



Government of Andhra Pradesh

A.P. Revised Standard Data (With Schedule of Rates 2021-22 (Effective from 01-06-2021)

Part – 1 For Water Resources Department Works and LEADS & LIFTS (Common to all Department)

BOARD OF CHIEF ENGINEERS

**Office of the Engineer-in-Chief (I.W)
Water Resources Dept., Vijayawada.**

Procs.No.ENC/IW/P&M/EE.1/DEE-3/AEE (N)/ SoR 2021-22/Vol.1 dt: 28.07.2021

Sub:- A.P. Revised Standard Data with SoR 2021-22 for Water Resources Department works (Part-I) - approved – Printing & Communication of Standard Data – Reg.,

Ref:- 1) G.O.Ms.No.49, I&CAD (PW: Reforms) Dept., Dt: 02.03.2009.
2) Minutes of BOCEs meeting for Schedule of Rates held on Dt: 22.07.2021.
3) SoR Procs.No.ENC/IW/SE (P&M)/EE.1/DEE-3/AEE(N)/SoR 2021-22/Vol.1
Dt: 28.07.2021.

The BoCEs meetings for finalization of Schedule of Rates (SoR) for WR Dept. (Part-I), Road & Bridges (Part-II) and Public Health Items (Part-IV) were held on 22.07.2021 and approved minutes of meeting is placed on the Water Resources website i.e., <http://irrigation.ap.gov.in>.

Subsequently, based on the approved minutes of meeting, the rates pertaining to WR items(Part-I), Roads & Bridges items(Part-II) & Public Health Items(Part-IV) are updated and proceedings are issued for approved SoR-2021-22 for Parts-I,II & IV on 28.07.2021 by Engineer-in-Chief(A.W/I.W), WR Dept. & Chairman, BoCEs.

Based on the approved rates of SoR-2021-22 for all the materials and capital cost of machinery, the unit rate of work items related to Water Resources Department are arrived for the year 2021-22.

By incorporating approved labour, material and Hire Charges for SoR 2021-22 & Percentage Provision of 13.615% towards Contractor's profit and overhead charges in the items, the A.P. Revised Standard Data (unit rate for work items) for the year 2021-22 is finalized.

Any additions or modifications or deletions in the existing data must be approved by BOCEs only.

**Encl: Soft copy of A.P Revised Standard Data
for WR Department for the year 2021-22.**

**Sd/-R.Sathish Kumar,dt.28.07.2021
Engineer-in-Chief(A.W/I.W.)
Chairman, BOCE(SoR)
Water Resources Department**

- I) Copy submitted to the Secretary to Govt., WR Dept., 4th Block, A.P.Secretariat Buildings, Velagapudi,Amaravathi.
- II) Copy communicated to the following Heads of Departments along with enclosures for information.
 1. Engineer-in-Chief (Admn)., Roads & Buildings Department.
 2. Engineer-in-Chief, Public Health Department.
 3. Engineer-in-Chief, Panchayath Raj Department.

4. Engineer-in-Chief, R W S, Department.
 5. Chief Engineer (Buildings & RSW), R&B Department.
- III) Copy of Scheduled of Rates 2021-22 & Standard data, Part-1 (WR Dept. works) are communicated to the respective E-mail ids of all the Engineers-in-Chief, Chief Engineers and Regional Superintending Engineers of Irrigation circles of Vijayawada, Guntur, Dowlaiswaram and Chittoor of Water Resources Department for taking necessary action
- IV) Copy to DEE(Computers), EnC(SAW) for uploading the approved SoR-2021-22 (part-I, Part-II & Part-IV) & Standard Data Part-I on the Water Resources Department website to communicate this letter to all the members of Board of Chief Engineers through E-mail

Sd/-R.Sathish Kumar,dt. 28.07.2021
Engineer-in-Chief (A.W/I.W.)
Chairman, BOCE(SoR)
Water Resources Department

GOVERNMENT OF ANDHRA PRADESH

ABSTRACT

Irrigation & CAD Department - Adoption of Revision and Updating of Andhra Pradesh Standard data in all Engineering/Public Works Department and other organisations - Orders - Issued.

IRRIGATION & CAD (PW- REFORMS) DEPARTMENT

G.O.Ms. No. 49

Dated: the 2nd March, 2009
Read the following:-

1. G.O.Rt.No.7326 , GA (GPM/AR) Department dated 26.10.2005
2. From the Director General D.O.Letter.No.CGG/AP Standard Data/2006-07, dated 8.12.2006
3. Govt.Memo.No.36710/Reforms/I&CAD(PW) Dept., dated 22.6.2007
4. U.O.Note.No.36710/Reforms/2005, I&CAD (PW) Dpt., dt.29.6.2007
5. Govt.Memo.No.36710/Reforms/2005, I&CAD Dept., dated 10.3.2008
6. From ENC (AW)/IW I&CAD Dept., Letter.No.ENC/IW/P&M/EE.1/DEE.8 /19200-98, dated 21.4.2008

ORDER:

The basic components for preparing any estimate are Standard Specifications, Standard Data, and Schedule of Rates for construction materials, skilled and un-skilled labour and hire charges of machinery utilized on works. To get the work done, as per the standard specifications, required quantities of recommended materials, requirement of specific need based manpower, deployment of proper utility based machinery and duration of its utilization are to be observed and quantified for each unit of work, and this is called Standard Data. Thus, the Standard Data gives the details of various inputs in terms of quantities required for one Unit of any work. Schedule of rates for material, skilled and unskilled labour are fixed and revised by the Board of Chief Engineers' once in a year and these are called Standard Schedule of Rates. When the Standard Schedule of Rates and Hire charges of machinery are incorporated in the inputs of Standard Data and Standard Schedule of Rates it will have direct bearing on the preparation of project Estimates and consequent finalization of Tenders.

(P.T.O.)

2. The existing AP Standard Data for various construction items were based on observations made several decades back mostly by utilizing manpower for execution of all items of works, and deployment of machinery was at the barest minimum. The advent of latest machinery and their extensive use has changed the structure and methodology of data formulation and rate structure. There is a need to revise the present “Standard Data” for all items of works dealing with Public works. Realizing the urgency and importance to have realistic data, Government in the GO.Rt.No.7326 G.A (GPM & AR) Department dated 26-10-2005 constituted a High Level Committee under the chairmanship of Special Chief Secretary, General Administration (GPM&AR) Department, to advise on “Updating and Revising the A.P.Standard Data”. A project for Standard Data (revision) and Schedule of Rates was conceived and entrusted to the Centre for Good Governance. Keeping in view the strategy, factors considered and classification of works, a number of High Level Committee meetings and review meetings were conducted at Centre for Good Governance/ A.P.Secretariat and in the offices of concerned Engineers-in-Chief I&CAD, Public Health, Panchayati Raj and Roads & Buildings Departments etc. Their specific views, suggestions and recommendations were taken into account, besides collecting the data from various sources while finalizing the Draft AP standard Data and Standard Schedule of Rates. This has been cleared by the Board of Chief Engineers’ and finally by the High level Committee. The Standard Data has been revised and updated in four parts considering nature of work, location of work and magnitude of work as indicated below.

- | | |
|-------------|--|
| 1. PART - I | : Irrigation & Command Area Development. |
| 2. PART- II | : Roads & Bridges. |
| 3. PART-III | : Buildings |
| 4. PART-IV | : Drinking Water Supply Schemes. |

3. The revision of Standard Data and Schedule of Rates in respect of works items of Irrigation Department has been taken up by the SPIU (Irrigation) and completed as per the C.W.C guidelines and B.I.S standards and also observations and recommendations made by the High Level Committee. In respect of other Departments, MORTH data is adopted for Roads & Bridges, where higher capacity machinery can be deployed and MORD data is adopted for Roads & Bridges in Rural areas. For other works data as per MORTH, MORD, and C.P.W.D. etc., is adopted. The comparative estimates have been prepared by the T.R. &B Dept. , Engineering-in-Chief (Irrigation) and MA & UD Department for various types of works of a magnitude of Rs.15-20 crores, based upon the earlier data and the newly revised and proposed data .

4. After detailed deliberations and discussion on the above issue, the Govt. accept the recommendations of Board of Chief Engineers and High level Committee and accordingly issue the orders for adoption of the Revised and Updated Standard data in all Engineering/ Public works Department and other organisations in four parts considering nature of work, location of work and magnitude of work as indicated below. The four parts of Standard Data

booklets are forwarded to Engineer-in-Chief (AW), who in turn will publish the authenticated version and circulate a copy to all works Departments.

1. PART - I : Irrigation & Command Area Development.
2. PART- II : Roads & Bridges.
3. PART-III : Buildings
4. PART-IV : Drinking Water Supply Schemes.

5. The Revised Data now approved is to be adopted by all Engineering Departments/ all Public Works Department and other organisations, duly superseding all the earlier orders issued on the subject.

6. These orders shall come into force from the date of issue.

7. This order issues with the concurrence of Finance Department vide their U.O.No.5532/520/Exp.PW.I Dept/08, dated 13-5-2008.

(BY ORDER AND IN THE NAME OF THE GOVERNOR OF ANDHRA PRADESH)

RAJIV RANJAN MISHRA
SECRETARY TO GOVERNMENT

To

All the Engineer-in-Chief of Irrigation & CAD Department.

All the Chief Engineers of Irrigation & CAD Department.

The Commissioner, Commissioner of Tenders,

The Engineer-in-Chief, PR & RD Department, Hyderabad.

The Engineer-in-Chief (R&B) Admn.,Dept., Hyderabad.

The Engineer-in-Chief (PH) Hyderabad.

Copy to:

All the Collectors & Dist. Magistrate of Andhra Pradesh

All Sections in Irrign. & CAD (PW/Irrgn.) Dept.

The Accountant General Andhra Pradesh Hyderabad.

The G.A. (Cabinet) Dept. w.r.t. U.O.No.79/2009, dated 17-2-2009.

The G.A. (GPM&AR) Dept.

The Finance (W&P) Dept.

The P.S. to Ministers (PR & RD/ MA &UD/ T.R. & B / Housing)

The P.S. to Prl. Secy. (SKJ)/ P.S. to Secretary (AD)/ P.S. to Secretary (RRM)

The P.S. to Prl. Secretary, Housing/P.S. to Prl. Secy, M.A. & U.D. / P.S. to Secretary, T.R.& B / P.S. to Prl. Secretary, PR & RD./P.S. to Secretary , Housing.

All the Advisors of Irrgn. & CAD Dept.

SF/SC.

// FORWARDED::BY ORDER//

SECTION OFFICER

| code and index for work items of standard data | | |
|--|---|--------------|
| Item Code | Item of the work | Page No. |
| PREAMBLE & GUIDELINES | | I-xii |
| <u>PART-1</u> | <u>IRRIGATION</u> | |
| | Abstract of Items - Irrigation | 1-46 |
| | Abstract of Leads and Lifts | 47-49 |
| IRR-DAW | Dam And Allied Works | |
| IRR-DAW-1 | EXCAVATION & FOUNDATION TREATMENT WORKS: | 50 |
| IRR-DAW-2 | REINFORCEMENT & CEMENT CONCRETE WORKS : | 62 |
| IRR-DAW-3 | MASONRY & GUNITING WORKS : | 81 |
| IRR-DAW-4 | CONTRACTION JOINT WORKS: | 87 |
| IRR-DAW-5 | EARTH / ROCKFILL EMBANKMENT WORKS : | 91 |
| IRR-DAW-6 | FILTER & PITCHING WORKS : | 100 |
| IRR-TAW | Tunnel & Allied Works | |
| IRR-TAW-1 | EXCAVATION : | 110 |
| IRR-TAW-2 | DEWATERING & GUNITING WORKS : | 118 |
| IRR-TAW-3 | TEMPORARY & PERMANENT SUPPORTS : | 121 |
| IRR-TAW-4 | MASONRY WORKS : | 126 |
| IRR-TAW-5 | REINFORCEMENT & CONCRETE WORKS : | 127 |
| IRR-TAW-6 | DRILLING & GROUTING WORKS : | 132 |
| IRR-CAW | Canal And Allied Works | |
| IRR-CAW-1 | EXCAVATION WORKS : | 135 |
| IRR-CAW-2 | EMBANKMENT WORKS USING BORROW AREA SOIL : | 146 |
| IRR-CAW-3 | EMBANKMENT WORKS USING DUMP AREA SOIL : | 152 |
| IRR-CAW-4 | EMBANKMENT WORKS USING EXCAVATED SOIL : | 155 |
| IRR-CAW-5 | FOUNDATION FILLING WORKS : | 159 |
| IRR-CAW-6 | ROCK FILL WORKS : | 165 |
| IRR-CAW-7 | CANAL LINING WORKS : | 166 |
| IRR-CAW-8 | ROCK PITCHING: | 199 |
| IRR-CCDW | Canal & Cross Drainage Works | |
| IRR-CCDW-1 | EXCAVATION & FOUNDATION TREATMENT WORKS : | 209 |
| IRR-CCDW-2 | STEEL AND CEMENT CONCRETE WORKS : | 215 |
| IRR-CCDW-3 | FOUNDATION WELL SINKING WORKS : | 242 |
| IRR-CCDW-4 | MASONRY WORKS : | 244 |
| IRR-CCDW-5 | COPING & RAILING WORKS : | 251 |
| IRR-CCDW-6 | HUME PIPE LAYING & JOINTING WORKS : | 255 |
| IRR-CCDW-7 | BACK FILLING & OTHER WORKS : | 261 |

| Item Code | Item of the work | Page No. |
|--|--|----------|
| IRR_GAW | <u>Gates/Hoists And Allied Works</u> | |
| | NOTES ON GATES/HOISTS AND ALLIED WORKS | 265 |
| IRR-GAW-1 | RADIAL GATES | 266 |
| IRR-GAW-2 | VERTICAL LIFT GATES | 274 |
| IRR-GAW-3 | SAND BLASTING AND PAINTING: | 305 |
| IRR-GAW-4 | PAINTING WITHOUT SAND BLASTING: | 310 |
| IRR-PMW | Preliminary And Maintenance Works | |
| IRR-PMW-1 | JUNGLE CLEARANCE : | 313 |
| IRR-PMW-2 | PRELIMINARY WORKS : | 320 |
| IRR-PMW-3 | MAINTENANCE WORKS : | 327 |
| COM-MWRK | A. Manual Works | 241-241 |
| | | |
| | | |
| <u>COMMON ITEMS TO ALL DEPARTMENTS (unless specified)</u> | | |
| | | |
| COM_MWRK | A. Manual Works | 341 |
| COM_LDLFT | B. Lead/Lift/Loading & Unloading Charges | |
| | (to follow MORTH standards for the items not covered ,as applicable to roads and bridge works) | |
| COM-LDLFT | Notes on Lead and Lift | 342 |
| COM-LDLFT-1 | (Lead) Conveyance Charges for materials by head load | 342 |
| COM-LDLFT-2 | (Lead) Conveyance charges for machinery per kilometer for transporting materials by tippers and trucks, excluding loading, unloading and hire charges of machinery. | 342 |
| COM-LDLFT-3 | LOADING AND UNLOADING CHARGES BY MANUAL MEANS (Idle hire charges of trucks are not added) | 343 |
| COM-LDLFT-4 | LOADING AND UNLOADING CHARGES BY MANUAL MEANS (including idle hire charges of trucks) | 343 |
| COM-LDLFT-5 | LOADING AND UNLOADING CHARGES BY MECHANICAL MEANS (including idle hire charges of trucks) | 343 |
| COM-LDLFT-6 | LIFT CHARGES FOR MATERIALS BY HEAD LOAD | 343 |
| COM-DTL-LDLFT-1 | (Lead) Conveyance Charges for materials by head load | 344 |
| COM-DTL-LDLFT-2 | (Lead) Conveyance charges for machinery per kilometer for transporting materials by tippers and trucks, excluding loading, unloading and hire charges of machinery. | 345 |
| COM-DTL-LDLFT-3 | LOADING AND UNLOADING CHARGES BY MANUAL MEANS (idle hire charges of trucks are not added) | 351 |
| COM-DTL-LDLFT-4 | LOADING AND UNLOADING CHARGES BY MANUAL MEANS (including idle hire charges of trucks) | 352 |
| COM-DTL-LDLFT-5 | LOADING AND UNLOADING CHARGES BY MECHANICAL MEANS (including idle hire charges of trucks) | 353 |
| COM-DTL-LDLFT-6 | LIFT CHARGES FOR MATERIALS BY HEAD LOAD | 354 |
| | MACHINERY HIRE CHARGES | 355 |

A.P. REVISED STANDARD DATA

PREAMBLE

The AP Revised Standard data for various construction items has come into existence as per the Government orders G.O.Ms.No.49, I & CAD (PW: Reforms) Dept., dt: .2-3-2009.

The background for adoption of A.P. Revised Standard Data is:

1. Government, in GO 7326 (GAD-GPM& AR), Dated 26-10-2005, has observed that the age old "Standard data" requires revision and updation with reference to the latest machinery and contemporary practices and has constituted a **High Level Committee** to advise on updating and revision of standard data and schedule of rates. The work has been taken up by CGG and SPIU-irrigation. The secretary (Irrigation) is the member- convener of the committee.

Accordingly the data has been revised adopting the procedures and guidelines given by CWC, Report on "committee on cost control of river valley Projects, BIS specifications, NHAI, MORTH, MORD, CPWD and Government of Karnataka and revised data and formulated schedule of rates for all infrastructure Departments (I&CAD, R&B, PR and PH). The team of senior engineers interacted with the S.R Committee of Karnataka on implementation and improvements needed. For Water Resources work items, the data pattern as adopted by Karnataka has been considered and for other Departments, the data adopted by MORTH, MORD and NHAI etc. is adopted.

2. Sequence followed in revision of standard data is,
 - (a) The first step is the revision and formulation of standard data for each work component.
 - (b) The second step is to work out the details of inputs. This enables to generate the unit work item rates, by incorporating the use rates of machinery, materials, labour charges and other supplementary parameters.
 - (c) The third step is to develop software tool to generate unit rate using the software (completed for Water Resources work items by the SPI Unit of Irrigation)

3. The Detailed draft data was communicated to all the HOD's and interacted through many seminars and discussions and incorporated the relevant features. The Board of chief engineers in their meetings have recommended for acceptance to the data formulated and schedule of rates. It was proposed to examine the recommendations on important parameters, to refer to high level committee, for their specific recommendations for adoption, as they are common to all departments.

The committee made in depth study on the methodology and systems followed by the reputed National organizations and other States and made detailed deliberations with HOD's and representatives of Builders Association of India and made recommendations to the Government, on adoption of such parameters in A.P.

4. The Chief Secretary held a detailed discussions on 04-07-2007, with the Secretaries of the Departments and Heads of Departments.

GUIDELINES

- 1) The Revised Standard Data is formulated under four Parts, which are applicable to all the Engineering Departments and other Organisations.

PART -1: Water Resources Department work items (Dam and Allied Works, Canals and Allied Works, Canal C.D. Works, Tunnels and Allied Works, Preliminary and Maintenance Works, Hydraulic Gates and allied works and Leads and Lifts applicable to all Departments)

PART -2: Roads and Bridges.

PART -3: Buildings including Electrical Works.

PART -4: Drinking Water Supply and Public Health (ONLY FOR WORKS DONE BY MANUAL MEANS)

2) Brief description of item of work (Specification of work item):

Brief description of the item of work to cover all important aspects of the work included in the Data. On reading the item description, the user should be in a position to assess the various cost components involved in the work.

3) Data for assessing quantities:

The data reflects various assessments / assumptions made in arriving at the quantities of materials, machinery, labour and other in-puts. In case of plants and equipment the output of main plant is worked out and the requirement of all other inputs and assessed to match the output of the main plant. Cycle time of operations is the criteria for assessing the output of equipment. Generally the equipment manufacturers furnish the output of machinery under ideal conditions of working. Suitable job and management efficiency factors are considered while working out the average output of machinery under field conditions. In case of combination of machinery and manpower, the assessment of manpower shall match the output of machinery.

Though cycle time of operations is the criteria for hourly / daily out-put of machinery work-force, the actual progress of work depends on several other factors such as power interruptions, minor break-downs, time for meals and other needs of work-force, stray rains etc. Therefore, it is the general practice to consider 50 minutes as the actual working time per hour for working out the hourly / daily out-put of machinery / work-force. CWC / BIS guide-lines stipulate the actual working hours for the purpose of

equipment planning and utilisation. The daily out-put is computed duly considering the actual available working time and feedback from the field.

- For gate and hoist works, it is the general practice to specify the quantity of work in terms of number of sets of embedded parts / gates. The requirement of machinery and work-force for cutting, bending, fabrication, erection, painting etc., is assessed to commensurate with the task involved.
- The data for gates and E.M. Parts is arrived per Ton quantity.
- The data for Hoists and Gantry Cranes is worked out on the basis of capacity in tonnage.

4) The lead and lift charges provided in PART-I (B) are generally applicable and common to all Departments. For applicability of lead and lift charges for various materials and other details, please refer to COM-LDLFT in lead and lift charges statement. For any item not covered in this part, the rates as provided in the data of the relevant works may be adopted in preparation of estimates.

5) The basic material inputs needed for all works are listed and incorporated in the data. The requirements are analyzed and the specifications adopted shall confirm to Standards published by the BIS.

- The labour and material rates will be communicated by the Board of Chief engineers.
- Unless otherwise specified, all material rates shall be exclusive of GST, duties, levies, transportation and handling costs up to project area.
- For sand, gravel , murum, stones , course aggregates etc, the rates are to be fixed for delivery at Quarry, adding loading charges by machinery / manual means and idle hire charges of machinery (as per table under chapter " conveyance or lead and lift charges"), as applicable.
- For steel, AC sheets, GI sheets, Hume pipes, wood and stone slabs, the rates are to be taken prevailing at major commercial centre near project area. The lead charges, as applicable are to be added in preparing estimates.

- The specifications of the aggregates for sizes and gradation and its adoption shall be as per IS 383.

6) The labour component in the data is mentioned for unit work.

- No allowance towards labour importation and labour amenities added extra as they are included in the recommended overheads.
- On Labour Component: Certain additional allowances are added extra to the wages of labour (i.e. only on labour component in the work item) in the form of percentage, as recommended by the Government/Board of Chief Engineers due to statutory and other provisions.
- However, If more than one area allowances, such as those for (1) Municipalities Agency / Tribal areas (3) Industrial areas are applicable for a particular situation, only the maximum out of the allowable percentages is to be allowed

7) HIRE CHARGES OF MACHINERY:

The machinery and /or group of machinery for items of works and their output has been worked based on the availability of machinery generally in the market and working in the field successfully, duly considering cycle time, idle time, operator efficiency, type of work etc.

- The hire charge of a machinery / equipment is worked out based on the guidelines published by CWC and BIS codes.
- For the other machinery not covered by the list, the R&B and other users may adopt hire charges as recommended by the MORTH

8) Lead Charges

- The high level committee has recommended to adopt, for conveyance by head load, a minimum lead of 50 meters and additional lead up to 150 meters in the intervals of 50 meters. Beyond 150 meters lead, only machinery rates are to be adopted.
- The basic work item rates provided in the Standard Data & Schedule of rates include 50 m or 1 km as initial lead and no lead charges shall be allowed where the source of material is within the initial lead specified in item rate. Additional lead charges shall be allowed for the lead exceeding

initial lead specified in the item rate. The Guidelines may be followed regarding adding Lead charges as given against each chapter.

- The lead charges per unit quantity for conveyance of the materials are worked out, and included in the schedule of rates in increment of 50 m for head load and in increment of 1 km for mechanical mode.
- The rates for lead charges by head load up to 150 meters and by machinery up to 5 km, shall be cumulative and inclusive of lead charges for preceding lead. For lead beyond 5 km, the lead charges shall be worked out on per km basis.

9) Loading and Unloading charges for Materials

The following features are considered:

1. Loading and unloading charges are not payable for conveyance by head load.
2. Loading and unloading charges are not payable for conveyance by mechanical means, for disposal of excavated material unless specified.
3. The rates for unloading of materials except earth, sand, gravel, coarse aggregate, rubble, size stone and cut stone, are inclusive of stacking wherever applicable.

10) LIFT CHARGES:

- The data includes initial lift charges of 3 meters ,for materials conveyance by head load, Additional leads in the interval of 1.0 meters are worked out, as additional labour input and incorporated in the chapter on" Lead and lifts" .
- Where the conveyance / lifting of material is done by mechanical means, lift charges shall not be considered, as the cycle time of operation of the machine includes lifts involved.
- The data and rates for lift charges is cumulative and are inclusive of rates for preceding lifts also.

11) Wastage of Materials

- (i) **Cement:** No wastage allowance is recommended towards the quantity of cement used in works, as the wastage is already included in the input and in major works , bulk quantities are used.

(ii)Steel: The wastage of steel @ 2.5% is allowed for gates and allied structures. For RCC works the wastage is @2.5% for the reinforcement rods above 36mm dia. and @ 5% for rods below 36mm dia. including overlaps, if they are not welded. If welding is adopted for the reinforcement rods even for below 36mm dia, 2.5% of wastage is only recommended.

12) Provision for rate for water:-

The Committee has recommended not to consider the water charges in the Irrigation Project works. But, it may be considered in specific cases as per the site conditions.

13) In respect of RCC works the rate for cement concrete for 1 cum is worked separately for all grades based on Indian Standards. The rate for ton is calculated separately and to be added separately in the estimates of RCC works as a separate item.

14) Soil classification: The Committee recommended to allow uniform classification of soils for all Departments and data is worked out accordingly.

1. all soils
2. Marshy soil
3. ordinary rock (not requiring blasting).
4. hard rock
 - a. hard rock (requiring blasting)
 - b. hard rock (controlled blasting)
 - c. removable by chiseling(blasting prohibited)

15) Use of Super Plasticizers and Admixtures:

Concrete admixtures such as Air-Entraining Agent (AEA) / Water reducing agent can be used advantageously for better quality concrete. The high level committee has recommended to adopt for super plasticizers and admixtures at 0.4% on cement for concrete work as per MORTH standards for batching plants.

16) Contractors overheads, profit and other provisions:

- High Level Committee has recommended adding 14% towards contractor overheads and profit including labour importation and amenities, insurance etc., as given below which includes various items as recommended in MORTH data.
- The provision for GST for works contracts at 12% or as fixed by the Government from time to time should be made separately in Part-B of the estimate. The provisions allowed in G.O.Ms.No.94, I&CAD, dt: 01.07.03, need not be added separately for the items covered in the contractor overhead charges.

The overhead charges include the following elements:

- Site accommodation, setting up plant, access road, water supply, electricity and general site arrangements.
- Office furniture, equipment and communications
- Expenditure on:
 - Corporate office of contractor
 - site supervision
 - Documentation and "as built" drawings
 - Mobilisation/ de-mobilisation of resources
 - Labour camps with minimum amenities and transportation to work sites.
 - Light vehicles for site supervision including administrative and managerial requirements.
 - Laboratory equipment and quality control including field and laboratory testing.
 - Minor T & P and survey instruments and setting outworks, including verification of line, dimensions, trial pits and bore holes, where required.
 - Watch and ward.
 - Traffic management during construction.
 - Expenditure on safeguarding environment.
 - Sundries.
 - Financing Expenditure

- ~~Work insurance/ compensation~~ (Deleted as per the Government Orders G.O.Ms.No.62 I&CAD(Reforms) Department dt:11.11.2014 and consequently CP&OH component reduced to 13.615% from 14%).

17) EXCISE DUTY ON SUPPLIES :(deleted)

18) DEWATERING & DESILTING:

The High level committee considering the local conditions of rainfall / seepage has recommended towards de-watering and de-silting at 3 percent on the relevant work component for which dewatering is required. It is also proposed as per CWC guidelines, to keep a condition in the agreements shall be incorporated, to fix a ceiling of 5% in extreme cases, with the specific approval of Chief Engineer/Government.

19) Computerization of Data:

- A software program is developed by the SPI Unit (Irrigation), which facilitates automatic changes and generation of unit rates, based on basic input rates of Labour, materials and capital cost of machinery.
- A soft ware tool is also developed for auto preparation of estimates based on input quantities.
- Other Departments are also advised to develop such program.

20) In each chapter additional details are incorporated for clarity.

USER GUIDELINES OF REVISED STANDARD DATA

- 1. Please select the item of work, as given in Index Code, and view the relevant data.**
- 2. The common data items like, lead, lift, conveyance and manual excavation (without involving contracting agencies) is applicable to all Departments (Volume-1)**
- 3. The departments have to adopt the relevant data from other Departments, if such works are executed by them.**
- 4. The unit rate /hire charges, of machinery not covered in the Irrigation data, the MORTH data may be taken with the approval of Board of Chief Engineers.**
- 5. For “Drinking water Supply works and Public Health Items(PART-IV)”, the data incorporated is generally applicable only for manual means of execution. The rates deploying machinery have to be worked out by the Board of Chief Engineers and approved for adoption.**

ROLE OF CENTRAL COMPETENT AGENCY FOR SCHEDULE OF RATES (BOARD OF CHIEF ENGINEERS)

- a) The Board of Chief Engineers under the chairman ship of Engineer-in- chief, (administration) I&CAD Department is the competent authority to finalise and recommend the Schedule of Rates applicable for all engineering Departments. The board has to assess and incorporate only the three basic inputs required to generate unit work item rates as below.

Basic rates of labour:

Wages of labour commonly required in execution of works has to be arrived and incorporated in the schedule of rates (**Basic Input Of Labour Wages**), without adding extra towards area allowances (like municipality allowance, tribal area and ghat road allowances etc, which shall be added to the rates where applicable in the form of separate percentage as explained in the preceding paras. The rates shall be the prevailing daily rates in the State and shall not be less than the minimum wages fixed by the Government from time to time.

Materials rates:

The basic input material rates common to all departmental works are listed out and incorporated (in the chapter "Basic inputs") The material specifications adopted shall confirm to Standards published by the BIS.

The Prevailing market rates for all basic input materials shall be obtained from the major commercial centers near the project areas. Average of the rates, ignoring freak rates, shall be reckoned as the prevailing market rate.

Unless otherwise specified, all material rates shall be exclusive of GST, duties, levies, royalty, transportation and handling costs up to project area.

For sand, gravel, murrum, stones, aggregates etc, the rates are for delivery at Quarry including loading charges and idle hire charges. For steel, Cement, AC sheets, GI sheets, Hume pipes, wood and stone slabs, the rates prevailing at major commercial centre near project area has to be adopted.

Use rate of machinery:

The third parameter for incorporation in the Basic Inputs, is the use rate of machinery. To arrive at the use rate of machinery, the inputs to be incorporated are

- The list and capital cost of machinery required to be used in the construction activity,
- The rate has to be obtained from major manufacturers and outlet sources and the rate shall be the current market price inclusive of all duties and freight charges but exclusive GST.
- The prevailing fuel charges of petrol and diesel are ascertained and average rate adopted.
- Borrow rate of interest as fixed by the Government/competent authority be indicated.
- For the other machinery not covered by the list, the R&B and other users may adopt hire charges as recommended by the MORTH.

b) The Chairman, Board of Chief Engineers or competent authority appointed by the Government, based on the approved basic inputs, load the above three basic parameters in the software program. The unit rate of all works including hire charges of all machinery will be generated automatically for adoption.

He shall communicate the uniform Schedule of rates arrived from Standard Data, to all users for uniform and direct adoption in all infrastructure Departments, as applicable

