



# कार्यालय, नगर पालिक निगम, कोरबा

: साकेत भवन आई.टी.आई. चौक, कोरबा

मु.का. दूरभाष: 221288, 222672, फ़ैक्स : 07759-221929, पो. बाक्स नं. : 12 पिन कोड : 495677

Website : [www.korbamunicipal.in](http://www.korbamunicipal.in), Email : [Corporationkorba@gmail.com](mailto:Corporationkorba@gmail.com)

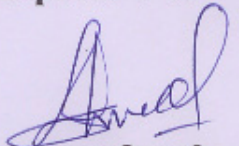
पृ.क./भवन अनुज्ञा/11/2019/3684 \

कोरबा दिनांक 7.06.19

EOI-51767

## रुचि की अभिव्यक्ति

नगर पालिक निगम कोरबा द्वारा निगम क्षेत्रांतर्गत विभिन्न भवनों में रैन वाटर हार्वैस्टिंग पिट निर्माण हेतु पंजीकृत अशासकीय संगठनों (एन.जी.ओ.) बेरोजगार इंजीनियर्स (सिविल) निगम में पंजीकृत वास्तुविद् एवं एकीकृत पंजीयन प्रणाली अंतर्गत सक्षम श्रेणी में पंजीकृत ठेकदारों से रुचि की अभिव्यक्ति निर्धारित ड्राईंग एवं डिजाइन अनुसार ऑफर ई-टेण्डर के माध्यम से दिनांक 19.06.19 को सांय 5:30 बजे तक आमंत्रित किया जाता है। आवेदन के साथ राशि रुपये 1000/- नगद जमा कर रसीद प्रस्तुत करना होगा। ऑफर संबंधी विस्तृत जानकारी नगर पालिक निगम कोरबा के वेबसाईट [www.korbamunicipal.in](http://www.korbamunicipal.in) से प्राप्त की जा सकती है।

  
भवन अधिकारी  
नगर पालिक निगम  
कोरबा (छ.ग.)





# कार्यालय, नगर पालिक निगम, कोरबा

: साकेत भवन आई.टी.आई. चौक, कोरबा

मु.का. दूरभाष: 221288, 222672, फ़ैक्स: 07759-221929, पो. बाक्स नं.: 12 पिन कोड :495677

Website : www.korbamunicipal.in, Email : Corporationkorba@gmail.com

शर्तें :-

01. संस्था पंजीकृत हो तथा किसी राज्य सरकार या सरकारी प्रतिष्ठान से मान्यता प्राप्त हो प्रमाण की सत्यापित प्रति संलग्न करना होगा।
02. आदेश प्राप्ति के पश्चात कार्य 01 माह में पूर्ण कर देना होगा।
03. अशासकीय संस्था द्वारा कार्य समयावधि में पूर्ण न करने पर संबंधित अशासकीय संस्था से लागत मूल्य का 0.1 प्रतिशत प्रतिमाह की दर से लंबित अवधि हेतु दण्ड देना होगा।
04. उपरोक्त कार्य का प्राक्कलन राशि संलग्न मानचित्र अनुसार निम्नानुसार है :-

|      |     |            |
|------|-----|------------|
| टाईप | ए-  | 20,500/-   |
| टाईप | बी- | 55,000/-   |
| टाईप | सी- | 7,500/-    |
| टाईप | डी- | 20,000/-   |
| टाईप | इ-  | 31,500/-   |
| टाईप | एफ- | 53,300/-   |
| टाईप | जी- | 69,000/-   |
| टाईप | एच- | 2,11,000/- |
05. कंडिका 04 में दिये गये विभिन्न आकार (टाईप) के कार्य के अतिरिक्त ऑफर कर्ता संधारण/निर्माण हेतु आयटम दर भी कोड कर सकते हैं।
06. शासन को देय समस्त रायल्टी/करों/शुल्कों का भुगतान करने की जवाबदारी कार्य एजेंसी की होगी।
07. ऑफर स्वीकृत होने पर संबंधित कार्य एजेंसी को नगर पालिक निगम में उपस्थित होकर 03 दिवस के भीतर अनुबंध निष्पादित करना होगा एवं आदेश की प्राप्ति के 07 दिवस के भीतर कार्य प्रारंभ करना होगा।
08. कार्य प्रारंभ न करने की स्थिति में निरस्त करने का अधिकार नगर पालिक निगम कोरबा के पास सुरक्षित होगा।
09. सभी प्रमाण पत्र सत्यापित होने चाहिए एवं आवश्यक होने पर मूल प्रति अवलोकन हेतु उपलब्ध कराना होगा।
10. किसी भी ऑफर को स्वीकृत करने या अस्वीकृत करने का निर्णय नगर पालिक निगम कोरबा का होगा।
11. शासन द्वारा समय-समय पर जारी दिशा निर्देश में परिवर्तन होने पर संशोधित आदेश मान्य होगा।
12. कार्य हेतु राशि रुपये 10,000/- की अमानत राशि का टी.डी.आर. के रूप में ऑफर के साथ जमा करना अनिवार्य होगा।
13. ऑफर में भाग लेने वाली एजेंसी को आवेदन पत्र के साथ उपरोक्तानुसार आवश्यक दस्तावेजों की सत्य प्रतिलिपि आयकर प्रमाण पत्र, पेन कार्ड एवं छ.ग. वाणिज्य प्रमाण पत्र एवं अमानत राशि एफडीआर/टीडीआर जो आयुक्त नगर पालिक निगम कोरबा के नाम देय होगा, जो कि दिनांक तक कार्यालयीन समय में संबंधित शाखा में प्रस्तुत करना अनिवार्य होगा।
14. ऑफर में प्राप्त न्यूनतम दर पर ऑफर कर्ता किसी भी एजेंसी से निगम, कार्य करा सकता है।

TYPE - 'A'

**OFFICE OF THE MUNICIPAL CORPORATION, KORBA (C.G.)**

**TECHNICAL REPORT**

1. NAME OF WORK : CONSTRUCTION OF RAIN WATER HARVESTING PIT TYPE A

|                   |         |   |          |
|-------------------|---------|---|----------|
| 1. SOR 01.01.2015 | Part-A  | = | 17119.25 |
| 2. NON SOR ITEM   | Part-B  | = | 3340.00  |
|                   | Total   | = | 20459.25 |
|                   | Say Rs. | = | 20500.00 |

T.S. NO. 21 ; Dated 03/03/2017

Technically Sanctioned For Rs. 20,500/-

Rs. *Twenty thousand five hundred only* in words

Executive Engineer  
Municipal Corporation  
KORBA (C. G.)

Assitant Engineer  
Nagar Palik Nigam  
Korba (C.G.)

Sub Engineer  
Nagar Palik Nigam  
Korba (C.G.)



