



NCC LTD.

SOIL SAMPLE COLLECTION REPORT

SWSM PROJECT - GORAKHPUR ,UP



|   |   |                    |
|---|---|--------------------|
| 1 | Name of the Block-  | GOLA               |
| 2 | Name of the Gram Panchayat-                               | PERSIA-NISPFI-RAJA |
| 3 | Name of the Borewell Village-                             |                    |
| 4 | Name of the Revenue Village-                              | 2                  |
| 5 | Drilling For Housing Pipe (Dia-<br>Dia of 200 mm/300 mm)- | 200                |
|   | Bore For Plain/Slotted 150<br>Hole/ mm dia-               | 150                |
| 6 | Drilling For Housing Pipe-                                | 36.05              |
|   | Depth( For Plain/Slotted Pipe-                            | 88.91/18.04        |
| 7 | Total Drilling Depth (m)-                                 | 170M               |
| 8 | Electrical Logging Test Depth                             | 160M               |

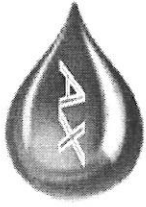
| Sl no. | Date of Sample Collection | Type of Soil Sample | Depth of Sample Collection (m) | Remarks |
|--------|---------------------------|---------------------|--------------------------------|---------|
| 1      | 06-09-2021                | CLAY                | 0 - 3                          |         |
| 2      | 06-09-2021                | CLAY                | 3 - 6                          |         |
| 3      | 06-09-2021                | CLAY                | 6 - 9                          |         |
| 4      | 06-09-2021                | CONCRETE CLAY       | 09 - 12                        |         |
| 5      | 06-09-2021                | CONCRETE CLAY       | 12 - 15                        |         |
| 6      | 06-09-2021                | CONCRETE CLAY       | 15 - 18                        |         |
| 7      | 06-09-2021                | CONCRETE CLAY       | 18 - 21                        |         |
| 8      | 07-09-2021                | MEDIUM SAND         | 21 - 24                        |         |
| 9      | 07-09-2021                | MEDIUM SAND         | 24 - 27                        |         |
| 10     | 07-09-2021                | SANDY CLAY          | 27 - 30                        |         |
| 11     | 07-09-2021                | SANDY CLAY          | 30 - 33                        |         |
| 12     | 07-09-2021                | MEDIUM SAND         | 33 - 36                        |         |
| 13     | 07-09-2021                | SANDY CLAY          | 36 - 39                        |         |
| 14     | 07-09-2021                | MEDIUM SAND         | 39 - 42                        |         |
| 15     | 07-09-2021                | MEDIUM SAND         | 42 - 45                        |         |
| 16     | 07-09-2021                | MEDIUM SAND         | 45 - 48                        |         |
| 17     | 07-09-2021                | MEDIUM SAND         | 48 - 51                        |         |
| 18     | 07-09-2021                | MEDIUM SAND         | 51 - 54                        |         |
| 19     | 08-09-2021                | MEDIUM SAND         | 54 - 57                        |         |
| 20     | 08-09-2021                | MEDIUM SAND         | 57 - 60                        |         |
| 21     | 08-09-2021                | CONCRETE CLAY       | 60 - 63                        |         |
| 22     | 08-09-2021                | CONCRETE CLAY       | 63 - 66                        |         |
| 23     | 09-09-2021                | CONCRETE CLAY       | 66 - 69                        |         |
| 24     | 09-09-2021                | CONCRETE CLAY       | 69 - 72                        |         |
| 25     | 09-09-2021                | FINE SAND           | 72 - 75                        |         |
| 26     | 09-09-2021                | SANDY CLAY          | 75 - 78                        |         |
| 27     | 09-09-2021                | SANDY CLAY          | 78 - 81                        |         |
| 28     | 09-09-2021                | SANDY CLAY          | 81 - 84                        |         |
| 29     | 09-09-2021                | SANDY CLAY          | 84 - 87                        |         |
| 30     | 10-09-2021                | SANDY CLAY          | 87 - 90                        |         |
| 31     | 10-09-2021                | SANDY CLAY          | 90 - 93                        |         |
| 32     | 10-09-2021                | SANDY CLAY          | 93 - 96                        |         |
| 33     | 10-09-2021                | SANDY CLAY          | 96 - 99                        |         |
| 34     | 10-09-2021                | FINE SAND           | 099 - 102                      |         |

|    |            |               |           |  |
|----|------------|---------------|-----------|--|
| 35 | 10-09-2021 | FINE SAND     | 102 - 105 |  |
| 36 | 10-09-2021 | CLAY          | 105 - 108 |  |
| 37 | 10-09-2021 | MEDIUM SAND   | 108 - 111 |  |
| 38 | 10-09-2021 | MEDIUM SAND   | 111 - 114 |  |
| 39 | 10-09-2021 | MEDIUM SAND   | 114 - 117 |  |
| 40 | 11-09-2021 | CLAY          | 117 - 120 |  |
| 41 | 11-09-2021 | MEDIUM SAND   | 120 - 123 |  |
| 42 | 11-09-2021 | MEDIUM SAND   | 123 - 126 |  |
| 43 | 11-09-2021 | MEDIUM SAND   | 126 - 129 |  |
| 44 | 11-09-2021 | MEDIUM SAND   | 129 - 132 |  |
| 45 | 11-09-2021 | MEDIUM SAND   | 132 - 135 |  |
| 46 | 11-09-2021 | MEDIUM SAND   | 135 - 138 |  |
| 47 | 11-09-2021 | MEDIUM SAND   | 138 - 141 |  |
| 48 | 11-09-2021 | CONCRETE CLAY | 141 - 144 |  |
| 49 | 11-09-2021 | CONCRETE CLAY | 144 - 147 |  |
| 50 | 11-09-2021 | CONCRETE CLAY | 147 - 150 |  |
| 51 | 11-09-2021 | CONCRETE CLAY | 150 - 153 |  |
| 52 | 11-09-2021 | CLAY          | 153 - 156 |  |
| 53 | 11-09-2021 | CLAY          | 156 - 159 |  |
| 54 | 11-09-2021 | CLAY          | 159 - 162 |  |
| 55 | 11-09-2021 | CLAY          | 162 - 165 |  |
| 56 | 11-09-2021 | CLAY          | 165 - 170 |  |



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 TR. K. K. K.

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 CLIENT



# Aqua Xplore

(Groundwater Assessment & Allied Services)

243/5, New Colony Jiyamau, Hazratganj, Lucknow – 226001

Mob. 9918202546 / 9889323322, Email-aquaxplorelko@gmail.com

Advisor- Dr. R. A. Yadav, ex- Manager (Groundwater), U. P. Jal Nigam

Ref 912 - P / AX - 2021

Date 12.09.2021

## Geophysical Borehole Logging Report

Name of the site : Parsia Nisfi Raja , Block- Gola

District : Gorakhpur

Date : 12.09.2021

Depth logged : 160.0 mbgl

Depth drilled : 170.0 mbgl

Logged by : Aqua Xplore

Presence : Representative of M/S NCC Limited, Gorakhpur - South

Based on the interpretation of geophysical logs, following information may be deciphered, particularly with respect to salinity of the formation water;

| Sl.No. | Depth range(mbgl) | Thickness(m) | Remarks  |
|--------|-------------------|--------------|----------|
| 1      | 22.0--27.0        | 5.0          | Good all |
| 2      | 30.0--34.0        | 4.0          |          |
| 3      | 40.0--60.0        | 20.0         |          |
| 4      | 72.0--76.0        | 4.0          |          |
| 5      | 80.0--84.0        | 4.0          |          |
| 6      | 99.0--103.0       | 4.0          |          |
| 7      | 108.0--115.0      | 7.0          |          |
| 8      | 120.0--130.0      | 10.0         |          |
| 9      | 133.0--138.0      | 5.0          |          |

Note. Sl. Nos. 4, 5 & 6 are fine sand. All zones are intermixed with fine bands of kankar. No suitable zones were encountered below 140.0 mbgl till depth logged.

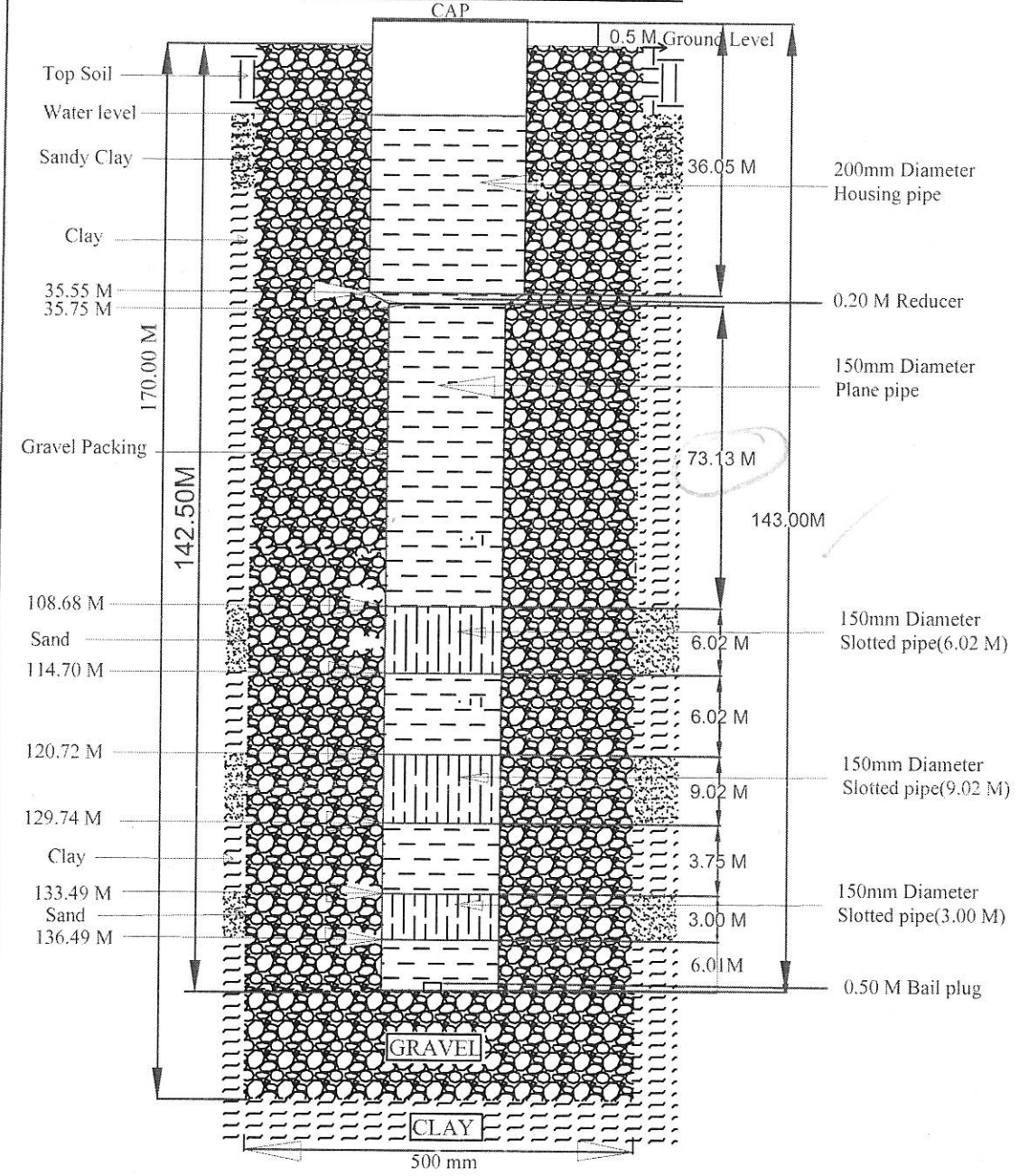
for Aqua Xplore

CC;

1. Executive Engineer, C.D. (E/M), U.P.Jal Nigam, Gorakhpur.
2. M/S NCC Limited, Gorakhpur –South, SWSM.



# TUBE WELL ASSEMBLY



|                                     |   |   |  |
|-------------------------------------|---|---|--|
| .....<br>(Signature By)<br>NCC LTD. | .....<br>(Signature Of)<br>TPI<br>(Jal Nigam) | .....<br>(Signature Of)<br>JE/AE<br>(Jal Nigam) | .....<br>(Signature Of)<br>(EE)<br>(Jal Nigam) |
|-------------------------------------|---|---|--|

Depth of Tube well :- 170 M

Lowering of Tube well assembly :- 143.00M

Plane/Housig pipe :- 36.05 M

Plane pipe :- 88.91 M (-20)

Slotted pipe :- 18.04 M

Required Discharge :- LPM

Project Name  
Implementation of Rural Water Supply Projects in the Gorakhpur District of Gorakhpur Division Uttar pradesh under jeevan mission

Name of Block :- GOLA

Name of Village :- **Parsia Nisphi Raja**

Name of Client  
Executive Director, SWSM Lucknow  
State Water & sanitation Mission, 6 Rana Pratap Marg  
Lucknow - 2260001, Uttar Pradesh.