**WORK ITEM RATES
FOR THE YEAR -2021-22**

* Add Leads and Lifts and Area Allowance as applicable in the estimate

*** Unit Rates arrived without Seigniorage Charges

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|------------------------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Chapter I | | | | | |
| IRR-DAW | | DAM AND ALLIED WORKS | | | |
| IRR-DAW-1 | | EXCAVATION & FOUNDATION TREATMENT WORKS: | | | |
| IRR-DAW-1-1 | 1 | Excavation for foundation in all kinds of soil including boulders upto 0.30 m diameter for dam, spillway, intake structure and other appurtenant works and placing the excavated soil neatly in dump area or disposing off the same as directed etc., complete with initial lead upto 1 km and all lifts. | cum | 147.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 34.50 |
| IRR-DAW-1-2 | 2 | Excavation for foundation in ordinary rock (including HDR) without blasting including boulders above 0.3 m upto 0.6 m dia for dam, spillway, intake structure and other appurtenant works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with initial lead upto 1 km and all lifts. | cum | 194.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 44.70 |
| IRR-DAW-1-3 | 3 | Excavation for foundation in hard rock (including F&F) requiring blasting including boulders above 0.6 m upto 1.2 m dia. for dam, spillway, intake structure and other appurtenant works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with initial lead upto 1 km and all lifts. | cum | 283.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 78.80 |
| IRR-DAW-1-3-A New Item2015-16-1 | 4 | Excavation for foundation in hard rock (including F&F rock) including boulders above 0.6 m upto 1.2 m dia. by controlled blasting and controlling fly rock by muffling arrangements for dam, spillway, intake structure and other appurtenant works and other open foundation works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with initial lead upto 1 km and all leads | cum | 425.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 93.80 |
| IRR-DAW-1-4(a) | 5 | Excavation for foundation in hard rock of all toughness by blasting including boulders above 1.2 m dia. for dam, spillway, intake structure and other appurtenant works and placing the excavated rock neatly in dump area or stack yard including levelling as directed etc., complete with initial lead upto 1 km and all lifts. | cum | 496.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 151.70 |
| IRR-DAW-1-5(b) | 6 | Excavation for foundation in hard rock of all toughness including boulders above 1.2 m dia. by controlled blasting method and controlling fly-rock by muffling arrangements for dam, spillway, intake structure and other appurtenant structures etc., including placing and levelling the excavated rock neatly in dump area or other place as directed etc., complete with lead upto upto 1 km and all lifts. | cum | 777.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 168.30 |
| IRR-DAW-1-6(c) | 7 | Excavation for foundation in hard rock of all toughness including boulders above 1.2 m dia. by line drilling and smooth blasting and controlling fly-rock by muffling arrangements for dam, spillway, intake structure and other appurtenant structures etc., including dressing sides and bed to required level / profile, placing and levelling the excavated rock neatly in dump area or other place as directed etc., complete with lead upto 1 km and all lifts. i) For the purpose of payment 1 m width of excavation along boundary of excavation shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be. ii) The rate includes controlling fly-rock wherever required. iii) The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval. iv) In case, where the above criteria is not fulfilled payment shall be restricted to rate provided for excavation by normal blasting or controlled blasting as the case may be. | cum | 1064.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 439.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|-------|----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-DAW-1-7 | 8 | Preparing foundation bed for masonry or concrete by benching, stepping, removing all loose material by wedging / chiselling and disposing off the same as directed and cleaning the surface with air and water jet etc., complete with initial lead upto 50 m and all lifts. | sqm | 49.00 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 41.50 |
| IRR-DAW-1-8 | 9 | Preparing foundation bed for cut-off trench filling in rock portion by removing all loose materials by wedging / chiselling and disposing off the same as directed etc., complete with initial lead upto 50 m and all lifts. | sqm | 35.00 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 35.00 |
| IRR-DAW-1-9 | 10 | Drilling 45 to 50 mm dia holes vertical or inclined upto 10 degrees to vertical in rock / masonry / concrete by percussion drilling using waggon drill or any other suitable equipment including cost of all materials, machinery, labour, redrilling through partially set grout wherever required etc., complete for drilling upto 6 m depth from surface. The item rate for drilling through rock / masonry / concrete includes redrilling through partially set grout, if any, in the portion of the hole drilled and grouted. | Rm | 223.50 | |
| | | Beyond 6 m upto 12 m from surface : | Rm | 245.90 | |
| | | Beyond 12 m upto 18 m from surface : | Rm | 270.50 | |
| | | Beyond 18 m upto 24 m from surface | Rm | 297.60 | |
| | | Beyond 24 m upto 30 m from surface | Rm | 327.40 | |
| | | Beyond 30 m upto 36 m from surface | Rm | 360.10 | |
| | | Beyond 36 m upto 42 m from surface | Rm | 396.10 | |
| | | Beyond 42 m upto 48 m from surface | Rm | 435.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 66.50 |
| IRR-DAW-1-10 | 11 | Flushing grout holes of all sizes with water and air jets alternatively for an average period of 30 minutes including water intake observations after flushing, cost of all materials, machinery, labour etc., complete. | Rm | 61.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 26.80 |
| IRR-DAW-1-11(a) | 12 | Consolidation grouting with neat cement grout mix of suitable consistency under specified pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete with initial lead upto 1 km and all lifts. | tonne | 9370.50 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 4264.10 |
| IRR-DAW-1-12(b) | 13 | Curtain grouting with neat cement grout mix of suitable consistency under specified pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete with initial lead upto 1 km and all lifts. | tonne | 10758.40 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 5503.10 |
| IRR-DAW-1-13 | 14 | Providing and fixing 25 mm dia 3 m long cold twisted deformed steel dowel bars with one end driven into 45 to 50 mm diameter 1.50 m deep hole drilled in bed rock and other end provided with L-bend for embedding in concrete / masonry of over flow / non-over flow blocks and other appertenant works including cost of drilling and cleaning hole, filling hole with cement mortar 1 : 1 proportion , driving anchor rod, cost of all materials, machinery, labour etc., complete with initial lead upto 1 km and all lifts. | Each | 1152.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 155.40 |
| IRR-DAW-1-14 | 15 | Providing and fixing 25 mm dia. 2.75 m long ribbed steel anchor rods with one end split and driven firmly using steel wedge into 1.25 m deep 45 to 50 mm dia. hole drilled in bed rock and other end provided with L- bend for embedding in concrete / masonry for spillway and appurtenant works including drilling and cleaning hole, filling hole with thick cement slurry, driving anchor rod, cost of all materials, machinery, labour, steel wedge etc., complete with initial lead upto 1 km and all lifts. | Each | 1071.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 177.50 |
| IRR-DAW-2 | | REINFORCEMENT & CEMENT CONCRETE WORKS : | | | |
| IRR-DAW-2-1A | 16 | Providing, fabricating and placing in position reinforcement steel for RCC, below 36 dia rods overlaps and wastages wherever required, tying with 1.25 mm diameter soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with initial lead upto 1 km and all lifts. | tonne | 68926.70 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 5398.50 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|-------------------------------------|------|---|-------|----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-DAW-2-1B | 17 | Providing, fabricating and placing in position reinforcement steel for RCC above 36 dia with welding and wastage at 2.5%, tying with 1.25 mm diameter soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with initial lead upto 1 km and all lifts. | tonne | 70846.69 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 7031.70 |
| IRR-DAW-2-2 | 18 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 250 kg /cum with use of super plasticiser equal to 0.4% of cement content, CA : 0.98 cum, Blending Ratio of CA -- 40:30:20:10, FA : 0.35 cum) | cum | 3607.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 250.10 |
| IRR-DAW-2-2A (new Item1 2010-11) | 19 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 300 kg /cum with use of super plasticiser equal to 0.4% of cement content, CA : 0.90 cum, Blending Ratio of CA -- 40:30:20:10, FA : 0.4 cum) | cum | 3785.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 250.00 |
| IRR-DAW-2-3 | 20 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 220 kg /cum with use of super plasticiser, CA: 0.98 cum, Blending Ratio of CA -- 40:30:20:10, FA: 0.37 cum) | cum. | 3477.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum. | | 250.10 |
| IRR-DAW-2-4 | 21 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for RCC works of gallery, sluice, spillway crest, spillway d / s face, energy dissipating structures, training walls, piers, abutments and such other locations with initial lead upto 1 km and all lifts. (Cement content : 310 kg / cum with use of super plasticiser, CA : 0.90 cum, blending ratio of CA--50:30:20, FA : 0.40 cum) | cum. | 4954.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum. | | 502.10 |
| IRR-DAW-2-4A (new Item2 2010-11) | 22 | Providing and laying insitu vibrated M-25 (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for RCC works of gallery, sluice, spillway crest, spillway d / s face, energy dissipating structures, training walls, piers, abutments and such other locations with initial lead upto 1 km and all lifts. (Cement content : 360 kg / cum with use of super plasticiser,CA : 0.90 cum, blending ratio of CA--50:30:20, FA : 0.40 cum) | cum. | 5196.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum. | | 502.10 |
| IRR-DAW-2-4B (new Item3 2010-11) | 23 | Providing and laying insitu vibrated M-25 (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for RCC works of gallery, sluice, spillway crest, spillway d / s face, energy dissipating structures, training walls, piers, abutments and such other locations with initial lead upto 1 km and all lifts. (Cement content : 380 kg / cum with use of super plasticiser,CA : 0.90 cum, blending ratio of CA--65:35, FA : 0.40 cum) | cum. | 5262.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum. | | 502.10 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-DAW-2-5 | 24 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 260 kg /cum with use of super plasticiser,CA : 0.90 cum, Blending Ratio of CA -- 50:30:20, FA : 0.40 cum) | cum. | 5009.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum. | | 1845.60 |
| IRR-DAW-2-6 | 25 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates with placing and sinking plums of size 150 to 80 mm upto 15 percent for gravity type structures including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete with initial lead upto 1 km and all lifts. (Cement content : 260 kg / cum of concrete with use of plums and super plasticiser,, CA : 0.77 cum, Blending Ratio of CA : 50:30:20,FA : 0.34 cum, plums of size 150 to 80 mm : 0.25 cum) | cum. | 4852.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum. | | 1807.20 |
| IRR-DAW-2-7 | 26 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content 220 kg /cum with use of super plasticiser,CA : 0.90 cum, Blending Ratio of CA : 50:30:20, FA : 0.40 cum) | cum. | 4647.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum. | | 1672.40 |
| IRR-DAW-2-8 | 27 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 280 kg /cum with use of super plasticiser,CA : 0.80 cum, Blending Ratio of CA -- 65:35, FA : 0.44 cum) | cum. | 4816.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum. | | 1712.30 |
| IRR-DAW-2-9 | 28 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete for RCC works of spillway bridge, blockouts and such other similar structures with congested reinforcement with initial lead upto 1 km and all lifts. (Cement content : 330 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA -- 65:35, FA : 0.44 cum). | cum. | 6938.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum. | | 2418.30 |
| IRR-DAW-2-10 | 29 | Providing and forming porous concrete body drain of size 68.5 x 68.5 cm with 23 cm diameter central hole using cement and 20 mm down approved, clean, hard, graded coarse aggregates in 1 : 3.50 proportion by volume including cost of all materials, machinery, labour, formwork, curing etc., complete with initial lead upto 1 km and all lifts.(M15 Cement content : 400kg/cum, CA : 1cum, Blending Ratio of CA -- 65:35) | Rm | 2483.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 828.00 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-DAW-2-11(a) | 30 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for RCC solid parapet consisting of 35 cm x 20 cm kerb, 35 cm x 35 cm x 1 m pillars spaced approximately at 3.35 m c / c, 12.5 cm thick wall 80 cm height with 12.5 cm thick and 35 cm wide coping slab for wall and 12.5 cm thick 40 cm x 40 cm coping for pillars with top edges of kerb and coping chamfered / rounded as directed etc., complete (excluding cost of providing and placing reinforcement steel and gate) with initial lead upto 1 km and all lifts. (Cement content 350 kg / cum with use of super plasticiser (0.4% by wt.of cement), CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.44 cum) | Rm | 2712.20 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 1027.20 |
| IRR-DAW-2-12(b) | 31 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for RCC ornamental parapet consisting of 35 cm x 20 cm kerb, 35 cm x 35 cm x 1 m pillars spaced approximately at 3.5 m apart, 20 cm x 15 cm posts 80 cm height approximately 30 cm c / c with 12.5 cm thick and 35 cm wide coping slab for posts and pillars with top edges of kerb and coping chamfered or rounded as directed etc., complete (excluding cost of providing and placing reinforcement steel and gate) with initial lead upto 1 km and all lifts. (Cement content : 350 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.44 cum) | Rm | 2830.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 1089.10 |
| IRR-DAW-2-13 | 32 | Providing and laying insitu M- 25 (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for wearing coat including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position in alternate panels, levelling, compacting, finishing, curing, packing joints with asphalt mortar etc., complete with initial lead upto 1 km and all lifts. (Cement content : 380 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.45 cum) | cum | 5471.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2084.50 |
| IRR-DAW-2-14 | 33 | Pre-cooling to control placement temperature of cement concrete in the range of 18 to 21 C at the concrete placement point by inundation of coarse aggregates and adding flaked ice as part of mixing water including cost of all materials, machinery, labour etc., complete with all leads and lifts. | cum | 94.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 19.40 |
| IRR-DAW-2-15 | 34 | Conveying and fixing elastomeric bearing for spillway bridge including cleaning and preparing surface, mixing and applying adhesive, fixing bearing in correct position etc., including cost of all materials except bearings, machinery, labour etc., complete with all leads and lifts. | Each | 489.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 439.30 |
| IRR-DAW-2-16 | 35 | Providing and constructing 150 mm dia hume pipe weep holes for concrete / masonry walls including providing 20 x 20 x 20 cm size porous concrete block made of cement and 20 mm down coarse aggregate in 1 : 4 proportion including 10 cm thick sand backing at the junction of wall and soil back fill, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts. | Rm | 412.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 96.10 |
| IRR-DAW-2-17 | 36 | Providing and forming expansion joint for spillway bridge consisting of 75 x 75 x 6 mm angles 2 numbers provided with 25 cm long 12 mm dia. anchors fixed to both flanges at 15 cm c / c and 140 x 6 mm plate welded on top of one of the angle including cost of all materials, machinery, labour, providing and fixing 38 mm thick joint filler board matching the thickness of wearing coat, painting etc., complete with lead upto 1 km and all lifts. | Rm | 2258.20 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 438.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR_DAW-3 | | MASONRY & GUNITING WORKS : | | | |
| IRR_DAW-3-1 | 37 | Providing and constructing un-coursed rubble stone masonry using approved stones in cement mortar 1 : 3 proportion including cost of all materials, machinery, labour, scaffolding, cleaning, packing mortar, wedging stone chips, curing etc., complete with initial lead upto 1 km and all lifts.(Cement content : 190 kg/cum of masonry, rubble stones : 0.85 cum,stone chips : 0.15 cum/cum, FA : 0.4 cum) | cum | 3163.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1550.00 |
| IRR_DAW-3-2 | 38 | Providing and constructing un-coursed rubble stone masonry using approved stones in cement mortar 1 : 4 proportion including cost of all materials, machinery, labour, scaffolding, cleaning, packing mortar, wedging stone chips, curing etc., complete with initial lead upto 1 km and all lifts.(Cement content : 143 kg/cum of masonry, rubble stones : 0.85 cum, stone chips : 0.15 cum/cum, FA : 0.4 cum) | cum | 2966.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1550.00 |
| IRR_DAW-3-3 | 39 | Providing and constructing coursed rubble face stone masonry using approved rubble stones in cement mortar 1 : 3 proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., with initial lead upto 1 km and all lifts.(Thickness of the CR face assumed: 0.75 m, Cement content : 178 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.375 cum, CR stones 30 x 30 x 45 cm : 9.75 No, CR stones 30 x 30 x 60 cm : 3.25 No) | cum | 3469.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1717.10 |
| IRR_DAW-3-4 | 40 | Providing and constructing coursed rubble face stone masonry using approved rubble stones in cement mortar 1 : 4 proportion including cost of all materials, machinery, labour, scaffolding,ramps, cleaning, packing mortar, wedging stone chips, curing etc., with initial lead upto 1 km and all lifts. (Cement content : 134 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.375 cum, CR stones 30 x 30 x 45 cm : 9.75 No, CR stones 30 x 30 x 60 cm : 3.25 No) | cum | 3285.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1717.10 |
| IRR_DAW-3-5 | 41 | Providing and constructing chisel drafted and hammer dressed face stone masonry with approved stones in cement mortar 1 : 3 proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., complete with initial lead upto 1 km and all lifts.(Cement content : 167 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.35 cum, Dressed stones 30 x 30 x 45 cm : 10 No, Dressed stones 30 x 30 x 60 cm : 3.40 No) | cum | 3783.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2086.10 |
| IRR-DAW-3-6 | 42 | Providing and constructing chisel drafted and hammer dressed face stone masonry with approved stones in cement mortar 1 : 4 proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., complete with initial lead upto 1 km and all lifts.(Cement content : 125 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.35 cum, Dressed stones 30 x 30 x 45 cm : 10 No, Dressed stones 30 x 30 x 60 cm : 3.40 No) | cum | 3608.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2086.10 |
| IRR-DAW-3-7 | 43 | Providing cement mortar pointing to coursed rubble face stone masonry 50 mm deep in CM 1 : 2 proportion by volume including raking and cleaning joints, pressing mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 1 km and all lifts. | sqm | 147.30 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 122.10 |
| IRR-DAW-3-8 | 44 | Providing cement mortar pointing to coursed rubble face stone masonry 50 mm deep in CM 1 : 3 proportion by volume including raking and cleaning joints, pressing mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 1 km and all lifts. | sqm | 141.70 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 122.10 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-DAW-4 | | CONTRACTION JOINT WORKS: | | | |
| IRR-DAW-4-1 | 45 | Providing 25 mm thick guniting to rock or masonry surface in cement mortar 1 : 3 proportion by weight including cost of all materials, machinery, labour, raking-out and cleaning joints, scaffolding wherever required and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts. | sqm | 543.80 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 239.20 |
| IRR-DAW-4-2 | 46 | Providing and constructing contraction joints by fixing 16 SWG 60 cm wide annealed copper sheets in two lines with 8 mm dia steel dowel rods on either side at one metre interval, forming 125 x 125 mm size groove in between copper strips for filling asphalt including fixing 15 mm dia two legged G.I pipe with U - bend at bottom for circulation of steam at intervals and forming 150 mm dia formed drain behind water seals including cost of all materials, machinery, labour, filling asphalt, circulation of steam through pipes etc., complete with all leads and lifts. | Rm | 15920.00 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 244.70 |
| IRR-DAW-4-3 | 47 | Providing and constructing contraction joints by fixing 310 mm wide central bulb type approved quality PVC water stop in two lines with 8 mm diameter steel dowel rods on either side at 1m interval, forming 125 x 125 mm size groove in between two water stops, providing & fixing 15 mm dia two legged G.I pipe with U-bend at bottom for circulation steam at interval, forming 150 mm diameter formed drain behind water seals including filling groove with asphalt, circulation of steam at intervals, cost of all materials, machinery, labour etc., complete with all leads and lifts. | Rm | 2478.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 165.40 |
| IRR-DAW-4-4 | 48 | Providing and constructing contraction joints by fixing 16 SWG 60 cm wide annealed copper sheets in single line with 8 mm dia steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour etc., complete with all leads and lifts. | Rm | 7460.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 189.40 |
| IRR-DAW-4-5 | 49 | Providing and constructing contraction joints by fixing 23 cm wide central bulb type PVC water stop in single line supported by 10 mm dia steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour, valcunising joints etc., complete with all leads and lifts. | Rm | 282.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 153.50 |
| IRR-DAW-5 | | EARTH / ROCKFILL EMBANKMENT WORKS : | | | |
| IRR-DAW-5-1 | 50 | Providing hearting embankment using selected impervious soil from approved borrow areas in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent or as stipulated using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 166.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 28.90 |
| IRR-DAW-5-2 | 51 | Providing cut-off trench filling using selected impervious soil from approved borrow areas in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller as stipulated etc., complete with initial lead upto 1 km and all lifts. | cum | 178.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 31.40 |
| IRR-DAW-5-3 | 52 | Providing casing embankment using semi-pervious soil from approved borrow areas in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all other operations such as excavation, sorting out, transportation, spreading soil in layers of specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller as stipulated etc., complete with initial lead upto 1 km and all lifts. | cum | 178.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 31.40 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|--|------|--|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-DAW-5-4 | 53 | Providing casing embankment using semi-pervious soil available from excavation in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all other operations such as re-excavation, sorting out, transportation, spreading in layers of specified thickness, breaking clods, sectioning, watering, compacting to specified density control of not less than 95 percent using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller as stipulated etc., complete with initial lead upto 1 km and all lifts. | cum | 150.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 26.60 |
| IRR-DAW-5-4-A (New Item1 - 2011-12) | 54 | Providing casing embankment using semi-pervious soil available from excavation in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all other operations such as re-excavation, sorting out, transportation, spreading in layers of specified thickness, breaking clods, sectioning, watering, compacting to specified density control of not less than 90 percent using 2Tonne Roller as stipulated etc., complete with initial lead upto 1 km and all lifts. (For Maintenance Works) | cum | 101.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 26.60 |
| IRR-DAW-5-5 | 55 | Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent or as stipulated using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 168.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 29.40 |
| IRR-DAW-5-6 | 56 | Providing embankment adjacent to masonry / concrete structures and filling trial pits using impervious soil from approved borrow areas in layers of 10 to 15 cm and compacting each layer to density control of not less than 95 percent using pneumatic tampers or by vibratory earth rammers including cost of all materials, machinery, labour, picking previous layer, spreading soil in layer, breaking clods, watering etc., complete with initial lead upto 1 km and all lifts. | cum | 328.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 163.30 |
| IRR-DAW-5-7 | 57 | Providing and constructing rockfill embankment with 300 mm down graded stones and quarry spalls from approved source including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing the surface to required slopes etc., complete with initial lead upto 1 km and all lifts. | cum | 533.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 146.30 |
| IRR-DAW-5-8 | 58 | Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 1 km and all lifts. | cum | 642.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 283.40 |
| IRR-DAW-5-9 | 59 | Providing and constructing dry rubble rock-toe with rubble and stone chips from dump yard including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 1 km and all lifts. Note: Useful rubble and stone chips will be issued at dump yard at the issue rate for usefull rubble /stone chips. Sorting out and breaking charges included in rate analysis. | cum | 569.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 200.30 |
| IRR-DAW-5-9-A (New Item1-2020-21) | 60 | Providing and constructing dry rock pitching for groynes/platform using un-coursed rubble stone of size 300 mm thick from quarry to site of work including cost of all materials, machinery, labour charge hand picking un-coursed rubble stone to the designed profile with all leads and all lifts etc for Above Water level. | cum | 736.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 200.30 |
| IRR-DAW-5-9-B (New Item2(2020-21) | 61 | Providing and constructing dry rock pitching for groynes using un-coursed rubble stone of size 300 mm thick and un-coursed rubble stone chips from quarry to site of work including cost of all materials, machinery, labour charge hand picking un-coursed rubble stone and chips to the designed profile with all leads and all lifts etc for Below Water level. | cum | 558.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 22.50 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|-------------------------------------|------|--|------|----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-DAW-5-10 | 62 | Providing and laying 30 cm diameter open jointed hume pipes with collars in rock-toe for drainage including cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts. | Rm | 694.10 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 45.30 |
| IRR-DAW-6 | | FILTER & PITCHING WORKS : | | | |
| IRR-DAW-6-1 | 63 | Providing and constructing 1.20 m internal diameter and average 3 m height RCC manhole with 60 cm dia. top cover in M-15 grade cement concrete using 20 mm down graded , clean, hard coarse aggregate, 20 cm thick for bed / sides / top slab / 1.5 m long cut-off wall and 7.5 cm thick for cover including providing 12 mm dia reinforcement bars at 30 cm c / c bothways for bed / sides / cut-off wall / top slab / rungs and 8 mm dia bars at 15 cm c / c bothways for cover, excavation for foundation, providing 30 cm dia hume pipe outlet, cost of all materials, machinery, labour, formwork, scaffolding, batching, mixing, laying, vibrating, finishing, curing etc., complete with lead upto 1 km and all lifts.(Cement content : 300 kg/cum , CA : 0.80 cum, Blending Ratio of CA -- 65:35,FA : 0.44 cum, superplasticizer (0.4% by wt. of cement) | Each | 51827.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 15408.50 |
| IRR-DAW-6-2 | 64 | Providing and constructing longitudinal and cross graded filter drains using sand and 80-20 mm and 20 mm down graded aggregates satisfying specified filter criteria in layers as per specifications including cost of all materials, machinery, labour, laying to required slopes, compaction etc. complete with initial lead upto 50 m and all lifts. | cum | 1170.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 218.80 |
| IRR-DAW-6-3 | 65 | Providing and constructing 1.40 m thick vertical or inclined graded filter media consisting of 20 cm thick sand layers, 25 cm thick 20 mm down coarse aggregate layers and 50 cm thick 80-20 mm coarse aggregate layer using approved materials satisfying specified filter criteria as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts. | cum | 1238.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 218.80 |
| IRR-DAW-6-4 | 66 | Providing and constructing graded filter media below and behind rock-toe consisting of 20 cm thick sand, 25 cm thick 20 - 4.75 mm and 40 cm thick 80 - 20 mm size graded coarse aggregates satisfying filter criteria as per specifications including cost of all materials, labour, machinery, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts. | cum | 1171.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 196.60 |
| IRR-DAW-6-4-A (New Item 2011-12) | 67 | Providing and constructing graded filter media below and behind rock-toe consisting of 30 cm thick, 80 - 20 mm size graded coarse aggregates satisfying filter criteria as per specifications including cost of all materials, labour, machinery, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts. | cum | 1271.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 74.10 |
| IRR-DAW-6-5 | 68 | Providing and laying filter media consisting of 2 layers of 250 gsm poly-propylene non-woven filter fabric and 400 mm thick 20 mm down graded coarse aggregate for vertical / inclined and horizontal filter blanket for embankment including cost of all materials, machinery, labour etc., complete with lead upto 50 m for aggregate and all leads for fabric and all lifts. | sqm | 947.50 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 85.20 |
| IRR-DAW-6-6 | 69 | Providing and constructing 45 cm thick chimney filter using clean approved sand satisfying filter criteria including cost of all materials, machinery, labour, compacting etc., complete with initial lead upto 50 m and all lifts. | cum | 896.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 174.30 |
| IRR-DAW-6-7 | 70 | Providing and constructing 90 cm thick transition cum filter media behind rockfill using approved sand and 80-20 mm and 20 mm down graded aggregates satisfying the filter criteria in layers of 30 cm thickness each as per specifications including cost of all materials, machinery, labour, laying each layer to required slope, compaction etc., complete with initial lead upto 50 m and all lifts. | cum | 1228.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 230.00 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-DAW-6-8 | 71 | Providing and constructing 60 cm thick hand packed rough stone revetment with 65 to 75 cm long through stones at 1.50 m c / c over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size approved graded aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts. | sqm | 1050.60 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 250.60 |
| IRR-DAW-6-9 | 72 | Providing and constructing 60 cm thick hand packed rough stone revetment with 65 to 75 cm long through stones at 1.50 m c / c over a backing of 60 cm thick graded filter media consisting of sand, 10 mm and 40 mm size approved graded aggregates laid in layers of 20 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts. | sqm | 1248.40 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 284.00 |
| IRR-DAW-6-10 | 73 | Providing and constructing 60 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips etc., complete with initial lead upto 50 m and all lifts. | sqm | 970.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 193.00 |
| IRR-DAW-6-11 | 74 | Providing and constructing 75 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips, etc., complete with initial lead upto 50 m and all lifts. | sqm | 1057.30 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 210.10 |
| IRR-DAW-6-12 | 75 | Providing and constructing 90 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips etc., complete with initial lead upto 50 m and all lifts. | sqm | 1163.60 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 244.30 |
| IRR-DAW-6-13 | 76 | Providing and laying Hariyala or other approved quality turfing sods for the slopes of earthen embankments over 20 mm thick sand backing including cost of all materials, machinery, labour including preparing surface, spreading sand, watering for 15 days etc., complete with initial lead upto 1 km and all lifts. | sqm | 139.80 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 96.80 |
| Chapter II | | | | | |
| IRR-TAW | | TUNNEL AND ALLIED WORKS | | | |
| IRR-TAW-1 | | EXCAVATION : | | | |
| IRR-TAW-1-1 | 77 | Excavation for adit by tunnelling methods in all types of rock including cost of all materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage, removing and hauling the excavated muck outside adit upto specified dump area and all other ancillary operations etc., complete with initial lead upto 50 m and all lifts. | cum | 2039.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 846.30 |
| IRR-TAW-1-2 | 78 | Excavation for vertical / inclined shaft in all types of soft / hard rock including cost of all materials, machinery, labour, shoring, strutting, scaling excavated surface, ventilation, lighting, drainage, removing and hauling excavated muck outside shaft upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts. | cum | 2915.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1718.00 |
| IRR-TAW-1-3 | 79 | Excavation for tunnel by tunnelling methods in rock not requiring supports including cost of all materials, machinery, labour, scaling excavated surface, removing under-cuts, ventilation, lighting, drainage, removing and hauling the excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts. | cum | 2096.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 834.70 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|-------------------------------------|------|---|-------|-----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-TAW-1-4 | 80 | Excavation for tunnel by tunnelling methods including excavation for supports in all types of soil / rock strata requiring supports (excluding cost of providing supports) including cost of all other materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage, removing and hauling the excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts. | cum | 2159.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 862.20 |
| IRR-TAW-1-5 | 81 | Excavation for tunnel by heading and benching tunnelling methods including excavation for supports in all types of soil / rock strata requiring supports (excluding cost of providing supports) for roof before benching including cost of all other materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage removing and hauling excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts. NOTE: Where mucking is to be carried out through shaft using winch and mucking tub system increase the basic rates for items 3, 4 & 5 by 8 percent. | cum | 2225.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 922.60 |
| IRR-TAW-1-6 | 82 | Removing and hauling muck overfallen due to natural causes such as geological faults etc., out of tunnel including breaking large fragments by blasting if necessary and disposing off the same in specified dump area or as directed including cost of all materials, machinery, labour, ventilation, drainage, lighting and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts. | cum | 431.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 129.90 |
| IRR-TAW-2 | | DEWATERING & GUNITING WORKS : | | | |
| IRR-TAW-2-1 | 83 | Dewatering tunnel by pumping out water collected by natural drainage inside tunnel including providing sump wherever necessary, cost of all materials, machinery, labour, drainage, lighting, ventilation and all other ancillary operations etc., complete. | Kwhr | 29.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Kwhr | | 12.00 |
| IRR-TAW-2-2 | 84 | Providing 25 mm thick guniting to sides and arch of tunnel in cement mortar 1 : 3 proportion by weight including cost of all materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc., complete with lead upto 1 km and all lifts. | sqm | 670.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 269.90 |
| IRR-TAW-2-3 (new Item 4 2010-11) | 85 | Shortcreting in two layers (each layer+38 mm thickness) for slabs duly fixing chain weld wire mesh 100 x 100x5 mm in between the two layers including cost and conveyance of all materials, labour charges, all heads, lifts, centering, scaffolding, machine mixing, laying concrete with shortcrete machine etc. complete as per specification and as directed by Engineer-in-Charge | sqm | 1580.40 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 269.90 |
| IRR-TAW-3 | | TEMPORARY & PERMANENT SUPPORTS : | | | |
| IRR-TAW-3-1 | 86 | Providing and fixing 25 mm diameter steel rock bolts with mechanical / wedge type anchorage including drilling 35 mm dia holes, providing 15 cm long 20 mm thick steel tapered wedge, 10 mm thick plate washers and nuts, tightening bolt by torque wrench, cost of all materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc., complete with lead upto 1 km and all lifts. | Rm | 1333.50 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 444.30 |
| IRR-TAW-3-2 | 87 | Providing and fixing 25 mm diameter steel rock bolts with resin bond cement capsule anchorage including drilling 35 mm dia holes, inserting grout capsule, driving bolt, fixing 10 mm thick plate washers and nuts and tightening the same by torque wrench after hardening of cement grout, cost of all materials, machinery, labour, ventilation, lighting, drainage and other ancillary operations etc., complete with lead upto 1 km and all lifts. | Rm | 1275.20 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 411.30 |
| IRR-TAW-3-3 | 88 | Providing, fabricating and fixing in position permanent structural steel supports as per details including cost of all materials, machinery, labour, cutting, bending, welding, grinding, lighting, ventilation, drainage and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts. | tonne | 111049.10 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 23948.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|-------|----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-TAW-3-4 | 89 | Providing, fabricating and fixing in position temporary structural steel supports as per details and dismantling the same before concreting including cost of all materials, machinery, labour, cutting, bending, welding, grinding, ventilation, lighting, drainage and all other ancillary operations etc.,complete with initial lead upto 1 km and all lifts. | tonne | 26866.50 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 12008.90 |
| IRR-TAW-3-5 | 90 | Providing and fixing hard variety cut jungle wood for lagging / blocking locations in tunnel wherever required including cost of all materials, machinery, labour, fixing in position, lighting, ventilation, drainage etc complete with all leads and lifts. | cum | 29214.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2229.80 |
| IRR-TAW-4 | | MASONRY WORKS : | | | |
| IRR-TAW-4-1 | 91 | Providing and constructing un-coursed rubble stone masonry with approved stones from tunnel excavated muck in cement mortar 1 : 6 proportion for backfilling over cuts / slips on tunnel sides due to geological faults etc., including cost of all materials, machinery, labour, cleaning,scaffolding, packing mortar, wedging stone chips, curing, ventilation, lighting, drainage complete with lead upto 1 km and all lifts.(cement content : 95 kg/cum of masonry, Rubble stones : 0.83 cum, Stone chips : 0.13 cum,FA : 0.40 cum) | cum | 2630.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1207.60 |
| IRR-TAW-5 | | REINFORCEMENT & CONCRETE WORKS : | | | |
| IRR-TAW-5-1 | 92 | Providing, fabricating and placing in position reinforcement steel for tunnel RCC works including cleaning, straightening, cutting, bending, hooking, lapping / welding joints wherever required, tying with 1.25 mm dia.soft annealed steel wire, including cost of all materials, labour, machinery, ventilation, lighting, drainage etc.,complete with initial lead upto 1 km and all lifts. | tonne | 87171.10 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 15508.40 |
| IRR-TAW-5-2 | 93 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates crushed from tunnel excavated muck for filling and levelling over-cuts in bed due to geological faults etc., including cost of all materials, machinery, labour, cleaning bed, batching, mixing, conveying and laying, levelling, compacting, finishing, curing, lighting, ventilation, drainage etc., complete with initial lead upto 1 km and all lifts. (Cement content : 220 kg / cum, CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum, Superplasticizer 0.4% by wt. of cement) | cum | 5861.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1167.50 |
| IRR-TAW-5-3 | 94 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using 40 mm and down size approved clean, hard, graded aggregates crushed from tunnel muck for kerb and bed lining including cost of all materials, machinery, labour, formwork, batching, mixing, conveying upto placing point in agitator cars, placing in position, levelling, vibrating, finishing, curing, ventilation, lighting, drainage and all other ancillary operations etc., complete with lead upto 1 km and all lifts. (Cement content 330 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) | cum | 6965.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1453.40 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|-------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-TAW-5-4 | 95 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using 40 mm and down size approved clean, hard, graded aggregates crushed from tunnel muck for sides and arch lining including cost of all materials, machinery, labour, formwork, batching, mixing, conveying upto placing point in agitator cars, placing in position, levelling, vibrating, finishing, curing, ventilation, lighting, drainage and all other ancillary operations etc., complete with lead upto 1 km and all lifts. (Cement content 330 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) | cum | 7735.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1178.50 |
| IRR-TAW-6 | | DRILLING & GROUTING WORKS : | | | |
| IRR-TAW-6-1 | 96 | Drilling 32 mm diameter grout holes in concrete / rock by percussion drilling using jack hammer or stooper drills as directed to specified depth for consolidation / contact grouting including cost of all materials, machinery, labour, cleaning holes, ventilation, lighting, drainage and all other ancillary operations etc., complete. | Rm | 468.60 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 213.60 |
| IRR-TAW-6-2 | 97 | Grouting cement slurry in grout holes under specified pressure for consolidation / contact grouting including cost of all materials, machinery, labour, redrilling wherever necessary, ventilation, lighting, drainage and other ancillary operations etc., complete with lead upto 1 km and all lifts. | tonne | 9738.00 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 3331.50 |
| IRR-TAW-6-3 | 98 | Drilling 75 mm diameter drainage holes vertical or inclined in rock / concrete in tunnel by percussion drilling using waggon drill or other suitable drilling equipment including cost of all materials, machinery, labour, ventilation, lighting, drainage etc., complete. | Rm | 399.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 88.10 |
| Chapter III | | | | | |
| IRR-CAW | | CANAL AND ALLIED WORKS | | | |
| IRR-CAW-1 | | EXCAVATION WORKS : | | | |
| IRR-CAW-1-1 | 99 | Excavation in all kinds of soil including boulders upto 0.3 m diameter for canal , seating of embankment, filter drains / catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated soil neatly in dump area or for the formation of service road / embankment as directed etc., complete with initial lead upto 1 km and all lifts. | cum | 117.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 35.30 |
| IRR-CAW-1-2 | 100 | Excavation in all kinds of soil including boulders upto 0.30 m dia for field channels , seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road / embankment as directed etc., complete with lead upto 10 m and lift upto 3 m. (Machinery excavation and manual conveyance) | cum | 64.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 29.40 |
| IRR-CAW-1-3 | 101 | Excavation in ordinary rock (including HDR) without blasting including boulders above 0.30 m upto 0.6 m dia. for canals , seating of embankment, filter drain / catch water drains etc., including dressing of bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated soft rock neatly in dump area or for formation of service road as directed etc., complete with lead upto 1 km and all lifts. | cum | 159.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 51.80 |
| IRR-CAW-1-4 | 102 | Excavation in ordinary rock (including HDR) without blasting including boulders above 0.3 m upto 0.60 m dia. for field channels , seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road as directed etc., complete with lead upto 10 m and lift upto 3 m. (Machinery excavation and manual conveyance) | cum | 105.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 47.50 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-1-5 | 103 | Excavation in hard rock (including F&F rock) requiring blasting including boulders above 0.6 m upto 1.2 m dia. for canals , seating of embankment, filter drain / catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated rock in dump area or for formation of service road as directed etc., complete with lead upto 1 km and all lifts. | cum | 241.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 92.90 |
| IRR-CAW-1-6 (a) | 104 | Excavation in hard rock of all toughness by blasting including boulders above 1.2 m dia. for canals , seating of embankment, filter drain / catch water drains etc., including levelling the bed by removing all projections by hammering / chiselling, cost of all materials, machinery, labour, placing the excavated rock neatly in approved dump area and levelling the same as directed etc., complete with initial lead upto 1 km and all lifts. i) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth excavation in hard rock is less than 3 m. ii) The rate includes levelling canal bed by hammering / chiselling all rock projections wherever required. | cum | 606.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 196.70 |
| IRR-CAW-1-7 (b) | 105 | Excavation in hard rock of all toughness including boulders above 1.2 m dia. by approved controlled blasting methods for canals , cut-off trench of embankment, filter / catch-water drains etc., including controlling fly-rock by muffling arrangements such as placing 50 x 50 mm opening chain link mesh or waste tyres and sand bags, monitoring ground vibrations at specified locations, cost of all materials, machinery, labour, placing excavated rock neatly in approved dump area or other place as directed etc., complete with lead upto 1 km and all lifts. i) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth excavation in hard rock is less than 3 m. ii) The rate under this item shall be adopted where the control of fly-rock and ground vibrations is required. | cum | 741.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 195.10 |
| IRR-CAW-1-8(c) | 106 | Excavation in hard rock of all toughness including boulders above 1.2 m dia. for dressing canal sides neatly on either side to required profile by line drilling and smooth blasting including removing under-cuts by chiselling / hammering, placing the excavated rock neatly in dump area or other place as directed, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts. i) For excavation of canal below free board level combination of normal controlled blasting and line drilling and smooth blasting shall be adopted to obtain neat side slopes. For the purpose of payment 1 m width of excavation on either side shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be. ii) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth of excavation in hard rock is less than 3 m. iii) The rate includes controlling fly-rock wherever required. iv) The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval. v) In case, where the above criteria is not fulfilled payment shall be restricted to the rate provided for excavation by normal blasting or controlled blasting as the case may be. | cum | 1388.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 518.80 |
| IRR-CAW-1-9(a) | 107 | Excavation in hard rock by blasting including boulders above 1.2 m dia. for canals , seating embankment etc., including levelling bed by removing all projections by hammering / chiselling, cost of all materials, machinery, labour, placing the excavated rock neatly in approved dump area and levelling the same as directed etc., complete with initial lead upto 1 km and all lifts. i) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m. ii) The rate includes levelling canal bed by hammering /chiselling all rock projections wherever required. | cum | 351.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 61.80 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-1-10(b) | 108 | Excavation in hard rock of all toughness including boulders above 1.2 m dia. by approved controlled blasting methods for canals, cut-off trench of embankment etc., including controlling fly-rock by muffling arrangements such as placing 50 x 50 mm opening chain link mesh or waste tyres and sand bags, monitoring ground vibrations at specified locations, cost of all materials, machinery, labour, placing excavated rock neatly in approved dump area or other place as directed etc., complete with lead upto 1 km and all lifts. i) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m. ii) The rate under this item shall be adopted where the control of fly-rock and ground vibrations is required. | cum | 514.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 70.80 |
| IRR-CAW-1-11(c) | 109 | Excavation in hard rock of all toughness including boulders above 1.2 m dia. for dressing canal sides neatly on either side to required profile by line drilling and smooth blasting including removing under-cuts by chiselling / hammering, placing the excavated rock neatly in dump area or other place as directed, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts. i) For excavation of canal below free board level combination of normal controlled blasting and line drilling and smooth blasting shall be adopted to obtain neat side slopes. For the purpose of payment 1 m width of excavation on either side shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be. ii) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m. iii) The rate includes controlling fly-rock wherever required. iv) The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval. v) In case, where the above criteria is not fulfilled payment shall be restricted to | cum | 870.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 158.90 |
| IRR-CAW-2 | | EMBANKMENT WORKS USING BORROW AREA SOIL : | | | |
| IRR-CAW-2-1 | 110 | Providing impervious hearting embankment with selected soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 238.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 46.70 |
| IRR-CAW-2-2 | 111 | Providing impervious hearting embankment with selected soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 230.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 45.80 |
| IRR-CAW-2-3 | 112 | Providing semi-pervious / pervious casing embankment using soil from approved borrow area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 238.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 46.70 |
| IRR-CAW-2-4 | 113 | Providing semi-pervious / pervious casing embankment using soil from approved borrow area in layers of 25cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 233.70 | |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 49.40 |
| IRR-CAW-2-5 | 114 | Providing semi-pervious / pervious casing embankment using soil from approved borrow area in layers of 25cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer without watering to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 216.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 42.50 |
| IRR-CAW-2-6 | 115 | Providing hearting / casing embankment with homogeneous soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 205.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 38.30 |
| IRR-CAW-2-7 | 116 | Providing hearting / casing embankment with homogeneous soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 198.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 37.50 |
| IRR-CAW-2-8 | 117 | Providing casing embankment using homogeneous soil from approved borrow area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer without watering to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 185.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 34.50 |
| IRR-CAW-3 | | EMBANKMENT WORKS USING DUMP AREA SOIL : | | | |
| IRR-CAW-3-1 | 118 | Providing impervious hearting embankment with soil from approved dump areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to achieve density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 181.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 35.60 |
| IRR-CAW-3-2 | 119 | Providing impervious hearting embankment with soil from approved dump areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to achieve density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 175.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 35.10 |
| IRR-CAW-3-3 | 120 | Providing semi-pervious / pervious casing embankment using soil from approved dump area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 176.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 34.50 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-3-4 | 121 | Providing semi-pervious / pervious casing embankment using soil from approved dump area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering , compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 169.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 33.90 |
| IRR-CAW-3-5 | 122 | Providing semi-pervious / pervious casing embankment using soil from approved dump area in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer without watering to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts. | cum | 158.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 31.20 |
| IRR-CAW-4 | | EMBANKMENT WORKS USING EXCAVATED SOIL : | | | |
| IRR-CAW-4-1 | 123 | Providing impervious hearting embankment with soil collected in embankment area in heaps as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sortingout, spreading in layer of 25 cm before compaction, breaking clods,sectioning, watering and compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water. | cum | 81.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 14.70 |
| IRR-CAW-4-2 | 124 | Providing impervious hearting embankment with soil collected in embankment area in heaps as part of disposal of excavated soil from canal including cost of all materials,machinery, labour, all operations such as sortingout, spreading in layer of 25 cm before compaction, breaking clods,sectioning, watering and compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water. | cum | 75.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 15.10 |
| IRR-CAW-4-3 | 125 | Providing semi-pervious / pervious casing hearting embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in layers of 25 cm before compaction, breaking clods, sectioning, watering and compacting each layer to density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water. | cum | 81.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 14.70 |
| IRR-CAW-4-4 | 126 | Providing semi-pervious / pervious casing embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in layers of 25 cm before compaction, breaking clods, sectioning, watering and compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water. | cum | 75.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 15.10 |
| IRR-CAW-4-5 | 127 | Providing semi-pervious / pervious casing embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in layers of 25 cm before compaction, breaking clods, sectioning and compacting each layer without watering to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete. | cum | 61.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 10.90 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|---|------|---|----------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-4-6 | 128 | Providing compacted embankment for field irrigation channels with gravely soil from approved borrow area including sorting out, spreading in layers of 15 cm thickness, breaking clods, watering, compacting, dressing sides to required slopes etc., complete with lead upto 50 m and all lifts. (manual work with water pump) | cum | 429.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 423.60 |
| IRR-CAW-5 | | FOUNDATION FILLING WORKS : | | | |
| IRR-CAW-5-1 | 129 | Providing rubble and sand filling in layers of 22.5 to 30 cm including cost of all materials, machinery, labour, watering, ramming etc., complete with initial lead upto 50 m and all lifts. | cum | 839.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 222.70 |
| IRR-CAW-5-2 | 130 | Providing rubble and Murum filling in layers of 22.5 to 30 cm including cost of all materials, machinery, labour, watering, ramming etc., complete with initial lead upto 50 m and all lifts. | cum | 728.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 222.70 |
| IRR-CAW-5-3 | 131 | Providing and laying 25 cm thick sand blanket below embankment including cost of all materials, machinery, labour, spreading to specified thickness etc., complete with initial lead upto 50 m and all lifts. | sqm | 158.50 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 27.80 |
| IRR-CAW-5-3-A (New Item 3 - 2011-12) | 132 | Providing and laying sand blanket below embankment including cost of all materials, machinery, labour, spreading to specified thickness etc., complete with initial lead upto 50 m and all lifts. | cum | 634.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 111.30 |
| IRR-CAW-5-4 | 133 | Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 50 m and all lifts. | cum | 629.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 154.90 |
| IRR-CAW-5-5 | 134 | Providing and constructing longitudinal and cross graded filter drains using sand and 20 mm down graded aggregates satisfying specified filter creteria in layers as per specifications including cost of all materials, machinery, labour, laying to required slopes, compaction etc., complete with initial lead upto 50 m and all lifts. | cum | 1058.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 207.70 |
| IRR-CAW-5-6 | 135 | Laying Longitudinal Drains and Transverse drains of Size 600 x600 x750 mm in Bed and filling with 12 mm to 40 mm HG machine Crushed metal and sand in bed including excavation of drains and Cost of procuring of all materials | Rm | 500.80 | |
| | | 133 | Rm | | 39.30 |
| IRR-CAW-5-7 | 136 | Laying and fixing of 100 mm Dia 300 mm long precast porous CC plugs in bed and sides using 1.181 Kgs of cement per each using 20 mm HG metal and placing in local filters of size 600x600x750 mm in size including excavation of drains and Cost of procuring of all materials | one plug | 494.43 | |
| | | Labour Component (including contractor's profit and Overheads) | one plug | | 167.01 |
| IRR-CAW-5-8 | 137 | Providing and constructing 0.50 m thick vertical or inclined graded filter media consisting of 15 cm thick sand layers and 20 cm thick 20 mm down coarse aggregate layer using approved materials satisfying specified filter creteria as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts. | cum | 1177.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 207.70 |
| IRR-CAW-5-9 | 138 | Providing and constructing graded filter media below and behind rock-toe consisting of 20 cm thick sand, 15 cm thick 20 mm down and 15 cm thick 40 mm down size graded coarse aggregates satisfying filter creteria behind rock-toe and 15 cm thick sand, 20 cm thick 20 mm down coarse aggregate and 65 cm thick 40 mm down size coarse aggregate satisfying filter creteria below rock-toe as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete with initial lead upto 50 m and all lifts. | cum | 1369.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 193.90 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-5-10(a) | 139 | Providing and laying filter media consisting of 2 layers of poly-propeline nonwoven filter fabric and 200 mm thick 20 mm down graded coarse aggregate for embankment including cost of all materials, machinery, labour, forming toe drain etc., complete with lead upto 50 m for aggregate and all leads for fabric and all lifts. Using 200 gsm filter fabric. | sqm | 582.60 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 46.20 |
| IRR-CAW-5-11(b) | 140 | Providing and laying filter media consisting of 2 layers of poly-propeline nonwoven filter fabric and 200 mm thick 20 mm down graded coarse aggregate for embankment including cost of all materials, machinery, labour, forming toe drain etc., complete with lead upto 50 m for aggregate and all leads for fabric and all lifts. Using 250 gsm filter fabric. | sqm | 616.00 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 46.20 |
| IRR-CAW-6 | | ROCK FILL WORKS : | | | |
| IRR-CAW-6-1 | 141 | Providing and constructing rockfill casing to canal embankment with graded stones and spalls from approved quarry including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing surface to required slopes etc., complete with initial lead upto 50 m and all lifts. | cum | 553.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 80.30 |
| IRR-CAW-6-2 | 142 | Providing and constructing rockfill casing to canal embankment with graded stones and spalls available in dump yard including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing surface to required slopes etc., complete with initial lead upto 50 m and all lifts. Stones and spalls available in dump yard will be issued at specified issue rate. | cum | 344.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 103.40 |
| IRR-CAW-7 | | CANAL LINING WORKS : | | | |
| IRR-CAW-7-1 | 143 | Providing cohesive non-swelling (CNS) soil lining to canals using soil from approved borrow area including spreading soil in layers of thickness not more than 15 cm , breaking clods, watering, compacting to density control of not less than 98 percent or as stipulated, dressing to required profile etc., complete with initial lead upto 1 km and all lifts. | cum | 276.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 96.30 |
| IRR-CAW-7-2 | 144 | Providing cohesive non-swelling (CNS) soil lining to canals using soil from approved borrow area including spreading soil in layers of thickness not more than 15 cm , breaking clods, watering, compacting to density control of not less than 95 percent or as stipulated, dressing to required profile etc., complete with initial lead upto 1 km and all lifts. | cum | 269.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 95.10 |
| IRR-CAW-7-3 | 145 | Providing cohesive non-swelling (CNS) soil lining to canal using soil collected in heaps along the edge of canal requiring CNS soil lining as part of the disposal of excavated soil from canal excavation in CNS soil reach including spreading in layers of thickness not more than 15 cm , breaking clods, watering, compacting to density control of not less than 95 percent or as stipulated, dressing to required profile etc., complete with lead upto upto 50 m and all lifts. | cum | 151.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 74.40 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|----------|----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-7-4 | 146 | Providing and fixing 20 x 20 x 75 cm size top surface neatly dressed canal bed level stones including cost of all materials, labour, excavation, fixing in position to correct level etc., complete with lead upto 50 m and all lifts. | Each | 129.40 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 98.70 |
| IRR-CAW-7-5 | 147 | Providing, fabricating and placing in position reinforcement steel bars for RCC works including cleaning, straightening, cutting, bending, hooking, lapping, tying with 1.25 mm dia.soft annealed steel wire, welding wherever required including cost of all materials, machinery, labour etc., complete with initial lead upto 50 and all lifts.(1.05 tonne/tonne of steel) | kg | 74.50 | |
| | | Labour Component (including contractor's profit and Overheads) | kg | | 10.90 |
| IRR-CAW-7-6 | 148 | Providing and laying 75 mm thick in-situ M-15 (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete with 20 mm down size approved, clean, hard, graded aggregates for canal lining using vibrating cylinder type mechanical paver including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position,finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete with initial lead upto 1 km and all lifts. (43 Gr Cement content: (300kg /cum) 22.5 kg / sqm for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum, equivalent concrete volume:79.2 cum including the extra quantity of concrete for curvatures and bends etc.,) | sqm | 428.90 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 42.30 |
| IRR-CAW-7-7 | 149 | Providing and laying 80 mm thick in-situ M-15 (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete with 20 mm down size approved, clean, hard, graded aggregates for canal lining using vibrating cylinder type mechanical paver including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete with initial lead upto 1 km and all lifts. (43 Gr Cement content: (300kg /cum) 24 kg / sqm for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum, equivalent concrete volume:84.48 cum including the extra quantity of concrete for curvatures and bends etc.,) | sqm | 444.60 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 42.30 |
| IRR-CAW-7-8 | 150 | Providing and laying 100 mm thick in situ M-15 (28 days cube compressive strength not less than 15 N /Sqmm) grade cement concrete with 20 mm down size approved, clean, hard, graded aggregates for canal lining using, vibrating, cylinder type mechanical paver including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete with initial lead upto 1 Km and all lifts. (43 Gr Cement content: (300kg /cum) 30 kg / sqm for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum, equivalent concrete volume:88 cum including the extra quantity of concrete for curvatures and bends etc.,) | sqm | 536.80 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 49.20 |
| IRR-CAW-7-9 | 151 | Dismantling, shifting and re-erecting mechanical concrete paver and DG set with all accessories across canal CD work or other locations wherever shifting and re-erecting is necessary including aligning paver correctly for continuing canal lining work, cost of all materials, machinery, labour etc., complete with all leads and lifts. Note: Local shifting and re-erection of paver for LH and RH side lining included in concrete lining rates under items IRR-CAW-7-7 and IRR-CAW-7-8 and saperate rate for shifting shall not be allowed. | shifting | 11804.60 | |
| | | Labour Component (including contractor's profit and Overheads) | shifting | | 9368.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-7-10 | 152 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N /sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for bed and side lining of canal(150mm thick) including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (43 Gr Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) (Only forManually operated) | cum | 5058.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1733.90 |
| IRR-CAW-7-11 | 153 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N/sqm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregade for bed and side lining of canal(100 mm thick) including, finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead up to 50 m and all lifts (43 Gr Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) | cum | 5323.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1784.90 |
| IRR-CAW-7-12 | 154 | Providing and laying 100mm thick insitu vibrated M-10 (28 days cube compressive strength-not less than 10.00 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for bed and side lining of canal lining using vibrating cylindertype mechanical paver including cost of all materials mechninery labour batching mixing placing in position forming contraction joints fixing pvc joint seiling strips shifting of paver from one side of canal to other side etc. complete with all leads & lifts. (Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) | sqm | 520.60 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 49.20 |
| IRR-CAW-7-13 | 155 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N /sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for bed and side lining of canal including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) | cum | 5213.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1784.90 |
| IRR-CAW-7-14 | 156 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for bed and side lining(150 mm thick) of canal including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 290 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) | cum | 5443.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1887.40 |
| IRR-CAW-7-15 | 157 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for bed and side lining(of thickness 100 mm) of canal including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 300 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.45 cum) | cum | 5692.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1992.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-7-16 | 158 | Providing and laying 150mm thick insitu vibrated M-15 (28 days cube compressive strength-not less than 15.00 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for bed and side lining of canal lining using vibrating cylindertype mechanical paver including cost of all materials machinery labour batching mixing placing in position forming contraction joints fixing pvc joint sealing strips shifting of paver from one side of canal to other side etc. complete with all leads & lifts. (Cement content: 300 kg / cum for use of super plasticiser(0.4% by wt. of cement),CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.44 cum) (Paver) | sqm | 687.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 49.20 |
| IRR-CAW-7-17 | 159 | Providing and fixing pre-cast RCC template walls consisting of 0.05 cum M-15 grade concrete using 20 mm down size coarse aggregates and 10 kg reinforcement steel moulded as per specifications and drawing in CM 1:4 proportion including cost of all materials, machinery, labour, formwork, fabricating and placing reinforcement steel, mixing, laying, conveying and fixing in position including necessary excavation for seating, finishing joints in CM 1:4, curing etc., complete with initial lead upto 1 km and all lifts. | Rm | 1219.20 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 391.70 |
| IRR-CAW-7-18 | 160 | Providing and fixing 50 mm dia perforated GI pressure relief pipes 12.50 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts. | Each | 144.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 65.10 |
| IRR-CAW-7-19 | 161 | Providing and fixing 50 mm dia perforated GI pressure relief pipes 22.50 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts. | Each | 193.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 65.10 |
| IRR-CAW-7-20 | 162 | Providing and fixing 50 mm dia perforated GI pressure relief pipes 30 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts. | Each | 225.10 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 65.10 |
| IRR-CAW-7-21 | 163 | Providing and fixing 50 mm dia perforated GI pressure relief pipes 45 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts. | Each | 283.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 65.10 |
| IRR-CAW-7-22 | 164 | Providing and fixing 50 mm dia perforated GI pressure relief pipes 75 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all leads and lifts. | Each | 397.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 65.10 |
| IRR-CAW-7-23 | 165 | Providing and fixing 100 mm dia perforated PVC pipes 40 cm long for Weep holes including cost of all materials, labour, drilling 8 mm dia holes etc. complete with all leads and lifts. | Each | 218.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 32.50 |
| IRR-CAW-7-24 | 166 | Drilling 32 mm dia pressure relief hole below pressure relief pipe for bed and side lining of canal laid on rock including cost of all materials, machinery, labour etc., complete with all leads and lifts. | Each | 360.60 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 128.70 |
| IRR-CAW-7-25 | 167 | Providing and forming 35 x 35 x 40 cm deep filter drain consisting of 75 mm thick 10 mm down coarse aggregate around pressure relief pipe and 75 mm thick sand around coarse aggregate filter including cost of all materials, labour, excavation of pit etc., complete with lead upto 50 m and all lifts. | Each | 52.10 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 11.60 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-7-26 | 168 | Providing and fixing 25 to 40 mm thick Shahabad / Talikota / other similar stone slabs with pointing and finishing joints neatly in CM 1:3 proportion for canal / field channel lining including cutting slabs to required size, mixing mortar, finishing joints neatly, curing etc., complete with lead upto 50 m and all lifts. | sqm | 432.30 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 100.20 |
| IRR-CAW-7-27 | 169 | Fixing PCC slabs of various sizes in CM 1 : 3 proportion to the side slopes of canal including preparing bed, flush pointing joints in CM 1 : 3 propn, cost of all materials (excluding PCC slabs), labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts. | sqm | 111.00 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 93.80 |
| IRR-CAW-7-28 | 170 | Fixing PCC lug slabs of various sizes in CM 1 : 3 proportion for supporting PCC slab lining including necessary excavation, refilling, flush pointing joints in CM 1 : 3 propn, cost of all materials (excluding PCC lug slabs), labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts. | Rm | 67.60 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 62.60 |
| IRR-CAW-7-29 | 171 | Fixing 30 cm height pre-cast drops for field channels as directed including excavation, etc., complete with all leads and lifts. | Each | 268.60 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 268.60 |
| IRR-CAW-7-30 | 172 | Providing and fixing LDPE sheet for bed and sides of canal including cost of all materials, labour, laying, joining etc., complete with all leads and lifts. Using 500 micron thick LDPE sheet. | sqm | 131.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 13.00 |
| | | If the surface on which the LDPE sheet is to be laid is too rough and undulating provide 75 mm thick sand backing to LDPE sheet. For providing 75 mm thick Sand for backing add | sqm | 52.60 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 13.40 |
| IRR-CAW-7-31 | 173 | Providing and fixing LDPE sheet for bed and sides of canal including cost of all materials, labour, laying, joining etc., complete with all leads and lifts. Using 750 micron thick LDPE sheet. | sqm | 185.70 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 17.50 |
| IRR-CAW-7-32 | 174 | Providing and fixing LDPE sheet for bed and sides of canal including cost of all materials, labour, laying, joining etc., complete with all leads and lifts. Using 1000 micron thick LDPE sheet. | sqm | 258.00 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 23.50 |
| IRR-CAW-7-33 | 175 | Providing and fixing 12 mm thick 380 mm depth tarfelt expansion joint filler boards for stone masonry lining of canal including cost of all materials, labour etc., complete with all leads and lifts. | Rm | 181.00 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 11.60 |
| IRR-CAW-7-34 | 176 | Providing and fixing 20 mm thick 100 mm depth tarfelt expansion joint filler boards for cement concrete lining of canal including cost of all materials, labour etc., complete with all leads and lifts. | Rm | 78.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 11.60 |
| IRR-CAW-7-35 | 177 | Providing and fixing 20 mm thick 150 mm depth tarfelt expansion joint filler boards for cement concrete lining of canal including cost of all materials, labour etc., complete with all leads and lifts. | Rm | 114.60 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 11.60 |
| IRR-CAW-7-36 | 178 | Providing and forming 35 mm wide and 10 mm thick construction / contraction joints for concrete lining by mastic filler including cost of all materials, labour etc., complete with all leads and lifts. | Rm | 26.40 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 8.50 |
| IRR-CAW-7-37 | 179 | Manufacturing 550 x 550 x 55 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N /sqmm) cement concrete using 20 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.80 cum, Blending Ratio of CA : 65:35, FA : 0.45cum) | Each | 100.60 | |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 36.70 |
| IRR-CAW-7-38 | 180 | Manufacturing 550 x 300 x 55 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 20 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.80 cum, Blending Ratio of CA : 65:35, FA : 0.45cum) | Each | 75.60 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 36.70 |
| IRR-CAW-7-39 | 181 | Manufacturing 450 x 300 x 30 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.68 cum, FA : 0.43cum) | Each | 39.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 24.10 |
| IRR-CAW-7-40 | 182 | Manufacturing 450 x 150 x 30 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement),CA : 0.68 cum, FA : 0.43cum) | Each | 32.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 24.10 |
| IRR-CAW-7-41 | 183 | Manufacturing 600 x 300 x 100mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N/Sqmm) cement concrete using 20 mm down grades coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.80 cum, FA : 0.45cum, Blending Ratio of CA--65:35) | Each | 83.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 23.50 |
| IRR-CAW-7-42 | 184 | Manufacturing 400 x 400 x 30 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm)cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.68 cum, FA : 0.43cum) | Each | 41.60 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 24.10 |
| IRR-CAW-7-43 | 185 | Manufacturing 400 x 150 x 30 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N /sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.68 cum, FA : 0.43cum) | Each | 32.20 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 24.10 |
| IRR-CAW-7-44 | 186 | Providing and laying uncoursed rubble stone masonry in CM 1 : 5 proportion for canal side lining using stones and chips from approved quarry including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Thickness of the masonry assumed: 0.3 m, rubble stones : 0.96 cum, Stone Chips : 0.15cum,Through Stones 20 x 20 x 30cm : 1/sqm) | cum | 2309.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 902.00 |
| IRR-CAW-7-45 | 187 | Providing and laying uncoursed rubble stone masonry in CM 1:5 proportion for canal side lining using stones from approved quarry including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with initial lead upto 50m and all lifts.(with no pin headers)(Thickness of the Masonry assumed:0.3 m, rubble stones : 1.1 cum) | cum | 4179.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2968.10 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|--|------|---|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CAW-7-46 | 188 | Providing and laying uncoursed rubble stone masonry in CM 1 : 5 proportion for canal side lining using stones and chips from canal excavation including cost of all materials, machinery, labour, forming weep holes at specified interval, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.96 cum, Stone Chips : 0.15cum, Through Stones 20 x 20 x 30cm : 1/sqm) | cum | 2197.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1017.30 |
| IRR-CAW-7-47 | 189 | Providing and laying uncoursed rubble stone masonry in CM 1:5 proportion for canal side lining using stones from canal excavation including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with initial lead upto 50m and all lifts.(with no pin headers)(rubble stones : 1.1cum, cement : 98kg, sand 0.34 cum) | cum | 3956.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2968.10 |
| IRR-CAW-8 | | ROCK PITCHING | | | |
| IRR-CAW-8-1 | 190 | Providing and constructing 25 cm thick dry rubble stone pitching with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.23 cum/sqm, Stone Chips : 0.0375cum/sqm, Pin Headers 30cm : 2/sqm) | sqm | 235.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 70.60 |
| | | If 15 cm thick murum bed is to be provided below pitching add | sqm | 66.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 22.30 |
| IRR-CAW-8-1-A (New Item4 - 2011-12) | 191 | Providing and constructing 22.5 cm thick dry rubble stone pitching with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.207 cum/sqm, Stone Chips : 0.3375cum/sqm, Pin Headers 30cm : 2/sqm) (For Maintenance Works) | sqm | 224.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 70.60 |
| IRR-CAW-8-2 | 192 | Providing and constructing 25 cm thick dry rubble stone pitching including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(with no pin headers)(rubble stones : 0.33 cum/sqm) | sqm | 282.80 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 170.60 |
| IRR-CAW-8-2 - A (New Item5 - 2011-12) | 193 | Providing and constructing 225 mmm thick dry rubble stone pitching including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(with no pin headers)(rubble stones : 0.2475 cum/sqm) (For Maintenance Works) | sqm | 215.10 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 153.50 |
| IRR-CAW-8-3 | 194 | Providing and constructing 30 cm thick dry rubble stone pitching with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.275 cum/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm) | sqm | 256.90 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 70.60 |
| IRR-CAW-8-4 | 195 | Providing and constructing 30 cm thick dry rubble stone pitching including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(with no pin headers)(rubble stones : 0.33 cum/sqm) | sqm | 339.30 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 204.70 |
| IRR-CAW-8-5 | 196 | Providing and constructing 45 cm thick dry rubble stone pitching with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.40 cum/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm) | sqm | 389.50 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 99.20 |
| IRR-CAW-8-6 | 197 | Providing and constructing 45 cm thick dry rubble stone pitching including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(with no pin headers)(rubble stones : 0.495 cum/sqm) | sqm | 509.00 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 307.10 |
| IRR-CAW-8-7 | 198 | Providing and constructing 30 cm thick rubble stone pitching set in CM 1: 5 proportion with pin headers at 2 per sqm in including cost of all materials, labour, packing chips and mortar, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(rubble stones : 0.275 cum/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm) | sqm | 518.90 | |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 120.40 |
| IRR-CAW-8-8 | 199 | Providing and Constructing 30 cm thick rubble stone pitching set in CM 1:5 Proportion including cost of all materials,labour, packing chips and mortar ,finishing etc., complete(rubble stones : 0.33 cum/sqm) | sqm | 385.70 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 26.70 |
| IRR-CAW-8-9 | 200 | Providing and constructing 30 cm thick dry khandki stone pitching using 20 to 25 cm size khandki stones with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(Khandki stones 20- 25 cm height : 1200 Nos/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm) | sqm | 403.80 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 70.60 |
| IRR-CAW-8-10 | 201 | Providing and constructing 45 cm thick dry khandki stone pitching using 25 to 30 cm size khandki stones with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.(Khandki stones 25- 30 cm height : 1200 Nos/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm) | sqm | 392.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 99.20 |
| IRR-CAW-8-11 | 202 | Providing and constructing 30 cm thick khandki stone pitching using 20 to 25 cm size khandki stones with pin headers at 2 per sqm set in CM 1 : 5 proportion with pointing joints in CM 1:3 proportion including cost of all materials, labour, packing chips and mortar, finishing, curing etc. complete with initial lead upto 50 m and all lifts.(Khandki stones 20- 25 cm height : 1200 Nos/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm) | sqm | 649.50 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 114.90 |
| IRR-CAW-8-12 | 203 | Providing and constructing 45 cm thick khandki stone pitching using 25 to 30 cm stones with pin headers at 2 per sqm set in CM 1 : 5 proportion with pointing joints in CM 1 : 3 proportion including cost of all materials, labour, packing chips and mortar, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Khandki stones 25- 30 cm height : 730 Nos/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm) | sqm | 737.90 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 157.90 |
| IRR-CAW-8-13 | 204 | Providing 10 cm thick approved type grass turfing to the side slopes of canal including cost of all materials, labour, watering for minimum 15 days etc., complete with lead 50 m and all lifts.(FA : 2 cum/sqm) | sqm | 134.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 91.90 |
| IRR-CAW-8-14 | 205 | Providing 10 cm thick approved type grass turfing to the side slopes of canal including cost of all materials, labour, watering for minimum 15 days etc., complete with lead 50 m and all lifts. with no sand | sqm | 84.10 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 52.30 |
| Chapter IV | | | | | |
| IRR-CCDW | | CANAL CROSS DRAINAGE WORKS | | | |
| IRR-CCDW-1 | | EXCAVATION & FOUNDATION TREATMENT WORKS : | | | |
| | | (manual means of excavation and conveyance) | | | |
| IRR-CCDW-1-1 | 206 | Excavation in all kinds of soil including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m. | cum | 352.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 352.20 |
| IRR-CCDW-1-2 | 207 | Excavation for Structures- Mechanical Means (Data adopted from MORTH) Earth work in excavation in all kinds of soils of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material. (depth upto 3 meters) | cum | 112.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 28.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CCDW-1-3 | 208 | (manual means of excavation and conveyance) Excavation in ordinary rock (including HDR) without blasting including boulders above 0.3 m upto 0.60 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m. | cum | 501.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 501.40 |
| IRR-CCDW-1-4 | 209 | (Data adopted from MORTH) (manual means of excavation and conveyance) Excavation in ordinary rock (including HDR) without blasting for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m. | cum | 143.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 31.00 |
| IRR-CCDW-1-5 | 210 | (manual means of excavation after blasting and conveyance) Excavation in hard rock requiring blasting including boulders above 0.6 m upto 1.2 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m. | cum | 485.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 390.20 |
| IRR-CCDW-1-6 | 211 | (manual means of excavation after blasting and conveyance) Excavation in hard rock of all toughness by blasting including boulders above 1.2 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated rock neatly in specified dump area or stack yard as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m. | cum | 721.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 479.00 |
| IRR-CCDW-1-7 | 212 | (manual means of excavation after controlled blasting and conveyance) Hard Rock (blasting prohibited) (Data adopted from MORTH) Excavation in hard rock with blasting (blasting prohibited)prohibited for foundations of canal cross drainage and other appurtenant structures and placing the excavated rock neatly in or stack yard as directed etc., complete with specified dump area initial lead upto 50 m and initial lift upto 3 m. | cum | 1415.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 480.10 |
| IRR-CCDW-1-8 | 213 | Providing and fixing 25 mm dia 2.50 m long cold twisted deformed steel anchor rods with 1.25 m length driven into 32 mm dia hole drilled in bed rock and remaining length embedded in concrete / masonry including cost of all materials, machinery, labour, drilling and cleaning hole, driving anchor rod, grouting hole with thick cement slurry etc., complete with initial lead upto 50 m and all lifts. | Each | 1134.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 290.30 |
| IRR-CCDW-2 | | STEEL AND CEMENT CONCRETE WORKS : | | | |
| IRR-CCDW-2-1 | 214 | Providing, fabricating and placing in position reinforcement steel bars for RCC works including cleaning, straightening, cutting, bending, hooking, lapping, welding wherever required,tying with 1.25 mm dia soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with initial lead upto 50 and all lifts. | kg | 75.00 | |
| | | Labour Component (including contractor's profit and Overheads) | kg | | 11.60 |
| IRR-CCDW-2-2 | 215 | Providing, fabricating and fixing in position structural steel cutting edge consisting of 100 x 100 x 10 mm angle and 250 x 12 mm plate for sinking 4.50 m outer diameter foundation wells foundation wells including cost of all materials, machinery, labour, bending, welding, providing anchors etc., complete with initial lead upto 50 m and all lifts. | kg | 90.20 | |
| | | Labour Component (including contractor's profit and Overheads) | kg | | 13.60 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CCDW-2-3 | 216 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) | cum | 5031.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1798.50 |
| IRR-CCDW-2-4 | 217 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum) | cum | 5053.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1872.70 |
| IRR-CCDW-2-5 | 218 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) | cum | 4777.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1733.20 |
| IRR-CCDW-2-6 | 219 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum) | cum | 4904.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1860.70 |
| IRR-CCDW-2-7 | 220 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 310 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) | cum | 5361.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1890.00 |
| IRR-CCDW-2-8 | 221 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for sub-structure / super- structure works including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) | cum | 5842.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1883.90 |
| IRR-CCDW-2-9 | 222 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for sub-structure / super- structure works including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) | cum | 5863.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1999.60 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CCDW-2-10 | 223 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for sub-structure / super- structure works including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 280 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) | cum | 5645.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2003.00 |
| IRR-CCDW-2-11 | 224 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for sub-structure / super- structure works including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) | cum | 5214.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1862.70 |
| IRR-CCDW-2-12 | 225 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for well kerb including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 350 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 7418.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2412.70 |
| IRR-CCDW-2-13 | 226 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for well steining including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 6692.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2207.00 |
| IRR-CCDW-2-14 | 227 | Providing and laying insitu M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for well bottom plug by tremie or skip box method including cost of all materials, complete with initial lead upto 50 m and all lifts.(Cement content: 350 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) | cum | 4864.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1757.40 |
| IRR-CCDW-2-15 | 228 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for well top plug including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 280 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltrs / cum | cum | 4615.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1712.90 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CCDW-2-16 | 229 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for well cap including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 5064.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1742.30 |
| IRR-CCDW-2-17 | 230 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for piers and abutments including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 6274.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2310.50 |
| IRR-CCDW-2-18 | 231 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for piers and abutments including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 6126.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2297.50 |
| IRR-CCDW-2-19 | 232 | Providing and laying insitu vibrated M-10 (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for piers and abutments including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 5961.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2125.20 |
| IRR-CCDW-2-20 | 233 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates for cantiliver / counterfort retaining walls including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 6579.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2199.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CCDW-2-21 | 234 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard, graded aggregates with placing and sinking plums of size 150 to 80 mm upto 15 percent for gravity type retaining walls / piers / abutments etc. , including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.765cum, Blending Ratio of CA--50:30:20, FA : 0.34 cum, plums of size 150 to 80 mm : 0.25cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 5890.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2061.80 |
| IRR-CCDW-2-22 | 235 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 40 mm down size approved, clean, hard,graded aggregates for cast in-situ pipes including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 5542.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1946.50 |
| IRR-CCDW-2-23 | 236 | Providing and laying insitu vibrated M-15 (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using 80 mm down size approved, clean, hard, graded aggregates for cast in-situ pipes including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 5557.20 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2019.60 |
| IRR-CCDW-2-24 | 237 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for deck slab & kerb including cost of all materials,labour, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 9298.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2883.00 |
| IRR-CCDW-2-25 | 238 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for columns and beams including cost of all materials,labour, machinery, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc.,complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 8029.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2633.90 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CCDW-2-26 | 239 | Providing and laying insitu M- 20 (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for wearing coat including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position in alternate panels, levelling, compacting, finishing, curing, packing joints with asphalt mortar etc., complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 4960.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1786.50 |
| IRR-CCDW-2-27 | 240 | Providing and laying insitu vibrated M-20 (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using 20 mm down size approved, clean, hard, graded aggregates for troughs including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position,levelling, vibrating, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) If water is to be brought from other place add only lead charges @ 500 ltr / cum. | cum | 7243.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2447.40 |
| IRR-CCDW-3 | | FOUNDATION WELL SINKING WORKS : | | | |
| IRR-CCDW-3-1 | 241 | Sinking RCC wells vertically for foundation of piers and abutments in all kinds of soil, sand and soft rock by approved well sinking method including cost of all materials, machinery, labour, kent - ledge arrangements, disposal of excavated material as disposal of excavated material as directed etc., complete with lead upto 50 m for disposal of excavated material.(diameter of well 6.00m) (Data adopted from MORTH) | *Rm | 4831.30 | |
| | | Labour Component (including contractor's profit and Overheads) | *Rm | | 2361.40 |
| | | for 3 to 10 meters for each running meter | *Rm | 6784.60 | |
| | | Labour Component (including contractor's profit and Overheads) | *Rm | | 3079.60 |
| IRR-CCDW-3-2 | 242 | Filling foundation wells with sand in layers of 25 to 30 cm and compacting by watering, ramming as directed including cost of all materials, machinery, labour etc., complete with initial lead upto 50 m and all lifts. | cum | 709.30 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 160.50 |
| IRR-CCDW-4 | | MASONRY WORKS : | | | |
| IRR-CCDW-4-1 | 243 | Providing and constructing un-coursed rubble stone masonry with approved stones in CM 1 : 4 proportion for sub-structure portions of return walls / abutments etc. , including cost of all materials, machinery, labour, scaffolding, cleaning, packing cement mortar, wedging stone chips, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 143 kg / cum of masonry, rubble stones : 0.85cum, FA : 0.40 cum,Stone Chips : 0.15 cum) | cum | 2562.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1127.30 |
| IRR-CCDW-4-2 | 244 | Providing and constructing un-coursed rubble stone masonry with approved stones in CM 1 : 4 proportion for super-structure portions of return walls / abutments etc. , including cost of all materials, machinery, labour, scaffolding, cleaning, packing cement mortar, wedging stone chips, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 143 kg / cum of masonry, rubble stones : 0.85cum, FA : 0.40 cum,Stone Chips : 0.15 cum) | cum | 2623.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1155.50 |
| IRR-CCDW-4-3 | 245 | Providing and constructing coursed rubble masonry second sort in CM 1:4 proportion with stones from approved source including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, finishing, curing etc., complete with initial lead upto 50 m and initial lift upto 3 m.(Cement content: 133 kg / cum of masonry, rubble stones : 0.45cum, FA : 0.35 cum,Stone Chips : 0.15 cum, Khandki stones 25 x 25 x 30 cm : 180 Nos, Header stones 25 x 25x 45 cm : 60 Nos) | cum | 3219.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1281.80 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CCDW-4-4 | 246 | Providing and constructing coursed rubble masonry first sort in CM 1:4 proportion with stones from approved source including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, finishing, curing etc., complete with initial lead upto 50 m and initial lift upto 3 m. (Cement content: 133 kg / cum of masonry, rubble stones : 0.45cum, FA : 0.35 cum,Stone Chips : 0.15 cum, Khandki stones 25 x 25 x 30 cm : 180 Nos, Header stones 25 x 25x 45 cm : 60 Nos) | cum | 3402.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1465.20 |
| IRR-CCDW-4-5 | 247 | Providing cement mortar pointing to coursed rubble face stone masonry in CM 1 : 2 proportion by volume including raking and cleaning joints for 50 mm depth, pressing cement mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 50 m and all lifts. | sqm | 155.10 | |
| | 246 | | sqm | | 129.40 |
| IRR-CCDW-4-6 | 248 | Providing cement mortar pointing to coursed rubble face stone masonry in CM 1 : 3 proportion by volume including raking and cleaning joints for 50 mm depth, pressing cement mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 50 m and all lifts. | sqm | 149.30 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 129.40 |
| IRR-CCDW-4-7 | 249 | Providing 12 mm thick plastering in cement mortar 1:3 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts. | sqm | 222.80 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 185.10 |
| IRR-CCDW-4-8 | 250 | Providing 12 mm thick plastering in cement mortar 1:4 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts. | sqm | 216.10 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 185.10 |
| IRR-CCDW-4-9 | 251 | Providing 20 mm thick plastering in cement mortar 1:3 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts. | sqm | 309.10 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 246.20 |
| IRR-CCDW-4-10 | 252 | Providing 20 mm thick plastering in cement mortar 1:4 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts. | sqm | 297.90 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 246.20 |
| IRR-CCDW-5 | | COPING & RAILING WORKS : | | | |
| IRR-CCDW-5-1 | 253 | Providing and fixing 10 cm thick roughly dressed burnt stone slabs for coping set in CM 1: 6 proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm thick 1.05 sqm/ sqm) | sqm | 708.70 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 267.00 |
| IRR-CCDW-5-2 | 254 | Providing and fixing 10 cm thick one line dressed burnt stone slabs for coping set in CM 1: 6 proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm thick 1.05 sqm/ sqm) | sqm | 912.70 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 470.90 |
| IRR-CCDW-5-3 | 255 | Providing and fixing 10 cm thick two line dressed burnt stone slabs for coping set in CM 1: 6 proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm thick 1.05 sqm/ sqm) | sqm | 1176.30 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 734.50 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|-------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-CCDW-5-4 | 256 | Providing and laying insitu M-15 (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete using 20 mm down size approved clean, hard, graded aggregates for coping slab including cost of all materials, machinery, labour, formwork, cleaning surface, batching, mixing, placing in position, levelling, compacting, finishing, curing etc., complete with initial lead upto 50 m and initial lift upto 3 m. (Cement content: 300 kg / cum with use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum) | cum | 7007.90 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 2327.40 |
| IRR-CCDW-5-5 | 257 | Providing and constructing protective railing consisting of in-situ railing posts of size 15 x 15 cm at bottom, 10 x 10 cm at top and 75 cm height at 2 m centre to centre in M-20 grade concrete using 20 mm down size graded aggregates and with each post reinforced by 4 Nos. of 8 mm dia main bars embedded in kerb concrete for a depth of 40 cm and 5 Nos. of 6 mm dia. stirrups including fixing 3 rows of 40 mm dia. GI pipes with one coat of red oxide primer and two coats of synthetic enamel paint, cost of all materials, machinery, labour, formwork, finishing, curing etc., complete with lead upto 50 m and all lifts. | Rm | 1292.60 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 252.60 |
| IRR-CCDW-6 | | HUME PIPE LAYING & JOINTING WORKS : | | | |
| IRR-CCDW-6-1 | 258 | Laying and jointing 300 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 9.9 kg / joint, FA : 0.01cum/joint, Hemp Yarn : 0.091kg/joint) | Joint | 416.50 | |
| | | Labour Component (including contractor's profit and Overheads) | Joint | | 359.00 |
| IRR-CCDW-6-2 | 259 | Laying and jointing 450 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 17.4 kg / joint, FA : 0.022cum/joint, Hemp Yarn : 0.127kg/joint) | Joint | 460.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Joint | | 359.00 |
| IRR-CCDW-6-3 | 260 | Laying and jointing 600 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 24.8 kg / joint, FA : 0.025cum/joint, Hemp Yarn : 0.22kg/joint) | Joint | 587.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Joint | | 444.60 |
| IRR-CCDW-6-4 | 261 | Laying and jointing 700 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 32.1 kg / joint, FA : 0.031cum/joint, Hemp Yarn : 0.25kg/joint) | Joint | 625.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Joint | | 444.60 |
| IRR-CCDW-6-5 | 262 | Laying and jointing 800 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 39.6 kg / joint, FA : 0.039cum/joint, Hemp Yarn : 0.31kg/joint) | Joint | 754.40 | |
| | | Labour Component (including contractor's profit and Overheads) | Joint | | 530.00 |
| IRR-CCDW-6-6 | 263 | Laying and jointing 900 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 44.6 kg / joint, FA : 0.045cum/joint, Hemp Yarn : 0.34kg/joint) | Joint | 782.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Joint | | 530.00 |
| IRR-CCDW-6-7 | 264 | Laying and jointing 1000 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 49.5 kg / joint, FA : 0.05cum/joint, Hemp Yarn : 0.377kg/joint) | Joint | 866.30 | |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|-------|-----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | Labour Component (including contractor's profit and Overheads) | Joint | | 585.70 |
| IRR-CCDW-6-8 | 265 | Laying and jointing 1100 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 56.9 kg / joint, FA : 0.058cum/joint, Hemp Yarn : 0.415kg/joint) | Joint | 907.00 | |
| | | Labour Component (including contractor's profit and Overheads) | Joint | | 585.70 |
| IRR-CCDW-6-9 | 266 | Laying and jointing 1200 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.(Cement content: 66.8 kg / joint, FA : 0.069cum/joint, Hemp Yarn : 0.453kg/joint) | Joint | 1075.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Joint | | 701.00 |
| IRR-CCDW-7 | | BACK FILLING & OTHER WORKS : | | | |
| IRR-CCDW-7-1 | 267 | Providing rubble / boulder and sand filling behind abutment and return walls in layers including cost of all materials, machinery, labour, watering, ramming etc., complete with initial lead upto 50 m and initial lift upto 3 m. | cum | 935.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 318.70 |
| IRR-CCDW-7-2 | 268 | Providing and filling murrum / gravely soil (CNS soil) for foundation or around pipes including breaking clods, spreading in layers of 10 to 15 cm, watering, compaction by earth masters to achieve density control of not less than 95 percent etc., complete with lead upto 50 m and all lifts. | cum | 696.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 403.70 |
| IRR-CCDW-7-3 | 269 | Providing and filling murum / gravely soil (CNS soil) for foundation or above pipes including breaking clods, spreading in layers of 10 to 15 cm, watering, compaction by power roller to achieve density control of not less than 98 percent etc., complete with lead upto 50 m and all lifts. | cum | 477.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 158.50 |
| IRR-CCDW-7-4 | 270 | Providing and fixing one line dressed 111x35x25 cm thick IRC standard kilometre stone in cement concrete M-10 grade with 40 mm down size aggregates including excavating pit of size 70x45x40 cm, embedding the stone by 30 cm in concrete, providing 2 coats synthetic enamel paint of approved quality and colour to exposed surfaces and lettering as directed, cost of all materials, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts. | Each | 1668.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 656.10 |
| IRR-CCDW-7-5 | 271 | Providing and fixing one line dressed 65x15x10 cm thick IRC standard hectometre stone in cement concrete M-10 grade with 40 mm down size aggregates including excavating pit of size 50x45x40 cm, embedding the stone by 30 cm in concrete, providing 2 coats synthetic enamel paint of approved quality and colour to exposed surfaces and lettering as directed, cost of all materials, labour, finishing, curing etc., complete with initial lead upto 50 m and all lifts. | Each | 1239.40 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 563.10 |
| Chapter V | | | | | |
| IRR-GAW | | GATES / HOISTS AND ALLIED WORKS | | | |
| IRR-GAW-1-1 | 272 | <u>SPILLWAY RADIAL GATES</u> E.M Parts and anchorages fabrication, supply, erection, testing and commissioning of embedded parts for radial gate consists of sill beam, wall plates, anchor girders , yoke girders, tie flats, trunnion supports etc., including cost of all materials, machinery, labour, welding, finishing, with leads and lifts &all accessories (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne | 183438.50 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 60974.60 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|----------------|-----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-GAW-1-2 | 273 | <u>RADIAL GATES</u> fabrication, supply, erection, testing and commissioning of radial gate consisting of skin plate, stiffeners, horizontal girders, radial arms, trunnion assemblies, tie beam, pulley supports, bracings, rubber seals, clamps etc., with all accessories for spillway/canals including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne | 165436.40 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 46752.00 |
| IRR-GAW-1-3 | 274 | <u>RADIAL GATES-ROPE DRUM HOISTS WITH HOIST BRIDGES</u> fabrication, supply, erection, testing and commissioning of electrically operated rope drum hoist of adequate capacity consisting of base frames, rope drums, connecting shaft, gear system, brake system, electric motor, wire ropes, gate position indicator, manual operation arrangement etc., with all accessories for spillway radial gate including cost of all materials, machinery, labour, greasing, providing hand railing and approach staircase with gate to hoist platform, , complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne capacity | 44736.30 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne capacity | | 3735.10 |
| IRR-GAW-1-4 | 275 | <u>RADIAL GATES</u> Walk way(cat walk) Design, fabrication, supply, erection and commissioning of 1 metre wide walkway connecting spillway piers / abutments at trunnion platform level including cost of all materials, machinery, labour, cutting, etc., complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | Rm | 126397.40 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 44737.60 |
| IRR-GAW-2-1 | 276 | <u>VERTICAL LIFT GATES-EM PARTS</u> Design, fabrication, supply, erection and commissioning of embedded parts consisting of sill beam, slide tracks, seal seats, guide rails, dogging sets for storage of stoplog elements etc., with all accessories for spillway stop log gates and other vertical lift elements including cost of all materials, machinery, labour, etc., complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne | 203869.70 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 72919.00 |
| IRR-GAW-2-2 | 277 | <u>vertical lift gates and stop log gate elements (SLIDING GATES)</u> Design, fabrication, supply, erection, testing and commissioning of vertical lift gates and stoplog gate elements , consisting of skin plate, horizontal and vertical girders, stiffeners, lifting pins, bronze padded slide blocks/bearings, guide shoes, rubber seals, clamps etc., with all accessories including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)2 | tonne | 171200.30 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 53579.90 |
| IRR-GAW-2-3 | 278 | <u>STOP LOGS-automatic lifting beam</u> fabrication, supply, erection, testing and commissioning of automatic lifting beam with all accessories for handling, lowering and lifting of spillway stop log gate elements including cost of all materials, machinery, labour, cutting, aligning, welding, finishing, etc., complete as per specifications and drawings with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne | 138286.70 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 27215.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|----------------|-----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-GAW-2-4 | 279 | <u>MOVING GANTRY CRANE-CLASS II</u> fabrication, supply, erection, testing and commissioning of adequate capacity Class- II type moving gantry crane consisting of rail mounted gantry frame, top platform with hand railing, long / cross travel arrangements, rope drums, gear systems, electric motors, electro-magnetic brake system, cabin, control panel, wire rope, ladder, motorised cable reeling drum etc., with all accessories for operating spillway stop log gate elements and river sluice / canal sluice emergency gates including cost of all materials, machinery, labour, etc., complete with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne capacity | 249587.60 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne capacity | | 27432.90 |
| IRR-GAW-2-5 | 280 | <u>RAIL TRACK FOR GANTRY CRANE</u> Design, fabrication, supply, erection and commissioning of rail track using 45 kg / m standard rails on spillway bridge for movement of gantry crane for handling and operating spillway stoplog gate elements / river sluice / canal sluice emergency gate including cost of all materials, machinery, labour, complete as per specifications (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | Rm | 7816.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 672.90 |
| IRR-GAW-2-6 | 281 | <u>VERTICAL LIFT GATES/STOP LOGS - ROLLER MOUNTED</u> Design, fabrication, supply, erection, testing and commissioning of fixed wheel type vertical lift service gate consisting of skin plate, vertical and horizontal girders, wheels, stiffeners, lifting brackets, guide rollers, ballast blocks, teflon clad rubber seals etc., with all accessories for river sluice / canal sluice vent including cost of all materials, machinery, labour, welding, aligning finishing seal fixing etc. with all leads and lifts, complete as per specifications and approved drawings (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne | 167207.30 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 50915.00 |
| IRR-GAW-2-7 | 282 | <u>VERTICAL LIFT GATES-ROPE DRUM HOIST UPTO 30 TON CAP. POWER OPERATED</u> Design, fabrication, supply, erection, testing and commissioning of adequate capacity rope drum hoist consisting of hoist platform, rope drum, gear system, electric motor, electro-magnetic brake system, hand operation assembly, control panel, wire rope, pulleys, ladder etc., with all accessories for operating river sluice / canal sluice service gate including cost of all materials, machinery, labour, , complete as per specifications and drawings with all leads and lifts (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne capacity | 72114.30 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne capacity | | 3563.80 |
| IRR-GAW-2-8 | 283 | <u>HOIST BRIDGE/ WITH TRESSELS</u> Design, fabrication, supply, erection and commissioning of structural steel hoist bridge consisting of columns, beams, bracings, stiffeners, ties, chequered plate covering, hand railing, ladder etc., with all accessories for supporting rope drum hoist for operating barrage gates including cost of all materials, machinery, labour, welding, finishing, etc., complete complete as per specifications and drawings with all leads and lifts (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne | 143982.20 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne | | 46330.30 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|-----------------------------------|------|--|----------------|-----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-GAW-2-9 | 284 | ROPE DRUM HOIST WITHOUT HOIST BRIDGE FOR BARRAGE GATES Design, fabrication, supply, erection, testing and commissioning of adequate capacity rope drum hoist consisting of rope drum, pulleys, gear system, electric motor, electro-magnetic brake system, manual operation assembly, position indicator, control panel, wire rope etc., with all accessories for operating vertical lift roller gates for barrage including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc., complete with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne capacity | 35149.20 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne capacity | | 1510.40 |
| IRR-GAW-2-10 | 285 | SCREW GEAR HOISTS INCLUDING PLATFORM (UPTO 10 TON CAP) Design, fabrication, supply, erection, testing and commissioning of adequate capacity screw gear type hoist consisting of supporting structure, platform, ladder etc., with all accessories for operating canal escape / regulator gate including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc., complete with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne capacity | 38163.70 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne capacity | | 6824.40 |
| IRR-GAW-2-11 | 286 | MANUAL OPERATED ROPE DRUM HOISTS Design, fabrication, supply, erection, testing and commissioning of adequate capacity manually operated rope drum hoist consisting of hoist platform, rope drum, gear system, brake system, wire rope, ladder etc., with all accessories for operating canal regulator radial gate including cost of all materials, machinery, labour, welding, finishing, cleaning, ., complete with all leads and lifts (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | tonne capacity | 76778.20 | |
| | | Labour Component (including contractor's profit and Overheads) | tonne capacity | | 9134.30 |
| IRR-GAW-2-12 New Item2015-16-2 | 287 | OT SLUICE SHUTTERS Screw Gear Hoist Including Platform for below 5 Tons Capacity (Small Gates) <u>As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System</u> Fabrication, supply, erection, testing and commissioning of Embedded parts consisting of supporting structure, platform etc. with all accessories for operating canal escape/ regulator gate with all accessories including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc. complete as per Specification and approved drawings (without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | Tonne | 144267.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Tonne | | 34141.80 |
| IRR-GAW-2-13 New Item2015-16-3 | 288 | OT SLUICE SHUTTERS EM parts for Below 5 Tons capacity (small gates) <u>As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System</u> Fabrication, supply, erection, testing and commissioning of Embedded parts consisting of sil beam, slide tracks, seal seats, Guide plates etc. with all accessories including cost of all materials, machinery, labour, etc. complete as per specifications and approved drawings. (without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | Tonne | 98388.20 | |
| | | Labour Component (including contractor's profit and Overheads) | Tonne | | 28413.30 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|-----------------------------------|------|--|-------|-----------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-GAW-2-14 New Item2015-16-4 | 289 | OT SLUICE SHUTTERS for Below 5 Tons capacity (small gates) <u>As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad</u> <u>Specification drawing for Krishna Delta System</u> Fabrication, supply, erection, testing and commissioning of Sluice Shutters consisting of skin plate, horizontal and vertical angles, stiffeners, rubber seals, clamps with all accessories for sluice shutters including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings (without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately) | Tonne | 240683.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Tonne | | 14638.80 |
| IRR-GAW-3 | | SAND BLASTING AND PAINTING | | | |
| IRR-GAW-3-1 | 290 | Cleaning gates / hoists / embedded parts/lifting beams etc, to expose fresh metal surface for painting by sand blasting method as per specifications including cost of all materials, labour, machinery, scaffolding, etc., complete with initial lead for sand upto 1 km and all lifts. | sqm | 551.80 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 134.40 |
| IRR-GAW-3-2 | 291 | painting of embedded metal parts and all types of gates , stoplogs,etc, on sand blasted surfaces with one coat of inorganic zinc silicate (airless spray preferred)70+/- 5 and two super coats with a total thickness of 300 microns (each 150+/- 5) of solventless coaltar epoxy paint each coat 150 microns (total 300 microns) cost of all materials, labour, scaffolding etc., complete with all leads and all lifts (Upstream surface of gates portion may be painted with solventless coaltar epoxy brown paint instead of solventless coaltar black. The rate for coaltar epoxy brown shall be adopted in data for Upstream side painting) | sqm | 610.10 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 278.90 |
| IRR-GAW-3-3 | 292 | painting of Lifting beams,cat walks and other similar structures -painting hoist machinery, on sand blasted surfaces with two coats of zinc phosphate primer (airless spray preferred) 40microns/coat and twocoats of alkyd based micaceous iron oxide paint , 65 microns/coat cost of all materials, labour, scaffolding etc., complete with all leads and all lifts | sqm | 438.10 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 213.80 |
| IRR-GAW-3-4 | 293 | HOISTS:STRUCTURAL COMPONENTS-- painting structurals on sand blasted surfaces with two coats of zinc phosphate primer (airless spray preferred) 40microns/coat and one coat 65+/-5 of alkyd based micaceous iron oxide paint followed by two coats of synthetic enamel paint 25 microns/coat cost of all materials, labour, scaffolding etc., complete with all leads and all lifts | sqm | 544.40 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 278.90 |
| IRR-GAW-3-5 | 294 | HOISTS:machineryCOMPONENTS-- painting hoist machinery, on sand blasted surfaces with one coats of zinc phosphate primer (airless spray preferred) 50microns/coat and three coats of aluminium paint or synthetic enamel , 25 microns/coat cost of all materials, labour, scaffolding etc., complete with all leads and all lifts | sqm | 504.30 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 278.90 |
| IRR-GAW-4 | | PAINTING WITHOUT SAND BLASTING | | | |
| IRR-GAW-4-1 | 295 | E.M Parts OF ALL TYPES OF GATES Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning,applying primary coat with one coat of Protective Mastic to athickness of 70+5 microns ,followed by finishing coats 2 coats with coal tar epoxy each coat with a DFT of 150+5 microns and total DFT of all coats including Primary coat should not be less than 350 microns with material, labour and all accessories with all leads and lifts (in respect of Heavily rusted (30 to 40% rusted) surfaces) | sqm | 689.60 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 278.90 |
| IRR-GAW-4-2 | | Deleted from the year2015-16 onwards | | | |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-GAW-4-3 | 296 | HOIST BRIDGES ,HOISTING EQUIPMENT AND CRANES,Etc, Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning,applying primary coat with two coats of Zinc chromite red oxide primer , followed by finishing coats 3 coats with synthetic enamel paint with material, labour,and all accessories with all leads and lifts where surface cleaning by sand blasting is not feasible and based on specific recommendations of designers, it is to adopt surface preparation done manually by hand and power tool after cleaning by chemical treatment to remove grease, rust, scaling etc., and to form phosphate coating to prevent further rusting, before applying primer painting. | sqm | 521.00 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 278.90 |
| IRR-GAW-4-4 | 297 | WALK WAYS(CAT WALKS), LIFTING BEAMS,etc, Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning,applying primary coat with one coat of Zinc rich epoxy primer to a thickness of 40 microns ,followed by finishing coats 2 coats with coal tar epoxy with material, labour, and all accessories with all leads and lifts | sqm | 556.90 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 187.80 |
| Chapter VI | | | | | |
| IRR-PMW | | PRELIMINARY AND MAINTENANCE WORKS | | | |
| IRR-PMW-1 | | JUNGLE CLEARANCE : | | | |
| IRR-PMW-1-1 | 298 | Clearing thin jungle growth (more than 50 percent open space) including bushes upto 30 cm / parthenium and other weeds including burning or disposing off the same as directed etc., complete. | sqm | 2.00 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 2.00 |
| IRR-PMW-1-2 | 299 | Clearing thick jungle growth (less than 50 percent open space) including bushes upto 30 cm / parthenium and other weeds including burning or disposing off the same as directed etc., complete. | sqm | 3.10 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 3.20 |
| IRR-PMW-1-3 | 300 | Removing stumps, tree roots, roots of bamboo clusters etc., upto 1.50 m girth including excavation, stacking the materials neatly and levelling the surface etc., complete with initial lead upto 50 m and all lifts. | Each | 72.00 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 71.90 |
| IRR-PMW-1-4 | 301 | Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 1.50 m and upto 3.0 m including excavation, stacking the materials neatly and levelling the area etc., complete with initial lead upto 50 m and all lifts. | Each | 161.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 161.90 |
| IRR-PMW-1-5 | 302 | Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 3.0 m and upto 5.0 m including excavation, stacking the materials neatly and levelling the area etc., complete with initial lead upto 50 m and all lifts. | Each | 518.10 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 518.10 |
| IRR-PMW-1-6 | 303 | Additional rate for every 0.5 m increase in girth of tree stump/stumps of bamboo cluster beyond 5 m | Each | 92.40 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 92.50 |
| IRR-PMW-1-7 | 304 | Cutting and stacking bamboos excluding removing stumps and roots etc., complete with initial lead upto 50 m and all lifts. | Each | 21.00 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 21.00 |
| IRR-PMW-1-8 | 305 | Cutting and removing jauliflora bushes upto 1.5 m girth excluding removal of stumps and including burning or disposing off the materials as directed with initial lead upto 50 m and all lifts. | Each | 20.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 20.30 |
| IRR-PMW-1-9 | 306 | Cutting and removing jauliflora bushes above 1.5 m upto 3.0 m girth excluding removal of stumps and including burning or disposing off the materials as directed with initial lead upto 50 m and all lifts. | Each | 40.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 40.70 |
| IRR-PMW-1-10 | 307 | Cutting trees above 0.3 m and upto 0.6 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts. | Each | 135.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 132.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|-------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-PMW-1-11 | 308 | Cutting trees above 0.6 m and upto 1.2 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts. | Each | 475.00 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 463.00 |
| IRR-PMW-1-12 | 309 | Cutting trees above 1.2 m and upto 1.8 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts. | Each | 950.00 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 926.00 |
| IRR-PMW-1-13 | 310 | Cutting trees above 1.8 m and upto 2.4 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts. | Each | 1899.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 1851.90 |
| IRR-PMW-1-14 | 311 | Cutting trees above 2.4 m and upto 3.0 m girth excluding removal of stumps and including stacking the materials neatly as directed with initial lead upto 50 m and all lifts. | Each | 3061.40 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 2965.40 |
| IRR-PMW-1-15 | 312 | For every 0.5 m increase in girth of tree beyond 3 m add Additional rate for cutting tree for every 0.5 m increase in girth of tree beyond 3 m. | Each | 1075.80 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 1047.00 |
| IRR-PMW-1-16 | 313 | Cutting and burning or disposing off Apu / Jundu from marshy areas as directed with initial lead upto 50 m and all lifts. | sqm | 7.40 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 7.40 |
| IRR-PMW-2 | | PRELIMINARY WORKS : | | | |
| IRR-PMW-2-1 | 314 | Earthwork excavation for trial pits / borrow pits and other investigation works in all kinds of soil including boulders upto 30 cm dia and disposing off excavated soil as directed with lead upto 10 m and lift upto 3 m. | cum | 370.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 370.40 |
| IRR-PMW-2-2 | 315 | Earthwork excavation for trial pits / borrow pits and other investigation works in soft rock including disposing off the excavated rock as directed with lead upto 10 m and lift upto 3 m. | cum | 513.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 513.50 |
| IRR-PMW-2-3 | 316 | Conducting geophysical investigation studies by electrical resistivity method in stages of 5m for sub-surface details such as depth of formations, shear zones, classification of strata, depth of water table etc., including cost of all materials, equipments, labour, analysing and reporting the details of field studies conducted etc., complete excluding cost of transportation arrangements. | stage | 410.60 | |
| | | Labour Component (including contractor's profit and Overheads) | stage | | 348.80 |
| IRR-PMW-2-4 | 317 | Drilling 80 mm dia hole through over-burden using casing shoe bit vertical or inclined upto 10 degrees to vertical as directed including cost of all materials, machinery, labour, water charges, reaming, collection of wash samples at suitable intervals, logging and labelling, supplying honne wood core box, fixing casing pipes (excluding cost of casing pipes) etc., complete for depth upto 30 m from surface. 1. For drilling through over-burden beyond 30 m from surface increase the rate per Rm by 10 percent. 2. For providing HDPE or light black MS casing pipe add the cost of pipe per Rm. | Rm | 1412.60 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 618.10 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|--------------------------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-PMW-2-5 | 318 | Drilling 76 mm dia (NX) core hole in hard rock using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging and labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface. 1. For drilling in hard rock beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in hard rock beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent. | Rm | 7204.40 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 2346.50 |
| IRR-PMW-2-5-A (New Item2015-16)-5 | 319 | Drilling 76 mm dia (NX) core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface for Primary and Secondary Holes 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent. | Rm | 4635.70 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 1400.10 |
| IRR-PMW-2-5-B (New Item2015-16)-6 | 320 | Drilling 76 mm dia (NX) core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging and labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface for Test Holes 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent. | Rm | 5334.00 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 1400.90 |
| IRR-PMW-2-6 | 321 | Drilling 47 mm (BX)dia core hole in hard rock using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging, labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface. 1. For drilling in hard rock beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in hard rock beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent. | Rm | 7038.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 2346.50 |
| IRR-PMW-2-6-A (New Item2015-16)-7 | 322 | Drilling 47 mm (BX)dia core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, and redrilling in case of collapse of sides etc., complete for depth upto 30 m 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the rate per Rm by 25 percent. 2. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 60 m upto 90 m from surface increase the rate per Rm by 40 percent. | Rm | 4400.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 1400.10 |
| IRR-PMW-2-7 | 323 | Providing and fixing 20 x 20 x 75 cm size roughly dressed boundary / demarcation / chainage / arrow stones including cost of all materials, labour, engraving marks, fixing in position, murum filling etc., complete with lead upto 50 m and all lifts. | Each | 214.00 | |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|---------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 169.70 |
| IRR-PMW-2-8 | 324 | Providing and fixing 20 x 20 x 75 cm size temporary bench mark stone in CC 1 : 4 : 8 using 40 mm down size graded coarse aggregate including cost of all materials, labour, dressing top surface, engraving BM data etc., complete with lead upto 50 m and all lifts. | Each | 648.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 493.10 |
| NOTE: | | For providing 30 cm thick compacted murum bed in B.C soil area including additional excavation for thickness of murum bedding add per | Each | 4.00 | |
| IRR-PMW-2-9 | 325 | Providing and fixing 20 x 20 x 75 cm size permanent bench mark stone in CC 1 : 3 : 6 block of size 90 x 90 x 120 cm using 40 mm down size graded coarse aggregate and providing 35 cm thick 30 cm high UCR masonry in CM 1 : 5 proportion protective wall around the BM stone, including cost of all materials, labour, dressing top surface of stone, engraving BM data | Each | 7480.50 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 4436.70 |
| IRR-PMW-3 | | MAINTENANCE WORKS : | | | |
| IRR-PMW-3-1 | 326 | Removing dry stone rock-toe / rivetment and filter layers below rock-toe/ rivetment including stacking all materials separately as directed with initial lead upto 50 m and all lifts. | cum | 295.50 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 295.50 |
| IRR-PMW-3-2 | 327 | Re-constructing 60 cm thick hand packed rough stone revetment with through stones at 1.5 m c / c over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded aggregates satisfying filter criteria laid in layers of 15 cm thick each using sand from approved quarry and stones and filter aggregates obtained from revetment removed for re-construction including cost of all machinery, labour, laying filter and stones to specified slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts. | sqm | 326.00 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 220.90 |
| IRR-PMW-3-3 | 328 | Re-constructing dry rubble rock-toe and filter media for rock-toe consisting of sand 20 mm and 80 mm size graded aggregates satisfying filter criteria laid in layers of 15 cm thick each using sand from approved quarry and stones and filter aggregates obtained from rock-toe removed for re-construction including cost of all machinery, labour, laying filter and stones to specified slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts. | cum | 383.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 316.30 |
| IRR-PMW-3-4 | 329 | Removing and resetting disturbed Yarguntla / Shahabad / Talikot / PCC / Other types of slab lining set in CM 1 : 3 including flush cement mortar pointing in CM 1 : 3 with lead upto 50 m and all lifts. | sqm | 79.80 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 74.00 |
| IRR-PMW-3-5 | 330 | Removing and resetting disturbed dry rubble / khandki stone pitching 25 to 45 cm thick including packing, wedging, finishing etc., complete with all leads and lifts. | sqm | 76.50 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 76.50 |
| IRR-PMW-3-6 | 331 | Removing and refixing disturbed chainage / demarcation / hectometre / guard stones including excavation, back filling etc., complete with all leads and lifts. | Each | 102.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 102.30 |
| IRR-PMW-3-7 | 332 | Removing and refixing disturbed km stone / sign board / hecto-metre stone etc., including excavation, back filling with available stuff after refixing, forming base platform of size 90 x 90 x 7.5 cm including watering, ramming etc complete with all leads and lifts. | Each | 230.10 | |
| | | Labour Component (including contractor's profit and Overheads) | Each | | 230.10 |
| IRR-PMW-3-8 | 333 | Providing impervious hearting for breached / damaged portion of embankment with soil from approved borrow areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts. | cum | 222.60 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 42.20 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|--|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-PMW-3-9 | 334 | Providing pervious/semi-pervious casing for breached / damaged portion of embankment with soil from approved borrow areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts. | cum | 255.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 50.70 |
| IRR-PMW-3-10 | 335 | Providing impervious hearting for breached / damaged portion of embankment with soil from approved dump areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts. | cum | 204.00 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 40.30 |
| IRR-PMW-3-11 | 336 | Providing pervious /semi-pervious casing for breached /damaged portion of embankment with soil from approved dump areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts. | cum | 232.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 47.80 |
| IRR-PMW-3-12 | 337 | Repairing rain cuts / resectioning canal slopes to required lines and grades as directed using available soil including dressing, clod breaking, packing, tamping etc., complete with all leads and lifts. | sqm | 5.20 | |
| | | Labour Component (including contractor's profit and Overheads) | sqm | | 5.20 |
| IRR-PMW-3-13 | 338 | Cleaning drainage gallery, adits, instrumentation galleries etc., by scrubbing / brushing including chiselling and removing leached lime deposit and disposing off all the waste material out side adits in specified location etc., complete with all leads and lifts. | Rm | 53.90 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 45.30 |
| IRR-PMW-3-14 | 339 | Cleaning dam parapet inner face and top using oxalic acid and water by scrubbing / brushing and washing to remove all surface coatings etc., complete . | Rm | 46.30 | |
| | | Labour Component (including contractor's profit and Overheads) | Rm | | 33.40 |
| IRR-PMW-3-15 | | Deleted from the year2013-14 onwards | | | |
| IRR-PMW-3-16 | | Deleted from the year2013-14 onwards | | | |
| IRR-PMW-3-17 | | Deleted from the year2013-14 onwards | | | |
| IRR-PMW-3-18 | | Deleted from the year2013-14 onwards | | | |
| IRR-PMW-3-19 | | Deleted from the year2013-14 onwards | | | |
| IRR-PMW-3-20 | 340 | Excavation and removal of silt and silt mixed with sand from canal bed in dry condition including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with initial lead upto 50 m and all lifts. | cum | 222.70 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 222.70 |
| IRR-PMW-3-21 | 341 | Excavation and removal of silt or silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with initial lead upto 50 m and all lifts. | cum | 278.40 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 278.40 |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|---|------|--|-----------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| IRR-PMW-3-22 (new Item5 2010-11) (for Minor Works) | 342 | Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, etc., complete with initial lead upto 1 km and all lifts. | cum | 113.10 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 19.80 |
| IRR-PMW-3-23 (new Item6 2010-11) (for Minor Works) | 343 | Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as watering, compacting to density control of not less than 95 percent or as stipulated using 8T roller etc., complete with initial lead upto 1 km and all lifts. | cum | 55.80 | |
| | | Labour Component (including contractor's profit and Overheads) | | | 9.70 |
| IRR-PMW-3-24 (new Item7 2010-11) | 344 | Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as compacting to density control of not less than 90 percent or as stipulated using 2T roller etc., complete with initial lead upto 1 km and all lifts. | cum | 6.80 | |
| | | Labour Component (including contractor's profit and Overheads) | cum | | 1.80 |
| (New Item 2012-13-3) | | Weed Removal by Manual Means | | | |
| IRR-PMW-3-25(a) | 345 | Removal of Water Hyacinth up to 30 cm thick | Sqm | 9.10 | |
| IRR-PMW-3-25(b) | 346 | Removal of Water Hyacinth beyond 30 cm thick | Sqm | 12.40 | |
| IRR-PMW-3-25(c) | 347 | Clearing Alchi Tilla | Sqm | 8.30 | |
| IRR-PMW-3-25(d) | 348 | Removal of Jammu | Sqm | 7.00 | |
| IRR-PMW-3-25(e) | 349 | Removal of Imponea, Cornea | Sqm | 8.30 | |
| IRR-PMW-3-25(f) (new Item 2012-13-6) | 350 | Removal of Natchu, goobi, thooti, etc. | Sqm | 2.70 | |
| IRR-PMW-3-26 New Item2015-16-8 | 351 | <u>PAINTING OF SLUICES FOR MAINTENANCE WORKS</u> Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning, applying primary coat with one coat of Zinc rich epoxy primer to a thickness of 100 microns, followed by finishing coats 2 coats with Coal tar epoxy with material, labour, and all accessories with all leads and lifts. | Sqm | 455.50 | |
| | | Labour Component (including contractor's profit and Overheads) | Sqm | | 230.64 |
| IRR-PMW-3-27 New Item2018-19 | | Lifting of water from rivers/drains to agricultural fields and where there is no element of excavation | | | |
| | | a) Water lifting charges using Electrical driven pump | per hp hr | 10.25 | |
| | | Other pumping arrangements including pipes, labour, pump operator etc | per hr | 195.93 | |
| | | b) Water lifting charges using Diesel driven pump | per hp hr | 31.53 | |
| | | Other pumping arrangements including pipes, labour, pump operator etc., | per hr | 236.71 | |
| | | | | | |
| | | | | | |
| | | | | | |
| COM-MWRK | | New extra items-- common item for all earth works using only manual labour for all other works | | | |
| | | without involving contractors | | | |
| COM-MWRK-1 | 352 | (Manual) Excavation in all kinds of soil including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) With 3 Cum per day output | cum | 163.30 | |

