
	Rate as per PWD DSR-2006-07, Item no- 751, P-270	61.00	Per CUM
	add conveying & shifting upto 3Km Lead	66.68	Per CUM
	Total	127.68	Per CUM
	Add 5% corporation Charges	6.38	Per CUM
	Total	134.06	Per CUM
	say	134.05	Per CUM
2.00	Excavation for foundation In hard murum and boulders upto 0.3 cum. to 0.20 cum. size including shoring and strutting as necessary and disposing off excavated stuff as directed excluding dewatering if separately provided etc. complete as directed by Engineer in charge		
	Rate as per PWD DSR-2006-07, Item no- 753, P-270	81.00	Per CUM
	add conveying & shifting upto 3Km Lead	66.68	Per CUM
	Total	147.68	Per CUM
	Add 5% corporation Charges	7.38	Per CUM
	Total	155.06	Per CUM
	say	155.05	Per CUM
3.00	Excavation for foundation in soft rock including shoring and strutting as necessary and disposing off excavated stuff as directed, excluding dewatering if separately provided etc. complete as directed by Engineer in charge		
	Rate as per PWD DSR-2006-07, Item no- 755, P-271	125.00	Per CUM
	add conveying & shifting upto 3Km Lead	66.68	Per CUM
	Total	191.68	Per CUM
	Add 5% corporation Charges	9.58	Per CUM
	Total	201.26	Per CUM
	say	201.25	Per CUM
4.00	Excavation for foundation In hard rock by chiselling, wedged or line drilled including control blasting if necessary, shoring and strutting as necessary and disposing off excavated stuff as directed, or stacked etc. complete (excluding dewatering if separately provided) as directed by Engineer in charge.		
	Rate as per PWD DSR-2006-07, Item no- 757, P-271	389.00	Per CUM
	add conveying & shifting upto 3Km Lead	81.57	Per CUM
	Total	470.57	Per CUM
	Add 5% corporation Charges	23.53	Per CUM
	Total	494.10	Per CUM
	say	494.10	Per CUM
5.00	Dewatering including diversion of stream, providing cofferdam, bunds etc. as may be necessary for foundation and other parts of work and bailing out and pumping out water below the actual initial natural water level for start of that particular component till completion of bridge etc. complete as directed by Engineer in charge.		
	a) Raft, cut off wall		
	Rate as per PWD DSR-2006-07, Item no- 762-(c), P-272	489.00	Per CUM

Add 5% corporation Charges	24.45 Per CUM
Total	<u>513.45</u> Per CUM

6.00 Dismantling carefully the stone masonry in lime or cement mortar including sorting out serviceable materials and stacking and disposing the unserviceable material upto a lead of 50 m. etc. complete as directed by Engineer-in-charge.

Rate as per PWD DSR-2006-07, Item no- 745, P-269	279.00 Per CUM
Add 5% corporation Charges	13.95 Per CUM
Total	<u>292.95</u> Per CUM

7.00 Providing and filling with approved Sand, shingle below raft including watering, compaction etc. complete as directed by Engineer in charge.

Rate as per PWD DSR-2006-07, Item no- 759, P-271	162.00 Per CUM
add Lead charges 13Km $=(149.32-84.73)$	<u>64.59</u> Per CUM
Total	226.59 Per CUM
Add royalty charge	17.67 Per CUM
Add 5% corporation Charges	8.10 Per CUM
Total	<u>252.36</u> Per CUM
say	<u>252.35</u> Per CUM

8.00 Providing dry trap/ granite/ quartzite/ gneiss rubble stone soling 15 cm. to 20 cm. thick including hand packing and compacting complete

Rate as per PWD DSR-2006-07, I.No-17 P.No-10	129.00 Per CUM
add Lead charges 13Km $=(182.68-103.66)$	<u>79.02</u> Per CUM
Total	208.02 Per CUM
Add royalty charge	17.67 Per CUM
Add 5% corporation Charges	10.40 Per CUM
Total	<u>236.09</u> Per CUM
say	<u>236.10</u> Per CUM

9.00 Providing selected hard murum filling including laying in layers of 15 cm. to 20 cm. thick layers including watering and compacting etc. complete as directed by Engineer in charge

Rate as per PWD DSR-2006-07, I.No-737 P.No-266	85.00 Per CUM
add Lead charges 13Km $=(149.32-84.73)$	<u>64.59</u> Per CUM
Total	149.59 Per CUM
Add royalty charge	17.67 Per CUM
Add 5% corporation Charges	7.48 Per CUM
Total	<u>174.74</u> Per CUM
say	<u>174.75</u> Per CUM

10.00 Providing and laying in situ cement concrete in 1:5:10 of trap/ granite/ quartzite/ gneiss metal for foundation and bedding including bailing out water, form work, compacting, finishing if required and curing etc. complete.

Rate as per PWD DSR-2006-07, I.No-32 P.No-16	1042.00 Per CUM
add Lead charges for stone 13Km $=(149.32-84.73)*0.94$	60.71 Per CUM
add Lead charges for sand 20Km $=(204.08-84.73)*0.47$	<u>56.09</u> Per CUM
Total	1158.81 Per CUM
Add royalty charge $=17.67*(0.94+0.47)$	24.91 Per CUM
Add 5% corporation Charges	57.94 Per CUM
Total	<u>1241.66</u> Per CUM
say	<u>1241.65</u> Per CUM

11.00 Providing and laying in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete work in foundation like raft, grillages, strip foundation and footings of reinforced cement concrete columns and steel stanchion including bailing out water, form work, compaction and finishing, curing etc. complete. (Excluding steel reinforcement and structural steel) (7.60 Bag/ Cum.)

Rate as per PWD DSR-2006-07, I.No-46 P.No-19	2482.00 Per CUM
add Lead charges 13Km $= (149.32-84.73)*0.9$	58.13 Per CUM
add Lead charges for sand 20Km $= (204.08-84.73)*0.45$	53.71 Per CUM
Total	<u>2593.84 Per CUM</u>
Add royalty charge $= 17.67*(0.90+0.45)$	23.85 Per CUM
Add 5% corporation Charges	129.69 Per CUM
Total	<u>2747.38 Per CUM</u>
say	<u>2747.40 Per CUM</u>

12.00 Providing and laying in situ controlled reinforced cement concrete of M-20 for cut off walls including form work, scaffolding, compaction, by vibrating, finishing, curing etc. complete as directed by Engineer in charge. (7.60 bags/ Cum.)