Name of Contractor  
NCC Limited  
Ansal API, Sector - C2/183, Sushant Gold City, Near SJ,  
International School, Shaheed Park, Lucknow - 226030

Drawing Name

TUBE WELL ASSEMBLY



NCC LTD.  
 STATE WATER AND SANITATION MISSION  
 CLIENT: JJM / SWSM / DWSM  
 CONSULTANT: Medhaj Techno Concepts Private Ltd.  
 TESTING OF QUALITY OF BRICKS  
 AS PER IS - 1077 : 1992



Area: Block - GOLA GP- Persia Niphi Raja Ref. Doc:

Material : Brick Frog : SPY Date of testing : 12/10/2021

Source : Mahaveer Eit vdhog Sample No : 02

Dimension of the Brick : 230x110x70(mm)

| Sl No. | Area of bricks [L X B ] (mm2) | Load in KN | Compressive strength in N/mm2 | % of Water Absorption | Efflorescence rating |
|--------|-------------------------------|------------|-------------------------------|-----------------------|----------------------|
| 1      | <u>230x110</u>                |            |                               | <u>16.72</u>          | <u>nil</u>           |
| 2      | <u>230x110</u>                |            |                               | <u>14.95</u>          | <u>nil</u>           |
| 3      | <u>230x110</u>                |            |                               | <u>14.81</u>          | <u>nil</u>           |
| 4      | <u>230x110</u>                |            |                               | <u>17.76</u>          | <u>nil</u>           |
| 5      | <u>230x110</u>                |            |                               | <u>18.40</u>          | <u>nil</u>           |
|        |                               | Average    |                               |                       |                      |
| 6      |                               |            |                               |                       |                      |
| 7      |                               |            |                               |                       |                      |
| 8      |                               |            |                               |                       |                      |
| 9      |                               |            |                               |                       |                      |
| 10     |                               |            |                               |                       |                      |
|        |                               | Average    |                               |                       |                      |

| Description | Dimension Tolerance Limit As Per IS 1077:1992 |
|-------------|---|
| Length      | 4600 (± 80)                                   |
| Width       | 2200 (± 40)                                   |
| Height      | 1400 (± 40)                                   |

| Scale of Sampling as per IS : 5454 |             |
|------------------------------------|-------------|
| Lot Size                           | Sample Size |
| 2001 to 10000                      | 5           |
| 10001 to 35000                     | 10          |
| 35001 to 50000                     | 15          |

i) Class ( as per IS : 1077) -  
 ii) Maximum % of water absorption permissible : (As per Specification) -

AK, ac NCC LTD. PMC/TPIA CLIENT

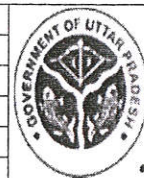








NCC LTD.  
STATE WATER AND SANITATION MISSION  
CLIENT: JJM / SWSM / DWSM  
CONSULTANT: Medhaj Techno Concepts Private Ltd.  
SIEVE ANALYSIS OF PEA GRAVELS (1.6 mm to 4.8 mm)  
(As per IS : 460)



Date of Testing : 21/09/2021  
Test report no : NCC/OKP-S/80/12

| SL NO. | DESCRIPTION                | OBSERVATIONS                   |
|--------|----------------------------|--------------------------------|
| 1      | Source of material :       | Nainital, Uttarakhand.         |
| 2      | Location :                 | Block Name- Gola -             |
|        |                            | G.P Name- Persie Nisphi - Baza |
| 3      | Date of sampling :         | 20/09/2021                     |
| 4      | Lab. Test no :             | 12                             |
| 5      | Sample no. :               | 01                             |
| 6      | Total wt. of sample (gm) : | 1000 gm                        |

SIEVE ANALYSIS

| IS Sieve Size | Wt. retained (gm) | Cumulative wt. Retained (gm) | Cumulative % wt. Retained | % passing | Specific limit |
|---------------|-------------------|------------------------------|---------------------------|-----------|----------------|
| 6.3 mm        | 14                | 14                           | 1.4                       | 98.6      | OK             |
| 4.75 mm       | 174               | 188                          | 18.8                      | 81.2      | OK             |
| 2.36 mm       | 702               | 890                          | 89.0                      | 11        | OK             |
| 1.18 mm       | 94                | 984                          | 98.4                      | 1.6       | OK             |
| Pan           | 8                 |                              |                           |           |                |

NCC LTD. BMC CLIENT

112 mm



NCC LTD.

STATE WATER AND SANITATION MISSION

CLIENT: JJM / SWSM / DWSM



CONSULTANT: Medhaj Techno Concepts Private Ltd.

SPECIFIC GRAVITY OF PEA GRAVELS- 1.6 mm to 4.8 mm

As per IS : 2386 (Part-3)

Date of Testing- 21/09/2021

Test report no - NCC/GKP-S/SC/12

| SL NO. | DESCRIPTION          | OBSERVATIONS                                      |
|--------|----------------------|---|
| 1      | Source of material : | Nainital, Uttarakhand                             |
| 2      | Location :           | NAME OF THE BLOCK - Gola -                        |
|        |                      | NAME OF THE GRAM PANCHAYAT - Pessie Nisphi - Raja |
| 3      | Date of sampling :   | 20/09/2021  |
| 4      | Lab. Test no :       | 12  |
| 5      | Sample no :          | 01  |

SPECIFIC GRAVITY TEST AT ROOM TEMPERATURE

|    |  |  |
|----|--|--|
| 6  | Weight of the Jar, W1 (gm)=              | 246 gm   |
| 7  | Weight of Jar + Gravel, W2 (gm)=         | 458 gm   |
| 8  | Weight of Jar + Gravel + Water, W3 (gm)= | 854 gm   |
| 9  | Weight of the Jar + Water, W4 (gm)=      | 718 gm   |
| 10 | Specific Gravity =                       | $\frac{W2 - W1}{(W2 - W1) - (W3 - W4)} = \frac{212}{212 - 136} = 2.78$ |

Note : The Specific Gravity should not be less than 2.5

NCC LTD.

PMC

CLIENT



# TECHPRO ENGINEERS PVT. LTD.

(Laboratory Division)

Lab Add. 131, Ram Ganga Housing Society, Naramau, Kanpur- 209217,

Tel.: 0512-2525759, 09793209918, Web site: www.techproindia.com

e-mail: tepplab@gmail.com, info@techproindia.com,

Doc No.: TEQR-36C, Issue No.: 02, Issue Date: 18/08/20, Rev. No. : 01, Rev. Date: 10/12/2020

TEPL/MT/2020-21/117

Dated: 11.10.2021

## TEST REPORT

|                            |   |   |
|----------------------------|---|---|
| Name of Customer           | : | Jal Nigam, Gorakhpur                                  |
| Project                    | : | SWSM-JJM Project (Har Ghar Jal Mission) at Gorakhpur. |
| Reference No.              | : | SWSM-UP/GKP/QC/TPE/001                                |
| Sample supplied to Lab by  | : | Customer representative                               |
| Name of Contractor/ Agency | : | NCC Ltd.  |
| Sample Particulars         | : | Pea-Gravel  |

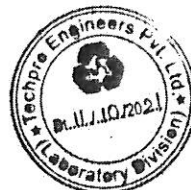
|                     |   |                          |                   |   |                          |
|---------------------|---|--------------------------|-------------------|---|--------------------------|
| Sample Receipt Date | : | 08-10-2021               | Job No.           | : | MT117/1                  |
| Condition of sample | : | Satisfactory             | SRF No.           | : | 2021/55                  |
| Type of Sample      | : | Pea-Gravel               | ULR No.           | : | NA                       |
| Source of sample    | : | Lalkuan<br>(Uttarakhand) | Period of Testing | : | 08/10/2021 to 11/10/2021 |

### Terms & Conditions:

|    |   |
|----|---|
| 1. | Results relate only to the test sample provided by customer.  |
| 2. | This report is under copyright of Techpro Engineers Pvt. Ltd. (Laboratory Division) and is not to be reproduced, copied, handed over third party or used for any purpose other than for which it has been loaned. |
| 3. | The tested samples are retained for three months after issue of test report (if not collected by customer).   |
| 4. | The unique identification of sample is as Job No. / Chainage No. /BH. No./SI. No. But only SI. No is mentioned in results.  |

Checked By:

(Technical Manager)



Approved By:

Arvind Kumar Garg  
(Quality Manager)



# TECHPRO ENGINEERS PVT. LTD.

(Laboratory Division)

Lab Add. 131, Ram Ganga Housing Society, Naramau, Kanpur- 209217,

Tel.: 0512-2525759, 09793209918, Web site: www.techproindia.com

e-mail: tepllab@gmail.com, info@techproindia.com,

Doc No.: TEQR-36C, Issue No.: 02, Issue Date: 18/08/20, Rev. No. : 01, Rev. Date: 10/12/2020

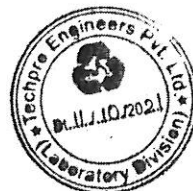
## I. PHYSICAL TEST RESULT

Sample Unique ID: MT117/1

| Sl. No. | Particular of Test                    | Test-1<br>Passing<br>% | Test-2<br>Passing<br>% | Avg.<br>Passing<br>% | Test Method                           | Remark                                |   |
|---------|---------------------------------------|------------------------|------------------------|----------------------|---------------------------------------|---------------------------------------|---|
| 1.0     | Sieve<br>Analysis<br>(% by<br>weight) | 6.3 mm                 | 100                    | 100                  | 100                                   | IS 2386<br>(Part-1)-1963, RA-<br>2016 | - |
|         |                                       | 4.75 mm                | 49.928                 | 52.412               | 51.17                                 |                                       |   |
|         |                                       | 3.35 mm                | 18.992                 | 23.930               | 21.461                                |                                       |   |
|         |                                       | 2.00 mm                | 13.116                 | 17.926               | 15.521                                |                                       |   |
|         |                                       | 1.18 mm                | 6.412                  | 8.016                | 7.214                                 |                                       |   |
|         |                                       | 0.600 mm               | 2.562                  | 3.410                | 2.986                                 |                                       |   |
|         |                                       | 0.300 mm               | 0.164                  | 0.818                | 0.491                                 |                                       |   |
|         |                                       | 0.150 mm               | 0.134                  | 0.354                | 0.244                                 |                                       |   |
|         |                                       | 0.075 mm               | 0.092                  | 0.254                | 0.173                                 |                                       |   |
| 2.0     | Elongation Index (% by weight)        | 0.0                    | 0.0                    | 0.0                  | IS 2386<br>(Part-1)-1963, RA-<br>2016 | Partical Size<br>>6.3                 |   |
| 3.0     | Hardness Test (Number)                | 7.40                   | 8.66                   | 8.00                 | IS 13630<br>(Part-13)-2006            | -                                     |   |
| 4.0     | Specific Gravity                      | 2.66                   | 2.66                   | 2.66                 | IS 2386<br>(Part-3)-1963, RA-<br>2016 | -                                     |   |

Checked By:

(Technical Manager)



Approved By:

Arvind Kumar Garg  
(Quality Manager)



# TECHPRO ENGINEERS PVT. LTD.

(Laboratory Division)

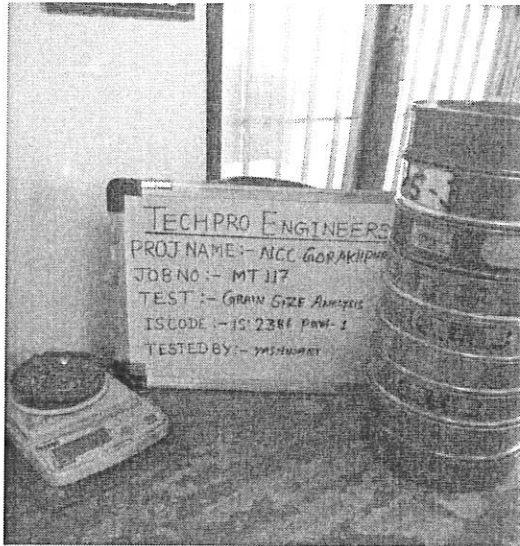
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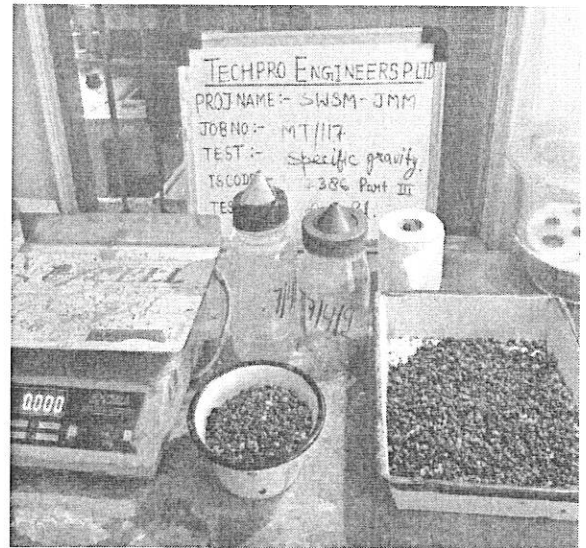
e-mail: tepllab@gmail.com, info@techproindia.com,

Doc No.: TEQR-36C, Issue No.: 02, Issue Date: 18/08/20, Rev. No. : 01, Rev. Date: 10/12/2020

## PHOTOGRAPHS



SIEVE ANALYSIS



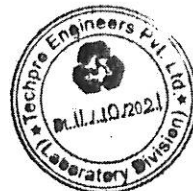
SPECIFIC GRAVITY



HARDNESS TEST

Checked By:

(Technical Manager)



Approved By:

Arvind Kumar Garg  
(Quality Manager)

END OF REPORT

# NCC SWSM PROJECTS – UP – GORAKHPUR

Project Name: Survey, Design, Preparation of DPR, Construction, Commissioning and O&M for 10 years of Various Rural Water Supply Project in the State of Uttar Pradesh – Gorakhpur District

Client : UP – JAL NIGAM  
 Consultant : Medhaj Techno Concept Pvt. Ltd.  
 Contractor : NCC Limited

## Request For Inspection

|                   |  |             |           |
|-------------------|--|-------------|-----------|
| RFI No:           | SWSM/UP – GORAKHPUR (S)/005/TW   | Date / Time | 18 Sep 21 |
| Description:      | Lowering of pipe with assembly & filling of P-gravel.  |             |           |
| Location:         | Block - Gola, Gram Panchayat - Parsia Nisfi Rajn.  |             |           |
| Preceding RFI No. | SWSM/UP – GORAKHPUR (S)/   |             |           |
| Commencement:     | 18 Sep 21  | Position:   |           |
| Submitted By:     | Mr Sanjay Kumar Singh  | DPM (MEP)   |           |
| Signature:        | <i>SKP</i>   | Date        | 18 Sep 21 |
| Concessionaire:   | Mr Kamal Kumar   | Time        | 1600 hrs. |
|                   |  | Proceed     | Hold -    |
|                   |  | yes         |           |
| Comments:         | Request for site visit before lowering of pipe assembly and P-gravel.<br>1. Pea gravel found under size to be filled after rectification<br>2. Tubewell clamp thickness found 13 mm to be replace before doing work (required 16 mm thick) |             |           |
| APPROVED          |  |             |           |

*[Signature]*  
 Signature  
 Contractor Representative

*[Signature]*  
 Signature  
 Consultant Representative

*[Signature]*  
 Signature  
 Client Representative

CIN :U28111DL2006PTC148810

ISO 9001:2015

# DADU PIPES (P) LIMITED

Manufacturers &amp; Exporters of MS ERW Black Pipes, Steel Tubular Poles &amp; Hollow Sections



Corporate Office : C-101, Dadu Dayal House, RDC, Raj Nagar, Ghaziabad-201002 (U.P.) India.

