



# ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar



समस्त बिहार के सभी जिलों में कार्य करता है

**BIHAR RURAL ROAD DEVELOPMENT AGENCY (BRRDA)**

F.D.R. PART-A (2021-22)

**DETAILED ESTIMATE FOR F.D.R. RESTORATION WORK**



|                |                         |         |            |
|----------------|-------------------------|---------|------------|
| DISTRICT :     | Bhagalpur               | BLOCK : | Naugachhia |
| NAME OF ROAD : | RCD Road to Barwa (VRL) |         |            |

|                                |                                 |      |
|--------------------------------|---------------------------------|------|
| TOTAL LENGTH OF ROAD           | : 2.326                         | KM   |
| TOTAL COST OF FDR PART-A       | : <del>0.422</del> <b>0.404</b> | LAKH |
| GST @ 12 %                     | : <del>0.051</del> <b>0.043</b> | LAKH |
| LABOUR CHSS @ 1 %              | : 0.004                         | LAKH |
| SEIGNIORAGE FEE @ 10 %         | : 0.025                         | LAKH |
| TOTAL COST OF RESTORATION WORK | : <del>0.502</del> <b>0.482</b> | LAKH |

Subscribed By

**Executive Engineer**

Rural Work Department  
Works Division, Naugachhia

# GENERAL ABSTRACT OF COST

Name of Road : RCD Road to Burwa (VRL)

District : Bhagalpur

Length (Kms) : 2.326

Block : Naugachhia

| Sl. No | Particulars                                  | Details (Km) | Total Cost (in Rs.)   |
|--------|----------------------------------------------|--------------|-----------------------|
| 1      | Cost of Road Restoration work                | :            | 40412.00<br>42,158.00 |
| 2      | Add G.S.T @ 12 %                             | :            | 4850.00<br>5,059.00   |
| 3      | Add L.C. @ 1 %                               | :            | 304.00<br>422.00      |
| 4      | Add 10% S.F. on Basic rate of Mines material | :            | 2,532.00              |
|        | Total Cost of Restoration work               | :            | 48138.00<br>50,171.00 |
|        |                                              | Say,         | 50,171.00             |

40412.00  
48200.20

*[Signature]*  
01/11/21  
J. E.

*[Signature]*  
01-11-2021  
A. E.

*[Signature]*  
01/11/21  
E. E.

Technically sanctioned for Rs- 48,200.00 (forty eight thousand two hundred) only.

*[Signature]*  
Superintending Engineer  
Rural Works Department  
Works Circle, Bhagalpur  
02/11/21

# ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: RCU Road to Barwa (VRL)

Block: Naugachinia

District: Bhagalpur

Length: 2.325 Km

| Sl. No. | SSR Item No. | Description                                                                                                                                                                                                                                                                                                     | No. | Length (m) | Width (m) | H/D (M) | Qty.                                  | Unit | Rates (in Rs.) | Amount (in Rs.) |
|---------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|------------|-----------|---------|---------------------------------------|------|----------------|-----------------|
| 1       | 1.5          | Preparing brick bats including spreading, laying, hand packing and compacting with C.S. hammer in layers not exceeding 75 mm thick including cost of light barrier, danger signals, overhead taxes, royalty etc. all complete job as per specification and direction of E.I. excluding carriage cost of bricks. |     |            |           |         |                                       |      |                |                 |
|         |              | As per attached Annexure - A                                                                                                                                                                                                                                                                                    |     |            |           |         | 24.09                                 |      | 1644.34        | 40412.00        |
|         |              |                                                                                                                                                                                                                                                                                                                 |     |            |           |         | 24.09                                 | Cum  | 4769.94        | 22,164.00       |
|         |              |                                                                                                                                                                                                                                                                                                                 |     |            |           |         | Total Cost of Flood Protective work = |      |                | 42,158.00       |

*Grand*  
01/11/21  
J. E.

*AB*  
01-11-2021  
A. E.

*RV*  
01/11/21  
E. E.