| Chapterwise item No. | S.NO | Item description | Unit | Rate | Itemwise unit rate for Labour Component |
|----------------------|------|---|------|--------|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| COM-MWRK-2 | 353 | (Manual) Excavation in all kinds of soil/HDR including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) With 2.5 Cum per day output | cum | 196 | |
| COM-MWRK-3 | 354 | (Manual) Excavation in soft rock (including F&F rock) without blasting , including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) Soft rock 1.33 Cum/Day | cum | 368.40 | |
| COM-MWRK-4 | 355 | (Manual) Excavation in hard rock , including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) Hard rock 0.67Cum/ day | cum | 731.30 | |

COM-LDLFT

Abstract
LEAD, LIFT, LOADING AND UNLOADING CHARGES FOR MATERIALS
 FOR THE YEAR: 2021-22

COM-LDLFT

- 1 For total lead upto 150 m (including initial lead) lead charges by head load only shall be adopted irrespective of mode of conveyance.
- 2 For total lead exceeding 150 m conveyance by mechanical means only shall be adopted irrespective of mode of conveyance.
- 3 The rates for loading at quarry including idle hire charges of trucks and hire charges per for each kilometer and upto 5 km are cumulative and inclusive of total charges for preceding lead.
- 4 Unless otherwise specified lead charges for Earth / Sand / Gravel / Aggregates and Stones are for loose volume and not for compacted or in-situ volume.
- 5 The rates for lift charges, lead charges hire charges are cumulative and inclusive of rates for preceding lift, load and hire charges
- 6 Lift charges are not payable where conveyance of materials is by mechanical means to final placing point.
- 7 Loading and unloading charges are not payable for conveyance by head load.
- 8 Loading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 50 m wherever specified.
- 9 Loading and unloading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 1 km wherever specified.
- 10 The rates for unloading of materials except earth, sand, gravel, coarse aggregate, rubble, size stone and cut stone are inclusive of stacking.
- 11 Hire charges are per 1KM for tippers and trucks for transport of materials from work site to dump yard & other places are cumulative and includes previous km upto 5 kms
- 12 The lead & lift charges are exclusive of contractor's profit and overhead charges of 13.615%
- 13 The loading & unloading charges are exclusive of contractor's profit and overhead charges of 13.615%
- 14 During the BoCE meeting held on 10.06.2015, the BoCEs has recommended to withdraw lead charges, loading and unloading charges for Cement as per the minutes of meeting of Sub-Committee held on 29.06.2015. (The conveyance charges, loading & unloading charges for cement are displayed for information purpose only).
- 15 As per the BOCE meeting held on 21.08.2019 in order to simplify the procedure of adding lead charges to the data items in the CFMS work module, the BOCE recommended to delete the contractor profit and over head charges from the calculation of Lead, Lift, Loading and Unloading charges. But at the time of preparation of estimates the contractor profit and over head charges on Lead, Lift, Loading and Unloading charges shall be added as usual.

COM-LDLFT-1 A. (Lead) Conveyance Charges for materials by head load
 FOR THE YEAR: 2021-22

| SI No. | Total distance (Total lead includes initial lead) | Earth / Sand /Gravel / Murrum/ Lime/ Surki/ Size stone / Cut stone Rubble / Coarse aggregate Rs/Cum | Cement/Reinforc e-ment steel Str steel Rs / tonne | PCC slab/ Shahbad slab / CC block/ BS slab/ Late- rite / Wood Rs / cum |
|--------|---|--|--|---|
| 1 | 2 | 3 | 4 | 5 |
| 1 | Total lead upto 50 m (covered by item rate) | initial lead | initial lead | initial lead |
| 2 | Total lead upto 100 m | 70.00 | 40.80 | 89.10 |
| 3 | Total lead upto 150 m | 140.00 | 81.70 | 178.20 |

Notes: 1. No loading or unloading charges are admissible for conveyance by head load.
 2. For total lead exceeding 150 m conveyance charges by mechanical means only shall be adopted irrespective of mode of conveyance.

COM-LDLFT-2 B.(Lead) Conveyance charges for machinery per kilometer for transporting materials by tippers and trucks excluding loading, unloading and idle hire charges of machinery

(No loading and unloading charges allowed for machinery loading and unloading)

| SI No. | Distance | (Lead) charges for trucks and tippers for Earth / Sand /Gravel / Murrum/ Lime/ Surki/ per cu.meter | (Lead) charges for trucks and tippers for Rubble/Size stones/ Cut Stones/ Coarse aggregate per cu.meter | (Lead) charges for trucks and tippers for Cement/ Steel/ RCC poles/ AC & GI sheets/ Packed materials/tonne | (Lead) charges for trucks and tippers per cu.meter for PCC slabs/ Shahabad slabs/ CC & Laterite blocks/ Wood/ cum | (Lead) charges for trucks and tippers per cu.meter for water/ 1000 litres | (Lead) charges for trucks per 1000 Nos. of Bricks |
|--------|-------------------------------------|--|---|--|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | Lead upto 1 km | 33.70 | 32.50 | 20.30 | 47.80 | 20.60 | 54.10 |
| 2 | Lead upto 2 km | 47.20 | 45.50 | 28.40 | 66.90 | 28.80 | 75.80 |
| 3 | Lead upto 3 km | 62.90 | 60.60 | 37.90 | 89.20 | 38.40 | 101.10 |
| 4 | Lead upto 4 km | 76.40 | 73.60 | 46.00 | 108.30 | 46.60 | 122.70 |
| 5 | Lead upto 5 km | 89.90 | 86.60 | 54.10 | 127.40 | 54.80 | 144.40 |
| 6 | for Every km beyond 5 km upto 30 km | 13.50 | 13.00 | 8.10 | 19.10 | 8.20 | 21.70 |
| 7 | for Every km beyond 30 km | 11.20 | 10.80 | 6.80 | 15.90 | 6.90 | 18.10 |

COM-LDLFT-3 C. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (idle hire charges of trucks are not added)

| SI No. | Description of item | Earth / Sand /Gravel / Murrum/ / Surki/ Rs / cum | Rubble/ size stone/ cut stone/ Coarse aggregate,Lime in Rs/cum | cement in Rs/tonne | steel in Rs./tonne | brick work Rs/1000 No |
|--------|---------------------|--|--|--------------------|--------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Loading | 23.20 | 46.50 | 76.70 | 91.90 | 63.90 |
| 2 | Unloading | 11.60 | 23.25 | 76.70 | 91.90 | 63.90 |

COM-LDLFT-4 D. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (including idle hire charges of trucks)

| SI No. | Description of item | Earth / Sand /Gravel / Murrum/ / Surki/ Rs / cum | Rubble/ size stone/ cut stone/ Coarse aggregate,Lime in Rs/cum | cement in Rs/tonne | steel in Rs./tonne | brick work Rs/1000 No |
|--------|---------------------|--|--|--------------------|--------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Loading | 121.70 | 144.90 | 184.90 | 200.20 | 242.60 |
| 2 | Unloading | 44.30 | 72.45 | 184.90 | 200.20 | 242.60 |

COM-LDLFT-5 E. LOADING AND UNLOADING CHARGES BY MECHANICAL MEANS (including idle hire charges of trucks)

| SI No. | Description of item | Earth / Sand /Gravel Murrum/ / Surki/ Rs / cum | Rubble/ size stone/ cut stone/ Coarse aggregate,Lime in Rs/cum |
|--------|---------------------|--|--|
| 1 | 2 | 3 | 4 |
| 1 | Loading | 54.10 | 107.60 |
| 2 | Unloading | 17.00 | 17.00 |

COM-LDLFT-6 F. LIFT CHARGES FOR MATERIALS BY HEAD LOAD

| SI No. | Total lift (Total lift includes initial lift) | Earth / Sand /Gravel Murrum/ Lime/ Surki/ Size stone / Cut stone Rubble / Coarse aggregate Rs / cum | Cement/ Reinforce- ment steel Str steel Rs / tonne | PCC slab/ Shahbad slab / CC block/ BS slab / Laterite / Wood Rs / cum |
|--------|---|--|--|---|
| 1 | 2 | 3 | 4 | 5 |
| 1 | Total lift upto 3 m (covered by item rate) | Initial lift | Initial lift | Initial lift |
| 2 | For Every 1.00 Lift beyond initial lift of 3 meters | 8.20 | 5.90 | 10.90 |

Chapter - I

DAM AND ALLIED WORKS - Standard Data

(WILL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)

FOR THE YEAR :2021-22

Index- code

IRR-DAW

DAM AND ALLIED WORKS - DATA RATES

Directions to add Seigniorage Charges and Additional Lead Charges

Seigniorage Charges:

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic item rates(i.e., specifications) are inclusive of all lifts.
2. For concrete, masonry and reinforcement items(i.e., specifications) **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:
Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item. In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again

Example:

| | | |
|---|-----|-----------|
| Total lead for sand from approved sand quarry : | | 15 Km |
| Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) | | 1 Km |
| Additional lead charges : Lead charges for 5 km | Rs. | 102.14 |
| Lead charges for next 10 km | Rs. | 153.38025 |
| Total lead charges for 15 km /cum | Rs. | 255.52 |
| Less 1 km initial lead charges /cum | Rs. | 38.29 (-) |
| Net additional lead charges / cum | Rs. | 217.23 |

3. The Leads for Steel shall be from the nearest market place to the Project area

4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows: Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item. (**same as above**)

Example:

| | | |
|--|-----|-----------|
| Total lead for earth from approved borrow area : | | 15 Km |
| Initial lead included in the basic item rate in the data(i.e., item specification) : | | 1 Km |
| Additional lead charges : Lead charges for 5 km | Rs. | 102.14 |
| Lead charges for next 10 km | Rs. | 153.38025 |
| Total lead charges for 15 km /cum | Rs. | 255.52 |
| Less 1 km initial lead charges /cum | Rs. | 38.29 (-) |
| Net additional lead charges / cum | Rs. | 217.23 |

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area. For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

DAW - Work Items

IRR-DAW-1

EXCAVATION & FOUNDATION TREATMENT WORKS:

IRR-DAW-1-1

Excavation for foundation **in all kinds of soil** including boulders **upto 0.30 m** diameter for dam, spillway, intake structure and other appurtenant works and placing the excavated soil neatly in dump area or disposing off the same as directed etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

A. MATERIALS:

UNIT
880 cum

| Sl No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|------------------------------|------|----------|-------------|---------------------|
| 1 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 2 | Dumpers 5 cum capacity 6 Nos | Hour | 48.00 | 531.00 | 25488.00 |
| | Fuel / Energy charges | Hour | 48.00 | 654.40 | 31411.20 |
| 3 | Tipper 5 cum capacity 1 No | Hour | 8.00 | 404.90 | 3239.20 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| Total hire charges of Machinery | | | | | Rs: 87728.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------|------|----------|-------------|---------------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Dumper | Hour | 48.00 | 292.00 | 14016.00 |
| 3 | Crew for Tipper | Hour | 8.00 | 228.20 | 1825.60 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | mazdoor | Day | 16.00 | 490.00 | 7840.00 |
| Total cost of Labour | | | | | Rs: 26755.20 |

labour component/unit qty 30.40
 Add contractor's profit and overhead charges 13.615% 4.10
 labour component/unit qty (including contractor's profit) **34.50**

ABSTRACT:

| | | |
|---|------------|----------------------|
| A. Cost of Materials | | Rs: 0.00 |
| B. Hire charges of Machinery | | Rs: 87728.80 |
| C. Cost of Labour | | Rs: 26755.20 |
| Total | | Rs: 114484.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 15587 |
| Total cost for | 880.00 cum | Rs: 130071.00 |
| Rate per cum (A+B+C+D)/880 | | Rs: 147.80 |

IRR-DAW-1-2

Excavation for foundation in **ordinary rock (including HDR)** without blasting including boulders above **0.3 m upto 0.6 m** dia for dam, spillway, intake structure and other appurtenant works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**UNIT :
520 cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|-----------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | | Rs: 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------|------|----------|-------------|---------------------|
| 1 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 2 | Dumpers 5 cum capacity(4 Nos) | Hour | 32.00 | 531.00 | 16992.00 |
| | Fuel / Energy charges | Hour | 32.00 | 654.40 | 20940.80 |
| 3 | Tipper 5 cum capacity(1 No) | Hour | 8.00 | 404.90 | 3239.20 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| Total hire charges of Machinery | | | | | Rs: 68762.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------|------|----------|-------------|---------------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Dumper | Hour | 32.00 | 292.00 | 9344.00 |
| 3 | Crew for Tipper | Hour | 8.00 | 228.20 | 1825.60 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | Crowbarman | Day | 2.50 | 525.00 | 1312.50 |
| 6 | mazdoor | Day | 10.00 | 490.00 | 4900.00 |
| Total cost of Labour | | | | | Rs: 20455.70 |

labour component/unit qty 39.30
 Add contractor's profit and overhead charges 13.615% 5.40
 labour component/unit qty (including contractor's profit) **44.70**

ABSTRACT:

| | | | | | |
|---|--------------------------|--|---------|--|---------------|
| A. Cost of Materials | | | | | Rs: 0.00 |
| B. Hire charges of Machinery | | | | | Rs: 68762.40 |
| C. Cost of Labour | | | | | Rs: 20455.70 |
| | | | | | Rs: 89218.10 |
| | | | | | Rs: 12147.04 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | | Rs: 101365.14 |
| Total cost for | 520.00 | | cum | | Rs: 194.90 |
| Rate per | cum (A+B+C+D)/520 | | | | |

IRR-DAW-1-3

Excavation for foundation in **hard rock (including F&F rock) requiring blasting** including boulders above **0.6 m upto 1.2 m** dia. for dam, spillway, intake structure and other appurtenant works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with **initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

520.00 cum.

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------|------------------------------|------|----------|-------------|--------------|
| 1 | Use rate of 1.5 m drill rod | Rm | 216.00 | 19.51 | 4214.16 |
| | Reconditioning charges @ 10% | | | | 421.42 |
| 2 | Use rate of air hose 4 Nos. | Hour | 26.00 | 11.00 | 286.00 |
| 3 | Explosive small dia | kg | 104.00 | 69.00 | 7176.00 |
| 4 | Electric detonators | Nos | 154.00 | 10.00 | 1540.00 |
| 5 | Fuse coil | Rm | 320.00 | 8.00 | 2560.00 |
| 6 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| | Total cost of Materials | | | | Rs. 16367.58 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------|--------------------------------------|------|----------|-------------|--------------|
| 1 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 2 | Dumpers 5 cum capacity 4 Nos. | Hour | 32.00 | 531.00 | 16992.00 |
| | Fuel / Energy charges | Hour | 32.00 | 654.40 | 20940.80 |
| 3 | Tipper 5 cum capacity 1 No | Hour | 8.00 | 404.90 | 3239.20 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 4 | Air compressor 8.5 cmm (ele) 2 Nos | Hour | 13.00 | 145.90 | 1896.70 |
| | Fuel / Energy charges | Hour | 13.00 | 475.90 | 6186.70 |
| 5 | Jack hammers 4 Nos. | Hour | 26.00 | 17.30 | 449.80 |
| | Fuel / Energy charges | Hour | 26.00 | 0.00 | 0.00 |
| | Total hire charges of Machinery | | | | Rs: 77295.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------|-------------------------|------|----------|-------------|--------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Dumper | Hour | 32.00 | 292.00 | 9344.00 |
| 3 | Crew for Tipper | Hour | 8.00 | 228.20 | 1825.60 |
| 4 | Crew for Air compressor | Hour | 13.00 | 214.50 | 2788.50 |
| 5 | Crew for Jack hammer | Hour | 26.00 | 429.00 | 11154.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | Blaster | Day | 1.00 | 645.00 | 645.00 |
| 8 | Helper blaster | Day | 1.00 | 525.00 | 525.00 |
| 9 | Crowbarman | Day | 2.50 | 525.00 | 1312.50 |
| 10 | Stone breaker | Day | 1.00 | 525.00 | 525.00 |
| 11 | mazdoor | Day | 10.00 | 490.00 | 4900.00 |
| | Total cost of Labour | | | | Rs. 36093.20 |

labour component/unit qty 69.40

Add contractor's profit and overhead charges 13.615% 9.40

labour component/unit qty (including contractor's profit) **78.80****ABSTRACT:**

| | | | | | |
|---|---------------------------|--|---------|--|---------------|
| A. Cost of Materials | | | | | Rs: 16367.58 |
| B. Hire charges of Machinery | | | | | Rs: 77295.60 |
| C. Cost of Labour | | | | | Rs: 36093.20 |
| | | | | | Rs: 129756.38 |
| | | | | | Rs: 17666.33 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | | Rs: 147422.71 |
| Total cost for | 520.00 | | cum. | | Rs: 283.50 |
| Rate per | cum. (A+B+C+D)/520 | | | | |

IRR-DAW-1-3A

New Item 2015-16-1

Excavation for foundation in **hard rock (including F&F rock)** including boulders above **0.6 m upto 1.2 m** dia. **by controlled blasting and controlling fly rock by muffling arrangements** for dam, spillway, intake structure and other appurtenant works and other open foundation works and placing the excavated material neatly in dump area or disposing off the same as directed etc., complete with **initial lead upto 1 km and all leads**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

520.00 cum.

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Use rate of 1.5 m drill rod | Rm | 216.00 | 19.51 | 4214.16 |
| | Reconditioning charges @ 10% | | | | 421.42 |
| 2 | Use rate of air hose 4 Nos. | Hour | 26.00 | 11.00 | 286.00 |
| 3 | Use rate of chain link wire mesh | Sq m | 500.00 | 71.97 | 35984.38 |
| 4 | Use rate of Sand Bags | Nos. | 190.00 | 95.80 | 18202.00 |
| 5 | Explosive small dia | kg | 104.00 | 69.00 | 7176.00 |
| 6 | Electric delay detonators | Nos | 154.00 | 20.00 | 3080.00 |
| 7 | Fuse coil | Rm | 320.00 | 8.00 | 2560.00 |
| 8 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs. | 72093.96 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|-----------------|
| 1 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 2 | Angle dozer 90 hp | Hour | 1.00 | 1531.00 | 1531.00 |
| | Fuel / Energy charges | Hour | 1.00 | 999.10 | 999.10 |
| 3 | Dumpers 5 cum capacity 4 Nos. | Hour | 32.00 | 531.00 | 16992.00 |
| | Fuel / Energy charges | Hour | 32.00 | 654.40 | 20940.80 |
| 4 | Tipper 5 cum capacity 1 No | Hour | 8.00 | 404.90 | 3239.20 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 5 | Air compressor 8.5 cmm (ele) 2 Nos | Hour | 13.00 | 145.90 | 1896.70 |
| | Fuel / Energy charges | Hour | 13.00 | 475.90 | 6186.70 |
| 6 | Jack hammers 4 Nos. | Hour | 26.00 | 17.30 | 449.80 |
| | Fuel / Energy charges | Hour | 26.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs. | 79825.70 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Angle dozer | Hour | 1.00 | 304.20 | 304.20 |
| 3 | Crew for Dumper | Hour | 32.00 | 292.00 | 9344.00 |
| 4 | Crew for Tipper | Hour | 8.00 | 228.20 | 1825.60 |
| 5 | Crew for Air compressor | Hour | 13.00 | 214.50 | 2788.50 |
| 6 | Crew for Jack hammer | Hour | 26.00 | 429.00 | 11154.00 |
| 7 | work inspector | Day | 3.00 | 640.00 | 1920.00 |
| 8 | Blaster | Day | 1.50 | 645.00 | 967.50 |
| 9 | Helper blaster | Day | 2.00 | 525.00 | 1050.00 |
| 10 | Crowbarman | Day | 2.50 | 525.00 | 1312.50 |
| 11 | Stone breaker | Day | 2.00 | 525.00 | 1050.00 |
| 12 | mazdoor | Day | 18.00 | 490.00 | 8820.00 |
| Total cost of Labour | | | | Rs. | 42969.90 |

| | |
|---|---------------|
| labour component/unit qty | 82.60 |
| Add contractor's profit and overhead charges | 13.615% 11.20 |
| labour component/unit qty (including contractor's profit) | 93.80 |

ABSTRACT:

| | | |
|---|---------------------------|----------------------|
| A. Cost of Materials | | Rs: 72093.96 |
| B. Hire charges of Machinery | | Rs: 79825.70 |
| C. Cost of Labour | | Rs: 42969.90 |
| | Total | Rs: 194889.56 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 26534.21 |
| Total cost for | 520.00 cum. | Rs: 221423.77 |
| Rate per | cum. (A+B+C+D)/520 | Rs: 425.80 |

IRR-DAW-1-4
(a)

Excavation for foundation in **hard rock of all toughness by blasting** including boulders **above 1.2 m** dia. for dam, spillway, intake structure and other appurtenant works and placing the excavated rock neatly in dump area or stack yard including levelling as directed etc., complete with **initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

| | | | | | UNIT |
|-------------------------|----------------------------------|------|----------|-------------|--------------|
| | | | | | 320.00 cum |
| Sl No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Use rate of drill rod 1.5 m long | Rm | 310.00 | 26.01 | 8064.13 |
| | Reconditioning charges @ 10% | | | | 806.41 |
| 2 | Use rate of air hose 4 Nos. | Hour | 48.00 | 11.00 | 528.00 |
| 3 | Explosive small dia | kg | 95.00 | 69.00 | 6555.00 |
| 4 | Ordinary detonators | Nos | 10.00 | 7.00 | 70.00 |
| 5 | Electric detonators | Nos | 333.00 | 10.00 | 3330.00 |
| 6 | Fuse coil | Rm | 450.00 | 8.00 | 3600.00 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 23123.54 |

| | | | | | UNIT |
|---------------------------------|-------------------------------------|------|----------|-------------|--------------|
| | | | | | 320.00 cum |
| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 2 | Dumpers 5 cum capacity 3 Nos. | Hour | 24.00 | 531.00 | 12744.00 |
| | Fuel / Energy charges | Hour | 24.00 | 654.40 | 15705.60 |
| 3 | Tipper 5 cum capacity 1 No | Hour | 4.00 | 404.90 | 1619.60 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 4 | Angle dozer 90 hp | Hour | 1.00 | 1531.00 | 1531.00 |
| | Fuel / Energy charges | Hour | 1.00 | 999.10 | 999.10 |
| 5 | Air compressor 8.5 cmm (ele) 2 Nos. | Hour | 24.00 | 145.90 | 3501.60 |
| | Fuel / Energy charges | Hour | 24.00 | 475.90 | 11421.60 |
| 6 | Jack hammers 4 Nos. | Hour | 48.00 | 17.30 | 830.40 |
| | Fuel / Energy charges | Hour | 48.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs. | 73980.10 |

| | | | | | UNIT |
|----------------------|-------------------------|------|----------|-------------|--------------|
| | | | | | 320.00 cum |
| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Dumper | Hour | 24.00 | 292.00 | 7008.00 |
| 3 | Crew for Tipper | Hour | 4.00 | 228.20 | 912.80 |
| 4 | Crew for Dozer | Hour | 1.00 | 304.20 | 304.20 |
| 5 | Crew for Air compressor | Hour | 24.00 | 214.50 | 5148.00 |
| 6 | Crew for Jack hammer | Hour | 48.00 | 429.00 | 20592.00 |
| 7 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 8 | Blaster | Day | 1.00 | 645.00 | 645.00 |
| 9 | Helper blaster | Day | 1.00 | 525.00 | 525.00 |
| 10 | Crowbarman | Day | 1.00 | 525.00 | 525.00 |
| 11 | Stone breaker | Day | 2.00 | 525.00 | 1050.00 |
| 12 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs. | 42723.60 |

| | |
|---|---------------|
| labour component/unit qty | 133.50 |
| Add contractor's profit and overhead charges | 13.615% 18.20 |
| labour component/unit qty (including contractor's profit) | 151.70 |

ABSTRACT:

| | | |
|---|------------|---------------|
| A. Cost of Materials | | Rs: 23123.54 |
| B. Hire charges of Machinery | | Rs: 73980.10 |
| C. Cost of Labour | | Rs: 42723.60 |
| | Total | Rs: 139827.24 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 19037.48 |
| Total cost for | 320.00 cum | Rs: 158864.72 |
| Rate per cum (A+B+C+D)/320 | | Rs: 496.50 |

IRR-DAW-1-5
(b)

Excavation for foundation in **hard rock of all toughness** including boulders **above 1.2 m dia.** by controlled blasting method and controlling fly-rock by muffling arrangements for dam, spillway, intake structure and other appurtenant structures etc., including placing and levelling the excavated rock neatly in dump area or other place as directed etc., complete with **lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

480.00 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------------------------|------|----------|-------------|----------------------|
| 1 | Use rate of drill rod 1.5 m length | Rm | 464.00 | 26.01 | 12070.19 |
| | Reconditioning charges @ 10% | 10% | | | 1207.02 |
| 2 | Use rate of 50 m air hose 4 Nos. | Hour | 70.00 | 11.00 | 770.00 |
| 3 | Use rate of chain link wire mesh | sqm | 715.00 | 71.97 | 51457.66 |
| 4 | Use rate of sand bag | Nos | 580.00 | 95.80 | 55564.00 |
| 5 | Explosive small dia. | kg | 149.00 | 69.00 | 10281.00 |
| 6 | Ordinary detonators | Nos | 23.00 | 7.00 | 161.00 |
| 7 | Electric delay detonators | Nos | 500.00 | 20.00 | 10000.00 |
| 8 | Fuse coil | Rm | 700.00 | 8.00 | 5600.00 |
| 9 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total cost of Materials | | | | | Rs: 147450.87 |

B. MACHINERY:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|----------------------|
| 1 | Shovel 0.85 cum capacity | Hour | 12.00 | 1529.70 | 18356.40 |
| | Fuel / Energy charges | Hour | 12.00 | 1428.30 | 17139.60 |
| 2 | Angle dozer 90 hp | Hour | 2.00 | 1531.00 | 3062.00 |
| | Fuel / Energy charges | Hour | 2.00 | 999.10 | 1998.20 |
| 3 | Dumpers 5 cum capacity 3 Nos. | Hour | 36.00 | 531.00 | 19116.00 |
| | Fuel / Energy charges | Hour | 36.00 | 654.40 | 23558.40 |
| 4 | Tipper 5 cum capacity 1 No | Hour | 4.00 | 404.90 | 1619.60 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 5 | Air compressor 8.5 cmm (ele) 2 Nos | Hour | 35.00 | 145.90 | 5106.50 |
| | Fuel / Energy charges | Hour | 35.00 | 475.90 | 16656.50 |
| 6 | Jack hammers 4 Nos. | Hour | 70.00 | 17.30 | 1211.00 |
| | Fuel / Energy charges | Hour | 70.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | | Rs: 109787.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|---------------------|
| 1 | Crew for Shovel | Hour | 12.00 | 304.20 | 3650.40 |
| 2 | Crew for Angle dozer | Hour | 2.00 | 304.20 | 608.40 |
| 3 | Crew for Dumper | Hour | 36.00 | 292.00 | 10512.00 |
| 4 | Crew for Tipper | Hour | 4.00 | 228.20 | 912.80 |
| 5 | Crew for Air compressor | Hour | 35.00 | 214.50 | 7507.50 |
| 6 | Crew for Jack hammer | Hour | 70.00 | 429.00 | 30030.00 |
| 7 | work inspector | Day | 4.50 | 640.00 | 2880.00 |
| 8 | Blaster | Day | 1.50 | 645.00 | 967.50 |
| 9 | Helper blaster | Day | 3.00 | 525.00 | 1575.00 |
| 10 | Crowbarman | Day | 2.50 | 525.00 | 1312.50 |
| 11 | Stone breaker | Day | 2.50 | 525.00 | 1312.50 |
| 13 | mazdoor | Day | 20.00 | 490.00 | 9800.00 |
| Total cost of Labour | | | | | Rs: 71068.60 |

| | |
|---|---------------|
| labour component/unit qty | 148.10 |
| Add contractor's profit and overhead charges | 13.615% 20.20 |
| labour component/unit qty (including contractor's profit) | 168.30 |

ABSTRACT:

| | | |
|---|---------------|----------------------|
| A. Cost of Materials | | Rs: 147450.87 |
| B. Hire charges of Machinery | | Rs: 109787.40 |
| C. Cost of Labour | | Rs: 71068.60 |
| | Total | Rs: 328306.87 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 44698.98 |
| Total cost for | 480.00 cum | Rs: 373005.85 |
| Rate per cum | (A+B+C+D)/480 | Rs: 777.10 |

IRR-DAW-1-6
(c)

Excavation for foundation in **hard rock of all toughness** including boulders **above 1.2 m dia. by line drilling and smooth blasting and controlling** fly-rock by muffling arrangements for dam, spillway, intake structure and other appurtenant structures etc., including dressing sides and bed to required level / profile, placing and levelling the excavated rock neatly in dump area or other place as directed etc., complete **with lead upto 1 km and all lifts.**

Note :

- 1 m width of excavation along the face to be dressed shall be treated as excavation by line drilling and smooth blasting.
- The rate includes controlling fly-rock wherever required.
- The rate under this item shall be paid only on ascertaining that the surface requiring dressing has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval.
- In case, where the above criteria is not fulfilled payment shall be restricted to the rate provided for excavation by normal or controlled blasting as the case may be..

DATA:

RATE ANALYSIS

UNIT :

A. MATERIALS:**40.00 cum**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of drill rod 1.5 m length | Rm | 138.00 | 26.01 | 3589.84 |
| | Reconditioning charges @ 10% | | | | 358.98 |
| 2 | Use rate of 50 m air hose 4 Nos. | Hour | 22.00 | 11.00 | 242.00 |
| 3 | Explosive small dia. | kg | 10.50 | 69.00 | 724.50 |
| 4 | Ordinary detonators | Nos | 2.00 | 7.00 | 14.00 |
| 5 | Electric delay detonators | Nos | 76.00 | 20.00 | 1520.00 |
| 6 | Fuse coil | Rm | 140.00 | 8.00 | 1120.00 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs. | 7637.32 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|-----------------|
| 1 | Shovel 0.85 cum capacity | Hour | 1.00 | 1529.70 | 1529.70 |
| | Fuel / Energy charges | Hour | 1.00 | 1428.30 | 1428.30 |
| 2 | Angle dozer 90 hp | Hour | 0.25 | 1531.00 | 382.75 |
| | Fuel / Energy charges | Hour | 0.25 | 999.10 | 249.78 |
| 3 | Dumpers 5 cum capacity 3 Nos. | Hour | 3.00 | 531.00 | 1593.00 |
| | Fuel / Energy charges | Hour | 3.00 | 654.40 | 1963.20 |
| 4 | Air compressor 8.5 cmm (ele) 2 Nos | Hour | 11.00 | 145.90 | 1604.90 |
| | Fuel / Energy charges | Hour | 11.00 | 475.90 | 5234.90 |
| 5 | Jack hammers 4 Nos. | Hour | 22.00 | 17.30 | 380.60 |
| | Fuel / Energy charges | Hour | 22.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs. | 14367.13 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 1.00 | 304.20 | 304.20 |
| 2 | Crew for Angle dozer | Hour | 0.25 | 304.20 | 76.05 |
| 3 | Crew for Dumper | Hour | 3.00 | 292.00 | 876.00 |
| 4 | Crew for Air compressor | Hour | 11.00 | 214.50 | 2359.50 |
| 5 | Crew for Jack hammer | Hour | 22.00 | 429.00 | 9438.00 |
| 6 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 7 | Blaster | Day | 0.50 | 645.00 | 322.50 |
| 8 | Helper blaster | Day | 0.50 | 525.00 | 262.50 |
| 9 | Crowbarman | Day | 0.50 | 525.00 | 262.50 |
| 10 | Stone breaker | Day | 0.50 | 525.00 | 262.50 |
| 11 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs. | 15463.75 |

| | |
|---|---------------|
| labour component/unit qty | 386.60 |
| Add contractor's profit and overhead charges | 13.615% 52.60 |
| labour component/unit qty (including contractor's profit) | 439.20 |

ABSTRACT:

| | | | |
|---|--------------|---------|---------------------|
| A. Cost of Materials | | | Rs: 7637.32 |
| B. Hire charges of Machinery | | | Rs: 14367.13 |
| C. Cost of Labour | | | Rs: 15463.75 |
| | | | Rs: 37468.20 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: 5101.3 |
| Total cost for | 40.00 | cum | Rs: 42569.50 |
| Rate per cum | (A+B+C+D)/40 | | Rs: 1064.20 |

IRR-DAW-1-7

Preparing foundation bed for masonry or concrete by benching, stepping, removing all loose material by wedging / chiselling and disposing off the same as directed and cleaning the surface with air and water jet etc. ,complete with initial lead upto 50 m and all lifts.

DATA

RATE ANALYSIS

UNIT:

A. MATERIALS:**100.00 sqm**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs. | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------|------|----------|-------------|---------------|
| 1 | Air compressor 8.5 cmm (ele) | Hour | 1.00 | 145.90 | 145.90 |
| | Fuel / Energy charges | Hour | 1.00 | 475.90 | 475.90 |
| 2 | Pump 5 hp (ele) | Hour | 1.00 | 2.70 | 2.70 |
| | Fuel / Energy charges | Hour | 1.00 | 42.30 | 42.30 |
| Total hire charges of Machinery | | | | Rs. | 666.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|--------------------|
| 1 | Crew for Air compressor | Hour | 1.00 | 214.50 | 214.50 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | Stone breaker | Day | 2.00 | 525.00 | 1050.00 |
| 4 | mazdoor | Day | 2.50 | 490.00 | 1225.00 |
| 5 | Crowbar man | Day | 2.00 | 525.00 | 1050.00 |
| Total cost of Labour | | | | | Rs: 3647.10 |

labour component/unit qty 36.50

Add contractor's profit and overhead charges 13.615% 5.00

labour component/unit qty (including contractor's profit) **41.50****ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 666.80

C. Cost of Labour

Rs: 3647.10

Total

Rs: 4313.90

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 587.34

Total cost for

100.00

sqm

Rs: **4901.24****Rate per****sqm**

(A+B+C+D)/100

Rs: **49.00**

IRR-DAW-1-8

Preparing foundation bed for cut-off trench filling in rock portion by removing all loose materials by wedging / chiselling and disposing off the same as directed etc., complete with initial lead upto 50 m and all lifts.

DATA

RATE ANALYSIS

UNIT:

100.00 sqm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------|------|----------|-------------|-----------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | | Rs: 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------|------|----------|-------------|-----------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Machinery | | | | | Rs: 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------|------|----------|-------------|--------------------|
| 1 | Crowbar man | Day | 2.00 | 525.00 | 1050.00 |
| 2 | Stone breaker | Day | 2.00 | 525.00 | 1050.00 |
| 3 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | | Rs: 3080.00 |

labour component/unit qty 30.80

Add contractor's profit and overhead charges 13.615% 4.20

labour component/unit qty (including contractor's profit) **35.00****ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 3080.00

Total

Rs: 3080.00

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 419.34

Total cost for

100.00

sqm

Rs: **3499.34****Rate per****sqm**

(A+B+C+D)/100

Rs: **35.00**

IRR-DAW-1-9

Drilling 45 to 50 mm dia holes vertical or inclined upto 10 degrees to vertical in rock /masonry/ concrete by percussion drilling using waggon drill or any other suitable equipment including cost of all materials, machinery, labour, redrilling through partially set grout wherever required etc., complete.

for drilling upto 6 m depth from surface.

NOTE:

The item rate for drilling through rock / masonry / concrete includes redrilling through partially set grout, if any, in the portion of hole already grouted.

Data

RATE ANALYSIS

UNIT:

96.00 Rm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------------|------|----------|-------------|--------------------|
| 1 | Use rate of cross bit 50 mm dia | Rm | 96.00 | 64.25 | 6168.00 |
| 2 | Use rate of 50 mm dia air hose 50 m | Hour | 8.00 | 16.63 | 133.00 |
| 3 | Use rate of extension rod 4.5 m | Rm | 96.00 | 5.94 | 570.24 |
| Total cost of Materials | | | | | Rs: 6871.24 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------|------|----------|-------------|--------------------|
| 1 | Waggon drill | Hour | 8.00 | 169.80 | 1358.40 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 2 | Air compressor 8.5 cmm (ele) | Hour | 8.00 | 145.90 | 1167.20 |
| | Fuel / Energy charges | Hour | 8.00 | 475.90 | 3807.20 |
| 3 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | | Rs: 6400.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|--------------------|
| 1 | Crew for Waggon drill | Hour | 8.00 | 365.00 | 2920.00 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | | Rs: 5616.00 |

labour component/unit qty 58.50

Add contractor's profit and overhead charges 13.615% 8.00

labour component/unit qty (including contractor's profit) **66.50****ABSTRACT:**

| | | | | |
|---|-----------|--------------|--|---------------------|
| A. Cost of Materials | | | | Rs: 6871.24 |
| B. Hire charges of Machinery | | | | Rs: 6400.80 |
| C. Cost of Labour | | | | Rs: 5616.00 |
| | | Total | | Rs: 18888.04 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: 2571.61 |
| Total cost for | 96.00 | Rm | | Rs: 21459.65 |
| Rate per | Rm | (A+B+C+D)/96 | | Rs: 223.50 |

Upto 6 m from surface 223.50

Beyond 6 m upto 12 m from surface :

Upto 6 m from surface

Rate per RmRs: **223.50**

Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @

10%

Rs: 22.35

Beyond 6 m upto 12 m from surface

Rate / Rm

Rs: 245.90

Beyond 12 m upto 18 m from surface :

For 6 m to 12 m from surface

Rate per RmRs: **245.90**

Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @

10%

Rs: 24.59

Beyond 12 m upto 18 m from surface

Rate / Rm

Rs: 270.50

Beyond 18 m upto 24 m from surface

:

For 12 m to 18 m from surface

Rate per RmRs: **270.50**

Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @

10%

Rs: 27.05

Beyond 18 m upto 24 m from surface

Rate / Rm

Rs: 297.60

Beyond 24 m upto 30 m from surface

:

For 18 m to 24 m from surface

Rate per RmRs: **297.60**

Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @ :

10%

Rs: 29.76

Beyond 24 m upto 30 m from surface

Rate / Rm

Rs: 327.40

Beyond 30 m upto 36 m from surface

:

For 24 m to 30 m from surface

Rate per RmRs: **327.40**

Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @

10%

Rs: 32.74

Beyond 30 m upto 36 m from surface

Rate / Rm

Rs: 360.10

Beyond 36 m upto 42 m from surface

:

For 30 m to 36 m from surface

Rate per RmRs: **360.10**

Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @

10%

Rs: 36.01

Beyond 36 m upto 42 m from surface

Rate / Rm

Rs: 396.10

Beyond 42 m upto 48 m from surface

For 36 m to 42 m from surface

Rate per RmRs: **396.10**

Add for redrilling through partially set grout / additional extension rods / reduction in rate of drilling etc @

10%

Rs: 39.61

Beyond 42 m upto 48 m from surface

Rate / Rm

Rs: 435.70

IRR-DAW-1-10

Flushing grout holes of all sizes with water and air jets alternatively for an average period of 30 minutes including water intake observations after flushing, cost of all materials, machinery, labour etc., **complete.**

DATA:

RATE ANALYSIS

UNIT :

192.00 Rm.**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--------------------------------------|------|----------|-------------|-------------------|
| 1 | Use rate of air hose 2 Nos x 8 hrs | Hour | 16.00 | 11.00 | 176.00 |
| 2 | Use rate of water hose 2 Nos x 8 hrs | Hour | 16.00 | 11.13 | 178.08 |
| 3 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | | Rs: 422.08 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------|------|----------|-------------|--------------------|
| 1 | Air compressor 8.5 cmm (ele) | Hour | 8.00 | 145.90 | 1167.20 |
| | Fuel / Energy charges | Hour | 8.00 | 475.90 | 3807.20 |
| 2 | Pump 5 hp (ele) | Hour | 8.00 | 2.70 | 21.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 3 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | | Rs: 5402.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|--------------------|
| 1 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 2 | Crew for Pump | Hour | 8.00 | 107.60 | 860.80 |
| 3 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | | Rs: 4536.80 |

labour component/unit qty 23.60

Add contractor's profit and overhead charges 13.615% 3.20

labour component/unit qty (including contractor's profit) **26.80****ABSTRACT:**

A. Cost of Materials

Rs: 422.08

B. Hire charges of Machinery

Rs: 5402.40

C. Cost of Labour

Rs: 4536.80

Total

Rs: 10361.28

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1410.69

Total cost for 192.00

Rm.

Rs: **11771.97****Rate per Rm. (A+B+C+D)/192**Rs: **61.30**IRR-DAW-1-11
(a)

Consolidation grouting with neat cement grout mix of suitable consistency under specified pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

1.05 tonne**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|----------------------------------|-------|----------|-------------|--------------------|
| 1 | Cement | tonne | 1.05 | 3680.00 | 3864.00 |
| 2 | Use rate of 50 m pressure hose | Hour | 8.00 | 11.00 | 88.00 |
| 3 | Sundries (packer assembly etc) | LS | 3.00 | 34.00 | 102.00 |
| Total cost of Materials | | | | | Rs: 4054.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------|------|----------|-------------|-------------------|
| 1 | Grouting equipment | Hour | 8.00 | 21.10 | 168.80 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | Pump 5 hp (ele) | Hour | 2.00 | 2.70 | 5.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 3 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | | Rs: 665.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------------|------|----------|-------------|--------------------|
| 1 | Crew for Grout pump | Hour | 8.00 | 343.20 | 2745.60 |
| 2 | Crew for Pump | Hour | 2.00 | 107.60 | 215.20 |
| 3 | mazdoor (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | | Rs: 3940.80 |

labour component/unit qty 3753.10

Add contractor's profit and overhead charges 13.615% 511.00

labour component/unit qty (including contractor's profit) **4264.10****ABSTRACT:**

A. Cost of Materials

Rs: 4054.00

B. Hire charges of Machinery

Rs: 665.20

C. Cost of Labour

Rs: 3940.80

Total

Rs: 8660.00

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1179.06

Total cost for 1.05

tonne

Rs: **9839.06****Rate per tonne (A+B+C+D)/1.05**Rs: **9370.50**IRR-DAW-1-12
(b)

Curtain grouting with neat cement grout mix of suitable consistency under specified pressure as directed in drilled holes by stage grouting method including cost of all materials, machinery, labour, redrilling if necessary etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

1.05 tonne**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|----------------------------------|-------|----------|-------------|----------------|
| 1 | Cement | tonne | 1.05 | 3680.00 | 3864.00 |
| 2 | Use rate of 100 m pressure hose | Hour | 8.00 | 22 | 176.00 |
| 3 | Use rate of 400 m GI pipe | Hour | 8.00 | 6.2 | 49.60 |
| 4 | Sundries (packer assembly etc) | LS | 3.00 | 34.00 | 102.00 |
| Total cost of Materials | | | | Rs: | 4191.60 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Grouting equipment | Hour | 8.00 | 21.10 | 168.80 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | Pump 5 hp (ele) | Hour | 2.00 | 2.70 | 5.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 3 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 665.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Crew for Grout pump | Hour | 8.00 | 343.20 | 2745.60 |
| 2 | Crew for Pump | Hour | 2.00 | 107.60 | 215.20 |
| 3 | Pipe fitter | Day | 1.00 | 655.00 | 655.00 |
| 4 | mazdoor (cement handling) | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 5085.80 |

labour component/unit qty 4843.60

Add contractor's profit and overhead charges 13.615% 659.50

labour component/unit qty (including contractor's profit) **5503.10****ABSTRACT:**

A. Cost of Materials

Rs: 4191.60

B. Hire charges of Machinery

Rs: 665.20

C. Cost of Labour

Rs: 5085.80

Total

Rs: 9942.60

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1353.68

Total cost for

1.05

Rs: **11296.28****Rate per tonne**

(A+B+C+D)/1.05

Rs: **10758.40**

IRR-DAW-1-13

Providing and **fixing 25 mm dia 3 m long cold twisted deformed steel**

dowel bars with one end driven into 45 to 50 mm diameter 1.50 m deep hole drilled in bed rock and other end provided with L-bend for embedding in concrete / masonry of over flow / non-over flow blocks and other appertenant works including cost of drilling and cleaning hole, filling hole with cement mortar 1 : 1 proportion, driving anchor rod, cost of all materials, machinery, labour etc., complete **with initial lead upto 1 km and all lifts.**

Consider 25 anchor rods for analysis.

DATA:

RATE ANALYSIS

UNIT:

25 Nos.**A. MATERIALS**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|---------------------------------|------|----------|-------------|-----------------|
| 1 | Use rate of drill bit 50 mm dia | Rm | 37.50 | 64.25 | 2409.38 |
| 2 | Use rate of air hose 50 m | Hour | 4.00 | 16.63 | 66.52 |
| 3 | Anchor rod 25 mm dia | kg | 303.22 | 52.50 | 15919.05 |
| 4 | Cement | kg | 75.00 | 3.68 | 276.00 |
| 5 | Sand (screened) | cum | 0.05 | 700.00 | 35.00 |
| Total cost of Materials | | | | Rs: | 18705.95 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Air compressor 8.5 cmm (ele) | Hour | 4.00 | 145.90 | 583.60 |
| | Fuel / Energy charges | Hour | 4.00 | 475.90 | 1903.60 |
| 2 | Waggon drill | Hour | 4.00 | 169.80 | 679.20 |
| | Fuel / Energy charges | Hour | 4.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 3166.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Air compressor | Hour | 4.00 | 214.50 | 858.00 |
| 2 | Crew for Waggon drill | Hour | 4.00 | 365.00 | 1460.00 |
| 3 | Bar bender | Day | 0.50 | 700.00 | 350.00 |
| 4 | Mason CI- II | Day | 0.50 | 525.00 | 262.50 |
| 5 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 3420.50 |

labour component/unit qty 136.80

Add contractor's profit and overhead charges 13.615% 18.60

labour component/unit qty (including contractor's profit) **155.40****ABSTRACT:**

A. Cost of Materials

Rs: 18705.95

B. Hire charges of Machinery

Rs: 3166.40

C. Cost of Labour

Rs: 3420.50

Total

Rs: 25292.85

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 3443.62

Lead Charges for 1 Km for FA

0.05 cum @

38.288255 Rs./Cum 1.91441275

Lead Charges for 1Km for Steel (including Loading and Unloading Charges)

0.30 tonne @

231.888215 Rs./Tonn 70.31314455

Total cost for

25.00

Nos.

Rs: **28808.70****Rate per****Each**

(A+B+C+D)/25

Rs: 1152.30

IRR-DAW-1-14

Providing and **fixing 25 mm dia. 2.75 m long ribbed steel anchor rods**

with one end split and driven firmly using steel wedge into 1.25 m deep 45 to 50 mm dia. hole drilled in bed rock and other end provided with L- bend for embedding in concrete / masonry for spillway and appurtenant works including drilling and cleaning hole, filling hole with thick cement slurry, driving anchor rod, cost of all materials, machinery, labour, steel wedge etc., complete with **initial lead upto 1 km and all lifts.**

Consider 25 anchor rods for analysis.