Email : info@dadupipes.com, Website : www.dadupipes.com

Regd. Office : B-231, Okhla Industrial Area, Phase-1, New Delhi-110020

Contractor Name: NCC Limited

Client Name: State Water and Sanitation Mission

Project Name: Gorakhpur South Project

PO No.: NCC/ROK/SWSMUP-G(S)/PO/23 Dt.: 19.08.2021

## TECHNICAL DATASHEET OF STEEL TUBES USED FOR WATER WELLS

| S.No. | Parameter                           | Unit | Requirement   | Vender data   |
|-------|-------------------------------------|------|---|---|
| 1.    | Name of Manufacturer                |      |   | M/S Dadu Pipes Ltd  |
| 2.    | Ref IS No.                          |      | IS:4270-2001  | IS:4270-2001  |
| 3.    | Type                                |      | ERW/HFIW  | ERW/HFIW  |
| 4.    | Ends (Plain/Bevel/Screwed)          |      | Plain   | Plain   |
| 5.    | Size                                | mm   | 300mm, 200mm, 150mm   | 300mm, 200mm, 150mm   |
| 6.    | Specified Thickness                 | mm   | 7.1mm   | 7.1mm   |
| 7.    | Tolerance on thickness              | %    | As per BIS  | As per BIS  |
| 8.    | Tolerance on OD                     | mm   | ± 1% of OD  | ± 1% of OD  |
| 9.    | Length of Pipe                      | Mtr. | As per order  | As per order  |
| 10.   | Tolerance on Mass                   | %    | ± 10%   | ± 10%   |
| 11.   | Tensile strength                    | MPa  | 410 MPa (Min.)  | 410 MPa (Min.)  |
| 12.   | Yield Strength                      | MPa  | 235 MPa (Min.)  | 235 MPa (Min.)  |
| 13.   | Elongation percent                  | %    | 15% (Min.)  | 15% (Min.)  |
| 14.   | Flattening Test                     | %    | On weld = 66% remaining<br>On material = 33% remaining  | On weld = 66% remaining<br>On material = 33% remaining  |
| 15.   | Embossing details                   | --   | Embossing on every metre of<br>Manufacturer Name/logo,<br>IS:4270, Grade & ISI Logo with<br>CM/L No. and Size, Thickness,<br>Grade & Batch No. stenciling on<br>each pipe | Embossing on every metre of<br>Manufacturer Name/logo,<br>IS:4270, Grade & ISI Logo with<br>CM/L No. and Size, Thickness,<br>Grade & Batch No. stenciling<br>on each pipe |
| 16.   | Bituminous Coating                  | °C   | At 0°C & 65°C   | At 0°C & 65°C   |
| 17.   | Bead Height                         | %    | 60% Max. of specified thickness   | 60% Max. of specified<br>thickness  |
| 18.   | Straightness                        | mm   | Max. 1 in 600 of any length   | Max. 1 in 600 of any length   |
| 19.   | Make of Steel                       |      | Tata/SAIL/Reputed make  | SAIL TC to be submitted   |
| 20.   | Chemical composition<br>certificate | %    | As per IS. 10748, Grade-3   | Raw material certificate &<br>manufacturer test certificate to<br>be provided   |
| 21.   | Leak Proof Test                     | MPa  | 7 MPA for at least 5 sec.   | 7 MPA for at least 5 sec.   |

For Dadu Pipes (P) Ltd.

Auth. Signatory

Recommended for approval with condition that  
negative tolerance individuals is not allowedA.E.  
C.D. (E/M) UPJN  
Gorakhpur23वां मण्डल (वि०  
उ० प्र० जल नि.  
अयोध्या

# DADU PIPES PVT. LTD.

A-72, Industrial Area, Sikandrabad, Bulandshahar (U.P)

QUALITY PLAN FOR ERW M.S. ERW PIPES (DADU MAKE)

SIZE :- 100 MM NB TO 300 MM NB CONFORMING AS PER IS:4270-2001.

Contractor Name:- NCC Limited.  
 Client Name:- UP Jal Nigam  
 Project Name:- State Water & Sanitation Mission Gorakhpur

DOCUMENT NO. DPPL/OP/01 REV. 0

NO. OF PAGES 2  
 PAGE NO. 1/2

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| Sr. No.                            | Component/Operation           | Characteristics               | Class    | Type of Check     | Extent of Check              | Reference Document | Acceptance Norms | Format of Records              | Scope of Inspection |                  | Remarks |   |
|------------------------------------|-------------------------------|-------------------------------|----------|-------------------|------------------------------|--------------------|------------------|--------------------------------|---------------------|------------------|---------|---|
|                                    |                               |                               |          |                   |                              |                    |                  |                                | DPPL                | TPI (If Any)     |         |   |
| 1                                  | 2                             | 3                             | 4        | 5                 | 6                            | 7                  | 8                | 9                              | 10                  | 11               | 12      |   |
| 1                                  | RAW MATERIALS H.R C/IOL SKELP | 1 CHEMICAL COMPOSITION        | MAJOR    | CHEMICAL ANALYSES | VERIFICATION OF SUPPLIER T.C | IS:10748 & IS:4270 | AS PER IS:4270   | SUPPLIER TC & DPPL TEST REPORT | SUPPLIER/DPPL QC    | R                |         |   |
|                                    |                               | 2 PHYSICAL PROPERTIES         | MAJOR    | MECHANICAL        | DPPL QC REPORT               | ---                | ---              | ---                            | ---                 | R                |         |   |
|                                    |                               | 3 DIMENSIONS THICK & WIDTH.   | MAJOR    | DIMENSIONAL       | 100%                         | ---                | ---              | ---                            | DPPL TEST REPORT    | ---              | R       |   |
|                                    |                               | 4 VISUAL                      | MINOR    | VISUAL            | 100%                         | ---                | ---              | ---                            | ---                 | ---              | R       |   |
| 2                                  | IN PROCESS INSPECTION         | 1 DIMENSIONS                  | CRITICAL | DIMENSIONAL       | ONE HOUR PRODUCTION          | AS PER IS:4270     | ---              | DPPL TEST REPORT               | DPPL QC             | R                |         |   |
|                                    |                               | DIAMETER                      | ---      | ---               | ---                          | ---                | ---              | ---                            | ---                 | ---              | R       |   |
|                                    |                               | THICKNESS                     | --DO--   | --DO--            | --DO--                       | --DO--             | --DO--           | --DO--                         | --DO--              | --DO--           | R       |   |
|                                    |                               | LENGTH                        | MINOR    | --DO--            | --DO--                       | --DO--             | --DO--           | --DO--                         | --DO--              | --DO--           | R       |   |
|                                    |                               | WEIGHT                        | --DO--   | --DO--            | --DO--                       | --DO--             | --DO--           | --DO--                         | --DO--              | --DO--           | R       |   |
|                                    |                               | STRAIGHTNESS                  | --DO--   | --DO--            | --DO--                       | --DO--             | --DO--           | --DO--                         | --DO--              | --DO--           | R       |   |
|                                    |                               | SURFACE & END FINISH          | --DO--   | --DO--            | VISUAL                       | --DO--             | --DO--           | --DO--                         | --DO--              | --DO--           | R       |   |
|                                    |                               | PLAIN, DEVEL/SREWE AND SOCKET | --DO--   | --DO--            | VISUAL                       | --DO--             | --DO--           | --DO--                         | --DO--              | --DO--           | R       |   |
|                                    |                               | PHYSICAL PROPERTIES           | --DO--   | --DO--            | VISUAL                       | --DO--             | --DO--           | --DO--                         | --DO--              | --DO--           | R       |   |
|                                    |                               | 2 FLATTENING/BEND             | CRITICAL | MECH. TEST        | TWO SAMPLE PER SHIFT         | ---                | ---              | ---                            | ---                 | ---              | R       |   |
|                                    |                               | TENSILE STRENGTH              | --DO--   | --DO--            | ---                          | ---                | ---              | ---                            | ---                 | ---              | R       |   |
|                                    |                               | 3 PRESSURE/LEAK TEST          | MAJOR    | HADRAULIC TEST    | 100%                         | ---                | ---              | ---                            | ---                 | DPPL TEST REPORT | ---     | R |
| 4 WORKMANSHIP & PROTECTIVE COATING | MAJOR                         | VISUAL                        | RANDOM   | ---               | AS PER IS:4270               | AS PER IS:4270     | REPORT           | ---                            | ---                 | R                |         |   |

A.E. E.E.





| Sr. No. | COMPONENT/ OPERATION | CHARACTERISTICS               | CLASS    | TYPE OF CHECK        | EXTENT OF CHECK | PAGE NO.           |                  | FORMAT OF RECORDS | TESTING    |               | REMARKS |  |
|---------|----------------------|-------------------------------|----------|----------------------|-----------------|--------------------|------------------|-------------------|------------|---------------|---------|--|
|         |                      |                               |          |                      |                 | REFERENC. DOCUMENT | ACCEPTANCE NORMS |                   | OFFL.      | TIPI (If Any) |         |  |
| 1       | 2                    | 3                             | 4        | 5                    | 6               | 7                  | 8                | 9                 | 10         | 11            | 12      |  |
| 3       | FINAL INSPECTION     | 1 DIMENSIONAL                 | MAJOR    | MEASUREMENT & VISUAL | IS:4111:2013    | --- DO ---         | --- DO ---       | --- DO ---        | --- DO --- | W             |         |  |
|         |                      | 2 TENSILE & BEND / FLATTENING | CRITICAL | MECHANICAL TEST      | As per IS:4272  | --- DO ---         | --- DO ---       | --- DO ---        | --- DO --- | W             |         |  |
|         |                      | 3 LEAK TEST                   | MAJOR    | HYDRAULIC TEST       | 5%              | AS PER IS:4272     | AS PER IS:4272   | --- DO ---        | --- DO --- | W             |         |  |
|         |                      | 4 IDENTIFICATION & MARKING    | MAJOR    | VISUAL               | ---             | ---                | ---              | ---               | ---        | ---           | H       |  |
|         |                      | 5 WORKMANSHIP                 | MAJOR    | VISUAL               | ---             | ---                | ---              | ---               | ---        | ---           | W       |  |

NOTE: WE GIVE OUR MANUFACTUR TEST CERTIFICATE.

R = REVIEW OF DOCUMENT

W = WITNESS

V = VERIFICATION

PREPARED BY:—

Deep Narayan Singh  
QUALITY CONTROL ENGINEER  
DADU PIPES (P) LIMITED

APPROVED BY:—

MANAGER (Q.A.)  
DADU PIPES (P) LIMITED

Recommended

A.E.  
C.D. (E/M) UPJN  
Gorakhpur

अधीक्षण अभियन्ता  
23वाँ मण्डल (वि० प्र० नं० ३)  
उ० प्र० जल निगम  
अयोध्या

# TUV INDIA PRIVATE LIMITED

## INSPECTION RELEASE NOTE / CERTIFICATE

IRN -8116448356-NCC/ROK/SWSMUP-G(S)/PO/23- Sr. No 1.- Rev. 00



|   |  |  |  |
|---|--|--|--|
| TUV India Control Or SAP Number:            | 8116448356   | Date:  | 01-09-2021                               |
| Project Name & Location                     | SWSM-Gorakhpur-South Project Gorakhpur (U.P)                             | TUV India Branch Name:                                 | Noida                                    |
| TUV India Client Name:                      | M/S. DADU PIPES PVT LTD  | End User Name:   | NCC LIMITED                              |
| Contractor Name & Location                  | NCC LIMITED  |  |  |
| Vendor Name & Location:                     | M/s. Dadu Pipes (P) Ltd. A-72, Ind. Area, Sikandrabad Bulandshahar (U.P) | P.O. Number: (Client PO on Vendor)                     | NCC/ROK/SWSMUP-G(S)/PO/23 DT:-19.08.2021 |
| Sub Vendor Name & Location: (If applicable) | Not Applicable   | P.O. Number: (If applicable - Vendor PO on Sub Vendor) | Not Applicable                           |