# OFFICE OF THE NAGAR PALIK NIGAM, KORBA ( C.G.)

## ABSTRACT

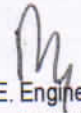
Name of Work **CONSTRUCTION OF RAIN WATER HARVESTING PIT TYPE A**

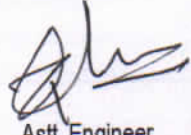
As per SOR : SCHEDULE OF RATES PUBLIC WORKS DEPARTMENT [PWD BUILDING-01.01.2015]

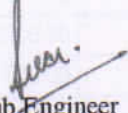
| S.N | REF   | ITEM DESCRIPTION                                                                                                                                                                                                                                                                                                  | UNIT  | QTY   | RATE    | AMOUNT   |
|-----|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|---------|----------|
| 1   | 1.1   | Excavation for all types and sizes of foundations, trenches and drains or for any other purpose including disposal of excavated stuff upto 1.5 m lift and lead upto 50m (at least 5m away from the excavated area), including dressing and leveling of pits.                                                      |       |       |         |          |
|     | 1.1   | In all types of soils.                                                                                                                                                                                                                                                                                            | cum   | 7.93  | 185.00  | 1,467.05 |
| 2   | 1.18  | Providing and filling in plinth with sand/ Crusher dust and hard moorum under floor in layers not exceeding 20cm in depth consolidating each deposited layer by ramming and watering, including dressing etc. complete.                                                                                           | cum   | 1.12  | 371.00  | 415.52   |
| 3   | 3.2   | Providing and laying nominal mix reinforced cement concrete with crushed stone aggregate using concrete mixer in all works upto plinth level excluding cost of form work.                                                                                                                                         |       |       |         |          |
|     | 2.1   | 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size).                                                                                                                                                                                                                                  | cum   | 0.34  | 4163.00 | 1,415.42 |
| 4   | 7.1   | Brick work with modular well burnt clay bricks of crushing strength not less than 35 kg/sqcm and water absorption not more than 20% in foundation and plinth in:                                                                                                                                                  |       |       |         |          |
|     | 1.4   | Cement Mortar 1:6 (1 Cement : 6 Coarse Sand)                                                                                                                                                                                                                                                                      | cum   | 2.5   | 3821.00 | 9,552.50 |
| 5   | 3.9   | Extra for precast PCC/ RCC work of any mix including form work, hoisting and fixing in Cement Mortar. 1:2 (1 Cement : 2 coarse sand) and finishing with cement plaster in Cement Mortar 1:3 (1 Cement : 3 coarse sand) but excluding reinforcement.                                                               | cum   | 0.34  | 469.00  | 159.46   |
| 6   | 3.12  | Providing and placing in position reinforcement for R.C.C. work including straightening, cutting, bending, binding etc. complete as per drawings including cost of binding wire in foundation and plinth all complete:                                                                                            |       |       |         |          |
|     | 12.2  | Thermo-Mechanically treated bars FE 500D                                                                                                                                                                                                                                                                          | kg    | 34.00 | 54.50   | 1,853.00 |
| 7   | 18.76 | Providing and fixing on wall face or under floor UV stabilized Unplasticised Rigid PVC pipes (single socketed) having 3.2mm wall thickness conforming to IS : 13592 (4kg/sqcm) including required couplers, jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion etc complete. |       |       |         |          |
|     | 76.2  | 110 mm dia pipe.                                                                                                                                                                                                                                                                                                  | metre | 3.00  | 267.00  | 801.00   |
| 8   | 3.1   | Providing and laying nominal mix plain cement concrete with crushed stone aggregate using concrete mixer in all works upto plinth level                                                                                                                                                                           |       |       |         |          |

| REF | ITEM DESCRIPTION                                                               | UNIT | QTY  | RATE    | AMOUNT   |
|-----|--------------------------------------------------------------------------------|------|------|---------|----------|
|     | excluding cost of form work.                                                   |      |      |         |          |
| 1.3 | 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size). | cum  | 0.49 | 2970.00 | 1,455.30 |

As per Estimate Amount Rs. 17119.25

  
E.E. Engineer  
Nagar Palik Nigam  
Korba (C.G.)

  
Astt. Engineer  
Nagar Palik Nigam  
Korba (C.G.)

  
Sub Engineer  
Nagar Palik Nigam  
Korba (C.G.)

**OFFICE OF THE NAGAR PALIK NIGAM, KORBA ( C.G.)**  
**ABSTRACT**

Name of Work **CONSTRUCTION OF RAIN WATER HARVESTING PIT TYBE A [NON SOR ITEM]**

As per SOR : SCHEDULE OF RATES PUBLIC WORKS DEPARTMENT [PWD BUILDING-01.01.2015]

| S.N | REF  | ITEM DESCRIPTION                            | UNIT | QTY  | RATE    | AMOUNT   |
|-----|------|---------------------------------------------|------|------|---------|----------|
| 1   | NS-1 | PROVIDING AND FILLING BOULDER OF 100MM SIZE | CUM  | 0.75 | 800.00  | 600.00   |
| 2   | NS-2 | PROVIDING AND FILLINF 40MM CRUSHED METAL    | CUM  | 0.75 | 1400.00 | 1,050.00 |
| 3   | NS-3 | PROVIDING AND FILLING 20MM CRUSHED METAL    | CUM  | 0.75 | 1500.00 | 1,125.00 |
| 4   | NS-4 | PROVIDING AND FILLING BRUSHED BRICK         | CUM  | 1.13 | 500.00  | 565.00   |

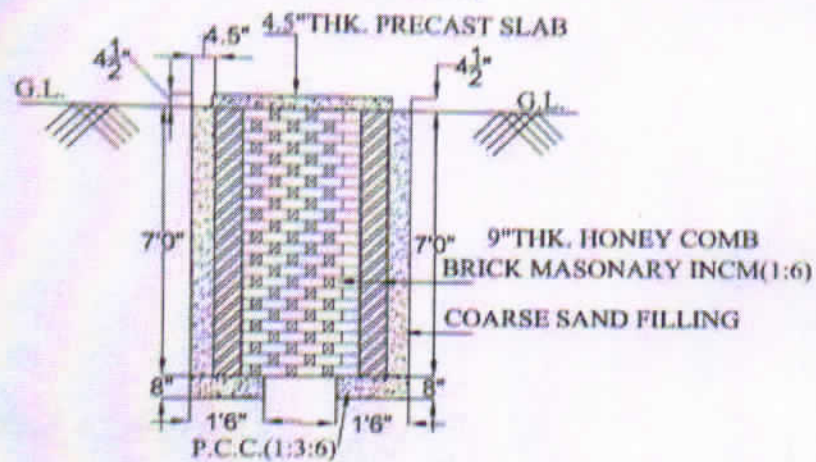
As per Estimate Amount Rs. **3340.00**

  
E.E. Engineer  
Nagar Palik Nigam  
Korba (C.G.)

  
Asst. Engineer  
Nagar Palik Nigam  
Korba (C.G.)

  
Sub Engineer  
Nagar Palik Nigam  
Korba (C.G.)





9"THK. HONEY COMB  
BRICK MASONARY INCM(1:6)

Diagram illustrating the construction of a soak pit. The outer pit is 6'0" wide and 6'0" deep. The inner soak pit is 3'0" x 3'0" x 3'0". The surrounding structure is 1'6" wide P.C.C. (1:3:6).

CONSULTING ENGINEERS & GOVT. APPROVED VALUERS

## SOAK PIT PLAN





TYPE B

**OFFICE OF THE MUNICIPAL CORPORATION, KORBA (C.G.)**

**TECHNICAL REPORT**

1. NAME OF WORK : CONSTRUCTION OF RAIN WATER HARVESTING PIT TYPE B

|                   |         |   |          |
|-------------------|---------|---|----------|
| 1. SOR 01.01.2015 | Part-A  | = | 40405.98 |
| 2. NON SOR ITEM   | Part-B  | = | 14688.00 |
|                   | Total   | = | 55093.98 |
|                   | Say Rs. | = | 55000.00 |

T.S. No. 22 ; Dated 04/03/2017

Technically Sanctioned For Rs. 55,000/-

Rs. Fifty five thousand only

Assitant Engineer  
Nagar Palik Nigam  
Korba (C.G.)

Executive Engineer  
Municipal Corporation  
KORBA (C. G.)

Sub Engineer  
Nagar Palik Nigam  
Korba (C.G.)