Brick Bat Measurement

Name of Road : RCD Road to Borwa (VRL)

Length (Km) : 2.326

| Sr. No. | Chainage (m) | Nos. | Length (m) | Width (m) |  |  | Average Width (m) | Depth (m) |  |  | Average Depth (m) | Quantity (Cum) |
|---------|--------------|------|------------|-----------|--|--|-------------------|-----------|--|--|-------------------|----------------|
| 1       | 1500 - 1520  | 1    | 1.80       | 2.60      |  |  | 2.60              | 0.60      |  |  | 0.60              | 2.50           |
| 2       |              | 1    | 1.70       | 1.00      |  |  | 1.00              | 1.10      |  |  | 1.10              | 1.87           |
| 3       |              | 1    | 1.75       | 2.20      |  |  | 2.20              | 0.60      |  |  | 0.60              | 2.31           |
| 4       |              | 1    | 1.75       | 2.00      |  |  | 2.00              | 0.50      |  |  | 0.50              | 1.75           |
| 5       | 1750 - 1760  | 1    | 1.80       | 2.00      |  |  | 2.00              | 1.10      |  |  | 1.10              | 3.62           |
| 6       |              | 1    | 1.50       | 2.00      |  |  | 2.00              | 1.00      |  |  | 1.00              | 5.00           |
| 7       |              | 1    | 2.50       | 0.60      |  |  | 0.60              | 0.15      |  |  | 0.15              | 0.23           |
| 8       |              | 1    | 2.00       | 1.60      |  |  | 1.60              | 1.20      |  |  | 1.20              | 3.84           |
| 9       |              | 1    | 2.00       | 2.20      |  |  | 2.20              | 1.10      |  |  | 1.10              | 4.84           |
| 10      |              | 1    | 1.80       | 0.80      |  |  | 0.80              | 0.15      |  |  | 0.15              | 0.23           |
|         |              |      |            |           |  |  |                   |           |  |  | Total =           | 24.09          |

|  |       |   |       |     |    |     |         |   |     |   |     |          |
|--|-------|---|-------|-----|----|-----|---------|---|-----|---|-----|----------|
|  | S. F. | - | 24.09 | Cum | 00 | Rs. | 1051.00 | x | 10% | = | Rs. | 2,532.00 |
|--|-------|---|-------|-----|----|-----|---------|---|-----|---|-----|----------|

*[Signature]*  
01/11/21  
J. E.

*[Signature]*  
01-11-2021  
A. E.

*[Signature]*  
01/11/21  
E. E.

# Carriage Cost of Material Via Road

| Name of Road : |                                      |        | RCD Road to Borwa (VRL) |                  |                         | Carriage Cost & Load Km |                         |                         | Block : Naugachhia      |                         |        |
|----------------|--------------------------------------|--------|-------------------------|------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-------------------------|--------|
| Sl No          | Item                                 | Unit   | Source                  | Packs / Sq. Feet | Carriage Cost & Load Km | Carriage Cost & Load Km | Carriage Cost & Load Km | Carriage Cost & Load Km | Carriage Cost & Load Km | Carriage Cost & Load Km | Total  |
| 1              | Stone Metal Gr. 1/4" Via Road        | Sq. Yd | Mirza Chakla            | 0.00             | 8.00                    | 8.00                    | 8.00                    | 8.00                    | 8.00                    | 8.00                    | 127.35 |
| 2              | Stone Metal Gr. 3/4" / 1/2" Via Road | Sq. Yd | Mirza Chakla            | 4.50             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 3              | Stone Aggregate / Chippes Via Road   | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 4              | Stone Boulder / Via Road             | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 5              | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 6              | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 7              | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 8              | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 9              | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 10             | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 11             | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 12             | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 13             | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 14             | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 15             | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 16             | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 17             | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |
| 18             | Gravel Sand / Via Road               | Sq. Yd | Mirza Chakla            | 8.00             | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 7.47                    | 110.62 |