**Item Description:**

| PO Item No. | Item Code<br>Item Description  | UOM  | P.O. Quantity | Offered Quantity | Accepted Quantity | Cumulative accepted Quantity |
|-------------|--|------|---------------|------------------|-------------------|------------------------------|
| 1           | 300 MM Dia MS ERW Plain pipe 6 Mtr Length, WT:7.1 MM Thick as per IS:4270 Plain end  | Mtrs | 462           | 474              | 462               | 462                          |
| 2           | 200 MM Dia MS ERW Plain pipe 6 Mtr Length, WT:7.1 MM Thick as per IS:4270 Plain end  | Mtrs | 36            | 48               | 36                | 36                           |
| 3           | 150 MM Dia MS ERW Plain pipe 6 Mtr Length, WT:7.1 MM Thick as per IS:4270 Plain end  | Mtrs | 180           | 192              | 180               | 180                          |
| 4           | MS ERW PLAIN END SLOTTED PIPE 150 MM Dia, Wt:7.10 mm conforming to IS:4270(Slotting as per IS:8110 & Zig Zag slots of length 75 mm x width 1.20 mm. & 780 Slot (+/- 10%) per Mtr | Mtrs | 162           | 162              | 162               | 162                          |

**Reference Documents:**

| Sr. No. | Document Name    | Client Document Number    | Vendor Document Number | Approval Status    |
|---------|------------------|---------------------------|------------------------|--------------------|
| 1)      | PR / MR / ARM    | Not Applicable            | Not Applicable         | Not Applicable     |
| 2)      | QAP / ITP / QCP  | DPPL/443/QP/01 Rev 0      | Not Applicable         | Approved by client |
| 3)      | Drawing(s)       | Not Applicable            | Not Applicable         | Not Applicable     |
| 4)      | Datasheet(s)     | Not Applicable            | Not Applicable         | Not Applicable     |
| 5)      | Procedure(s)     | Not Applicable            | Not Applicable         | Not Applicable     |
| 6)      | Others (Specify) | IS 4270, IS 8110, IS 4711 | Not Applicable         | Approved           |

**Stages Witnessed:**(For PO sr.no 4- Scope as per QAP sr. no 3.1, 3.4,3.5 only & All for rest)

- 1) Total offered quantity verified.
- 2) QAP Sr.No 3.5 Visual inspection done for surface defects, workmanship and protective coating for all items- found satisfactory.
- 3) QAP Sr.No 3.1 Final dimension inspection done Thickness, Outer Diameter, Length & weight for randomly selected

Disclaimer: The inspection by TUV India Pvt. Ltd., review of Test Certificates / Reports and issue of Inspection Release Note / Certificate does not relieve Client / Supplier / Manufacturer / Shipper from their responsibility towards the Client / End User to supply the genuine material / Item(s) and document(s) in full compliance with applicable Order, Specification, Technical, Quality, Quantity, Warranty, Guarantee requirements. Supplier / Manufacturer / Shipper is wholly legally responsible for genuineness of the material / Item(s) supplied and document(s) submitted. TUV India's responsibility is only limited to correctness of inspection results. Neither TUV India nor any of its group companies, associates or employees are in any way legally responsible for genuineness of the material / Item(s) and document(s). If the calibration certificate(s) for the measuring instrument(s) / equipment(s) used during inspection do not have traceability to NABL / Other certifying bodies, then the scope of review is limited only to inspection conducted in the calibration certificate.

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## EXECUTIVE SUMMARY

### Salient Features

|                              |                                    |
|------------------------------|------------------------------------|
| · Name of the state          | UTTAR PRADESH                      |
| · Name of the District       | GORAKHPUR                          |
| · Name of the Tehsil         | GOLA                               |
| · Name of the Block          | GOLA                               |
| · Name of the Programme      | Under Jal Jeevan Mission Programme |
| · Name of the GP             | PARSIA NISPI RAJA                  |
| · No. of Village/Habitations | 2/2                                |

Table 1: List of Village and Habitations

| S. No | District Name | Sub District Name | Block Name | Gram Panchayat Name | 2011 Census Code | Revenue Village Name | Habitations Name  |
|-------|---------------|-------------------|------------|---------------------|------------------|----------------------|-------------------|
| 1     | GORAKHPUR     | GOLA              | GOLA       | PARSIA NISPI RAJA   | 187785           | PARSIA NISPI RAJA    | PARSIA NISPI RAJA |
| 2     |               |                   |            |                     | 187786           | NEVASA               | NEVASA            |

Village Population Summary

Table 2: Population, SC/ST and House hold Data  
GP/VILLAGE-POPULATION DETAILS

| S. NO | DESCRIPTION         | GROWTH FACTOR WRT Y-2011 | POPULATION | SC/ST | HOUSE HOLDS |
|-------|---------------------|--------------------------|------------|-------|-------------|
| 1.    | As per Census 2011  | 1                        | 1525       | 259   | 230         |
| 2.    | Initial Stage 2022  | 1.21                     | 1850       | 314   | 279         |
| 3.    | Middle Stage 2037   | 1.57                     | 2400       | 407   | 362         |
| 4.    | Ultimate Stage 2052 | 2.05                     | 3120       | 529   | 471         |

|                               |   |   |
|-------------------------------|---|---|
| · Rate of water supply        | : | 64.7 LPCD (added 15% losses over 55 LPCD)                               |
| · Nature of Sources           | : | Ground water  |
| · Source of Development       | : | Tube-Well   |
| · Daily Water Demand Summary  | : |   |
| a) Base year 2022             | : | 120 KLD   |
| b) Intermediate year 2037     | : | 155 KLD   |
| c) Design year 2052           | : | 202 KLD   |
| · Number of Tube wells        | : | 1 No.   |
| · Nature of Treatments        | : | Chlorinator through HDPE Tank (100 L) and Dosing metering pump (0-6LPH) |
| · Average Dosing Capacity     | : | 0.5 PPM   |
| · Pumping plant for Tube Well | : |   |
| a) No. and Type of Plant      | : | 1 Number of Submersible Pump  |
| b) Anticipated Discharge      | : | 400 LPM   |
| c) Total working Head         | : | 45 M  |
| d) Motor (HP)                 | : | 10.0 HP   |
| · Service Storage             | : |   |
| a) Quantity                   | : | 1 No.   |
| b) Capacity                   | : | 150 KL  |
| c) Staging                    | : | 16 M  |

Pipeline Summary

Table 3: Rising Main Summary

| Pipeline Type           | Details of tube well | Tube well Location | Material | Class | Diameter (mm)-OD | Length (m) |
|-------------------------|----------------------|--------------------|----------|-------|------------------|------------|
| Rising Mains            | New Tube Well        | In Water Works     | DI       | K-9   | 100              | 35         |
| <b>Total Length (m)</b> |                      |                    |          |       |                  | <b>35</b>  |

Table 4: Distribution Summary

| Pipeline Type           | Material | Class      | Diameter(mm) | Length (m)    |
|-------------------------|----------|------------|--------------|---------------|
| Distribution Mains      | HDPE     | PN-6 PE100 | 63           | 10,892        |
| Distribution Mains      | HDPE     | PN-6 PE100 | 75           | 138           |
| Distribution Mains      | HDPE     | PN-6 PE100 | 90           | 0             |
| Distribution Mains      | HDPE     | PN-6 PE100 | 110          | 862           |
| Distribution Mains      | HDPE     | PN-6 PE100 | 125          | 182           |
| Distribution Mains      | HDPE     | PN-6 PE100 | 140          | 0             |
| Distribution Mains      | HDPE     | PN-6 PE100 | 160          | 0             |
| Distribution Mains      | HDPE     | PN-6 PE100 | 180          | 0             |
| Distribution Mains      | HDPE     | PN-6 PE100 | 200          | 0             |
| <b>Total Length (m)</b> |          |            |              | <b>12,074</b> |

**Instrument detail**

Two nos. of sluice valves have been provided at the outlet of each tubewell. One will be placed at rising main to OHT and another will be placed at the inlet of the bypass chamber. One Sluice valve of required size has been provided at each of OHSR Inlet pipe, Outlet pipe, Washout Pipe and for bypass arrangement. For multi village scheme, one number of sluice valve has been provided at the entry of each village. Air valve of required size has been provided at required regular intervals in main distribution line from OHT to village entry point. Also, one sluice valve type fire hydrant consisting of 80 mm dia sluice valve has been provided inside the OHSR campus boundary.

**Table 25: Valve Abstract**

| Type of Instrument | Size (mm) | Instruments Quantity (No) |       |                          |               |              |
|--------------------|-----------|---------------------------|-------|--------------------------|---------------|--------------|
|                    |           | Rising Main               | OHT   | Emergency By-pass in OHT | Fire-Hydrants | Distribution |
| Sluice Valve       | 200       |                           |       |                          |               |              |
|                    | 150       |                           | 1 (E) |                          |               |              |
|                    | 125       |                           |       |                          |               |              |
|                    | 100       |                           | 2     |                          |               | 1            |
|                    | 80        | 2 (E)                     |       |                          |               | 1            |
|                    | 65        |                           |       |                          |               | 1            |
| Air Valve          | 50        |                           |       |                          |               | 8            |
|                    | 20        |                           |       |                          |               | 5            |
|                    | 50        |                           |       |                          |               |              |
|                    | 80        |                           |       |                          |               |              |
| Scour Valve        | 150       |                           |       |                          |               |              |
|                    | 200       |                           |       |                          |               |              |
|                    | 250       |                           |       |                          |               |              |
|                    | 80        |                           |       |                          |               | 5            |
|                    | 100       |                           |       |                          |               |              |
| Flow Meter         | 80        | 1                         |       |                          |               |              |
|                    | 100       |                           |       |                          |               |              |
|                    | 150       |                           |       |                          |               |              |
|                    | 200       |                           |       |                          |               |              |
|                    | 250       |                           |       |                          |               |              |
|                    | 300       |                           |       |                          |               |              |
|                    | 350       |                           |       |                          |               |              |
|                    | 400       |                           |       |                          |               |              |
| Check Valve        | 150       |                           |       |                          |               |              |
|                    | 100       |                           |       |                          |               |              |
| Fire Hydrant       | 80        | 1                         |       |                          |               |              |
|                    | 80        |                           |       |                          | 3             |              |

**Fire Hydrant:**

3 No's of fire hydrants are provided. 1 in water work campus area and 2 at each village entrance.

**1.16 Design of drilling and size of pipes for construction of Tubewell**

Discharge Required for Tube Well 400 LPM

**Size of Pipes (Screens/Slotted Pipes)**

For discharge of 400, As per IS code recommended size of Slotted pipe is 150 mm. Hence, we adopted 150 mm dia MS Slotted pipe for construction of tube well.

|  |
|--|
| Estimate for Parsia Nisphi Raja Gram Panchayat |
| Water Supply Scheme                            |
| Under - SWSM                                   |
| Block- Gola, District- Gorakhpur               |

| BOQ Item No. | Description  | Unit | Qty    | Rate      | Amount |
|--------------|--|------|--------|-----------|--------|
|              | <b>Survey, Design &amp; Preperation of DPR</b>   |      |        |           |        |
| 1.01         | All the works including Hydrological survey, topographical survey, Design charges including preparation and approval of DPR  | LS   | 1.00   | 242289.00 | 242289 |
| 2.00         | Drilling of Borehole for Tubewell construction by DC/RC/DTH Rig Machine including transportaion, erection, dismantling of Rig and associated T&P complete in all respect including required all material labour etc. |      |        |           |        |
|              | <b>RIG Transportation for Tube Well Construction</b>   |      |        |           |        |
| 2.01         | Transportation, Installation Dismantling of Rig machine and logging of bore hole   | Job  | 1.00   | 159478.88 | 159479 |
|              | <b>Tube Well Construction- Drilling of Borehole</b>  |      |        |           |        |
| 2.03         | <b>DC/RC Drilling up to 100Mtr.</b>  |      |        |           |        |
| 2.04         | 400 MMØ  | Mtr. |        | 1638.27   |        |
| 2.05         | 450 MMØ  | Mtr. |        | 1834.20   |        |
| 2.06         | 500 MMØ  | Mtr. | 100.00 | 2013.00   | 201300 |
| 2.07         | 600 MMØ  | Mtr. |        | 2422.00   |        |
| 2.08         | <b>DC/RC Drilling from 101 Mtr. To 200 Mtr.Deep</b>  |      |        |           |        |
| 2.09         | 450 MMØ  | Mtr. |        | 1960.88   |        |
| 2.10         | 500 MMØ  | Mtr. | 80.00  | 2144.00   | 171520 |
| 2.11         | 600 MMØ  | Mtr. |        | 2510.25   |        |
| 2.12         | <b>DC/RC Drilling from 201 Mtr. To 300 Mtr.Deep</b>  |      |        |           |        |
| 2.13         | 450 MMØ  | Mtr. |        | 2831.63   |        |
| 2.14         | 500 MMØ  | Mtr. |        | 3014.75   |        |
| 2.15         | 600 MMØ  | Mtr. |        | 3381.00   |        |
| 2.16         | <b>DC/RC Drilling from 301 Mtr. To 400 Mtr.Deep &amp; above</b>  |      |        |           |        |
| 2.17         | 450 MMØ  | Mtr. |        | 3319.35   |        |
| 2.18         | 500 MMØ  | Mtr. |        | 3502.48   |        |
| 2.19         | 600 MMØ  | Mtr. |        | 3868.72   |        |
| 2.20         | <b>DTH Drilling upto 200.0 Mtr.Deep</b>  |      |        |           |        |
| 2.21         | 200/165 MMØ (in over burden/Hard Rock)   | Mtr. |        | 1250.00   |        |
| 2.22         | Development / Flushing of tubewell   | Hr.  |        | 2900.00   |        |
|              | <b>Tubewell Assembly (Supply + Fittings &amp; Specials)</b>  |      |        |           |        |
| 3.01         | <b>MSERW plain pipe,As per IS 4270</b>   |      |        |           |        |
| 3.02         | 100 MMØ  | Mtr. |        | 927.50    |        |
| 3.03         | 150 MMØ  | Mtr. | 109.00 | 1900.00   | 207100 |
| 3.04         | 200 MMØ  | Mtr. | 36.00  | 2550.00   | 91800  |
| 3.05         | 300 MMØ  | Mtr. |        | 3800.00   |        |
| 3.06         | <b>MSERW Pipe slotted pipe as per IS 8110</b>  |      |        |           |        |
| 3.07         | 100 MMØ  | Mtr. |        | 1366.85   |        |
| 3.08         | 150 MMØ  | Mtr. | 18.00  | 2800.00   | 50400  |
| 3.09         | 200 MMØ  | Mtr. |        | 3833.80   |        |
| 3.10         | 300 MMØ  | Mtr. |        | 5188.59   |        |
| 3.11         | MS fittings such as clamp, bail plug, reducer, well cap, girder & support structure  | LS   | 1.00   | 32295.00  | 32295  |
| 3.12         | MS fittings such as ring & centre guide  | RM   | 163.00 | 471.68    | 76884  |
|              | <b>Tubewell Assembly Lowering Works</b>  |      |        |           |        |
|              | Lowering of above assembly with welding of parts complete in all respect with all required material, T&P, labour, etc.   |      |        |           |        |
| 4.01         | <b>Lowering up to 100 Mtr. Deep</b>  |      |        |           |        |
| 4.02         | 100 MMØ MSERW Plane/Slotted Pipe   | Mtr. |        | 129.45    |        |
| 4.03         | 150 MMØ MSERW Plane/Slotted Pipe   | Mtr. | 64.00  | 281.00    | 17984  |
| 4.04         | 200 MMØ MSERW Plane/Slotted Pipe   | Mtr. | 36.00  | 376.50    | 13554  |
| 4.05         | 300 MMØ MSERW Plain/Slotted Pipe   | Mtr. |        | 472.00    |        |
| 4.06         | <b>Lowering from 101 Mtr. To 200 Mtr. Deep</b>   |      |        |           |        |
| 4.07         | 150 MMØ MSERW Plane/Slotted Pipe   | Mtr. | 63.00  | 376.00    | 23688  |