# OFFICE OF THE NAGAR PALIK NIGAM, KORBA ( C.G.)

## ABSTRACT

Name of Work **CONSTRUCTION OF RAIN WATER HARVESTING PIT TYPE B**

As per SOR : SCHEDULE OF RATES PUBLIC WORKS DEPARTMENT [PWD BUILDING-01.01.2015]

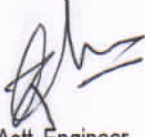
| S.N | REF   | ITEM DESCRIPTION                                                                                                                                                                                                                                                                                                  | UNIT  | QTY    | RATE    | AMOUNT    |
|-----|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|---------|-----------|
| 1   | 1.1   | Excavation for all types and sizes of foundations, trenches and drains or for any other purpose including disposal of excavated stuff upto 1.5 m lift and lead upto 50m (at least 5m away from the excavated area), including dressing and leveling of pits.                                                      |       |        |         |           |
|     | 1.1   | In all types of soils.                                                                                                                                                                                                                                                                                            | cum   | 31.10  | 185.00  | 5,753.50  |
| 2   | 1.18  | Providing and filling in plinth with sand/ Crusher dust and hard moorum under floor in layers not exceeding 20cm in depth consolidating each deposited layer by ramming and watering, including dressing etc. complete.                                                                                           | cum   | 1.12   | 371.00  | 415.52    |
| 3   | 3.2   | Providing and laying nominal mix reinforced cement concrete with crushed stone aggregate using concrete mixer in all works upto plinth level excluding cost of form work.                                                                                                                                         |       |        |         |           |
|     | 2.1   | 1:1½:3 (1 cement : 1½ coarse sand : 3 graded stone aggregate 20mm nominal size).                                                                                                                                                                                                                                  | cum   | 1.22   | 4163.00 | 5,078.86  |
| 4   | 7.1   | Brick work with modular well burnt clay bricks of crushing strength not less than 35 kg/sqcm and water absorption not more than 20% in foundation and plinth in:                                                                                                                                                  |       |        |         |           |
|     | 1.4   | Cement Mortar 1:6 (1 Cement : 6 Coarse Sand)                                                                                                                                                                                                                                                                      | cum   | 4.42   | 3821.00 | 16,888.82 |
| 5   | 3.9   | Extra for precast PCC/ RCC work of any mix including form work, hoisting and fixing in Cement Mortar. 1:2 (1 Cement : 2 coarse sand) and finishing with cement plaster in Cement Mortar 1:3 (1 Cement : 3 coarse sand) but excluding reinforcement.                                                               | cum   | 1.22   | 469.00  | 572.18    |
| 6   | 3.12  | Providing and placing in position reinforcement for R.C.C. work including straightening, cutting, bending, binding etc. complete as per drawings including cost of binding wire in foundation and plinth all complete:                                                                                            |       |        |         |           |
|     | 12.2  | Thermo-Mechanically treated bars FE 500D                                                                                                                                                                                                                                                                          | kg    | 122.00 | 54.50   | 6,649.00  |
| 7   | 18.76 | Providing and fixing on wall face or under floor UV stabilized Unplasticised Rigid PVC pipes (single socketed) having 3.2mm wall thickness conforming to IS : 13592 (4kg/sqcm) including required couplers, jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion etc complete. |       |        |         |           |
|     | 76.2  | 110 mm dia pipe.                                                                                                                                                                                                                                                                                                  | metre | 3.00   | 267.00  | 801.00    |
| 8   | 3.1   | Providing and laying nominal mix plain cement concrete with crushed stone aggregate using concrete mixer in all works upto plinth level                                                                                                                                                                           |       |        |         |           |



| REF  | ITEM DESCRIPTION                                                                                                                                                         | UNIT  | QTY  | RATE    | AMOUNT   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|---------|----------|
|      | for thermal expansion etc complete.                                                                                                                                      |       |      |         |          |
| 76.2 | 110 mm dia pipe.                                                                                                                                                         | metre | 3.00 | 267.00  | 801.00   |
| 8    | 3.1 Providing and laying nominal mix plain cement concrete with crushed stone aggregate using concrete mixer in all works upto plinth level excluding cost of form work. |       |      |         |          |
| 1.3  | 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size).                                                                                           | cum   | 1.43 | 2970.00 | 4,247.10 |

As per Estimate Amount Rs. 40405.98

  
E.E. Engineer  
Nagar Palik Nigam  
Korba (C.G.)

  
Asst. Engineer  
Nagar Palik Nigam  
Korba (C.G.)

  
Sub Engineer  
Nagar Palik Nigam  
Korba (C.G.)

**OFFICE OF THE NAGAR PALIK NIGAM, KORBA ( C.G.)**  
**ABSTRACT**

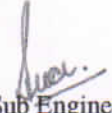
Name of Work **CONSTRUCTION OF RAIN WATER HARVESTING PIT TYBE B [NON SOR ITEM]**

As per SOR : SCHEDULE OF RATES PUBLIC WORKS DEPARTMENT [PWD BUILDING-01.01.2015]

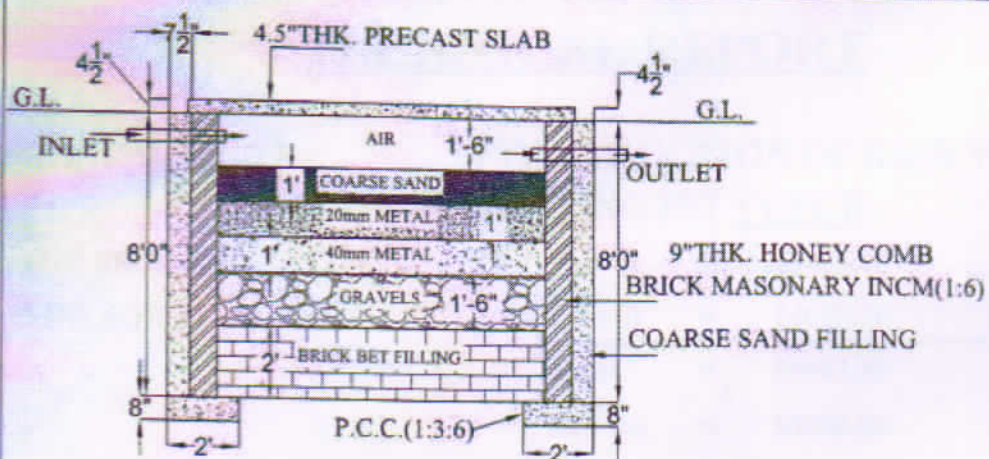
| S.N                        | REF  | ITEM DESCRIPTION                            | UNIT | QTY  | RATE    | AMOUNT   |
|----------------------------|------|---------------------------------------------|------|------|---------|----------|
| 1                          | NS-1 | PROVIDING AND FILLING BOULDER OF 100MM SIZE | CUM  | 4.32 | 800.00  | 3,456.00 |
| 2                          | NS-2 | PROVIDING AND FILLINF 40MM CRUSHED METAL    | CUM  | 2.88 | 1400.00 | 4,032.00 |
| 3                          | NS-3 | PROVIDING AND FILLING 20MM CRUSHED METAL    | CUM  | 2.88 | 1500.00 | 4,320.00 |
| 4                          | NS-4 | PROVIDING AND FILLING BRUSHED BRICK         | CUM  | 5.76 | 500.00  | 2,880.00 |
| As per Estimate Amount Rs. |      |                                             |      |      |         | 14688.00 |

  
E.E. Engineer  
Nagar Palik Nigam  
Korba (C.G.)