  
 27-11-2021  
 Assistant Engineer

  
 27-11-2021  
 Junior Engineer

  
 27-11-2021  
 Executive Engineer

# Rate Analysis

| SDB SL No.   | DESCRIPTION                                                                                                                                                                                                                           | Unit | QTY   | Rate     | Amount in Rs |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|----------|--------------|
| 4.5          | Providing and Laying of Brick Bats                                                                                                                                                                                                    |      |       |          |              |
|              | Pinning tractor at landing point, loading with front end loader dumping, turning for return trip excluding time for haulage and return trip                                                                                           |      |       |          |              |
|              | Unit = cum                                                                                                                                                                                                                            |      |       |          |              |
|              | Taking output = 2.832 cum                                                                                                                                                                                                             |      |       |          |              |
| a)           | Labour                                                                                                                                                                                                                                |      |       |          |              |
|              | Mazdoor (Unskilled)                                                                                                                                                                                                                   | day  | 2.17  | 292      | 633.64       |
| b)           | Materials                                                                                                                                                                                                                             |      |       |          | 2976.42      |
|              | Brick Bats                                                                                                                                                                                                                            | cum  | 2.832 | 1,051.00 | 2,976.32     |
| c)           | Carriage                                                                                                                                                                                                                              |      |       |          | 462.80       |
|              |                                                                                                                                                                                                                                       |      |       |          | 462.80       |
|              | Cost for 5.5 cum = a+b+c                                                                                                                                                                                                              |      |       |          | 1,144.65     |
|              | Rate per cum = (a+b+c+d)/2.832                                                                                                                                                                                                        |      |       |          | 495.60       |
|              | Total per cum                                                                                                                                                                                                                         |      |       |          | 1,750.04     |
| 5.7.9        | Labour for fitting and fixing 62 mm to 75 mm dia bamboo rafters in position at every vertical pile with 150 mm long nails or 38 swg G.I. wire including cost of G.I. or nails complete job as per specification and direction of E.O. |      |       |          | 1629.54      |
|              | Unit = Per mt.                                                                                                                                                                                                                        |      |       |          |              |
|              | Taking Out Put = 30.50 m                                                                                                                                                                                                              |      |       |          |              |
| (i)          | Materials                                                                                                                                                                                                                             |      |       |          |              |
|              | Cost of 150 mm long nails                                                                                                                                                                                                             | kg   | 0.50  | 61.74    | 30.87        |
| (ii)         | Labour                                                                                                                                                                                                                                |      |       |          |              |
|              | Carpenter Gr -II                                                                                                                                                                                                                      | No.  | 0.125 | 251      | 42.88        |
|              | Unskilled Labour                                                                                                                                                                                                                      | No.  | 0.75  | 292      | 73.00        |
|              | Rate for 30.5 m                                                                                                                                                                                                                       |      |       |          | 147.75       |
|              |                                                                                                                                                                                                                                       |      |       |          | 147.75       |
|              | Rate for 1 m                                                                                                                                                                                                                          |      |       |          | 4.84         |
| (iii)        | Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long                                                                                                                                                                                           | m    | 1.00  | 23.58    | 23.58        |
|              | Rate per m                                                                                                                                                                                                                            |      |       | Say.     | 28.43        |
| 5.7.7        | Labour for cutting 62 mm to 75 mm dia bamboo piles in size and making shoes and driving etc. complete job as per specification and direction E.O.                                                                                     |      |       |          |              |
|              | Unit = Per m                                                                                                                                                                                                                          |      |       |          |              |
|              | Taking Out Put = 30.50 m                                                                                                                                                                                                              |      |       |          |              |
|              | Assuming                                                                                                                                                                                                                              |      |       |          |              |
|              | 20 mm pile sunk 1.525 m deep                                                                                                                                                                                                          |      |       |          |              |
|              | Total depth sunk 30.50 m                                                                                                                                                                                                              |      |       |          |              |
| (i)          | Labour                                                                                                                                                                                                                                |      |       |          |              |
|              | Carpenter Gr -II                                                                                                                                                                                                                      | No.  | 0.25  | 331      | 82.75        |
|              | Unskilled Labour for piling                                                                                                                                                                                                           | No.  | 2.50  | 292      | 730.00       |
|              |                                                                                                                                                                                                                                       |      |       |          | 812.75       |
|              | Rate for 30.5 m                                                                                                                                                                                                                       |      |       |          | 812.75       |
|              | Rate for 1 m                                                                                                                                                                                                                          |      |       |          | 26.81        |
| (ii)         | Bamboo(2nd class) 75mm dia, 1.8 - 2.5m long                                                                                                                                                                                           | m    | 1.00  | 23.58    | 23.58        |
|              | Rate per m                                                                                                                                                                                                                            |      |       | Say.     | 50.39        |
| 5.7.8<br>WRD | Labour for fitting and and fixing split bamboo woven chain in position with 20 swg G.I. wire of 75 mm to 100 mm long nails alternatively including cost of G.I. wire or nails complete job as per specification and direction of E.O. |      |       |          |              |
|              | (Assuming strip of 3.05x3.05 = 9.30 sqm)                                                                                                                                                                                              |      |       |          |              |
|              | Unit = per sqm                                                                                                                                                                                                                        |      |       |          |              |
|              | Taking Out = 9.30 sqm                                                                                                                                                                                                                 |      |       |          |              |