| BOQ Item No. | Description  | Unit    | Qty    | Rate      | Amount |
|--------------|--|---------|--------|-----------|--------|
| 4.08         | 200 MMØ MSERW Plane/Slotted Pipe   | Mtr.    |        | 499.19    |        |
| 4.09         | 300 MMØ MSERW Plane/Slotted Pipe   | Mtr.    |        | 745.58    |        |
| 4.10         | <b>Lowering from 201 Mtr. To 300 Mtr. Deep</b>   |         |        |           |        |
| 4.11         | 150 MMØ MSERW Plane/Slotted Pipe   | Mtr.    |        | 385.19    |        |
| 4.12         | 200 MMØ MSERW Plane/Slotted Pipe   | Mtr.    |        | 459.00    |        |
| 4.13         | 300 MMØ MSERW Plane/Slotted Pipe   | Mtr.    |        | 606.62    |        |
| 4.14         | <b>Lowering from 301 Mtr. To 400 Mtr. Deep &amp; above</b>   |         |        |           |        |
| 4.15         | 150 MMØ MSERW Plane/Slotted Pipe   | Mtr.    |        | 426.53    |        |
| 4.16         | 200 MMØ MSERW Plane/Slotted Pipe   | Mtr.    |        | 499.00    |        |
| 4.17         | 300 MMØ MSERW Plane/Slotted Pipe   | Mtr.    |        | 643.94    |        |
|              | <b>Supply and Packing of Gravel Works</b>  |         |        |           |        |
| 5.00         | Supply and unconsolidated packing of gravel with suitable size   | Cum     | 47.00  | 7500.00   | 352500 |
|              | <b>Development of Tube well</b>  |         |        |           |        |
| 6.01         | Tranportation, Installation Dismantling of 150 PSI Compressor  | Job     |        | 42120.00  |        |
| 6.02         | Charges for Development by 150 PSI Compressor per hour   | Hr.     |        | 2544.52   |        |
| 6.03         | Tranportation, Installation Dismantling of 250/400/600 PSI Compressor  | Job     | 1.00   | 42120.00  | 42120  |
| 6.04         | Charges for Development by 250 PSI Compressor per hour   | Hr.     |        | 3027.00   |        |
| 6.05         | Charges for Development by 400 PSI Compressor per hour   | Hr.     | 60.00  | 3154.10   | 189246 |
| 6.06         | Charges for Development by 600 PSI Compressor per hour   | Hr.     |        | 4062.20   |        |
| 6.07         | Tranportation, Installation Dismantling of 0.5 Cusec OP Unit and Yield test, water test  | Job     |        | 22321.28  |        |
| 6.08         | Charges for Development of TW by 0.5 Cusec OP Unit   | Hr.     |        | 785.42    |        |
| 6.09         | Tranportation, Installation Dismantling of 1 Cusec to 3 Cusec OP Unit and Yield test, water test   | Job     | 1.00   | 67225.00  | 67225  |
| 6.10         | Charges for Development of TW by 1 cusec OP Unit   | Hr.     | 100.00 | 959.00    | 95900  |
| 6.11         | Charges for Development of TW by 3 cusec OP Unit   | Hr.     |        | 1196.00   |        |
| 6.12         | Tranportation, Installation Dismantling of 2 Cusec OP Unit and Yield test, water test  | Job     |        | 89317.00  |        |
| 6.13         | Charges for Development of TW by 2 cusec OP Unit   | Hr.     |        | 1119.00   |        |
| 7.00         | <b>Pumping Plant:-</b><br>SITC of Pumping plant including pumps with motors starter, pannel, cable, complete in all respect with all required material T&P labour etc. |         |        |           |        |
| 7.01         | 1 HP   | Nos     |        | 32518.98  |        |
| 7.02         | 2 HP   | Nos     |        | 35843.14  |        |
| 7.03         | 3 HP   | Nos     |        | 46249.21  |        |
| 7.04         | 5 HP   | Nos     |        | 65037.95  |        |
| 7.05         | 7.5HP  | Nos     |        | 228500    |        |
| 7.06         | 10 HP  | Nos     | 1.00   | 230200    | 230200 |
| 7.07         | 12.5 HP  | Nos     |        | 238800    |        |
| 7.08         | 15 HP  | Nos     |        | 252100    |        |
| 7.09         | 17.5 HP  | Nos     |        | 276504.56 |        |
| 7.10         | 20 HP  | Nos     |        | 295500    |        |
| 7.11         | 25 HP  | Nos     |        | 334043.48 |        |
| 7.12         | 30 HP  | Nos     |        | 366163.04 |        |
| 7.13         | 35 HP  | Nos     |        | 393723.7  |        |
| 7.14         | 40 HP  | Nos     |        | 426547.83 |        |
| 7.15         | Variation in HP due to change of site locations increased/decreased in per HP of the proposed pumping plants.  | Rate/HP |        | 30467     |        |
| 8.00         | Pressure Transmitter   | Nos     | 1.00   | 43120     | 43120  |
|              | <b>Electrically operated Sluice Valve:-</b>  |         |        |           |        |
| 9.00         | Electrically operated Sluice Valve PN 1.0 dia 100 mm   | Nos     | 1.00   | 125000    | 125000 |
| 9.01         | Electrically operated Sluice Valve PN 1.0 dia 150 mm   | Nos     |        | 125000    |        |
| 9.02         | Electrically operated Sluice Valve PN 1.0 dia 200 mm   | Nos     |        | 150000    |        |
|              |  | Nos     | 1.00   | 125000    | 125000 |
|              | <b>Check Valve:-</b>   |         |        |           |        |
| 9.03         | Check Valve PN 1.0 DPCV dia 100 mm   | Nos     |        | 27519.8   |        |
| 9.04         | Check Valve PN 1.0 DPCV dia 150 mm   | Nos     |        | 51145.45  |        |
| 9.05         | Check Valve PN 1.0 DPCV dia 200 mm   | Nos     |        | 73485.9   |        |
|              |  | Nos     | 1.00   | 27519     | 27519  |

| BOQ Item No. | Description   | Unit | Qty   | Rate      | Amount |
|--------------|---|------|-------|-----------|--------|
|              | <b>Dismantling Joint :-</b>   |      |       |           |        |
| 9.06         | Dismantling Joint PN 1.0 dia 100 mm   | Nos  | 2.00  | 3923.92   | 7848   |
| 9.07         | Dismantling Joint PN 1.0 dia 150 mm   | Nos  | 1.00  | 5605.6    | 5606   |
| 9.08         | Dismantling Joint PN 1.0 dia 200 mm   | Nos  |       | 7367.36   |        |
| 9.09         | SITC of Chain Pulley Blocks   |      |       |           |        |
| 9.10         | 1 Tonne   | Nos  |       | 46305     |        |
| 9.11         | 2 Tonne   | Nos  | 1.00  | 58432.5   | 58433  |
| 10.00        | Turbidity & Chlorine analyzer   | Nos  | 1.00  | 273000    | 273000 |
| 11.00        | <b>Hydrostatic Level Sensor:-</b><br>Providing and installation hydrostatic level sensor at all tubewell pumping system including all accessories etc. complete in all respect as per instructions of Engineer -in -charge.   | Nos  | 1.00  | 126000    | 126000 |
| 12.00        | <b>Stabalizer</b>   |      |       |           |        |
| 12.01        | 2 KVA   | Nos  |       | 12777.78  |        |
| 12.02        | 5 KVA   | Nos  |       | 25555.56  |        |
| 12.03        | 7.5 KVA   | Nos  |       | 44722.22  |        |
| 12.04        | 10 KVA  | Nos  |       | 127777.78 |        |
| 12.05        | 15 KVA  | Nos  |       | 166111.11 |        |
| 12.06        | 20 KVA  | Nos  |       | 191666.67 |        |
| 12.07        | 25 KVA  | Nos  |       | 204444.44 |        |
| 12.08        | 30 KVA  | Nos  |       | 230000    |        |
| 12.09        | 40 KVA  | Nos  |       | 281111.11 |        |
| 12.10        | 50 KVA  | Nos  |       | 319444.44 |        |
| 12.11        | 60 KVA  | Nos  |       | 345000    |        |
| 13.00        | <b>Column Pipe:-</b><br>SITC of Column pipe of MS pipe for connecting submersible pumps   |      |       |           |        |
| 13.01        | 32 mm Dia size - MS pipe  | Mtr. |       | 500       |        |
| 13.02        | 40 mm dia size - MS pipe  | Mtr. |       | 666.67    |        |
| 13.03        | 50 mm dia size - MS pipe  | Mtr. |       | 921       |        |
| 13.04        | 65 mm Dia size - MS pipe  | Mtr. |       | 1066.67   |        |
| 13.05        | 80 mm Dia size - MS pipe  | Mtr. | 30.00 | 1400      | 42000  |
| 13.06        | 100 mm Dia size - MS pipe   | Mtr. |       | 1567      |        |
| 13.07        | 150 mm Dia size - MS pipe   | Mtr. |       | 2167      |        |
| 14.00        | <b>Chlorinating System:-</b><br>Supply , Installation of chlorinating system with dosing pump 0-6 LPH capacity with 100 Litres(1w+1s) tanks, valves ,pipes with required accessories (Automatic dosing system for chemical injection)   | JOB  | 1.00  | 112000    | 112000 |
| 15.00        | <b>Fluoride Removal Plant:-</b><br>Supplying, installation, testing, commissioning of Fluoride removal plant for required capacity including transportation and labour charges as complete. (vendor have to select the technology based on capacity (Electrolytic-de fluoridation plant or media based system).<br>Rates for 400 KLD/ 500 LPM | LS   |       | 8062500   |        |
| 16.00        | <b>Iron Removal Plant:-</b><br>Supplying, installation, testing, commissioning of Iron removal plant which includes vessel, media, piping valves etc. for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM   | LS   |       | 6062500   |        |
| 17.00        | <b>Arsenic Removal Plant:-</b><br>Supplying, installation, testing, commissioning of Arsenic removal plant which include vessel, media, piping valves etc. for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM  | LS   |       | 9000000   |        |



| BOQ Item No. | Description  | Unit | Qty    | Rate     | Amount  |
|--------------|--|------|--------|----------|---------|
| 18.00        | <b>TDS and Hardness Removal Plant:-</b><br>Supplying, installation, testing, commissioning of reverse osmosis plant which includes pump, micron cartridge filter, high pressure pump, reverse osmosis membrane, cleaning system and required piping and valves etc. complete for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM   | LS   |        | 13125000 |         |
| 19.00        | <b>Tube Well Electrification:-</b><br>Internal electrification of tube well  | LS   | 1.00   | 20000    | 20000   |
| 20.00        | <b>Solar Power Plant:-</b><br>SITC of Solar power plant (for complete plant ) including solar panel, Structure, inverter etc. complete in all respect with required material, T&P labour   | KW   | 19.00  | 86800    | 1649200 |
| 21.00        | <b>Boundary Wall:-</b><br>Construction of 1.3 m high and 115mm thick boundary wall with 230 mmx230 mm thick pillar made in Brick masonry in 1 cement and 4 sand mortar, the spacing between two pillar should not be more than 3.0 m c/c and the depth of foundation should not be less than 0.60m, at the site of water works as per departmental type design and drawing, and, as per specifications given in the bid document including supply of all materials, labour T&P etc. for proper completion of work as per instructions of Engineer -in - charge. (Drawing No.D-1) | Rmt  | 145.20 | 6400     | 929280  |
| 22.00        | <b>MS Gate:-</b><br>Supply and fixing of 3.6 m x 1.20 m MS gate including fabrication and supply of steel and construction of boundary wall pillars of size 1.35mx0.23mx0.23m with ornamental brick work 115mm th. around RCC, as per departmental type design and drawing (Drawing No. D-1) and as per specifications laid down in the bid document, including supply of all material, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in-charge.   | No.  | 1.00   | 52000    | 52000   |
| 23.00        | <b>MS Wicket Gate :-</b><br>Supply and fixing of 1.2m wide MS wicket gate including fabrication and supply of steel and construction of boundary wall pillars etc. as per specifications laid down in the bid document, including supply of all material, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in- charge.  | No.  | 1.00   | 19000    | 19000   |
| 24.00        | <b>Interlocking Pavement:-</b><br>Construction of Interlocking pavement for approach to water works, as per departmental type design and drawing and as per specifications laid down in the bid document, including supply of all materials , labour, T&P etc. required for proper completion of work as per instructions of Engineer -in -charge.   | Sqm. | 262.20 | 1070.5   | 280685  |
| 25.00        | <b>Granular Sub Base:-</b><br>Construction of granular sub base by providing coarse grade materials, spreading in uniform layers including watering and compaction complete.   | Cum  | 52.44  | 2800     | 146832  |
| 26.00        | <b>Construction of WBM:-</b><br>Construction of WBM by providing grade materials, spreading in uniform layers including watering and compaction complete.  | Cum  | 65.55  | 3029     | 198551  |

