

DETAIL ESTIMATE FOR THE CONSTRUCTION OF 45 CFT CAPACITY SEPTIC TANK. IN THE DISTRICT OF ----- UNDER ----- DIVISION

Vide DRG no.156 Sl.no. 278 dt. 05.12.1978

VIDE S/R OF B.C.D.BIHAR, w.e.f.15.09.2014

Sl.no.	SR.Item No.	Items of work	Total Quantity
1	2	3	4
1	2.8.1.	Earthwork in excavation in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m: All kinds of soil Tank- 9'-6"x 6'-0"x 5'-9" = 328 Cft. Chamber- 2x4'-8"x 2'-10"x2'-6" = 66 Cft. Masonry Pillar- 1x 2'-1"x2'-1"x0'-6" = 2 Cft 396 Cft Or 11.21 M ³	11.21 M ³
2	11.72	Providing designation 100A one brick flat soling joints filled with local sand including cost of watering, taxes, royalty all complete as per building specification and direction of E/I. Tank- 9'-6"x 6'-0" = 57 Sft. Or 5.30 M ²	5.30 M ²
3	4.1.3	Providing and laying in position cement concrete of specified grade excluding the cost of centring and shuttering all work upto plinth level: 1:2:4 (1 Cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) Tank- 9'-6" x 6'-0"x 0'-6" = 29 Cft. Chamber- 2x4'-8"x 3'-4"x 0'-6" = 16 Cft. Masonry Pillar- 1x 2'-1"x2'-1"x 0'-6" = 2 Cft 47 Cft Or 1.33 M ³	1.33 M ³
4	6.1.12/A	Brick work with bricks of class designation 100A in foundation and plinth in : Cement mortar 1:4(1 cement : 4 coarse sand) <u>16" Thick wall</u> Tank - 2 x 8'-6" = 17'-0" 2 x 2'-6" = 5'-0" 22'-0" Quantity- 22'-0"x 1'-3"x4'-0" = 110 Cft. <u>For 10" thick wall</u> Tank - 2 x 8'-1" = 16'-2" 2 x 2'-11" = 5'-10" 22'-0" Quantity- 22'-0"x 0'-10"x2'-3" = 41 Cft. <u>Chamber-</u> 2x2x3'-½" = 12'-2" 2x1x2'-0" = 4'-0" 16'-2" Quantity- 16'-2"x0'-10"x3'-3" = 44 Cft. Masonry Pillar- 1x1'-8"x1'-8"x3'-0" = 8 Cft. Total - 110 + 41 + 44+ 8 Cft = 203 Cft. Or 5.75 M ³	5.75 M ³
5	5.1.3	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement-All work upto plinth level : 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) <u>In Baffle wall (2" thick:-)</u> 1x3'-4"x2'-9"x 0'-2" = 2 Cft. <u>Slab Cover (3" thick)</u> Tank- 7'-3"x3'-9"x 0'-3" = 7 Cft. <u>In Chambers 2 Nos</u> 2x3'-½"x 2'-10"x0'-3" = 4. Cft. 13.00 Cft. Or 0.37 M ³	0.37 M ³

**DETAIL ESTIMATE & ABSTRACT OF COST FOR CONSTRUCTION OF 4'-0" DIA
SOAK PIT & 10'-0" DEPTH IN-----Qrt. AT-----
----- P..S. IN THE DISTRICT OF ----- UNDER --
----- DIVISION VDE S/R OF B.C.D.BIHAR, w.e.f 15-09-2014**