|                |                                                                                                                                                                                                                                                                                                                          |      |        |           |           |
|----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|--------|-----------|-----------|
| A              | Labour                                                                                                                                                                                                                                                                                                                   |      |        |           |           |
|                | Carpenter (G + II)                                                                                                                                                                                                                                                                                                       | No.  | 1.00   | 351       | 351.00    |
|                | Mazdoor (Unskilled) for piling                                                                                                                                                                                                                                                                                           | No.  | 1.00   | 292       | 292.00    |
| B              | Materials                                                                                                                                                                                                                                                                                                                |      |        |           |           |
|                | 75 mm to 100 mm long nails                                                                                                                                                                                                                                                                                               | kg   | 0.25   | 61.74     | 15.44     |
|                | Bamboo (2nd class) 75mm dia, 1.8 - 2.5m long                                                                                                                                                                                                                                                                             | m    | 11     | 23.58     | 259.47    |
|                |                                                                                                                                                                                                                                                                                                                          |      |        |           | 917.85    |
|                | Rate Per Sqm = (a+b+c)/0.30                                                                                                                                                                                                                                                                                              |      |        |           | 98.69     |
| 10.7.40<br>W&B | Labour for filling Cement Bag, saving and laying materials (Unit = Per Bag)                                                                                                                                                                                                                                              |      |        |           |           |
| A              | Supply Empty cement Bag with Sand (2.92+4.82)                                                                                                                                                                                                                                                                            | No   | 100    | 7.74      | 774.00    |
|                | Stretching Roll (Nylon)                                                                                                                                                                                                                                                                                                  | No   | 2      | 30.00     | 60.00     |
|                |                                                                                                                                                                                                                                                                                                                          |      |        | Total (A) | 834.00    |
| B              | Unskilled Labour for filling stretching and staking                                                                                                                                                                                                                                                                      | No   | 1.67   | 292       | 487.64    |
|                | Unskilled Labour for carrying and Placing at work site                                                                                                                                                                                                                                                                   | No   | 3      | 292       | 876.00    |
|                | Skilled Labour for stitching                                                                                                                                                                                                                                                                                             | No   | 0.33   | 370       | 122.10    |
|                | Total per bag                                                                                                                                                                                                                                                                                                            |      |        | Total (B) | 1,485.74  |
| C              | Hire charge of Machine                                                                                                                                                                                                                                                                                                   |      |        |           |           |
|                | Hire charge of Stretching Machine                                                                                                                                                                                                                                                                                        | No   | 0.33   | 50        | 16.50     |
|                | Hire charge of Generator 3 K.V.A.                                                                                                                                                                                                                                                                                        | No   | 2.67   | 74        | 197.58    |
|                | Total per bag                                                                                                                                                                                                                                                                                                            |      |        | Total (C) | 214.08    |
| D              | Carriage Cost of Local Sand                                                                                                                                                                                                                                                                                              |      |        |           |           |
|                | 1.2 Cft = 0.034 m <sup>3</sup>                                                                                                                                                                                                                                                                                           | cum  | 7.40   | 157.85    | 536.62    |
|                |                                                                                                                                                                                                                                                                                                                          |      |        | Total (D) | 536.62    |
|                | Total cost of (A+B+C+D) =                                                                                                                                                                                                                                                                                                | Bag  |        |           | 3,070.44  |
|                | Rate per Bag                                                                                                                                                                                                                                                                                                             |      |        |           | 30.70     |
| 4.1            | Granular Sub-base with Well Graded Material (Table 400.1)                                                                                                                                                                                                                                                                |      |        |           |           |
|                | (By mix in place method) For Grading II Material                                                                                                                                                                                                                                                                         |      |        |           |           |
|                | Construction of granular sub-base by providing well graded material, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401. |      |        |           |           |
| (ii)           | For Grading II Material                                                                                                                                                                                                                                                                                                  |      |        |           |           |
|                | Unit = cum                                                                                                                                                                                                                                                                                                               |      |        |           |           |
|                | Take output = 500 cum                                                                                                                                                                                                                                                                                                    |      |        |           |           |
| a)             | Labour                                                                                                                                                                                                                                                                                                                   |      |        |           |           |
|                | Mate                                                                                                                                                                                                                                                                                                                     | day  | 0.10   | 304.00    | 121.60    |
|                | Mazdoor (Skilled)                                                                                                                                                                                                                                                                                                        | day  | 2.00   | 170.00    | 740.00    |
|                | Mazdoor (Unskilled)                                                                                                                                                                                                                                                                                                      | day  | 8.00   | 292.00    | 2336.00   |
| b)             | Machinery                                                                                                                                                                                                                                                                                                                |      |        |           |           |
|                | Tractor mounted grader arrangement for grading @ 100 cum per hour                                                                                                                                                                                                                                                        | hour | 12.00  | 573.20    | 6878.40   |
|                | Three wheel 80-100 KN static roller @ 10 cum per hour                                                                                                                                                                                                                                                                    | hour | 12.00  | 893.00    | 9636.00   |
|                | Tractor with Rotavator 25 cum per hour                                                                                                                                                                                                                                                                                   | hour | 12.00  | 573.20    | 6878.40   |
|                | Water trucker 5 kl capacity                                                                                                                                                                                                                                                                                              | hour | 5.00   | 184.00    | 920.00    |
| c)             | Material                                                                                                                                                                                                                                                                                                                 |      |        |           |           |
|                | Well graded granular sub-base material as per Table 400.1                                                                                                                                                                                                                                                                |      |        |           |           |
|                | 26.5 mm to 9.5 mm @ 35 per cent                                                                                                                                                                                                                                                                                          | cum  | 134.40 | 604.91    | 81299.90  |
|                | 9.5 mm to 2.36 mm @ 25 per cent                                                                                                                                                                                                                                                                                          | cum  | 96.00  | 582.00    | 55948.80  |
|                | 2.36 mm below @ 40 per cent - Local Sand                                                                                                                                                                                                                                                                                 | cum  | 153.60 | 514.58    | 79039.49  |
|                | Water                                                                                                                                                                                                                                                                                                                    | kl   | 50.00  | 40.00     | 1200.00   |
|                | Cost of GSB for 300 cum                                                                                                                                                                                                                                                                                                  |      |        |           | 244998.59 |
|                | A) Cost of GSB without carriage per cum                                                                                                                                                                                                                                                                                  | cum  |        |           | 816.66    |
| e)             | CARRIAGE                                                                                                                                                                                                                                                                                                                 |      |        |           |           |
|                | Carriage for GSB material                                                                                                                                                                                                                                                                                                | Cum  | 0.748  | 1187.62   | 912.09    |
|                | Carriage for material below 2.36 mm (Local Sand)                                                                                                                                                                                                                                                                         | Cum  | 0.512  | 1187.62   | 608.06    |