| <i>BOQ Item No.</i> | <i>Description</i>   | <i>Unit</i> | <i>Qty</i> | <i>Rate</i> | <i>Amount</i> |
|---------------------|--|-------------|------------|-------------|---------------|
| 27.00               | <b>Earth Filling:-</b><br>Earth filling work for proper leveling of water work site, in accordance with the contour map and Grid map of existing site enclosed (Drawing no.D-1), including leveling, dressing, excavation and filling of earth where necessary and also including all labour, materials, T&P etc.required for proper completion of works and also including carriage of earth from within a distance of about 8 km. from the site of works as per instructions of Engineer -in - charge. | Cum         |            | 890         |               |
| 28.00               | <b>Semicircular Drain:-</b><br>Provision for inside semicircular drain 200mm dia including supply of all materials, labour and T & P etc. complete.  | Rmt         | 156.50     | 1607.14     | 251517        |
| 29.00               | <b>Pump House (3.6x3.0x3.0):-</b><br>Provide all materials, labour, T&P etc. complete and construct Pump house size (3.6x3.0x3.0)m Chlorinating room size (2.5x1.8x3.0)m as per departmental type design and drawing (drawing no-D-2) and as per the specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer -in - charge.  | Job         | 1.00       | 597000      | 597000        |
| 30.00               | <b>Pump House (2.5x3.0x3.0):-</b><br>Provide all materials, labour, T&P etc. complete and construct Pump house size (2.5x3.0x3.0)m Chlorinating room size (1.5x1.3x3.0)m as per departmental type design and drawing (drawing no-D-2) and as per the specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer -in - charge.  | Job         |            | 404000      |               |
| 31.00               | <b>Bye-pass Chamber:-</b><br>Provide all materials, labour, T&P etc. complete and constructed Bye-pass chamber for pump house ( 1000 (L) x 1000 (W) x 1150 (H) mm ) drawing (drawing no.D-3) and as per the specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer -in - charge.   | No.         | 1.00       | 14600       | 14600         |

| BOQ Item No. | Description  | Unit | Qty  | Rate       | Amount  |
|--------------|--|------|------|------------|---------|
| 32.00        | <p><b>OHT:-</b><br/> Supply of all materials labour T&amp;P etc. for complete construction of R.C.C. Over Head Tank of following capacity and staging above ground level with main components, including cost of soil testing and assuming bearing capacity of soil as 8 MT, with supply of design and drawings. All the water retaining components of OHT shall be casted in M-30 concrete and minimum grade of concrete of foundation and staging should be M-25 with approved cement, coarse sand and stone grit as per I.S. 11682 and I.S.456 Seismic effects and wind load should be taken into consideration as per I.S. 1893 for earthquake resistance and I.S. 875 part-III for wind load on structure and including 1M wide RCC staircase, 1 m wide R.C.C. M30 balcony, M.S. ladder made of 50x50x6 mm angle section and 20mm plain M.S. bars with hand rails of 20mm medium class G.I. pipes, One aluminum ladder inside the tank from top dome to bottom dome, R.C.C. railing with 20mm dia medium class G.I. pipe (in 3 rows) on both sides of stair case, supported on 50x50x6mm M.S. angle section, spaced at intervals not more than 1.5m, Proper ventilator at top dome in circular shape of 1.2 m dia, Water level indicator fabricated with sensor connecting to automation, Lightening conductor as per I.S.S.2309 or its latest amendments of latest electricity rules, consisting of proper elevation rod with 5 or more fork points as prescribed in ISS 2309-1969 and ISS 3013-1966, C.I. manhole of min 60x60cm size with locking arrangement, Supply, fixing, jointing of D.I.D/F Pipes of appropriate size with D.I.D/F specials conforming to IS 8329/2000 as vertical pipes for inlet, outlet, overflow and washout as per latest / relevant I.S. specifications with all jointing materials for proper completion of work, Construction of bed blocks in 1:2:4 PCC with cement, coarse sand and approved stone grit, Construction of washout / overflow chamber and chambers for sluice / butter fly valves as per departmental type design and drawing, Supply of 200 mm dia PVC pipe as per I.S.- 4985/2000 for disposal of water from overflow and washout chamber to suitable point outside the water works compound, Painting of all concrete surface and steel pipe works with three coats of</p> |      |      |            |         |
| 32.01        | 50 KL 10 M Staging   | Job  |      | 1712500.00 |         |
| 32.02        | 50 KL 12 M Staging   | Job  |      | 1788750.00 |         |
| 32.03        | 75 KL 10 M Staging   | Job  |      | 2150000.00 |         |
| 32.04        | 75 KL 12 M Staging   | Job  |      | 2242500.00 |         |
| 32.05        | 100 KL 12 M Staging  | Job  |      | 2886250.00 |         |
| 32.06        | 100 KL 16 M Staging  | Job  |      | 3073750.00 |         |
| 32.07        | 150 KL 12 M Staging  | Job  |      | 3241250.00 |         |
| 32.08        | 150 KL 16 M Staging  | Job  | 1.00 | 3457500.00 | 3457500 |
| 32.09        | 175 KL 12 M Staging  | Job  |      | 3441250.00 |         |
| 32.10        | 175 KL 16 M Staging  | Job  |      | 3732500.00 |         |
| 32.11        | 200 KL 12 M Staging  | Job  |      | 3843750.00 |         |
| 32.12        | 200 KL 16 M Staging  | Job  |      | 4040000.00 |         |
| 32.13        | 200 KL 18 M Staging  | Job  |      | 4105000.00 |         |
| 32.14        | 225 KL 12 M Staging  | Job  |      | 4170000.00 |         |
| 32.15        | 250 KL 12 M Staging  | Job  |      | 4537500.00 |         |
| 32.16        | 300 KL 12 M Staging  | Job  |      | 4877500.00 |         |
| 32.17        | 300 KL 16 M Staging  | Job  |      | 5508750.00 |         |
| 32.18        | 350 KL 14 M Staging  | Job  |      | 6093750.00 |         |
| 32.19        | 400 KL 14 M Staging  | Job  |      | 6830000.00 |         |
| 32.20        | 400 KL 16 M Staging  | Job  |      | 7021250.00 |         |
| 32.21        | 500 KL 14 M Staging  | Job  |      | 7457500.00 |         |
| 32.22        | 25 Kl 10 M Staging   | Job  |      | 1296250.00 |         |
| 32.23        | 25 Kl 12 M Staging   | Job  |      | 1363750.00 |         |
| 32.24        | For 2 m Staging (5% additional per Meter)  | Rm   |      | 172875.00  |         |

| BOQ Item No. | Description  | Unit | Qty     | Rate     | Amount  |
|--------------|--|------|---------|----------|---------|
| 33.00        | <b>Excavation:-</b><br>Excavation of earth in ordinary soil (loam, clay or sand) for pipe line and rising main trenches including lift upto 1.50 m and lead upto 50 m and refilling watering, ramming of the excavated earth into the trench and also disposal of surplus earth upto 50m from the center of the trenches including supply of all material labour, T&P etc complete as per instructions of Engineer -in -charge.  |      |         |          |         |
| 34.00        | <b>Ordinary Soil</b>   | Cum  | 4316.18 | 214.61   | 926296  |
| 35.00        | <b>Mixed Soil with Kankar</b>  | Cum  | 4316.18 | 249.27   | 1075894 |
| 36.00        | <b>Soft Rock</b>   | Cum  |         | 943.82   |         |
| 37.00        | <b>Hard Rock</b>   | Cum  |         | 1319.18  |         |
| Additional   | <b>Disposal of Surplus Earth top 300 mm ht.</b>  | Cum  |         |          |         |
| 38.00        | <b>Sand Bedding:-</b><br>Sand Bedding in trenches in layers not exceeding 10 cm. in depth, consolidating each deposited layer by ramming and watering complete as per instructions of Engineer.  | Cum  | 10.49   | 1656.00  | 17368   |
| 39.00        | <b>Retaining Wall:-</b><br>Construction of Retaining Wall for Protection Survey, Investigation, Soil Testing, Planning, construction, commissioning etc. as per design and drawing provided by the contractor all in accordance with the relevent latest I.S. Codes and approved by the Engineer as per conditions of the bid documents. The design and drawings provided by the contractor should be betted by any IIT Institute or Government Engineering College approved by the Engineer, on contractor's cost. For construction of R.C.C. retaining wall including excavation of earth in hard rock/soft rock/ Kanker /morrum /bajri etc. for foundation, Plain Cement Concrete 1:4:8 (one cement four fine aggregates and eight coarse aggregates) and supply of steel as per drawing including bending ,binding with all type of binding materials including wastage of steel Reinforced Cement Concrete (M20) 1:1½:3(one cement one and half fine aggregates and three coarse aggregates) including cost of all arrangement of shuttering ,scaffolding and water with supply of all materials, labors T&P etc. required for proper completion of works as per the directions of the Engineer (Provisional) | Cum  |         | 16400.00 |         |
| 40.00        | <b>Ductile Iron Pipes:-</b><br>Supply of following sizes (D.I.) pipes for rising main/distribution system conforming to latest/relevant I.S. 8329/2000 Specifications- with all jointing materials such as specials conforming to latest /relevant I.S. specifications, suitable for D.I pipes, as per IS-1239 /2000 and IS 8329/2000 or their latest amendment including F.O.R. destination and all taxes and insurance etc. with loading, unloading and Carting up to site of work, also including specials for these pipes and lowering them into the trenches and laying true to alignment and gradient and jointing etc. complete (including testing of pipe lines and cutting of pipes for making up the length but excluding the cost of trenches).all complete as per instructions of Engineer -in -charge.  |      |         |          |         |
|              | <b>Ductile Iron Pipe (K-9)</b>   |      |         |          |         |
| 40.01        | 300 mm dia Ductile Iron K-9  | m    |         | 3877.6   |         |
| 40.02        | 250 mm dia Ductile Iron K-9  | m    |         | 3103.5   |         |
| 40.03        | 200 mm dia Ductile Iron K-9  | m    |         | 2332.32  |         |
| 40.04        | 150 mm dia Ductile Iron K-9  | m    |         | 1728.48  |         |
| 40.05        | 125 mm dia Ductile Iron K-9  | m    |         | 1411.41  |         |
| 40.06        | 100 mm dia Ductile Iron K-9  | m    | 35.00   | 1191.41  | 41699   |
| 40.07        | 80 mm dia Ductile Iron K-9   | m    |         | 905.41   |         |
|              | <b>Ductile Iron Pipe (K-7)</b>   |      |         |          |         |