Rate as per PWD DSR-2006-07, I.No-764 P.No-273	2963.00 Per CUM
add Lead charges 13Km $= (149.32-84.73)*0.9$	58.13 Per CUM
add Lead charges for sand 20Km $= (204.08-84.73)*0.45$	53.71 Per CUM
Total	<u>3074.84 Per CUM</u>
Add royalty charge $= 17.67*(0.90+0.45)$	23.85 Per CUM
Add 5% corporation Charges	153.74 Per CUM
Total	<u>3252.43 Per CUM</u>
say	<u>3252.45 Per CUM</u>

13.00 Providing and casting in situ cement concrete M-20/ 1: 1½ :3 of trap/ granite/ quartzite/ gneiss metal for coping to plinth or parapet, moulded or chamfered as per drawings or as directed including centering, formwork, compacting, roughening them if special finish is to be provided, finishing if required and curing etc. complete.(7.60 Bag/ Cum.)

Rate as per PWD DSR-2006-07, I.No-36 P.No-17	2486.00 Per CUM
add Lead charges 13Km $= (149.32-84.73)*0.9$	58.13 Per CUM
add Lead charges for sand 20Km $= (204.08-84.73)*0.45$	53.71 Per CUM
Total	<u>2597.84 Per CUM</u>
Add royalty charge $= 17.67*(0.90+0.45)$	23.85 Per CUM
Add 5% corporation Charges	129.89 Per CUM
Total	<u>2751.58 Per CUM</u>
say	<u>2751.60 Per CUM</u>

14.00 Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for steps including centering, form work, compacting, finishing the exposed faces with sufficient minimum thickness of 1:3 cement plaster to give a smooth and even surface or roughening them if special finish is to be provided and curing etc. complete.(7.60 Bag/Cum.)

Rate as per PWD DSR-2006-07, I.No-33 P.No-16	2367.00 Per CUM
add Lead charges 13Km $= (149.32-84.73)*0.9$	58.13 Per CUM
add Lead charges for sand 20Km $= (204.08-84.73)*0.45$	53.71 Per CUM
Total	<u>2478.84 Per CUM</u>
Add royalty charge $= 17.67*(0.90+0.45)$	23.85 Per CUM
Add 5% corporation Charges	123.94 Per CUM
Total	<u>2626.63 Per CUM</u>

say 2626.65 Per CUM

15.00 Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete beams and lintels as per detailed designs and drawings, or as directed including, centering, form work, compaction and roughening the surface if special finishing to be provided and curing etc. complete. (Excluding reinforcement) (7.60 Bag/ Cum.)

Rate as per PWD DSR-2006-07, I.No-52 P.No-21	3325.00 Per CUM
add Lead charges 13Km $= (149.32-84.73)*0.9$	58.13 Per CUM
add Lead charges for sand 20Km $= (204.08-84.73)*0.45$	53.71 Per CUM
Total	<u>3436.84</u> Per CUM
Add royalty charge $= 17.67*(0.90+0.45)$	23.85 Per CUM
Add 5% corporation Charges	171.84 Per CUM
Total	<u>3632.53</u> Per CUM
say	<u>3632.55</u> Per CUM

16.00 Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete slabs and landings as per detailed designs and drawings, including, centering, form work, compacting and roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement) (7.60 Bag/ Cum.)

Rate as per PWD DSR-2006-07, I.No-54 P.No-22	2929.00 Per CUM
add Lead charges 13Km $= (149.32-84.73)*0.9$	58.13 Per CUM
add Lead charges for sand 20Km $= (204.08-84.73)*0.45$	53.71 Per CUM
Total	<u>3040.84</u> Per CUM
Add royalty charge $= 17.67*(0.90+0.45)$	23.85 Per CUM
Add 5% corporation Charges	152.04 Per CUM
Total	<u>3216.73</u> Per CUM
say	<u>3216.75</u> Per CUM

17.00 Providing and casting in situ cement concrete M-20 of trap/ granite/ quartzite/ gneiss metal for reinforced cement concrete columns as per detailed designs and drawing, or as directed including centering, formwork, compacting and finishing the form surfaces with cement mortar 1:3 of sufficient minimum thickness, to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement)

Rate as per PWD DSR-2006-07, I.No-49 P.No-20	3247.00 Per CUM
add Lead charges 13Km $= (149.32-84.73)*0.9$	58.13 Per CUM
add Lead charges for sand 20Km $= (204.08-84.73)*0.45$	53.71 Per CUM
Total	<u>3358.84</u> Per CUM
Add royalty charge $= 17.67*(0.90+0.45)$	23.85 Per CUM
Add 5% corporation Charges	167.94 Per CUM
Total	<u>3550.63</u> Per CUM
say	<u>3550.65</u> Per CUM

18.00 Providing and laying HYSD bars with cement polymer composite coating (CPCC) anticorrosive epoxy treatment for reinforcement for structure including cutting, bending hooking by machine, trying in position including binding wire, spacers, chairs, cover blocks as per detailed drawing including all leads and lifts etc. complete.

With anti corrosive treatment either by CPCC or by FBEC.

Including addition of CPCC rate	5,000.00 Per M.T.
Rate as per PWD DSR-2006-07 I.No-803 P.No-283	<u>33,232.00</u> Per M.T.

Total	38,232.00	Per M.T.
Add corporation charges @ 5%	1,911.60	Per M.T.
Total	40,143.60	Per M.T.
<b>Say</b>	<b>40,143.60</b>	Per M.T.

19.00 Providing earth work for embankment with approved materials obtained by excavation from departmental land or other sources including all lifts and leads upto 50 m, laying in layers of 20 cm. to 30 cm. thickness breaking clods, dressing to the required lines, curves, grade and section, watering and Compaction with power roller etc. complete as directed by Engineer in charge.

Rate as per PWD DSR-2005-06, I.No-655 P.No-232	35.00	Per CUM
Add 5% corporation Charges	1.75	Per CUM
Total	36.75	Per CUM
say	36.75	Per CUM

20.00 Providing uncoursed rubble masonry of trap/ granite/ quartzite/ gneiss stones in cement mortar 1:6 in foundation and plinth of inner walls / in plinth of external walls including bailing out water manually, striking joints on unexposed faces and watering complete

Rate as per PWD DSR-2006-07, I.No-99 P.No-57	788.00	Per CUM
add Lead charges 13Km =(182.68-103.66)	79.02	Per CUM
Total	867.02	Per CUM
Add royalty charge	17.67	Per CUM
Add 5% corporation Charges	43.35	Per CUM
Total	928.04	Per CUM
say	928.05	Per CUM

21.00 Providing coursed rubble masonry first sort of trap/ granite/ quartzite/ gneiss stones in cement mortar 1:6 in external wall of plinth including bailing out water manually, striking joints inside and watering.

Rate as per PWD DSR-2006-07, I.No-103 P.No-57	1083.00	Per CUM
add Lead charges 13Km =(182.68-103.66)	79.02	Per CUM
Total	1162.02	Per CUM
Add royalty charge	17.67	Per CUM
Add 5% corporation Charges	58.10	Per CUM
Total	1237.79	Per CUM
say	1237.80	Per CUM

22.00 Clearing and removing bushes, waiste trees etc. on bank of river including stacking etc. complete as directed by Engineer in charge.