|      |                                                                                                                                                                                                                                                                                                         |     |       |         |          |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|---------|----------|
|      | Rate per cum with carriage                                                                                                                                                                                                                                                                              |     |       |         | 2336.82  |
| 9.3  | Providing and Laying Reinforced Cement Concrete Pipe NP3 as per design in Single Row                                                                                                                                                                                                                    |     |       |         |          |
| 1100 | Providing and laying reinforced cement concrete pipe NP3 in culverts on first class bedding of granular material in single row including: fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and piers Clause 1106. |     |       |         |          |
| A.   | 1000 MM DIA (Double Row)                                                                                                                                                                                                                                                                                |     |       |         |          |
| a)   | Material                                                                                                                                                                                                                                                                                                |     |       |         |          |
|      | RCC NP3 pipe including collar                                                                                                                                                                                                                                                                           | m   | 15.00 | 7755.50 | 11332.50 |
| b)   | Labour                                                                                                                                                                                                                                                                                                  |     |       |         |          |
|      | Mate                                                                                                                                                                                                                                                                                                    | day | 0.22  | 304.00  | 66.88    |
|      | Mason (1st class)                                                                                                                                                                                                                                                                                       | day | 0.60  | 751.00  | 210.60   |
|      | Mazdoor (Unskilled)                                                                                                                                                                                                                                                                                     | day | 4.80  | 297.00  | 1401.60  |
|      | Cost for 7.5m = (a+b+c)                                                                                                                                                                                                                                                                                 |     |       |         | 1301.58  |
|      | A) Basic Cost per m = (a+b+c)/7.5                                                                                                                                                                                                                                                                       | m   |       |         | 574.88   |
|      | CARRIAGE COST                                                                                                                                                                                                                                                                                           |     |       |         |          |
|      | NP3 Pipe                                                                                                                                                                                                                                                                                                | m   | 15.00 | 487.00  | 7230.90  |
|      | Carriage cost of 7.5 m                                                                                                                                                                                                                                                                                  |     |       |         | 7230.90  |
|      | B) Carriage cost per m                                                                                                                                                                                                                                                                                  | m   |       |         | 964.12   |
|      | Rate per m = (A+B)                                                                                                                                                                                                                                                                                      | m   |       |         | 6699.00  |
| B.   | 1000 MM DIA (Single Row)                                                                                                                                                                                                                                                                                |     |       |         |          |
| a)   | Material                                                                                                                                                                                                                                                                                                |     |       |         |          |
|      | RCC NP3 pipe including collar                                                                                                                                                                                                                                                                           | m   | 7.50  | 2755.50 | 20666.25 |
| b)   | Labour                                                                                                                                                                                                                                                                                                  |     |       |         |          |
|      | Mate                                                                                                                                                                                                                                                                                                    | day | 0.09  | 304.00  | 27.36    |
|      | Mason (1st class)                                                                                                                                                                                                                                                                                       | day | 0.25  | 751.00  | 87.75    |
|      | Mazdoor (Unskilled)                                                                                                                                                                                                                                                                                     | day | 2.00  | 292.00  | 584.00   |
|      | Cost for 7.5m = (a+b+c)                                                                                                                                                                                                                                                                                 |     |       |         | 2165.36  |
|      | A) Basic Cost per m = (a+b)/7.5                                                                                                                                                                                                                                                                         | m   |       |         | 284.71   |
|      | CARRIAGE COST                                                                                                                                                                                                                                                                                           |     |       |         |          |
|      | NP3 Pipe                                                                                                                                                                                                                                                                                                | m   | 7.50  | 482.00  | 3615.45  |