DATA:

RATE ANALYSIS

UNIT:

25.00 Nos.**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Use rate of 50 mm dia drill bit | Rm | 31.25 | 64.25 | 2007.81 |
| 2 | Use rate of air hose 50 m 1 Nos. | Hour | 3.00 | 16.63 | 49.89 |
| 3 | Anchor rod 25 mm dia | kg | 277.92 | 52.50 | 14590.80 |
| 4 | Cement | kg | 62.50 | 3.68 | 230.00 |
| 5 | Gas for splitting anchor rods | LS | 5.00 | 39.30 | 196.50 |
| 6 | Steel wedges | LS | 10.00 | 17.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 17245.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Air compressor 8.5 cmm (ele) | Hour | 3.00 | 145.90 | 437.70 |
| | Fuel / Energy charges | Hour | 3.00 | 475.90 | 1427.70 |
| 2 | Waggon drill | Hour | 3.00 | 169.80 | 509.40 |
| | Fuel / Energy charges | Hour | 3.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 2374.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Air compressor | Hour | 3.00 | 214.50 | 643.50 |
| 2 | Crew for Waggon drill | Hour | 3.00 | 365.00 | 1095.00 |
| 3 | Bar bender | Day | 0.50 | 700.00 | 350.00 |
| 4 | Mason CI- II | Day | 0.50 | 525.00 | 262.50 |
| 5 | Gas cutter | Day | 1.00 | 575.00 | 575.00 |
| 6 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 3906.00 |

labour component/unit qty 156.20

Add contractor's profit and overhead charges 13.615% 21.30

labour component/unit qty (including contractor's profit) **177.50****ABSTRACT:**

A. Cost of Materials

Rs: 17245.00

B. Hire charges of Machinery

Rs: 2374.80

C. Cost of Labour

Rs: 3906.00

Total

Rs: 23525.80

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 3203.04

Lead Charges for 1Km for Steel (including Loading and Unloading Charges)

0.28 tonne @

231.888215 Rs./Tonn 64.44637271

Total cost for

25.00

Nos.

Rs: **26793.29****Rate per****Each**

(A+B+C+D)/25

Rs: 1071.70

IRR-DAW-2

REINFORCEMENT & CEMENT CONCRETE WORKS :

IRR-DAW-2-1A

Providing, fabricating and **placing in position reinforcement steel for RCC, below 36 dia rods** overlaps and wastages wherever required, tying with 1.25 mm diameter soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with **initial lead upto 1 km and all lifts.**
 overlaps and wastage as per NHAI-data
 Lap jointing considered for bars upto 36 mm diameter.

DATA:

RATE ANALYSIS

UNIT :

1.00 tonne**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-----------------------------|-------|----------|-------------|---------------------|
| 1 | Rein.Steel with 5 % wastage | tonne | 1.05 | 52500.00 | 55125.00 |
| 2 | Binding wire 1.25 mm dia | kg | 9.00 | 64.00 | 576.00 |
| Total cost of Materials | | | | | Rs: 55701.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|-----------------|
| Total hire charges of Machinery | | | | | Rs: 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------|------|----------|-------------|----------------|
| 1 | Bar bender | Day | 2.00 | 700.00 | 1400.00 |
| 2 | mazdoor | Day | 6.84 | 490.00 | 3351.60 |
| Total cost of Labour | | | | | 4751.60 |

labour component/unit qty 4751.60

Add contractor's profit and overhead charges 13.615% 646.90

labour component/unit qty (including contractor's profit) **5398.50**

A. MATERIAL

55701.00

B. MACHINERY

0.00

C. LABOUR

4751.60

Total

60452.60

D. Add for contractor's profit and overheads on A+B+C

13.615%

8230.62

Lead Charges for 1Km for Steel (including Loading and Unloading Charges)

231.89 Rs/Tonne

243.4826258

Total cost for

1.00

tonne

68926.70**Rate per/ TON.=(A+B+C+D) / I****68926.70**

IRR-DAW-2-1B

Providing, fabricating and **placing in position reinforcement steel for RCC above 36 dia with welding** and wastage at 2.5%, tying with 1.25 mm diameter soft annealed steel wire, including cost of all materials, machinery, labour etc., complete with **initial lead upto 1 km and all lifts.**
 overlaps and wastage as per NHAI-data
 welding joints considered for bars above 36 mm diameter.

DATA:

RATE ANALYSIS

UNIT :

1.00 tonne**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--|-------|----------|-------------|---------------------|
| 1 | Rein.Steel with 2.5 % wastage | tonne | 1.025 | 52500.00 | 53812.50 |
| 3 | Welding electrodes 5 per joint and 14 joints per One | One | 70.00 | 14.00 | 980.00 |
| Total cost of Materials | | | | | Rs: 54792.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------|------|----------|-------------|--------------------|
| 1 | welding machine | hour | 10.00 | 15.10 | 151.00 |
| | fuel charges | hour | 10.00 | 101.50 | 1015.00 |
| Total hire charges of Machinery | | | | | Rs: 1166.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------|------|----------|-------------|----------------|
| 1 | welder | day | 2.50 | 575.00 | 1437.50 |
| 2 | Bar bender | Day | 2.00 | 700.00 | 1400.00 |
| 3 | mazdoor | Day | 6.84 | 490.00 | 3351.60 |
| Total cost of Labour | | | | | 6189.10 |

labour component/unit qty 6189.10

Add contractor's profit and overhead charges 13.615% 842.60

labour component/unit qty (including contractor's profit) **7031.70**

ABSTRACT:

| | | |
|--|-----------------|-----------------|
| A. Cost of Materials | | 54792.50 |
| B. Hire charges of Machinery | | 1166.00 |
| C. Cost of Labour | | 6189.10 |
| Total | | 62147.60 |
| D. Add for contractor's profit and overheads on A+B+C | 13.615% | 8461.4 |
| Lead Charges for 1Km for Steel (including Loading and Unloading Charges) | 231.89 Rs/Tonne | 237.6854204 |
| Total cost for | 1.00 tonne | 70846.69 |
| Rate per/ TON.=(A+B+C+D) / I | | 70846.69 |

IRR-DAW-2-2

Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 250 kg /cum with use of super plasticiser equal to 0.4% of cement content , CA : 0.98 cum, Blending Ratio of CA -- 40:30:20:10, FA : 0.35 cum)**

DATA:

RATE ANALYSIS

UNIT:

240.00 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------------|------|----------|-------------|----------------------|
| 1 | Cement for mix | kg | 60000.00 | 3.68 | 220800.00 |
| | Cement for incidentals @ 3 kg / cum | kg | 720.00 | 3.68 | 2649.60 |
| 2 | Coarse aggregate 80-40 mm | cum | 94.08 | 697.00 | 65573.76 |
| | Coarse aggregate 40-20 mm | cum | 70.56 | 1265.00 | 89258.40 |
| | Coarse aggregate 20-10 mm | cum | 47.04 | 1313.00 | 61763.52 |
| | Coarse aggregate 10 mm below | cum | 23.52 | 967.00 | 22743.84 |
| 3 | Fine aggregate (Un-screened) | cum | 84.00 | 605.00 | 50820.00 |
| 4 | Super Plasticizer or AEA | kg | 240.00 | 55.00 | 13200.00 |
| 5 | Use rate of shuttering | sqm | 120.00 | 405.29 | 48634.80 |
| Total cost of Materials | | | | | Rs: 575443.92 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|---------------------|
| 1 | Batching plant | Hour | 8.00 | 538.70 | 4309.60 |
| | Fuel / Energy charges | Hour | 8.00 | 465.30 | 3722.40 |
| 2 | Air compressor 7 cmm (ele) | Hour | 8.00 | 113.40 | 907.20 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 3 | Tipper | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Tower crane 5 t | Hour | 16.00 | 749.10 | 11985.60 |
| | Fuel / Energy charges | Hour | 16.00 | 220.00 | 3520.00 |
| 5 | Concrete bucket | Hour | 40.00 | 14.00 | 560.00 |
| | Fuel / Energy charges | Hour | 40.00 | 0.00 | 0.00 |
| 6 | 10 hp pump (ele) | Hour | 8.00 | 5.90 | 47.20 |
| | Fuel / Energy charges | Hour | 8.00 | 84.60 | 676.80 |
| 7 | Needle vibrator 60 mm dia (ele) | Hour | 16.00 | 8.80 | 140.80 |
| | Fuel / Energy charges | Hour | 16.00 | 12.70 | 203.20 |
| 8 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | | Rs: 58120.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------|------|----------|-------------|---------------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | Crew for Tipper (4) | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Tower crane (2) | Hour | 16.00 | 243.40 | 3894.40 |
| 5 | Crew for Pump | Hour | 8.00 | 107.60 | 860.80 |
| 6 | Crew for Needle vibrator (2) | Hour | 16.00 | 205.90 | 3294.40 |
| 7 | Mason Class-I | Day | 4.00 | 585.00 | 2340.00 |
| 8 | Foreman | Day | 2.00 | 645.00 | 1290.00 |
| 9 | mazdoor | | | | |
| | for silo (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching plant | Day | 2.00 | 490.00 | 980.00 |
| | for conveyor system | Day | 2.00 | 490.00 | 980.00 |
| | for laying & vibrating | Day | 6.00 | 490.00 | 2940.00 |
| | for cleaning / washing / curing | Day | 2.00 | 490.00 | 980.00 |
| 10 | Labour cost for shuttering | sqm | 120.00 | 181.13 | 21735.60 |
| Total cost of Labour | | | | | Rs: 52812.00 |

| | |
|---|---------------|
| labour component/unit qty | 220.10 |
| Add contractor's profit and overhead charges | 13.615% 30.00 |
| labour component/unit qty (including contractor's profit) | 250.10 |

ABSTRACT:

| | | | | | |
|---|---------|---------------|-------|-------------------|--------------------|
| A. Cost of Materials | | | | | Rs: 575443.92 |
| B. Hire charges of Machinery | | | | | Rs: 58120.80 |
| C. Cost of Labour | | | | | Rs: 52812.00 |
| | | | | | |
| | | | Total | | Rs: 686376.72 |
| Add for conveyor system @ | 3.00% | | | | 20591.30 |
| Add for electric sub-station/ Demand charges @ | 2.5% | | | | 17159.42 |
| Add for trestle bridge for tower crane track @ | 4.0% | | | | 27455.07 |
| | | | Total | | Rs: 751582.51 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | | | | Rs: 102327.96 |
| Lead Charges for 1 Km for FA | 84.00 | cum @ | | 38.288255 Rs./Cum | 3216.21342 |
| Lead Charges for 1 Km for CA | 235.20 | cum @ | | 36.924875 Rs./Cum | 8684.73 |
| Total cost for | 240.00 | | cum | | Rs: 865811.41 |
| Rate per cum | | (A+B+C+D)/240 | | | Rs: 3607.50 |

IRR-DAW-2-2A
New Item1-2010-11

Providing and laying **insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **for plain concrete works** with **initial lead upto 1 km and all lifts. (Cement content : 300 kg /cum with use of 0.4% of cement content super plasticiser , CA : 0.90 cum, Blending Ratio of CA -- 40:30:20:10, FA : 0.40 cum)**

DATA:

RATE ANALYSIS

| UNIT: 240.00 cum | | | | | |
|----------------------------|-------------------------------------|------|----------|-------------|---------------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Cement for mix | kg | 72000.00 | 3.68 | 264960.00 |
| | Cement for incidentals @ 3 kg / cum | kg | 720.00 | 3.68 | 2649.60 |
| 2 | Coarse aggregate 80-40 mm | cum | 86.40 | 697.00 | 60220.80 |
| | Coarse aggregate 40-20 mm | cum | 64.80 | 1265.00 | 81972.00 |
| | Coarse aggregate 20-10 mm | cum | 43.20 | 1313.00 | 56721.60 |
| | Coarse aggregate 10 mm below | cum | 21.60 | 967.00 | 20887.20 |
| 3 | Fine aggregate (Un-Screened) | cum | 96.00 | 605.00 | 58080.00 |
| 4 | Super Plasticizer or AEA | kg | 288.00 | 55.00 | 15840.00 |
| 5 | Use rate of shuttering | sqm | 120.00 | 405.29 | 48634.80 |
| Total cost of Materials | | | | | Rs: 609966.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|--------------|
| 1 | Batching plant | Hour | 8.00 | 538.70 | 4309.60 |
| | Fuel / Energy charges | Hour | 8.00 | 465.30 | 3722.40 |
| 2 | Air compressor 7 cmm (ele) | Hour | 8.00 | 113.40 | 907.20 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 3 | Tipper | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Tower crane 5 t | Hour | 16.00 | 749.10 | 11985.60 |
| | Fuel / Energy charges | Hour | 16.00 | 220.00 | 3520.00 |
| 5 | Concrete bucket | Hour | 40.00 | 14.00 | 560.00 |
| | Fuel / Energy charges | Hour | 40.00 | 0.00 | 0.00 |
| 6 | 10 hp pump (ele) | Hour | 8.00 | 5.90 | 47.20 |
| | Fuel / Energy charges | Hour | 8.00 | 84.60 | 676.80 |
| 7 | Needle vibrator 60 mm dia (ele) | Hour | 16.00 | 8.80 | 140.80 |
| | Fuel / Energy charges | Hour | 16.00 | 12.70 | 203.20 |
| 8 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | | Rs: 58120.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------|------|----------|-------------|--------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | Crew for Tipper (4) | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Tower crane (2) | Hour | 16.00 | 243.40 | 3894.40 |
| 5 | Crew for Pump | Hour | 8.00 | 107.60 | 860.80 |
| 6 | Crew for Needle vibrator (2) | Hour | 16.00 | 205.90 | 3294.40 |
| 7 | Mason Class-I | Day | 4.00 | 585.00 | 2340.00 |
| 8 | Foreman | Day | 2.00 | 645.00 | 1290.00 |
| 9 | mazdoor | | | | |
| | for silo (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching plant | Day | 2.00 | 490.00 | 980.00 |
| | for conveyor system | Day | 2.00 | 490.00 | 980.00 |
| | for laying & vibrating | Day | 6.00 | 490.00 | 2940.00 |
| | for cleaning / washing / curing | Day | 2.00 | 490.00 | 980.00 |
| 10 | Labour cost for shuttering | sqm | 120.00 | 181.13 | 21735.00 |
| Total cost of Labour | | | | | Rs: 52811.40 |

| | |
|---|---------------|
| labour component/unit qty | 220.00 |
| Add contractor's profit and overhead charges | 13.615% 30.00 |
| labour component/unit qty (including contractor's profit) | 250.00 |

ABSTRACT:

| | | | | |
|---|---------------|-------|-------------------|--------------------|
| A. Cost of Materials | | | | Rs: 609966.00 |
| B. Hire charges of Machinery | | | | Rs: 58120.80 |
| C. Cost of Labour | | | | Rs: 52811.40 |
| | | | Total | Rs: 720898.20 |
| Add for conveyor system @ | 3.00% | | | 21626.95 |
| Add for electric sub-station/ Demand charges @ | 2.5% | | | 18022.46 |
| Add for trestle bridge for tower crane track @ | 4.0% | | | 28835.93 |
| | | | Total | Rs: 789383.54 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | | | Rs: 107474.57 |
| Lead Charges for 1 Km for FA | 96.00 | cum @ | 38.288255 Rs./Cum | 3675.67248 |
| Lead Charges for 1 Km for CA | 216.00 | cum @ | 36.924875 Rs./Cum | 7975.77 |
| Total cost for | 240.00 | | cum | Rs: 908509.56 |
| Rate per cum | (A+B+C+D)/240 | | | Rs: 3785.50 |

IRR-DAW-2-3

Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **for plain concrete works with initial lead upto 1 km and all lifts.** (Cement content : 220 kg /cum with use of super plasticiser, CA: 0.98 cum, Blending Ratio of CA -40:30:20:10, FA: 0.37 cum)

DATA:

RATE ANALYSIS

| UNIT: 240.00 cum | | | | | |
|----------------------|-------------------------------------|------|----------|-------------|------------------|
| A. MATERIALS: | | | | | |
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Cement for mix | kg | 52800 | 3.68 | 194304.00 |
| | Cement for incidentals @ 3 kg / cum | kg | 720.00 | 3.68 | 2649.60 |
| 2 | Coarse aggregate 80-40 mm | cum | 94.08 | 697.00 | 65573.76 |
| | Coarse aggregate 40-20 mm | cum | 70.56 | 1265.00 | 89258.40 |
| | Coarse aggregate 20-10 mm | cum | 47.04 | 1313.00 | 61763.52 |
| | Coarse aggregate 10 mm below | cum | 23.52 | 967.00 | 22743.84 |
| 3 | Fine aggregate (Un-Screened) | cum | 88.8 | 605.00 | 53724.00 |
| 4 | Super Plasticizer or AEA | kg | 211.20 | 55.00 | 11616.00 |
| 5 | Use rate of shuttering | sqm | 120.00 | 405.29 | 48634.80 |
| | Total cost of Materials | | | Rs: | 550267.92 |
| B. MACHINERY: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Batching plant 2 x 1.5 cum | Hour | 8.00 | 538.70 | 4309.60 |
| | Fuel / Energy charges | Hour | 8.00 | 465.30 | 3722.40 |
| 2 | Air compressor 7 cmm (ele) | Hour | 8.00 | 113.40 | 907.20 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 3 | Tipper | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Tower crane 5 t | Hour | 16.00 | 749.10 | 11985.60 |
| | Fuel / Energy charges | Hour | 16.00 | 220.00 | 3520.00 |
| 5 | Concrete bucket | Hour | 40.00 | 14.00 | 560.00 |
| | Fuel / Energy charges | Hour | 40.00 | 0.00 | 0.00 |
| 6 | 10 hp pump (ele) | Hour | 8.00 | 5.90 | 47.20 |
| | Fuel / Energy charges | Hour | 8.00 | 84.60 | 676.80 |
| 7 | Needle vibrator 60 mm dia (ele) | Hour | 16.00 | 8.80 | 140.80 |
| | Fuel / Energy charges | Hour | 16.00 | 12.70 | 203.20 |
| 8 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| | Total hire charges of Machinery | | | Rs: | 58120.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | Crew for Tipper (4) | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Tower crane (2) | Hour | 16.00 | 243.40 | 3894.40 |
| 5 | Crew for Pump | Hour | 8.00 | 107.60 | 860.80 |
| 6 | Crew for Needle vibrator (2) | Hour | 16.00 | 205.90 | 3294.40 |
| 7 | Mason Class-I | Day | 4.00 | 585.00 | 2340.00 |
| 8 | Foreman | Day | 2.00 | 645.00 | 1290.00 |
| 9 | mazdoor | | | | |
| | for silo (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching plant | Day | 2.00 | 490.00 | 980.00 |
| | for conveyor system | Day | 2.00 | 490.00 | 980.00 |
| | for laying & vibrating | Day | 6.00 | 490.00 | 2940.00 |
| | for cleaning / washing / curing | Day | 2.00 | 490.00 | 980.00 |
| 10 | Labour cost for shuttering | sqm | 120.00 | 181.13 | 21735.60 |
| Total cost of Labour | | | | Rs: | 52812.00 |

| | |
|---|---------------|
| labour component/unit qty | 220.10 |
| Add contractor's profit and overhead charges | 13.615% 30.00 |
| labour component/unit qty (including contractor's profit) | 250.10 |

ABSTRACT:

| | | |
|--|----------------------|-------------------------------|
| A. Cost of Materials | Rs: | 550267.92 |
| B. Hire charges of Machinery | Rs: | 58120.80 |
| C. Cost of Labour | Rs: | 52812.00 |
| Total | Rs: | 661200.72 |
| Add for conveyor system @ | 3.00% | 19836.02 |
| Add for electric sub-station/ Demand charges @ | 2.5% | 16530.02 |
| Add for trestle bridge for tower crane track @ | 4.0% | 26448.03 |
| Total | Rs: | 724014.79 |
| D. Add for contractor's profit and overheads on (A+B+C+other | 13.615% | Rs. 98574.61 |
| Lead Charges for 1 Km for FA | 88.80 cum @ | 38.288255 Rs./Cum 3399.997044 |
| Lead Charges for 1 Km for CA | 235.20 cum @ | 36.924875 Rs./Cum 8684.73 |
| Total cost for | 240.00 cum | Rs: 834674.13 |
| Rate per cum | (A+B+C+D)/240 | Rs: 3477.80 |

IRR-DAW-2-4

Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **for RCC works of gallery, sluice, spillway crest, spillway d / s** face, energy dissipating structures, training walls, piers, abutments and such other locations with **initial lead upto 1 km and all lifts.**
(Cement content : 310 kg / cum with use of super plasticiser,
CA : 0.90 cum, blending ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSIS

| UNIT: 240.00 cum | | | | | |
|-------------------------|-------------------------------------|------|----------|-------------|------------------|
| A. MATERIALS: | | | | | |
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Cement for mix | kg | 74400 | 3.68 | 273792.00 |
| 2 | Cement for incidentals @ 3 kg / cum | kg | 720.00 | 3.68 | 2649.60 |
| | Coarse aggregate 40-20 mm | cum | 108 | 1265.00 | 136620.00 |
| | Coarse aggregate 20-10 mm | cum | 64.8 | 1313.00 | 85082.40 |
| | Coarse aggregate 10 mm below | cum | 43.2 | 967.00 | 41774.40 |
| 3 | Fine aggregate (Un-Screened) | cum | 96 | 605.00 | 58080.00 |
| 4 | Super Plasticizer or AEA | kg | 297.60 | 55.00 | 16368.00 |
| 5 | Use rate of shuttering | sqm | 360.00 | 405.29 | 145904.40 |
| 6 | Scaffolding of shuttering @ | 15% | | | 21885.66 |
| Total cost of Materials | | | | Rs: | 782156.46 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Batching plant 2 x 1.5 cum | Hour | 8.00 | 538.70 | 4309.60 |
| | Fuel / Energy charges | Hour | 8.00 | 465.30 | 3722.40 |
| 2 | Air compressor 7 cmm (ele) | Hour | 8.00 | 113.40 | 907.20 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 3 | Tipper | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Tower crane 5 t | Hour | 16.00 | 749.10 | 11985.60 |
| | Fuel / Energy charges | Hour | 16.00 | 220.00 | 3520.00 |
| 5 | Concrete bucket | Hour | 40.00 | 14.00 | 560.00 |
| | Fuel / Energy charges | Hour | 40.00 | 0.00 | 0.00 |
| 6 | 10 hp pump (ele) | Hour | 8.00 | 5.90 | 47.20 |
| | Fuel / Energy charges | Hour | 8.00 | 84.60 | 676.80 |
| 7 | Needle vibrator 60 mm dia (ele) | Hour | 16.00 | 8.80 | 140.80 |
| | Fuel / Energy charges | Hour | 16.00 | 12.70 | 203.20 |
| 8 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | Rs: | 58120.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------|------|----------|-------------|------------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | Crew for Tipper (4) | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Tower crane (2) | Hour | 16.00 | 243.40 | 3894.40 |
| 5 | Crew for Pump | Hour | 8.00 | 107.60 | 860.80 |
| 6 | Crew for Needle vibrator (2) | Hour | 16.00 | 205.90 | 3294.40 |
| 7 | Mason Class-I | Day | 4.00 | 585.00 | 2340.00 |
| 8 | Foreman | Day | 2.00 | 645.00 | 1290.00 |
| 9 | mazdoor | | | | 0.00 |
| | for silo (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching plant | Day | 2.00 | 490.00 | 980.00 |
| | for conveyor system | Day | 2.00 | 490.00 | 980.00 |
| | for laying & vibrating | Day | 6.00 | 490.00 | 2940.00 |
| | for cleaning / washing / curing | Day | 2.00 | 490.00 | 980.00 |
| 10 | Labour cost for shuttering | sqm | 360.00 | 181.13 | 65206.80 |
| 11 | Labour cost for scaffolding @ | 15% | | | 9781.02 |
| Total cost of Labour | | | | Rs: | 106064.22 |

| | |
|---|---------------|
| labour component/unit qty | 441.90 |
| Add contractor's profit and overhead charges | 13.615% 60.20 |
| labour component/unit qty (including contractor's profit) | 502.10 |

ABSTRACT:

| | |
|--|--|
| A. Cost of Materials | Rs: 782156.46 |
| B. Hire charges of Machinery | Rs: 58120.80 |
| C. Cost of Labour | Rs: 106064.22 |
| Total | Rs: 946341.48 |
| Add for aggregate conveyor system @ | 3.0% 28390.24 |
| Add for electric sub-station / Demand charges @ | 2.50% 23658.54 |
| Add for trestle bridge for tower crane track @ | 4.0% 37853.66 |
| Total | Rs: 1036243.92 |
| D. Add for contractor's profit and overheads on (A+B+C+other | 13.615% Rs. 141084.61 |
| Lead Charges for 1 Km for FA | 96.00 cum @ 38.288255 Rs./Cum 3675.67248 |
| Lead Charges for 1 Km for CA | 216.00 cum @ 36.924875 Rs./Cum 7975.77 |
| Total cost for | 240.00 cum Rs: 1188979.98 |
| Rate per cum | (A+B+C+D)/240 Rs: 4954.10 |

IRR-DAW-2-4A
new Item2-2010-11

Providing and **laying insitu vibrated M-25** (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **RCC works of gallery, sluice, spillway crest, spillway d / s face, energy dissipating structures, training walls, piers, abutments** and such other locations **with initial lead upto 1 km and all lifts.**
(Cement content : 360 kg / cum with use of super plasticiser,
CA : 0.90 cum, blending ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSIS

UNIT:

240.00 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------------|------|----------|-------------|----------------------|
| 1 | Cement for mix | kg | 86400 | 3.68 | 317952.00 |
| 2 | Cement for incidentals @ 3 kg / cum | kg | 720.00 | 3.68 | 2649.60 |
| | Coarse aggregate 40-20 mm | cum | 108 | 1265.00 | 136620.00 |
| | Coarse aggregate 20-10 mm | cum | 64.8 | 1313.00 | 85082.40 |
| | Coarse aggregate 10 mm below | cum | 43.2 | 967.00 | 41774.40 |
| 3 | Fine aggregate (Un-Screened) | cum | 96 | 605.00 | 58080.00 |
| 4 | Super Plasticizer or AEA | kg | 345.60 | 55.00 | 19008.00 |
| 5 | Use rate of shuttering | sqm | 360.00 | 405.29 | 145904.40 |
| 6 | Scaffolding of shuttering @ | 15% | | | 21885.66 |
| Total cost of Materials | | | | | Rs: 828956.46 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|---------------------|
| 1 | Batching plant 2 x 1.5 cum | Hour | 8.00 | 538.70 | 4309.60 |
| | Fuel / Energy charges | Hour | 8.00 | 465.30 | 3722.40 |
| 2 | Air compressor 7 cmm (ele) | Hour | 8.00 | 113.40 | 907.20 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 3 | Tipper | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Tower crane 5 t | Hour | 16.00 | 749.10 | 11985.60 |
| | Fuel / Energy charges | Hour | 16.00 | 220.00 | 3520.00 |
| 5 | Concrete bucket | Hour | 40.00 | 14.00 | 560.00 |
| | Fuel / Energy charges | Hour | 40.00 | 0.00 | 0.00 |
| 6 | 10 hp pump (ele) | Hour | 8.00 | 5.90 | 47.20 |
| | Fuel / Energy charges | Hour | 8.00 | 84.60 | 676.80 |
| 7 | Needle vibrator 60 mm dia (ele) | Hour | 16.00 | 8.80 | 140.80 |
| | Fuel / Energy charges | Hour | 16.00 | 12.70 | 203.20 |
| 8 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | | Rs: 58120.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------|------|----------|-------------|----------------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | Crew for Tipper (4) | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Tower crane (2) | Hour | 16.00 | 243.40 | 3894.40 |
| 5 | Crew for Pump | Hour | 8.00 | 107.60 | 860.80 |
| 6 | Crew for Needle vibrator (2) | Hour | 16.00 | 205.90 | 3294.40 |
| 7 | Mason Class-I | Day | 4.00 | 585.00 | 2340.00 |
| 8 | Foreman | Day | 2.00 | 645.00 | 1290.00 |
| 9 | mazdoor | | | | 0.00 |
| | for silo (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching plant | Day | 2.00 | 490.00 | 980.00 |
| | for conveyor system | Day | 2.00 | 490.00 | 980.00 |
| | for laying & vibrating | Day | 6.00 | 490.00 | 2940.00 |
| | for cleaning / washing / curing | Day | 2.00 | 490.00 | 980.00 |
| 10 | Labour cost for shuttering | sqm | 360.00 | 181.13 | 65206.80 |
| 11 | Labour cost for scaffolding @ | 15% | | | 9781.02 |
| Total cost of Labour | | | | | Rs: 106064.22 |

| | |
|---|---------------|
| labour component/unit qty | 441.90 |
| Add contractor's profit and overhead charges | 13.615% 60.20 |
| labour component/unit qty (including contractor's profit) | 502.10 |

ABSTRACT:

| | | |
|--|----------------------|------------------------------|
| A. Cost of Materials | | Rs: 828956.46 |
| B. Hire charges of Machinery | | Rs: 58120.80 |
| C. Cost of Labour | | Rs: 106064.22 |
| | Total | Rs: 993141.48 |
| Add for aggregate conveyor system @ | 3.0% | 29794.24 |
| Add for electric sub-station / Demand charges @ | 2.50% | 24828.54 |
| Add for trestle bridge for tower crane track @ | 4.0% | 39725.66 |
| | Total | Rs: 1087489.92 |
| D. Add for contractor's profit and overheads on (A+B+C+other | 13.615% | Rs: 148061.75 |
| Lead Charges for 1 Km for FA | 96.00 cum @ | 38.288255 Rs./Cum 3675.67248 |
| Lead Charges for 1 Km for CA | 216.00 cum @ | 36.924875 Rs./Cum 7975.77 |
| Total cost for | 240.00 cum | Rs: 1247203.12 |
| Rate per cum | (A+B+C+D)/240 | Rs: 5196.70 |

IRR-DAW-2-4B
new Item3-2010-11

Providing and **laying insitu vibrated M-25** (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **RCC works of gallery, sluice, spillway crest, spillway d / s** face, energy dissipating structures, training walls, piers, abutments and such other locations **with initial lead upto 1 km and all lifts.**
(**Cement content : 380 kg / cum with use of super plasticiser,**
CA : 0.90 cum, blending ratio of CA--65:35, FA : 0.40 cum)

DATA:

RATE ANALYSIS

UNIT:

240.00 cum

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------------|------|----------|-------------|----------------------|
| 1 | Cement for mix | kg | 91200 | 3.68 | 335616.00 |
| 2 | Cement for incidentals @ 3 kg / cum | kg | 720.00 | 3.68 | 2649.60 |
| | Coarse aggregate 20-10 mm | cum | 140.4 | 1313.00 | 184345.20 |
| | Coarse aggregate 10 mm below | cum | 75.6 | 967.00 | 73105.20 |
| 3 | Fine aggregate (Un-Screened) | cum | 96 | 605.00 | 58080.00 |
| 4 | Super Plasticizer or AEA | kg | 364.80 | 55.00 | 20064.00 |
| 5 | Use rate of shuttering | sqm | 360.00 | 405.29 | 145904.40 |
| 6 | Scaffolding of shuttering @ | 15% | | | 21885.66 |
| Total cost of Materials | | | | | Rs: 841650.06 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|---------------------|
| 1 | Batching plant 2 x 1.5 cum | Hour | 8.00 | 538.70 | 4309.60 |
| | Fuel / Energy charges | Hour | 8.00 | 465.30 | 3722.40 |
| 2 | Air compressor 7 cmm (ele) | Hour | 8.00 | 113.40 | 907.20 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 3 | Tipper | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Tower crane 5 t | Hour | 16.00 | 749.10 | 11985.60 |
| | Fuel / Energy charges | Hour | 16.00 | 220.00 | 3520.00 |
| 5 | Concrete bucket | Hour | 40.00 | 14.00 | 560.00 |
| | Fuel / Energy charges | Hour | 40.00 | 0.00 | 0.00 |
| 6 | 10 hp pump (ele) | Hour | 8.00 | 5.90 | 47.20 |
| | Fuel / Energy charges | Hour | 8.00 | 84.60 | 676.80 |
| 7 | Needle vibrator 60 mm dia (ele) | Hour | 16.00 | 8.80 | 140.80 |
| | Fuel / Energy charges | Hour | 16.00 | 12.70 | 203.20 |
| 8 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | | Rs: 58120.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------|------|----------|-------------|----------------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | Crew for Tipper (4) | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Tower crane (2) | Hour | 16.00 | 243.40 | 3894.40 |
| 5 | Crew for Pump | Hour | 8.00 | 107.60 | 860.80 |
| 6 | Crew for Needle vibrator (2) | Hour | 16.00 | 205.90 | 3294.40 |
| 7 | Mason Class-I | Day | 4.00 | 585.00 | 2340.00 |
| 8 | Foreman | Day | 2.00 | 645.00 | 1290.00 |
| 9 | mazdoor | | | | 0.00 |
| | for silo (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching plant | Day | 2.00 | 490.00 | 980.00 |
| | for conveyor system | Day | 2.00 | 490.00 | 980.00 |
| | for laying & vibrating | Day | 6.00 | 490.00 | 2940.00 |
| | for cleaning / washing / curing | Day | 2.00 | 490.00 | 980.00 |
| 10 | Labour cost for shuttering | sqm | 360.00 | 181.13 | 65206.80 |
| 11 | Labour cost for scaffolding @ | 15% | | | 9781.02 |
| Total cost of Labour | | | | | Rs: 106064.22 |

labour component/unit qty 441.90
Add contractor's profit and overhead charges 13.615% 60.20
labour component/unit qty (including contractor's profit) **502.10**

ABSTRACT:

| | | | | | |
|--|--------|---------------|---------|-------------------|----------------|
| A. Cost of Materials | | | | | Rs: 841650.06 |
| B. Hire charges of Machinery | | | | | Rs: 58120.80 |
| C. Cost of Labour | | | | | Rs: 106064.22 |
| | | | Total | | Rs: 1005835.08 |
| Add for aggregate conveyor system @ | | | 3.0% | | 30175.05 |
| Add for electric sub-station / Demand charges @ | | | 2.50% | | 25145.88 |
| Add for trestle bridge for tower crane track @ | | | 4.0% | | 40233.40 |
| | | | Total | | Rs: 1101389.41 |
| D. Add for contractor's profit and overheads on (A+B+C+other | | | 13.615% | | Rs: 149954.17 |
| Lead Charges for 1 Km for FA | 96.00 | cum @ | | 38.288255 Rs./Cum | 3675.67248 |
| Lead Charges for 1 Km for CA | 216.00 | cum @ | | 36.924875 Rs./Cum | 7975.77 |
| Total cost for | 240.00 | | cum | | Rs: 1262995.03 |
| Rate per cum | | (A+B+C+D)/240 | | | Rs: 5262.50 |

IRR-DAW-2-5

Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **for plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 260 kg / cum with use of super plasticiser, CA : 0.90 cum, Blending Ratio of CA -- 50:30:20, FA : 0.40 cum)**

DATA:

RATE ANALYSISUNIT :
14.00 cum**A. MATERIALS:**

| Sl No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------|------|----------|-------------|--------------|
| 1 | Cement for mix | kg | 3640.00 | 3.68 | 13395.20 |
| | Cement for incidentals @ 3 kg | kg | 42.00 | 3.68 | 154.56 |
| 2 | Coarse aggregate 40-20 mm | cum | 6.3 | 1265.00 | 7969.50 |
| | Coarse aggregate 20-10 mm | cum | 3.78 | 1313.00 | 4963.14 |
| | Coarse aggregate 10 mm below | cum | 2.52 | 967.00 | 2436.84 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.6 | 605.00 | 3388.00 |
| 4 | Super plasticizer | kg | 14.56 | 55.00 | 800.80 |
| 5 | Use rate of shuttering | sqm | 14.00 | 270.19 | 3782.66 |
| 6 | Use rate of scaffolding @ | 15% | | | 567.40 |
| Total cost of Materials | | | | | Rs: 37458.10 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|--------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.0 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.0 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.0 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.0 | 84.60 | 84.60 |
| 3 | Needle vibrator 40 mm dia (ele) | Hour | 8.0 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.0 | 8.50 | 68.00 |
| Total hire charges of Machinery | | | | | Rs: 924.10 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------------|------|----------|-------------|--------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | mazdoor | | | | |
| | for batching cement (cement handling | Day | 2.00 | 490.00 | 980.00 |
| | for batching other materials | Day | 9.00 | 490.00 | 4410.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 14.00 | 490.00 | 6860.00 |
| | for cleaning / washing / curing | Day | 1.00 | 490.00 | 490.00 |
| 6 | Labour cost of shuttering | sqm | 14.00 | 120.75 | 1690.50 |
| 7 | Labour cost of scaffolding @ | 15% | | | 253.58 |
| Total cost of Labour | | | | | Rs: 22741.88 |

labour component/unit qty 1624.40

Add contractor's profit and overhead charges 13.615% 221.20

labour component/unit qty (including contractor's profit) 1845.60

ABSTRACT:

| | | | | | |
|---|-------|--------------|---------|-------------------|--------------------|
| A. Cost of Materials | | | | | Rs: 37458.10 |
| B. Hire charges of Machinery | | | | | Rs: 924.10 |
| C. Cost of Labour | | | | | Rs: 22741.88 |
| | | | | | Rs: 61124.08 |
| | | | | | Rs: 8322.04 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | | Rs: 8322.04 |
| Lead Charges for 1 Km for FA | 5.60 | cum @ | | 38.288255 Rs./Cum | 214.414228 |
| Lead Charges for 1 Km for CA | 12.60 | cum @ | | 36.924875 Rs./Cum | 465.25 |
| Total cost for | 14.00 | | cum | | Rs: 70125.79 |
| Rate per cum | | (A+B+C+D)/14 | | | Rs: 5009.00 |

IRR-DAW-2-6

Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **with placing and sinking plums of size 150 to 80 mm upto 15 percent for gravity type structures** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 1 km and all lifts. (Cement content : 260 kg / cum of concrete with use of plums and super plasticiser of 0.4% of cement quantity, CA : 0.77 cum, Blending Ratio of CA : 50:30:20, FA : 0.34 cum, plums of size 150 to 80 mm : 0.25 cum)**

DATA:

RATE ANALYSIS

| A. MATERIALS: | | | | | UNIT: | 16.45 cum |
|-------------------------|-------------------------------------|------|----------|-------------|--------------|-----------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs | |
| 1 | Cement for mix | kg | 4277 | 3.68 | 15739.36 | |
| | Cement for incidentals @ 3 kg / cum | kg | 49.35 | 3.68 | 181.61 | |
| 2 | Coarse aggregate 40-20 mm | cum | 6.33 | 1265.00 | 8007.45 | |
| | Coarse aggregate 20-10 mm | cum | 3.8 | 1313.00 | 4989.40 | |
| | Coarse aggregate 10 mm below | cum | 2.53 | 967.00 | 2446.51 | |
| 3 | Plums of size 150 to 80 mm | cum | 4.11 | 385.00 | 1583.31 | |
| 4 | Fine aggregate (Un-Screened) | cum | 5.59 | 605.00 | 3383.77 | |
| 5 | Super Plasticizer | kg | 17.11 | 55.00 | 940.94 | |
| 6 | Use rate of shuttering for 40 uses | sqm | 16.45 | 270.19 | 4444.63 | |
| 7 | Scaffolding of shuttering @ 15% | | | | 666.69 | |
| Total cost of Materials | | | | | Rs: 42383.67 | |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|--------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 3 | Needle vibrator 60 mm dia (ele) | Hour | 8.00 | 8.80 | 70.40 |
| | Fuel / Energy charges | Hour | 8.00 | 12.70 | 101.60 |
| Total hire charges of Machinery | | | | Rs: 970.50 | |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------------|------|----------|-------------|--------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching cement (cement handling | Day | 2.00 | 490.00 | 980.00 |
| | for batching other materials | Day | 9.00 | 490.00 | 4410.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for loading plums | Day | 1.00 | 490.00 | 490.00 |
| | for laying concrete and plums | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying concrete | Day | 13.99 | 490.00 | 6853.15 |
| | for conveying plums | Day | 3.00 | 490.00 | 1470.00 |
| | for cleaning / washing / curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour for shuttering | sqm | 16.45 | 120.75 | 1986.34 |
| 8 | Labour for scaffolding @ 15% | | | | 297.95 |
| Total cost of Labour | | | | | Rs: 26165.24 |

labour component/unit qty 1590.60

Add contractor's profit and overhead charges 13.615% 216.60

labour component/unit qty (including contractor's profit) **1807.20**

ABSTRACT:

| | | | | | |
|---|-------|-----------------|-----|---------------|-------------------------------|
| A. Cost of Materials | | | | | Rs: 42383.67 |
| B. Hire charges of Machinery | | | | | Rs: 970.50 |
| C. Cost of Labour | | | | | Rs: 26165.24 |
| | | | | | Rs: 69519.41 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | Total 13.615% | Rs: 9465.07 |
| Lead Charges for 1 Km for FA | 5.59 | cum @ | | | 38.288255 Rs./Cum 214.1462102 |
| Lead Charges for 1 Km for CA and Plums | 16.77 | cum @ | | | 36.924875 Rs./Cum 619.32 |
| Total cost for | 16.45 | | cum | | Rs: 79817.95 |
| Rate per cum | | (A+B+C+D)/16.45 | | | Rs: 4852.20 |

IRR-DAW-2-7

Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **for plain concrete works with initial lead upto 1 km and all lifts. (Cement content 220 kg / cum with use of super plasticiser, CA : 0.90 cum, Blending Ratio of CA : 50:30:20, FA : 0.40 cum)**

DATA:

RATE ANALYSIS

UNIT:

16.53 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------------------------|------|----------|-------------|---------------------|
| 1 | Cement for mix | kg | 3636.60 | 3.68 | 13382.69 |
| | Cement for incidentals @ 3 kg/ cum | kg | 49.59 | 3.68 | 182.49 |
| 2 | Coarse aggregate 40-20 mm | cum | 7.44 | 1265.00 | 9409.70 |
| | Coarse aggregate 20-10 mm | cum | 4.46 | 1313.00 | 5860.05 |
| | Coarse aggregate 10 mm below | cum | 2.98 | 967.00 | 2877.21 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.61 | 605.00 | 4000.26 |
| 4 | Super plasticizer | kg | 14.55 | 55.00 | 800.05 |
| 5 | Use rate of shuttering | sqm | 16.53 | 270.19 | 4466.24 |
| 6 | Use rate of scaffolding @ 15% | | | | 669.94 |
| Total cost of Materials | | | | | Rs: 41648.63 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|-------------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 3 | Needle vibrator 40 mm dia (ele) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 8.50 | 68.00 |
| Total hire charges of Machinery | | | | | Rs: 924.10 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------------|------|----------|-------------|---------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | mazdoor | | | | |
| | for batching cement (cement handling | Day | 2.00 | 490.00 | 980.00 |
| | for batching other materials | Day | 9.00 | 490.00 | 4410.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 16.53 | 490.00 | 8099.70 |
| | for cleaning / washing / curing | Day | 1.00 | 490.00 | 490.00 |
| 6 | Labour cost of shuttering | sqm | 16.53 | 120.75 | 1996.00 |
| 7 | Labour cost of scaffolding @ 15% | | | | 299.40 |
| Total cost of Labour | | | | | Rs: 24332.90 |

| | |
|---|----------------|
| labour component/unit qty | 1472.00 |
| Add contractor's profit and overhead charges | 13.615% 200.40 |
| labour component/unit qty (including contractor's profit) | 1672.40 |

ABSTRACT:

| | | | | | |
|---|-------|-----------------|-------|-------------------|--------------------|
| A. Cost of Materials | | | | | Rs: 41648.63 |
| B. Hire charges of Machinery | | | | | Rs: 924.10 |
| C. Cost of Labour | | | | | Rs: 24332.90 |
| | | | Total | | Rs: 66905.63 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | 13.615% | Rs: 9109.2 |
| Lead Charges for 1 Km for FA | 6.61 | cum @ | | 38.288255 Rs./Cum | 253.1619421 |
| Lead Charges for 1 Km for CA | 14.88 | cum @ | | 36.924875 Rs./Cum | 549.33 |
| Total cost for | 16.53 | | cum | | Rs: 76817.32 |
| Rate per cum | | (A+B+C+D)/16.53 | | | Rs: 4647.10 |

IRR-DAW-2-8

Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **plain concrete works with initial lead upto 1 km and all lifts. (Cement content : 280 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA -- 65:35, FA : 0.44 cum)**

DATA:

RATE ANALYSIS**A. MATERIALS:**UNIT:
15.87 cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------------------------|------|----------|-------------|--------------|
| 1 | Cement for mix | kg | 4443.6 | 3.68 | 16352.45 |
| | Cement for incidentals @ 3 kg/ cum | kg | 47.61 | 3.68 | 175.20 |
| 2 | Coarse aggregate 20-10 mm | cum | 8.25 | 1313.00 | 10835.40 |
| | Coarse aggregate 10 mm below | cum | 4.44 | 967.00 | 4296.96 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.98 | 605.00 | 4224.59 |
| 4 | Super plasticiser | kg | 17.77 | 55.00 | 977.59 |
| 5 | Use rate of shuttering | sqm | 15.87 | 270.19 | 4287.92 |
| 6 | Use rate of scaffolding @ | 15% | | | 643.19 |
| Total cost of Materials | | | | | Rs: 41793.30 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|--------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 3 | Needle vibrator 40 mm dia (ele) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 8.50 | 68.00 |
| Total hire charges of Machinery | | | | | Rs: 924.10 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------------|------|----------|-------------|--------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | mazdoor | | | | |
| | for batching cement (cement handling | Day | 2.00 | 490.00 | 980.00 |
| | for batching other materials | Day | 9.00 | 490.00 | 4410.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 15.87 | 490.00 | 7776.30 |
| | for cleaning / washing / curing | Day | 1.00 | 490.00 | 490.00 |
| 6 | Labour cost of shuttering | sqm | 15.87 | 120.75 | 1916.30 |
| 7 | Labour cost of scaffolding @ | 15% | | | 287.45 |
| Total cost of Labour | | | | | Rs: 23917.85 |

| | |
|---|----------------|
| labour component/unit qty | 1507.10 |
| Add contractor's profit and overhead charges | 13.615% 205.20 |
| labour component/unit qty (including contractor's profit) | 1712.30 |

ABSTRACT:

| | | | | | |
|---|-------|-----------------|-------|-------------------|--------------------|
| A. Cost of Materials | | | | | Rs: 41793.30 |
| B. Hire charges of Machinery | | | | | Rs: 924.10 |
| C. Cost of Labour | | | | | Rs: 23917.85 |
| | | | Total | | Rs: 66635.25 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | 13.615% | Rs: 9072.39 |
| Lead Charges for 1 Km for FA | 6.98 | cum @ | | 38.288255 Rs./Cum | 267.359227 |
| Lead Charges for 1 Km for CA | 12.70 | cum @ | | 36.924875 Rs./Cum | 468.80 |
| Total cost for | 15.87 | | cum | | Rs: 76443.80 |
| Rate per cum | | (A+B+C+D)/15.87 | | | Rs: 4816.90 |

IRR-DAW-2-9

Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm** down size approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **RCC works of spillway bridge, blockouts** and such other similar structures with congested reinforcement **with initial lead upto 1 km and all lifts. (Cement content : 330 kg / cum with use of super plasticiser, CA : 0.80 cum, Blending Ratio of CA -- 65:35, FA : 0.44 cum)**

DATA:

RATE ANALYSIS

UNIT:

13.47 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------------------------|------|----------|-------------|---------------------|
| 1 | Cement for mix | kg | 4445.1 | 3.68 | 16357.97 |
| | Cement for incidentals @ 3 kg/ cum | kg | 40.41 | 3.68 | 148.71 |
| 2 | Coarse aggregate 20-10 mm | cum | 7.00 | 1313.00 | 9196.78 |
| | Coarse aggregate 10 mm below | cum | 3.77 | 967.00 | 3647.14 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.93 | 605.00 | 3585.71 |
| 4 | Super plasticiser | ltr | 17.78 | 55.00 | 977.92 |
| 5 | Use rate of shuttering | sqm | 33.68 | 270.19 | 9098.65 |
| 6 | Scaffolding of shuttering @ | 100% | | | 9098.65 |
| Total cost of Materials | | | | | Rs: 52111.53 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|------------------------------------|------|----------|-------------|-------------------|
| 1 | Concrete mixer 300 / 200 ltr (ele | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 3 | Needle vibrator 40 mm dia (ele) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 8.50 | 68.00 |
| Total hire charges of Machinery | | | | | Rs: 924.10 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|-------------|---------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | mazdoor | | | | 0.00 |
| | for batching cement (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching other materials | Day | 9.00 | 490.00 | 4410.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 13.47 | 490.00 | 6600.30 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 6 | Labour cost of shuttering | sqm | 33.68 | 120.75 | 4066.26 |
| 7 | Labour cost of scaffolding @ | 100% | | | 4066.26 |
| Total cost of Labour | | | | | Rs: 28670.62 |

labour component/unit qty 2128.50

Add contractor's profit and overhead charges 13.615% 289.80

labour component/unit qty (including contractor's profit) **2418.30****ABSTRACT:**

A. Cost of Materials

Rs: 52111.53

B. Hire charges of Machinery

Rs: 924.10

C. Cost of Labour

Rs: 28670.62

Total

Rs: 81706.25

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 11124.31

Lead Charges for 1 Km for FA 5.93 cum @

38.288255 Rs./Cum 226.9268297

Lead Charges for 1 Km for CA 10.78 cum @

36.924875 Rs./Cum 397.90

Total cost for 13.47 cum

Rs: **93455.39****Rate per cum (A+B+C+D)/13.47**Rs: **6938.00**

IRR-DAW-2-10

Providing and **forming porous concrete body drain of size 68.5 x 68.5 cm** with 23 cm diameter central hole using cement and 20 mm down approved, clean, hard, graded coarse aggregates in 1 : 3.50 proportion by volume including cost of all materials, machinery, labour, formwork, curing etc., complete **with initial lead upto 1 km and all lifts. (M15 Cement content : 400kg/cum, CA : 1cum, Blending Ratio of CA -- 65:35)**

DATA:

RATE ANALYSISUNIT:
20.00 Rm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-----------------------------|------|----------|-------------|-----------------|
| 1 | Cement | kg | 3424 | 3.68 | 12600.32 |
| 2 | Coarse aggregate 20-10 mm | cum | 5.56 | 1313.00 | 7305.53 |
| 3 | Coarse aggregate 10-4.75 mm | cum | 3.00 | 967.00 | 2897.13 |
| 4 | Use rate of shuttering | sqm | 76.00 | 69.93 | 5314.73 |
| Total cost of Materials | | | | Rs: | 28117.71 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|---------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 0.50 | 5.90 | 2.95 |
| | Fuel / Energy charges | Hour | 0.50 | 84.60 | 42.30 |
| Total hire charges of Machinery | | | | Rs: | 753.25 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 107.60 | 53.80 |
| 3 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 4 | mazdoor | | | | |
| | for batching cement (cement handling | Day | 2.00 | 490.00 | 980.00 |
| | for batching other materials | Day | 6.00 | 490.00 | 2940.00 |
| | for loading mortar pans | Day | 2.00 | 490.00 | 980.00 |
| | for laying & packing concrete | Day | 2.00 | 490.00 | 980.00 |
| | for conveying concrete | Day | 8.56 | 490.00 | 4194.40 |
| 5 | Fitter shuttering | Day | 3.00 | 525.00 | 1575.00 |
| Total cost of Labour | | | | Rs: | 14576.20 |

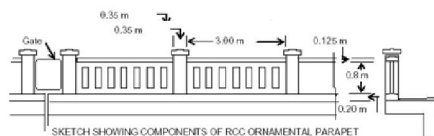
| | |
|---|---------------|
| labour component/unit qty | 728.80 |
| Add contractor's profit and overhead charges | 13.615% 99.20 |
| labour component/unit qty (including contractor's profit) | 828.00 |

ABSTRACT:

| | | | | |
|---|--------------|---------|-------------------|---------------------|
| A. Cost of Materials | | | | Rs: 28117.71 |
| B. Hire charges of Machinery | | | | Rs: 753.25 |
| C. Cost of Labour | | | | Rs: 14576.20 |
| | Total | | | Rs: 43447.16 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: 5915.33 |
| Lead Charges for 1 Km for CA | 8.56 cum @ | | 36.924875 Rs./Cum | 316.08 |
| Total cost for | 20.00 | Rm | | Rs: 49678.57 |
| Rate per Rm | (A+B+C+D)/20 | | | Rs: 2483.90 |

IRR-DAW-2-11
(a)

Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **RCC solid parapet consisting of 35 cm x 20 cm kerb**, 35 cm x 35 cm x 1 m pillars spaced approximately at 3.35 m c / c, 12.5 cm thick wall 80 cm height with 12.5 cm thick and 35 cm wide coping slab for wall and 12.5 cm thick 40 cm x 40 cm coping for pillars with top edges of kerb and coping chamfered / rounded as directed etc., **complete (excluding cost of providing and placing reinforcement steel and gate) with initial lead upto 1 km and all lifts.**
(Cement content 350 kg / cum with use of super plasticiser (0.4% by wt. of cement), CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.44 cum)



DATA:

RATE ANALYSIS

UNIT:

36.00 Rm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------------|------|----------|-------------|---------------------|
| 1 | Cement mix | kg | 3034.5 | 3.68 | 11166.96 |
| | Cement for incidentals @ 5 kg / cum | kg | 43.35 | 3.68 | 159.53 |
| 2 | Coarse aggregate 20-10 mm | cum | 4.51 | 1313.00 | 5921.63 |
| | Coarse aggregate 10-4.75 mm | cum | 2.43 | 967.00 | 2349.81 |
| 3 | Fine aggregate (Un-Screened) | cum | 3.81 | 605.00 | 2305.05 |
| 4 | Super plasticiser | kg | 12.14 | 55.00 | 667.59 |
| 5 | Use rate of shuttering | sqm | 95.00 | 270.19 | 25668.05 |
| 6 | Scaffolding of shuttering @ | 15% | | | 3850.21 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | | Rs: 52156.83 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|-------------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | Needle vibrator 40 mm (ele) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 8.50 | 68.00 |
| 3 | 10 hp pump (ele) | Hour | 0.50 | 5.90 | 2.95 |
| | Fuel / Energy charges | Hour | 0.50 | 84.60 | 42.30 |
| Total hire charges of Machinery | | | | | Rs: 878.85 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|-------------|---------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 107.60 | 53.80 |
| 3 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching cement (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching other materials | Day | 9.00 | 490.00 | 4410.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying & packing concrete | Day | 2.00 | 490.00 | 980.00 |
| | for conveying concrete | Day | 8.67 | 490.00 | 4248.30 |
| | for curing & miscellaneous | Day | 2.00 | 490.00 | 980.00 |
| 7 | Labour for shuttering | sqm | 95.00 | 120.75 | 11471.25 |
| 8 | Labour for scaffolding @ | 15% | | | 1720.69 |
| Total cost of Labour | | | | | Rs: 32549.24 |

labour component/unit qty 904.10

Add contractor's profit and overhead charges 13.615% 123.10

labour component/unit qty (including contractor's profit) **1027.20****ABSTRACT:**

A. Cost of Materials

Rs: 52156.83

B. Hire charges of Machinery

Rs: 878.85

C. Cost of Labour

Rs: 32549.24

Total

Rs: 85584.92

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 11652.39

Lead Charges for 1 Km for FA

3.81

cum @

38.288255 Rs./Cum 145.8782516

Lead Charges for 1 Km for CA

6.94

cum @

36.924875 Rs./Cum 256.26

Total cost for

36.00

Rm

Rs: **97639.45****Rate per****Rm**

(A+B+C+D)/36

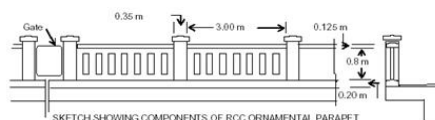
Rs: 2712.20

IRR-DAW-2-12

(b)

Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates including cost of all materials, machinery, labour, formwork, centering, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete for **RCC ornamental parapet consisting of 35 cm x 20 cm kerb**, 35 cm x 35 cm x 1 m pillars spaced approximately at 3.5 m apart, 20 cm x 15 cm posts 80 cm height approximately 30 cm c / c with 12.5 cm thick and 35 cm wide coping slab for posts and pillars with top edges of kerb and coping chamfered or rounded as directed etc., **complete (excluding cost of providing and placing reinforcement steel and gate) with initial lead upto 1 km and all lifts.**

(Cement content : 350 kg / cum with use of super plasticiser(0.4% by wt. of cement, CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.44 cum)



DATA:

RATE ANALYSIS

UNIT:

36.00 Rm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate | Amount |
|-------------------------|-------------------------------------|------|----------|---------------------|----------|
| | | | | in Rs. | in Rs |
| 1 | Cement mix | kg | 2450 | 3.68 | 9016.00 |
| | Cement for incidentals @ 5 kg / cum | kg | 35.00 | 3.68 | 128.80 |
| 2 | Coarse aggregate 20-10 mm | cum | 3.64 | 1313.00 | 4779.32 |
| | Coarse aggregate 10-4.75 mm | cum | 1.96 | 967.00 | 1895.32 |
| 3 | Fine aggregate (Un-Screened) | cum | 3.08 | 605.00 | 1863.40 |
| 4 | Super plasticiser | kg | 9.80 | 55.00 | 539.00 |
| 5 | Use rate of shuttering | sqm | 115.00 | 270.19 | 31071.85 |
| 6 | Scaffolding of shuttering @ | 15% | | | 4660.78 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: 54022.47 | |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|------------------------------------|------|----------|-------------------|--------------|
| 1 | Concrete mixer 300 / 200 ltr (ele | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | Needle vibrator 40 mm (ele) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 8.50 | 68.00 |
| 3 | 10 hp pump (ele) | Hour | 0.50 | 5.90 | 2.95 |
| | Fuel / Energy charges | Hour | 0.50 | 84.60 | 42.30 |
| Total hire charges of Machinery | | | | Rs: 878.85 | |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|---------------------|--------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 107.60 | 53.80 |
| 3 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching cement (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching other materials | Day | 9.00 | 490.00 | 4410.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying & packing concrete | Day | 2.00 | 490.00 | 980.00 |
| | for conveying concrete | Day | 7.00 | 490.00 | 3430.00 |
| | for curing & miscellaneous | Day | 2.00 | 490.00 | 980.00 |
| 7 | Labour for shuttering | sqm | 115.00 | 120.75 | 13886.25 |
| 8 | Labour for scaffolding @ | 15% | | | 2082.94 |
| Total cost of Labour | | | | Rs: 34508.19 | |

| | |
|---|----------------|
| labour component/unit qty | 958.60 |
| Add contractor's profit and overhead charges | 13.615% 130.50 |
| labour component/unit qty (including contractor's profit) | 1089.10 |

ABSTRACT:

| | | | | | |
|---|-----------|--------------|---------|-------------------|----------------------|
| A. Cost of Materials | | | | | Rs: 54022.47 |
| B. Hire charges of Machinery | | | | | Rs: 878.85 |
| C. Cost of Labour | | | | | Rs: 34508.19 |
| | Total | | | | Rs: 89409.51 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | | Rs: 12173.1 |
| Lead Charges for 1 Km for FA | 3.08 | cum @ | | 38.288255 Rs./Cum | 117.9278254 |
| Lead Charges for 1 Km for CA | 5.60 | cum @ | | 36.924875 Rs./Cum | 206.78 |
| Total cost for | 36.00 | | Rm | | Rs: 101907.31 |
| Rate per | Rm | (A+B+C+D)/36 | | | Rs: 2830.80 |

IRR-DAW-2-13

Providing and **laying insitu M- 25** (28 days cube compressive strength not less than 25 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates for wearing coat including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position in alternate panels, levelling, compacting, finishing, curing, packing joints with asphalt mortar etc., **complete with initial lead upto 1 km and all lifts.**
(Cement content : 380 kg / cum with use of super plasticiser(0.4% by wt. of cement, CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.45 cum)

DATA:

RATE ANALYSIS

UNIT:

11.70 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 4446 | 3.68 | 16361.28 |
| | Cement for incidentals @ 5 kg / cum | kg | 58.50 | 3.68 | 215.28 |
| 2 | Coarse aggregate 20-10 mm | cum | 6.084 | 1313.00 | 7988.29 |
| | Coarse aggregate 10 mm below | cum | 3.276 | 967.00 | 3167.89 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.265 | 605.00 | 3185.33 |
| 4 | Super Plasticizer | kg | 17.78 | 55.00 | 978.12 |
| 5 | Use rate of shuttering | sqm | 5.85 | 270.19 | 1580.61 |
| 6 | Sundries (asphalt mortar etc) | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 33646.80 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|------------------------------------|------|----------|-------------|---------------|
| 1 | Concrete mixer 300/200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 0.50 | 5.90 | 2.95 |
| | Fuel / Energy charges | Hour | 0.50 | 84.60 | 42.30 |
| Total hire charges of Machinery | | | | Rs: | 753.25 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 107.60 | 53.80 |
| 3 | Mason Class-I | Day | 3.00 | 585.00 | 1755.00 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| | for batching cement (cement handling) | Day | 9.00 | 490.00 | 4410.00 |
| | for batching materials | Day | 4.00 | 490.00 | 1960.00 |
| | for loading mortar pans | Day | 5.00 | 490.00 | 2450.00 |
| | for laying & compacting | Day | 11.70 | 490.00 | 5733.00 |
| | for conveying concrete | Day | 1.00 | 490.00 | 490.00 |
| | for cleaning/ washing/ curing | Day | 5.85 | 120.75 | 706.39 |
| 6 | Labour cost for shuttering | sqm | 5.85 | 120.75 | 706.39 |
| Total cost of Labour | | | | Rs: | 21466.19 |

labour component/unit qty 1834.70

Add contractor's profit and overhead charges 13.615% 249.80

labour component/unit qty (including contractor's profit) **2084.50****ABSTRACT:**

A. Cost of Materials

Rs: 33646.80

B. Hire charges of Machinery

Rs: 753.25

C. Cost of Labour

Rs: 21466.19

Total

Rs: 55866.24

D.Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs. 7606.19

Lead Charges for 1 Km for FA

5.27

cum @

38.288255 Rs./Cum 201.5876626

Lead Charges for 1 Km for CA

9.36

cum @

36.924875 Rs./Cum 345.62

Total cost for

11.70

cum

Rs: **64019.63****Rate per****cum**

(A+B+C+D)/11.70

Rs: **5471.80**

IRR-DAW-2-14

Pre-cooling to control placement temperature of cement concrete in the

range of 18 to 21 C at the concrete placement point by inundation of coarse

aggregates and adding flaked ice as part of mixing water including cost of

all materials, machinery, labour etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSIS

UNIT:

500 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|----------------------------|------|----------|-------------|---------------|
| 1 | Sundries (amonia gas etc) | LS | 3.00 | 34.00 | 102.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 102.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|---|------|----------|-------------|---------------------|
| 1 | Ice maker unit consisting of: Compressor 125 hp - 1 No. Condenser with 30 hp motor - 1 No. Ice makers 10 t / day each - 3 Nos. Pump 2 hp for ice cutting - 3 Nos. Pump 2 hp for pumping water-3 Nos. Screw conveyor with 15 hp motor -1 Ice elevator with 5 hp motor - 1 No. Fuel / Energy charges for system | Hour | 24.00 | 163.60 | 3926.40 |
| | | Hour | 24.00 | 1205.50 | 28932.00 |
| Total hire charges of Machinery | | | | | Rs: 32858.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------------------|------|----------|-------------|--------------------|
| 1 | Crew for Ice maker unit | Hour | 24.00 | 171.60 | 4118.40 |
| 2 | mazdoor | | | | |
| | for Ice chamber (2 x 3) | Day | 6.00 | 490.00 | 2940.00 |
| | for miscellaneous works (1 x 3) | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | | Rs: 8528.40 |

labour component/unit qty 17.10
 Add contractor's profit and overhead charges 13.615% 2.30
 labour component/unit qty (including contractor's profit) **19.40**

ABSTRACT:

| | | | | |
|---|---------------|---------|--|---------------------|
| A. Cost of Materials | | | | Rs: 102.00 |
| B. Hire charges of Machinery | | | | Rs: 32858.40 |
| C. Cost of Labour | | | | Rs: 8528.40 |
| | Total | | | Rs: 41488.80 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: 5648.7 |
| Total cost for | 500.00 cum | | | Rs: 47137.50 |
| Rate per cum | (A+B+C+D)/500 | | | Rs: 94.30 |