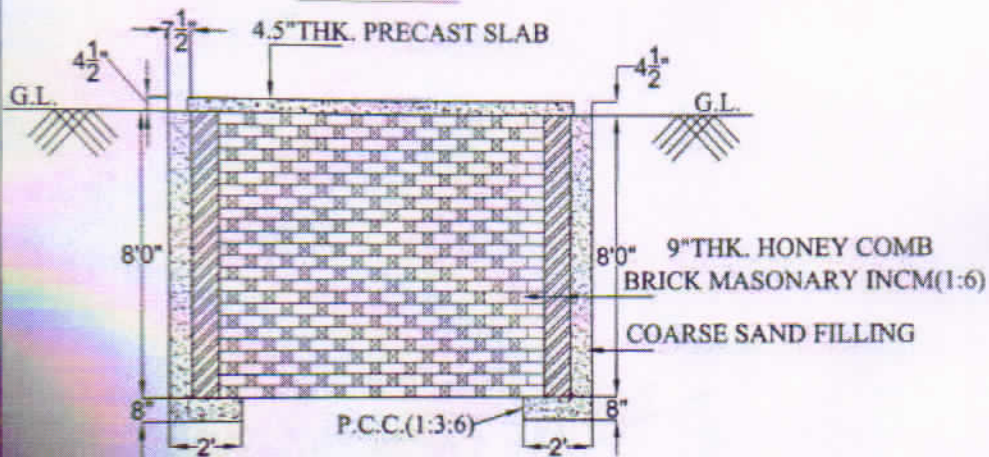
  
Astt. Engineer  
Nagar Palik Nigam  
Korba (C.G.)

  
Sub Engineer  
Nagar Palik Nigam  
Korba (C.G.)

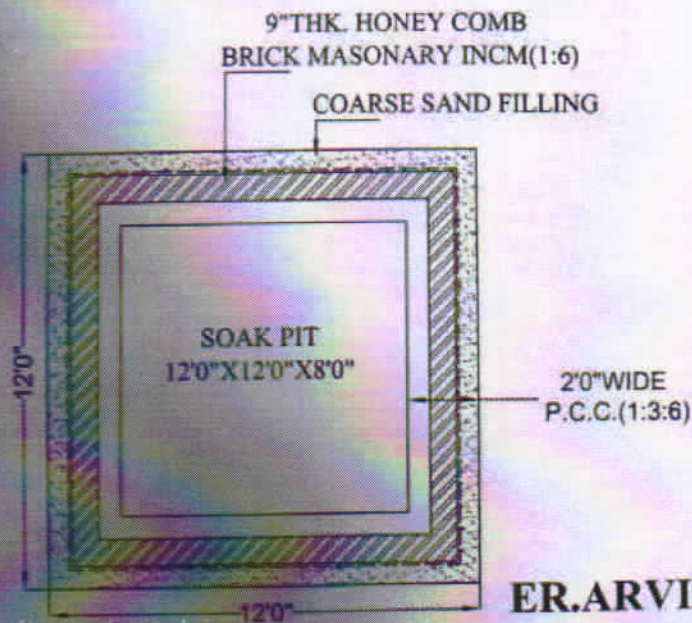




**SECTION**



**SECTIONAL ELEVATION**



**SOAK PIT PLAN**

**ER.ARVIND SAHU**

B. E. CIVIL (HONS) M.I.E., F.I.V.

CONSULTING ENGINEERS & GOVT. APPROVED VALUERS



TYPE - C

| ESTIMATE FOR BORE RECHARGE WELL RAIN WATER |                 |                                                                                                                                                                                        |     |     |     |   |       |          |         |         |
|--------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|---|-------|----------|---------|---------|
| S.NO                                       | SOR NO.         | ITEMS                                                                                                                                                                                  | No. | L   | B   | D | UNIT  | QUANTITY | RATE    | AMOUNT  |
| 1                                          | 421             | (a) Boring holes with auger for under reamed pile to a depth of 3.5 m in any soil below sub-soil water level, if any, including reaming 2.5 times the dia of piles ( one bulb only ) - |     |     |     |   |       |          |         |         |
|                                            |                 | (i) For 200 mm dia piles                                                                                                                                                               |     |     |     |   | EACH. |          | 304.00  |         |
|                                            |                 | (ii) For 250 mm dia piles                                                                                                                                                              |     |     |     |   | EACH. | 1        | 351.00  | 351     |
|                                            |                 | (iii) For 300 mm dia piles                                                                                                                                                             |     |     |     |   | EACH. |          | 377.00  |         |
| 2                                          | PHE SOR NO. 6/7 | I.S.I.markedUPVCcasingpipeConformingtoIS4985/1988 (with up-to-date amendments)                                                                                                         |     |     |     |   |       |          |         |         |
| 3                                          | 503             | CM casing pipes 200mm dia                                                                                                                                                              |     |     |     |   | RM    | 3.5      | 1293.00 | 4525.5  |
|                                            |                 | Collection of hard metal (without blasting)-                                                                                                                                           |     |     |     |   |       |          |         |         |
|                                            |                 | (d) 40 mm nominal size                                                                                                                                                                 |     |     |     |   | cum   | 0.074    | 419.00  | 31.006  |
|                                            |                 | (f) 20 mm nominal size                                                                                                                                                                 |     |     |     |   |       |          |         |         |
| 4                                          | 517             | (b) Sand                                                                                                                                                                               |     |     |     |   | cum   | 0.074    | 565.00  | 41.81   |
| 5                                          | 2902            | Material Consumption/Transportation at 5 km                                                                                                                                            |     |     |     |   | cum   | 0.025    | 24.00   | 0.6     |
|                                            |                 | Sand                                                                                                                                                                                   |     |     |     |   |       |          |         |         |
|                                            |                 | 40 mm Metal                                                                                                                                                                            |     |     |     |   | CUM   | 0.025    | 178.80  | 4.47    |
|                                            |                 | 20mm Metal                                                                                                                                                                             |     |     |     |   | CUM   | 0.074    | 178.80  | 13.2312 |
|                                            |                 | C.C. 1:2:4 with 20 mm garded matel                                                                                                                                                     | 1   | 0.8 | 0.8 | 0 | CUM   | 0.074    | 178.80  | 13.2312 |
| 6                                          | 921             | Honey comb brick masnory with second class T.M. open bhatta or Pajawa burnt bricks in -                                                                                                |     |     |     |   | cum   | 0.064    | 2640    | 168.96  |
|                                            |                 | (b)Cement mortar 1:4                                                                                                                                                                   |     |     |     |   |       |          |         |         |
| 7                                          | 910             | Extra rate for one-brick or half-brick wall                                                                                                                                            | 4   | 0.6 | 0.6 | 0 | cum   | 0.144    | 1512.00 | 217.728 |
| 8                                          | 1104            | 10mm thick cement plaster on brickwork in-                                                                                                                                             |     |     |     |   | cum   | 0.144    | 138.00  | 19.872  |
|                                            |                 | (b) C.M. 1:4                                                                                                                                                                           | 1   | 0.6 | 0.6 |   | sqm   | 0.36     |         |         |

Neglecting the thickness of casing pipe while calculating the quantity of filter

|  |                                    |   |     |     |     |      |         |          |
|--|------------------------------------|---|-----|-----|-----|------|---------|----------|
|  |                                    | 4 | 0.6 | 0.6 | sqm | 1.44 |         |          |
|  |                                    | 4 | 0.8 | 0.8 | sqm | 2.56 |         |          |
|  |                                    |   |     |     | sqm | 4.36 | 66.00   | 287.76   |
|  | Total                              |   |     |     |     |      |         | 5675.168 |
|  | Add 10% contractor marginal profit |   |     |     |     |      |         | 567.51   |
|  | Grand Total                        |   |     |     |     |      | say Rs. | 6242.678 |
|  |                                    |   |     |     |     |      |         | 6250.00  |