| BOQ Item No. | Description   | Unit | Qty      | Rate      | Amount  |
|--------------|---|------|----------|-----------|---------|
| 40.08        | 300 mm dia Ductile Iron K-7   | m    |          | 3151.6    |         |
| 40.09        | 250 mm dia Ductile Iron K-7   | m    |          | 2564.5    |         |
| 40.10        | 200 mm dia Ductile Iron K-7   | m    |          | 1848.32   |         |
| 40.11        | 150 mm dia Ductile Iron K-7   | m    |          | 1497.48   |         |
| 40.12        | 125 mm dia Ductile Iron K-7   | m    |          | 1301.41   |         |
| 40.13        | 100 mm dia Ductile Iron K-7   | m    |          | 1007.11   |         |
| 40.14        | 80 mm dia Ductile Iron K-7  | m    |          | 909.49    |         |
| 41           | <b>HDPE Pipes PN6, PE 100:-</b><br>Supply of following sizes pipes for distribution system conforming to latest/ relevant I.S. 4984/1995 Specifications with all jointing materials and specials conforming to latest /relevant I.S. specifications including F.O.R. destination and all taxes and insurance etc. with loading, unloading and Carting up to site of work, also including specials for these pipes and lowering them into the trenches and laying true to alignment and gradient and jointing etc. complete (including testing of pipe lines and cutting of pipes for making up the length but excluding the cost of trenches) all complete as per instructions of Engineer -in -charge. |      |          |           |         |
| 41.01        | 90 mm dia HDPE Pipe PN6, PE 100   | m    |          | 229.5     |         |
| 41.02        | 75 mm dia HDPE Pipe PN6, PE 100   | m    | 138.00   | 169.2     | 23350   |
| 41.03        | 63 mm dia HDPE Pipe PN6, PE 100   | m    | 10892.00 | 125.8     | 1370214 |
| 42.00        | <b>Valves:-</b><br>Supply and carting up to site of work of the following dia DI butterfly /sluice valves, class I, working pressure 10 Kg/cm2 confirming to IS: 780/1969 or its latest amendments, including valve fittings & Dismantling Joints as per requirement F.O.R. destination, and lowering them into the already prepared trenches, fixing in position and jointing them with pipelines and testing etc. complete and also including supply of jointing materials etc. complete including all taxes and insurance, as per instructions of Engineer -in -charge.  |      |          |           |         |
|              | <b>Isolating Sluice Valve</b>   |      |          |           |         |
| 42.01        | Sluice valve - 300 mm dia   | Nos  |          | 64042.00  |         |
| 42.02        | Sluice valve - 250 mm dia   | Nos  |          | 48109.00  |         |
| 42.03        | Sluice valve - 200 mm dia   | Nos  |          | 27304.00  |         |
| 42.04        | Sluice valve - 150 mm dia   | Nos  |          | 17626.00  |         |
| 42.05        | Sluice valve - 125 mm dia   | Nos  |          | 14505.00  |         |
| 42.06        | Sluice valve - 100 mm dia   | Nos  | 3.00     | 14455.00  | 43365   |
| 42.07        | Sluice valve - 80 mm dia  | Nos  | 1.00     | 12401.00  | 12401   |
| 42.07.1      | Sluice valve - 65 mm dia  | Nos. | 1.00     | 10650.00  | 10650   |
| 42.07.2      | Sluice valve - 50 mm dia  | Nos. | 8.00     | 9700.00   | 77600   |
|              | <b>Scour Valve</b>  |      |          |           |         |
| 42.08        | Scour valve - 80 mm dia   | Nos  | 5.00     | 10160.84  | 50804   |
| 42.09        | Scour valve - 100 mm dia  | Nos  |          | 12535.28  |         |
| 42.10        | Scour valve - 150 mm dia  | Nos  |          | 17625.57  |         |
| 42.11        | Scour valve - 200 mm dia  | Nos  |          | 27304.03  |         |
| 42.12        | Scour valve - 250 mm dia  | Nos  |          | 48109.48  |         |
| 42.13        | <b>Pressure Relief Valve</b>  |      |          |           |         |
| 42.14        | PRV 80 mm dia   | Nos  |          | 54219.00  |         |
| 42.15        | PRV 100 mm dia  | Nos  |          | 80025.00  |         |
| 42.16        | PRV 150 mm dia  | Nos  |          | 124575.00 |         |
| 42.17        | <b>Single / Double ball type Air Valve:-</b> Supply and installation, testing etc. of single/double ball type air valve conforming to latest/relevant I.S. specifications including all taxes and insurance, carting up to site of work and lowering them into the trenches, fixing in position and jointing them with pipelines and testing etc. complete (including supply of jointing materials and Valve fittings etc complete) as per instructions of Engineer.  |      |          |           |         |
| 42.18        | 20 mm   | Nos  | 5.00     | 10229.21  | 51146   |
| 42.19        | 50 mm   | Nos  |          | 23170.33  |         |
| 42.20        | 80 mm   | Nos  |          | 23170.33  |         |

| BOQ Item No. | Description  | Unit | Qty   | Rate      | Amount |
|--------------|--|------|-------|-----------|--------|
| 42.21        | 150 mm   | Nos  |       | 41024.88  |        |
| 42.22        | <b>Fire Hydrant:-</b><br>Supply of under ground sluice valve type fire hydrant consisting of 80 mm dia sluice valve, 80mm dia tail pieces, 80mm dia duck foot bend and 80 mm dia standard makes iron coupling with cap and etc. complete conforming to latest/relevant I.S.specifications including all taxes and insurance up to site of work and lowering them into the trenches, fixing in position and jointing them with pipelines and testing etc. complete (including supply of jointing materials and Valve fittings etc. complete as per instructions of Engineer -in - charge.       | Nos  | 3.00  | 24500.00  | 73500  |
| 43.00        | <b>Valve Chambers:-</b><br>Construction of following type chambers as per department type design and drawing including Heavy duty M.S. Manhole Cover and all materials, labour, T&P etc complete for proper completion of work as per instructions of Engineer -in -charge.  |      |       |           |        |
| 43.01-43.02  | <b>Sluice Valve Chamber (Masonry Type):-</b><br>Dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm  | No.  | 11.00 | 25800.00  | 283800 |
| 43.03        | <b>Sluice Valve Chamber (Surface Box Type):-</b> Dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm   | No.  |       | 5000.00   |        |
| 43.04        | <b>Fire Hydrant chamber (800 (L) X 1250 (W) X 1000 (H) mm)</b>   | No.  | 3.00  | 18500.00  | 55500  |
| 43.05        | <b>Air Valve Chamber</b>   |      |       |           |        |
| 43.06        | <b>350 (L) x 350 (W) x 500 (H) mm</b>  | No.  | 5.00  | 9000.00   | 45000  |
| 43.07        | <b>Scour Valve Chamber</b>   |      |       |           |        |
| 43.08        | <b>dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm</b>   | No.  | 5.00  | 29670.00  | 148350 |
| 43.09        | <b>PRV Valve Chamber - 1000 (L) x 1200 (W) x 1300 (H) mm</b>   | No.  |       | 28380.00  |        |
| 44.00        | <b>Design and construct Thrust Block:-</b><br>Design and construct Thrust Block made in R.C.C. with cement, coarse sand & 20 mm gauge stone ballast in proportion of 1:1.5:3, for pipe line, including supply of MS reinforcement wrought to equired shape as necessary ,its bending, fixing & binding the same with 0.50 mm thick binding wire in position & necessary centering & shuttering including curing and supply of all materials, labour, T & P etc. required for proper completion of the work and as per specifications for RCC work as per instructions of Engineer -in -charge. |      |       |           |        |
| 44.01        | <b>Reinforced Cement Concrete:-</b><br>Design and construct Thrust Block made in Reinforced Cement concrete (1:1.5:3), with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, as per technical requirements.   | Cum  | 0.64  | 13656.33  | 8740   |
| 44.02        | <b>Shuttering:-</b><br>Providing shuttering for Thrust block using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete works curved or straight including fitting fixing and striking out after completion of works.  | Sqm  | 6.40  | 420.00    | 2688   |
| 44.03        | <b>Reinforcement of Thrust Block:-</b><br>Providing reinforcement of Thrust block for reinforced concrete work including distribution bars, stirrups, binders etc. initial straightening and removal of loose rust (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with wire at every inter-section, complete as per drawing and direction.  | MT   | 0.03  | 109838.98 | 3515   |
| 45.00        | <b>Staff Quarter / Office Room:-</b><br>Provide all materials labour, T&P etc. and construct single room staff quarter / office room at water works site identified by the Engineer-in-charge as per department type design and drawing and specifications of civil works laid down in the bid document, including all material labour, T&P etc complete for proper completion of work as per instructions of Engineer -in -charge. (Drawing No.D-7)   | No   | 1.00  | 970600    | 970600 |

| BOQ Item No. | Description   | Unit | Qty     | Rate      | Amount  |
|--------------|---|------|---------|-----------|---------|
| 46.00        | <b>Recharge Mechanism:-</b><br>Water recharge Mechanism within the water works campus   | Sqm  | 16.00   | 52500.00  | 840000  |
| 47.00        | <b>Backfilling of Earth:-</b><br>Backfilling of abandoned tube well with available Earth  | Cum  |         | 107.00    |         |
| 48.00        | <b>Assest replacement items</b>   |      |         |           |         |
| 48.01        | <b>Pumping Plant:-</b><br>SITC of Pumping plant including pumps with motors, starter, pannel, cable, complete in all respect with all required material T&P labour etc.   |      |         |           |         |
| 48.02        | 1 HP  | Nos  |         | 32518.98  |         |
| 48.03        | 2 HP  | Nos  |         | 35843.14  |         |
| 48.04        | 3 HP  | Nos  |         | 46249.21  |         |
| 48.05        | 5 HP  | Nos  |         | 65037.95  |         |
| 48.06        | 7.5HP   | Nos  |         | 228500.00 |         |
| 48.07        | 10 HP   | Nos  |         | 230200.00 |         |
| 48.08        | 12.5 HP   | Nos  |         | 238800.00 |         |
| 48.09        | 15 HP   | Nos  |         | 252100.00 |         |
| 48.10        | 17.5 HP   | Nos  |         | 276504.56 |         |
| 48.11        | 20 HP   | Nos  |         | 295500.00 |         |
| 48.12        | 25 HP   | Nos  |         | 334043.48 |         |
| 48.13        | 30 HP ( discharge 1000 LPM Head 62 m)   | Nos  |         | 366163.04 |         |
| 48.14        | 35 HP   | Nos  |         | 393723.70 |         |
| 48.15        | 40 HP   | Nos  |         | 426547.83 |         |
| 48.16        | Turbidity & Chlorine analyzer   | Nos  |         | 273000.00 |         |
| 48.17        | <b>Hydrostatic Level Sensor:-</b><br>Providing and installation hydrostatic level sensor at all tubewell pumping system including all accessories etc. complete in all respect as per instructions of Engineer -in -charge.   | Nos  |         | 126000.00 |         |
| 48.18        | <b>3Mtr. Long Column Pipe</b>   |      |         |           |         |
| 48.19        | 32 mm Dia size - MS pipe  | Nos  |         | 1500.00   |         |
| 48.20        | 40 mm dia size - MS pipe  | Nos  |         | 2000.01   |         |
| 48.21        | 50 mm dia size - MS pipe  | Nos  |         | 2763.00   |         |
| 48.22        | 65 mm Dia size - MS pipe  | Nos  |         | 3200.01   |         |
| 48.23        | 80 mm Dia size - MS pipe  | Nos  |         | 4200.00   |         |
| 48.24        | 100 mm Dia size - MS pipe   | Nos  |         | 4701.00   |         |
| 48.25        | 150 mm Dia size - MS pipe   | Nos  |         | 6501.00   |         |
| 49.00        | <b>Tubewell Automation System:-</b><br>Installation of suitable capacity simple T.W. automation system to control operation of the pumping plant with respect to high/low water level in OHT iwith RTU panel , 7" HMI screen , surge device including enrgy meter inside the pump house with arrangement for communication of data with GSM and GPRS system to show required parameters including all accessories etc. complete in all respect as per instructions of Engineer -in -charge. | Job  | 1.00    | 375000    | 375000  |
| 50.00        | <b>Dismantling of Roads:-</b><br>Dismantling of Following type of surfaces including sorting out and stacking of serviceable materials and disposal of unserviceable materials upto a distance of 50m as per instructions of Engineer -in -charge.  |      |         |           |         |
| 50.01        | <b>B.O.E. Surface</b>   | Sqm  | 3160.00 | 100.00    | 316000  |
| 50.02        | <b>Bituminous Surface</b>   | Sqm  | 1752.00 | 200.00    | 350400  |
| 50.03        | <b>Interlocking Road</b>  | Sqm  |         | 155.00    |         |
| 50.04        | <b>C.C. Road</b>  | Sqm  | 71.00   | 329.96    | 23427   |
| 51.00        | <b>Restoration of Roads:-</b><br>Reinstatement of the following type of road surface with old and new materials including supply of all materials, labour, T&P etc. required for proper completion of the work as per instructions of Engineer -in -charge.   |      |         |           |         |
| 51.01        | <b>B.O.E. Surface (50% of existing bricks to be reused)</b>   | Sqm  | 3160.00 | 350       | 1106000 |
| 51.02        | <b>Bituminous surface</b>   | Sqm  | 1752.00 | 1534.82   | 2689005 |
| 51.03        | <b>Interlocking Road</b>  | Sqm  |         | 1070.5    |         |

| BOQ Item No. | Description  | Unit | Qty   | Rate    | Amount |
|--------------|--|------|-------|---------|--------|
| 51.04        | C.C. Road  | Sqm  | 71.00 | 1560.71 | 110810 |
| 52.00        | <b>Nala/Culvert Crossing:-</b><br>Provision for following types of Culvert crossing -along the alignment of pipe line complete as per instructions of Engineer -in -charge. ( casing of pipe is done by concreting)  |      |       |         |        |
| 52.01        | Nala/Culvert Crossing ( width -3.5 m) upto Dia 300 mm  | Nos  | 4.00  | 19000   | 76000  |
| 52.02-52.03  | <b>Trenchless Crossings:-</b><br>Survey site Investigation Planning , design Drawings as per State Road manual and vetting / checked from State Road Divisional Office and taking NOC for trenchless crossing of National highway road and Railway track(crossing length 15m to 25m ), Road for of required dia Rising main pipe with casing pipe as required for proper completion of work required size of MS casing pipe as per drawing and as per (IS:3589 & made from confining to IS:2062) with 750 Micron PU coating internally and 250 micron anti corrosive bituminous paint externally by trenchless technology method at an average depth 3.60 mtr from normal ground level up to top of casing pipe including excavation & filling of Pit, Dewatering arrangement, Supporting system for soil, also including supply and fixing of 2 no Sluice valve ISI Mark, construction of sluice valve chamber etc. all complete work including supply & fixing specials in carrier pipe over main pipe, as per specification given in the bid documents including supply of all materials, labour T&P etc. for proper completion of work as per instruction of Engineer. |      |       |         |        |
| 52.04        | Railway Line crossing (Upto Dia 350 mm)  | Nos  |       | 60000   |        |
| 52.05        | National Highway road crossing (Upto Dia 350 mm)   | Nos  |       | 40000   |        |
| 52.06        | State Highway road crossing (Upto Dia 350 mm)  | Nos  |       | 27000   |        |
| 52.07        | <b>Road Crossing:-</b><br>Excavation in foundation of trench of proper size in soil mixed with moorum, Shingle, Kankar, soft rock, hard rock, including refilling, dressing and ramming earth or sand or bajri, ballast, including providing, supply, carting, lowering, laying and jointing of casing pipe of RCC NP-3 with appropriate size, with rubber ring joint, sand filling in gap inside RCC pipe, insertion of distribution pipe into the encasing pipe including supply of T&P, including concrete of 150 mm thick in with 40mm gauge brick ballast local sand and cement in proportion of 8:4:1, provision for barricading, labour for traffic diversion etc. Complete for proper completion of work as per instruction of Engineer.   |      |       |         |        |
| 52.08        | 50 mm dia. Pipe  | Nos  |       | 1400    |        |
| 52.09        | 100 mm dia. Pipe   | Nos  |       | 1700    |        |
| 52.10        | 150 mm dia. Pipe   | Nos  |       | 2000    |        |
| 52.11        | 200 mm dia. Pipe   | Nos  |       | 2400    |        |
| 52.12        | 250 mm dia. Pipe   | Nos  |       | 3600    |        |
| 52.13        | 300 mm dia. Pipe   | Nos  |       | 3900    |        |
| 52.14        | 350 mm dia. Pipe   | Nos  |       | 4386    |        |
| 52.15        | 400 mm dia. Pipe   | Nos  |       | 4700    |        |
| 52.16        | 450 mm dia. Pipe   | Nos  |       | 5200    |        |
| 52.17        | 500 mm dia. Pipe   | Nos  |       | 6200    |        |
| 52.18        | 600 mm dia. Pipe   | Nos  |       | 7600    |        |