IRR-DAW-2-15

Conveying and **fixing elastomeric bearing for spillway bridge** including cleaning and preparing surface, mixing and applying adhesive, fixing bearing in correct position etc., including cost of all materials except bearings, machinery, labour etc., complete **with all leads and lifts.**

DATA:

RATE ANALYSISUNIT:
6.00 Nos.**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--|------|----------|-------------|-------------------|
| 1 | Synthetic adhesive (Resin + Hardener) | kg | 0.60 | 331.00 | 198.60 |
| 2 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | | Rs: 266.60 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|-----------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | | Rs: 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|------------------|------|----------|-------------|--------------------|
| 1 | Marker / Erector | Day | 1.00 | 700.00 | 700.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | | Rs: 2320.00 |

labour component/unit qty 386.70
 Add contractor's profit and overhead charges 13.615% 52.60
 labour component/unit qty (including contractor's profit) **439.30**

ABSTRACT:

| | | | | |
|---|-------------|---------|--|--------------------|
| A. Cost of Materials | | | | Rs: 266.60 |
| B. Hire charges of Machinery | | | | Rs: 0.00 |
| C. Cost of Labour | | | | Rs: 2320.00 |
| | Total | | | Rs: 2586.60 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: 352.17 |
| Total cost for | 6.00 Nos. | | | Rs: 2938.77 |
| Rate per Each | (A+B+C+D)/6 | | | Rs: 489.80 |

IRR-DAW-2-16

Providing and **constructing 150 mm dia hume pipe weep holes for concrete / masonry walls** including providing 20 x 20 x 20 cm size porous concrete block made of cement and 20 mm down coarse aggregate in 1 : 4 proportion including 10 cm thick sand backing at the junction of wall and soil back fill, cost of all materials, machinery, labour etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT:
3.00 Rm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-----------------------------|------|----------|-------------|-------------------|
| 1 | 150 mm dia hume pipe | Rm | 2.90 | 277.00 | 803.30 |
| 2 | Cement | kg | 3.00 | 3.68 | 11.04 |
| 3 | 20 - 10 mm coarse aggregate | cum | 0.01 | 1313.00 | 10.50 |
| 4 | Sand for filling | cum | 0.02 | 460.00 | 9.20 |
| Total cost of Materials | | | | | Rs: 834.04 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|-----------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | | Rs: 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|-------------------|
| 1 | Mason Class-II | Day | 0.25 | 525.00 | 131.25 |
| 2 | mazdoor | Day | 0.25 | 490.00 | 122.50 |
| Total cost of Labour | | | | | Rs: 253.75 |

labour component/unit qty 84.60
 Add contractor's profit and overhead charges 13.615% 11.50
 labour component/unit qty (including contractor's profit) **96.10**

ABSTRACT:

| | | | | | |
|---|------|-------------|---------|-------------------|--------------------|
| A. Cost of Materials | | | | | Rs: 834.04 |
| B. Hire charges of Machinery | | | | | Rs: 0.00 |
| C. Cost of Labour | | | | | Rs: 253.75 |
| | | | | | Rs: 1087.79 |
| | | | | | Rs: 148.1 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | | |
| Lead Charges for 1 Km for FA | 0.02 | cum @ | | 38.288255 Rs./Cum | 0.7657651 |
| Lead Charges for 1 Km for CA | 0.01 | cum @ | | 36.924875 Rs./Cum | 0.30 |
| Total cost for | 3.00 | | | | Rs: 1236.96 |
| Rate per Rm | | (A+B+C+D)/3 | | | Rs: 412.30 |

IRR-DAW-2-17

Providing and **forming expansion joint for spillway bridge** consisting of 75 x 75 x 6 mm angles 2 numbers provided with 25 cm long 12 mm dia. anchors fixed to both flanges at 15 cm c /c and 140 x 6 mm plate welded on top of one of the angle including cost of all materials, machinery, labour, providing and fixing 38 mm thick joint filler board matching the thickness of wearing coat, painting etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT:
7.50 Rm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--------------------------------------|------|----------|-------------|---------------------|
| 1 | Structural steel plate | kg | 50.70 | 52.00 | 2636.40 |
| 2 | Structural steel angle | kg | 104.50 | 50.50 | 5277.25 |
| 3 | 12 dia steel anchors | kg | 27.40 | 52.50 | 1438.50 |
| 4 | Welding electrodes | Nos | 70.00 | 14.00 | 980.00 |
| 5 | Joint filler board 19 mm thick | sqm | 1.00 | 593.00 | 593.00 |
| 6 | Sundries (cutting gas / paint etc) | LS | 1.50 | 34.00 | 51.00 |
| Total cost of Materials | | | | | Rs: 10976.15 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--|------|----------|-------------|--------------------|
| 1 | Welding set | Hour | 8.00 | 15.10 | 120.80 |
| | Fuel / Energy charges | Hour | 8.00 | 101.50 | 812.00 |
| 2 | Sundries (cutting torch/ welding guns etc) | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | | Rs: 1000.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------------|------|----------|-------------|----------------|
| 1 | Marker / Fabricator / Erector | Day | 1.50 | 700.00 | 1050.00 |
| 2 | Gas cutter / Welder | Day | 1.50 | 575.00 | 862.50 |
| 3 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 2892.50 |

| | |
|---|---------------|
| labour component/unit qty | 385.70 |
| Add contractor's profit and overhead charges | 13.615% 52.50 |
| labour component/unit qty (including contractor's profit) | 438.20 |

ABSTRACT:

| | | |
|--|----------------|---------------------|
| A. Cost of Materials | | Rs: 10976.15 |
| B. Hire charges of Machinery | | Rs: 1000.80 |
| C. Cost of Labour | | Rs: 2892.50 |
| | Total | Rs: 14869.45 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 2024.48 |
| Lead Charges for 1Km for Steel (including Loading and Unloading Charges) | 0.18 tonne @ | 231.888215 Rs./Tonn |
| Total cost for | 7.50 Rm | Rs: 16936.27 |
| Rate per Rm | (A+B+C+D)/7.50 | Rs: 2258.20 |

IRR_DAW-3

MASONRY & GUNITING WORKS :

IRR-DAW-3-1

Providing and **constructing un-coursed rubble stone masonry** using approved stones in **cement mortar 1 : 3** proportion including cost of all materials, machinery, labour, scaffolding, cleaning, packing mortar, wedging stone chips, curing etc., complete with initial lead upto 1 km and all lifts.
(Cement content : 190 kg/cum of masonry, rubble stones : 0.85 cum, stone chips : 0.15 cum/cum, FA : 0.4 cum)

DATA:

RATE ANALYSIS

| | | | | | UNIT: |
|-------------------------|-------------------|------|----------|-------------|------------------|
| | | | | | 25.00 cum |
| A. MATERIALS: | | | | | |
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Cement for mortar | kg | 4750 | 3.68 | 17480.00 |
| 2 | Rubble stones | cum | 21.25 | 359.00 | 7628.75 |
| 3 | Stone chips | cum | 3.75 | 385.00 | 1443.75 |
| 4 | Sand (Screened) | cum | 10 | 700.00 | 7000.00 |
| Total cost of Materials | | | | Rs: | 33552.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|---------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| Total hire charges of Machinery | | | | Rs: | 798.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Mason Class-I | Day | 2.50 | 585.00 | 1462.50 |
| 5 | Mason Class-II | Day | 4.00 | 525.00 | 2100.00 |
| 6 | Chavali | Day | 16.00 | 525.00 | 8400.00 |
| 7 | mazdoor | Day | | | |
| | for batching cement (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching sand | Day | 6.00 | 490.00 | 2940.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying & packing mortar | Day | 10.00 | 490.00 | 4900.00 |
| | for loading chips | Day | 1.00 | 490.00 | 490.00 |
| | for washing rubble / finishing / curing | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying mortar / chips | Day | 12.00 | 490.00 | 5880.00 |
| Total cost of Labour | | | | Rs: | 34108.10 |

| | |
|---|----------------|
| labour component/unit qty | 1364.30 |
| Add contractor's profit and overhead charges | 13.615% 185.70 |
| labour component/unit qty (including contractor's profit) | 1550.00 |

ABSTRACT:

| | | | | | |
|---|-------|--------------|---------|-------------------|--------------------|
| A. Cost of Materials | | | | | Rs: 33552.50 |
| B. Hire charges of Machinery | | | | | Rs: 798.50 |
| C. Cost of Labour | | | | | Rs: 34108.10 |
| | | | Total | | Rs: 68459.10 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | | Rs: 9320.71 |
| Lead Charges for 1 Km for FA | 10.00 | cum @ | | 38.288255 Rs./Cum | 382.88255 |
| Lead Charges for 1 Km for Stones/Stone Chips | 25.00 | cum @ | | 36.924875 Rs./Cum | 923.12 |
| Total cost for | 25.00 | | cum | | Rs: 79085.81 |
| Rate per cum | | (A+B+C+D)/25 | | | Rs: 3163.40 |

IRR-DAW-3-2

Providing and constructing **un-coursed rubble stone masonry** using approved stones in **cement mortar 1 : 4** proportion including cost of all materials, machinery, labour, scaffolding, cleaning, packing mortar, wedging stone chips, curing etc., complete **with initial lead upto 1 km and all lifts.**
(Cement content : 143 kg/cum of masonry, rubble stones : 0.85 cum, stone chips : 0.15 cum/cum, FA : 0.4 cum)
 For 1 cum masonry :-

DATA:

RATE ANALYSIS

| UNIT: 25.00 cum | | | | | |
|-------------------------|-------------------|------|----------|-------------|--------------|
| Sl No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Cement for mortar | kg | 3575 | 3.68 | 13156.00 |
| 2 | Rubble stones | cum | 21.25 | 359.00 | 7628.75 |
| 3 | Stone chips | cum | 3.75 | 385.00 | 1443.75 |
| 4 | Sand (Screened) | cum | 10 | 700.00 | 7000.00 |
| Total cost of Materials | | | | | Rs: 29228.50 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|--------------|
| 1 | Concrete mixer 300 / 200 ltr(ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| Total hire charges of Machinery | | | | | Rs: 798.50 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|-------------|--------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Mason Class-I | Day | 2.50 | 585.00 | 1462.50 |
| 5 | Mason Class-II | Day | 4.00 | 525.00 | 2100.00 |
| 6 | Chavali | Day | 16.00 | 525.00 | 8400.00 |
| 7 | mazdoor | | | | |
| | for batching cement (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching sand | Day | 6.00 | 490.00 | 2940.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying & packing mortar | Day | 10.00 | 490.00 | 4900.00 |
| | for loading chips | Day | 1.00 | 490.00 | 490.00 |
| | for washing rubble / finishing / curing | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying mortar / chips | Day | 12.00 | 490.00 | 5880.00 |
| Total cost of Labour | | | | | Rs: 34108.10 |

| | |
|---|----------------|
| labour component/unit qty | 1364.30 |
| Add contractor's profit and overhead charges | 13.615% 185.70 |
| labour component/unit qty (including contractor's profit) | 1550.00 |

ABSTRACT:

| | | | | | |
|---|-------|--------------|---------|-------------------|--------------------|
| A. Cost of Materials | | | | | Rs: 29228.50 |
| B. Hire charges of Machinery | | | | | Rs: 798.50 |
| C. Cost of Labour | | | | | Rs: 34108.10 |
| | | | Total | | Rs: 64135.10 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | | Rs: 8731.99 |
| Lead Charges for 1 Km for FA | 10.00 | cum @ | | 38.288255 Rs./Cum | 382.88255 |
| Lead Charges for 1 Km for Stones/Stone Chips | 25.00 | cum @ | | 36.924875 Rs./Cum | 923.12 |
| Total cost for | 25.00 | | cum | | Rs: 74173.09 |
| Rate per cum | | (A+B+C+D)/25 | | | Rs: 2966.90 |

IRR-DAW-3-3

Providing and **constructing** **coursed rubble face stone masonry** using approved rubble stones in **cement mortar 1 : 3** proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., **with initial lead upto 1 km and all lifts.**

(Thickness of the CR face assumed: 0.75 m,Cement content : 178 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.375 cum, CR stones 30 x 30 x 45 cm : 9.75 No, CR stones 30 x 30 x 60 cm : 3.25 No)

DATA:

RATE ANALYSISUNIT:
25.00 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--------------------------------------|------|----------|-------------|---------------------|
| 1 | Cement for mortar | kg | 4450 | 3.68 | 16376.00 |
| 2 | Coursed rubble stone 30 x 30 x 45 cm | Nos | 244 | 27.00 | 6588.00 |
| 3 | Coursed rubble stone 30 x 30 x 60 cm | Nos | 82 | 30.00 | 2460.00 |
| 4 | Rubble stones | cum | 8.75 | 359.00 | 3141.25 |
| 5 | Stone chips | cum | 3.75 | 385.00 | 1443.75 |
| 6 | Sand (Screened) | cum | 9.375 | 700.00 | 6562.50 |
| Total cost of Materials | | | | | Rs: 36571.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|-------------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| Total hire charges of Machinery | | | | | Rs: 798.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|-------------|---------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Stone chiseller CI -II | Day | 7.00 | 525.00 | 3675.00 |
| 5 | Mason Class-I | Day | 2.50 | 585.00 | 1462.50 |
| 6 | Mason Class-II | Day | 4.00 | 525.00 | 2100.00 |
| 7 | Chavali | Day | 16.00 | 525.00 | 8400.00 |
| 8 | mazdoor | | | | |
| | for batching cement (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching sand | Day | 6.00 | 490.00 | 2940.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying & packing mortar | Day | 10.00 | 490.00 | 4900.00 |
| | for loading chips | Day | 1.00 | 490.00 | 490.00 |
| | for washing rubble / finishing / curing | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying mortar / chips | Day | 12.00 | 490.00 | 5880.00 |
| Total cost of Labour | | | | | Rs: 37783.10 |

labour component/unit qty 1511.30
 Add contractor's profit and overhead charges 13.615% 205.80
 labour component/unit qty (including contractor's profit) **1717.10**

ABSTRACT:

| | | | | |
|---|--------------|---------|-------------------|---------------------|
| A. Cost of Materials | | | | Rs: 36571.50 |
| B. Hire charges of Machinery | | | | Rs: 798.50 |
| C. Cost of Labour | | | | Rs: 37783.10 |
| | Total | | | Rs: 75153.10 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: 10232.09 |
| Lead Charges for 1 Km for FA | 9.38 | cum @ | 38.288255 Rs./Cum | 358.9523906 |
| Lead Charges for 1 Km for Stones/Stone Chips | 26.81 | cum @ | 36.924875 Rs./Cum | 989.96 |
| Total cost for | 25.00 | cum | | Rs: 86734.10 |
| Rate per cum | (A+B+C+D)/25 | | | Rs: 3469.40 |

IRR-DAW-3-4

Providing and **constructing** **coursed rubble face stone masonry** using approved rubble stones in **cement mortar 1 : 4** proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., **with initial lead upto 1 km and all lifts.**

(Cement content : 134 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.375 cum, CR stones 30 x 30 x 45 cm : 9.75 No, CR stones 30 x 30 x 60 cm : 3.25 No)

DATA:

RATE ANALYSIS

UNIT:
25.00 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mortar | kg | 3350 | 3.68 | 12328.00 |
| 2 | Coursed rubble stone 30 x 30 x 45 cm | Nos | 244 | 27.00 | 6588.00 |
| 3 | Coursed rubble stone 30 x 30 x 60 cm | Nos | 82 | 30.00 | 2460.00 |
| 4 | Rubble stones | cum | 8.75 | 359.00 | 3141.25 |
| 5 | Stone chips | cum | 3.75 | 385.00 | 1443.75 |
| 6 | Sand (Screened) | cum | 9.375 | 700.00 | 6562.50 |
| Total cost of Materials | | | | Rs: | 32523.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|---------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| Total hire charges of Machinery | | | | Rs: | 798.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Stone chiseller CI -II | Day | 7.00 | 525.00 | 3675.00 |
| 5 | Mason Class-I | Day | 2.50 | 585.00 | 1462.50 |
| 6 | Mason Class-II | Day | 4.00 | 525.00 | 2100.00 |
| 7 | Chavali | Day | 16.00 | 525.00 | 8400.00 |
| 8 | mazdoor | | | | |
| | for batching cement (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching sand | Day | 6.00 | 490.00 | 2940.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying & packing mortar | Day | 10.00 | 490.00 | 4900.00 |
| | for loading chips | Day | 1.00 | 490.00 | 490.00 |
| | for washing rubble / finishing / curing | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying mortar / chips | Day | 12.00 | 490.00 | 5880.00 |
| Total cost of Labour | | | | Rs: | 37783.10 |

labour component/unit qty 1511.30
 Add contractor's profit and overhead charges 13.615% 205.80
 labour component/unit qty (including contractor's profit) **1717.10**

ABSTRACT:

| | | | | |
|---|--------------|---------|-------------------|---------------------|
| A. Cost of Materials | | | | Rs: 32523.50 |
| B. Hire charges of Machinery | | | | Rs: 798.50 |
| C. Cost of Labour | | | | Rs: 37783.10 |
| | Total | | | Rs: 71105.10 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: 9680.96 |
| Lead Charges for 1 Km for FA | 9.38 | cum @ | 38.288255 Rs./Cum | 358.9523906 |
| Lead Charges for 1 Km for Stones/Stone Chips | 26.81 | cum @ | 36.924875 Rs./Cum | 989.96 |
| Total cost for | 25.00 | cum | | Rs: 82134.97 |
| Rate per cum | (A+B+C+D)/25 | | | Rs: 3285.40 |

IRR-DAW-3-5

Providing and **constructing chisel drafted and hammer dressed face stone masonry** with approved stones in **cement mortar 1 : 3** proportion including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., complete with **initial lead upto 1 km and all lifts.**
(Cement content : 167 kg/cum of masonry, rubble stones : 0.35 cum, stone chips : 0.15 cum/cum, FA : 0.35 cum,
Dressed stones 30 x 30 x 45 cm : 10 No, Dressed stones 30 x 30 x 60 cm : 3.40 No)

DATA:

RATE ANALYSISUNIT:
25.00 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mortar | kg | 4175 | 3.68 | 15364.00 |
| 2 | Coursed rubble stone 30 x 30 x 45 cm | Nos | 250 | 27.00 | 6750.00 |
| 3 | Coursed rubble stone 30 x 30 x 60 cm | Nos | 85 | 30.00 | 2550.00 |
| 4 | Rubble stones | cum | 8.75 | 359.00 | 3141.25 |
| 5 | Stone chips | cum | 3.75 | 385.00 | 1443.75 |
| 6 | Sand (Screened) | cum | 8.75 | 700.00 | 6125.00 |
| Total cost of Materials | | | | Rs: | 35374.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|-------------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| Total hire charges of Machinery | | | | | Rs: 798.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|-------------|---------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Stone chiseller CI -I | Day | 14.00 | 580.00 | 8120.00 |
| 5 | Stone chiseller CI -II | Day | 7.00 | 525.00 | 3675.00 |
| 6 | Mason Class-I | Day | 2.50 | 585.00 | 1462.50 |
| 7 | Mason Class-II | Day | 4.00 | 525.00 | 2100.00 |
| 8 | Chavali | Day | 16.00 | 525.00 | 8400.00 |
| 9 | mazdoor | | | | |
| | for batching cement (cement handling) | Day | 2.00 | 490.00 | 980.00 |
| | for batching sand | Day | 6.00 | 490.00 | 2940.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying & packing mortar | Day | 10.00 | 490.00 | 4900.00 |
| | for loading chips | Day | 1.00 | 490.00 | 490.00 |
| | for washing rubble / finishing / curing | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying mortar / chips | Day | 12.00 | 490.00 | 5880.00 |
| Total cost of Labour | | | | | Rs: 45903.10 |

labour component/unit qty 1836.10

Add contractor's profit and overhead charges 13.615% 250.00

labour component/unit qty (including contractor's profit) **2086.10****ABSTRACT:**

A. Cost of Materials Rs: 35374.00

B. Hire charges of Machinery Rs: 798.50

C. Cost of Labour Rs: 45903.10

Total

Rs: 82075.60

D. Add for contractor's profit and overheads on (A+B+C) 13.615%

Rs: 11174.59

Lead Charges for 1 Km for FA

8.75 cum @

38.288255 Rs./Cum 335.0222313

Lead Charges for 1 Km for Stones/Stone Chips

27.22 cum @

36.924875 Rs./Cum 1004.91

Total cost for

25.00

cum

Rs: **94590.12****Rate per cum**

(A+B+C+D)/25

Rs: **3783.60**

IRR-DAW-3-6

Providing and **constructing chisel drafted and hammer dressed face****stone masonry** with approved stones in **cement mortar 1 : 4** proportionincluding cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, curing etc., complete with **initial lead upto 1 km and all lifts.****(Cement content : 125 kg/cum of masonry, rubble stones : 0.35 cum,****stone chips : 0.15 cum/cum, FA : 0.35 cum,****Dressed stones 30 x 30 x 45 cm : 10 No, Dressed stones 30 x 30 x 60 cm : 3.40 No)**

DATA:

RATE ANALYSIS

UNIT:

25.00 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--------------------------------------|------|----------|-------------|---------------------|
| 1 | Cement for mortar | kg | 3125 | 3.68 | 11500.00 |
| 2 | Coursed rubble stone 30 x 30 x 45 cm | Nos | 250 | 27.00 | 6750.00 |
| 3 | Coursed rubble stone 30 x 30 x 60 cm | Nos | 85 | 30.00 | 2550.00 |
| 4 | Rubble stones | cum | 8.75 | 359.00 | 3141.25 |
| 5 | Stone chips | cum | 3.75 | 385.00 | 1443.75 |
| 6 | Sand (Screened) | cum | 8.75 | 700.00 | 6125.00 |
| Total cost of Materials | | | | | Rs: 31510.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|-------------------|
| 1 | Concrete mixer 300 / 200 ltr (ele) | Hour | 8.00 | 46.20 | 369.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| Total hire charges of Machinery | | | | | Rs: 798.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Stone chiseller CI -I | Day | 14.00 | 580.00 | 8120.00 |
| 5 | Stone chiseller CI -II | Day | 7.00 | 525.00 | 3675.00 |
| 6 | Mason Class-I | Day | 2.50 | 585.00 | 1462.50 |
| 7 | Mason Class-II | Day | 4.00 | 525.00 | 2100.00 |
| 8 | Chavali | Day | 16.00 | 525.00 | 8400.00 |
| 9 | mazdoor | | | | |
| | for batching cement (cement handling | Day | 2.00 | 490.00 | 980.00 |
| | for batching sand | Day | 6.00 | 490.00 | 2940.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying & packing mortar | Day | 10.00 | 490.00 | 4900.00 |
| | for loading chips | Day | 1.00 | 490.00 | 490.00 |
| | for washing rubble / finishing / curing | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying mortar / chips | Day | 12.00 | 490.00 | 5880.00 |
| Total cost of Labour | | | | Rs: | 45903.10 |

labour component/unit qty 1836.10

Add contractor's profit and overhead charges 13.615% 250.00

labour component/unit qty (including contractor's profit) **2086.10****ABSTRACT:**

| | | | | |
|---|--------------|---------|-------------------|---------------------|
| A. Cost of Materials | | | | Rs: 31510.00 |
| B. Hire charges of Machinery | | | | Rs: 798.50 |
| C. Cost of Labour | | | | Rs: 45903.10 |
| | Total | | | Rs: 78211.60 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: 10648.51 |
| Lead Charges for 1 Km for FA | 8.75 | cum @ | 38.288255 Rs./Cum | 335.0222313 |
| Lead Charges for 1 Km for Stones/Stone Chips | 27.22 | cum @ | 36.924875 Rs./Cum | 1004.91 |
| Total cost for | 25.00 | cum | | Rs: 90200.04 |
| Rate per cum | (A+B+C+D)/25 | | | Rs: 3608.00 |

IRR-DAW-3-7

Providing **cement mortar pointing to coursed rubble face stone masonry**
 50 mm deep in **CM 1 : 2** proportion by volume including raking and cleaning
 joints, pressing mortar into joints, cost of all materials, labour, scaffolding,
 finishing, curing etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT:

100.00 sqm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 455.446 | 3.68 | 1676.04 |
| 2 | Sand (Screened) | cum | 0.735 | 700.00 | 514.50 |
| Total cost of Materials | | | | Rs: | 2190.54 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|------------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------|------|----------|-------------|-----------------|
| 1 | Mason Class-I | Day | 10.00 | 585.00 | 5850.00 |
| 2 | mazdoor | Day | 10.00 | 490.00 | 4900.00 |
| Total cost of Labour | | | | Rs: | 10750.00 |

labour component/unit qty 107.50

Add contractor's profit and overhead charges 13.615% 14.60

labour component/unit qty (including contractor's profit) **122.10****ABSTRACT:**

| | | | | |
|---|---------------|---------|-------------------|---------------------|
| A. Cost of Materials | | | | Rs: 2190.54 |
| B. Hire charges of Machinery | | | | Rs: 0.00 |
| C. Cost of Labour | | | | Rs: 10750.00 |
| | Total | | | Rs: 12940.54 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: 1761.85 |
| Lead Charges for 1 Km for FA | 0.74 | cum @ | 38.288255 Rs./Cum | 28.14186743 |
| Total cost for | 100.00 | sqm | | Rs: 14730.53 |
| Rate per sqm | (A+B+C+D)/100 | | | Rs: 147.30 |

IRR-DAW-3-8

Providing **cement mortar pointing to coursed rubble face stone masonry**
 50 mm deep in **CM 1 : 3** proportion by volume including raking and cleaning
 joints, pressing mortar into joints, cost of all materials, labour, scaffolding,
 finishing, curing etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT:

100.00 sqm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 321.80 | 3.68 | 1184.22 |
| 2 | Sand (Screened) | cum | 0.74 | 700.00 | 514.50 |
| Total cost of Materials | | | | Rs: | 1698.72 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------|------|----------|-------------|-----------------|
| 1 | Mason Class-I | Day | 10.00 | 585.00 | 5850.00 |
| 2 | mazdoor | Day | 10.00 | 490.00 | 4900.00 |
| Total cost of Labour | | | | Rs: | 10750.00 |

labour component/unit qty 107.50

Add contractor's profit and overhead charges 13.615% 14.60

labour component/unit qty (including contractor's profit) **122.10****ABSTRACT:**

A. Cost of Materials

Rs: 1698.72

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 10750.00

Total

Rs: 12448.72

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1694.89

Lead Charges for 1 Km for FA

0.74

cum @

38.288255 Rs./Cum

Total cost for

100.00

sqm

Rs: **14171.76****Rate per****sqm**

(A+B+C+D)/100

Rs: 141.70

IRR_DAW-4

CONTRACTION JOINT WORKS:

IRR-DAW-4-1

Providing **25 mm thick guniting to rock or masonry surface in cement mortar 1 : 3** proportion by weight including cost of all materials, machinery, labour, raking-out and cleaning joints, scaffolding wherever required and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

36.00 sqm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 609.90 | 3.68 | 2244.43 |
| 2 | Sand (Screened) | cum | 1.09 | 700.00 | 763.00 |
| 3 | Use rate of grout hose 25 m | Hour | 8.00 | 5.50 | 44.00 |
| 4 | Use rate of water hose 25 m | Hour | 8.00 | 5.56 | 44.50 |
| 5 | Use rate of guniting nozzle | Hour | 8.00 | 3.25 | 26.00 |
| 6 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 3189.93 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Guniting equipment | Hour | 8.00 | 109.30 | 874.40 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 2 | Air compressor 8.5 cmm (ele) | Hour | 8.00 | 145.90 | 1167.20 |
| | Fuel / Energy charges | Hour | 8.00 | 475.90 | 3807.20 |
| 3 | Pump 10 hp (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 4 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 6007.30 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Crew for Guniting equipment | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | Crew for pump | Hour | 1.00 | 107.60 | 107.60 |
| 4 | Mason Cl II | Day | 1.00 | 525.00 | 525.00 |
| 5 | mazdoor | | | | |
| | for cement handling | Day | 2.00 | 490.00 | 980.00 |
| | for sand | Day | 2.00 | 490.00 | 980.00 |
| | mazdoor for other works | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 7576.60 |

| | |
|---|---------------|
| labour component/unit qty | 210.50 |
| Add contractor's profit and overhead charges | 13.615% 28.70 |
| labour component/unit qty (including contractor's profit) | 239.20 |

ABSTRACT:

| | | |
|--|--------------|-------------------------------|
| A. Cost of Materials | | Rs: 3189.93 |
| B. Hire charges of Machinery | | Rs: 6007.30 |
| C. Cost of Labour | | Rs: 7576.60 |
| | Total | Rs: 16773.83 |
| Add for scaffolding | 3% | 419.35 |
| | Total | Rs: 17193.18 |
| D. Add for contractor's profit and overheads on (A+B+C+other | 13.615% | Rs: 2340.85 |
| Lead Charges for 1 Km for FA | 1.09 cum @ | 38.288255 Rs./Cum 41.73419795 |
| Total cost for | 36.00 sqm | Rs: 19575.76 |
| Rate per sqm | (A+B+C+D)/36 | Rs: 543.80 |

IRR-DAW-4-2

Providing and **constructing contraction joints by fixing 16 SWG 60 cm wide annealed copper sheets** in two lines with 8 mm dia steel dowel rods on either side at one metre interval, forming 125 x 125 mm size groove in between copper strips for filling asphalt including fixing 15 mm dia two legged G.I pipe with U - bend at bottom for circulation of steam at intervals and forming 150 mm dia formed drain behind water seals including cost of all materials, machinery, labour, filling asphalt, circulation of steam through pipes etc., complete with all leads and lifts. consider 12 m height of contraction joint for analysis.

DATA:

RATE ANALYSIS

UNIT:

12.00 Rm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------|------|----------|-------------|------------------|
| 1 | Copper sheet 16 SWG | kg | 215.00 | 708.00 | 152220.00 |
| 2 | Reinforcement steel 8 mm dia | kg | 30.00 | 52.50 | 1575.00 |
| 3 | GI pipe 15 mm dia | Rm | 24.00 | 92.00 | 2208.00 |
| 4 | Asphalt | kg | 192.00 | 44.00 | 8448.00 |
| 5 | Elbows / Nipple / Plugs etc., | LS | 5.00 | 17.00 | 85.00 |
| 6 | Soldering materials | LS | 40.00 | 17.00 | 680.00 |
| Total cost of Materials | | | | Rs: | 165216.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|----------------------------------|------|----------|-------------|---------------|
| 1 | Steam circulation arrangement | LS | 8.00 | 17.00 | 136.00 |
| | Fuel charges (gas for heating) | LS | 10.00 | 21.00 | 210.00 |
| Total hire charges of Machinery | | | | Rs: | 346.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------|------|----------|-------------|----------------|
| 1 | Welder | Day | 1.00 | 575.00 | 575.00 |
| 2 | Tinsmith | Day | 1.00 | 550.00 | 550.00 |
| 3 | Bar bender | Day | 0.50 | 700.00 | 350.00 |
| 4 | Pipe fitter | Day | 0.50 | 655.00 | 327.50 |
| 5 | Mason Class-I | Day | 0.50 | 585.00 | 292.50 |
| 6 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 2585.00 |

| | |
|---|---------------|
| labour component/unit qty | 215.40 |
| Add contractor's profit and overhead charges | 13.615% 29.30 |
| labour component/unit qty (including contractor's profit) | 244.70 |

ABSTRACT:

| | | | | | | |
|---|-----------|---------------------|--|---------|--|---------------------|
| A. Cost of Materials | | | | | | Rs: 165216.00 |
| B. Hire charges of Machinery | | | | | | Rs: 346.00 |
| C. Cost of Labour | | | | | | Rs: 2585.00 |
| | | | | Total | | Rs: 168147.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | 13.615% | | Rs: 22893.21 |
| Total cost for | | 12.00 Rm | | | | Rs: 191040.21 |
| Rate per | Rm | (A+B+C+D)/12 | | | | Rs: 15920.00 |

IRR-DAW-4-3

Providing and **constructing contraction joints by fixing 310 mm wide central bulb type approved quality PVC water stop** in two lines with 8 mm diameter steel dowel rods on either side at 1m interval, forming 125 x 125 mm size groove in between two water stops, providing & fixing 15 mm dia two legged G.I pipe with U-bend at bottom for circulation steam at interval, forming 150 mm diameter formed drain behind water seals including filling groove with asphalt, circulation of steam at intervals, cost of all materials, machinery, labour etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSISUNIT:
12.00 Rm.**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------|------|----------|-------------|--------------|
| 1 | PVC water stops 310 mm wide | Rm | 24.50 | 459.00 | 11245.50 |
| 2 | Reinforcement steel 8 mm dia | kg | 30.00 | 52.50 | 1575.00 |
| 3 | GI pipe 15 mm dia | Rm | 24.00 | 92.00 | 2208.00 |
| 4 | Asphalt | kg | 192.00 | 44.00 | 8448.00 |
| 5 | Elbows / Nipple / Plugs etc., | LS | 5.00 | 17.00 | 85.00 |
| 6 | Vulcanizing materials | LS | 25.00 | 21.00 | 525.00 |
| Total cost of Materials | | | | | Rs: 24086.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|----------------------------------|------|----------|-------------|--------------|
| 1 | Steam circulation arrangement | LS | 8.00 | 17.00 | 136.00 |
| | Fuel charges (gas for heating) | LS | 10.00 | 21.00 | 210.00 |
| Total hire charges of Machinery | | | | | Rs: 346.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------|------|----------|-------------|--------------|
| 1 | Welder | Day | 0.50 | 575.00 | 287.50 |
| 2 | Bar bender | Day | 0.50 | 700.00 | 350.00 |
| 3 | Pipe fitter | Day | 0.50 | 655.00 | 327.50 |
| 4 | Mason Class-I | Day | 0.50 | 585.00 | 292.50 |
| 5 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | | Rs: 1747.50 |

| | |
|---|---------------|
| labour component/unit qty | 145.60 |
| Add contractor's profit and overhead charges | 13.615% 19.80 |
| labour component/unit qty (including contractor's profit) | 165.40 |

ABSTRACT:

| | | | | | | |
|---|------------|---------------------|--|---------|--|--------------------|
| A. Cost of Materials | | | | | | Rs: 24086.50 |
| B. Hire charges of Machinery | | | | | | Rs: 346.00 |
| C. Cost of Labour | | | | | | Rs: 1747.50 |
| | | | | Total | | Rs: 26180.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | 13.615% | | Rs: 3564.41 |
| Total cost for | | 12.00 Rm. | | | | Rs: 29744.41 |
| Rate per | Rm. | (A+B+C+D)/12 | | | | Rs: 2478.70 |

IRR-DAW-4-4

Providing and **constructing contraction joints by fixing 16 SWG 60 cm wide annealed copper sheets** in single line with 8 mm dia steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSISUNIT:
8.7 Rm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------------------|------|----------|-------------|--------------|
| 1 | Copper sheet 16 SWG | kg | 77.00 | 708.00 | 54516.00 |
| 2 | Reinforcement steel 8 mm dia | kg | 15.00 | 52.50 | 787.50 |
| 3 | Soldering materials | LS | 10.00 | 17.00 | 170.00 |
| Total cost of Materials | | | | | Rs: 55473.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|-------------------|
| 1 | Sundries such as soldering gun etc., | LS | 3.00 | 34.00 | 102.00 |
| | Fuel charges (gas) | LS | 5.00 | 21.00 | 105.00 |
| Total hire charges of Machinery | | | | | Rs: 207.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------|------|----------|-------------|--------------------|
| 1 | Welder | Day | 0.5 | 575.00 | 287.50 |
| 2 | Tinsmith | Day | 0.5 | 550.00 | 275.00 |
| 3 | Bar bender | Day | 0.5 | 700.00 | 350.00 |
| 4 | Mason Class-I | Day | 0.5 | 585.00 | 292.50 |
| 5 | mazdoor | Day | 0.5 | 490.00 | 245.00 |
| Total cost of Labour | | | | | Rs: 1450.00 |

labour component/unit qty 166.70
 Add contractor's profit and overhead charges 13.615% 22.70
 labour component/unit qty (including contractor's profit) **189.40**

ABSTRACT:

| | |
|---|---------------------|
| A. Cost of Materials | Rs: 55473.50 |
| B. Hire charges of Machinery | Rs: 207.00 |
| C. Cost of Labour | Rs: 1450.00 |
| | Rs: 57130.50 |
| D. Add for contractor's profit and overheads on (A+B+C) | Rs: 7778.32 |
| Total cost for | Rs: 64908.82 |
| Rate per Rm | Rs: 7460.80 |

Total 13.615%
 8.70 Rm
 (A+B+C+D)/8.70

IRR-DAW-4-5

Providing and **constructing contraction joints by fixing 23 cm wide central bulb type PVC water stop in single line** supported by 10 mm dia steel dowel rods on either side at 1 metre interval including cost of all materials, machinery, labour, valcunising joints etc., complete **with all leads and lifts.**

DATA:

RATE ANALYSIS

UNIT:
8.70 Rm

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------|------|----------|-------------|-------------------|
| 1 | PVC water seal 23 cm wide | Rm | 9.00 | 44.00 | 396.00 |
| 2 | Reinforcement steel 10 mm dia | kg | 10.00 | 52.50 | 525.00 |
| 3 | Vulcanising materials | LS | 2.00 | 21.00 | 42.00 |
| Total cost of Materials | | | | | Rs: 963.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------------------------|------|----------|-------------|--------------|
| 1 | Sundries such as heater etc., | LS | 0.50 | 34.00 | 17.00 |
| | Fuel charges for heating | LS | 0.50 | 21.00 | 10.50 |
| Total hire charges of Machinery | | | | | 27.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------|------|----------|-------------|--------------------|
| 1 | Welder | Day | 0.50 | 575.00 | 287.50 |
| 2 | Bar bender | Day | 0.50 | 700.00 | 350.00 |
| 3 | Mason Class-I | Day | 0.50 | 585.00 | 292.50 |
| 4 | mazdoor | Day | 0.50 | 490.00 | 245.00 |
| Total cost of Labour | | | | | Rs: 1175.00 |

labour component/unit qty 135.10
 Add contractor's profit and overhead charges 13.615% 18.40
 labour component/unit qty (including contractor's profit) **153.50**

ABSTRACT:

| | |
|---|--------------------|
| A. Cost of Materials | Rs: 963.00 |
| B. Hire charges of Machinery | Rs: 27.50 |
| C. Cost of Labour | Rs: 1175.00 |
| | Rs: 2165.50 |
| D. Add for contractor's profit and overheads on (A+B+C) | Rs: 294.83 |
| Total cost for | Rs: 2460.33 |
| Rate per Rm | Rs: 282.80 |

Total 13.615%
 8.70 Rm
 (A+B+C+D)/8.70

IRR_DAW-5

EARTH / ROCKFILL EMBANKMENT WORKS :

IRR-DAW-5-1

Providing **heating embankment** using selected **impervious soil** from **approved borrow areas** in **layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 95 percent** or as stipulated using **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

| | | | | | UNIT |
|-------------------------|-------------|------|----------|-------------|-------------------|
| | | | | | 825.00 cum |
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | | Rs: 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|---------------------|
| 1 | Angle dozer 90 hp | Hour | 5.50 | 1531.00 | 8420.50 |
| | Fuel / Energy charges | Hour | 5.50 | 999.10 | 5495.05 |
| 2 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 3 | Tipplers 5.00 cum capacity 5 Nos. | Hour | 40.00 | 404.90 | 16196.00 |
| | Fuel / Energy charges | Hour | 40.00 | 490.80 | 19632.00 |
| 4 | Pump 5 hp (ele) | Hour | 4.00 | 2.70 | 10.80 |
| | Fuel / Energy charges | Hour | 4.00 | 42.30 | 169.20 |
| 5 | Water tanker 8000 ltr | Hour | 8.00 | 380.50 | 3044.00 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 6 | Vibratory Roller 8 tonne | Hour | 6.50 | 1237.90 | 8046.35 |
| | Fuel / Energy charges | Hour | 6.50 | 1687.90 | 10971.35 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | | Rs: 99643.65 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------|------|----------|-------------|---------------------|
| 1 | Crew for Dozer | Hour | 5.50 | 304.20 | 1673.10 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 40.00 | 228.20 | 9128.00 |
| 4 | Crew for Pump | Hour | 4.00 | 107.60 | 430.40 |
| 5 | Crew for Water tanker | Hour | 8.00 | 225.20 | 1801.60 |
| 6 | Crew for Roller | Hour | 6.50 | 343.20 | 2230.80 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | | Rs: 20937.50 |

labour component/unit qty 25.40

Add contractor's profit and overhead charges 13.615% 3.50

labour component/unit qty (including contractor's profit) **28.90****ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 99643.65

C. Cost of Labour

Rs: 20937.50

Total

Rs: 120581.15

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 16417.12

Total cost for 825.00 cum

Rs: **136998.27****Rate per cum** (A+B+C+D)/825Rs: **166.10**

IRR-DAW-5-2

Providing **cut-off trench filling** using selected **impervious soil** from **approved borrow areas** in **layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil to specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 95 percent** using **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** as stipulated etc., **complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

| | | | | | UNIT : |
|-------------------------|-------------|------|----------|-------------|-------------------|
| | | | | | 825.00 cum |
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | | Rs: 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|------------------|
| 1 | Angle dozer 90 hp | Hour | 5.50 | 1531.00 | 8420.50 |
| | Fuel / Energy charges | Hour | 5.50 | 999.10 | 5495.05 |
| 2 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 3 | Tipplers 5.00 cum capacity 6 Nos. | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Pump 5 hp (ele) | Hour | 4.00 | 2.70 | 10.80 |
| | Fuel / Energy charges | Hour | 4.00 | 42.30 | 169.20 |
| 5 | Water tanker 8000 ltr | Hour | 8.00 | 380.50 | 3044.00 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 6 | Vibratory Roller 8 tonne | Hour | 6.50 | 1237.90 | 8046.35 |
| | Fuel / Energy charges | Hour | 6.50 | 1687.90 | 10971.35 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 106809.25 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 5.50 | 304.20 | 1673.10 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Pump | Hour | 4.00 | 107.60 | 430.40 |
| 5 | Crew for Water tanker | Hour | 8.00 | 225.20 | 1801.60 |
| 6 | Crew for Roller | Hour | 6.50 | 343.20 | 2230.80 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 22763.10 |

labour component/unit qty 27.60

Add contractor's profit and overhead charges 13.615% 3.80

labour component/unit qty (including contractor's profit) **31.40****ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 106809.25

C. Cost of Labour

Rs: 22763.10

Total

Rs: 129572.35

D.Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 17641.28

Total cost for 825.00 cum

Rs: **147213.63**

Rate per cum (A+B+C+D)/825

Rs: **178.40**

IRR-DAW-5-3

Providing casing embankment using semi-pervious soil from approved**borrow areas in layers of 25 to 30 cm before compaction including cost of**

all materials, machinery, labour, all other operations such as excavation,

sorting out, transportation, spreading soil in layers of specified thickness,

breaking clods, sectioning, **watering**, compacting to density control of **not****less than 95 percent using Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** as stipulated etc.,**complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

A. MATERIALS:**630 cum**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 4.00 | 1531.00 | 6124.00 |
| | Fuel / Energy charges | Hour | 4.00 | 999.10 | 3996.40 |
| 2 | Shovel 0.85 cum | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 3 | Tipper 5 cum | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Pump 5 hp (ele) | Hour | 3.00 | 2.70 | 8.10 |
| | Fuel / Energy charges | Hour | 3.00 | 42.30 | 126.90 |
| 5 | Water tanker 8000 ltr | Hour | 5.00 | 380.50 | 1902.50 |
| | Fuel / Energy charges | Hour | 5.00 | 490.80 | 2454.00 |
| 6 | Vibratory Roller 8 tonne | Hour | 5.00 | 1237.90 | 6189.50 |
| | Fuel / Energy charges | Hour | 5.00 | 1687.90 | 8439.50 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 81737.30 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 4.00 | 304.20 | 1216.80 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Pump | Hour | 3.00 | 107.60 | 322.80 |
| 5 | Crew for Water tanker | Hour | 5.00 | 225.20 | 1126.00 |
| 6 | Crew for Roller | Hour | 5.00 | 343.20 | 1716.00 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 17357.60 |

labour component/unit qty 27.60

Add contractor's profit and overhead charges 13.615% 3.80

labour component/unit qty (including contractor's profit) **31.40****ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 81737.30

C. Cost of Labour

Rs: 17357.60

Total

Rs: 99094.90

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 13491.77

Total cost for 630.00 cum

Rs: **112586.67****Rate per cum (A+B+C+D)/630**Rs: **178.70**

IRR-DAW-5-4

Providing **casing embankment** using **semi-pervious soil** available from excavation in **layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all other operations such as re-excavation, sorting out, transportation, spreading in layers of specified thickness, breaking clods, sectioning, **watering**, compacting to specified density control of **not less than 95 percent** using **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** as **stipulated etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

A. MATERIALS:**970.00 cum**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------|------|----------|-------------|------------------|
| 1 | Angle dozer 90 hp | Hour | 4.60 | 1531.00 | 7042.60 |
| | Fuel / Energy charges | Hour | 4.60 | 999.10 | 4595.86 |
| 2 | Shovel 0.85 cum | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 3 | Tipper 5 cum | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Pump 5 hp (ele) | Hour | 4.00 | 2.70 | 10.80 |
| | Fuel / Energy charges | Hour | 4.00 | 42.30 | 169.20 |
| 5 | Water tanker 8000 ltr | Hour | 8.00 | 380.50 | 3044.00 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 6 | Vibratory Roller 8 tonne | Hour | 7.00 | 1237.90 | 8665.30 |
| | Fuel / Energy charges | Hour | 7.00 | 1687.90 | 11815.30 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 106097.06 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 4.60 | 304.20 | 1399.32 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Pump | Hour | 4.00 | 107.60 | 430.40 |
| 5 | Crew for Water tanker | Hour | 8.00 | 225.20 | 1801.60 |
| 6 | Crew for Roller | Hour | 7.00 | 343.20 | 2402.40 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 22660.92 |

labour component/unit qty 23.40

Add contractor's profit and overhead charges 13.615% 3.20

labour component/unit qty (including contractor's profit) **26.60**

ABSTRACT:

A. Cost of Materials
 B. Hire charges of Machinery
 C. Cost of Labour

Rs: 0.00
 Rs: 106097.06
 Rs: 22660.92

D. Add for contractor's profit and overheads on (A+B+C)

Total
 13.615%

Rs: 128757.98
 Rs: 17530.4

Total cost for

970.00 cum

Rs: **146288.38**

Rate per

cum

(A+B+C+D)/970

Rs: **150.80**

IRR-DAW-5-4-A
 (New Item1 - 2011-12)

Providing casing embankment using semi-pervious soil available

from excavation in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all other operations such as re-excavation, sorting out, transportation, spreading in layers of specified thickness, breaking clods, sectioning, **watering**, compacting to specified density control of **not less than 90 percent using 2 Tonne Roller as stipulated etc., complete with initial lead upto 1 km and all lifts.**
(For Maintenance Works)

DATA:

RATE ANALYSIS

UNIT :

A. MATERIALS:

970.00 cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------|------|----------|-------------|-----------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | | Rs: 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------|------|----------|-------------|----------------------|
| 1 | Angle dozer 90 hp | Hour | 4.60 | 1531.00 | 7042.60 |
| | Fuel / Energy charges | Hour | 4.60 | 999.10 | 4595.86 |
| 2 | Shovel 0.85 cum | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 3 | Tipper 5 cum | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Pump 5 hp (ele) | Hour | 4.00 | 2.70 | 10.80 |
| | Fuel / Energy charges | Hour | 4.00 | 42.30 | 169.20 |
| 5 | Water tanker 8000 ltr | Hour | 8.00 | 380.50 | 3044.00 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 6 | Vibratory Roller 8 tonne | Hour | 7.00 | 1237.90 | 8665.30 |
| | Fuel / Energy charges | Hour | 7.00 | 1687.90 | 11815.30 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | | Rs: 106097.06 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------|------|----------|-------------|---------------------|
| 1 | Crew for Dozer | Hour | 4.60 | 304.20 | 1399.32 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Pump | Hour | 4.00 | 107.60 | 430.40 |
| 5 | Crew for Water tanker | Hour | 8.00 | 225.20 | 1801.60 |
| 6 | Crew for Roller | Hour | 7.00 | 343.20 | 2402.40 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | | Rs: 22660.92 |

labour component/unit qty

23.40

Add contractor's profit and overhead charges

13.615% 3.20

labour component/unit qty (including contractor's profit)

26.60

ABSTRACT:

A. Cost of Materials
 B. Hire charges of Machinery
 C. Cost of Labour

Rs: 0.00
 Rs: 106097.06
 Rs: 22660.92

D. Add for contractor's profit and overheads on (A+B+C)

Total
 13.615%

Rs: 128757.98
 Rs: 17530.4

Total cost for

970.00 cum

Rs: **146288.38**

Rate per

cum

(A+B+C+D)/970

Rs: 150.80

Deduct Rate for Proctor's density Control of 95% using 8T roller as per IRR-PMW-3-23

55.80

Add Rate for Proctor's density control of 90% using 2T Roller as per IRR-PMW-3-24

6.80

Rate per

cum

Rs.

101.80

IRR-DAW-5-5

Providing **homogeneous embankment** using soil from **approved borrow area in layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 95 percent** or as stipulated using **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

807.00 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 5.40 | 1531.00 | 8267.40 |
| | Fuel / Energy charges | Hour | 5.40 | 999.10 | 5395.14 |
| 2 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 3 | Tipplers 5.00 cum capacity 5 Nos. | Hour | 40.00 | 404.90 | 16196.00 |
| | Fuel / Energy charges | Hour | 40.00 | 490.80 | 19632.00 |
| 4 | Pump 5 hp (ele) | Hour | 4.00 | 2.70 | 10.80 |
| | Fuel / Energy charges | Hour | 4.00 | 42.30 | 169.20 |
| 5 | Water tanker 8000 ltr | Hour | 8.00 | 380.50 | 3044.00 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 6 | Vibratory Roller 8 tonne | Hour | 6.40 | 1237.90 | 7922.56 |
| | Fuel / Energy charges | Hour | 6.40 | 1687.90 | 10802.56 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 99098.06 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 5.40 | 304.20 | 1642.68 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 40.00 | 228.20 | 9128.00 |
| 4 | Crew for Pump | Hour | 4.00 | 107.60 | 430.40 |
| 5 | Crew for Water tanker | Hour | 8.00 | 225.20 | 1801.60 |
| 6 | Crew for Roller | Hour | 6.40 | 343.20 | 2196.48 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 20872.76 |

labour component/unit qty 25.90

Add contractor's profit and overhead charges 13.615% 3.50

labour component/unit qty (including contractor's profit) **29.40****ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 99098.06

C. Cost of Labour

Rs: 20872.76

Total

Rs: 119970.82

D.Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs. 16334.03

Total cost for

807.00 cum

Rs: **136304.85****Rate per cum**

(A+B+C+D)/807

Rs: **168.90**

IRR-DAW-5-6

Providing **embankment adjacent to masonry / concrete structures and filling trial pits** using **impervious soil** from **approved borrow areas in layers of 10 to 15 cm** and compacting each layer to density control of **not less than 95 percent using pneumatic tampers or by vibratory earth rammers** including cost of all materials, machinery, labour, picking previous layer, spreading soil in layer, breaking clods, **watering** etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

80 cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|----------------------|------|----------|-------------|---------------|
| 1 | Use rate of air hose | Hour | 16.00 | 11.00 | 176.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 176.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 0.15 | 1531.00 | 229.65 |
| | Fuel / Energy charges | Hour | 0.15 | 999.10 | 149.87 |
| 2 | Shovel 0.85 cum | Hour | 0.80 | 1529.70 | 1223.76 |
| | Fuel / Energy charges | Hour | 0.80 | 1428.30 | 1142.64 |
| 3 | Tipper 5 cum | Hour | 3.00 | 404.90 | 1214.70 |
| | Fuel / Energy charges | Hour | 3.00 | 490.80 | 1472.40 |
| 4 | Air compressor 8.5 cmm (ele) | Hour | 8.00 | 145.90 | 1167.20 |
| | Fuel / Energy charges | Hour | 8.00 | 475.90 | 3807.20 |
| 5 | Pump 5 hp (ele) | Hour | 0.40 | 2.70 | 1.08 |
| | Fuel / Energy charges | Hour | 0.40 | 42.30 | 16.92 |
| 6 | Water tanker 8000 ltr | Hour | 0.80 | 380.50 | 304.40 |
| | Fuel / Energy charges | Hour | 0.80 | 490.80 | 392.64 |
| 7 | Pneumatic tampers 2 Nos. | Hour | 16.00 | 18.30 | 292.80 |
| | Fuel / Energy charges | Hour | 16.00 | 0.00 | 0.00 |
| 8 | Sundries | LS | 1.00 | 34.00 | 34.00 |
| Total hire charges of Machinery | | | | Rs: | 11449.26 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|---------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 0.15 | 304.20 | 45.63 |
| 2 | Crew for Shovel | Hour | 0.80 | 304.20 | 243.36 |
| 3 | Crew for Tipper | Hour | 3.00 | 228.20 | 684.60 |
| 4 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 5 | Crew for Pump | Hour | 0.40 | 107.60 | 43.04 |
| 6 | Crew for Water tanker | Hour | 0.80 | 225.20 | 180.16 |
| 7 | Crew for Pneumatic tamper | Hour | 16.00 | 343.20 | 5491.20 |
| 8 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 9 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 11493.99 |

| | |
|---|---------------|
| labour component/unit qty | 143.70 |
| Add contractor's profit and overhead charges | 13.615% 19.60 |
| labour component/unit qty (including contractor's profit) | 163.30 |

ABSTRACT:

| | | |
|---|--------------|---------------------|
| A. Cost of Materials | Rs: | 176.00 |
| B. Hire charges of Machinery | Rs: | 11449.26 |
| C. Cost of Labour | Rs: | 11493.99 |
| | Rs: | 23119.25 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 3147.69 |
| Total cost for | 80.00 cum | Rs: 26266.94 |
| Rate per cum | (A+B+C+D)/80 | Rs: 328.30 |

IRR-DAW-5-7

Providing and **constructing rockfill embankment** with 300 mm down graded stones and quarry spalls from approved source including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing the surface to required slopes etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

400

cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Use rate of drill rod 2.5 m long | Rm | 387.00 | 38.93 | 15067.20 |
| | Reconditioning charges @ 10% | | | | 1506.72 |
| 2 | Use rate of air hose 6 Nos. | Hour | 60.00 | 11.00 | 660.00 |
| 3 | Explosive small dia | kg | 118.00 | 69.00 | 8142.00 |
| 4 | Electric detonators | Nos | 159.00 | 10.00 | 1590.00 |
| 5 | Detonator ordinary | Nos | 8.00 | 7.00 | 56.00 |
| 6 | Fuse coil | Rm | 200.00 | 8.00 | 1600.00 |
| 7 | Sundries (waste tyres etc) | LS | 10.00 | 34.00 | 340.00 |
| Total cost of Materials | | | | Rs: | 28961.92 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--------------------------------------|------|----------|-------------|------------------|
| 1 | Air compressor 8.5cmm(diesel)3 Nos | Hour | 30.00 | 237.70 | 7131.00 |
| | Fuel / Energy charges | Hour | 30.00 | 1460.70 | 43821.00 |
| 2 | Jack hammer 6 Nos | Hour | 60.00 | 17.30 | 1038.00 |
| | Fuel / Energy charges | Hour | 60.00 | 0.00 | 0.00 |
| 3 | Angle dozer 90 hp | Hour | 4.00 | 1531.00 | 6124.00 |
| | Fuel / Energy charges | Hour | 4.00 | 999.10 | 3996.40 |
| 4 | Shovel 0.85 cum | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 5 | Tipper 5 cum | Hour | 24.00 | 404.90 | 9717.60 |
| | Fuel / Energy charges | Hour | 24.00 | 490.80 | 11779.20 |
| Total hire charges of Machinery | | | | Rs: | 107271.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Air compressor | Hour | 30.00 | 274.60 | 8238.00 |
| 2 | Crew for Jack hammer | Hour | 60.00 | 429.00 | 25740.00 |
| 3 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 4 | Crew for Tipper | Hour | 24.00 | 228.20 | 5476.80 |
| 5 | Crew for Dozer | Hour | 4.00 | 304.20 | 1216.80 |
| 6 | Blaster | Day | 1.00 | 645.00 | 645.00 |
| 7 | Helper blaster | Day | 1.00 | 525.00 | 525.00 |
| 8 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 9 | Mason Class-II | Day | 2.00 | 525.00 | 1050.00 |
| 10 | mazdoor | Day | 10.00 | 490.00 | 4900.00 |
| Total cost of Labour | | | | Rs: | 51505.20 |

| | |
|---|---------------|
| labour component/unit qty | 128.80 |
| Add contractor's profit and overhead charges | 13.615% 17.50 |
| labour component/unit qty (including contractor's profit) | 146.30 |

ABSTRACT:

| | | |
|---|---------------|----------------------|
| A. Cost of Materials | Rs: | 28961.92 |
| B. Hire charges of Machinery | Rs: | 107271.20 |
| C. Cost of Labour | Rs: | 51505.20 |
| | Rs: | 187738.32 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 25560.57 |
| Total cost for | 400.00 cum | Rs: 213298.89 |
| Rate per cum | (A+B+C+D)/400 | Rs: 533.20 |

IRR-DAW-5-8

Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT : 100 cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|----------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of drill rod 1.5 m long | Rm | 97.00 | 38.93 | 3776.53 |
| | Reconditioning charges @ 10% | | | | 377.65 |
| 2 | Use rate of air hose | Hour | 15.00 | 11.00 | 165.00 |
| 3 | Explosive small dia | kg | 30.00 | 69.00 | 2070.00 |
| 4 | Electric detonator | Nos | 40.00 | 10.00 | 400.00 |
| 5 | Detonator ordinary | Nos | 2.00 | 7.00 | 14.00 |
| 6 | Fuse coil | Rm | 50.00 | 8.00 | 400.00 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 7271.19 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Air compressor 8.5 cmm (diesel) | Hour | 7.50 | 237.70 | 1782.75 |
| | Fuel / Energy charges | Hour | 7.50 | 1460.70 | 10955.25 |
| 2 | Jack hammer | Hour | 15.00 | 17.30 | 259.50 |
| | Fuel / Energy charges | Hour | 15.00 | 0.00 | 0.00 |
| 3 | Shovel 0.85 cum | Hour | 2.00 | 1529.70 | 3059.40 |
| | Fuel / Energy charges | Hour | 2.00 | 1428.30 | 2856.60 |
| 4 | Tipper 5 cum | Hour | 6.00 | 404.90 | 2429.40 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| Total hire charges of Machinery | | | | Rs: | 24287.70 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Air compressor | Hour | 7.50 | 274.60 | 2059.50 |
| 2 | Crew for Jack hammer | Hour | 15.00 | 429.00 | 6435.00 |
| 3 | Crew for Shovel | Hour | 2.00 | 304.20 | 608.40 |
| 4 | Crew for Tipper | Hour | 6.00 | 228.20 | 1369.20 |
| 5 | Blaster | Day | 0.50 | 645.00 | 322.50 |
| 6 | Helper blaster | Day | 1.00 | 525.00 | 525.00 |
| 7 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 8 | Mason Class-II | Day | 7.00 | 525.00 | 3675.00 |
| 9 | mazdoor | Day | 19.00 | 490.00 | 9310.00 |
| Total cost of Labour | | | | Rs: | 24944.60 |

| | |
|---|---------------|
| labour component/unit qty | 249.40 |
| Add contractor's profit and overhead charges | 13.615% 34.00 |
| labour component/unit qty (including contractor's profit) | 283.40 |

ABSTRACT:

| | | | | | |
|---|---------------|--|--|---------|---------------------|
| A. Cost of Materials | | | | | Rs: 7271.19 |
| B. Hire charges of Machinery | | | | | Rs: 24287.70 |
| C. Cost of Labour | | | | | Rs: 24944.60 |
| | | | | Total | Rs: 56503.49 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | 13.615% | Rs: 7692.95 |
| Total cost for | 100.00 cum | | | | Rs: 64196.44 |
| Rate per cum | (A+B+C+D)/100 | | | | Rs: 642.00 |

IRR-DAW-5-9

Providing and **constructing dry rubble rock-toe** with rubble and stone chips from **dump yard (Spoil Bank)** including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete **with initial lead upto 1 km and all lifts.**

Note: Useful rubble and stone chips will be issued at dump yard at the issue rate for usefull rubble / stone chips. Sorting out and breaking charges included in rate analysis.