Say Rs. 6500/-

Cost of pipe (110mm PVC)  
 @ 1000/-

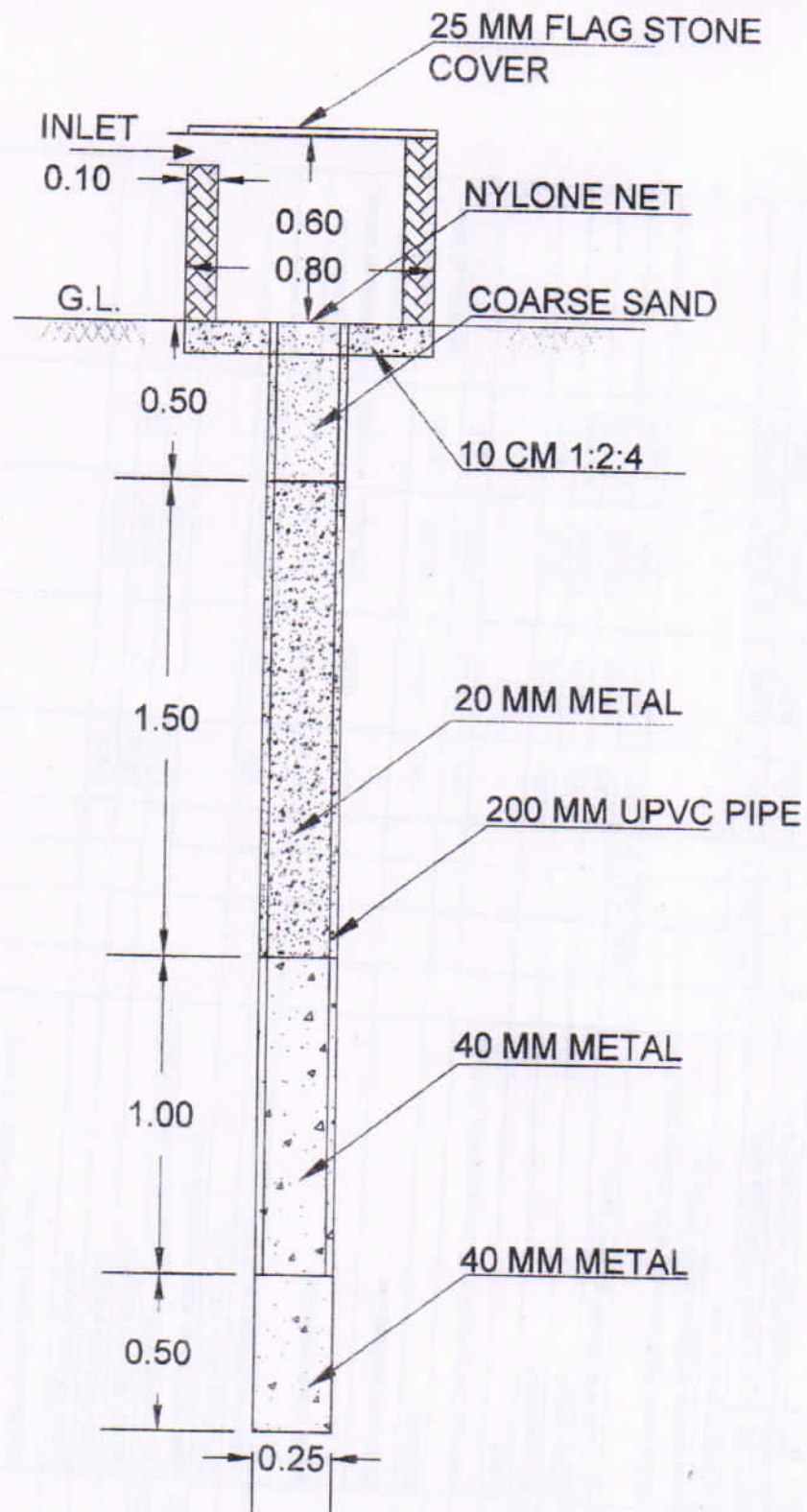
7500 = 00

T. S. No. 11713 Dt. 22.05.19  
 Technically Approved for Construction  
 of Rain Water Harvesting  
 In Ward No. For Rs. 7,500 = 00  
 (in words) Rs. Seven thousand  
and five hundred only

Superintending Engineer  
 Municipal Corporation  
 KOREA (C. G.)



Type C



BORE RECHARGE WELL RAIN WATER HARVESTING

*[Handwritten signature]*

TYPE - D

|                                                            |
|------------------------------------------------------------|
| <b>ESTIMATE FOR RECHARGE WELL <math>\Phi</math> 0.90 m</b> |
| <b>Abstract</b>                                            |

| S. no. | Ref. to SOR | Item                                                                                                                                                                                                | Quantity | Rate (Rs.) | Unit | Amount Rs. |
|--------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|------|------------|
| 1      | 2           | 3                                                                                                                                                                                                   | 4        | 5          | 6    | 7          |
| 1      |             | Excavation of foundation                                                                                                                                                                            |          |            |      |            |
|        | 2801.00     | (a) Excavation is soft or ordinary soil including 50m lead and 1.5m lift with dressing.                                                                                                             | 3.18     | 64.00      | cum  | 203.52     |
|        | 2802        | (b) Excavation in hard soil including 50m lead and 1.5m lift with dressing.                                                                                                                         | 10.67    | 76.00      | cum  | 810.92     |
| 2      | 2803        | Excavation in hard moorum and moorum with boulders including 50m lead and 1.5m lift with dressing.                                                                                                  | 7.66     | 89.00      | cum  | 681.74     |
| 3      | 2804        | Excavation in disintegrated rock including 50m lead and 1.5m lift with dressing                                                                                                                     | 1.49     | 177        | cum  | 263.73     |
| 4      | 403         | Add extra in items 2801 to 2803 above for depth (c) Beyond 4.5m to 6m                                                                                                                               | 23.00    | 7.00       | cum  | 161.00     |
| 5      | 703         | Filling foundations and around masonry works with hard moorum and moorum with boulder including watering and ramming .                                                                              | 12.66    | 127.00     | cum  | 1607.82    |
| 6      | 901(III)    | Second class T.M. open bhatta or pajawa burnt brick masonry in superstructure in- (iii) Cement mortar 1:4                                                                                           | 4.51     | 2379.00    | cum  | 10729.29   |
| 7      | 2902.00     | Transportation of Bricks, kankar, stone, chips shingle & excavated materials in disintegrated rock & soft rock when total distance is- (4) More than 5 km but up to 10 km- (a) 5 km excavated stuff | 3.17     | 178.80     | cum  | 566.80     |
| 8      | 2902        | Material Consumption/Transportation                                                                                                                                                                 |          |            |      |            |



|  |             |      |        |     |          |
|--|-------------|------|--------|-----|----------|
|  | Bricks      | 4.51 | 178.80 | cum | 806.39   |
|  | Cement      | 0.36 | 178.80 | cum | 64.368   |
|  | Sand        | 2.67 | 178.80 | cum | 477.40   |
|  | 40 mm Metal | 5.29 | 178.80 | cum | 945.85   |
|  | 20mm Metal  | 1.76 | 178.80 | cum | 314.69   |
|  | Charcole    | 0.53 | 178.80 | cum | 94.76    |
|  | Total Rs.   |      |        |     | 17728.27 |

Say Rs. 18000.00

Cost of pipe (110mm PVC)  
i/c all fittings. 45 -

2000-00

20,000-00

*Barisal*

*[Signature]*

T. S. No. 1/708 Dt. 22/5/19  
Technically Approved for Construction  
of 27 2125 5120m

In Ward No. For Rs. 20,000/-  
(in words) Rs. Twenty thousand  
only

*[Signature]*  
Superintending Engineer  
Municipal Corporation  
KORBA (C. G.)