| BOQ Item No. | Description   | Unit | Qty    | Rate   | Amount |
|--------------|---|------|--------|--------|--------|
| 53.00        | <b>Functional House Tap Connection:-</b><br>Making house connection should be done atleast 2 m inside the boundary wall with provision of tap from distribution line to outer wall of house, with supply of 1 m G.I. pipe ( 15 mm ) ( above ground ) & average 5 mtr. MDPE Pipe ( 20 mm ) ( below ground) including specials, saddle, Tap,etc. of suitable size, T&P etc. including excavation, laying and jointing for proper completion of work as per instructions of Engineer as per Dwg 12 ( excluding road restoration) | Nos. | 279.00 | 3500   | 976500 |
| 54.00        | <b>Stand Post:-</b><br>Construction of single tap pillar type stand post as per type design   | Nos. | 6.00   | 10000  | 60000  |
| 55.00        | <b>Operation and Maintenance:-</b><br>Operation and Maintenance for 10 years of water supply schemes after completion including staff required for operation and maintenance, chemicals, all materails, specials T & P for operation and maintenance excluding electricity charges.<br><b>(2% of Capex cost for first year of O&amp;M)</b><br><b>Note:- 6% Inflation Factor considered for arriving the O&amp;M Cost from Second Year onwards.</b>  | Rs   |        |        |        |
| 55.01        | Cost of DPR Preparation @ 1% of CAPEX Cost of DPR   | %    |        |        |        |
| 56.00        | <b>Electromagnetic flow meters</b>  |      |        |        |        |
| 56.01        | 150mm   | Nos. |        | 150000 |        |
| 56.02        | 200mm   | Nos. |        | 190000 |        |
| 56.03        | 250mm   | Nos. |        | 225000 |        |
| 56.04        | 300mm   | Nos. |        | 260000 |        |
| 56.05        | 350mm   | Nos. |        | 330000 |        |
| 56.06        | 400mm   | Nos. |        | 420000 |        |
| 56.07        | 450mm   | Nos. |        | 500000 |        |
| 56.08        | 500mm   | Nos. |        | 550000 |        |
| A.I-56.09    | 100mm   | Nos. | 1.00   | 100000 | 100000 |
| A.I-56.10    | 80mm  | Nos. |        | 80000  |        |
| 57.00        | <b>Soft Starter :-</b>  |      |        |        |        |
| 57.01        | soft starter with RS485 port -400V,7.5KW Rating   | Nos  |        | 60000  |        |
| 57.02        | soft starter with RS485 port -400V,15KW Rating  | Nos  |        | 70000  |        |
| 57.03        | soft starter with RS485 port -400V,22KW Rating  | Nos  |        | 85000  |        |
| 57.04        | soft starter with RS485 port -400V,30KW Rating  | Nos  |        | 100000 |        |
| 57.05        | soft starter with RS485 port -400V,45KW Rating  | Nos  |        | 125000 |        |
| 57.06        | soft starter with RS485 port -400V,55KW Rating  | Nos  |        | 140000 |        |
| 57.07        | soft starter with RS485 port -400V,75KW Rating  | Nos  |        | 150000 |        |
| 57.08        | soft starter with RS485 port -400V,90KW Rating  | Nos  |        | 175000 |        |
| 57.09        | soft starter with RS485 port -400V,110KW Rating   | Nos  |        | 225000 |        |
| 57.10        | soft starter with RS485 port -400V,132KW Rating   | Nos  |        | 250000 |        |
| 57.11        | soft starter with RS485 port -400V,220KW Rating   | Nos  |        | 275000 |        |
| 57.12        | soft starter with RS485 port -400V,250KW Rating   | Nos  |        | 325000 |        |
| 57.13        | soft starter with RS485 port -400V,312KW Rating   | Nos  |        | 375000 |        |
| 57.14        | soft starter with RS485 port -400V,450KW Rating   | Nos  |        | 550000 |        |
| 58.00        | <b>Auto Phase Reversal Unit:-</b>   |      |        |        |        |
| 58.01        | 100 Amp rating  | Nos  |        | 45000  |        |
| 58.02        | 125 Amp rating  | Nos  |        | 50000  |        |
| 58.03        | 160 Amp rating  | Nos  |        | 70000  |        |
| 58.04        | 200 Amp rating  | Nos  |        | 120000 |        |
| 58.05        | 250 Amp rating  | Nos  |        | 135000 |        |
| 58.06        | 315 Amp rating  | Nos  |        | 140000 |        |
| 58.07        | 400 Amp rating  | Nos  |        | 150000 |        |
| 58.08        | 500 Amp rating  | Nos  |        | 190000 |        |
| 58.09        | 630 Amp rating  | Nos  |        | 225000 |        |
| 59.00        | Radar type Level transmitter  | Nos  | 1.00   | 120000 | 120000 |
| 60.00        | <b>Control Panel:-</b><br>control panel for all power equipments with IP 54 protection  | Nos  | 1.00   | 120000 | 120000 |

| BOQ Item No.     | Description   | Unit | Qty    | Rate    | Amount |
|------------------|---|------|--------|---------|--------|
| 61.00            | <b>Cabling for Tube Well:-</b><br>complete cabling for tubewell including all power and control cables of all equipments at pumphouse and OHT           | Nos  | 1.00   | 60000   | 60000  |
| 62.00            | <b>Master Control PLC:-</b><br>Master control plc with CPU, SCADA software including GSM / GPRS modem, necessary firewall, ethernet switch, CCTV system | Nos  |        | 2665000 |        |
| 63.00            | Installation testing and commissioning  | Nos  | 1.00   | 60000   | 60000  |
| Additional Items |   |      |        |         |        |
| A.I - 1          | 110 mm dia HDPE Pipe PN6, PE 100  | m    | 862.00 | 321     | 276702 |
| A.I - 2          | 125 mm dia HDPE Pipe PN6, PE 100  | m    | 182.00 | 378     | 68796  |
| A.I - 3          | 140 mm dia HDPE Pipe PN6, PE 100  | m    |        | 498     |        |
| A.I - 4          | 160 mm dia HDPE Pipe PN6, PE 100  | m    |        | 630     |        |
| A.I - 5          | 180 mm dia HDPE Pipe PN6, PE 100  | m    |        | 779     |        |
| A.I - 6          | 200 mm dia HDPE Pipe PN6, PE 100  | m    |        | 951     |        |
| A.I - 7          | Supply Installation of Display board of Size 2M X 1 M for Providing details of proposal of water supply scheme  | LS   | 1.00   | 25000   | 25000  |
| A.I - 8          | Provision for arboriculture for development of water works  | LS   | 1.00   | 50000   | 50000  |
| A.I - 9          | Battery Backup with Accessories for 2 Kw Load   | Nos  | 2.00   | 92800   | 185600 |
| A.I - 10         | 40 Watts Solar Street Lights inbuilt with all accessories   | Nos  | 4.00   | 30000   | 120000 |
| A.I - 11         | SITC of DG for Electricity support  |      |        |         |        |
| A.I - 11 - 1     | 7.5 KVA   | Nos  |        | 240000  |        |
| A.I - 11 - 2     | 10 KVA  | Nos  |        | 260000  |        |
| A.I - 11 - 3     | 15 KVA  | Nos  |        | 306000  |        |
| A.I - 11 - 3     | 20 KVA  | Nos  | 1.00   | 370000  | 370000 |
| A.I - 11 - 3     | 25 KVA  | Nos  |        | 389000  |        |
| A.I - 11 - 3     | 30 KVA  | Nos  |        | 405000  |        |
| A.I - 11 - 3     | 40 KVA  | Nos  |        | 483000  |        |
| A.I - 11 - 3     | 45 KVA  | Nos  |        | 495000  |        |
| A.I - 11 - 3     | 50 KVA  | Nos  |        | 555000  |        |
| A.I - 11 - 3     | 62.5 KVA  | Nos  |        | 569000  |        |

279.68  
279.84

| Estimate for Parsia Nisfi Gram Panchayat |  |                      |        |                               |                             |                      |
|--|--|----------------------|--------|-------------------------------|-----------------------------|----------------------|
| Water Supply Scheme                      |  |                      |        |                               |                             |                      |
| Under - SWSM                             |  |                      |        |                               |                             |                      |
| Block- Gola, District- Gorakhpur         |  |                      |        |                               |                             |                      |
| Form "J" - Comprehensive Scheme          |  |                      |        |                               |                             |                      |
| Sr. No.                                  | Description of Work                            | Amount (Rs. in Lacs) | %      | Amount (Rs. in Lacs)          | Govt. of U.P. Share         | Govt. of India Share |
| 1  | 2  | 3                    | 4      | 5                             | 6                           | 7                    |
| 1  | Cost of Work                                   | 245.28               |        | <del>216.45</del><br>(245.28) |                             |                      |
| 2  | 0.14% Discount as per Contract on Cost of work | 245.28               | -0.14% | <del>0.34</del><br>0.30       |                             |                      |
|  | Net Cost of Work                               |                      |        | <del>216.15</del><br>244.94   | <del>205.98</del>           |                      |
| 3  | Add Contingency 2%                             | 244.94               | 2.00%  | <del>4.89</del><br>4.90       | <del>4.41</del>             |                      |
|  | Sub Total ( A )                                |                      |        | <del>220.47</del><br>249.84   | <del>200.57</del><br>124.92 | 124.92               |
| 4  | Add GST 12 %-B                                 | 249.84               | 12.00% | <del>29.98</del><br>29.98     | 14.99                       | 14.99                |
| 5  | Add 12.5% Centage-C                            | 249.84               | 12.50% | <del>31.23</del><br>31.23     | 31.23                       |                      |
| Grand Total (A+B+C)                      |  |                      |        | <del>274.60</del><br>311.05   | 171.14                      | 139.91               |
| 6  | 1st O&M Cost (after DLP)                       | 244.94               | 2%     | <del>4.90</del><br>4.90       | 2.45                        | 2.45                 |

239.14  
0.33  
238.8  
4.78  
243.5  
29.23  
30.45  
303.2  
68.63

|  |      |
|--|------|
| TOTAL POPULATION A (ULTIMATE YEAR 2052)    | 3120 |
| PER CAPITA COST (NET COST+CONTINGENCY+GST) | 8969 |

PREPARED BY

CHECKED BY

*[Signature]*



*[Signature]*  
J.E(T) Assistant Engineer

*[Signature]*  
Member Secretary DWSM  
अधिकाारी अभियन्ता  
Executive Engineer  
जल निगम, उ०प्र० जल निगम  
U.P. Jal Nigam, 10 TH Div. Gorakhpur  
गोरखपुर

280.21  
229.82  
39

Checked And Found Ok  
Recommended For Approval  
Technical Cell (SWSM), Lucknow

*[Signature]*  
EXECUTIVE ENGINEER  
CONSTRUCTION DIVISION  
(E/M) U.P. JAL NIGAM  
GORAKHPUR

| Estimate for Parsia Nisphi Raja Gram Panchayat              |   |                      |
|---|---|----------------------|
| Water Supply Scheme   |   |                      |
| Under - SWSM  |   |                      |
| Block- Gola, District- Gorakhpur                            |   |                      |
| General Abstract of Cost (Comprehensive)                    |   |                      |
| Estimate Number   | Description of Sub-Estimate                                   | Amount<br>(Rs. Lacs) |
| <b>(A) Civil Works</b>                                      |   |                      |
| E-1   | Construction of Pump House                                    | 5.97                 |
| E-2   | Pipelines - Raw Water Rising Main                             | 0.70                 |
| E-3   | Construction of Over Head Tank - 1 Nos                        | 37.88                |
| E-4   | Pipelines - Distribution Network                              | 102.31               |
| E-5   | Construction of Boundary Wall                                 | 10.00                |
| E-6   | Construction of Approach Road & Ancilliary Civil Works        | 11.30                |
| E-7   | Construction of Staff Quarters                                | 9.71                 |
| E-8   | Suvey, Investigation & Preparation of Detailed Project Report | 2.37                 |
| Net Cost of the Civil Works of the Scheme                   |   | 187.09               |
|   |   | 180.24               |
| <b>(B) Electrical &amp; Mechanical Works</b>                |   |                      |
| E-9   | Drilling Construction & Development of Tube Well - 1 Nos      | 17.93                |
| E-10  | Pumping Plant & Chlorination Plant                            | 11.37                |
| E-11  | Solar Power Plant   | 16.49                |
| E-12  | Electrical & Instrumentation                                  | 13.11                |
| Net Cost of the Electrical & Mechanical Works of the Scheme |   | 58.90                |
| Total Net Cost of the Scheme (A + B)                        |   | 245.99               |

239.14