DATA:

RATE ANALYSIS

UNIT :

100 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------------|------|----------|-------------|---------------------|
| 1 | Useful rubble (at dump yard) | cum | 100.00 | 181.00 | 18100.00 |
| 2 | Useful stone chips (at dump yard) | cum | 15.00 | 209.00 | 3135.00 |
| Total cost of Materials | | | | | Rs: 21235.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------|------|----------|-------------|---------------------|
| 1 | Shovel 0.85 cum | Hour | 2.00 | 1529.70 | 3059.40 |
| | Fuel / Energy charges | Hour | 2.00 | 1428.30 | 2856.60 |
| 2 | Tipper 5 cum | Hour | 6.00 | 404.90 | 2429.40 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| Total hire charges of Machinery | | | | | Rs: 11290.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------|------|----------|-------------|---------------------|
| 1 | Crew for Shovel | Hour | 2.00 | 304.20 | 608.40 |
| 2 | Crew for Tipper | Hour | 6.00 | 228.20 | 1369.20 |
| 3 | Mason Class-II | Day | 7.00 | 525.00 | 3675.00 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | Stone breaker | Day | 2.00 | 525.00 | 1050.00 |
| 7 | mazdoor | Day | 21.00 | 490.00 | 10290.00 |
| Total cost of Labour | | | | | Rs: 17632.60 |

| | |
|---|---------------|
| labour component/unit qty | 176.30 |
| Add contractor's profit and overhead charges | 13.615% 24.00 |
| labour component/unit qty (including contractor's profit) | 200.30 |

ABSTRACT:

| | | | | | |
|---|---------------|--|--|---------|---------------------|
| A. Cost of Materials | | | | | Rs: 21235.00 |
| B. Hire charges of Machinery | | | | | Rs: 11290.20 |
| C. Cost of Labour | | | | | Rs: 17632.60 |
| | | | | Total | Rs: 50157.80 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | 13.615% | Rs: 6828.98 |
| Total cost for | 100.00 cum | | | | Rs: 56986.78 |
| Rate per cum | (A+B+C+D)/100 | | | | Rs: 569.90 |

IRR-DAW-5-9-A

(New Item 1 -2020-21)

Providing and constructing dry rock pitching for groynes/platform using un-coursed rubble stone of size 300 mm thick from quarry to site of work including cost of all materials, machinery, labour charge hand picking un-coursed rubble stone to the designed profile with all leads and all lifts etc for **Above Water level**

DATA:

RATE ANALYSIS

UNIT :

100 cum**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------------------------|------|----------|-------------|---------------------|
| 1 | Un Coursed Rubble Stones at quarry | cum | 100.00 | 359.00 | 35900.00 |
| 2 | Stone Chips at Quarry | cum | 0.00 | 385.00 | 0.00 |
| Total cost of Materials | | | | | Rs: 35900.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|--|------|----------|-------------|---------------------|
| 1 | Shovel 0.85 cum for loading tipper at the worksite | Hour | 2.00 | 1529.70 | 3059.40 |
| | Fuel / Energy charges | Hour | 2.00 | 1428.30 | 2856.60 |
| 2 | Tipper 5 cum | Hour | 6.00 | 404.90 | 2429.40 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| Total hire charges of Machinery | | | | | Rs: 11290.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 2.00 | 304.20 | 608.40 |
| 2 | Crew for Tipper | Hour | 6.00 | 228.20 | 1369.20 |
| 3 | Mason Class-II | Day | 7.00 | 525.00 | 3675.00 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | Stone breaker | Day | 2.00 | 525.00 | 1050.00 |
| 6 | mazdoor | Day | 21.00 | 490.00 | 10290.00 |
| Total cost of Labour | | | | Rs: | 17632.60 |

| | |
|---|---------------|
| labour component/unit qty | 176.30 |
| Add contractor's profit and overhead charges | 13.615% 24.00 |
| labour component/unit qty (including contractor's profit) | 200.30 |

ABSTRACT:

| | | |
|--|----------------------|---------------------|
| A. Cost of Materials | Rs: | 35900.00 |
| B. Hire charges of Machinery | Rs: | 11290.20 |
| C. Cost of Labour | Rs: | 17632.60 |
| Total | Rs: | 64822.80 |
| D.Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 8825.62 |
| Total cost for | 100.00 cum | Rs: 73648.42 |
| Rate per cum | (A+B+C+D)/100 | Rs: 736.50 |

IRR-DAW-5-9-B
(New Item 2 -2020-21) Providing and constructing dry rock pitching for groynes using un-coursed rubble stone of size 300 mm thick and un-coursed rubble stone chips from quarry to site of work including cost of all materials,machinery, labour charge hand picking un-coursed rubble stone and chips to the designed profile with all leads and all lifts etc for **Below Water level.**

DATA:

RATE ANALYSISUNIT : **100 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|------------------------------------|------|----------|-------------|-----------------|
| 1 | Un Coursed Rubble Stones at quarry | cum | 100.00 | 359.00 | 35900.00 |
| 2 | Stone Chips at Quarry | cum | 0.00 | 385.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 35900.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|---|------|----------|-------------|-----------------|
| 1 | Shovel 0.85 cum for loading tipper at the | Hour | 2.00 | 1529.70 | 3059.40 |
| | Fuel / Energy charges | Hour | 2.00 | 1428.30 | 2856.60 |
| 2 | Tipper 5 cum | Hour | 6.00 | 404.90 | 2429.40 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| Total hire charges of Machinery | | | | Rs: | 11290.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------|------|----------|-------------|----------------|
| 1 | Crew for Shovel | Hour | 2.00 | 304.20 | 608.40 |
| 2 | Crew for Tipper | Hour | 6.00 | 228.20 | 1369.20 |
| Total cost of Labour | | | | Rs: | 1977.60 |

| | |
|---|--------------|
| labour component/unit qty | 19.80 |
| Add contractor's profit and overhead charges | 13.615% 2.70 |
| labour component/unit qty (including contractor's profit) | 22.50 |

ABSTRACT:

| | | |
|--|----------------------|---------------------|
| A. Cost of Materials | Rs: | 35900.00 |
| B. Hire charges of Machinery | Rs: | 11290.20 |
| C. Cost of Labour | Rs: | 1977.60 |
| Total | Rs: | 49167.80 |
| D.Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 6694.2 |
| Total cost for | 100.00 cum | Rs: 55862.00 |
| Rate per cum | (A+B+C+D)/100 | Rs: 558.60 |

IRR-DAW-5-10 Providing and **laying 30 cm diameter open jointed hume pipes with collars in rock-toe** for drainage including cost of all materials, machinery, labour etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **100 Rm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Hume pipe 300 mm dia.with collar | Rm | 100.00 | 571.00 | 57100.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 57100.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|--------------|------|----------|-------------|----------------|
| 1 | Mason CI- II | Day | 2 | 525.00 | 1050.00 |
| 2 | mazdoor | Day | 6 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 3990.00 |

labour component/unit qty 39.90

Add contractor's profit and overhead charges 13.615% 5.40

labour component/unit qty (including contractor's profit) **45.30****ABSTRACT:**

A. Cost of Materials

Rs: 57100.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 3990.00

Total

Rs: 61090.00

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 8317.4

Total cost for

100.00 Rm

Rs: **69407.40****Rate per Rm**

(A+B+C+D)/100

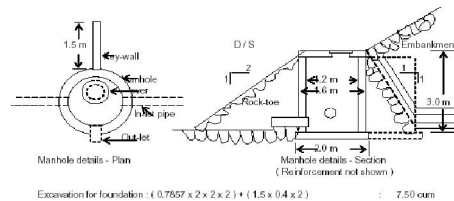
Rs: **694.10**

IRR_DAW-6

FILTER & PITCHING WORKS :

IRR-DAW-6-1

Providing and constructing **1.20 m internal diameter and average 3 m height RCC manhole** with 60 cm dia. top cover in **M-15** grade cement concrete using **20 mm down graded**, clean, hard coarse aggregate, 20 cm thick for bed / sides / top slab / 1.5 m long cut-off wall and 7.5 cm thick for cover including providing 12 mm dia reinforcement bars at 30 cm c / c bothways for bed / sides / cut-off wall / top slab / rungs and 8 mm dia bars at 15 cm c / c bothways for cover, excavation for foundation, providing 30 cm dia hume pipe outlet, cost of all materials, machinery, labour, formwork, scaffolding, batching, mixing, laying, vibrating, finishing, curing etc., complete with lead upto 1 km and all lifts.

(Cement content : 300 kg/cum , CA : 0.80 cum, Blending Ratio of CA -- 65:35,**FA : 0.44 cum, superplasticizer (0.4% by wt. of cement)**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT

1 Each

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement | kg | 1331.70 | 3.68 | 4900.66 |
| | Cement for incidentals @ 3 kg / cum | kg | 13.32 | 3.68 | 49.01 |
| 2 | Coarse aggregate 20 to 10 mm | cum | 2.31 | 1313.00 | 3030.77 |
| | Coarse aggregate 10 to 4.75 mm | cum | 1.24 | 967.00 | 1201.90 |
| 3 | Fine aggregate (Un-Screened) | cum | 1.95 | 605.00 | 1181.66 |
| 4 | Super plasticiser | kg | 23.65 | 55.00 | 1300.51 |
| 5 | Reinforcement steel with 5 % wastage | kg | 163.70 | 52.50 | 8593.99 |
| 6 | Binding wire | kg | 4.00 | 64.00 | 256.00 |
| 7 | Hume pipe 300 mm dia | Rm | 1.00 | 571.00 | 571.00 |
| 8 | Use rate of shuttering | sqm | 36.00 | 270.19 | 9726.84 |
| 9 | Scaffolding of shuttering @ | 5% | | | 486.34 |
| 10 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 31366.68 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|---------------|
| 1 | Concrete mixer 300 / 200 (ele) | Hour | 4.00 | 46.20 | 184.80 |
| | Fuel / Energy charges | Hour | 4.00 | 42.30 | 169.20 |
| 2 | Needle vibrator 40 mm dia (ele) | Hour | 4.00 | 7.20 | 28.80 |
| | Fuel / Energy charges | Hour | 4.00 | 8.50 | 34.00 |
| 3 | Pump 5 hp (ele) | Hour | 0.50 | 2.70 | 1.35 |
| | Fuel / Energy charges | Hour | 0.50 | 42.30 | 21.15 |
| 4 | Sundries | LS | 1.00 | 34.00 | 34.00 |
| Total hire charges of Machinery | | | | Rs: | 473.30 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Mason Cl- II | Day | 1.00 | 525.00 | 525.00 |
| 2 | Bar bender | Day | 1.00 | 700.00 | 700.00 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | mazdoor | | | | |
| | for excavation for foundation | Day | 2.00 | 490.00 | 980.00 |
| | for bar bending | Day | 1.00 | 490.00 | 490.00 |
| | for concreting | Day | 5.00 | 490.00 | 2450.00 |
| | for excavation for foundation | Day | 2.00 | 490.00 | 980.00 |
| | for concreting | Day | 4.00 | 490.00 | 1960.00 |
| | for curing | Day | 1.00 | 490.00 | 490.00 |
| 5 | Labour for shuttering | sqm | 36.00 | 120.75 | 4347.00 |
| Total cost of Labour | | | | Rs: | 13562.00 |

labour component/unit qty 13562.00

Add contractor's profit and overhead charges 13.615% 1846.50

labour component/unit qty (including contractor's profit) **15408.50****ABSTRACT:**

| | | |
|--|---------------|---------------------------------|
| A. Cost of Materials | Rs: | 31366.68 |
| B. Hire charges of Machinery | Rs: | 473.30 |
| C. Cost of Labour | Rs: | 13562.00 |
| | Rs: | 45401.98 |
| | Total | Rs: 6181.48 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 841.15 |
| Lead Charges for 1 Km for FA | 1.95 cum @ | 38.288255 Rs./Cum 74.78308814 |
| Lead Charges for 1 Km for CA | 3.55 cum @ | 36.924875 Rs./Cum 131.13 |
| Lead Charges for 1Km for Steel (including Loading and Unloading Charges) | 0.16 tonne @ | 231.888215 Rs./Tonn 37.95894135 |
| Total cost for | 1.00 Each | Rs: 51827.33 |
| Rate per | Each | Rs: 51827.30 |
| | (A+B+C+D)/1.0 | |

IRR-DAW-6-2

Providing and **constructing longitudinal and cross graded filter drains** using sand and 80-20 mm and 20 mm down graded aggregates satisfying specified filter criteria in layers as per specifications including cost of all materials, machinery, labour, laying to required slopes, compaction etc. complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

100 cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Fine aggregate (Un-Screened) | cum | 47.50 | 605.00 | 28737.50 |
| 2 | Coarse aggregate 80-40 mm | cum | 17.865 | 697.00 | 12451.91 |
| 3 | Coarse aggregate 40-20 mm | cum | 1.99 | 1265.00 | 2511.03 |
| 4 | Coarse aggregate 20-10 mm | cum | 24.49 | 1313.00 | 32152.09 |
| 5 | Coarse aggregate 10 mm down | cum | 8.16 | 967.00 | 7893.14 |
| Total cost of Materials | | | | Rs: | 83745.66 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 38.00 | 490.00 | 18620.00 |
| Total cost of Labour | | | | Rs: | 19260.00 |

labour component/unit qty 192.60

Add contractor's profit and overhead charges 13.615% 26.20

labour component/unit qty (including contractor's profit) **218.80****ABSTRACT:**

| | | |
|---|---------------|----------------------|
| A. Cost of Materials | Rs: | 83745.66 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 19260.00 |
| | Total | Rs: 103005.66 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 14024.22 |
| Total cost for | 100.00 cum | Rs: 117029.88 |
| Rate per | cum | Rs: 1170.30 |
| | (A+B+C+D)/100 | |

IRR-DAW-6-3

Providing and **constructing 1.40 m thick vertical or inclined graded filter media** consisting of 20 cm thick sand layers, 25 cm thick 20 mm down coarse aggregate layers and 50 cm thick 80-20 mm coarse aggregate layer using approved materials satisfying specified filter criteria as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

100 cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Fine aggregate (Un-Screened) | cum | 28.60 | 605.00 | 17303.00 |
| 2 | Coarse aggregate 80-40 mm | cum | 32.13 | 697.00 | 22394.61 |
| 3 | Coarse aggregate 40-20 mm | cum | 3.57 | 1265.00 | 4516.05 |
| 4 | Coarse aggregate 20-10 mm | cum | 28.13 | 1313.00 | 36928.13 |
| 5 | Coarse aggregate 10 mm down | cum | 8.93 | 967.00 | 8630.48 |
| Total cost of Materials | | | | Rs: | 89772.26 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 38.00 | 490.00 | 18620.00 |
| Total cost of Labour | | | | Rs: | 19260.00 |

labour component/unit qty 192.60
 Add contractor's profit and overhead charges 13.615% 26.20
 labour component/unit qty (including contractor's profit) **218.80**

ABSTRACT:

| | | |
|---|---------------|----------------------|
| A. Cost of Materials | Rs: | 89772.26 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 19260.00 |
| | Rs: | 109032.26 |
| D. Add for contractor's profit and overheads on (A+B+C) | Total 13.615% | Rs. 14844.74 |
| Total cost for | 100.00 cum | Rs: 123877.00 |
| Rate per cum | (A+B+C+D)/100 | Rs: 1238.80 |

IRR-DAW-6-4

Providing and constructing graded filter media below and behind rock-toe consisting of 20 cm thick sand, 25 cm thick 20 - 4.75 mm and 40 cm thick 80 - 20 mm size graded coarse aggregates satisfying filter criteria as per specifications including cost of all materials, labour, machinery, laying to required slope, compaction etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT

100 cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Fine aggregate (Un-Screened) | cum | 23.55 | 605.00 | 14247.75 |
| 2 | Coarse aggregate 80-40 mm | cum | 42.39 | 697.00 | 29545.83 |
| 3 | Coarse aggregate 40-20 mm | cum | 4.71 | 1265.00 | 5958.15 |
| 4 | Coarse aggregate 20-10 mm | cum | 22.05 | 1313.00 | 28951.65 |
| 5 | Coarse aggregate 10 mm down | cum | 7.35 | 967.00 | 7107.45 |
| Total cost of Materials | | | | Rs: | 85810.83 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 34.00 | 490.00 | 16660.00 |
| Total cost of Labour | | | | Rs: | 17300.00 |

labour component/unit qty 173.00
 Add contractor's profit and overhead charges 13.615% 23.60
 labour component/unit qty (including contractor's profit) **196.60**

ABSTRACT:

| | | | | | |
|---|--|----------------------|---------|-----|----------------|
| A. Cost of Materials | | | | Rs: | 85810.83 |
| B. Hire charges of Machinery | | | | Rs: | 0.00 |
| C. Cost of Labour | | | | Rs: | 17300.00 |
| | | | Total | Rs: | 103110.83 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | Rs: | 14038.54 |
| Total cost for | | 100.00 cum | | Rs: | 117149.37 |
| Rate per cum | | (A+B+C+D)/100 | | Rs: | 1171.50 |

IRR-DAW-6-4-A
(New Item2- 2011-12)

Providing and **constructing graded filter media below and behind rock-toe** consisting of 30 cm thick 80 - 20 mm size graded coarse aggregates satisfying filter criteria as per specifications including cost of all materials, labour, machinery, laying to required slope, compaction etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT

100 cum

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-----------------------------|------|----------|-------------|---------------|
| 1 | Coarse aggregate 80-40 mm | cum | 35.00 | 697.00 | 24395.00 |
| 2 | Coarse aggregate 40-20 mm | cum | 55.00 | 1265.00 | 69575.00 |
| 3 | Coarse aggregate 20-10 mm | cum | 5.00 | 1313.00 | 6565.00 |
| 4 | Coarse aggregate 10 mm down | cum | 5.00 | 967.00 | 4835.00 |
| Total cost of Materials | | | | | Rs: 105370.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | | Rs: 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|--------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 12.00 | 490.00 | 5880.00 |
| Total cost of Labour | | | | | Rs: 6520.00 |

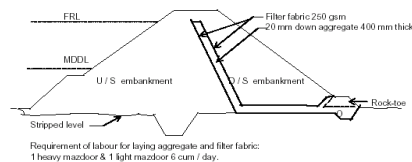
| | |
|---|--------------|
| labour component/unit qty | 65.20 |
| Add contractor's profit and overhead charges | 13.615% 8.90 |
| labour component/unit qty (including contractor's profit) | 74.10 |

ABSTRACT:

| | | | | | |
|---|--|----------------------|---------|-----|----------------|
| A. Cost of Materials | | | | Rs: | 105370.00 |
| B. Hire charges of Machinery | | | | Rs: | 0.00 |
| C. Cost of Labour | | | | Rs: | 6520.00 |
| | | | Total | Rs: | 111890.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | Rs: | 15233.82 |
| Total cost for | | 100.00 cum | | Rs: | 127123.82 |
| Rate per cum | | (A+B+C+D)/100 | | Rs: | 1271.20 |

IRR-DAW-6-5

Providing and **laying filter media consisting of 2 layers of 250 gsm poly-propeline non-woven filter fabric and 400 mm thick 20 mm down graded coarse aggregate** for vertical / inclined and horizontal filter blanket for embankment including cost of all materials, machinery, labour etc., complete **with lead upto 50 m for aggregate and all leads for fabric and all lifts.**



DATA:

RATE ANALYSIS

| A. MATERIALS: | | UNIT : | | 100 sqm | |
|-------------------------|--------------------------|--------|----------|----------------|-----------------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | PP filter fabric 250 gsm | sqm | 220.00 | 122.00 | 26840.00 |
| 2 | 20 - 10 mm CA @ 75 % | cum | 30.00 | 1313.00 | 39390.00 |
| | 10 mm down CA @ 25 % | cum | 10.00 | 967.00 | 9670.00 |
| Total cost of Materials | | | | Rs: | 75900.00 |

| B. MACHINERY: | | UNIT : | | 100 sqm | |
|---------------------------------|-------------|--------|----------|----------------|--------------|
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

| C. LABOUR: | | UNIT : | | 100 sqm | |
|----------------------|----------------|--------|----------|----------------|----------------|
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 14.00 | 490.00 | 6860.00 |
| Total cost of Labour | | | | Rs: | 7500.00 |

labour component/unit qty 75.00
 Add contractor's profit and overhead charges 13.615% 10.20
 labour component/unit qty (including contractor's profit) **85.20**

ABSTRACT:

| | | |
|---|----------------------|---------------------|
| A. Cost of Materials | Rs: | 75900.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 7500.00 |
| | Total | Rs: 83400.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 11354.91 |
| Total cost for | 100.00 sqm | Rs: 94754.91 |
| Rate per sqm | (A+B+C+D)/100 | Rs: 947.50 |

IRR-DAW-6-6

Providing and **constructing 45 cm thick chimney filter** using clean approved sand satisfying filter criteria including cost of all materials, machinery, labour, compacting etc., complete with **initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

| A. MATERIALS: | | UNIT : | | 100 cum | |
|-------------------------|--------------------|--------|----------|----------------|-----------------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Sand (Un-Screened) | cum | 105.00 | 605.00 | 63525.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 63525.00 |

| B. MACHINERY: | | UNIT : | | 100 cum | |
|---------------------------------|-------------|--------|----------|----------------|--------------|
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

| C. LABOUR: | | UNIT : | | 100 cum | |
|----------------------|----------------|--------|----------|----------------|-----------------|
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 30.00 | 490.00 | 14700.00 |
| Total cost of Labour | | | | Rs: | 15340.00 |

labour component/unit qty 153.40
 Add contractor's profit and overhead charges 13.615% 20.90
 labour component/unit qty (including contractor's profit) **174.30**

ABSTRACT:

| | | |
|---|----------------------|---------------------|
| A. Cost of Materials | Rs: | 63525.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 15340.00 |
| | Total | Rs: 78865.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 10737.47 |
| Total cost for | 100.00 cum | Rs: 89602.47 |
| Rate per cum | (A+B+C+D)/100 | Rs: 896.00 |

IRR-DAW-6-7

Providing and **constructing 90 cm thick transition cum filter media behind rockfill** using approved sand and 80-20 mm and 20 mm down graded aggregates satisfying the filter criteria in layers of 30 cm thickness each as per specifications including cost of all materials, machinery, labour, laying each layer to required slope, compaction etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS

| A. MATERIALS: | | | UNIT : | | 100 cum. |
|-------------------------|-----------------------------|------|----------|-------------|-----------------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Sand (Un-Screened) | cum | 34.00 | 605.00 | 20570.00 |
| 2 | Coarse aggregate 80-40 mm | cum | 30.60 | 697.00 | 21328.20 |
| 3 | Coarse aggregate 40-20 mm | cum | 3.40 | 1265.00 | 4301.00 |
| 4 | Coarse aggregate 20-10 mm | cum | 25.50 | 1313.00 | 33481.50 |
| 5 | Coarse aggregate 10 mm down | cum | 8.50 | 967.00 | 8219.50 |
| Total cost of Materials | | | | Rs: | 87900.20 |

| B. MACHINERY: | | | | | |
|---------------------------------|-------------|------|----------|-------------|--------------|
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

| C. LABOUR: | | | | | |
|----------------------|----------------|------|----------|-------------|-----------------|
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 40.00 | 490.00 | 19600.00 |
| Total cost of Labour | | | | Rs: | 20240.00 |

| | |
|---|---------------|
| labour component/unit qty | 202.40 |
| Add contractor's profit and overhead charges | 13.615% 27.60 |
| labour component/unit qty (including contractor's profit) | 230.00 |

ABSTRACT:

| | | |
|---|---------------|----------------------|
| A. Cost of Materials | Rs: | 87900.20 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 20240.00 |
| | Rs: | 108140.20 |
| | Total | |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 14723.29 |
| Total cost for | 100.00 cum. | Rs: 122863.49 |
| Rate per cum. | (A+B+C+D)/100 | Rs: 1228.60 |

IRR-DAW-6-8

Providing and **constructing 60 cm thick hand packed rough stone revetment** with 65 to 75 cm long through stones at 1.50 m c / c over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size approved graded aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS

| A. MATERIALS: | | | UNIT : | | 100 sqm |
|-------------------------|--|------|----------|-------------|-----------------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Sand (Un-Screened) | cum | 15.30 | 605.00 | 9256.50 |
| 2 | Coarse aggregate 10 mm down | cum | 15.30 | 967.00 | 14795.10 |
| 3 | Coarse aggregate 40-20 mm | cum | 15.30 | 1265.00 | 19354.50 |
| 4 | Stone chips | cum | 9.00 | 385.00 | 3465.00 |
| 5 | Rough stones (rubble) 30 to 45 cm long | cum | 57.60 | 359.00 | 20678.40 |
| 6 | Through stones 65 to 75 cm long | Nos | 44.00 | 65.00 | 2860.00 |
| Total cost of Materials | | | | Rs: | 70409.50 |

| B. MACHINERY: | | | | | |
|---------------------------------|-------------|------|----------|-------------|--------------|
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class-II | Day | 10.00 | 525.00 | 5250.00 |
| 3 | mazdoor | Day | 33.00 | 490.00 | 16170.00 |
| Total cost of Labour | | | | Rs: | 22060.00 |

| | |
|---|---------------|
| labour component/unit qty | 220.60 |
| Add contractor's profit and overhead charges | 13.615% 30.00 |
| labour component/unit qty (including contractor's profit) | 250.60 |

ABSTRACT:

| | | |
|---|---------------|----------------------|
| A. Cost of Materials | Rs: | 70409.50 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 22060.00 |
| | Rs: | 92469.50 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 12589.72 |
| Total cost for | 100.00 sqm | Rs: 105059.22 |
| Rate per sqm | (A+B+C+D)/100 | Rs: 1050.60 |

IRR-DAW-6-9

Providing and **constructing 60 cm thick hand packed rough stone revetment** with 65 to 75 cm long through stones at 1.50 m c / c over a backing of 60 cm thick graded filter media consisting of sand, 10 mm and 40 mm size approved graded aggregates laid in layers of 20 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with chips, finishing etc. complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT :

100 sqm

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|--|------|----------|-------------|-----------------|
| 1 | Sand (Un-Screened) | cum | 20.40 | 605.00 | 12342.00 |
| 2 | Coarse aggregate 10 mm down | cum | 20.40 | 967.00 | 19726.80 |
| 3 | Coarse aggregate 40-20 mm | cum | 20.40 | 1265.00 | 25806.00 |
| 4 | Stone chips | cum | 9.00 | 385.00 | 3465.00 |
| 5 | Rough stones (rubble) 30 to 45 cm long | cum | 57.60 | 359.00 | 20678.40 |
| 6 | Through stones 65 to 75 cm long | Nos | 44.00 | 65.00 | 2860.00 |
| Total cost of Materials | | | | Rs: | 84878.20 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class-II | Day | 10.00 | 525.00 | 5250.00 |
| 3 | mazdoor | Day | 39.00 | 490.00 | 19110.00 |
| Total cost of Labour | | | | Rs: | 25000.00 |

| | |
|---|---------------|
| labour component/unit qty | 250.00 |
| Add contractor's profit and overhead charges | 13.615% 34.00 |
| labour component/unit qty (including contractor's profit) | 284.00 |

ABSTRACT:

| | | |
|---|---------------|----------------------|
| A. Cost of Materials | Rs: | 84878.20 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 25000.00 |
| | Rs: | 109878.20 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 14959.92 |
| Total cost for | 100.00 sqm | Rs: 124838.12 |
| Rate per sqm | (A+B+C+D)/100 | Rs: 1248.40 |

IRR-DAW-6-10

Providing and **constructing 60 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media** consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

| A. MATERIALS: | | UNIT : | | 100 sqm. | |
|-------------------------|-----------------------------|--------|----------|-------------|-----------------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Sand (Un-Screened) | cum | 15.30 | 605.00 | 9256.50 |
| 2 | Coarse aggregate 10 mm down | cum | 15.30 | 967.00 | 14795.10 |
| 3 | Coarse aggregate 40-20 mm | cum | 15.30 | 1265.00 | 19354.50 |
| 4 | Stone chips | cum | 9.00 | 385.00 | 3465.00 |
| 5 | Rough stones (rubble) | cum | 60.00 | 359.00 | 21540.00 |
| Total cost of Materials | | | | Rs: | 68411.10 |

| B. MACHINERY: | | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

| C. LABOUR: | | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class-II | Day | 5.00 | 525.00 | 2625.00 |
| 3 | mazdoor | Day | 28.00 | 490.00 | 13720.00 |
| Total cost of Labour | | | | Rs: | 16985.00 |

labour component/unit qty 169.90
 Add contractor's profit and overhead charges 13.615% 23.10
 labour component/unit qty (including contractor's profit) **193.00**

ABSTRACT:

| | | |
|---|---------|---------------------|
| A. Cost of Materials | Rs: | 68411.10 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 16985.00 |
| | Rs: | 85396.10 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 11626.68 |
| Total cost for 100.00 sqm. | | Rs: 97022.78 |
| Rate per sqm. (A+B+C+D)/100 | | Rs: 970.20 |

IRR-DAW-6-11

Providing and **constructing 75 cm thick hand packed rough stone riprap** over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips, etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

| A. MATERIALS: | | UNIT : | | 100 sqm | |
|-------------------------|-----------------------------|--------|----------|-------------|-----------------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Sand (Un-Screened) | cum | 15.30 | 605.00 | 9256.50 |
| 2 | Coarse aggregate 10 mm down | cum | 15.30 | 967.00 | 14795.10 |
| 3 | Coarse aggregate 40-20 mm | cum | 15.30 | 1265.00 | 19354.50 |
| 4 | Stone chips | cum | 11.00 | 385.00 | 4235.00 |
| 5 | Rough stones (rubble) | cum | 75.00 | 359.00 | 26925.00 |
| Total cost of Materials | | | | Rs: | 74566.10 |

| B. MACHINERY: | | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

| C. LABOUR: | | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class-II | Day | 6.00 | 525.00 | 3150.00 |
| 3 | mazdoor | Day | 30.00 | 490.00 | 14700.00 |
| Total cost of Labour | | | | Rs: | 18490.00 |

labour component/unit qty 184.90
 Add contractor's profit and overhead charges 13.615% 25.20
 labour component/unit qty (including contractor's profit) **210.10**

ABSTRACT:

| | | | | | |
|---|------------|---------------|---------|-----|------------------|
| A. Cost of Materials | | | | Rs: | 74566.10 |
| B. Hire charges of Machinery | | | | Rs: | 0.00 |
| C. Cost of Labour | | | | Rs: | 18490.00 |
| | | | Total | Rs: | 93056.10 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | Rs: | 12669.59 |
| Total cost for | 100.00 sqm | | | Rs: | 105725.69 |
| Rate per | sqm | (A+B+C+D)/100 | | Rs: | 1057.30 |

IRR-DAW-6-12

Providing and **constructing 90 cm thick hand packed rough stone riprap over a backing of 45 cm thick graded filter media** consisting of sand, 10 mm and 40 mm size graded approved aggregates laid in layers of 15 cm thick each including cost of all materials, machinery, labour, laying to required slopes, wedging with stone chips etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT : 100 sqm

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-----------------------------|------|----------|-------------|-----------------|
| 1 | Sand (Un-Screened) | cum | 15.30 | 605.00 | 9256.50 |
| 2 | Coarse aggregate 10 mm down | cum | 15.30 | 967.00 | 14795.10 |
| 3 | Coarse aggregate 40-20 mm | cum | 15.30 | 1265.00 | 19354.50 |
| 4 | Stone chips | cum | 13.50 | 385.00 | 5197.50 |
| 5 | Rough stones (rubble) | cum | 90.00 | 359.00 | 32310.00 |
| Total cost of Materials | | | | Rs: | 80913.60 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class-II | Day | 8.00 | 525.00 | 4200.00 |
| 3 | mazdoor | Day | 34.00 | 490.00 | 16660.00 |
| Total cost of Labour | | | | Rs: | 21500.00 |

| | |
|---|---------------|
| labour component/unit qty | 215.00 |
| Add contractor's profit and overhead charges | 13.615% 29.30 |
| labour component/unit qty (including contractor's profit) | 244.30 |

ABSTRACT:

| | | | | | |
|---|------------|---------------|---------|-----|------------------|
| A. Cost of Materials | | | | Rs: | 80913.60 |
| B. Hire charges of Machinery | | | | Rs: | 0.00 |
| C. Cost of Labour | | | | Rs: | 21500.00 |
| | | | Total | Rs: | 102413.60 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | Rs: | 13943.61 |
| Total cost for | 100.00 sqm | | | Rs: | 116357.21 |
| Rate per | sqm | (A+B+C+D)/100 | | Rs: | 1163.60 |

IRR-DAW-6-13

Providing and **laying Hariyala or other approved quality turfing sods** for the slopes of earthen embankments over 20 mm thick sand backing including cost of all materials, machinery, labour including preparing surface, spreading sand, watering for 15 days etc., **complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS**A. MATERIALS:**

UNIT : 100 sqm.

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
|-------------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Sand for filling | cum | 2.00 | 460.00 | 920.00 |
| 2 | Hariyala turfing sods | sqm | 100.00 | 28.00 | 2800.00 |
| Total cost of Materials | | | | Rs: | 3720.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-------------|------|----------|-------------|--------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------------------------|------|----------|-------------|----------------|
| 1 | Cartman with double bullock cart | Day | 2.00 | 585.00 | 1170.00 |
| 2 | mazdoor | Day | 15.00 | 490.00 | 7350.00 |
| Total cost of Labour | | | | Rs: | 8520.00 |

labour component/unit qty

85.20

Add contractor's profit and overhead charges

13.615% 11.60

labour component/unit qty (including contractor's profit)

96.80**ABSTRACT:**

A. Cost of Materials

Rs: 3720.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 8520.00

Total

Rs: 12240.00

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs. 1666.48

Lead Charges for 1 Km for FA

2.00 cum @

38.288255 Rs./Cum 76.57651

Total cost for

100.00 sqm.

Rs: **13983.06****Rate per sqm.**

(A+B+C+D)/100

Rs: **139.80**

Chapter - II

TUNNEL AND ALLIED WORKS - Standard Data

(WLL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)
FOR THE YEAR :2021-22

Index- code**TUNNEL AND ALLIED WORKS - DATA RATES**

IRR-TAW

Directions to add Seigniorage Charges and Additional Lead Charges**Seigniorage Charges:**

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic rates are inclusive of all lifts.
2. For concrete, masonry and reinforcement items **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:
Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.
In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again

Example:

| | | |
|---|-----|-----------|
| Total lead for sand from approved sand quarry : | | 15 Km |
| Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) : | | 1 Km |
| Additional lead charges : Lead charges for 5 km | Rs. | 102.14 |
| Lead charges for next 10 km | Rs. | 153.38025 |
| Total lead charges for 15 km /cum | Rs. | 255.52 |
| Less 1 km initial lead charges /cum | Rs. | 38.29 (-) |
| Net additional lead charges / cum | Rs. | 217.23 |

3. The Leads for Steel shall be from the nearest market place to the Project area

4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:

Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item. (same as above)

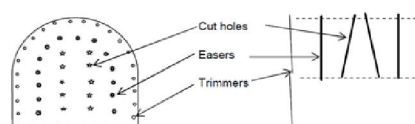
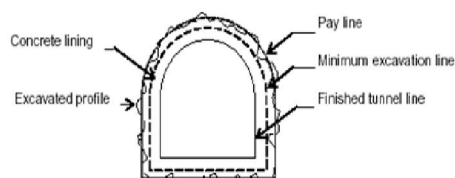
Example:

| | | |
|---|-----|-----------|
| Total lead for earth from approved borrow area : | | 15 Km |
| Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) : | | 1 Km |
| Additional lead charges : Lead charges for 5 km | Rs. | 102.14 |
| Lead charges for next 10 km | Rs. | 153.38025 |
| Total lead charges for 15 km /cum | Rs. | 255.52 |
| Less 1 km initial lead charges /cum | Rs. | 38.29 (-) |
| Net additional lead charges / cum | Rs. | 217.23 |

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area. For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

TAW -Work Items**IRR-TAW-1 EXCAVATION :**

- IRR-TAW-1-1 **Excavation for adit by tunnelling methods in all types of rock** including cost of all materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage, removing and hauling the excavated muck outside adit upto specified dump area and all other ancillary operations etc., complete **with initial lead upto 1km and all lifts.**



TYPICAL DRILLING PATTERN FOR ADIT / TUNNEL

DATA:

RATE ANALYSISUNIT : **38.50 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|----------------|
| 1 | Small dia explosive | kg | 40.00 | 69.00 | 2760.00 |
| 2 | Delay detonators | Nos | 54.00 | 20.00 | 1080.00 |
| 3 | Electric detonators | Nos | 5.00 | 10.00 | 50.00 |
| 4 | Detonating fuse coil | Rm | 50.00 | 8.00 | 400.00 |
| 5 | Use rate of drill rod 2.5 m long | Rm | 119.00 | 38.93 | 4633.07 |
| | Reconditioning charges @ 10% | | | | 463.31 |
| 6 | Use rate of air hose | Hour | 20.00 | 5.50 | 110.00 |
| 7 | Use rate of water hose | Hour | 20.00 | 5.56 | 111.25 |
| 8 | Sundries(paint / template etc) | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 9675.62 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Drilling jumbo | Hour | 8.00 | 335.30 | 2682.40 |
| | Fuel / Energy charges | Hour | 8.00 | 70.10 | 560.80 |
| 2 | Air compressor 15 cmm (ele) | Hour | 5.00 | 115.20 | 576.00 |
| | Fuel / Energy charges | Hour | 5.00 | 1057.50 | 5287.50 |
| 3 | Jack hammer (4 x 5 hrs) | Hour | 20.00 | 17.30 | 346.00 |
| | Fuel / Energy charges | Hour | 20.00 | 0.00 | 0.00 |
| 4 | Pusher leg | Hour | 20.00 | 11.90 | 238.00 |
| | Fuel / Energy charges | Hour | 20.00 | 0.00 | 0.00 |
| 5 | Convey mucker | Hour | 6.50 | 722.90 | 4698.85 |
| | Fuel / Energy charges | Hour | 6.50 | 294.40 | 1913.60 |
| 6 | Dumper (1 x 6.5 hrs) | Hour | 6.50 | 531.00 | 3451.50 |
| | Fuel / Energy charges | Hour | 6.50 | 654.40 | 4253.60 |
| 7 | Pump 10 hp (ele) | Hour | 5.00 | 5.90 | 29.50 |
| | Fuel / Energy charges | Hour | 5.00 | 84.60 | 423.00 |
| 8 | Ventilation fans 20 hp | Hour | 1.00 | 11.30 | 11.30 |
| | Fuel / Energy charges | Hour | 1.00 | 169.20 | 169.20 |
| 9 | Sundries(explosive van / magazine) | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 24709.25 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Drilling jumbo | Hour | 8.00 | 228.80 | 1830.40 |
| 2 | Crew for Air compressor | Hour | 5.00 | 228.80 | 1144.00 |
| 3 | Crew for Jack hammer | Hour | 20.00 | 429.00 | 8580.00 |
| 4 | Crew for Convey mucker | Hour | 6.50 | 228.80 | 1487.20 |
| 5 | Crew for Dumper | Hour | 6.50 | 292.00 | 1898.00 |
| 6 | Crew for Pump | Hour | 5.00 | 107.60 | 538.00 |
| 7 | Crew for ventilation fans | Hour | 1.00 | 37.10 | 37.10 |
| 8 | Surveyor | Day | 0.50 | 910.00 | 455.00 |
| 9 | Foreman | Day | 1.00 | 645.00 | 645.00 |
| 10 | Fitter / Mechanic | Day | 2.00 | 590.00 | 1180.00 |
| 11 | Blaster (Licensed) | Day | 1.00 | 645.00 | 645.00 |
| 12 | Helper blasting | Day | 2.00 | 525.00 | 1050.00 |
| 13 | Hammerman | Day | 2.00 | 525.00 | 1050.00 |
| 14 | work inspector 1 in each shift | Day | 3.00 | 640.00 | 1920.00 |
| 15 | Khalasi for mucking shift 4 Nos | Day | 4.00 | 575.00 | 2300.00 |
| 16 | mazdoor | | | | |
| | for mucking shift 4 Nos | Day | 4.00 | 490.00 | 1960.00 |
| | for other 2 shifts 1 No each shift | Day | 2.00 | 490.00 | 980.00 |
| | for cleaning & miscellaneous | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 28679.70 |

labour component/unit qty

744.90

Add contractor's profit and overhead charges

13.615% 101.40

labour component/unit qty (including contractor's profit)

846.30

ABSTRACT:

| | | | |
|---|------------------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 9675.62 |
| B. Hire charges of Machinery | | Rs: | 24709.25 |
| C. Cost of Labour | | Rs: | 28679.70 |
| | Total | Rs: | 63064.57 |
| Add for Air and Water line @ | 1.00% | Rs: | 630.65 |
| Add for Ventilation @ | 4.50% | Rs: | 2837.91 |
| Add for Lighting @ | 1.60% | Rs: | 1009.03 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 1576.61 |
| | Total | Rs: | 69118.77 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 9410.52 |
| Total cost for | 38.50 cum | Rs: | 78529.29 |
| Rate per cum | (A+B+C+D)/38.50 | Rs: | 2039.70 |

IRR-TAW-1-2 **Excavation for vertical / inclined shaft in all types of soft / hard rock** including cost of all materials, machinery, labour, shoring, strutting, scaling excavated surface, ventilation, lighting, drainage, removing and hauling excavated muck outside shaft upto specified dump area and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**

DATA

RATE ANALYSISUNIT : **30.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------------------------|----------------------------------|-------|----------|-------------|----------------|
| 1 | Small dia explosive | kg | 32.00 | 69.00 | 2208.00 |
| 2 | Electric detonator | Nos | 65.00 | 10.00 | 650.00 |
| 3 | Detonating fuse coil | Rm | 50.00 | 8.00 | 400.00 |
| 4 | Use rate of drill rod 1.6 m long | Rm | 95.00 | 26.01 | 2471.27 |
| 5 | Reconditioning charges @ | 10% | | | 247.13 |
| 6 | Use rate of air hose | Hour | 18.00 | 22.00 | 396.00 |
| 7 | Use rate of water hose | Hour | 16.00 | 22.25 | 356.00 |
| 8 | Use rate of rail track | Shift | 3.00 | 131.04 | 393.12 |
| 9 | Use rate of mucking bucket | Hour | 24.00 | 28.65 | 687.70 |
| 10 | Sundries(paint / template etc) | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 7877.21 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Air compressor 15 cmm (ele) | Hour | 4.50 | 115.20 | 518.40 |
| | Fuel / Energy charges | Hour | 4.50 | 1057.50 | 4758.75 |
| 2 | Jack hammer (4 x 4 hrs) | Hour | 16.00 | 17.30 | 276.80 |
| | Fuel / Energy charges | Hour | 16.00 | 0.00 | 0.00 |
| 3 | Pump 10 hp (ele) | Hour | 4.00 | 5.90 | 23.60 |
| | Fuel / Energy charges | Hour | 4.00 | 84.60 | 338.40 |
| 4 | Pump 20 hp electric | Hour | 2.00 | 11.20 | 22.40 |
| | Fuel / Energy charges | Hour | 2.00 | 169.20 | 338.40 |
| 5 | Winch 35 hp electric | Hour | 28.00 | 123.80 | 3466.40 |
| | Fuel / Energy charges | Hour | 28.00 | 207.30 | 5804.40 |
| 6 | Tipping tub 1.5 cum | Hour | 24.00 | 57.90 | 1389.60 |
| | Fuel / Energy charges | Hour | 24.00 | 0.00 | 0.00 |
| 7 | Sundries(explosive van / magazine) | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 17005.15 |

C. LABOUR:

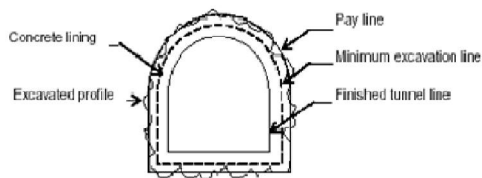
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Air compressor | Hour | 4.50 | 228.80 | 1029.60 |
| 2 | Crew for Jack hammer | Hour | 16.00 | 429.00 | 6864.00 |
| 3 | Crew for Pump 10 hp | Hour | 4.00 | 107.60 | 430.40 |
| 4 | Crew for Pump 20 hp | Hour | 2.00 | 107.60 | 215.20 |
| 5 | Crew for Winch | Hour | 28.00 | 343.20 | 9609.60 |
| 6 | Surveyor | Day | 0.50 | 910.00 | 455.00 |
| 7 | Foreman | Day | 4.00 | 645.00 | 2580.00 |
| 8 | Fitter / Mechanic | Day | 2.00 | 590.00 | 1180.00 |
| 9 | Blaster (Licensed) | Day | 1.00 | 645.00 | 645.00 |
| 10 | Helper blasting | Day | 2.00 | 525.00 | 1050.00 |
| 11 | Hammerman 1 No. in each shift | Day | 3.00 | 525.00 | 1575.00 |
| 12 | work inspector 1 in each shift | Day | 4.00 | 640.00 | 2560.00 |
| 13 | Khalasi for mucking 2 Nos in each shift | Day | 6.00 | 575.00 | 3450.00 |
| 14 | mazdoor | | | | |
| | for mucking 8 Nos in each shift | Day | 24.00 | 490.00 | 11760.00 |
| | for other 2 shifts 1 No / shift | Day | 2.00 | 490.00 | 980.00 |
| | for cleaning & miscellaneous | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 45363.80 |

| | |
|---|----------------|
| labour component/unit qty | 1512.10 |
| Add contractor's profit and overhead charges | 13.615% 205.90 |
| labour component/unit qty (including contractor's profit) | 1718.00 |

ABSTRACT:

| | | | |
|---|----------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 7877.21 |
| B. Hire charges of Machinery | | Rs: | 17005.15 |
| C. Cost of Labour | | Rs: | 45363.80 |
| | Total | Rs: | 70246.16 |
| Add for Air and Water line @ | 1.00% | Rs: | 702.46 |
| Add for Ventilation @ | 4.50% | Rs: | 3161.08 |
| Add for Lighting @ | 1.60% | Rs: | 1123.94 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 1756.15 |
| | Total | Rs: | 76989.80 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 10482.16 |
| Total cost for | 30.00 cum | Rs: | 87471.96 |
| Rate per cum | (A+B+C+D)/30.0 | Rs: | 2915.70 |

IRR-TAW-1-3 **Excavation for tunnel by tunnelling methods in rock not requiring supports** including cost of all materials, machinery, labour, scaling excavated surface, removing under-cuts, ventilation, lighting, drainage, removing and hauling the excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**



TYPICAL CROSS SECTION OF TUNNEL 4.50 m dia.

DATA:

RATE ANALYSISUNIT : **48.60 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|----------------|------------------|
| 1 | Small dia explosive | kg | 54.00 | 69.00 | 3726.00 |
| 2 | Delay detonators | Nos | 68.00 | 20.00 | 1360.00 |
| 3 | Electric detonators | Nos | 10.00 | 10.00 | 100.00 |
| 4 | Detonating fuse coil | Rm | 50.00 | 8.00 | 400.00 |
| 5 | Use rate of drill rod 2.5 m long | Rm | 150.00 | 38.93 | 5840.00 |
| | Reconditioning charges @ | 10% | | | 584.00 |
| 6 | Use rate of air hose | Hour | 24.00 | 5.50 | 132.00 |
| 7 | Use rate of water hose | Hour | 24.00 | 5.56 | 133.50 |
| 8 | Sundries(paint / template etc) | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 12343.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------------|------|----------|----------------|------------------|
| 1 | Drilling jumbo | Hour | 10.00 | 335.30 | 3353.00 |
| | Fuel / Energy charges | Hour | 10.00 | 70.10 | 701.00 |
| 2 | Air compressor 15 cmm (ele) | Hour | 6.50 | 115.20 | 748.80 |
| | Fuel / Energy charges | Hour | 6.50 | 1057.50 | 6873.75 |
| 3 | Jack hammer (4 x 6.5 hrs) | Hour | 26.00 | 17.30 | 449.80 |
| | Fuel / Energy charges | Hour | 26.00 | 0.00 | 0.00 |
| 4 | Pusher leg | Hour | 26.00 | 11.90 | 309.40 |
| | Fuel / Energy charges | Hour | 26.00 | 0.00 | 0.00 |
| 5 | Convey mucker | Hour | 6.00 | 722.90 | 4337.40 |
| | Fuel / Energy charges | Hour | 6.00 | 294.40 | 1766.40 |
| 6 | Dumper (2 x 6 hrs) | Hour | 12.00 | 531.00 | 6372.00 |
| | Fuel / Energy charges | Hour | 12.00 | 654.40 | 7852.80 |
| 7 | Pump 10 hp (ele) | Hour | 6.50 | 5.90 | 38.35 |
| | Fuel / Energy charges | Hour | 6.50 | 84.60 | 549.90 |
| 8 | Ventilation fans 20 hp | Hour | 2.00 | 11.30 | 22.60 |
| | Fuel / Energy charges | Hour | 2.00 | 169.20 | 338.40 |
| 9 | Sundries(explosive van / magazine) | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 33781.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Drilling jumbo | Hour | 10.00 | 228.80 | 2288.00 |
| 2 | Crew for Air compressor | Hour | 6.50 | 228.80 | 1487.20 |
| 3 | Crew for Jack hammer | Hour | 26.00 | 429.00 | 11154.00 |
| 4 | Crew for Convey mucker | Hour | 6.00 | 228.80 | 1372.80 |
| 5 | Crew for Dumper | Hour | 12.00 | 292.00 | 3504.00 |
| 6 | Crew for Pump | Hour | 6.50 | 107.60 | 699.40 |
| 7 | Crew for ventilation fans | Hour | 2.00 | 37.10 | 74.20 |
| 8 | Surveyor | Day | 0.50 | 910.00 | 455.00 |
| 9 | Foreman | Day | 1.00 | 645.00 | 645.00 |
| 10 | Fitter / Mechanic | Day | 2.00 | 590.00 | 1180.00 |
| 11 | Blaster (Licensed) | Day | 1.00 | 645.00 | 645.00 |
| 12 | Helper blasting | Day | 2.00 | 525.00 | 1050.00 |
| 13 | Hammerman | Day | 2.00 | 525.00 | 1050.00 |
| 14 | work inspector 1 in each shift | Day | 3.00 | 640.00 | 1920.00 |
| 15 | Khalasi for mucking shift 4 Nos | Day | 4.00 | 575.00 | 2300.00 |
| 16 | mazdoor | | | | |
| | for mucking shift 8 Nos | Day | 8.00 | 490.00 | 3920.00 |
| | for other 2 shifts 1 No each shift | Day | 2.00 | 490.00 | 980.00 |
| | for cleaning & miscellaneous | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 35704.60 |

| | |
|---|----------------|
| labour component/unit qty | 734.70 |
| Add contractor's profit and overhead charges | 13.615% 100.00 |
| labour component/unit qty (including contractor's profit) | 834.70 |

ABSTRACT:

| | | |
|---|-----------------|----------------------|
| A. Cost of Materials | Rs: | 12343.50 |
| B. Hire charges of Machinery | Rs: | 33781.60 |
| C. Cost of Labour | Rs: | 35704.60 |
| | Total | Rs: 81829.70 |
| Add for Air and Water line @ | 1.00% | Rs: 818.30 |
| Add for Ventilation @ | 4.50% | Rs: 3682.34 |
| Add for Lighting @ | 1.60% | Rs: 1309.28 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: 2045.74 |
| | Total | Rs: 89685.35 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: 12210.66 |
| Total cost for | 48.60 cum | Rs: 101896.01 |
| Rate per cum | (A+B+C+D)/48.60 | Rs: 2096.60 |

IRR-TAW-1-4 **Excavation for tunnel by tunnelling methods including excavation for supports in all types of soil / rock strata requiring supports (excluding cost of providing supports)** including cost of all other materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage, removing and hauling the excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **46.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Small dia explosive | kg | 41.00 | 69.00 | 2829.00 |
| 2 | Delay detonators | Nos | 77.00 | 20.00 | 1540.00 |
| 3 | Electric detonators | Nos | 10.00 | 10.00 | 100.00 |
| 4 | Detonating fuse coil | Rm | 50.00 | 8.00 | 400.00 |
| 5 | Use rate of drill rod 2.5 m long | Rm | 144.00 | 38.93 | 5606.40 |
| | Reconditioning charges @ 10% | | | | 560.64 |
| 6 | Use rate of air hose | Hour | 24.00 | 5.50 | 132.00 |
| 7 | Use rate of water hose | Hour | 24.00 | 5.56 | 133.50 |
| 8 | Sundries(paint / template etc) | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 11369.54 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Drilling jumbo | Hour | 11.00 | 335.30 | 3688.30 |
| | Fuel / Energy charges | Hour | 11.00 | 70.10 | 771.10 |
| 2 | Air compressor 15 cmm (ele) | Hour | 6.00 | 115.20 | 691.20 |
| | Fuel / Energy charges | Hour | 6.00 | 1057.50 | 6345.00 |
| 3 | Jack hammer (4 x 6 hrs) | Hour | 24.00 | 17.30 | 415.20 |
| | Fuel / Energy charges | Hour | 24.00 | 0.00 | 0.00 |
| 4 | Pusher leg | Hour | 24.00 | 11.90 | 285.60 |
| | Fuel / Energy charges | Hour | 24.00 | 0.00 | 0.00 |
| 5 | Convey mucker | Hour | 6.00 | 722.90 | 4337.40 |
| | Fuel / Energy charges | Hour | 6.00 | 294.40 | 1766.40 |
| 6 | Dumper (2 x 6 hrs) | Hour | 12.00 | 531.00 | 6372.00 |
| | Fuel / Energy charges | Hour | 12.00 | 654.40 | 7852.80 |
| 7 | Pump 10 hp (ele) | Hour | 6.00 | 5.90 | 35.40 |
| | Fuel / Energy charges | Hour | 6.00 | 84.60 | 507.60 |
| 8 | Ventilation fans 20 hp | Hour | 2.00 | 11.30 | 22.60 |
| | Fuel / Energy charges | Hour | 2.00 | 169.20 | 338.40 |
| 9 | Sundries(explosive van / magazine) | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 33497.00 |

C. LABOUR:

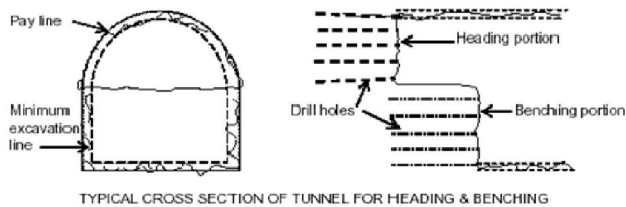
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Drilling jumbo | Hour | 11.00 | 228.80 | 2516.80 |
| 2 | Crew for Air compressor | Hour | 6.00 | 228.80 | 1372.80 |
| 3 | Crew for Jack hammer | Hour | 24.00 | 429.00 | 10296.00 |
| 4 | Crew for Convey mucker | Hour | 6.00 | 228.80 | 1372.80 |
| 5 | Crew for Dumper | Hour | 12.00 | 292.00 | 3504.00 |
| 6 | Crew for Pump | Hour | 6.00 | 107.60 | 645.60 |
| 7 | Crew for ventilation fans | Hour | 2.00 | 37.10 | 74.20 |
| 8 | Surveyor | Day | 0.50 | 910.00 | 455.00 |
| 9 | Foreman | Day | 1.00 | 645.00 | 645.00 |
| 10 | Fitter / Mechanic | Day | 2.00 | 590.00 | 1180.00 |
| 11 | Blaster (Licensed) | Day | 1.00 | 645.00 | 645.00 |
| 12 | Helper blasting | Day | 2.00 | 525.00 | 1050.00 |
| 13 | Hammerman 2 Nos | Day | 2.00 | 525.00 | 1050.00 |
| 14 | work inspector 1 in each shift | Day | 3.00 | 640.00 | 1920.00 |
| 15 | Khalasi for mucking shift 4 Nos | Day | 4.00 | 575.00 | 2300.00 |
| 16 | mazdoor | | | | |
| | for mucking shift 8 Nos | Day | 8.00 | 490.00 | 3920.00 |
| | for other 2 shifts 1 No each shift | Day | 2.00 | 490.00 | 980.00 |
| | for cleaning & miscellaneous | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 34907.20 |

| | |
|---|----------------|
| labour component/unit qty | 758.90 |
| Add contractor's profit and overhead charges | 13.615% 103.30 |
| labour component/unit qty (including contractor's profit) | 862.20 |

ABSTRACT:

| | | | |
|---|----------------|-----|----------------|
| A. Cost of Materials | | Rs: | 11369.54 |
| B. Hire charges of Machinery | | Rs: | 33497.00 |
| C. Cost of Labour | | Rs: | 34907.20 |
| | Total | Rs: | 79773.74 |
| Add for Air and Water line @ | 1.00% | Rs: | 797.74 |
| Add for Ventilation @ | 4.50% | Rs: | 3589.82 |
| Add for Lighting @ | 1.60% | Rs: | 1276.38 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 1994.34 |
| | Total | Rs: | 87432.02 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 11903.87 |
| Total cost for | 46.00 cum | Rs: | 99335.89 |
| Rate per cum | (A+B+C+D)/46.0 | Rs: | 2159.50 |

IRR-TAW-1-5 **Excavation for tunnel by heading and benching tunnelling methods including excavation for supports in all types of soil / rock strata requiring supports (excluding cost of providing supports) for roof before benching including cost of all other materials, machinery, labour, scaling excavated surface, ventilation, lighting, drainage removing and hauling excavated muck outside tunnel upto specified dump area and all other ancillary operations etc., complete with initial lead upto 1 km and all lifts.**



DATA:
DATA:

RATE ANALYSISUNIT : **50.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Small dia explosive | kg | 44.00 | 69.00 | 3036.00 |
| 2 | Delay detonators | Nos | 84.00 | 20.00 | 1680.00 |
| 3 | Electric detonator | Nos | 10.00 | 10.00 | 100.00 |
| 4 | Detonating fuse coil | Rm | 50.00 | 8.00 | 400.00 |
| 5 | Use rate of drill rod 2.5 m long | Rm | 157.00 | 38.93 | 6112.53 |
| | Reconditioning charges @ | 10% | | | 611.25 |
| 6 | Use rate of air hose | Hour | 26.00 | 5.50 | 143.00 |
| 7 | Use rate of water hose | Hour | 26.00 | 5.56 | 144.63 |
| 8 | Sundries(paint / template etc) | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 12295.41 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------------|------|----------|----------------|------------------|
| 1 | Drilling jumbo | Hour | 12.00 | 335.30 | 4023.60 |
| | Fuel / Energy charges | Hour | 12.00 | 70.10 | 841.20 |
| 2 | Air compressor 15 cmm (ele) | Hour | 6.50 | 115.20 | 748.80 |
| | Fuel / Energy charges | Hour | 6.50 | 1057.50 | 6873.75 |
| 3 | Jack hammer (4 x 6.5 hrs) | Hour | 26.00 | 17.30 | 449.80 |
| | Fuel / Energy charges | Hour | 26.00 | 0.00 | 0.00 |
| 4 | Pusher leg | Hour | 26.00 | 11.90 | 309.40 |
| | Fuel / Energy charges | Hour | 26.00 | 0.00 | 0.00 |
| 5 | Convey mucker | Hour | 6.50 | 722.90 | 4698.85 |
| | Fuel / Energy charges | Hour | 6.50 | 294.40 | 1913.60 |
| 6 | Dumper (2 x 6.5 hrs) | Hour | 13.00 | 531.00 | 6903.00 |
| | Fuel / Energy charges | Hour | 13.00 | 654.40 | 8507.20 |
| 7 | Pump 10 hp (ele) | Hour | 6.50 | 5.90 | 38.35 |
| | Fuel / Energy charges | Hour | 6.50 | 84.60 | 549.90 |
| 8 | Ventilation fans 20 hp | Hour | 3.00 | 11.30 | 33.90 |
| | Fuel / Energy charges | Hour | 3.00 | 169.20 | 507.60 |
| 9 | Sundries(explosive van / magazine) | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 36466.95 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Drilling jumbo | Hour | 12.00 | 228.80 | 2745.60 |
| 2 | Crew for Air compressor | Hour | 6.50 | 228.80 | 1487.20 |
| 3 | Crew for Jack hammer | Hour | 26.00 | 429.00 | 11154.00 |
| 4 | Crew for Convey mucker | Hour | 6.50 | 228.80 | 1487.20 |
| 5 | Crew for Dumper | Hour | 13.00 | 292.00 | 3796.00 |
| 6 | Crew for Pump | Hour | 6.50 | 107.60 | 699.40 |
| 7 | Crew for Ventilation fan | Hour | 3.00 | 37.10 | 111.30 |
| 8 | Surveyor | Day | 0.50 | 910.00 | 455.00 |
| 9 | Foreman | Day | 1.00 | 645.00 | 645.00 |
| 10 | Fitter / Mechanic | Day | 2.00 | 590.00 | 1180.00 |
| 11 | Blaster (Licensed) | Day | 2.00 | 645.00 | 1290.00 |
| 12 | Helper blasting | Day | 4.00 | 525.00 | 2100.00 |
| 13 | Hammerman 2 Nos | Day | 2.00 | 525.00 | 1050.00 |
| 14 | work inspector 1 in each shift | Day | 3.00 | 640.00 | 1920.00 |
| 15 | Khalasi | | | | |
| | for pushing muck in heading portion | Day | 4.00 | 575.00 | 2300.00 |
| | for mucking shift 4 Nos | Day | 4.00 | 575.00 | 2300.00 |
| 16 | mazdoor | | | | |
| | for mucking shift 8 Nos | Day | 8.00 | 490.00 | 3920.00 |
| | for other 2 shifts 1 No each shift | Day | 2.00 | 490.00 | 980.00 |
| | for cleaning & miscellaneous | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 40600.70 |

| | |
|---|----------------|
| labour component/unit qty | 812.00 |
| Add contractor's profit and overhead charges | 13.615% 110.60 |
| labour component/unit qty (including contractor's profit) | 922.60 |

ABSTRACT:

| | | | |
|---|----------------|-------|------------------|
| A. Cost of Materials | | Rs: | 12295.41 |
| B. Hire charges of Machinery | | Rs: | 36466.95 |
| C. Cost of Labour | | Rs: | 40600.70 |
| | | Total | Rs: 89363.06 |
| Add for Air and Water line @ | 1.00% | Rs: | 893.63 |
| Add for Ventilation @ | 4.50% | Rs: | 4021.34 |
| Add for Lighting @ | 1.60% | Rs: | 1429.81 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 2234.08 |
| | | Total | Rs: 97941.92 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 13334.79 |
| Total cost for | 50.00 cum | Rs: | 111276.71 |
| Rate per cum | (A+B+C+D)/50.0 | Rs: | 2225.50 |

NOTE: Where mucking is to be carried out through shaft using winch and mucking tub system increase the basic rates for items IRR-TAW-1-3, IRR-TAW-1-4 & IRR-TAW-1-5 by 8 percent.

IRR-TAW-1-6 **Removing and hauling muck** overfallen due to natural causes such as geological faults etc., out of tunnel including breaking large fragments by blasting if necessary and disposing off the same in specified dump area or as directed including cost of all materials, machinery, labour, ventilation, drainage, lighting and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**

DATA

RATE ANALYSISUNIT : **100.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------|------|----------|-------------|----------------|
| 1 | Use rate of drill rod | Rm | 15.00 | 26.01 | 390.20 |
| | Reconditioning charges @ | 10% | | | 39.02 |
| 2 | Explosive small dia. | kg | 8.00 | 69.00 | 552.00 |
| 3 | Detonator (ele) | Nos. | 30.00 | 10.00 | 300.00 |
| 4 | Detonating fuse coil | Rm | 20.00 | 8.00 | 160.00 |
| 5 | Use rate of air hose | Hour | 4.00 | 5.50 | 22.00 |
| 6 | Use rate of water hose | Hour | 4.00 | 5.56 | 22.25 |
| 7 | Sundries | LS | 1.00 | 34.00 | 34.00 |
| Total cost of Materials | | | | Rs: | 1519.47 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Air compressor 15 cmm (ele) | Hour | 1.00 | 115.20 | 115.20 |
| | Fuel / Energy charges | Hour | 1.00 | 1057.50 | 1057.50 |
| 2 | Jack hammer | Hour | 4.00 | 17.30 | 69.20 |
| | Fuel / Energy charges | Hour | 4.00 | 0.00 | 0.00 |
| 3 | Pump 10 hp (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 4 | Convey mucker | Hour | 6.00 | 722.90 | 4337.40 |
| | Fuel / Energy charges | Hour | 6.00 | 294.40 | 1766.40 |
| 5 | Dumper 4.5 cum | Hour | 12.00 | 531.00 | 6372.00 |
| | Fuel / Energy charges | Hour | 12.00 | 654.40 | 7852.80 |
| 6 | Sundries | LS | 1.00 | 34.00 | 34.00 |
| Total hire charges of Machinery | | | | Rs: | 21695.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Air compressor | Hour | 1.00 | 228.80 | 228.80 |
| 2 | Crew for Jack hammer | Hour | 4.00 | 429.00 | 1716.00 |
| 3 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 4 | Crew for Convey mucker | Hour | 6.00 | 228.80 | 1372.80 |
| 5 | Crew for Dumper | Hour | 12.00 | 292.00 | 3504.00 |
| 6 | Blaster (Licensed) | Day | 0.50 | 645.00 | 322.50 |
| 7 | Helper blasting | Day | 0.50 | 525.00 | 262.50 |
| 8 | mazdoor | Day | 8.00 | 490.00 | 3920.00 |
| Total cost of Labour | | | | Rs: | 11434.20 |

labour component/unit qty 114.30
 Add contractor's profit and overhead charges 13.615% 15.60
 labour component/unit qty (including contractor's profit) **129.90**

ABSTRACT:

| | | | |
|---|-----------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 1519.47 |
| B. Hire charges of Machinery | | Rs: | 21695.00 |
| C. Cost of Labour | | Rs: | 11434.20 |
| | Total | Rs: | 34648.67 |
| Add for Air and Water line @ | 1.00% | Rs: | 346.49 |
| Add for Ventilation @ | 4.50% | Rs: | 1559.19 |
| Add for Lighting @ | 1.60% | Rs: | 554.38 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 866.22 |
| | Total | Rs: | 37974.94 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 5170.29 |
| Total cost for | 100.00 cum | Rs: | 43145.23 |
| Rate per cum | (A+B+C+D)/100.0 | Rs: | 431.50 |

IRR_TAW-2 **DEWATERING & GUNITING WORKS :**

IRR-TAW-2-1 **Dewatering tunnel by pumping out water collected by natural drainage inside tunnel** including providing sump wherever necessary, cost of all materials, machinery, labour, drainage, lighting, ventilation and all other ancillary operations etc., complete.