|      | Carriage cost of 7.5 m                                                                                                                                                                                                                                                                                  |     |       |         | 3615.45  |
|      | B) Carriage cost per m                                                                                                                                                                                                                                                                                  | m   |       |         | 482.06   |
|      | Rate per m = (A+B)                                                                                                                                                                                                                                                                                      | m   |       |         | 3330.77  |
| C.   | 600 MM DIA (Double Row)                                                                                                                                                                                                                                                                                 |     |       |         |          |
| a)   | Material                                                                                                                                                                                                                                                                                                |     |       |         |          |
|      | RCC NP3 pipe including collar                                                                                                                                                                                                                                                                           | m   | 15    | 1582.72 | 23740.80 |
| b)   | Labour                                                                                                                                                                                                                                                                                                  |     |       |         |          |
|      | Mate                                                                                                                                                                                                                                                                                                    | day | 0.04  | 304.00  | 12.16    |
|      | Mason (1st class)                                                                                                                                                                                                                                                                                       | day | 0.12  | 351.00  | 42.12    |
|      | Mazdoor (Unskilled)                                                                                                                                                                                                                                                                                     | day | 0.96  | 292.00  | 780.32   |
|      | Cost of 7.5m = (a+b+c/d)                                                                                                                                                                                                                                                                                |     |       |         | 21075.40 |
|      | A) Basic Cost per m = (a+b)/7.5                                                                                                                                                                                                                                                                         | m   |       |         | 3210.05  |
|      | CARRIAGE COST                                                                                                                                                                                                                                                                                           |     |       |         |          |
|      | NP3 Pipe                                                                                                                                                                                                                                                                                                | m   | 15    | 194.99  | 2924.85  |
|      | Carriage cost of 7.5 m                                                                                                                                                                                                                                                                                  |     |       |         | 2924.85  |
|      | B) Carriage cost per m                                                                                                                                                                                                                                                                                  | m   |       |         | 389.98   |
|      | Rate per m = (A+B)                                                                                                                                                                                                                                                                                      | m   |       |         | 3600.03  |
| D.   | 600 MM DIA (Single Row)                                                                                                                                                                                                                                                                                 |     |       |         |          |
| a)   | Material                                                                                                                                                                                                                                                                                                |     |       |         |          |
|      | RCC NP3 pipe including collar                                                                                                                                                                                                                                                                           | m   | 7.50  | 1582.72 | 11870.40 |
| b)   | Labour                                                                                                                                                                                                                                                                                                  |     |       |         |          |
|      | Mate                                                                                                                                                                                                                                                                                                    | day | 0.04  | 304.00  | 12.16    |
|      | Mason (1st class)                                                                                                                                                                                                                                                                                       | day | 0.12  | 351.00  | 42.12    |
|      | Mazdoor (Unskilled)                                                                                                                                                                                                                                                                                     | day | 0.96  | 292.00  | 280.32   |
|      | Cost of 7.5m = (a+b+c-d)                                                                                                                                                                                                                                                                                |     |       |         | 12205.00 |
|      | A) Basic Cost per m = (a+b)/7.5                                                                                                                                                                                                                                                                         | m   |       |         | 1627.33  |
|      | CARRIAGE COST                                                                                                                                                                                                                                                                                           |     |       |         |          |
|      | NP3 Pipe                                                                                                                                                                                                                                                                                                | m   | 7.5   | 194.99  | 1462.43  |