RECHARGE WELL 0.50 M DIAMETER

The diagram illustrates a cross-section of a vertical well structure. The central shaft is filled with a series of layers, while the annular space between the shaft and the well wall is filled with a different material. The structure is supported by a porous foundation soil at the base.

**Dimensions and Layers:**

- Top Width:** 2.90
- Bottom Width:** 0.90
- Ground Level (G.L.):** Indicated at the top left.
- Soil Layers (Left Side):**
  - 0.5 M SOFT SOIL
  - 2.0 M HARD SOIL
  - 2.0 HARD MUROOM
  - 0.50 DISINTIGRATED ROCK
- Well Wall Layers (Right Side):**
  - NYLONE NET
  - NYLONE NET
  - NYLONE NET
  - HONEYCOMB
- Internal Well Shaft Layers (Center):**
  - 0.70 COARSE SAND
  - 0.30 CHARCOAL
  - 20 MM GRADED METAL
  - 40 MM GRAVEL/METAL
- Vertical Dimensions (Left Side):**
  - 5.00 (from G.L. to top of 2.0 HARD MUROOM)
  - 3.00 (from top of 2.0 HARD MUROOM to top of 0.50 DISINTIGRATED ROCK)
- Vertical Dimensions (Right Side):**
  - 5.00 (from G.L. to top of HONEYCOMB)
  - 3.00 (from top of HONEYCOMB to top of 0.50 DISINTIGRATED ROCK)
- Foundation:** POROUS FOUNDATION SOIL



TYPE - E

# ESTIMATE FOR RECHARGE WELL $\Phi$ 1.50 m

## Abstract

| S. no. | Ref. to SOR | Item                                                                                                                   | Quantity | Rate (Rs.) | Unit | Amount Rs. |
|--------|-------------|------------------------------------------------------------------------------------------------------------------------|----------|------------|------|------------|
| 1      | 2           | 3                                                                                                                      | 4        | 5          | 6    | 7          |
| 1      |             | Excavation of foundation                                                                                               |          |            |      |            |
|        | 2801.00     | (a) Excavation is soft or ordinary soil including 50m lead and 1.5m lift with dressing.                                | 4.67     | 64.00      | cum  | 298.88     |
|        | 2802        | (b) Excavation in hard soil including 50m lead and 1.5m lift with dressing.                                            | 16.13    | 76.00      | cum  | 1225.88    |
| 2      | 2803        | Excavation in hard moorum and moorum with boulders including 50m lead and 1.5m lift with dressing.                     | 12.34    | 89.00      | cum  | 1098.26    |
| 3      | 2804        | Excavation in disintegrated rock including 50m lead and 1.5m lift with dressing                                        | 2.11     | 177        | cum  | 373.47     |
| 4      | 403         | Add extra in items 2801 to 2803 above for depth (c) Beyond 4.5m to 6m                                                  | 35.25    | 7.00       | cum  | 246.75     |
| 5      | 703         | Filling foundations and around masonry works with hard moorum and moorum with boulder including watering and ramming . | 32.38    | 127.00     | cum  | 4112.26    |
| 6      | 901(III)    | Second class T.M. open bhatta or pajawa burnt brick masonry in superstructure in- (iii)<br>Cement mortar 1:4           | 6.86     | 2379.00    | cum  | 16319.94   |



|           |         |                                                                                                                                                                                                     |      |        |     |          |
|-----------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------|-----|----------|
| 7         | 2902.00 | Transportation of Bricks, kankar, stone, chips shingle & excavated materials in disintegrated rock & soft rock when total distance is- (4) More than 5 km but up to 10 km- (a) 5 km excavated stuff | 8.81 | 178.80 | cum | 1575.23  |
| 8         | 2902    | Material Consumption/Transportation                                                                                                                                                                 |      |        |     |          |
|           |         | Bricks                                                                                                                                                                                              | 6.86 | 178.80 | cum | 1226.57  |
|           |         | Cement                                                                                                                                                                                              | 0.36 | 178.80 | cum | 64.368   |
|           |         | Sand                                                                                                                                                                                                | 2.67 | 178.80 | cum | 477.40   |
|           |         | 40 mm Metal                                                                                                                                                                                         | 5.29 | 178.80 | cum | 945.85   |
|           |         | 20mm Metal                                                                                                                                                                                          | 1.76 | 178.80 | cum | 314.69   |
|           |         | Charcole                                                                                                                                                                                            | 0.53 | 178.80 | cum | 94.76    |
| Total Rs. |         |                                                                                                                                                                                                     |      |        |     | 28374.30 |

Say Rs. 28500.00

Cost of pipe line (110mm PVC)  
 if all fitting. 41 3000.00  
 Rs. 31500.00

Bairgwal

*[Signature]*

1/709 Dt. 22/5/19  
 Technically Approved for Construction  
 of 27 Ward Water Supply  
 in Ward No. .... For Rs. 31500/-  
 (in words) Rs. Thirty one thousand  
five hundred only  
 Superintending Engineer  
 Municipal Corporation  
 MORBA (C. G.)

The diagram illustrates a vertical infiltration system. On the left, the soil profile consists of 0.50m soft soil, 2.0 M HARD SOIL, 2.0 HARD MUROOM, and 0.50 DISINTGRATED ROCK. A BRICK MASONARY 1:4 structure is shown on the left side of the central assembly. The central assembly is a vertical column with a top width of 3.50 and a bottom width of 1.50. It contains the following layers from top to bottom: 0.70 COARSE SAND, CHARCOAL (0.30), 20 MM GRADED METAL (0.30), and 40 MM GRAVEL/METAL (3.00). Three NYLONE NET layers are positioned between the filter media. A HONEYCOMB structure is located within the 40 MM GRAVEL/METAL layer. The entire system is supported by POROUS FOUNDATION SOIL at the bottom.

RECHARGE WELL 1.50 M DAIMETER



TYPE - E

## ESTIMATE FOR RECHARGE WELL $\Phi$ 2.5 m

### Abstract

| S. no. | Ref. to SOR | Item                                                                                                         | Quantity | Rate (Rs.) | Unit | Amount Rs. | Remark |
|--------|-------------|--------------------------------------------------------------------------------------------------------------|----------|------------|------|------------|--------|
| 1      | 2           | 3                                                                                                            | 4        | 5          | 6    | 7          | 8      |
| 1      |             | Excavation of                                                                                                |          |            |      |            |        |
|        | 2801.00     | (a) Excavation is soft or ordinary soil including 50m lead and 1.5m lift with dressing.                      | 7.78     | 64.00      | cum  | 497.92     |        |
|        | 2802        | (b) Excavation in hard soil including 50m lead and 1.5m lift with dressing.                                  | 27.78    | 76.00      | cum  | 2111.28    |        |
| 2      | 2803        | Excavation in hard moorum and moorum with boulders including 50m lead and 1.5m lift with dressing.           | 22.73    | 89.00      | cum  | 2022.97    |        |
| 3      | 2804        | Excavation in disintegrated rock including 50m lead and 1.5m lift with dressing                              | 4.30     | 177        | cum  | 761.10     |        |
| 4      | 403         | Add extra in items 2801 to 2803 above for depth (c) Beyond 4.5m to 6m                                        | 62.59    | 7.00       | cum  | 438.13     |        |
| 5      | 703         | Filling foundations and around masonry works with hard moorum and moorum with boulder including watering and | 44.15    | 127.00     | cum  | 5607.05    |        |
| 6      | 901(III)    | Second class T.M. open bhatta or pajawa burnt brick masonry in superstructure in- (iii) Cement mortar 1:4    | 10.79    | 2379.00    | cum  | 25669.41   |        |