DATA

RATE ANALYSISUNIT : **15.00 Kwhr****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------|------|----------|-------------|---------------|
| 1 | Use rate of G.I.pipe 100 mm dia | Hour | 1.00 | 7.35 | 7.35 |
| 2 | Sundries | LS | 0.10 | 34.00 | 3.40 |
| Total cost of Materials | | | | Rs: | 10.75 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------------|------|----------|-------------|---------------|
| 1 | Electric pump 20 hp | Hour | 1.00 | 11.20 | 11.20 |
| 2 | Fuel / Energy charges | Hour | 1.00 | 169.20 | 169.20 |
| 3 | Sundries(Starter/Switches etc) | LS | 0.10 | 34.00 | 3.40 |
| Total hire charges of Machinery | | | | Rs: | 183.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|---------------------------|------|----------|-------------|---------------|
| 1 | Crew charges for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 2 | Laying & dismantling pipe | LS | 0.05 | 34.00 | 1.70 |
| 3 | mazdoor | Day | 0.10 | 490.00 | 49.00 |
| Total cost of Labour | | | | Rs: | 158.30 |

| | |
|---|--------------|
| labour component/unit qty | 10.60 |
| Add contractor's profit and overhead charges | 13.615% 1.40 |
| labour component/unit qty (including contractor's profit) | 12.00 |

ABSTRACT:

| | | |
|--|----------------|-------------------|
| A. Cost of Materials | Rs: | 10.75 |
| B. Hire charges of Machinery | Rs: | 183.80 |
| C. Cost of Labour | Rs: | 158.30 |
| | Total | Rs: 352.85 |
| Add for Air and Water line @ | 1.00% | Rs: 3.53 |
| Add for Ventilation @ | 4.50% | Rs: 15.88 |
| Add for Lighting @ | 1.60% | Rs: 5.65 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: 8.82 |
| | Total | Rs: 386.72 |
| D.Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: 52.65 |
| Total cost for | 15.00 Kwhr | Rs: 439.37 |
| Rate per Kwhr | (A+B+C+D)/15.0 | Rs: 29.30 |

IRR-TAW-2-2 **Providing 25 mm thick guniting to sides and arch of tunnel in cement mortar 1 : 3** proportion by weight including cost of all materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **36.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 600.00 | 3.68 | 2208.00 |
| 2 | Sand (Screened) | cum | 1.10 | 700.00 | 770.00 |
| 3 | Use rate of grout hose 20 m | Hour | 8.00 | 5.50 | 44.00 |
| 4 | Use rate of water hose 20 m | Hour | 8.00 | 5.56 | 44.50 |
| 5 | Use rate of guniting nozzle | Hour | 8.00 | 3.25 | 26.00 |
| 6 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 3160.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Guniting equipment | Hour | 8.00 | 109.30 | 874.40 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 2 | Air compressor 8.5 cmm (ele) | Hour | 8.00 | 145.90 | 1167.20 |
| | Fuel / Energy charges | Hour | 8.00 | 475.90 | 3807.20 |
| 3 | Pump 10 hp (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 4 | Drilling jumbo | Hour | 4.00 | 335.30 | 1341.20 |
| | Fuel / Energy charges | Hour | 4.00 | 70.10 | 280.40 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 7628.90 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Crew for Guniting equipment | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | Crew for pump | Hour | 1.00 | 107.60 | 107.60 |
| 4 | Crew for Drilling jumbo | Hour | 4.00 | 228.80 | 915.20 |
| 5 | Mason Cl I | Day | 1.00 | 585.00 | 585.00 |
| 6 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 8551.80 |

labour component/unit qty 237.60

Add contractor's profit and overhead charges 13.615% 32.30

labour component/unit qty (including contractor's profit) **269.90****ABSTRACT:**

| | | |
|------------------------------|-----|-----------------|
| A. Cost of Materials | Rs: | 3160.50 |
| B. Hire charges of Machinery | Rs: | 7628.90 |
| C. Cost of Labour | Rs: | 8551.80 |
| Total | Rs: | 19341.20 |

Add for Air and Water line @ 1.00% Rs: 193.41

Add for Ventilation @ 4.50% Rs: 870.35

Add for Lighting @ 1.60% Rs: 309.46

Add for Ele sub-station / Demand charges @ 2.50% Rs: 483.53

Total Rs: **21197.96**

D. Add for contractor's profit and overheads on (A+B+C+other percentages) 13.615% Rs: 2886.10

Lead Charges for 1 Km for FA 1.10 cum @ 38.288255 Rs./Cu 42.1170805

Total cost for 36.00 sqm Rs: **24126.17****Rate per sqm** (A+B+C+D)/36.0 Rs: **670.20**

IRR-TAW-2-3 Shortcreting in two layers (each layer+38 mm thickness) for slabs duly fixing chain weld wire mesh
(new4 - 2011-12)

100 x 100x5 mm in between the two layers including cost and conveyance of all materials, labour charges, all heads, lifts, centering, scaffolding, machine mixing, laying concrete with shortcrete machine etc. complete **as per specification and as directed by Engineer-in-Charge**

Data

RATE ANALYSISUNIT : **36.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|-----------------|
| 1 | Cement | kg | 1548.00 | 3.68 | 5696.64 |
| 2 | Sand (Screened) | cum | 2.41 | 700.00 | 1687.00 |
| 3 | Coarse aggregate 10-4.75 mm size | cum | 1.03 | 967.00 | 996.01 |
| 4 | Use rate of grout hose 20 m | Hour | 8.00 | 5.50 | 44.00 |
| 5 | Use rate of water hose 20 m | Hour | 8.00 | 5.56 | 44.50 |
| 6 | Use rate of guniting nozzle | Hour | 8.00 | 3.25 | 26.00 |
| 7 | Welded steel wire fabric 100 x 100 x 5 mm | kg | 108.00 | 193.00 | 20844.00 |
| 8 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 29406.15 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Guniting equipment | Hour | 8.00 | 109.30 | 874.40 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 2 | Air compressor 8.5 cmm (ele) | Hour | 8.00 | 145.90 | 1167.20 |
| | Fuel / Energy charges | Hour | 8.00 | 475.90 | 3807.20 |
| 3 | Pump 10 hp (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 4 | Drilling jumbo | Hour | 4.00 | 335.30 | 1341.20 |
| | Fuel / Energy charges | Hour | 4.00 | 70.10 | 280.40 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 7628.90 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Crew for Guniting equipment | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Air compressor | Hour | 8.00 | 214.50 | 1716.00 |
| 3 | Crew for pump | Hour | 1.00 | 107.60 | 107.60 |
| 4 | Crew for Drilling jumbo | Hour | 4.00 | 228.80 | 915.20 |
| 5 | Mason Cl I | Day | 1.00 | 585.00 | 585.00 |
| 6 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 8551.80 |

| | |
|---|---------------|
| labour component/unit qty | 237.60 |
| Add contractor's profit and overhead charges | 13.615% 32.30 |
| labour component/unit qty (including contractor's profit) | 269.90 |

ABSTRACT:

| | | | |
|---|----------------|------------------|-----------------|
| A. Cost of Materials | | Rs: | 29406.15 |
| B. Hire charges of Machinery | | Rs: | 7628.90 |
| C. Cost of Labour | | Rs: | 8551.80 |
| | Total | Rs: | 45586.85 |
| Add for Air and Water line @ | 1.00% | Rs: | 455.87 |
| Add for Ventilation @ | 4.50% | Rs: | 2051.41 |
| Add for Lighting @ | 1.60% | Rs: | 729.39 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 1139.67 |
| | Total | Rs: | 49963.19 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 6802.49 |
| Lead Charges for 1 Km for FA | 2.41 cum @ | 38.288255 Rs./Cu | 92.27469455 |
| Lead Charges for 1 Km for CA | 1.03 cum @ | 36.924875 Rs./Cu | 38.03262125 |
| Total cost for | 36.00 sqm | Rs: | 56895.98 |
| Rate per sqm | (A+B+C+D)/36.0 | Rs: | 1580.40 |

IRR_TAW-3 **TEMPORARY & PERMANENT SUPPORTS :**

IRR-TAW-3-1 Providing and **fixing 25 mm diameter steel rock bolts with mechanical / wedge type anchorage** including drilling 35 mm dia holes, providing 15 cm long 20 mm thick steel tapered wedge, 10 mm thick plate washers and nuts, tightening bolt by torque wrench, cost of all materials, machinery, labour, ventilation, lighting, drainage and all other ancillary operations etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

20.00 Rm**A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|----------------|
| 1 | Rein.Steel with 5 % wastage | kg | 86.91 | 52.50 | 4562.97 |
| 2 | Steel plate for washers | kg | 65.94 | 52.00 | 3428.88 |
| | Steel plate for wedges | kg | 6.18 | 52.00 | 321.46 |
| 3 | M S Nuts for bolts | kg | 4.00 | 86.00 | 344.00 |
| 4 | Use rate of drill rod | Rm | 20.00 | 38.93 | 778.67 |
| | Reconditioning charges @ | 10% | | | 77.87 |
| 5 | Use rate of air hose 4 Nos | Hour | 6.00 | 5.50 | 33.00 |
| 6 | Use rate of water hose 4 Nos | Hour | 6.00 | 5.56 | 33.38 |
| 7 | Sundries (gas for cutting / heating etc) | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 9750.22 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Air compressor 15 cmm (ele) | Hour | 1.50 | 115.20 | 172.80 |
| | Fuel / Energy charges | Hour | 1.50 | 1057.50 | 1586.25 |
| 2 | Pump 10 hp (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 3 | Jack hammer | Hour | 6.00 | 17.30 | 103.80 |
| | Fuel / Energy charges | Hour | 6.00 | 0.00 | 0.00 |
| 4 | Pusher leg | Hour | 6.00 | 11.90 | 71.40 |
| | Fuel / Energy charges | Hour | 6.00 | 0.00 | 0.00 |
| 5 | Drilling jumbo | Hour | 4.00 | 335.30 | 1341.20 |
| | Fuel / Energy charges | Hour | 4.00 | 70.10 | 280.40 |
| 6 | Sundries (lathe, blower etc) | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 3816.35 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Air compressor | Hour | 1.50 | 228.80 | 343.20 |
| 2 | Crew for pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | Crew for Jack hammer | Hour | 6.00 | 429.00 | 2574.00 |
| 4 | Crew for Drilling jumbo | Hour | 4.00 | 228.80 | 915.20 |
| 5 | Fitter | Day | 0.50 | 590.00 | 295.00 |
| 6 | Gas cutter | Day | 1.00 | 575.00 | 575.00 |
| 7 | Turner | Day | 1.00 | 645.00 | 645.00 |
| 8 | Blacksmith | Day | 1.00 | 550.00 | 550.00 |
| 9 | Khalasi (2 x 0.5) | Day | 1.00 | 575.00 | 575.00 |
| 10 | Hammerman | Day | 0.50 | 525.00 | 262.50 |
| 11 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 7822.50 |

| | |
|---|---------------|
| labour component/unit qty | 391.10 |
| Add contractor's profit and overhead charges | 13.615% 53.20 |
| labour component/unit qty (including contractor's profit) | 444.30 |

ABSTRACT:

| | | | |
|---|----------------|------------------|-----------------|
| A. Cost of Materials | | Rs: | 9750.22 |
| B. Hire charges of Machinery | | Rs: | 3816.35 |
| C. Cost of Labour | | Rs: | 7822.50 |
| | Total | Rs: | 21389.07 |
| Add for Air and Water line @ | 1.00% | Rs: | 213.89 |
| Add for Ventilation @ | 4.50% | Rs: | 962.51 |
| Add for Lighting @ | 1.60% | Rs: | 342.23 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 534.73 |
| | Total | Rs: | 23442.42 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 3191.69 |
| Lead Charges for 1Km for Steel (including Loading and Unloading Charges) | 0.16 tonne @ | 231.888215 Rs./T | 36.8784872 |
| Total cost for | 20.00 Rm | Rs: | 26670.98 |
| Rate per Rm | (A+B+C+D)/20.0 | Rs: | 1333.50 |

IRR-TAW-3-2 Providing and **fixing 25 mm diameter steel rock bolts with resin bond cement capsule anchorage** including drilling 35 mm dia holes, inserting grout capsule, driving bolt, fixing 10 mm thick plate washers and nuts and tightening the same by torque wrench after hardening of cement grout, cost of all materials, machinery, labour, ventilation, lighting, drainage and other ancillary operations etc., **complete with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **20.00 Rm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------|------|----------|-------------|----------------|
| 1 | Rein.Steel with 5 % wastage | kg | 86.91 | 52.50 | 4562.97 |
| 2 | Steel plate for washers | kg | 65.94 | 52.00 | 3428.88 |
| 3 | Resin bond cement grout capsule | Nos. | 2.00 | 52.00 | 104.00 |
| 4 | M S Nuts for bolts | kg | 4.00 | 86.00 | 344.00 |
| 5 | Use rate of drill rod | Rm | 20.00 | 38.93 | 778.67 |
| | Reconditioning charges @ | 10% | | | 77.87 |
| 6 | Use rate of air hose 4 Nos | Hour | 6.00 | 5.50 | 33.00 |
| 7 | Use rate of water hose 4 Nos | Hour | 6.00 | 5.56 | 33.38 |
| 8 | Sundries(gas for cutting etc) | LS | 3.00 | 34.00 | 102.00 |
| Total cost of Materials | | | | Rs: | 9464.76 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|----------------|
| 1 | Air compressor 15 cmm (ele) | Hour | 1.50 | 115.20 | 172.80 |
| | Fuel / Energy charges | Hour | 1.50 | 1057.50 | 1586.25 |
| 2 | Pump 10 hp (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / Energy charges | Hour | 1.00 | 84.60 | 84.60 |
| 3 | Jack hammer | Hour | 6.00 | 17.30 | 103.80 |
| | Fuel / Energy charges | Hour | 6.00 | 0.00 | 0.00 |
| 4 | Pusher leg | Hour | 6.00 | 11.90 | 71.40 |
| | Fuel / Energy charges | Hour | 6.00 | 0.00 | 0.00 |
| 5 | Drilling jumbo | Hour | 4.00 | 335.30 | 1341.20 |
| | Fuel / Energy charges | Hour | 4.00 | 70.10 | 280.40 |
| 6 | Sundries (lathe, etc) | LS | 3.00 | 34.00 | 102.00 |
| Total hire charges of Machinery | | | | Rs: | 3748.35 |

C. LABOUR:

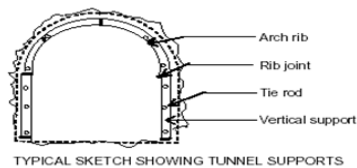
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Air compressor | Hour | 1.50 | 228.80 | 343.20 |
| 2 | Crew for pump | Hour | 1.00 | 107.60 | 107.60 |
| 3 | Crew for Jack hammer | Hour | 6.00 | 429.00 | 2574.00 |
| 4 | Crew for Drilling jumbo | Hour | 4.00 | 228.80 | 915.20 |
| 5 | Fitter | Day | 0.50 | 525.00 | 262.50 |
| 6 | Gas cutter | Day | 1.00 | 575.00 | 575.00 |
| 7 | Turner | Day | 1.00 | 645.00 | 645.00 |
| 8 | Khalasi (2 x 0.5) | Day | 1.00 | 575.00 | 575.00 |
| 9 | Hammerman | Day | 0.50 | 525.00 | 262.50 |
| 10 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 7240.00 |

| | |
|---|---------------|
| labour component/unit qty | 362.00 |
| Add contractor's profit and overhead charges | 13.615% 49.30 |
| labour component/unit qty (including contractor's profit) | 411.30 |

ABSTRACT:

| | | | |
|---|----------------|------------------|-----------------|
| A. Cost of Materials | | Rs: | 9464.76 |
| B. Hire charges of Machinery | | Rs: | 3748.35 |
| C. Cost of Labour | | Rs: | 7240.00 |
| | Total | Rs: | 20453.11 |
| Add for Air and Water line @ | 1.00% | Rs: | 204.53 |
| Add for Ventilation @ | 4.50% | Rs: | 920.39 |
| Add for Lighting @ | 1.60% | Rs: | 327.25 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 511.33 |
| | Total | Rs: | 22416.61 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 3052.02 |
| Lead Charges for 1Km for Steel (including Loading and Unloading Charges) | 0.15 tonne @ | 231.888215 Rs./T | 35.44498324 |
| Total cost for | 20.00 Rm | Rs: | 25504.08 |
| Rate per Rm | (A+B+C+D)/20.0 | Rs: | 1275.20 |

IRR-TAW-3-3 Providing, fabricating and **fixing in position permanent structural steel supports as per details** including cost of all materials, machinery, labour, cutting, bending, welding, grinding, lighting, ventilation, drainage and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**



Data

RATE ANALYSISUNIT : **1.00 tonne****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Structural steel beams | kg | 760.00 | 50.50 | 38380.00 |
| 2 | Structural steel plates | kg | 115.00 | 52.00 | 5980.00 |
| 3 | Steel bars for tie rods & anchors | kg | 150.00 | 52.50 | 7875.00 |
| 4 | For cutting sections: | | | | |
| | Oxygen gas @ 2.4 cum / t | cum | 2.40 | 43.00 | 103.20 |
| | Acetylene gas @ 0.8 cum / t | cum | 0.80 | 350.00 | 280.00 |
| 5 | For welding sections: | | | | |
| | Electrodes 4 x 300 mm @ 125 Nos / t | Nos. | 125.00 | 14.00 | 1750.00 |
| 6 | For field connections: | | | | |
| | M.S. Bolts / Nuts & Washers | kg | 50.00 | 86.00 | 4300.00 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 58838.20 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---|------|----------|-------------|----------------|
| 1 | Bending machine | Hour | 8.00 | 38.40 | 307.20 |
| | Fuel / Energy charges | Hour | 8.00 | 126.90 | 1015.20 |
| 2 | Welding set | Hour | 16.00 | 15.10 | 241.60 |
| | Fuel / Energy charges | Hour | 16.00 | 101.50 | 1624.00 |
| 3 | Drilling Jumbo | Hour | 12.00 | 335.30 | 4023.60 |
| | Fuel / Energy charges | Hour | 12.00 | 70.10 | 841.20 |
| 4 | Sundries (lathe / drilling / grinder) | LS | 30.00 | 34.00 | 1020.00 |
| Total hire charges of Machinery | | | | Rs: | 9072.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Drilling Jumbo | Hour | 12.00 | 228.80 | 2745.60 |
| 2 | Crew for Bending machine | Hour | 8.00 | 171.60 | 1372.80 |
| 3 | For cutting & preparing sections: | | | | |
| | Structural steel Marker | Day | 1.00 | 700.00 | 700.00 |
| | Gas cutter | Day | 2.00 | 575.00 | 1150.00 |
| | Fitter | Day | 2.00 | 590.00 | 1180.00 |
| | Turner / Driller | Day | 3.00 | 645.00 | 1935.00 |
| | Khalasi | Day | 2.00 | 575.00 | 1150.00 |
| | Helper fabrication | Day | 4.00 | 525.00 | 2100.00 |
| 4 | For welding sections: | | | | |
| | Welder | Day | 2.00 | 575.00 | 1150.00 |
| | Helper fabrication | Day | 2.00 | 525.00 | 1050.00 |
| | Khalasi | Day | 2.00 | 575.00 | 1150.00 |
| 5 | For erection of supports: | | | | |
| | Foreman | Day | 1.00 | 645.00 | 645.00 |
| | Structural steel Erector | Day | 2.00 | 700.00 | 1400.00 |
| | Helper erector | Day | 2.00 | 525.00 | 1050.00 |
| | Khalasi | Day | 4.00 | 575.00 | 2300.00 |
| Total cost of Labour | | | | Rs: | 21078.40 |

labour component/unit qty 21078.40
 Add contractor's profit and overhead charges 13.615% 2869.80
 labour component/unit qty (including contractor's profit) **23948.20**

ABSTRACT:

| | | | |
|---|---------------|------------------|------------------|
| A. Cost of Materials | | Rs: | 58838.20 |
| B. Hire charges of Machinery | | Rs: | 9072.80 |
| C. Cost of Labour | | Rs: | 21078.40 |
| | Total | Rs: | 88989.40 |
| Add for Air and Water line @ | 1.00% | Rs: | 889.89 |
| Add for Ventilation @ | 4.50% | Rs: | 4004.52 |
| Add for Lighting @ | 1.60% | Rs: | 1423.83 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 2224.74 |
| | Total | Rs: | 97532.38 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 13279.03 |
| Lead Charges for 1Km for Steel (including Loading and Unloading Charges) | 1.03 tonne @ | 231.888215 Rs./T | 237.6854204 |
| Total cost for | 1.00 tonne | Rs: | 111049.10 |
| Rate per tonne | (A+B+C+D)/1.0 | Rs: | 111049.10 |

IRR-TAW-3-4 Providing, fabricating and **fixing in position temporary structural steel supports as per details** and dismantling the same before concreting including cost of all materials, machinery, labour, cutting, bending, welding, grinding, ventilation, lighting, drainage and all other ancillary operations etc., complete **with initial lead upto 1 km and all lifts.**

DATA

RATE ANALYSISUNIT : **1.00 tonne****A. MATERIALS (for 20 uses):**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|-----------------------------|------|----------|-------------|----------------|
| 1 | Structural steel beams | kg | 760.00 | 50.50 | 38380.00 |
| 2 | Structural steel plates | kg | 115.00 | 52.00 | 5980.00 |
| 3 | Tie rods & anchors | kg | 150.00 | 52.50 | 7875.00 |
| 4 | For cutting sections: | | | | |
| | Oxygen gas @ 2.40 cum / t | cum | 2.40 | 43.00 | 103.20 |
| | Acetylene @ 0.8 cum / t | cum | 0.80 | 350.00 | 280.00 |
| 5 | For welding sections: | | | | |
| | Electrodes @ 125 Nos / t | Nos. | 125.00 | 14.00 | 1750.00 |
| 6 | For field connections: | | | | |
| | M.S. Bolts / Nuts / Washers | kg | 50.00 | 86.00 | 4300.00 |
| 7 | Sundries | LS | 20.00 | 34.00 | 680.00 |
| Total cost of Materials for 20 uses of supports | | | | Rs: | 59348.20 |
| Cost per use considering 20 uses | | | | Rs: | 2967.41 |

B. MACHINERY (for fabrication):

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Bending machine | Hour | 8.00 | 38.40 | 307.20 |
| | Fuel / Energy charges | Hour | 8.00 | 126.90 | 1015.20 |
| 2 | Welding set | Hour | 16.00 | 15.10 | 241.60 |
| | Fuel / Energy charges | Hour | 16.00 | 101.50 | 1624.00 |
| 3 | Sundries | LS | 30.00 | 34.00 | 1020.00 |
| Total hire charges of Machinery | | | | Rs: | 4208.00 |
| Cost per use considering 20 uses | | | | Rs: | 210.40 |

B. MACHINERY (for erection and dismantling):

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Drilling Jumbo | Hour | 18.00 | 335.30 | 6035.40 |
| | Fuel / Energy charges | Hour | 18.00 | 70.10 | 1261.80 |
| 2 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | Rs: | 7637.20 |

C. LABOUR (for fabrication):

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------------------|-----------------------------------|------|----------|-------------|---------------|
| 1 | Crew for Bending machine | Hour | 8.00 | 171.60 | 1372.80 |
| 2 | For cutting & preparing sections: | | | | |
| | Structural steel Marker | Day | 1.00 | 700.00 | 700.00 |
| | Gas cutter | Day | 2.00 | 575.00 | 1150.00 |
| | Fitter | Day | 2.00 | 590.00 | 1180.00 |
| | Turner / Driller | Day | 3.00 | 645.00 | 1935.00 |
| | Khalasi | Day | 2.00 | 575.00 | 1150.00 |
| | Helper fabrication | Day | 4.00 | 525.00 | 2100.00 |
| 3 | For welding sections: | | | | |
| | Welder | Day | 2.00 | 575.00 | 1150.00 |
| | Helper fabrication | Day | 2.00 | 525.00 | 1050.00 |
| | Khalasi | Day | 2.00 | 575.00 | 1150.00 |
| Total cost of Labour | | | | Rs: | 12937.80 |
| Cost per use considering 20 uses | | | | Rs: | 646.89 |

C. LABOUR (for erection):

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------------------|------|----------|-------------|----------------|
| 1 | Crew for Drilling jumbo | Hour | 8.00 | 228.80 | 1830.40 |
| 2 | For erection of supports: | | | | |
| | Foreman | Day | 1.00 | 645.00 | 645.00 |
| | Structural steel Erector | Day | 2.00 | 700.00 | 1400.00 |
| | Helper erector | Day | 2.00 | 525.00 | 1050.00 |
| | Khalasi | Day | 4.00 | 575.00 | 2300.00 |
| 3 | For dismantling of supports: | | | | |
| | Foreman | Day | 0.50 | 645.00 | 322.50 |
| | Structural steel Erector | Day | 1.00 | 700.00 | 700.00 |
| | Helper erector | Day | 1.00 | 525.00 | 525.00 |
| | Khalasi | Day | 2.00 | 575.00 | 1150.00 |
| Total cost of Labour | | | | Rs: | 9922.90 |

| | |
|---|-----------------|
| labour component/unit qty | 10569.80 |
| Add contractor's profit and overhead charges | 13.615% 1439.10 |
| labour component/unit qty (including contractor's profit) | 12008.90 |

ABSTRACT:

| | | |
|--|---------------|------------------------------|
| A. Cost of Materials | Rs: | 2967.41 |
| B. Hire charges of Machinery for fabrication | Rs: | 210.40 |
| C. Hire charges of Machinery for erection and dismantling | Rs: | 7637.20 |
| D. Cost of Labour for fabrication | Rs: | 646.89 |
| E. Cost of Labour for erection and dismantling | Rs: | 9922.90 |
| | Total | Rs: 21384.80 |
| Add for Air and Water line @ | 1.00% | Rs: 213.85 |
| Add for Ventilation @ | 4.50% | Rs: 962.32 |
| Add for Lighting @ | 1.60% | Rs: 342.16 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: 534.62 |
| | Total | Rs: 23437.74 |
| D.Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: 3191.05 |
| Lead Charges for 1Km for Steel (including Loading and Unloading Charges) | 1.03 tonne @ | 231.888215 Rs./T 237.6854204 |
| Total cost for | 1.00 tonne | Rs: 26866.47 |
| Rate per tonne | (A+B+C+D)/1.0 | Rs: 26866.50 |

IRR-TAW-3-5 Providing and fixing hard variety cut jungle wood for lagging / blocking locations in tunnel wherever required including cost of all materials, machinery, labour, fixing in position, lighting, ventilation, drainage etc complete with all leads and lifts.

DATA:

RATE ANALYSISUNIT : **1.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Cut jungle wood | cum | 1.05 | 19638.00 | 20619.90 |
| 2 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 20687.90 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Drilling jumbo | Hour | 2.00 | 335.30 | 670.60 |
| | Fuel / Energy charges | Hour | 2.00 | 70.10 | 140.20 |
| Total hire charges of Machinery | | | | Rs: | 810.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Drilling jumbo | Hour | 2.00 | 228.80 | 457.60 |
| 2 | Carpenter CI II | Day | 1.00 | 525.00 | 525.00 |
| 3 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 1962.60 |

labour component/unit qty 1962.60
 Add contractor's profit and overhead charges 13.615% 267.20
 labour component/unit qty (including contractor's profit) **2229.80**

ABSTRACT:

| | | | |
|---|---------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 20687.90 |
| B. Hire charges of Machinery | | Rs: | 810.80 |
| C. Cost of Labour | | Rs: | 1962.60 |
| | Total | Rs: | 23461.30 |
| Add for Air and Water line @ | 1.00% | Rs: | 234.61 |
| Add for Ventilation @ | 4.50% | Rs: | 1055.76 |
| Add for Lighting @ | 1.60% | Rs: | 375.38 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 586.53 |
| | Total | Rs: | 25713.58 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 3500.90 |
| Total cost for | 1.00 cum | Rs: | 29214.49 |
| Rate per cum | (A+B+C+D)/1.0 | Rs: | 29214.50 |

IRR_TAW-4 **MASONRY WORKS :**

IRR-TAW-4-1 Providing and **constructing un-coursed rubble stone masonry with approved stones** from **tunnel excavated muck** in cement mortar 1 : 6 proportion for backfilling over cuts / slips on tunnel sides due to geological faults etc., including cost of all materials, machinery, labour, cleaning, scaffolding, packing mortar, wedging stone chips, curing, ventilation, lighting, drainage complete **with lead upto 1 km and all lifts.**
(cement content : 95 kg/cum of masonry, Rubble stones : 0.83 cum, Stone chips : 0.13 cum, FA : 0.40 cum)

DATA

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Cement | kg | 950.00 | 3.68 | 3496.00 |
| 2 | Rubble stones | cum | 8.30 | 359.00 | 2979.70 |
| 3 | Stone chips | cum | 1.25 | 385.00 | 481.25 |
| 4 | Sand (Screened) | cum | 4.00 | 700.00 | 2800.00 |
| TOTAL | | | | Rs: | 9756.95 |
| Add for scaffolding @ | | | | 2.5% | Rs: 243.92 |
| Total cost of Materials | | | | Rs: | 10000.87 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | 10 hp pump (ele) | Hour | 1.00 | 5.90 | 5.90 |
| | Fuel / energy charges | Hour | 1.00 | 84.60 | 84.60 |
| Total hire charges of Machinery | | | | Rs: | 90.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Pump | Hour | 1.00 | 107.60 | 107.60 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 4 | Mason Class-II | Day | 2.00 | 525.00 | 1050.00 |
| 5 | mazdoor | | | | |
| | for sorting out rubble in dump yard | Day | 1.00 | 490.00 | 490.00 |
| | for conveying rubble | Day | 2.00 | 490.00 | 980.00 |
| | for preparing mortar | Day | 2.00 | 490.00 | 980.00 |
| | for loading mortar pans | Day | 1.00 | 490.00 | 490.00 |
| | for laying & packing mortar | Day | 4.00 | 490.00 | 1960.00 |
| | for washing rubble / finishing / curing | Day | 1.00 | 490.00 | 490.00 |
| | for conveying mortar / chips | Day | 3.00 | 490.00 | 1470.00 |
| TOTAL | | | | Rs: | 9242.60 |
| Add for labour for scaffolding @ | | | | 15.0% | Rs: 1386.39 |
| Total cost of Labour | | | | Rs: | 10628.99 |

| | |
|---|----------------|
| labour component/unit qty | 1062.90 |
| Add contractor's profit and overhead charges | 13.615% 144.70 |
| labour component/unit qty (including contractor's profit) | 1207.60 |

ABSTRACT:

| | | |
|---|----------------|----------------------------|
| A. Cost of Materials | Rs: | 10000.87 |
| B. Hire charges of Machinery | Rs: | 90.50 |
| C. Cost of Labour | Rs: | 10628.99 |
| Total | Rs: | 20720.36 |
| Add for Air and Water line @ | 1.00% | Rs: 207.20 |
| Add for Ventilation @ | 4.50% | Rs: 932.42 |
| Add for Lighting @ | 1.60% | Rs: 331.53 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: 518.01 |
| Total | Rs: | 22709.52 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: 3091.90 |
| Lead Charges for 1 Km for FA | 4.00 cum @ | 38.288255 Rs./Cu 153.15302 |
| Lead Charges for 1 Km for Stones and Stone Chip: 9.55 | cum @ | 36.924875 Rs./Cu 352.63 |
| Total cost for | 10.00 cum | Rs: 26307.21 |
| Rate per cum | (A+B+C+D)/10.0 | Rs: 2630.70 |

IRR_TAW-5 REINFORCEMENT & CONCRETE WORKS :

IRR-TAW-5-1 Providing, fabricating and **placing in position reinforcement steel for tunnel RCC works** including cleaning, straightening, cutting, bending, hooking, lapping / welding joints wherever required, tying with 1.25 mm dia. soft annealed steel wire, including cost of all materials, labour, machinery, ventilation, lighting, drainage etc., complete **with initial lead upto 1 km and all lifts.**

DATA

RATE ANALYSISUNIT : **1.00 tonne****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|-------|----------|-------------|-----------------|
| 1 | Rein. Steel with 5 % wastage | tonne | 1.05 | 52500.00 | 55125.00 |
| 2 | Binding wire 1.25 mm dia | kg | 13.50 | 64.00 | 864.00 |
| 3 | Sundries (chairs / spacers etc) | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 56159.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|-----------------|
| 1 | Bar bender | Day | 9.00 | 700.00 | 6300.00 |
| 2 | mazdoor | Day | 15.00 | 490.00 | 7350.00 |
| Total cost of Labour | | | | Rs: | 13650.00 |

| | |
|---|-----------------|
| labour component/unit qty | 13650.00 |
| Add contractor's profit and overhead charges | 13.615% 1858.40 |
| labour component/unit qty (including contractor's profit) | 15508.40 |

ABSTRACT:

| | | | |
|---|---------------|------------------|-----------------|
| A. Cost of Materials | | Rs: | 56159.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 13650.00 |
| | Total | Rs: | 69809.00 |
| Add for Air and Water line @ | 1.00% | Rs: | 698.09 |
| Add for Ventilation @ | 4.50% | Rs: | 3141.41 |
| Add for Lighting @ | 1.60% | Rs: | 1116.94 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 1745.23 |
| | Total | Rs: | 76510.66 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 10416.93 |
| Lead Charges for 1Km for Steel (including Loading and Unloading Charges) | 1.05 tonne @ | 231.888215 Rs./T | 243.4826258 |
| Total cost for | 1.00 tonne | Rs: | 87171.07 |
| Rate per tonne | (A+B+C+D)/1.0 | Rs: | 87171.10 |

IRR-TAW-5-2 Providing and laying **insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates crushed from tunnel excavated muck **for filling and levelling over-cuts in bed due to geological faults etc.**, including cost of all materials, machinery, labour, cleaning bed, batching, mixing, conveying and laying, levelling, compacting, finishing, curing, lighting, ventilation, drainage etc., complete **with initial lead upto 1 km and all lifts. (Cement content : 220 kg / cum, CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum, Superplasticizer 0.4% by wt. of cement)**

DATA

RATE ANALYSISUNIT : **28.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 6160.00 | 3.68 | 22668.80 |
| 2 | Coarse aggregate 40-20 mm | cum | 12.60 | 1265.00 | 15939.00 |
| | Coarse aggregate 20-10 mm | cum | 7.56 | 1313.00 | 9926.28 |
| | Coarse aggregate 10 mm below | cum | 5.04 | 967.00 | 4873.68 |
| 3 | Fine aggregate (Un-Screened) | cum | 11.20 | 605.00 | 6776.00 |
| 4 | Super Plasticizer | kg | 24.64 | 55.00 | 1355.20 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 61606.96 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------|------|----------|-------------|-----------------|
| 1 | Batching plant 2 x 1 cum | Hour | 8.00 | 351.80 | 2814.40 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 2 | Agitator car 2 cum | Hour | 16.00 | 668.90 | 10702.40 |
| | Fuel / Energy charges | Hour | 16.00 | 1428.30 | 22852.80 |
| 3 | 10 hp pump (ele) | Hour | 8.00 | 5.90 | 47.20 |
| | Fuel / Energy charges | Hour | 8.00 | 84.60 | 676.80 |
| 4 | Needle vibrator 40 mm dia | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 8.50 | 68.00 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 40332.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Agitator car | Hour | 16.00 | 365.00 | 5840.00 |
| 3 | Crew for Pump | Hour | 8.00 | 107.60 | 860.80 |
| 4 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | mazdoor | | | | |
| | for cleaning bed | Day | 2.00 | 490.00 | 980.00 |
| | for loading material bin (Cement) | Day | 3.00 | 490.00 | 1470.00 |
| | for miscellaneous works at BP | Day | 2.00 | 490.00 | 980.00 |
| | for laying concrete | Day | 7.00 | 490.00 | 3430.00 |
| | for conveying laying concrete | Day | 14.00 | 490.00 | 6860.00 |
| | for cleaning bed | Day | 2.00 | 490.00 | 980.00 |
| | for washing CA / curing | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 28771.40 |

labour component/unit qty 1027.60
Add contractor's profit and overhead charges 13.615% 139.90
labour component/unit qty (including contractor's profit) **1167.50**

ABSTRACT:

| | | | | | |
|---|----------------|-----------|------------------|-----|------------|
| A. Cost of Materials | | | | Rs: | 61606.96 |
| B. Hire charges of Machinery | | | | Rs: | 40332.80 |
| C. Cost of Labour | | | | Rs: | 28771.40 |
| | | | Total | Rs: | 130711.16 |
| Add for Air and Water line @ | 1.00% | | | Rs: | 1307.11 |
| Add for Ventilation @ | 4.50% | | | Rs: | 5882.00 |
| Add for Lighting @ | 1.60% | | | Rs: | 2091.38 |
| Add for Ele sub-station / Demand charges @ | 2.50% | | | Rs: | 3267.78 |
| | | | Total | Rs: | 143259.43 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | | 13.615% | | Rs: | 19504.77 |
| Lead Charges for 1 Km for FA | 11.20 | cum @ | 38.288255 Rs./Cu | | 428.828456 |
| Lead Charges for 1 Km for CA | 25.20 | cum @ | 36.924875 Rs./Cu | | 930.51 |
| Total cost for | | 28.00 cum | | Rs: | 164123.54 |
| Rate per cum | (A+B+C+D)/28.0 | | | Rs: | 5861.60 |

IRR-TAW-5-3 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sqmm) grade **cement concrete using 40 mm and down size** approved clean, hard, graded aggregates crushed from tunnel muck **for kerb and bed lining** including cost of all materials, machinery, labour, formwork, batching, mixing, conveying upto placing point in agitator cars, placing in position, levelling, vibrating, finishing, curing, ventilation, lighting, drainage and all other ancillary operations etc., complete **with lead upto 1 km and all lifts.**
(Cement content 330 kg / cum for use of super plasticiser(0.4% by wt. of cement), CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA

RATE ANALYSISUNIT : **28.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------------|------|----------|-------------|---------------|
| 1 | Cement 43 Gr | kg | 9240.00 | 3.68 | 34003.20 |
| | Cement for incidentals @ 1 kg / cum | kg | 28.00 | 3.68 | 103.04 |
| 2 | Fine aggregate (Un-Screened) | cum | 11.20 | 605.00 | 6776.00 |
| 3 | Coarse aggregate 40-20 mm | cum | 12.60 | 1265.00 | 15939.00 |
| | Coarse aggregate 20-10 mm | cum | 7.56 | 1313.00 | 9926.28 |
| | Coarse aggregate 10-4.75 mm | cum | 5.04 | 967.00 | 4873.68 |
| 4 | Super plasticiser | kg | 36.96 | 55.00 | 2032.80 |
| 5 | Use rate of shuttering for kerb / bed | sqm | 28.00 | 198.45 | 5556.63 |
| 6 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 79278.63 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------------------|------|----------|-------------|---------------|
| 1 | Batching plant 2 x 1.00 cum | Hour | 8.00 | 351.80 | 2814.40 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 2 | Agitator car 2 cum (2 Nos) | Hour | 16.00 | 668.90 | 10702.40 |
| | Fuel / Energy charges | Hour | 16.00 | 1428.30 | 22852.80 |
| 3 | Needle Vibrator | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 8.50 | 68.00 |
| 4 | Pump 10 hp (Ele) | Hour | 8.00 | 5.90 | 47.20 |
| | Fuel / Energy charges | Hour | 8.00 | 84.60 | 676.80 |
| 5 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 40434.80 |

C. LABOUR:

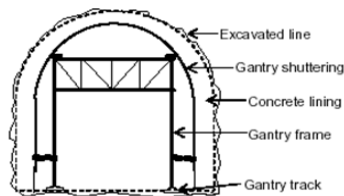
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Agitator car | Hour | 16.00 | 365.00 | 5840.00 |
| 3 | Crew for vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Crew for pump | Hour | 8.00 | 107.60 | 860.80 |
| 5 | For scaling & cleaning bed Hammerman | Day | 2.00 | 525.00 | 1050.00 |
| | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| 6 | For loading cement to BP bin mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| 7 | For miscellaneous work at BP mazdoor | Day | 2.00 | 490.00 | 980.00 |
| 8 | For wetting C.A & curing mazdoor | Day | 2.00 | 490.00 | 980.00 |
| 9 | Laying concrete for kerb/ invert Mason CI I | Day | 2.00 | 585.00 | 1170.00 |
| | Mason CI II | Day | 2.00 | 525.00 | 1050.00 |
| | mazdoor | Day | 21.00 | 490.00 | 10290.00 |
| | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 10 | Labour charges for shuttering | sqm | 28.00 | 120.75 | 3381.00 |
| Total cost of Labour | | | | Rs: | 35817.40 |

| | |
|---|----------------|
| labour component/unit qty | 1279.20 |
| Add contractor's profit and overhead charges | 13.615% 174.20 |
| labour component/unit qty (including contractor's profit) | 1453.40 |

ABSTRACT:

| | | | |
|---|----------------|------------------|------------------|
| A. Cost of Materials | | Rs: | 79278.63 |
| B. Hire charges of Machinery | | Rs: | 40434.80 |
| C. Cost of Labour | | Rs: | 35817.40 |
| | Total | Rs: | 155530.83 |
| Add for Air and Water line @ | 1.00% | Rs: | 1555.31 |
| Add for Ventilation @ | 4.50% | Rs: | 6998.89 |
| Add for Lighting @ | 1.60% | Rs: | 2488.49 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 3888.27 |
| | Total | Rs: | 170461.79 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 23208.37 |
| Lead Charges for 1 Km for FA | 11.20 cum @ | 38.288255 Rs./Cu | 428.828456 |
| Lead Charges for 1 Km for CA | 25.20 cum @ | 36.924875 Rs./Cu | 930.51 |
| Total cost for | 28.00 cum | Rs: | 195029.50 |
| Rate per cum | (A+B+C+D)/28.0 | Rs: | 6965.30 |

IRR-TAW-5-4 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using **40 mm and down size** approved clean, hard, graded aggregates crushed from tunnel muck **for sides and arch lining** including cost of all materials, machinery, labour, formwork, batching, mixing, conveying upto placing point in agitator cars, placing in position, levelling, vibrating, finishing, curing, ventilation, lighting, drainage and all other ancillary operations etc., complete **with lead upto 1 km and all lifts.**
(Cement content 330 kg / cum for use of super plasticiser(0.4% by wt. of cement), CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)



DATA:

RATE ANALYSISUNIT : **48.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|------------------|
| 1 | Cement 43 Gr | kg | 15840.00 | 3.68 | 58291.20 |
| | Cement for incidentals @ 1 kg / cum | kg | 48.00 | 3.68 | 176.64 |
| 2 | Fine aggregate (Un-Screened) | cum | 19.20 | 605.00 | 11616.00 |
| 3 | Coarse aggregate 40-20 mm | cum | 21.60 | 1265.00 | 27324.00 |
| | Coarse aggregate 20-10 mm | cum | 12.96 | 1313.00 | 17016.48 |
| | Coarse aggregate 10-4.75 mm | cum | 8.64 | 967.00 | 8354.88 |
| 4 | Super plasticiser | kg | 63.36 | 55.00 | 3484.80 |
| 5 | Use rate of end shuttering | sqm | 6.00 | 198.45 | 1190.71 |
| 6 | Use rate of steel gantry | sqm | 100.00 | 120.75 | 12075.00 |
| 7 | Sundries (placer pipe etc) | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 139699.71 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------------------------|------|----------|-------------|------------------|
| 1 | Air compressor (Ele) 8.5 cmm | Hour | 16.00 | 145.90 | 2334.40 |
| | Fuel / Energy charges @ 75 % load | Hour | 12.00 | 475.90 | 5710.80 |
| 2 | Batching plant 2 x 1.00 cum | Hour | 12.00 | 351.80 | 4221.60 |
| | Fuel / Energy charges | Hour | 12.00 | 380.70 | 4568.40 |
| 3 | Agitator car 2 cum (2 Nos) | Hour | 32.00 | 668.90 | 21404.80 |
| | Fuel / Energy charges | Hour | 32.00 | 1428.30 | 45705.60 |
| 4 | Concrete placer pump | Hour | 16.00 | 858.30 | 13732.80 |
| | Fuel / Energy charges | Hour | 16.00 | 507.60 | 8121.60 |
| 5 | Needle Vibrator / Shutter vibrator | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 8.50 | 68.00 |
| 6 | Pump 10 hp (Ele) | Hour | 8.00 | 5.90 | 47.20 |
| | Fuel / Energy charges | Hour | 8.00 | 84.60 | 676.80 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 106819.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------------------------|------|----------|-------------|-----------------|
| 1 | Crew charges for Air compressor | Hour | 16.00 | 214.50 | 3432.00 |
| 2 | Crew charges for Batching plant | Hour | 16.00 | 439.80 | 7036.80 |
| 3 | Crew charges for Agitator car | Hour | 32.00 | 365.00 | 11680.00 |
| 4 | Crew charges for placer pump | Hour | 16.00 | 214.50 | 3432.00 |
| 5 | Crew charges for vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 6 | Crew charges for Pump | Hour | 8.00 | 107.60 | 860.80 |
| 7 | For scaling & cleaning | | | | |
| | Stone chiseller CI II | Day | 0.50 | 525.00 | 262.50 |
| | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| 8 | For dismantling / Laying track | | | | |
| | Surveyer | Day | 0.50 | 910.00 | 455.00 |
| | Fitter shuttering | Day | 0.50 | 525.00 | 262.50 |
| | Helper shuttering 2 x 0.5 | Day | 1.00 | 525.00 | 525.00 |
| | Khalasi 6 x 0.5 | Day | 3.00 | 575.00 | 1725.00 |
| | mazdoor 2 x 0.5 | Day | 1.00 | 490.00 | 490.00 |
| 9 | For Moving / Positioning gantry | | | | |
| | Surveyer | Day | 0.50 | 910.00 | 455.00 |
| | Foreman | Day | 0.50 | 645.00 | 322.50 |
| | Fitter shuttering | Day | 0.50 | 525.00 | 262.50 |
| | Helper shuttering 2 x 0.5 | Day | 1.00 | 525.00 | 525.00 |
| | Khalasi 6 x 0.5 | Day | 3.00 | 575.00 | 1725.00 |
| | mazdoor 2 x 0.5 | Day | 1.00 | 490.00 | 490.00 |
| 10 | For loading cement to BP bin | | | | |
| | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| 11 | For miscellaneous works of BP | | | | |
| | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| 12 | For Erection/Dismantling bulk head | sqm | 6.00 | 120.75 | 724.50 |
| 13 | For Laying concrete by placer | | | | |
| | Masom CI I | Day | 3.00 | 585.00 | 1755.00 |
| | mazdoor | Day | 9.00 | 490.00 | 4410.00 |
| | work inspector | Day | 3.00 | 640.00 | 1920.00 |
| 14 | For wetting C.A / Curing etc | | | | |
| | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 49788.30 |

| | |
|---|----------------|
| labour component/unit qty | 1037.30 |
| Add contractor's profit and overhead charges | 13.615% 141.20 |
| labour component/unit qty (including contractor's profit) | 1178.50 |

ABSTRACT:

| | | | | | |
|---|----------------|-----------|------------------|------------|----------------|
| A. Cost of Materials | | | | Rs: | 139699.71 |
| B. Hire charges of Machinery | | | | Rs: | 106819.60 |
| C. Cost of Labour | | | | Rs: | 49788.30 |
| | | | Total | Rs: | 296307.61 |
| Add for Air and Water line @ | 1.00% | | | Rs: | 2963.08 |
| Add for Ventilation @ | 4.50% | | | Rs: | 13333.84 |
| Add for Lighting @ | 1.60% | | | Rs: | 4740.92 |
| Add for Ele sub-station / Demand charges @ | 2.50% | | | Rs: | 7407.69 |
| | | | Total | Rs: | 324753.14 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | | 13.615% | | Rs: | 44215.14 |
| Lead Charges for 1 Km for FA | 19.20 | cum @ | 38.288255 Rs./Cu | 735.134496 | |
| Lead Charges for 1 Km for CA | 43.20 | cum @ | 36.924875 Rs./Cu | 1595.15 | |
| Total cost for | | 48.00 cum | | Rs: | 371298.57 |
| Rate per cum | (A+B+C+D)/48.0 | | | Rs: | 7735.40 |

IRR-TAW-6 **DRILLING & GROUTING WORKS :**

IRR-TAW-6-1 **Drilling 32 mm diameter grout holes in concrete / rock by percussion drilling** using jack hammer or stooper drills as directed to specified depth for consolidation / contact grouting including cost of all materials, machinery, labour, cleaning holes, ventilation, lighting, drainage and all other ancillary operations etc., complete.

DATA:

RATE ANALYSISUNIT : **100.00 Rm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of drill rod | Rm | 100.00 | 38.93 | 3893.33 |
| | Reconditioning charges @ | 10% | | | 389.33 |
| 2 | Use rate of air hose 4 Nos | Hour | 32.00 | 5.50 | 176.00 |
| 3 | Use rate of water hose 4 Nos | Hour | 32.00 | 5.56 | 178.00 |
| 4 | Sundries | LS | 3.00 | 34.00 | 102.00 |
| Total cost of Materials | | | | Rs: | 4738.67 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Air compressor 15 cmm (ele) | Hour | 8.00 | 115.20 | 921.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1057.50 | 8460.00 |
| 2 | Pump 10 hp (ele) | Hour | 4.00 | 5.90 | 23.60 |
| | Fuel / Energy charges | Hour | 4.00 | 84.60 | 338.40 |
| 3 | Jack hammer | Hour | 32.00 | 17.30 | 553.60 |
| | Fuel / Energy charges | Hour | 32.00 | 0.00 | 0.00 |
| 4 | Pusher leg | Hour | 32.00 | 11.90 | 380.80 |
| | Fuel / Energy charges | Hour | 32.00 | 0.00 | 0.00 |
| 5 | Drilling jumbo | Hour | 8.00 | 335.30 | 2682.40 |
| | Fuel / Energy charges | Hour | 8.00 | 70.10 | 560.80 |
| 6 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 14091.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|---------------------------------|------|----------|-------------|-----------------|
| 1 | Crew charges for Air compressor | Hour | 8.00 | 228.80 | 1830.40 |
| 2 | Crew charges for Pump | Hour | 4.00 | 107.60 | 430.40 |
| 3 | Crew charges for Jack Hammer | Hour | 32.00 | 429.00 | 13728.00 |
| 4 | Crew charges for Drilling Jumbo | Hour | 8.00 | 228.80 | 1830.40 |
| 5 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 18799.20 |

| | |
|---|---------------|
| labour component/unit qty | 188.00 |
| Add contractor's profit and overhead charges | 13.615% 25.60 |
| labour component/unit qty (including contractor's profit) | 213.60 |

ABSTRACT:

| | | | |
|--|------------------------|-----|---------------|
| A. Cost of Materials | | Rs: | 4738.67 |
| B. Hire charges of Machinery | | Rs: | 14091.20 |
| C. Cost of Labour | | Rs: | 18799.20 |
| | Total | Rs: | 37629.07 |
| Add for Air and Water line @ | 1.00% | Rs: | 376.29 |
| Add for Ventilation @ | 4.50% | Rs: | 1693.31 |
| Add for Lighting @ | 1.60% | Rs: | 602.07 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 940.73 |
| | Total | Rs: | 41241.46 |
| D.Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 5615.02 |
| Total cost for | 100.00 Rm | Rs: | 46856.48 |
| Rate per Rm | (A+B+C+D)/100.0 | Rs: | 468.60 |

IRR-TAW-6-2 **Grouting cement slurry in grout holes** under specified pressure for consolidation / contact grouting including cost of all materials, machinery, labour, redrilling wherever necessary, ventilation, lighting, drainage and other ancillary operations etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **1.50 tonne****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------|-------|----------|-------------|----------------|
| 1 | Cement | tonne | 1.50 | 3680.00 | 5520.00 |
| 2 | Use rate of grouting hose 50 m | Hour | 8.00 | 11.00 | 88.00 |
| 3 | Use rate of water hose 50 m | Hour | 8.00 | 11.13 | 89.00 |
| 4 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 5765.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Grouting machine | Hour | 8.00 | 21.10 | 168.80 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 2 | Pump 10 hp (ele) | Hour | 2.00 | 5.90 | 11.80 |
| | Fuel / Energy charges | Hour | 2.00 | 84.60 | 169.20 |
| 3 | Drilling jumbo | Hour | 2.00 | 335.30 | 670.60 |
| | Fuel / Energy charges | Hour | 2.00 | 70.10 | 140.20 |
| 4 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 1567.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Grout pump | Hour | 8.00 | 343.20 | 2745.60 |
| 2 | Crew for pump | Hour | 2.00 | 107.60 | 215.20 |
| 3 | Crew for Drilling jumbo | Hour | 2.00 | 228.80 | 457.60 |
| 4 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 4398.40 |

| | |
|---|----------------|
| labour component/unit qty | 2932.30 |
| Add contractor's profit and overhead charges | 13.615% 399.20 |
| labour component/unit qty (including contractor's profit) | 3331.50 |

ABSTRACT:

| | | | |
|--|-----------------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 5765.00 |
| B. Hire charges of Machinery | | Rs: | 1567.00 |
| C. Cost of Labour | | Rs: | 4398.40 |
| | Total | Rs: | 11730.40 |
| Add for Air and Water line @ | 1.00% | Rs: | 117.30 |
| Add for Ventilation @ | 4.50% | Rs: | 527.87 |
| Add for Lighting @ | 1.60% | Rs: | 187.69 |
| Add for Ele sub-station / Demand charges @ | 2.50% | Rs: | 293.26 |
| | Total | Rs: | 12856.52 |
| D.Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: | 1750.41 |
| Total cost for | 1.50 tonne | Rs: | 14606.93 |
| Rate per tonne | (A+B+C+D)/1.50 | Rs: | 9738.00 |

IRR-TAW-6-3 **Drilling 75 mm diameter drainage holes** vertical or inclined in **rock / concrete** in tunnel by percussion drilling using waggon drill or other suitable drilling equipment including cost of all materials, machinery, labour, ventilation, lighting, drainage etc., complete.

DATA

RATE ANALYSISUNIT : **120.00 Rm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------|------|----------|-------------|-----------------|
| 1 | Use rate of cross bit 75 mm dia | Rm | 120.00 | 128.50 | 15420.00 |
| 2 | Use rate of air hose 20 m | Hour | 16.00 | 4.40 | 70.40 |
| 3 | Use rate of water hose 20 m | Hour | 16.00 | 4.45 | 71.20 |
| 4 | Use rate of extension rods | Rm | 120.00 | 7.92 | 950.40 |
| Total cost of Materials | | | | Rs: | 16512.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Waggon drill | Hour | 16.00 | 169.80 | 2716.80 |
| | Fuel / Energy charges | Hour | 16.00 | 0.00 | 0.00 |
| 2 | Air compressor 15 cmm (ele) | Hour | 8.00 | 115.20 | 921.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1057.50 | 8460.00 |
| 3 | Pump 10 hp (ele) | Hour | 6.00 | 5.90 | 35.40 |
| | Fuel / Energy charges | Hour | 6.00 | 84.60 | 507.60 |
| 4 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 12709.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Waggon drill | Hour | 16.00 | 365.00 | 5840.00 |
| 2 | Crew for Air compressor | Hour | 8.00 | 228.80 | 1830.40 |
| 3 | Crew for Pump | Hour | 6.00 | 107.60 | 645.60 |
| 4 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 9296.00 |

labour component/unit qty

77.50

Add contractor's profit and overhead charges

13.615% 10.60

labour component/unit qty (including contractor's profit)

88.10**ABSTRACT:**

A. Cost of Materials

Rs: 16512.00

B. Hire charges of Machinery

Rs: 12709.40

C. Cost of Labour

Rs: 9296.00

Total Rs: **38517.40**

Add for Air and Water line @

1.00%

Rs: 385.17

Add for Ventilation @

4.50%

Rs: 1733.28

Add for Lighting @

1.60%

Rs: 616.28

Add for Ele sub-station / Demand charges @

2.50%

Rs: 962.94

Total Rs: **42215.07**

D. Add for contractor's profit and overheads on (A+B+C+other percentages)

13.615%

Rs: 5747.58

Total cost for

120.00 Rm

Rs: **47962.65****Rate per Rm**

(A+B+C+D)/120.0

Rs: **399.70**

Chapter III

CANAL AND ALLIED WORKS - Standard Data

(WLL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)
FOR THE YEAR : 2021-22

Index- code

IRR-CAW

CANAL AND ALLIED WORKS - DATA RATES

Directions to add Seigniorage Charges and Additional Lead Charges

Seigniorage Charges:

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic rates are inclusive of all lifts.
2. For concrete, masonry and reinforcement items **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:

Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.

In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again

Example:

Total lead for sand from approved sand quarry :

Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :

| | | | | |
|---------------------------|-------------------------------------|-----|-----------|-------|
| Additional lead charges : | Lead charges for 5 km | Rs. | 102.14 | 15 Km |
| | Lead charges for next 10 km | Rs. | 153.38025 | 1 Km |
| | Total lead charges for 15 km /cum | Rs. | 255.52 | |
| | Less 1 km initial lead charges /cum | Rs. | 38.29 (-) | |
| | Net additional lead charges / cum | Rs. | 217.23 | |

3. The Leads for Steel shall be from the nearest market place to the Project area

4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:

Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item. (same as above)

Example:

Total lead for earth from approved borrow area :

Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) :

| | | | | |
|---------------------------|-------------------------------------|-----|-----------|-------|
| Additional lead charges : | Lead charges for 5 km | Rs. | 102.14 | 15 Km |
| | Lead charges for next 10 km | Rs. | 153.38025 | 1 Km |
| | Total lead charges for 15 km /cum | Rs. | 255.52 | |
| | Less 1 km initial lead charges /cum | Rs. | 38.29 (-) | |
| | Net additional lead charges / cum | Rs. | 217.23 | |

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area. For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

CAW-Work Items

IRR-CAW-1 **EXCAVATION WORKS :**

IRR-CAW-1-1 Excavation in **all kinds of soil** including boulders **upto 0.3 m** diameter **for canal**, seating of embankment, filter drains / catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated soil neatly in dump area or for the formation of service road / embankment as directed etc., complete **with initial lead upto 1 km and all lifts**.

DATA:

RATE ANALYSIS

UNIT :

925.00 cum

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------------------|------|----------|-------------|---------------|
| 1 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 2 | Tippers 5 cum capacity 6 Nos | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| Total hire charges of Machinery | | | | Rs: | 66657.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | mazdoor | Day | 30.00 | 490.00 | 14700.00 |
| Total cost of Labour | | | | Rs: | 28727.20 |

labour component/unit qty 31.10
 Add contractor's profit and overhead charges 13.615% 4.20
 labour component/unit qty (including contractor's profit) **35.30**

ABSTRACT:

| | | |
|---|---------------|----------------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 66657.60 |
| C. Cost of Labour | Rs: | 28727.20 |
| Total | Rs: | 95384.80 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 12986.64 |
| Total cost for | 925.00 cum | Rs: 108371.44 |
| Rate per cum | (A+B+C+D)/925 | Rs: 117.20 |

IRR-CAW-1-2 Excavation in **all kinds of soil** including boulders **upto 0.30 m dia for field channels**, seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road / embankment as directed etc., complete **with lead upto 10 m and lift upto 3 m.**

DATA:

RATE ANALYSISUNIT : **440.00 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| Total hire charges of Machinery | | | | Rs: | 13557.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 17.00 | 490.00 | 8330.00 |
| Total cost of Labour | | | | Rs: | 11403.60 |

labour component/unit qty 25.90
 Add contractor's profit and overhead charges 13.615% 3.50
 labour component/unit qty (including contractor's profit) **29.40**

ABSTRACT:

| | | |
|---|---------------|---------------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 13557.60 |
| C. Cost of Labour | Rs: | 11403.60 |
| Total | Rs: | 24961.20 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 3398.47 |
| Total cost for | 440.00 cum | Rs: 28359.67 |
| Rate per cum | (A+B+C+D)/440 | Rs: 64.50 |

IRR-CAW-1-3 Excavation in **ordinary rock (including HDR) without blasting** including boulders **above 0.30 m upto 0.6 m dia.** for canals, seating of embankment, filter drain / catch water drains etc., including dressing of bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated soft rock neatly in dump area or for formation of service road as directed etc., complete **with lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **630.00 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 2 | Tipplers 5 cum capacity 5 Nos | Hour | 40.00 | 404.90 | 16196.00 |
| | Fuel / Energy charges | Hour | 40.00 | 490.80 | 19632.00 |
| Total hire charges of Machinery | | | | Rs: | 59492.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Tipper | Hour | 40.00 | 228.20 | 9128.00 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Crowbarman | Day | 11.00 | 525.00 | 5775.00 |
| 5 | mazdoor | Day | 22.00 | 490.00 | 10780.00 |
| Total cost of Labour | | | | Rs: | 28756.60 |

labour component/unit qty

45.60

Add contractor's profit and overhead charges

13.615% 6.20

labour component/unit qty (including contractor's profit)

51.80**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 59492.00

C. Cost of Labour

Rs: 28756.60

Total Rs: **88248.60**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 12015.05

Total cost for

630.00 cum

Rs: **100263.65****Rate per****cum**

(A+B+C+D)/630

Rs. **159.10**

IRR-CAW-1-4

Excavation in ordinary rock (including HDR) without blasting including boulders above 0.3 m upto 0.60 m dia. for field channels, seating of embankment for field channels etc., including dressing of bed and sides to required profile, cost of all materials, machinery, labour, placing the excavated stuff for formation of service road as directed etc., complete with lead upto 10 m and lift upto 3 m.

DATA:

RATE ANALYSIS

UNIT :

265.00 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| Total hire charges of Machinery | | | | Rs: | 13557.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Crowbarman | Day | 5.00 | 525.00 | 2625.00 |
| 4 | mazdoor | Day | 11.00 | 490.00 | 5390.00 |
| Total cost of Labour | | | | Rs: | 11088.60 |

labour component/unit qty

41.80

Add contractor's profit and overhead charges

13.615% 5.70

labour component/unit qty (including contractor's profit)

47.50**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 13557.60

C. Cost of Labour

Rs: 11088.60

Total Rs: **24646.20**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 3355.58

Total cost for

265.00 cum

Rs: **28001.78****Rate per****cum**

(A+B+C+D)/265

Rs. **105.70**

IRR-CAW-1-5

Excavation in hard rock (including F&F rock) requiring blasting including boulders above 0.6 m upto 1.2 m dia. for canals, seating of embankment, filter drain / catch water drains etc., including dressing bed and sides to required level and profile, cost of all materials, machinery, labour, placing the excavated rock in dump area or for formation of service road as directed etc., complete with lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

805.00 cum

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------------|------|----------|-------------|-----------------|
| 1 | Use rate of drill rod 1.5 m length | Rm | 316.00 | 19.51 | 6165.16 |
| | Reconditioning charges @ 10% | | | | 616.52 |
| 2 | Use rate of 50 m air hose 2 Nos | Hour | 24.00 | 11.00 | 264.00 |
| 3 | Explosive small dia (Kelvex-220) | kg | 161.00 | 69.00 | 11109.00 |
| 4 | Ordinary detonators | Nos | 12.00 | 7.00 | 84.00 |
| 5 | Electric detonators | Nos | 215.00 | 10.00 | 2150.00 |
| 6 | Fuse coil | Rm | 520.00 | 8.00 | 4160.00 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 24718.68 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 2 | Tippers 5 cum capacity 5 Nos. | Hour | 40.00 | 404.90 | 16196.00 |
| | Fuel / Energy charges | Hour | 40.00 | 490.80 | 19632.00 |
| 3 | Air compressor 8.5 cmm (diesel) | Hour | 12.00 | 237.70 | 2852.40 |
| | Fuel / Energy charges | Hour | 12.00 | 1460.70 | 17528.40 |
| 4 | Jack hammers 3 Nos. | Hour | 39.00 | 17.30 | 674.70 |
| | Fuel / Energy charges | Hour | 39.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 80547.50 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Tipper | Hour | 40.00 | 228.20 | 9128.00 |
| 3 | Crew for Air compressor | Hour | 12.00 | 274.60 | 3295.20 |
| 4 | Crew for Jack hammer | Hour | 39.00 | 429.00 | 16731.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | Blaster | Day | 1.00 | 645.00 | 645.00 |
| 7 | Helper blaster | Day | 1.00 | 525.00 | 525.00 |
| 8 | Crowbarman | Day | 16.00 | 525.00 | 8400.00 |
| 9 | Stone breaker | Day | 16.00 | 525.00 | 8400.00 |
| 10 | mazdoor | Day | 32.00 | 490.00 | 15680.00 |
| Total cost of Labour | | | | Rs: | 65877.80 |

labour component/unit qty

81.80

Add contractor's profit and overhead charges

13.615% 11.10

labour component/unit qty (including contractor's profit)

92.90**ABSTRACT:**

A. Cost of Materials

Rs: 24718.68

B. Hire charges of Machinery

Rs: 80547.50

C. Cost of Labour

Rs: 65877.80

Total Rs: **171143.98**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 23301.25

Total cost for

805.00 cum

Rs: **194445.23****Rate per cum**

(A+B+C+D)/805

Rs. **241.50**

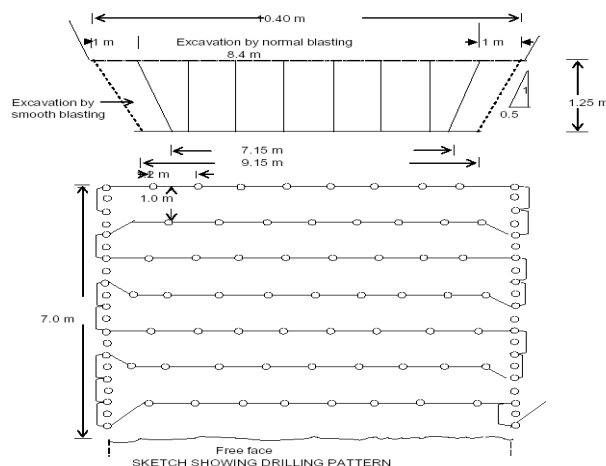
IRR-CAW-1-6

(a)

Excavation in hard rock of all toughness by blasting including boulders above 1.2 m dia. for canals, seating of embankment, filter drain / catch water drains etc., including levelling the bed by removing all projections by hammering / chiselling, cost of all materials, machinery, labour, placing the excavated rock neatly in approved dump area and levelling the same as directed etc., complete with initial lead upto 1 km and all lifts.