Rate as per PWD DSR-2005-06, K-50 P.No-41	2.70	Per sqm
Add 5% corporation Charges	0.14	Per sqm
Total	2.84	Per sqm
Say	2.85	Per sqm

23.00 Providing & fixing Stainless steel hand rails , blusters, post, Pergolas, railings & similar works etc. using Brush finished Stainless steel members ( Stainless Steel Grade 304 and finish no-4 ) including hold fasts, screws, nut bolts, fasteners, etc. with cutting, hoisting, fixing & argon welding etc. in position as per approved drawing and direction of Engineer in charge. ( work shall be executed through specialized agency only )

Rate as per Market Rate Analysis	553.39	Per Kg.
Add 5% corporation Charges	27.67	Per Kg.

Total	<u>581.06</u>	Per Kg.
SAY	<u>581.05</u>	Per Kg.

24.00 Providing and laying Rough Shahabad Stone Flooring 50 mm. to 60 mm.-thick and of required width in plain/ diamond pattern on a bed of 1:6 cement mortar including cement float, striking joints,pointing in cement mortar 1:3 curing and cleaning etc. complete.

Rate as per PWD DSR-2006-07, I.No-158 P.No-85	201.00	Per sqm
Add 5% corporation Charges	<u>10.05</u>	Per sqm
Total	<u>211.05</u>	Per sqm

25.00 Providing and fixing mudhugal granite Stone block, chisel dressed (two line chisel dressed) Flooring /paving with 70 mm. thick of sizes with hand cut edges and smooth chisel dressed on top ( top surface undulation not exceeding more than 3mm ) in required pattern, laid with the other stones, for paving, floors etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand ) with joints 20mm ( average ) wide filled with same mortar and 4mm deep recessed pointing with cement mortar 1:2 (1 cement : 2 stone dust ) including , cleaning, curing etc.all complete as per approved drawing and direction of Engineer in charge.

as per a.r. attached	1694.15	Per sqm
Add 5% corporation Charges	<u>84.71</u>	Per sqm
Total	<u>1778.86</u>	Per sqm
Say	<u>1,778.85</u>	Per sqm

26.00 Providing and fixing mudhugal granite Stone block, chisel dressed (three line chisel dressed) in Tread & Riser paving with 70 mm. thick of sizes with hand cut edges with three line chisel dressed with half moulding and smooth chisel dressed on top ( top surface undulation not exceeding more than 3mm ) in required pattern, laid with the other stones, for paving, floors etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand ) with joints 20mm ( average ) wide filled with same mortar and 4mm deep recessed pointing with cement mortar 1:2 (1 cement : 2 stone dust ) including , cleaning, curing etc.all complete as per approved drawing and direction of Engineer in charge.

as per a.r. attached	2893.10	Per sqm
Add 5% corporation Charges	<u>144.66</u>	Per sqm
Total	<u>3037.76</u>	Per sqm
Say	<u>3,037.75</u>	Per sqm

27.00 Providing trap/ granite/ quartzite/ gneiss rubble stone filling behind the abutment, returns or wings including all materials and hand packing and filling voids with spouts etc. complete as directed by Engineer in charge.

Rate as per PWD DSR-2006-07, I.No-822 P.No-287	170.00	Per CUM
add Lead charges 13Km =(182.68-103.66)	<u>79.02</u>	Per CUM
Total	<u>249.02</u>	Per CUM
Add royalty charge	17.67	Per CUM
Add 5% corporation Charges	<u>12.45</u>	Per CUM
Total	<u>279.14</u>	Per CUM
say	<u>279.15</u>	Per CUM

28.00 Providing and fixing of 450 mm dia Precast concrete. bollards Spherical shape Red/Grey shade (K.K manholes, Delhi or any equivalent Approved Make.) including excavating holes upto required size in all kinds of soil, and providing and fixing of required concrete Base of 1:3:4(1 cement:3 coarse sand: 4 graded stone) for fixing as per direction of engineer- in- charge, all complete as per direction of Engineer-in-charge.

Rate as per Market Rate Analysis	1,842.64	Per No.
Add 5% corporation Charges	<u>92.13</u>	Per No.
Total	1,934.77	Per No.
SAY	<u>1,934.75</u>	Per No.

29.00 Add for providing richer mixes respectively at all level.

( I ) Providing M-30 grade RCC instead of M-20 or 1: 1½ :3 or grade RCC.

Rate as per Rate Analysis	435.54	Per CUM
Add 5% corporation Charges	<u>21.78</u>	Per CUM
Total	457.32	Per CUM
say	<u>457.30</u>	Per CUM

30.00 Dismantling stone masonry in lime or cement including stacking the materials as directed with all leads and lifts complete. As directed by Engineer in charge

Rate as per PWD DSR-2006-07, I.No-596 P.No-218	74.00	Per CUM
Add 5% corporation Charges	<u>3.70</u>	Per CUM
Total	<u>77.70</u>	Per CUM

31.00 Removing lime or lean cement concrete including stacking the spoils as directed with all leads and lifts complete. As directed by Engineer in charge

Rate as per PWD DSR-2006-07, I.No-597 P.No-218	49.00	Per CUM
Add 5% corporation Charges	<u>2.45</u>	Per CUM
Total	<u>51.45</u>	Per CUM

32.00 Removing rich mix cement concrete including stacking the spoils as directed with all leads and lifts complete. As directed by Engineer in charge

Rate as per PWD DSR-2006-07, I.No-598 P.No-218	124.00	Per CUM
Add 5% corporation Charges	<u>6.20</u>	Per CUM
Total	<u>130.20</u>	Per CUM

33.00 Removing trap stone from floor without bed concrete including stacking the materials as directed with all leads, lifts complete

Rate as per PWD DSR-2006-07,I.No-604 P.No-219	13.00	Per sqm
Add 5% corporation Charges	<u>0.65</u>	Per sqm
Total	<u>13.65</u>	Per sqm

34.00 Removing Shahabad or Tandur stones/ cement tiles / marble mosaic tiles from floor without bed concrete including stacking the materials as directed with all leads, lifts complete.

Rate as per PWD DSR-2006-07, I.No-605 P.No-219	13.00	Per sqm
Add 5% corporation Charges	<u>0.65</u>	Per sqm
Total	<u>13.65</u>	Per sqm

35.00 Removing iron pipe railing having wooden reinforced cement concrete or cement concrete or iron posts and stacking the materials as directed.

Rate as per PWD DSR-2006-07, I.No-611 P.No-220	13.00	Per sqm
Add 5% corporation Charges	<u>0.65</u>	Per sqm
Total	<u>13.65</u>	Per sqm

36.00 Dismantling carefully the old cement concrete of reinforced cement concrete structure by chiselling or breaker including cutting reinforcement, steel bars, sorting out serviceable materials and stacking and disposing off unserviceable material upto lead of 50 m. etc. complete as directed by Engineer in charge.