|   |         |                                                                                                                                                                                                     |       |        |     |                 |  |
|---|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|--------|-----|-----------------|--|
| 7 | 2902.00 | Transportation of Bricks, kankar, stone, chips shingle & excavated materials in disintegrated rock & soft rock when total distance is- (4) More than 5 km but up to 10 km- (a) 5 km excavated stuff | 24.54 | 178.80 | cum | 4388.47         |  |
| 8 | 2902    | Transportation / material Consumption                                                                                                                                                               |       |        |     |                 |  |
|   |         | Bricks                                                                                                                                                                                              | 10.79 | 178.80 | cum | 1929.25         |  |
|   |         | Cement                                                                                                                                                                                              | 0.57  | 178.80 | cum | 101.02          |  |
|   |         | Sand                                                                                                                                                                                                | 5.69  | 178.80 | cum | 1017.37         |  |
|   |         | 40 mm Metal                                                                                                                                                                                         | 14.74 | 178.80 | cum | 2635.51         |  |
|   |         | 20mm Metal                                                                                                                                                                                          | 4.91  | 178.80 | cum | 877.91          |  |
|   |         | Charcole                                                                                                                                                                                            | 1.47  | 178.80 | cum | 263.37          |  |
|   |         | <b>Total Rs.</b>                                                                                                                                                                                    |       |        |     | <b>48320.77</b> |  |

Say Rs. 48,300.00

Cost of pipe line (110 mm PRC)  
w/c all fitting 45

5000.00  
53300 = 00

*Baran*

*[Signature]*

T S. No. 11710 Dt. 22/5/19  
Technically Approved for Construction  
27/5/19

In Ward No. 53,300/-  
(in words) Rs. Fifty three thousand  
three hundred only

*[Signature]*  
Superintending Engineer  
Municipal Corporation  
KORBA (C. G.)





TYPE G

In Ward No. For Rs. 69,000/-  
(in words) Rs. Sixty nine thousand  
only

Superintending Engineer  
Municipal Corporation  
KORBA (C. G.)

# ESTIMATE FOR RECHARGE WELL Ø 3.0 m

## Abstract

| S. no. | Ref. to SOR | Item                                                                                                                                                                                                | Quantity | Rate (Rs.) | Unit | Amount Rs.      |
|--------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|------------|------|-----------------|
| 1      | 2           | 3                                                                                                                                                                                                   | 4        | 5          | 6    | 7               |
| 1      |             | Excavation of foundation                                                                                                                                                                            |          |            |      |                 |
|        | 2801.00     | (a) Excavation is soft or ordinary soil including 50m lead and 1.5m lift with dressing.                                                                                                             | 9.61     | 64.00      | cum  | 615.04          |
|        | 2802        | (b) Excavation in hard soil including 50m lead and 1.5m lift with dressing.                                                                                                                         | 34.74    | 76.00      | cum  | 2640.24         |
| 2      | 2803        | Excavation in hard moorum and moorum with boulders including 50m lead and 1.5m lift with dressing.                                                                                                  | 29.09    | 89.00      | cum  | 2589.01         |
| 3      | 2804        | Excavation in disintegrated rock including 50m lead and 1.5m lift with dressing                                                                                                                     | 5.70     | 177        | cum  | 1008.90         |
| 4      | 403         | Add extra in items 2801 to 2803 above for depth (c) Beyond 4.5m to 6m                                                                                                                               | 79.14    | 7.00       | cum  | 553.98          |
| 5      | 703         | Filling foundations and around masonry works with hard moorum and moorum with boulder including watering and ramming.                                                                               | 44.15    | 127.00     | cum  | 5607.05         |
| 6      | 901(III)    | Second class T.M. open bhatta or pajawa burnt brick masonry in superstructure in- (iii) Cement mortar 1:4                                                                                           | 12.76    | 2379.00    | cum  | 30356.04        |
| 7      | 2902.00     | Transportation of Bricks, kankar, stone, chips shingle & excavated materials in disintegrated rock & soft rock when total distance is- (4) More than 5 km but up to 10 km- (a) 5 km excavated stuff | 35.32    | 178.80     | cum  | 6315.22         |
| 8      | 2902        | Material Consumption/Transportation                                                                                                                                                                 |          |            |      |                 |
|        |             | Bricks                                                                                                                                                                                              | 12.76    | 178.80     | cum  | 2281.49         |
|        |             | Cement                                                                                                                                                                                              | 0.67     | 178.80     | cum  | 118.902         |
|        |             | Sand                                                                                                                                                                                                | 7.61     | 178.80     | cum  | 1360.67         |
|        |             | 40 mm Metal                                                                                                                                                                                         | 21.19    | 178.80     | cum  | 3788.77         |
|        |             | 20mm Metal                                                                                                                                                                                          | 7.07     | 178.80     | cum  | 1263.22         |
|        |             | Charcole                                                                                                                                                                                            | 2.11     | 178.80     | cum  | 377.27          |
|        |             | <b>Total Rs.</b>                                                                                                                                                                                    |          |            |      | <b>58875.80</b> |

Say Rs. 59000.00

Cost of pipe line (110mm dia PVC)  
w/ all fittings.

4/-

10,000.00

69000.00

Baran



The diagram illustrates a cross-section of a biofilter system. The layers and their dimensions are as follows:

- Top Layer:** 5.00 m wide, 4.00 m high, labeled "NYLONE NET".
- Coarse Sand Layer:** 0.70 m thick, labeled "COARSE SAND".
- Charcoal Layer:** 0.30 m thick, labeled "CHARCOAL".
- 20 MM GRADED METAL Layer:** A layer of small circles, labeled "20 MM GRADED METAL".
- Honeycomb Layer:** A layer of hexagonal cells, labeled "HONEYCOMB".
- 40 MM GRAVEL/METAL Layer:** A layer of larger circles, labeled "40 MM GRAVEL/METAL".
- Bottom Layer:** 0.25 m thick, labeled "POROUS FOUNDATION SOIL".