|  |                        |   |  |  |         |
|--|------------------------|---|--|--|---------|
|  | Carriage cost of 7.5 m |   |  |  | 1462.35 |
|  | B) Carriage cost per m | m |  |  | 194.99  |
|  | Rate per m = (A+B)     | m |  |  | 1822.32 |

|      |                                                                                 |     |      |        |        |
|------|---------------------------------------------------------------------------------|-----|------|--------|--------|
| 11.1 | Local Sand filling in as per drawing and technical specification Clause 305.3.9 |     |      |        |        |
|      | Sand filling                                                                    |     |      |        |        |
|      | Unit = cum                                                                      |     |      |        |        |
| a)   | Labour                                                                          |     |      |        |        |
|      | Mate                                                                            | day | 0.01 | 304.00 | 3.04   |
|      | Mazdoor (Unskilled)                                                             | day | 0.30 | 292.00 | 87.60  |
| b)   | Material                                                                        |     |      |        |        |
|      | Sand (assuming 20 per cent voids)                                               | cum | 1.20 | 141.85 | 170.22 |
|      | Rate per cum = (a+b)                                                            |     |      |        | 260.86 |
| c)   | Carriage Cost                                                                   |     |      |        |        |
|      | Sand (assuming 20 per cent voids)                                               | cum | 1.20 | 157.85 | 189.40 |
|      | Rate per cum = a+b+c                                                            | cum |      |        | 450.26 |

730.22

*Draw*  
01/11/21  
J.E.

*Dr*  
21-11-2021  
A.E.

*R*  
01/11/21  
E.E.