Rate as per PWD DSR-2006-07, I.No-745 P.No-269	279.00	Per CUM
Add 5% corporation Charges	<u>13.95</u>	Per CUM
Total	<u>292.95</u>	Per CUM

**SH 01 - DSR ANALYSIS**

**ANALYSIS OF RATE**

**Item No- 23 - -** Providing & fixing Stainless steel hand rails , blusters, post, Pergolas, railings & similar works etc. using Brush finished Stainless steel members ( Stainless Steel Grade 304 and finish no-4 ) including hold fasts, screws, nut bolts, fasteners, etc. with cutting, hoisting, fixing & argon welding etc. in position as per approved drawing and direction of Engineer in charge. ( work shall be executed through specialized agency only )

Analysis of Rate on Market  
Details of cost for 100 Kg.

DESCRIPTION	UNIT	QTY	RATE	COST	REFERENCE
Brush finished Stainless steel members ( Stainless Steel Grade 304 and finish no 4 )	Kg	100.00	430.00	43000.00	
add WAT. 12%				5160.00	
Fitter 1st class	EACH	5.00	200.00	1000.00	
beldar for hoisting, fixing etc.	EACH	5.00	120.00	600.00	
sundries for carriage etc.	L.S.			50.00	
TOTAL	*****	*****		49810.00	
Add For water charges @ 1%	49810.00	1.00	%	498.10	
TOTAL	*****	*****		50308.10	
Add For contractor's profit & over head @10%	50308.10	*****		5030.81	
Cost for 100 Kg -TOTAL	*****	*****	Rs	55338.91	
Rate per Kg	*****	*****	Rs	553.39	

**ANALYSIS OF RATE**

**Item no-25** Providing and fixing mudhugal granite Stone block, chisel dressed (two line chisel dressed) Flooring /paving with 70 mm. thick of sizes with hand cut edges and smooth chisel dressed on top ( top surface undulation not exceeding more than 3mm ) in required pattern, laid with the other stones, for paving, floors etc. laid over 20mm thick base mortar 1:4 ( 1 cement : 4 coarse sand ) with joints 20mm ( average ) wide filled with same mortar and 4mm deep recessed pointing with cement mortar 1:2 ( 1 cement : 2 stone dust ) including , cleaning, curing etc.all complete as per approved drawing and direction of Engineer in charge.

Details of cost for=10x0.60x0.90m = 5.40sqm

DESCRIPTION	UNIT	QTY	RATE	COST	REFERENCE
mudhugal granite Stone block, chisel dressed (two line chisel dressed) Flooring /paving with 70 mm. thick	sqm	5.94	970.00	5761.80	DSR-06-07 M.R.
add for cartage	M.T.	1.20	1400.00	1680.00	
labour for laying of stone --- Mason 1st	Nos.	1.00	220.00	220.00	
coolie	Nos.	1.50	65.00	97.50	0115 p-2
sundries				15.00	
TOTAL				7774.30	
Add For water charges @ 1%	*****	*****	Rs	77.74	
TOTAL	*****	*****	Rs	7852.04	
Add For contractor's profit & over head @10%	*****	*****	Rs	785.20	
TOTAL				8637.25	

20mm mortar 1:4 (1 cement : 4 coarse sand) for bed=5.40sqmx0.02m=0.11cum	sqm	5.94	75.00	445.50	139 p-80
20mm mortar 1:4 (1 cement : 4 coarse sand) for vertical joints=10x0.90x0.075x0.02=0.01cum	sqm	0.68	75.00	50.63	139 p-80
cement mortar 1:2 (1 cement : 3 stone dust ) for pointing the joints=10*0.9*0.02	sqm	0.18	83.00	14.94	140 p-80
cost for 5.4sqm				9148.31	
Rate per sqm				1694.13	
SAY Rate per sqm				<b>1694.15</b>	

### ANALYSIS OF RATE

**Item no-26** Providing and fixing mudhugal granite Stone block, chisel dressed (three line chisel dressed) in Tread & Riser paving with 70 mm. thick of sizes with hand cut edges with three line chisel dressed with half moulding and smooth chisel dressed on top ( top surface undulation not exceeding more than 3mm ) in required pattern, laid with the other stones, for paving, floors etc. laid over 20mm thick base mortar 1:4 (1 cement : 4 coarse sand ) with joints 20mm ( average ) wide filled with same mortar and 4mm deep recessed pointing with cement mortar 1:2 (1 cement : 2 stone dust ) including , cleaning, curing etc.all complete as per approved drawing and direction of Engineer in charge.

Details of cost for=18\*0.30m = 5.40sqm

DESCRIPTION	UNIT	QTY	RATE	COST	REFERENCE
mudhugal granite Stone block, chisel dressed (two line chisel dressed)					DSR-06-07
Flooring /paving with 70 mm. thick	sqm	5.94	1345.00	7989.30	M.R.
add for Edge 3 line deressed half	Metre	18.00	200.00	3600.00	
add for cartage	M.T.	1.20	1400.00	1680.00	
labour for laying of stone --- Mason					
1st	Nos.	1.00	220.00	220.00	
coolie	Nos.	1.50	65.00	97.50	0115 p-2
sundries				15.00	
TOTAL				13601.80	
Add For water charges @ 1%	*****	*****	Rs	136.02	
TOTAL	*****	*****	Rs	13737.82	
Add For contractor's profit & over head @10%	*****	*****	Rs	1373.78	
TOTAL				15111.60	
20mm mortar 1:4 (1 cement : 4 coarse sand) for bed=5.40sqmx0.02m=0.11cum	sqm	5.94	75.00	445.50	139 p-80
20mm mortar 1:4 (1 cement : 4 coarse sand) for vertical joints=10x0.90x0.075x0.02=0.01cum	sqm	0.68	75.00	50.63	139 p-80
cement mortar 1:2 (1 cement : 3 stone dust ) for pointing the joints=10*0.9*0.02	sqm	0.18	83.00	14.94	140 p-80
cost for 5.4sqm				15622.66	
Rate per sqm				2893.09	

SAY Rate per sqm				<b>2893.10</b>
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**Item No-28** - Providing and fixing of 450 mm dia Precast concrete. bollards Spherical shape Red/Grey shade (K.K manholes, Delhi or any equivalent Approved Make.) including excavating holes upto required size in all kinds of soil, and providing and fixing of required concrete Base of 1:3:4(1 cement:3 coarse sand: 4 graded stone) for fixing as per direction of engineer- in- charge, all complete as per direction of Engineer-in-charge.

Details of cost for =1.00 No.