Additional dimensions and labels include:

- 0.50m soft soil (on the left side)
- 2.0 M HARD SOIL 1.00 (on the left side)
- 5.00 (width of the main filter area)
- 2.0 HARD MUROOM 3.00 (width of the main filter area)
- BRICK MASONRY 1:4 (on the right side)
- 0.50 DISINTIGRATED ROCK (on the right side)



# **CENTER FOR GROUND WATER RECHARGE**

**(C.G.W.R.)**

TYPE-4

Specialist For Roof Top & Surface Rain Water Harvesting

90/A, Sector-2 Geetanjali Nagar, Raipur 0771-4263167,9424203408,9630149832

email:cgwr.raipur@gmail.com

## **RAIN WATER HARVESTING COST ESTIMATE FOR NAGAR NIGAM KORBA GOVT BUILDINGS**

| S.No | Items                                                                                                                                        | Cost per unit         | Qty    | T. Amount |
|------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------|-----------|
| 1    | Digging of Tube well 200 mm Dia .up to 30 m bgl with and Development of well Including Logging of Core Sample ,at the time of Drilling.      | 750.00<br>Running Mtr | 30Mtr  | 22500.00  |
| 2.   | Supply & Installation of 200 mm PVC Casing pipe (Plain 20Mtr.) as Per Drawing                                                                | 800 /-<br>Running mtr | 15 Mtr | 12000.00  |
| 3.   | Supply & Installation of 200 mm PVC Casing pipe (Slotted 10Mtr.) as Per Drawing                                                              | 900 /-<br>Running mtr | 15 Mtr | 13500.00  |
| 2    | Digging of Recharge Trench of 5 x 5x 2.5 mtr<br>(As Per Drawing)                                                                             | 15,000.00             | 01     | 15,000.00 |
| 3    | Brick Wall Lining of the Whole Recharge Trenches Including Separation Wall including all civil material labour complete job( As Per Drawing) | 75,000.00             | 01     | 75,000.00 |
| 4    | Providing the Filter media material ( Metal Boulder ,Coarse Sand,Fine Sand and Wooden coal)                                                  | 25,000.00             | 01     | 25,000.00 |
| 5    | Slabbing Of Recharge Trenches.                                                                                                               | 10,000.00             | 01     | 10,000.00 |
| 6    | Providing & Fixing of Rigid PVC Pipe 200mm Dia from inlet & Outlet as per Drawing Complete Job.                                              | 800/Mtr               | 10 Mtr | 8,000.00  |

|                                                          |                                                                            |                         |       |                |
|----------------------------------------------------------|----------------------------------------------------------------------------|-------------------------|-------|----------------|
|                                                          | Providing & Fixing of 110 mm ISI Marka 4 Kg Pressure PVC Pipe              | 500/Running Mtr         | 10Mtr | 5,000.00       |
| 8                                                        | Transporting Of Tools Tackels & PVC Pipe Bore Drilling Hulting Charges etc | L.S.                    |       | 5000.00        |
| 9.                                                       | Consultancy & Supervising Charges                                          | L.S.<br>For 1 structure |       | 5000.00        |
| In WORDS : RUPEES ONE LAC NINTY SIX THOUSAND RUPEES ONLY |                                                                            |                         |       | 196000.00*     |
| Cost of pore line (110mm PVC)                            |                                                                            |                         |       | 15000.00       |
| Commercial terms: 10% advance                            |                                                                            |                         |       | to 2,11,000.00 |

1. IGST /GST will be paid extra @ 18% on the aforesaid fees.
2. Any other incidental charges and govt. fees will be reimbursed as per actual on submission of supporting documents.
3. The payment shall be made through RTGS/Account Payee Cheque only.

#### D. Payment terms

1. 30% Mobilization advance along with Job Order.
2. 50% Payment after 80% Of Work over
3. 20% Payment after 100% Of Work over

#### E. Time Schedule:

1. Total time for Work Completed 15 Days for 01 Structure , from the Date of Issue of Work Order

*[Signature]*

*[Signature]*  
K. Panigrahi

Sr. Hydrogeologist

Cum Partner, CGWR, Raipur

P.S. No. 11712 Dt. 22/5/19  
Technically Approved for Construction  
of *110mm PVC*

In Ward No. *2, 11, 5001-*  
(in words) *Two lakh eleven*  
*thousand only*

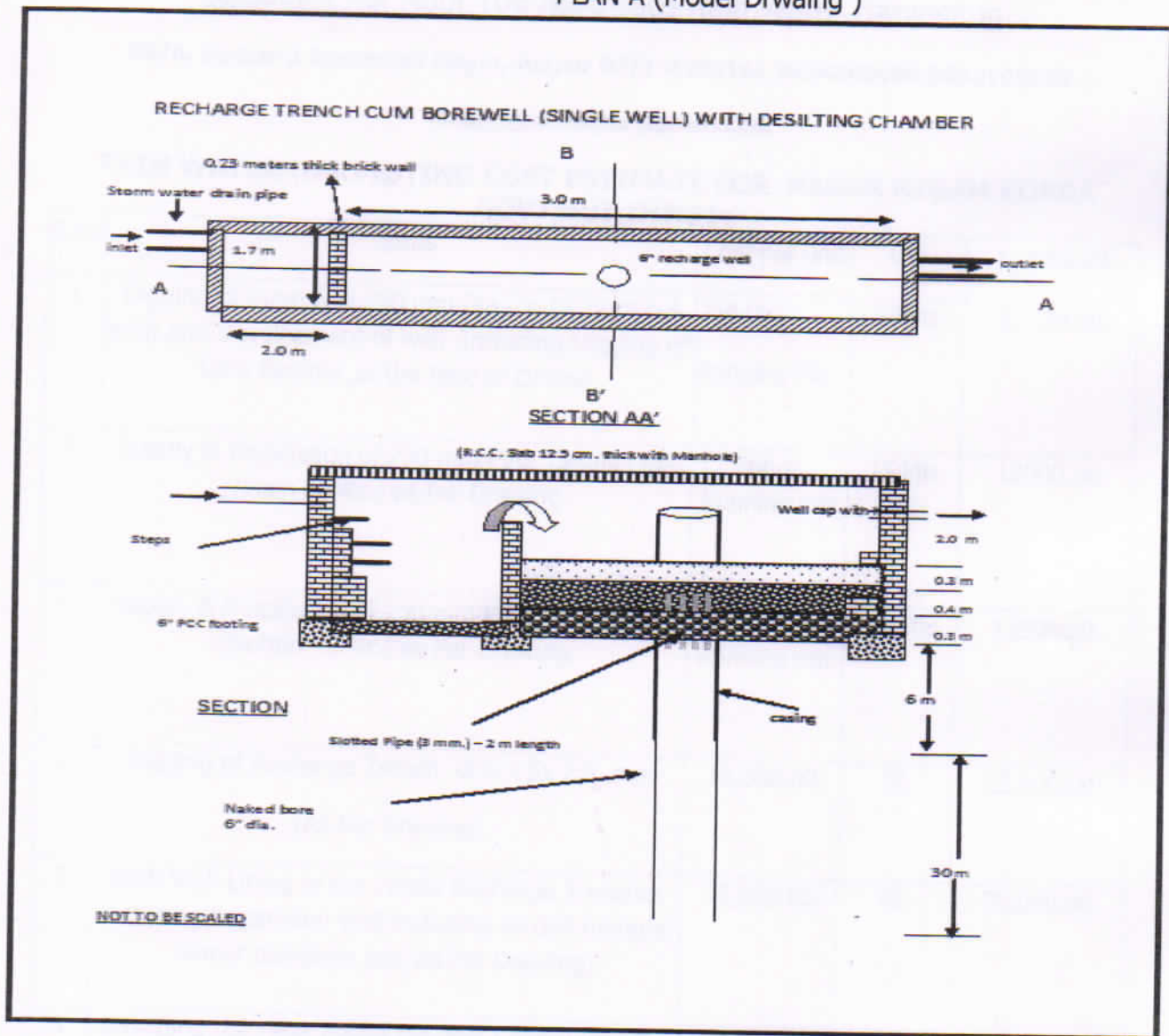
*[Signature]*  
Superintending Engineer  
Municipal Corporation,  
KORBA (C. G.)



# RAIN WATER HARVESTING DRAWING FOR D.M. PLANT BUILDING (Approved Drawing of CGWB)

TYPE H

FIGURE: A RECHARGE TRENCH CUM BOREWELL WITH DESILTING CHAMBER  
PLAN A (Model Drwaing )



*[Handwritten signature]*