Sl.no.	SR.Item No.	Items of work	Total Quantity
1	2	3	4
1	2.8.1.	<p>Earthwork in excavation in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m: All kinds of soil</p> <p>(A) $\frac{22}{7} \times (5'-8'')^2 \times 3'-0'' = 75.51 \text{ Cft.}$ $\frac{22}{7} \times (4'-0'')^2 \times 2'-0'' = 25.14 \text{ Cft.}$ 100.65 Cft. Or 2.85 M³</p> <p>(B) Do- -Do- below 5' - 0" upto 8' - 0" depth. $\frac{22}{7} \times (4'-0'')^2 \times 3'-0'' = 37.71 \text{ Cft.}$ Or 1.068 M³</p> <p>(C) Do- -Do- below 8' - 0" upto 10' - 0" depth. $\frac{22}{7} \times (4'-0'')^2 \times 2'-0'' = 25.14 \text{ Cft.}$ Or 0.719 M³ 4.63 M³</p>	4.63 M ³
2	5.1.3	<p>Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement-All work upto plinth level : 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size) In Baffle wall (2" thick:-)</p> <p>$\frac{22}{7} \times (5'-8'')^2 \times 0'-3'' = 6.29 \text{ Cft.}$ Or 0.178 M³</p>	0.178 M ³
3	5.22.7A	<p>Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete: Thermo-Mechanically Treated bars(TMTC-500) 8mm dia. R.C.C. same as item 5.1.3 Qty- 6.29 Cft 2.00 kg per Cft. Including from lifting rings needed. Qty. = 12.58 kg say 13 kg</p>	13 kg
.4	13.11.4	<p>12mm cement plaster of mix: 1:6 (1 Cement : 6 coarse sand) Ground Floor - $\frac{22}{7} \times 5'-8'' \times 1'-0'' = 17.80 \text{ Sft.}$ Or 1.654 M²</p>	1.654 M ²
5	13.24.2	<p>6mm cement plaster to ceiling of Mix : 1:4 (1 cement : 4 coarse sand) $\frac{22}{7} \times (5'-8'')^2 = 25.17 \text{ Sft.}$ $\frac{22}{7} \times 5'-8'' \times 0'-3'' = 4.45 \text{ Sft}$ 29.62 Sft. Or 2.753 M²</p>	2.753 M ²

6		<u>Extra cost :-</u> (a) Bricks - 663 Nos. (b) Cement - 3 Bags.	- 663 Nos 3 Bags.
7		<u>Carriage of materials :-</u> (a) Bricks - 1573 Nos. (b) Sand - 0.40 M ³ (C) Stone Chips - 0.16 M ³ .	1573Nos 0.40 M ³ 0.16 M ³
8	Br.	<u>Providing brick bats and filling the same in soak pit as per specificarion and direction of engineer in charge.</u> $\frac{22}{7 \times 4} \times (4'-0")^2 \times 8'-6" = 106.85 \text{ Cft.}$ Say 107 Cft. Or 3.03 M ³	3.03 M ³
9	6.1.14A	Brick work with bricks of class designation 100A in foundation and plinth in : Cement mortar 1:6(1 cement : 6 coarse sand) $-\frac{22}{28} \times \{ (5'-8")^2 - (4'-0")^2 \} \times 3'-9" = 47.44 \text{ Cft.}$ Or 1.343 M ³	1.343 M ³

CONSUMPTION STATEMENT OF MATERIALS FOR 4'-0" DIA SOAK PIT.

Sl No.	Item of work	Qty.	Cement in M ³	Coarse Sand in M ³	Stone Chips in ³	Bricks in Nos.	Steel in Kg.
1	Brick work in c.m. (1:6)	1.343 M ²	0.048-	0.288	-	663	-
2	R.C.C. (1:2:4)	0.178 M ³	0.040	0.079	0.158	-	-
3	Reinforcement	0.013 M./T.	-	-	-	-	13
4	Brick bats	3.03 M ³	-	-	-	910	-
5	½" C.P. (1:6)	1.654M ²	0.003	0.020	-	-	-
6	¼" C.P. (1:4)	2.753 M ²	0.004	0.016	-	-	-
Total -			0.095 M³ = 3 bags	0.403 M³ Say 0.40 M³	0.158 M³ Say 0.16 M³	1573 Nos.	13 Kg.

(S.N. Verma)
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