DESCRIPTION	UNIT	QTY	RATE	COST	REFERENCE
Providing and fixing of 350 mm dia Precast conc. bollards Spherical shape (Make K.K.Manhole and Gratings)	Nos	1.00	1600.00	1600.00	M.R.
For fixing on existing RCC slab or other places				0.00	
labour for job---Mason	Nos.	0.20	150.00	30.00	
Beldar	Nos.	0.20	93.00	18.60	
Bhisti	Nos.	0.10	99.40	9.94	
TOTAL				1658.54	
Add For water charges @ 1%	*****	*****	Rs	16.59	
TOTAL	*****	*****	Rs	1675.13	
Add For contractor's profit & over head @10%	*****	*****	Rs	167.51	
TOTAL				1842.64	
cost for on bollad inc fixing				1842.64	
<b>Say</b>				<b>1968.00</b>	

#### ANALYSIS OF RATE

**Item No- 29** - -Add for providing richer mixes respectively at all level.

( I ) Providing M-30 grade RCC instead of M-20 grade RCC.

Analysis of Rate on DSR-2006-07

Details of cost for 1.0 cum

DESCRIPTION	UNIT	QTY	RATE	COST	REFERENCE
Cement (1.90bag/cum)	M.T.	0.0950	3990.00	379.05	
carraige of cement	M.T.	0.0950	136.60	12.98	
TOTAL	*****	*****		392.03	
Add For water charges @ 1%	392.03	1.00	%	3.92	
TOTAL	*****	*****		395.95	
Add For contractor's profit & over head @10%	395.95	*****		39.59	
Cost for 1.00 cum -TOTAL	*****	*****	Rs	435.54	

CALCULATION - PARAPET WALL HT. ABOVE PLINTH - SH 01

Ghat No.	Landing Level FFL	Contour Level NGL	Difference NGL-FFL	Ht. above plinth level (add 1.0m to net difference between NGL & FFL)	Av. Ht.above plinth level (in m.)	SAY (round off in m.)
G1	353.000	353.000	0.000	1.000		
	352.10	353.50	1.400	2.400		
	351.20	351.50	0.300	1.300		
	349.55	346.50	3.050	4.050		
	349.10	347.50	1.600	2.600		
	347.45	346.00	1.450	2.450		
	345.80	344.50	1.300	2.300		
	344.15	344.00	0.150	1.150		
				<b>17.250</b>	<b>2.156</b>	<b>2.000</b>
G2	351.65	351.00	0.650	1.650		
	350.00	350.00	0.000	1.000		
	348.35	347.50	0.850	1.850		
	346.70	346.50	0.200	1.200		
	345.05	346.00	0.950	1.950		
	344.15	344.50	0.350	1.350		
				<b>9.000</b>	<b>1.500</b>	<b>1.500</b>
G3	356.000	357.000	1.000	2.000		
	355.085	357.000	1.915	2.915		
	353.435	354.500	1.065	2.065		
	351.785	353.000	1.215	2.215		
	350.135	350.500	0.365	1.365		
	348.485	347.500	0.985	1.985		
	346.835	345.500	1.335	2.335		
	345.185	344.500	0.685	1.685		
	344.150	344.000	0.150	1.150		
				<b>17.715</b>	<b>1.968</b>	<b>2.000</b>
G4	355.70	355.00	0.700	1.700		
	354.05	354.00	0.050	1.050		
	352.40	353.00	0.600	1.600		
	350.75	352.00	1.250	2.250		
	349.10	349.50	0.400	1.400		
	347.45	349.00	1.550	2.550		
	345.80	347.50	1.700	2.700		
	344.15	345.50	1.350	2.350		
				<b>15.600</b>	<b>1.95</b>	<b>2.00</b>
G5	355.25	355.00	0.250	1.250		
	353.45	354.00	0.550	1.550		
	351.65	352.00	0.350	1.350		
	350.60	351.00	0.400	1.400		
	348.80	349.00	0.200	1.200		
	347.75	348.00	0.250	1.250		
	345.95	347.50	1.550	2.550		
	344.15	345.50	1.350	2.350		
				<b>12.900</b>	<b>1.61</b>	<b>1.60</b>
G6	355.25	355.00	0.250	1.250		

	353.30	354.50	1.200	2.200		
	351.65	354.50	2.850	3.850		
	350.00	352.50	2.500	3.500		
	348.35	350.50	2.150	3.150		
	346.70	348.00	1.300	2.300		
	345.05	345.00	0.050	1.050		
	344.15	343.00	1.150	2.150		
				<b>19.450</b>	<b>2.43</b>	<b>2.50</b>
G7	345.05	353.50	8.450	9.450		
	352.40	352.50	0.100	1.100		
	350.75	352.00	1.250	2.250		
	349.10	350.00	0.900	1.900		
	347.43	348.50	1.070	2.070		
	345.80	347.00	1.200	2.200		
	344.15	345.00	0.850	1.850		
				<b>20.820</b>	<b>2.97</b>	<b>3.00</b>
G8	355.10	354.50	0.600	1.600		
	354.05	354.00	0.050	1.050		
	352.40	353.50	1.100	2.100		
	350.75	351.50	0.750	1.750		
	349.10	350.00	0.900	1.900		
	347.43	348.00	0.570	1.570		
	345.80	346.00	0.200	1.200		
	344.15	343.00	1.150	2.150		
				<b>13.320</b>	<b>1.67</b>	<b>1.70</b>
G9	356.15	356.00	0.150	1.150		
	354.50	355.50	1.000	2.000		
	352.40	354.00	1.600	2.600		
	351.20	352.00	0.800	1.800		
	349.55	350.50	0.950	1.950		
	346.25	347.00	0.750	1.750		
	344.15	344.50	0.350	1.350		
				<b>12.600</b>	<b>1.800</b>	<b>1.800</b>

Calculation Sheet No- 1

Calculation of Earth work at GHAT No-1

Satation At	Top Level			Top (avg) =(2+3+4)/3	Bottom Level			Bottom (avg) =(6+7+8)/3	H=(5-9)	Distance in Metre			Qutty  (111*12*13) Cum	Grid Location
	Top Lvl X-scc at '2'-'2'	Top Lvl X-scc at '2a-2a'	Top Lvl X-scc at '2b-2b'		Bottom X-scc at '2'-'2'	Bottom X-scc at '2a-2a'	Bottom X-scc at '2b-2b'			Mean height (a0+a1)/2	L	B		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a0	340.80	340.80	340.80	340.80	340.00	340.00	340.00	340.00	0.80					
a1	341.50	341.70	342.00	341.73	340.00	340.00	340.00	340.00	1.73	1.27	10.00	32.00	405.33	a0 -a1
a2	342.00	342.20	342.60	342.27	341.80	341.80	341.80	341.80	0.47	1.10	5.00	32.00	176.00	a1 -a2
a3	342.80	343.10	343.20	343.03	342.20	342.20	342.10	342.17	0.87	0.67	10.00	32.00	213.33	a2 -a3
a4	343.10	343.80	344.00	343.63	342.80	342.80	342.80	342.80	0.83	0.85	5.00	32.00	136.00	a3 -a4
a5	343.80	344.20	344.80	344.27	343.10	343.10	343.10	343.10	1.17	1.00	6.00	32.00	192.00	a4 -a5
a6	344.20	345.00	345.10	344.77	344.90	345.00	344.90	344.93	-0.17	0.50	4.00	32.00	64.00	a5 -a6
a7	346.00	346.00	346.70	346.23	346.50	346.10	346.40	346.33	-0.10	-0.13	6.00	32.00	-25.60	a6 -a7
a8	347.50	347.50	348.50	347.83	348.10	348.10	348.10	348.10	-0.27	-0.18	5.00	32.00	-29.33	a7 -a8
a9	349.00	348.90	350.00	349.30	348.60	348.60	348.50	348.57	0.73	0.23	5.00	32.00	37.33	a8 -a9
a10	350.10	350.00	350.20	350.10	350.00	350.00	350.10	350.03	0.07	0.40	4.00	44.80	71.68	a9 -a10
a11	351.10	350.20	350.30	350.53	350.10	350.10	350.10	350.10	0.43	0.25	6.00	44.80	67.20	a10 -a11
a12	352.70	351.00	350.60	351.43	350.10	350.10	350.10	350.10	1.33	0.88	10.00	44.80	395.73	a11 -a12
a13	353.00	351.20	351.00	351.73	351.00	351.00	351.00	351.00	0.73	1.03	3.00	44.80	138.88	a12 -a13
a14	353.60	351.70	351.50	352.27	351.10	351.10	351.10	351.10	1.17	0.95	7.00	44.80	297.92	a13 -a14
a15	353.90	352.00	352.00	352.63	351.80	351.70	351.80	351.77	0.87	1.02	5.00	44.80	227.73	a14 -a15
a16	354.10	352.20	352.50	352.93	352.00	351.80	352.00	351.93	1.00	0.93	5.00	44.80	209.07	a15 -a16
a17	354.80	353.10	353.10	353.67	352.00	352.00	352.00	352.00	1.67	1.20	10.00	44.80	537.60	a16 -a17
<b>TOTAL</b>													<b>3114.88</b>	<b>CUM</b>

**CALCULATION SHEET NO-2**

**Calculation of Earth work at GOVARDHAN GHAT ~ G-2**

Satation At	Top Level			Top (avg) =(2+3+4)/3	Bottom Level			Bottom (avg) =(6+7+8)/3	H=(5-9)	Distance in Metre			Qutty  (11*12*13) Cum	Grid Location
	Top Lvl X-scc at 'a'-a'	Top Lvl X-scc at 'b-b'	Top Lvl X-scc at 'c-c'		Bottom X-scc at 'a'-a'	Bottom X-scc at 'b-b'	Bottom X-scc at 'c-c'			Mean height (a0+a1)/2	L	B		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a0	342.80	342.80	342.90	342.83	340.00	340.00	340.00	340.00	2.83					
a0i	342.90	342.90	343.00	342.93	340.00	340.00	340.00	340.00	2.93	2.88	60.00	5.00	865.00	a0i -a0
a1	343.00	343.10	343.20	343.10	341.50	341.50	341.50	341.50	1.60	2.27	60.00	5.00	680.00	a0 -a1
a2	343.30	343.30	343.50	343.37	341.90	341.80	341.90	341.87	1.50	1.55	60.00	5.00	465.00	a1 -a2
a3	343.90	343.90	343.90	343.90	342.30	342.30	342.30	342.30	1.60	1.55	60.00	10.00	930.00	a2 -a3
a4	344.00	344.20	344.00	344.07	343.10	343.00	343.00	343.03	1.03	1.32	60.00	5.00	395.00	a3 -a4
a5	344.50	344.90	344.70	344.70	343.10	343.10	343.10	343.10	1.60	1.32	60.00	5.00	395.00	a4 -a5
a6	345.00	345.20	345.10	345.10	343.50	343.10	343.20	343.27	1.83	1.72	60.00	6.00	618.00	a5 -a6
a7	345.40	345.70	345.70	345.60	344.00	344.00	344.00	344.00	1.60	1.72	60.00	4.00	412.00	a6 -a7
a8	346.00	346.30	346.30	346.20	344.00	344.00	345.00	344.33	1.87	1.73	60.00	8.00	832.00	a7 -a8
a9	346.30	346.80	346.70	346.60	345.00	344.00	345.80	344.93	1.67	1.77	60.00	2.00	212.00	a8 -a9
a10	347.00	347.00	347.10	347.03	345.90	345.80	346.80	346.17	0.87	1.27	60.00	3.00	228.00	a9 -a10
a11	348.00	348.00	348.70	348.23	347.00	347.20	347.70	347.30	0.93	0.90	60.00	3.00	162.00	a10 -a11
a12	349.60	350.00	350.50	350.03	348.80	348.80	349.00	348.87	1.17	1.05	60.00	4.00	252.00	a11 -a12
a13	350.20	351.20	351.90	351.10	349.00	349.00	350.10	349.37	1.73	1.45	60.00	2.00	174.00	a12 -a13
a14	352.20	353.30	352.30	352.60	350.10	350.10	350.10	350.10	2.50	2.12	60.00	3.00	381.00	a13 -a14
A15	354.20	354.80		354.50	350.10	350.10		350.10	4.40	3.45	60.00	4.50	931.50	a14 -a15
													<b>7932.50</b>	<b>CUM</b>



**CALCULATION SHEET NO- 4 ( i )**

**Calculation of Earth work at GHAT No- G-4**

Satation At	Top Level			Top (avg) =(2+3+4)/3	Bottom Level			Bottom (avg) =(6+7+8)/3	H=(5-9)	Distance in Metre			Qutty  (111*12*13) Cum	Grid Location
	Top Lvl X-scc at 'a'-a'	Top Lvl X-scc at '2a'-2a'	Top Lvl X-scc at '2b-2b'		Bottom X-scc at 'a'-a'	Bottom X-scc at '2a'-2a'	Bottom X-scc at '2b-2b'			Mean height (a0+a1)/2	L	B		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a0	340.80	340.80	341.20	340.93	340.00	340.00	340.00	340.00	0.93					
a1	341.20	341.80	341.80	341.60	340.00	340.00	340.00	340.00	1.60	1.27	10.00	33.00	418.00	a0 -a1
a2	341.90	342.20	342.20	342.10	341.80	342.00	342.00	341.93	0.17	0.88	7.00	33.00	204.05	a1 -a2
a3	342.20	342.80	342.50	342.50	342.10	342.10	342.10	342.10	0.40	0.28	6.00	33.00	56.10	a2 -a3
a4	343.40	343.30	343.30	343.33	343.10	343.10	343.10	343.10	0.23	0.32	10.00	33.00	104.50	a3 -a4
a5	346.10	345.00	345.80	345.63	343.10	343.10	343.10	343.10	2.53	1.38	10.00	33.00	456.50	a4 -a5
a6	347.00	346.50	347.20	346.90	344.90	344.50	344.70	344.70	2.20	2.37	4.00	33.00	312.40	a5 -a6
a7	347.50	347.00	348.00	347.50	344.90	344.80	344.90	344.87	2.63	2.42	2.00	33.00	159.50	a6 -a7
a8	348.10	348.80	348.50	348.47	346.20	346.20	346.20	346.20	2.27	2.45	4.00	33.00	323.40	a7 -a8
a9	348.90	349.50	349.00	349.13	346.20	346.20	346.30	346.23	2.90	2.58	3.00	33.00	255.75	a8 -a9
a10	349.80	350.20	349.30	349.77	348.00	347.20	348.00	347.73	2.03	2.47	3.00	33.00	244.20	a9 -a10
a11	350.80	350.80	349.70	350.43	348.00	348.00	348.00	348.00	2.43	2.23	3.00	33.00	221.10	a10 -a11
a12	351.90	351.10	350.80	351.27	349.90	349.80	349.80	349.83	1.43	1.93	3.00	33.00	191.40	a11 -a12
a13	352.80	351.80	351.20	351.93	349.90	349.80	349.80	349.83	2.10	1.77	3.00	33.00	174.90	a12 -a13
a14	353.40	352.20	352.20	352.60	351.20	351.20	351.20	351.20	1.40	1.75	4.00	33.00	231.00	a13 -a14
a15	352.90	353.20	353.00	353.03	351.20	352.00	351.20	351.47	1.57	1.48	2.00	33.00	97.90	a14 -a15
a16	353.40	354.00	354.00	353.80	352.00	353.00	353.00	352.67	1.13	1.35	3.00	33.00	133.65	a15 -a16
a17	354.50	356.00	355.50	355.33	352.00	354.20	354.20	353.47	1.87	1.50	7.00	33.00	346.50	a16 -a17
a18	356.00	357.00	356.00	356.33	354.90	354.00	354.80	354.57	1.77	1.82	10.00	33.00	599.50	a17 -a18
													<b>4530.35</b>	<b>CUM</b>

**CALCULATION SHEET NO-4 ( ii )**

**Calculation of Earth work at Spiral Ramp for GHAT**

Satation At	Top Level	Bottom Level	H=(4-7)			Qty
	Top Lvl X-sec at 1a'	Bottom X-sec at 1a'		L	B	(column 4x5x6) Cum
1	2	3	4	5	6	7
a0	356.00	354.78	1.22			
a1	355.40	353.95	1.45			
a2	354.00	353.11	0.89			
a3	354.00	352.28	1.72			
a4	353.70	351.44	2.26			
a5	352.20	350.66	1.54			
a6	352.20	349.88	2.32			
a7	351.10	349.00	2.10			
a8	349.80	348.12	1.68			
a9	349.50	347.21	2.29			
a10	350.20	346.30	3.90			
a11	349.00	345.58	3.42			
a12	347.50	344.85	2.65		2.50+2*0	
a13	346.50	344.05	2.45		.50	
a14	347.20	343.23	3.97			
<b>TOTAL</b>			<b>33.86</b>			
Mean height			<b>2.419</b>	155.00	3.50	<b>1312.31</b> cum







Calculation of Earth work at GHAT No-8

Satation At	Top Level			Top (avg) =(2+3+4)/3	Bottom Level			Bottom (avg) =(6+7+8)/3	H=(5-9)	Distance in Metre			Gutty  (11*12*13) Cum	Grid Location
	Top Lvl X-scc at '2'-2'	Top Lvl X-scc at '2a-2a'	Top Lvl X-scc at '2b-2b'		Bottom X-scc at '2'-2'	Bottom X-scc at '2a-2a'	Bottom X-scc at '2b-2b'			Mean height (a0+a1)/2	L	B		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a0	340.80	341.00	341.70	341.17	340.00	340.00	340.00	340.00	1.17					
a1	341.50	342.00	342.20	341.90	341.50	341.60	341.70	341.60	0.30	0.73	10.00	35.00	256.67	a0 -a1
a2	341.90	342.80	342.80	342.50	341.90	341.80	341.90	341.87	0.63	0.47	5.00	35.00	81.67	a1 -a2
a3	342.20	344.00	343.90	343.37	342.20	342.20	342.20	342.20	1.17	0.90	10.00	35.00	315.00	a2 -a3
a4	342.40	344.50	344.60	343.83	342.40	342.40	342.40	342.40	1.43	1.30	4.00	35.00	182.00	a3 -a4
a5	342.80	344.90	345.00	344.23	342.80	342.40	343.00	342.73	1.50	1.47	3.00	35.00	154.00	a4 -a5
a6	343.00	345.10	345.80	344.63	343.00	343.10	343.10	343.07	1.57	1.53	3.00	35.00	161.00	a5 -a6
a7	344.00	347.80	348.10	346.63	343.10	343.10	343.10	343.10	3.53	2.55	11.00	35.00	981.75	a6 -a7
a8	347.80	349.00	349.90	348.90	345.90	346.50	345.90	346.10	2.80	3.17	7.00	35.00	775.83	a7 -a8
a9	349.20	350.50	350.80	350.17	347.10	348.00	347.10	347.40	2.77	2.78	4.00	35.00	389.67	a8 -a9
a10	350.90	351.90	351.40	351.40	348.80	348.00	348.60	348.47	2.93	2.85	4.00	35.00	399.00	a9 -a10
a11	352.10	352.80	352.40	352.43	350.00	350.00	350.00	350.00	2.43	2.68	4.00	35.00	375.67	a10 -a11
a12	355.00	354.00	353.90	354.30	352.80	352.80	351.20	352.27	2.03	2.23	8.00	35.00	625.33	a11 -a12
a13	356.00	354.00	354.00	354.67	353.70	354.10	354.00	353.93	0.73	1.38	2.00	35.00	96.83	a12 -a13
a14	356.00	354.20	354.20	354.80	354.20	354.20	354.10	354.17	0.63	0.68	10.00	35.00	239.17	a13 -a14
a15	355.80	354.20	354.50	354.83	354.20	354.20	354.10	354.17	0.67	0.70	10.00	35.00	245.00	a14 -a15
													<b>TOTAL</b>	<b>5278.58</b>
														<b>CUM</b>

**Calculation of Earth work a Ramp for ....GHAT - G-8**

Satation At	Top Level		Top (avg) =(2+3)/2	Bottom Level		Bottom (avg) =(5+6)/2	H=(4-7)			Cutty (13*14*15) Cum	Grid Location
	Top Lvl X-scc at '1a'	Top Lvl X-scc at 'X-X'		Bottom X-scc at '1a'	Bottom X-scc at 'X-X'			L	B		
1	2	3	4	5	6	7	8	9	10	11	12
x1	347.80	350.90	349.35	343.23	344.54	343.89	5.47	26.40	2.30	331.83	x1
x2	348.30	351.80	350.05	346.06	344.54	345.30	4.75	26.40	2.30	288.42	x2
x3	348.60	352.00	350.30	346.06	347.37	346.72	3.58	24.00	2.30	197.89	x3
x4	349.00	352.90	350.95	348.45	347.37	347.91	3.04	24.00	2.30	167.81	x4
x5	349.90	352.00	350.95	348.45	348.99	348.72	2.23	14.80	2.30	75.91	x5
x6	350.40	352.60	351.50	349.79	348.99	349.39	2.11	14.80	2.30	71.82	x6
green							0.81	12.00	1.50	14.67	
x7	351.20	348.60	349.90	349.90	350.86	350.38	-0.48	19.50	2.30	-21.53	x7
green							-0.25	8.50	1.80	-3.90	
x8	351.60	349.10	350.35	349.90	350.86	350.38	-0.03	19.50	2.30	-1.35	x8
x9	352.10	353.20	352.65	352.02	351.61	351.82	0.84	8.20	2.30	15.75	x9
green							1.15	12.00	1.80	24.73	
x10	353.00	355.20	354.10	352.17	353.12	352.65	1.46	12.50	2.30	41.83	x10
x11	353.60	355.30	354.45	354.18	353.12	353.65	0.80	12.50	2.30	23.00	x11
<b>TOTAL</b>										<b>1237.89</b>	<b>CUM</b>

**Calculation of Earth work at GHAT No-9**

Satation At	Top Level			Top (avg) = $(2+3+4)/3$	Bottom Level			Bottom (avg) = $(6+7+8)/3$	H=(5-9)	Distance in Metre			Quity  (11*12*13) Cum	Grid Location
	Top Lvl X-scc at '2'-2'	Top Lvl X-scc at '2a-2a'	Top Lvl X-scc at '2b-2b'		Bottom X-scc at '2'-2'	Bottom X-scc at '2a-2a'	Bottom X-scc at '2b-2b'			Mean height (a0+a1)/2	L	B		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
a0	341.00	341.00	342.00	341.33	340.00	340.00	340.00	340.00	1.33					
a1	342.00	341.80	342.00	341.93	340.00	340.00	340.00	340.00	1.93	1.63	41.00	10.00	669.67	a0 -a1
a2	342.80	342.20	342.60	342.53	342.00	342.00	342.00	342.00	0.53	1.23	41.00	10.00	505.67	a1 -a2
a3	343.20	343.00	343.10	343.10	342.40	342.80	342.50	342.57	0.53	0.53	41.00	8.00	174.93	a2 -a3
a4	343.30	343.30	343.70	343.43	342.80	343.10	342.80	342.90	0.53	0.53	41.00	2.00	43.73	a3 -a4
a5	345.00	345.60	345.70	345.43	343.10	343.10	343.10	343.10	2.33	1.43	41.00	7.00	411.37	a4 -a5
a6	346.00	347.00	346.80	346.60	345.20	345.10	345.00	345.10	1.50	1.92	41.00	4.00	314.33	a5 -a6
a7	347.00	347.60	347.20	347.27	345.20	345.10	345.20	345.17	2.10	1.80	41.00	2.00	147.60	a6 -a7
a8	348.60	349.00	348.50	348.70	347.00	347.00	347.00	347.00	1.70	1.90	41.00	4.00	311.60	a7 -a8
a9	350.90	350.80	350.10	350.60	348.80	348.60	348.80	348.73	1.87	1.78	41.00	6.00	438.70	a8 -a9
a10	353.20	353.00	352.10	352.77	351.00	351.90	351.00	351.30	1.47	1.67	41.00	7.00	478.33	a9 -a10
a11	354.20	354.00	353.20	353.80	352.00	351.90	352.00	351.97	1.83	1.65	41.00	3.00	202.95	a10 -a11
a12	356.20	356.00	355.20	355.80	355.00	355.00	355.00	355.00	0.80	1.32	41.00	7.00	377.88	a11 -a12
a13	358.10	357.70	357.00	357.60	355.20	355.10	355.20	355.17	2.43	1.62	41.00	10.00	662.83	a12 -a13
a14	358.80	358.10	357.40	358.10	355.20	355.10	355.20	355.17	2.93	2.68	41.00	10.00	1100.17	a13 -a14
													<b>TOTAL</b>	<b>5839.77</b> CUM

**Calculation of Earth work at Ramp for GHAT No-9**

Station At	Top Level			Top (avg) =(2+3+4)/3	Bottom Level			Bottom (avg) =(6+7+8)/3	H=(5-9)	Distance in Metre			Cutty (11*12*13) Cum
	Top Lvl X-sec at '2'-2'	Top Lvl X-sec at '2a-2a'	Top Lvl X-sec at '2b-2b'		Bottom X-sec at '2'- '2'	Bottom X-sec at '2a-2a'	Bottom X-sec at '2b-2b'			Mean height (a0+a1)/2	L	B	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
x1	344.30	344.50	344.50	344.43	343.23	344.43	344.23	343.96	0.47				
x2	344.70	344.80	345.90	345.13	345.00	344.43	345.23	344.89	0.25				
x3	345.50	346.00	346.90	346.13	345.23	345.93	345.23	345.46	0.67				
x4	346.00	347.80	348.60	347.47	346.50	345.93	346.78	346.40	1.06				
x5	347.00	348.30	349.20	348.17	346.73	347.53	347.55	347.27	0.90				
x6	349.00	350.00	350.30	349.77	349.73	348.93	348.33	349.00	0.77				
x7	350.60	352.20	352.80	351.87	350.23	351.53	352.02	351.26	0.61				
x8	352.50	353.90	354.10	353.50	353.63	352.83	352.03	352.83	0.67				
x9	353.90	356.00	356.40	355.43	353.63	354.43	355.23	354.43	1.00				
<b>TOTAL</b>									<b>6.40</b>	0.71	28.50	33.50	678.58
										0.71	6.50	6.00	27.72
										0.71	1.50	6.00	6.40
										<b>TOTAL</b>			<b>712.70 CUM</b>

### LEAD CHART - SH 01

Reference :- Irrigation Division, Nanded.

<b>S.No.</b>	<b>Name of Material</b>	<b>Source</b>	<b>Lead in Km.</b>
1	Cement/ Tiles/ Tandur /Tile/ Precast Tile	Nanded	with in Initial lead
2	Tor Steel / Mild steel	Nanded	with in Initial lead
3	All Type Paints etc.	Nanded	with in Initial lead
4	Rubble / stone	Musalman Wadi	12 Km
5	Metal ( All Types)	Musalman Wadi	12 Km
6	Sand	Godavari	with in Initial lead
7	Murum	Pangra	10 Km