Note:

- i) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth of excavation in hard rock is less than 3 m.
 ii) The rate includes levelling canal bed by hammering / chiselling all rock projections wherever required.



DATA:

RATE ANALYSIS

UNIT :

68.00 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of drill rod 1.5 m length | Rm | 85.00 | 26.01 | 2211.13 |
| | Reconditioning charges @ 10% | | | | 221.11 |
| 2 | Use rate of 50 m air hose 2 Nos. | Hour | 13.00 | 11.00 | 143.00 |
| 3 | Explosive small dia. (Kelvex-220) | kg | 21.20 | 69.00 | 1462.80 |
| 4 | Ordinary detonators | Nos | 4.00 | 7.00 | 28.00 |
| 5 | Electric detonators | Nos | 59.00 | 10.00 | 590.00 |
| 6 | Fuse coil | Rm | 90.00 | 8.00 | 720.00 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 5444.05 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---|------|----------|-------------|-----------------|
| 1 | Shovel 0.85 cum capacity | Hour | 1.10 | 1529.70 | 1682.67 |
| | Fuel / energy charges | Hour | 1.10 | 1428.30 | 1571.13 |
| 2 | Angle dozer 90 hp | Hour | 0.25 | 1531.00 | 382.75 |
| | Fuel / Energy charges | Hour | 0.25 | 999.10 | 249.78 |
| 3 | Tippers 5 cum capacity 4 Nos. | Hour | 4.40 | 404.90 | 1781.56 |
| | Fuel / Energy charges | Hour | 4.40 | 490.80 | 2159.52 |
| 4 | Air compressor 8.5 cmm (diesel) 1 Nos | Hour | 6.50 | 237.70 | 1545.05 |
| | Fuel / Energy charges | Hour | 6.50 | 1460.70 | 9494.55 |
| 5 | Jack hammers 2 Nos. | Hour | 13.00 | 17.30 | 224.90 |
| | Fuel / Energy charges | Hour | 13.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 19091.91 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 1.10 | 304.20 | 334.62 |
| 2 | Crew for Dozer | Hour | 0.25 | 304.20 | 76.05 |
| 3 | Crew for Tipper | Hour | 4.40 | 228.20 | 1004.08 |
| 4 | Crew for Air compressor | Hour | 6.50 | 274.60 | 1784.90 |
| 5 | Crew for Jack hammer | Hour | 13.00 | 429.00 | 5577.00 |
| 6 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 7 | Blaster | Day | 1.00 | 645.00 | 645.00 |
| 8 | Helper blaster | Day | 1.00 | 525.00 | 525.00 |
| 9 | Crowbarman | Day | 0.50 | 525.00 | 262.50 |
| 10 | Stone breaker | Day | 0.50 | 525.00 | 262.50 |
| 11 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 11771.65 |

labour component/unit qty

173.10

Add contractor's profit and overhead charges

13.615% 23.60

labour component/unit qty (including contractor's profit)

196.70**ABSTRACT:**

A. Cost of Materials

Rs: 5444.05

B. Hire charges of Machinery

Rs: 19091.91

C. Cost of Labour

Rs: 11771.65

Total Rs: **36307.60**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 4943.28

Total cost for

68.00 cum

Rs: **41250.88****Rate per****cum**

(A+B+C+D)/68

Rs. **606.60**

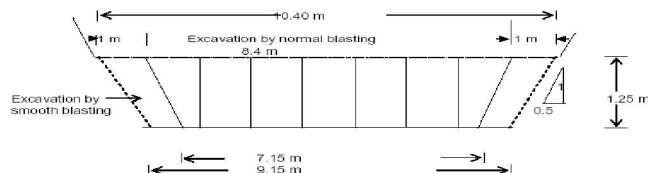
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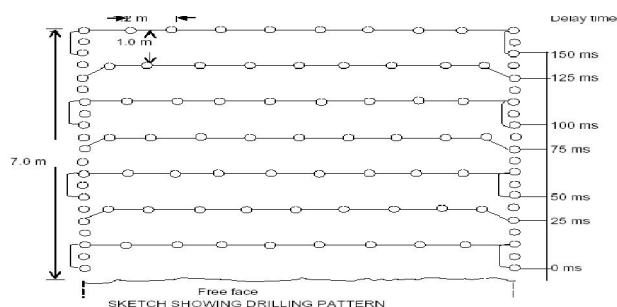
(b)

Excavation in **hard rock of all toughness** including boulders **above 1.2 m dia.** by approved **controlled blasting methods for canals**, cut-off trench of embankment, filter / catch-water drains etc., including controlling fly-rock by muffling arrangements such as placing 50 x 50 mm opening chain link mesh or waste tyres and sand bags, monitoring ground vibrations at specified locations, costof all materials, machinery, labour, placing excavated rock neatly in approved dump area or other place as directed etc., complete **with lead upto 1 km and all lifts.**

Note:

- i) The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth of excavation in hard rock is less than 3 m.
 ii) The rate under this item shall be adopted where the control of fly-rock and ground vibrations is required.





DATA

RATE ANALYSIS

UNIT :

68.00 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------------|------|----------|-------------|-----------------|
| 1 | Use rate of drill rod 1.5 m length | Rm | 85.00 | 26.01 | 2211.13 |
| | Reconditioning charges @ 10% | | | | 221.11 |
| 2 | Use rate of 50 m air hose 2 Nos. | Hour | 13.00 | 11.00 | 143.00 |
| 3 | Use rate of wire mesh | sqm | 94.00 | 58.51 | 5499.47 |
| 4 | Use rate of sand bag | Nos | 98.00 | 19.12 | 1873.76 |
| 5 | Explosive small dia. (Kelvex-220) | kg | 21.20 | 69.00 | 1462.80 |
| 6 | Ordinary detonators | Nos | 4.00 | 7.00 | 28.00 |
| 7 | Electric delay detonators | Nos | 59.00 | 20.00 | 1180.00 |
| 8 | Fuse coil | Rm | 90.00 | 8.00 | 720.00 |
| 9 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 13407.28 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--|------|----------|-------------|-----------------|
| 1 | Shovel 0.85 cum capacity | Hour | 1.10 | 1529.70 | 1682.67 |
| | Fuel / Energy charges | Hour | 1.10 | 1428.30 | 1571.13 |
| 2 | Angle dozer 90 hp | Hour | 0.25 | 1531.00 | 382.75 |
| | Fuel / Energy charges | Hour | 0.25 | 999.10 | 249.78 |
| 3 | Tipplers 5 cum capacity 3 Nos. | Hour | 4.40 | 404.90 | 1781.56 |
| | Fuel / Energy charges | Hour | 4.40 | 490.80 | 2159.52 |
| 4 | Air compressor 8.5 cmm (diesel) 1 No | Hour | 6.50 | 237.70 | 1545.05 |
| | Fuel / Energy charges | Hour | 6.50 | 1460.70 | 9494.55 |
| 5 | Jack hammers 2 Nos. | Hour | 13.00 | 17.30 | 224.90 |
| | Fuel / Energy charges | Hour | 13.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 19091.91 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 1.10 | 304.20 | 334.62 |
| 2 | Crew for Angle dozer | Hour | 0.25 | 304.20 | 76.05 |
| 3 | Crew for Tipper | Hour | 4.40 | 228.20 | 1004.08 |
| 4 | Crew for Air compressor | Hour | 6.50 | 274.60 | 1784.90 |
| 5 | Crew for Jack hammer | Hour | 13.00 | 429.00 | 5577.00 |
| 6 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 7 | Blaster | Day | 0.50 | 645.00 | 322.50 |
| 8 | Helper blaster | Day | 0.50 | 525.00 | 262.50 |
| 9 | Stone chiseller Cl - II | Day | 0.50 | 525.00 | 262.50 |
| 10 | Stone breaker | Day | 0.50 | 525.00 | 262.50 |
| 11 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 11676.65 |

labour component/unit qty

171.70

Add contractor's profit and overhead charges

13.615% 23.40

labour component/unit qty (including contractor's profit)

195.10**ABSTRACT:**

A. Cost of Materials

Rs: 13407.28

B. Hire charges of Machinery

Rs: 19091.91

C. Cost of Labour

Rs: 11676.65

Add for blasting studies & monitoring vibrations etc

0.50%

Total Rs: 44175.83

D. Add for contractor's profit and overheads on (A+B+C+blasting study charges)

13.615%

Total Rs: 44396.71

Total cost for

68.00 cum

Rs: 6044.61

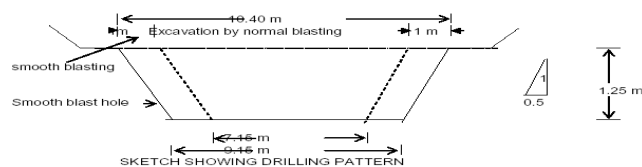
Rate per**cum**

(A+B+C+D)/68

Rs: **50441.32**Rs: **741.80**IRR-CAW-1-8
(c)

Excavation in hard rock of all toughness including boulders above 1.2 m dia. for dressing canal sides neatly on either side to required profile by line drilling and smooth blasting including removing under-cuts by chiselling / hammering, placing the excavated rock neatly in dump area or other place as directed, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts.

- Note:**
- For excavation of canal below free board level combination of normal / controlled blasting and line drilling and smooth blasting shall be adopted to obtain neat side slopes. For the purpose of payment 1 m width of excavation on either side shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be.
 - The rate under this item shall be adopted for canals designed for carrying capacity of less than 15 cumecs or where the average depth of excavation in hard rock is less than 3 m.
 - The rate includes controlling fly-rock wherever required.
 - The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval.
 - In case, where the above criteria is not fulfilled payment shall be restricted to rate provided for excavation by normal blasting or controlled blasting as the case may be.



DATA

RATE ANALYSIS

| A. MATERIALS: | | | UNIT : 17.50 cum | | |
|-------------------------|------------------------------------|------|------------------|-------------|----------------|
| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Use rate of drill rod 1.5 m length | Rm | 63.00 | 26.01 | 1638.84 |
| | Reconditioning charges @ 10% | | | | 163.88 |
| 2 | Use rate of 50 m air hose 2 Nos. | Hour | 10.00 | 11.00 | 110.00 |
| 3 | Explosive small dia. (Kelvex-220) | kg | 3.50 | 69.00 | 241.50 |
| 4 | Electric delay detonators | Nos | 22.00 | 20.00 | 440.00 |
| 5 | Fuse coil | Rm | 20.00 | 8.00 | 160.00 |
| 6 | Sundries | LS | 1.00 | 34.00 | 34.00 |
| Total cost of Materials | | | | Rs: | 2788.22 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---|------|----------|-------------|-----------------|
| 1 | Shovel 0.85 cum capacity | Hour | 0.28 | 1529.70 | 428.32 |
| | Fuel / Energy charges | Hour | 0.28 | 1428.30 | 399.92 |
| 2 | Tipplers 5 cum capacity 4 Nos. | Hour | 1.12 | 404.90 | 453.49 |
| | Fuel / Energy charges | Hour | 1.12 | 490.80 | 549.70 |
| 3 | Air compressor 8.5 cmm (diesel) 1 Nos | Hour | 5.00 | 237.70 | 1188.50 |
| | Fuel / Energy charges | Hour | 5.00 | 1460.70 | 7303.50 |
| 4 | Jack hammers 2 Nos. | Hour | 10.00 | 17.30 | 173.00 |
| | Fuel / Energy charges | Hour | 10.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 10496.42 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Shovel | Hour | 0.50 | 304.20 | 152.10 |
| 2 | Crew for Tipper | Hour | 1.12 | 228.20 | 255.58 |
| 3 | Crew for Air compressor | Hour | 5.00 | 274.60 | 1373.00 |
| 4 | Crew for Jack hammer | Hour | 10.00 | 429.00 | 4290.00 |
| 5 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 6 | Blaster | Day | 0.50 | 645.00 | 322.50 |
| 7 | Helper blaster | Day | 0.50 | 525.00 | 262.50 |
| 8 | Stone breaker | Day | 0.50 | 525.00 | 262.50 |
| 9 | Stone chiseller Cl - II | Day | 0.50 | 525.00 | 262.50 |
| 10 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 7990.68 |

labour component/unit qty 456.60

Add contractor's profit and overhead charges 13.615% 62.20

labour component/unit qty (including contractor's profit) 518.80

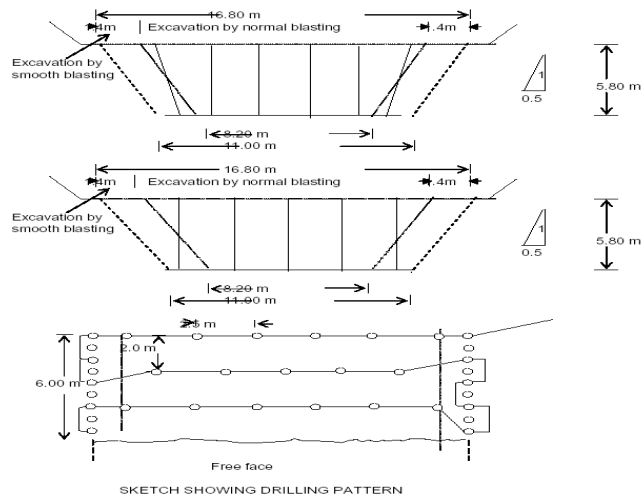
ABSTRACT:

| | | |
|--|-------|-----------------|
| A. Cost of Materials | Rs: | 2788.22 |
| B. Hire charges of Machinery | Rs: | 10496.42 |
| C. Cost of Labour | Rs: | 7990.68 |
| | Total | Rs: 21275.33 |
| Add for blasting studies & monitoring vibrations etc 0.50% | Rs: | 106.38 |
| | Total | Rs: 21381.71 |
| D. Add for contractor's profit and overheads on (A+B+C+blasting study charges) 13.615% | Rs: | 2911.12 |
| Total cost for 17.50 cum | Rs: | 24292.83 |
| Rate per cum (A+B+C+D)/17.50 | Rs: | 1388.20 |

- IRR-CAW-1-9 Excavation in hard rock by blasting including boulders above 1.2 m dia. for canals, seating embankment etc., including levelling bed by removing all projections by hammering / chiselling, cost of all materials, machinery, labour, placing the excavated rock neatly in approved dump area and levelling the same as directed etc., complete with initial lead upto 1 km and all lifts.

Note:

- i) The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m.
- ii) The rate includes levelling canal bed by hammering / chiselling all rock projections wherever required.



DATA:

RATE ANALYSIS

Unit: **386.00 Cum**

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|-----------------|
| 1 | Use rate of T.C bit 100 mm dia | Rm | 104.00 | 151.25 | 15730.00 |
| 2 | Use rate of Extension rod with coupling sleeve | Rm | 104.00 | 5.94 | 617.76 |
| 3 | Use rate of Jack hammer drill rod 1.5 m | Rm | 12.00 | 26.01 | 312.16 |
| | reconditioning charges @ 10% | | | | 31.22 |
| 4 | Use rate of 50 m air hose for waggon drill | Hour | 10.50 | 16.63 | 174.56 |
| | Use rate of 25 m air hose for JH 2 Nos | Hour | 1.00 | 11.00 | 11.00 |
| 5 | High strength ANFO booster | kg | 38.00 | 69.00 | 2622.00 |
| 6 | ANFO | kg | 155.00 | 44.00 | 6820.00 |
| 7 | Diesel oil | ltr | 35.00 | 94.43 | 3305.05 |
| 8 | Explosive small dia (Kelvex-220) | kg | 4.00 | 69.00 | 276.00 |
| 9 | Ordinary detonators | Nos | 20.00 | 7.00 | 140.00 |
| 10 | D-cord | Rm | 145.00 | 7.00 | 1015.00 |
| 11 | Detonating fuse coil | Rm | 20.00 | 8.00 | 160.00 |
| 12 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 31384.75 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Tippers 5 cum capacity | Hour | 24.84 | 404.90 | 10057.72 |
| | Fuel / Energy charges | Hour | 24.84 | 490.80 | 12191.47 |
| 2 | Shovel 0.85 cum capacity | Hour | 6.21 | 1529.70 | 9499.44 |
| | Fuel / Energy charges | Hour | 6.21 | 1428.30 | 8869.74 |
| 3 | Angle dozer | Hour | 2.00 | 1531.00 | 3062.00 |
| | Fuel / Energy charges | Hour | 2.00 | 999.10 | 1998.20 |
| 4 | Air compressor 8.5 cmm (diesel) | Hour | 11.50 | 237.70 | 2733.55 |
| | Fuel / Energy charges | Hour | 11.50 | 1460.70 | 16798.05 |
| 5 | Waggon drill | Hour | 10.50 | 169.80 | 1782.90 |
| | Fuel / Energy charges | Hour | 10.50 | 0.00 | 0.00 |
| 6 | Jack hammer | Hour | 2.00 | 17.30 | 34.60 |
| | Fuel / Energy charges | Hour | 2.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 67027.67 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Tipper | Hour | 24.84 | 228.20 | 5668.49 |
| 2 | Crew for Shovel | Hour | 6.21 | 304.20 | 1889.08 |
| 3 | Crew for Dozer | Hour | 2.00 | 304.20 | 608.40 |
| 4 | Crew for Air compressor | Hour | 11.50 | 274.60 | 3157.90 |
| 5 | Crew for Waggon drill | Hour | 10.50 | 365.00 | 3832.50 |
| 6 | Crew for Jack hammer | Hour | 2.00 | 429.00 | 858.00 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | Blaster | Day | 1.00 | 645.00 | 645.00 |
| 9 | Helper blaster | Day | 1.00 | 525.00 | 525.00 |
| 10 | Stone chiseller Cl - II | Day | 1.00 | 525.00 | 525.00 |
| 11 | Stone breaker | Day | 1.00 | 525.00 | 525.00 |
| 12 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 20984.37 |

| | |
|---|--------------|
| labour component/unit qty | 54.40 |
| Add contractor's profit and overhead charges | 13.615% 7.40 |
| labour component/unit qty (including contractor's profit) | 61.80 |

ABSTRACT:

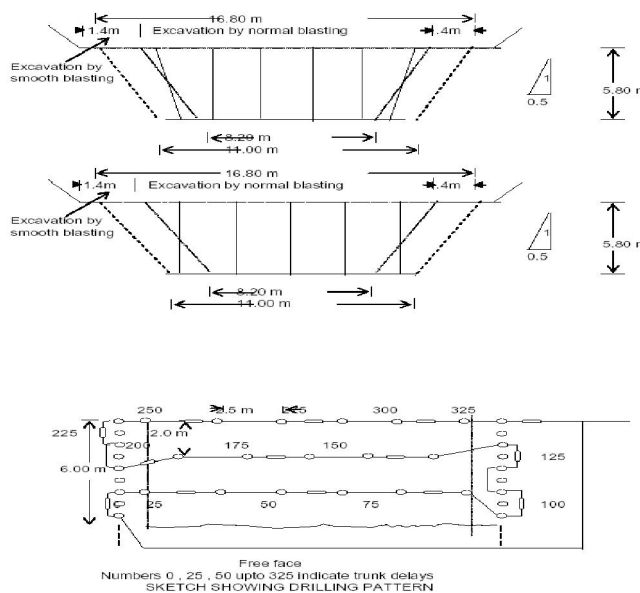
| | | |
|------------------------------|-----|------------------|
| A. Cost of Materials | Rs: | 31384.75 |
| B. Hire charges of Machinery | Rs: | 67027.67 |
| C. Cost of Labour | Rs: | <u>20984.37</u> |
| Total | Rs: | 119396.79 |

| | | | |
|---|---------------|-----|------------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 16255.87 |
| Total cost for | 386.00 Cum | Rs: | 135652.66 |
| Rate per Cum | (A+B+C+D)/386 | Rs. | 351.40 |

IRR-CAW-1-10 Excavation in hard rock of all toughness including boulders above 1.2 m dia. by approved controlled blasting methods for canals, cut-off trench of embankment etc., including controlling fly-rock by muffling arrangements such as placing 50 x 50 mm opening chain link mesh or waste tyres and sand bags, monitoring ground vibrations at specified locations, cost of all materials, machinery, labour, placing excavated rock neatly in approved dump area or other place as directed etc., complete with lead upto 1 km and all lifts.

Note:

- The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m.
- The rate under this item shall be adopted where the control of fly-rock and ground vibrations is required.



DATA

RATE ANALYSIS

UNIT :

386.00 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|-----------------|
| 1 | Use rate of T.C bit 100 mm dia | Rm | 104.00 | 151.25 | 15730.00 |
| 2 | Use rate of Extension rod with coupling sleeve | Rm | 104.00 | 5.94 | 617.76 |
| 3 | Use rate of Jack hammer drill rod 1.6 m | Rm | 12.00 | 26.01 | 312.16 |
| | reconditioning charges @ 10% | | | | 31.22 |
| 4 | Use rate of 50 m air hose 50 mm 1 No. | Hour | 10.50 | 16.63 | 174.56 |
| | Use rate of 25 mm air hose 2 Nos | Hour | 2.00 | 11.00 | 22.00 |
| 5 | High strength ANFO booster | kg | 38.00 | 69.00 | 2622.00 |
| 6 | ANFO | kg | 155.00 | 44.00 | 6820.00 |
| 7 | Diesel oil | ltr | 35.00 | 94.43 | 3305.05 |
| 8 | Explosive small dia (Kelvex-220) | kg | 4.00 | 69.00 | 276.00 |
| 9 | Ordinary detonators | Nos | 20.00 | 7.00 | 140.00 |
| 10 | Shock tube detonators | Rm | 120.00 | 37.00 | 4440.00 |
| 11 | Noiseless trunk line delays | Nos | 12.00 | 19.00 | 228.00 |
| 12 | Detonating fuse coil | Rm | 20.00 | 8.00 | 160.00 |
| 13 | Use rate of chain link wire mesh | sqm | 132.00 | 211.50 | 27918.00 |
| 14 | Use rate of sand bag | Nos | 110.00 | 14.12 | 1553.20 |
| 15 | Sundries | LS | 20.00 | 34.00 | 680.00 |
| Total cost of Materials | | | | Rs: | 65029.95 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Tippers 5 cum capacity | Hour | 30.00 | 404.90 | 12147.00 |
| | Fuel / Energy charges | Hour | 30.00 | 490.80 | 14724.00 |
| 2 | Shovel 0.85 cum capacity | Hour | 10.00 | 1529.70 | 15297.00 |
| | Fuel / Energy charges | Hour | 10.00 | 1428.30 | 14283.00 |
| 3 | Angle dozer | Hour | 2.00 | 1531.00 | 3062.00 |
| | Fuel / Energy charges | Hour | 2.00 | 999.10 | 1998.20 |
| 4 | Air compressor 8.5 cmm (diesel) | Hour | 12.50 | 237.70 | 2971.25 |
| | Fuel / Energy charges | Hour | 12.50 | 1460.70 | 18258.75 |
| 5 | Waggon drill | Hour | 11.50 | 169.80 | 1952.70 |
| | Fuel / Energy charges | Hour | 11.50 | 0.00 | 0.00 |
| 6 | Jack hammer | Hour | 2.00 | 17.30 | 34.60 |
| | Fuel / Energy charges | Hour | 2.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 84728.50 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Tipper | Hour | 30.00 | 228.20 | 6846.00 |
| 2 | Crew for Shovel | Hour | 10.00 | 304.20 | 3042.00 |
| 3 | Crew for Dozer | Hour | 2.00 | 304.20 | 608.40 |
| 4 | Crew for Air compressor | Hour | 12.50 | 274.60 | 3432.50 |
| 5 | Crew for Waggon drill | Hour | 11.50 | 365.00 | 4197.50 |
| 6 | Crew for Jack hammer | Hour | 2.00 | 429.00 | 858.00 |
| 7 | work inspector | Day | 1.50 | 640.00 | 960.00 |
| 8 | Blaster | Day | 0.50 | 645.00 | 322.50 |
| 9 | Helper blaster | Day | 0.50 | 525.00 | 262.50 |
| 10 | Stone chiseller Cl - II | Day | 1.00 | 525.00 | 525.00 |
| 11 | Stone breaker | Day | 1.00 | 525.00 | 525.00 |
| 12 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 24029.40 |

labour component/unit qty

62.30

Add contractor's profit and overhead charges

13.615% 8.50

labour component/unit qty (including contractor's profit)

70.80**ABSTRACT:**

A. Cost of Materials

Rs: 65029.95

B. Hire charges of Machinery

Rs: 84728.50

C. Cost of Labour

Rs: 24029.40

Total Rs: 173787.85

Add for blasting studies & monitoring vibrations etc

0.50%

Rs: 868.94

Total Rs: 174656.79

D. Add for contractor's profit and overheads on (A+B+C+blasting study charges)

13.615%

Rs: 23779.52

Total cost for

386.00 cum

Rs: **198436.31****Rate per cum**

(A+B+C+D)/386

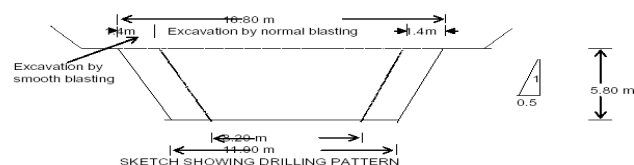
Rs. **514.10**

IRR-CAW-1-11

(c)

Excavation in hard rock of all toughness including boulders above 1.2 m dia. for dressing canal sides neatly on either side to required profile by line drilling and smooth blasting including removing under-cuts by chiselling / hammering, placing the excavated rock neatly in dump area or other place as directed, cost of all materials, machinery, labour etc., complete with lead upto 1 km and all lifts.

- Note:**
- For excavation of canal below free board level combination of normal / controlled blasting and line drilling and smooth blasting shall be adopted to obtain neat side slopes. For the purpose of payment 1 m width of excavation on either side shall be treated as excavation by line drilling and smooth blasting and remaining portion shall be treated as excavation by normal / controlled blasting as the case may be.
 - The rate under this item shall be adopted for canals designed for carrying capacity of more than 15 cumecs or where the average depth of excavation in hard rock is more than 3 m.
 - The rate includes controlling fly-rock wherever required.
 - The rate under this item shall be paid only on ascertaining that the excavated face has come off neatly as per specifications or atleast 50 percent of smooth blast holes are visible for inspection and are spaced at specified interval.
 - In case, where the above criteria is not fulfilled payment shall be restricted to rate provided for excavation by normal blasting or controlled blasting as the case may be.



DATA

RATE ANALYSIS

UNIT :

97.00 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|-----------------|
| 1 | Use rate of T.C bit 100 mm dia | Rm | 121.00 | 151.25 | 18301.25 |
| 2 | Use rate of Extension rod with coupling sleeve | Rm | 121.00 | 5.94 | 718.74 |
| 3 | Use rate of Jack hammer drill rod 1.6 m | Rm | 3.00 | 26.01 | 78.04 |
| | reconditioning charges @ 10% | | | | 7.80 |
| 4 | Use rate of 50 m air hose 50 mm 1 No. | Hour | 12.00 | 16.63 | 199.50 |
| | Use rate of 25 mm air hose 2 Nos | Hour | 0.50 | 11.00 | 5.50 |
| 5 | High strength ANFO booster | kg | 5.00 | 69.00 | 345.00 |
| 6 | ANFO | kg | 19.00 | 44.00 | 836.00 |
| 7 | Diesel oil | ltr | 4.50 | 94.43 | 424.94 |
| 8 | Explosive small dia (Kelvex-220) | kg | 1.00 | 69.00 | 69.00 |
| 9 | Ordinary detonators | Nos | 5.00 | 7.00 | 35.00 |
| 10 | Detonating shock tube | Rm | 70.00 | 37.00 | 2590.00 |
| 11 | Noiseless trunk line delays | Nos | 4.00 | 19.00 | 76.00 |
| 12 | Fuse coil | Rm | 10.00 | 8.00 | 80.00 |
| 13 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 23834.77 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Tippers 5 cum capacity | Hour | 6.24 | 404.90 | 2526.58 |
| | Fuel / Energy charges | Hour | 6.24 | 490.80 | 3062.59 |
| 2 | Shovel 0.85 cum capacity | Hour | 1.56 | 1529.70 | 2386.33 |
| | Fuel / Energy charges | Hour | 1.56 | 1428.30 | 2228.15 |
| 3 | Angle dozer | Hour | 0.50 | 1531.00 | 765.50 |
| | Fuel / Energy charges | Hour | 0.50 | 999.10 | 499.55 |
| 4 | Air compressor 8.5 cmm (diesel) | Hour | 13.45 | 237.70 | 3197.07 |
| | Fuel / Energy charges | Hour | 13.45 | 1460.70 | 19646.42 |
| 5 | Waggon drill | Hour | 13.20 | 169.80 | 2241.36 |
| | Fuel / Energy charges | Hour | 13.20 | 0.00 | 0.00 |
| 6 | Jack hammer | Hour | 0.50 | 17.30 | 8.65 |
| | Fuel / Energy charges | Hour | 0.50 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 36562.19 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Tipper | Hour | 5.24 | 228.20 | 1195.77 |
| 2 | Crew for Shovel | Hour | 1.56 | 304.20 | 474.55 |
| 3 | Crew for Dozer | Hour | 0.50 | 304.20 | 152.10 |
| 4 | Crew for Air compressor | Hour | 13.45 | 274.60 | 3693.37 |
| 5 | Crew for Waggon drill | Hour | 13.45 | 365.00 | 4909.25 |
| 6 | Crew for Jack hammer | Hour | 0.50 | 429.00 | 214.50 |
| 7 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 8 | Blaster | Day | 0.50 | 645.00 | 322.50 |
| 9 | Helper blaster | Day | 0.50 | 525.00 | 262.50 |
| 10 | Stone breaker | Day | 1.00 | 525.00 | 525.00 |
| 11 | Stone chiseller CI- II | Day | 1.00 | 525.00 | 525.00 |
| 12 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 13574.54 |

labour component/unit qty

139.90

Add contractor's profit and overhead charges

13.615% 19.00

labour component/unit qty (including contractor's profit)

158.90

ABSTRACT:

| | | | | | |
|--|---------|--------------|--|-------|-------------------|
| A. Cost of Materials | | | | | Rs: 23834.77 |
| B. Hire charges of Machinery | | | | | Rs: 36562.19 |
| C. Cost of Labour | | | | | Rs: 13574.54 |
| | | | | Total | Rs: 73971.50 |
| Add for blasting studies & monitoring vibrations etc | 0.50% | | | | Rs: 369.86 |
| | | | | Total | Rs: 74341.35 |
| D. Add for contractor's profit and overheads on (A+B+C+blasting study charges) | 13.615% | | | | Rs: 10121.58 |
| Total cost for | | 97.00 cum | | | Rs: 84462.93 |
| Rate per cum | | (A+B+C+D)/97 | | | Rs. 870.80 |

IRR-CAW-2

EMBANKMENT WORKS USING BORROW AREA SOIL :

IRR-CAW-2-1

Providing impervious hearing embankment with selected soil from **approved borrow areas** in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer | Hour | 3.40 | 1531.00 | 5205.40 |
| | Fuel / Energy charges | Hour | 3.40 | 999.10 | 3396.94 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5.00 cum capacity 4 Nos. | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Pump 5 hp (diesel) | Hour | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | Hour | 2.00 | 129.80 | 259.60 |
| 5 | Water tanker 8000 ltr | Hour | 4.00 | 380.50 | 1522.00 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 6 | Vibratory Roller 8 tonne | Hour | 5.10 | 1237.90 | 6313.29 |
| | Fuel / Energy charges | Hour | 5.10 | 1687.90 | 8608.29 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 69676.92 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 3.40 | 304.20 | 1034.28 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Pump | Hour | 2.00 | 143.50 | 287.00 |
| 5 | Crew for Water tanker | Hour | 4.00 | 225.20 | 900.80 |
| 6 | Crew for Roller | Hour | 5.10 | 343.20 | 1750.32 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 16948.40 |

labour component/unit qty

41.10

Add contractor's profit and overhead charges

13.615% 5.60

labour component/unit qty (including contractor's profit)

46.70**ABSTRACT:**

| | | | | | |
|---|--|------------------|--|-------|-------------------|
| A. Cost of Materials | | | | | Rs: 0.00 |
| B. Hire charges of Machinery | | | | | Rs: 69676.92 |
| C. Cost of Labour | | | | | Rs: 16948.40 |
| | | | | Total | Rs: 86625.32 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | | Rs: 11794.04 |
| Total cost for | | 412.80 cum | | | Rs: 98419.36 |
| Rate per cum | | (A+B+C+D)/412.80 | | | Rs. 238.40 |

IRR-CAW-2-2

Providing impervious hearing embankment with selected soil from **approved borrow areas** in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.40 | 1531.00 | 5205.40 |
| | Fuel / Energy charges | Hour | 3.40 | 999.10 | 3396.94 |
| 2 | Shovel 0.5 cum | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5 cum | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Pump 5 hp (diesel) | Hour | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | Hour | 2.00 | 129.80 | 259.60 |
| 5 | Water tanker 8000 ltr | Hour | 4.00 | 380.50 | 1522.00 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 6 | Vibratory Roller 8 tonne | Hour | 4.18 | 1237.90 | 5174.42 |
| | Fuel / Energy charges | Hour | 4.18 | 1687.90 | 7055.42 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 66985.18 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 3.40 | 304.20 | 1034.28 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Pump | Hour | 2.00 | 143.50 | 287.00 |
| 5 | Crew for Water tanker | Hour | 4.00 | 225.20 | 900.80 |
| 6 | Crew for Roller | Hour | 4.18 | 343.20 | 1434.58 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 16632.66 |

labour component/unit qty

40.30

Add contractor's profit and overhead charges

13.615%

5.50

labour component/unit qty (including contractor's profit)

45.80**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 66985.18

C. Cost of Labour

Rs: 16632.66

Total Rs: **83617.84**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 11384.57

Total cost for

412.80 cum

Rs: **95002.41****Rate per cum**

(A+B+C+D)/412.80

Rs. **230.10**

IRR-CAW-2-3

Providing semi-pervious / pervious casing embankment using soil from approved borrow area

in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.40 | 1531.00 | 5205.40 |
| | Fuel / Energy charges | Hour | 3.40 | 999.10 | 3396.94 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5.00 cum capacity 3 Nos. | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Pump 5 hp (diesel) | Hour | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | Hour | 2.00 | 129.80 | 259.60 |
| 5 | Water tanker 8000 ltr | Hour | 4.00 | 380.50 | 1522.00 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 6 | Vibratory Roller 8 tonne | Hour | 5.10 | 1237.90 | 6313.29 |
| | Fuel / Energy charges | Hour | 5.10 | 1687.90 | 8608.29 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 69574.92 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 3.40 | 304.20 | 1034.28 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Pump | Hour | 2.00 | 143.50 | 287.00 |
| 5 | Crew for Water tanker | Hour | 4.00 | 225.20 | 900.80 |
| 6 | Crew for Roller | Hour | 5.10 | 343.20 | 1750.32 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 16948.40 |

labour component/unit qty

41.10

Add contractor's profit and overhead charges

13.615% 5.60

labour component/unit qty (including contractor's profit)

46.70**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 69574.92

C. Cost of Labour

Rs: 16948.40

Total Rs: **86523.32**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 11780.15

Total cost for

412.80 cum

Rs: **98303.47****Rate per****cum**

(A+B+C+D)/412.80

Rs. **238.10**

IRR-CAW-2-4

Providing semi-pervious / pervious casing embankment using soil from approved borrow area

in layers of 25cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sortingout, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering, compacting to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.40 | 1531.00 | 5205.40 |
| | Fuel / Energy charges | Hour | 3.40 | 999.10 | 3396.94 |
| 2 | Shovel 0.5 cum | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tipplers 5 cum | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Pump 5 hp (diesel) | Hour | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | Hour | 2.00 | 129.80 | 259.60 |
| 5 | Water tanker 8000 ltr | Hour | 4.00 | 380.50 | 1522.00 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 6 | Vibratory Roller 8 tonne | Hour | 4.17 | 1237.90 | 5162.04 |
| | Fuel / Energy charges | Hour | 4.17 | 1687.90 | 7038.54 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 66955.93 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 3.40 | 304.20 | 1034.28 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Pump | Hour | 2.00 | 143.50 | 287.00 |
| 5 | Crew for Water tanker | Hour | 4.00 | 225.20 | 900.80 |
| 6 | Crew for Roller | Hour | 5.10 | 343.20 | 1372.80 |
| 7 | work inspector | Day | 4.17 | 640.00 | 2668.80 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 17959.68 |

labour component/unit qty

43.50

Add contractor's profit and overhead charges

13.615% 5.90

labour component/unit qty (including contractor's profit)

49.40**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 66955.93

C. Cost of Labour

Rs: 17959.68

Total Rs: **84915.61**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 11561.26

Total cost for

412.80 cum

Rs: **96476.87****Rate per****cum**

(A+B+C+D)/412.80

Rs. **233.70**

IRR-CAW-2-5 **Providing semi-pervious / pervious casing embankment** using soil from **approved borrow area** in layers of **25cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer **without watering** to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

412.80 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.40 | 1531.00 | 5205.40 |
| | Fuel / Energy charges | Hour | 3.40 | 999.10 | 3396.94 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5.00 cum capacity 3 Nos. | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Vibratory Roller 8 tonne | Hour | 4.17 | 1237.90 | 5162.04 |
| | Fuel / Energy charges | Hour | 4.17 | 1687.90 | 7038.54 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 63090.93 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 3.40 | 304.20 | 1034.28 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Roller | Hour | 4.17 | 343.20 | 1431.14 |
| 5 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 6 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 15441.42 |

labour component/unit qty

37.40

Add contractor's profit and overhead charges

13.615% 5.10

labour component/unit qty (including contractor's profit)

42.50**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 63090.93

C. Cost of Labour

Rs: 15441.42

Total Rs: **78532.35**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 10692.18

Total cost for

412.80 cum

Rs: **89224.53****Rate per cum**

(A+B+C+D)/412.80

Rs: **216.10**

IRR-CAW-2-6 **Providing hearding / casing embankment with homogeneous soil** from **approved borrow** areas in layers of **25 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller** etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

677.28 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|----------------------------------|------|----------|----------------|------------------|
| 1 | Angle dozer | Hour | 6.06 | 1531.00 | 9277.86 |
| | Fuel / Energy charges | Hour | 6.06 | 999.10 | 6054.55 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5.00 cum capacity 6 Nos. | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 5 | Water tanker 8000 ltr | Hour | 6.00 | 380.50 | 2283.00 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| 6 | Vibratory Roller 8 tonne | Hour | 7.53 | 1237.90 | 9321.39 |
| | Fuel / Energy charges | Hour | 7.53 | 1687.90 | 12709.89 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 99627.38 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|----------------|------------------|
| 1 | Crew for Dozer | Hour | 6.06 | 304.20 | 1843.45 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 5 | Crew for Water tanker | Hour | 6.00 | 225.20 | 1351.20 |
| 6 | Crew for Roller | Hour | 7.53 | 343.20 | 2584.30 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 22836.65 |

labour component/unit qty

33.70

Add contractor's profit and overhead charges

13.615% 4.60

labour component/unit qty (including contractor's profit)

38.30**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 99627.38

C. Cost of Labour

Rs: 22836.65

Total Rs: 122464.03

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 16673.48

Total cost for

677.28 cum

Rs: **139137.51****Rate per cum**

(A+B+C+D)/677.28

Rs. **205.40**

IRR-CAW-2-7

Providing hearding / casing embankment with homogeneous soil from approved borrow areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

677.28 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|----------------|------------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|----------------|------------------|
| 1 | Angle dozer 90 hp | Hour | 6.06 | 1531.00 | 9277.86 |
| | Fuel / Energy charges | Hour | 6.06 | 999.10 | 6054.55 |
| 2 | Shovel 0.5 cum | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5 cum 3 Nos | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 5 | Water tanker 8000 ltr | Hour | 6.00 | 380.50 | 2283.00 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| 6 | Vibratory Roller 8 tonne | Hour | 6.16 | 1237.90 | 7625.46 |
| | Fuel / Energy charges | Hour | 6.16 | 1687.90 | 10397.46 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 95721.03 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 6.06 | 304.20 | 1843.45 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 5 | Crew for Water tanker | Hour | 6.00 | 225.20 | 1351.20 |
| 6 | Crew for Roller | Hour | 6.16 | 343.20 | 2114.11 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 22366.46 |

labour component/unit qty

33.00

Add contractor's profit and overhead charges

13.615% 4.50

labour component/unit qty (including contractor's profit)

37.50**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 95721.03

C. Cost of Labour

Rs: 22366.46

Total Rs: **118087.50**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 16077.61

Total cost for

677.28 cum

Rs: **134165.11****Rate per****cum**

(A+B+C+D)/677.28

Rs. **198.10**

IRR-CAW-2-8

Providing casing embankment using homogeneous soil from approved borrow areain **layers of 25 cm** before compaction including cost of all materials, machinery, labour,

all operations such as excavation, sortingout, transporting, spreading in layer of specified

thickness, breaking clods, sectioning, compacting each layer **without watering** to densitycontrol of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/**8 to 10 tonne power roller etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

677.28 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 6.06 | 1531.00 | 9277.86 |
| | Fuel / Energy charges | Hour | 6.06 | 999.10 | 6054.55 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tipplers 5.00 cum capacity 4 Nos. | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Vibratory Roller 8 tonne | Hour | 6.16 | 1237.90 | 7625.46 |
| | Fuel / Energy charges | Hour | 6.16 | 1687.90 | 10397.46 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 89974.53 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 6.06 | 304.20 | 1843.45 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Roller | Hour | 6.16 | 343.20 | 2114.11 |
| 5 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 6 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 20584.76 |

labour component/unit qty

30.40

Add contractor's profit and overhead charges

13.615% 4.10

labour component/unit qty (including contractor's profit)

34.50**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 89974.53

C. Cost of Labour

Rs: 20584.76

Total Rs: **110559.30**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 15052.65

Total cost for

677.28 cum

Rs: **125611.95****Rate per****cum**

(A+B+C+D)/677.28

Rs. **185.50**

IRR-CAW-3

EMBANKMENT WORKS USING DUMP AREA SOIL :

IRR-CAW-3-1

Providing impervious hearing embankment with soil from approved dump areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering, compacting each layer to achieve density control of not less than 98 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc.,complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

735.36 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer | Hour | 4.04 | 1531.00 | 6185.24 |
| | Fuel / Energy charges | Hour | 4.04 | 999.10 | 4036.36 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5.00 cum capacity 6 Nos. | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 5 | Water tanker 8000 ltr | Hour | 6.00 | 380.50 | 2283.00 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| 6 | Vibratory Roller 8 tonne | Hour | 7.50 | 1237.90 | 9284.25 |
| | Fuel / Energy charges | Hour | 7.50 | 1687.90 | 12659.25 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 94428.80 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 3.58 | 304.20 | 1089.04 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 5 | Crew for Water tanker | Hour | 6.00 | 225.20 | 1351.20 |
| 6 | Crew for Roller | Hour | 7.50 | 343.20 | 2574.00 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 23051.94 |

labour component/unit qty

31.30

Add contractor's profit and overhead charges

13.615% 4.30

labour component/unit qty (including contractor's profit)

35.60**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 94428.80

C. Cost of Labour

Rs: 23051.94

Total Rs: **117480.74**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 15995

Total cost for

735.36 cum

Rs: **133475.74****Rate per cum**

(A+B+C+D)/735.36

Rs. **181.50**

IRR-CAW-3-2

Providing impervious hearing embankment with soil from approved dump areas in layers of 25 cm before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, watering, compacting each layer to achieve density control of not less than 95 percent or as stipulated by Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc.,complete with initial lead upto 1 km and all lifts.

DATA:

RATE ANALYSIS

UNIT :

735.36 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 4.04 | 1531.00 | 6185.24 |
| | Fuel / Energy charges | Hour | 4.04 | 999.10 | 4036.36 |
| 2 | Shovel 0.5 cum | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5 cum | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 5 | Water tanker 8000 ltr | Hour | 6.00 | 380.50 | 2283.00 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| 6 | Vibratory Roller 8 tonne | Hour | 6.13 | 1237.90 | 7588.33 |
| | Fuel / Energy charges | Hour | 6.13 | 1687.90 | 10346.83 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 90522.46 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 4.04 | 304.20 | 1228.97 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 5 | Crew for Water tanker | Hour | 6.00 | 225.20 | 1351.20 |
| 6 | Crew for Roller | Hour | 6.13 | 343.20 | 2103.82 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 22721.68 |

labour component/unit qty

30.90

Add contractor's profit and overhead charges

13.615% 4.20

labour component/unit qty (including contractor's profit)

35.10**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 90522.46

C. Cost of Labour

Rs: 22721.68

Total Rs: **113244.14**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 15418.19

Total cost for

735.36 cum

Rs: **128662.33****Rate per cum**

(A+B+C+D)/735.36

Rs. **175.00**

IRR-CAW-3-3

Providing semi-pervious / pervious casing embankment using soil from approved dump area

in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

768.00 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 4.22 | 1531.00 | 6460.82 |
| | Fuel / Energy charges | Hour | 4.22 | 999.10 | 4216.20 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5.00 cum capacity 6 Nos | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 5 | Water tanker 8000 ltr | Hour | 6.00 | 380.50 | 2283.00 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| 6 | Vibratory Roller 8 tonne | Hour | 7.82 | 1237.90 | 9680.38 |
| | Fuel / Energy charges | Hour | 7.82 | 1687.90 | 13199.38 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 95820.48 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|----------------|------------------|
| 1 | Crew for Dozer | Hour | 4.22 | 304.20 | 1283.72 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 5 | Crew for Water tanker | Hour | 6.00 | 225.20 | 1351.20 |
| 6 | Crew for Roller | Hour | 7.82 | 343.20 | 2683.82 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 23356.45 |

labour component/unit qty 30.40
 Add contractor's profit and overhead charges 13.615% 4.10
 labour component/unit qty (including contractor's profit) **34.50**

ABSTRACT:

| | | |
|---|---------------|----------------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 95820.48 |
| C. Cost of Labour | Rs: | 23356.45 |
| Total | Rs: | 119176.93 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 16225.94 |
| Total cost for | 768.00 cum | Rs: 135402.87 |
| Rate per cum | (A+B+C+D)/768 | Rs: 176.30 |

IRR-CAW-3-4 **Providing semi-pervious / pervious casing embankment** using soil from **approved dump area** in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, **watering**, compacting each layer to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **768.00 cum****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|----------------|------------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|----------------|------------------|
| 1 | Angle dozer 90 hp | Hour | 4.22 | 1531.00 | 6460.82 |
| | Fuel / Energy charges | Hour | 4.22 | 999.10 | 4216.20 |
| 2 | Shovel 0.5 cum | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tipplers 5 cum of 6 Nos | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 5 | Water tanker 8000 ltr | Hour | 6.00 | 380.50 | 2283.00 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| 6 | Vibratory Roller 8 tonne | Hour | 6.40 | 1237.90 | 7922.56 |
| | Fuel / Energy charges | Hour | 6.40 | 1687.90 | 10802.56 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 91767.84 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|----------------|------------------|
| 1 | Crew for Dozer | Hour | 4.22 | 304.20 | 1283.72 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 5 | Crew for Water tanker | Hour | 6.00 | 225.20 | 1351.20 |
| 6 | Crew for Roller | Hour | 6.40 | 343.20 | 2196.48 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 22869.10 |

labour component/unit qty 29.80
 Add contractor's profit and overhead charges 13.615% 4.10
 labour component/unit qty (including contractor's profit) **33.90**

ABSTRACT:

| | | | | |
|---|----------------------|---------|-------|---------------|
| A. Cost of Materials | | | Rs: | 0.00 |
| B. Hire charges of Machinery | | | Rs: | 91767.84 |
| C. Cost of Labour | | | Rs: | 22869.10 |
| | | | Total | Rs: 114636.95 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 15607.82 |
| Total cost for | 768.00 cum | | Rs: | 130244.77 |
| Rate per cum | (A+B+C+D)/768 | | Rs: | 169.60 |

IRR-CAW-3-5

Providing semi-pervious / pervious casing embankment using soil from approved dump area

in **layers of 25 cm** before compaction including cost of all materials, machinery, labour, all operations such as re-excavation, sorting out, transporting, spreading in layer of specified thickness, breaking clods, sectioning, compacting each layer **without watering** to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **768.00 cum****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 4.22 | 1531.00 | 6460.82 |
| | Fuel / Energy charges | Hour | 4.22 | 999.10 | 4216.20 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tippers 5.00 cum capacity 6 Nos. | Hour | 48.00 | 404.90 | 19435.20 |
| | Fuel / Energy charges | Hour | 48.00 | 490.80 | 23558.40 |
| 4 | Vibratory Roller 8 tonne | Hour | 6.40 | 1237.90 | 7922.56 |
| | Fuel / Energy charges | Hour | 6.40 | 1687.90 | 10802.56 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 86021.34 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 4.22 | 304.20 | 1283.72 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 48.00 | 228.20 | 10953.60 |
| 4 | Crew for Roller | Hour | 6.40 | 343.20 | 2196.48 |
| 5 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 6 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 21087.40 |

| | |
|---|--------------|
| labour component/unit qty | 27.50 |
| Add contractor's profit and overhead charges | 13.615% 3.70 |
| labour component/unit qty (including contractor's profit) | 31.20 |

ABSTRACT:

| | | | | |
|---|----------------------|---------|-------|---------------|
| A. Cost of Materials | | | Rs: | 0.00 |
| B. Hire charges of Machinery | | | Rs: | 86021.34 |
| C. Cost of Labour | | | Rs: | 21087.40 |
| | | | Total | Rs: 107108.75 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 14582.86 |
| Total cost for | 768.00 cum | | Rs: | 121691.61 |
| Rate per cum | (A+B+C+D)/768 | | Rs: | 158.50 |

IRR-CAW-4

EMBANKMENT WORKS USING EXCAVATED SOIL :

IRR-CAW-4-1

Providing impervious hearting embankment with soil collected in embankment area in heaps as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting out, spreading in **layer of 25 cm** before compaction, breaking clods, sectioning, **watering** and compacting each layer to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water.**

DATA:

RATE ANALYSISUNIT : **600.00 cum****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.60 | 1531.00 | 5511.60 |
| | Fuel / Energy charges | Hour | 3.60 | 999.10 | 3596.76 |
| 2 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 3 | Water tanker 8000 ltr | Hour | 5.00 | 380.50 | 1902.50 |
| | Fuel / Energy charges | Hour | 5.00 | 490.80 | 2454.00 |
| 4 | Vibratory Roller 8 tonne | Hour | 7.30 | 1237.90 | 9036.67 |
| | Fuel / Energy charges | Hour | 7.30 | 1687.90 | 12321.67 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 35307.90 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Crew for Dozer | Hour | 3.60 | 304.20 | 1095.12 |
| 2 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 3 | Crew for Water tanker | Hour | 5.00 | 225.20 | 1126.00 |
| 4 | Crew for Roller | Hour | 7.30 | 343.20 | 2505.36 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 7756.98 |

labour component/unit qty

12.90

Add contractor's profit and overhead charges

13.615% 1.80

labour component/unit qty (including contractor's profit)

14.70**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 35307.90

C. Cost of Labour

Rs: 7756.98

Total Rs: **43064.88**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 5863.28

Total cost for

600.00 cum

Rs: **48928.16****Rate per cum**

(A+B+C+D)/600

Rs. **81.50**

IRR-CAW-4-2

Providing impervious hearing embankment with soil collected in embankment area in

heaps as part of disposal of excavated soil from canal including cost of all materials, machinery,

labour, all operations such as sorting out, spreading in **layer of 25 cm** before compaction,breaking clods, sectioning, **watering** and compacting each layer to density control of **not less****than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/****8 to 10 tonne power roller etc., complete with lead upto 1 km for water.**

DATA:

RATE ANALYSIS

UNIT :

600.00 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.60 | 1531.00 | 5511.60 |
| | Fuel / Energy charges | Hour | 3.60 | 999.10 | 3596.76 |
| 2 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 3 | Water tanker 8000 ltr | Hour | 5.00 | 380.50 | 1902.50 |
| | Fuel / Energy charges | Hour | 5.00 | 490.80 | 2454.00 |
| 4 | Vibratory Roller 8 tonne | Hour | 6.06 | 1237.90 | 7501.67 |
| | Fuel / Energy charges | Hour | 6.06 | 1687.90 | 10228.67 |
| 5 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 31781.91 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Crew for Dozer | Hour | 3.60 | 304.20 | 1095.12 |
| 2 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 3 | Crew for Water tanker | Hour | 5.00 | 225.20 | 1126.00 |
| 4 | Crew for Roller | Hour | 6.06 | 343.20 | 2079.79 |
| 5 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 6 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 7971.41 |

labour component/unit qty

13.30

Add contractor's profit and overhead charges

13.615% 1.80

labour component/unit qty (including contractor's profit)

15.10

ABSTRACT:

| | | | | |
|---|--|----------------------|-------|--------------|
| A. Cost of Materials | | | Rs: | 0.00 |
| B. Hire charges of Machinery | | | Rs: | 31781.91 |
| C. Cost of Labour | | | Rs: | 7971.41 |
| | | | Total | Rs: 39753.32 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 5412.41 |
| Total cost for | | 600.00 cum | Rs: | 45165.73 |
| Rate per cum | | (A+B+C+D)/600 | Rs. | 75.30 |

IRR-CAW-4-3

Providing semi-pervious / pervious casing hearting embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in **layers of 25 cm** before compaction, breaking clods, sectioning, **watering** and compacting each layer to density control of **not less than 98 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water.**

DATA:

RATE ANALYSISUNIT : **600.00 cum****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.60 | 1531.00 | 5511.60 |
| | Fuel / Energy charges | Hour | 3.60 | 999.10 | 3596.76 |
| 2 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 3 | Water tanker 8000 ltr | Hour | 5.00 | 380.50 | 1902.50 |
| | Fuel / Energy charges | Hour | 5.00 | 490.80 | 2454.00 |
| 4 | Vibratory Roller 8 tonne | Hour | 7.30 | 1237.90 | 9036.67 |
| | Fuel / Energy charges | Hour | 7.30 | 1687.90 | 12321.67 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 35307.90 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Crew for Dozer | Hour | 3.60 | 304.20 | 1095.12 |
| 2 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 3 | Crew for Water tanker | Hour | 5.00 | 225.20 | 1126.00 |
| 4 | Crew for Roller | Hour | 7.30 | 343.20 | 2505.36 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 7756.98 |

| | |
|---|--------------|
| labour component/unit qty | 12.90 |
| Add contractor's profit and overhead charges | 13.615% 1.80 |
| labour component/unit qty (including contractor's profit) | 14.70 |

ABSTRACT:

| | | | | |
|---|--|----------------------|-------|--------------|
| A. Cost of Materials | | | Rs: | 0.00 |
| B. Hire charges of Machinery | | | Rs: | 35307.90 |
| C. Cost of Labour | | | Rs: | 7756.98 |
| | | | Total | Rs: 43064.88 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 5863.28 |
| Total cost for | | 600.00 cum | Rs: | 48928.16 |
| Rate per cum | | (A+B+C+D)/600 | Rs. | 81.50 |

IRR-CAW-4-4

Providing semi-pervious / pervious casing embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in **layers of 25 cm** before compaction, breaking clods, sectioning, **watering** and compacting each layer to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete with lead upto 1 km for water.**

DATA:

RATE ANALYSISUNIT : **600.00 cum****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.60 | 1531.00 | 5511.60 |
| | Fuel / Energy charges | Hour | 3.60 | 999.10 | 3596.76 |
| 2 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 3 | Water tanker 8000 ltr | Hour | 5.00 | 380.50 | 1902.50 |
| | Fuel / Energy charges | Hour | 5.00 | 490.80 | 2454.00 |
| 4 | Vibratory Roller 8 tonne | Hour | 6.1 | 1237.90 | 7501.67 |
| | Fuel / Energy charges | Hour | 6.1 | 1687.90 | 10228.67 |
| 5 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 31781.91 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Crew for Dozer | Hour | 3.60 | 304.20 | 1095.12 |
| 2 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 3 | Crew for Water tanker | Hour | 5.00 | 225.20 | 1126.00 |
| 4 | Crew for Roller | Hour | 6.1 | 343.20 | 2079.79 |
| 5 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 6 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 7971.41 |

labour component/unit qty

13.30

Add contractor's profit and overhead charges

13.615% 1.80

labour component/unit qty (including contractor's profit)

15.10**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 31781.91

C. Cost of Labour

Rs: 7971.41

Total Rs: **39753.32**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 5412.41

Total cost for

600.00 cum

Rs: **45165.73****Rate per cum**

(A+B+C+D)/600

Rs. **75.30**

IRR-CAW-4-5

Providing semi-pervious / pervious casing embankment using soil collected in heaps in embankment area as part of disposal of excavated soil from canal including cost of all materials, machinery, labour, all operations such as sorting-out, spreading in **layers of 25 cm** before compaction, breaking clods, sectioning and compacting each layer **without** watering to density control of **not less than 95 percent** or as stipulated by **Sheep foot roller / Vibratory roller/ 8 to 10 tonne power roller etc., complete.**

DATA:

RATE ANALYSIS

UNIT :

600.00 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Null | | 0.00 | 0.00 | |
| | | | | 0.00 | |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.60 | 1531.00 | 5511.60 |
| | Fuel / Energy charges | Hour | 3.60 | 999.10 | 3596.76 |
| 2 | Vibratory Roller 8 tonne | Hour | 6.06 | 1237.90 | 7501.67 |
| | Fuel / Energy charges | Hour | 6.06 | 1687.90 | 10228.67 |
| 3 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 26906.71 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|----------------|
| 1 | Crew for Dozer | Hour | 3.60 | 304.20 | 1095.12 |
| 2 | Crew for Roller | Hour | 6.06 | 343.20 | 2079.79 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 5774.91 |

labour component/unit qty

9.60

Add contractor's profit and overhead charges

13.615% 1.30

labour component/unit qty (including contractor's profit)

10.90**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 26906.71

C. Cost of Labour

Rs: 5774.91

Total Rs: **32681.62**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 4449.6

Total cost for

600.00 cum

Rs: **37131.22****Rate per cum**

(A+B+C+D)/600

Rs. **61.90**

IRR-CAW-4-6

Providing compacted embankment for field irrigation channels with gravely soil from approved borrow area including sorting out, spreading in **layers of 15 cm** thickness, breaking clods, **watering**, compacting, dressing sides to required slopes etc., complete **with lead upto 50 m and all lifts.**

DATA

| RATE ANALYSIS | | | UNIT : 25.00 cum | | |
|---|--|--------------|------------------|-------------|---------------|
| A. MATERIALS: | | | | | |
| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Nil | | 0.00 | 0.00 | |
| | | | 0.00 | 0.00 | |
| Total cost of Materials | | | | Rs: | 0.00 |
| B. MACHINERY: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | 5 hp pump (diesel) | Hour | 1.00 | 9.10 | 9.10 |
| | Fuel / Energy charges | Hour | 1.00 | 129.80 | 129.80 |
| Total hire charges of Machinery | | | | Rs: | 138.90 |
| C. LABOUR: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Crew for pump | Hour | 1.00 | 143.50 | 143.50 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Crowbarman for loosening soil | Day | 2.50 | 525.00 | 1312.50 |
| 4 | mazdoor | | | | |
| | For excavation at borrow area | Day | 5.00 | 490.00 | 2450.00 |
| | For spreading / levelling / sectioning | Day | 2.50 | 490.00 | 1225.00 |
| | for loading soil | Day | 5.00 | 490.00 | 2450.00 |
| 5 | Cartman with Bullock cart for water | Day | 1.00 | 550.00 | 550.00 |
| 6 | Bullock drawn roller for rolling | Day | 1.00 | 550.00 | 550.00 |
| Total cost of Labour | | | | Rs: | 9321.00 |
| labour component/unit qty | | | 372.80 | | |
| Add contractor's profit and overhead charges | | | 13.615% | 50.80 | |
| labour component/unit qty (including contractor's profit) | | | 423.60 | | |
| ABSTRACT: | | | | | |
| A. Cost of Materials | | | | Rs: | 0.00 |
| B. Hire charges of Machinery | | | | Rs: | 138.90 |
| C. Cost of Labour | | | | Rs: | 9321.00 |
| Total | | | | Rs: | 9459.90 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | Rs: | 1287.97 |
| Total cost for | | | 25.00 cum | Rs: | 10747.87 |
| Rate per | cum | (A+B+C+D)/25 | | Rs. | 429.90 |

IRR-CAW-5

FOUNDATION FILLING WORKS :

IRR-CAW-5-1

Providing **rubble and sand filling in layers of 22.5 to 30 cm** including cost of all materials, machinery, labour, watering, ramming etc., complete **with initial lead upto 50 m and all lifts.**

DATA

| RATE ANALYSIS | | | UNIT : 10.00 cum | | |
|---|-------------------------|--------------|------------------|-------------|---------------|
| A. MATERIALS: | | | | | |
| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Rubble stones at quarry | cum | 10.00 | 359.00 | 3590.00 |
| 2 | Sand for filling | cum | 4.00 | 460.00 | 1840.00 |
| Total cost of Materials | | | | Rs: | 5430.00 |
| B. MACHINERY: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |
| C. LABOUR: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 1960.00 |
| labour component/unit qty | | | 196.00 | | |
| Add contractor's profit and overhead charges | | | 13.615% 26.70 | | |
| labour component/unit qty (including contractor's profit) | | | 222.70 | | |
| ABSTRACT: | | | | | |
| A. Cost of Materials | | | | Rs: | 5430.00 |
| B. Hire charges of Machinery | | | | Rs: | 0.00 |
| C. Cost of Labour | | | | Rs: | 1960.00 |
| Total | | | | Rs: | 7390.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | 13.615% | Rs: | 1006.15 |
| Total cost for | | | 10.00 cum | Rs: | 8396.15 |
| Rate per | cum | (A+B+C+D)/10 | | Rs. | 839.60 |

IRR-CAW-5-2 **Providing rubble and Murum filling in layers of 22.5 to 30 cm** including cost of all materials, machinery, labour, watering, ramming etc., complete with **initial lead upto 50 m and all lifts.**

DATA

| RATE ANALYSIS | | | UNIT : 10.00 cum | | |
|---|-------------------------|--------------|------------------|-------------|---------------|
| A. MATERIALS: | | | | | |
| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Rubble stones at quarry | cum | 10.00 | 359.00 | 3590.00 |
| 2 | Murum | cum | 4.00 | 215.00 | 860.00 |
| Total cost of Materials | | | | Rs: | 4450.00 |
| B. MACHINERY: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |
| C. LABOUR: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 1960.00 |
| labour component/unit qty | | | 196.00 | | |
| Add contractor's profit and overhead charges | | | 13.615% 26.70 | | |
| labour component/unit qty (including contractor's profit) | | | 222.70 | | |
| ABSTRACT: | | | | | |
| A. Cost of Materials | | | | Rs: | 4450.00 |
| B. Hire charges of Machinery | | | | Rs: | 0.00 |
| C. Cost of Labour | | | | Rs: | 1960.00 |
| | | | | Total | Rs: 6410.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | 13.615% | Rs: 872.72 |
| Total cost for | | | | 10.00 cum | Rs: 7282.72 |
| Rate per | cum | (A+B+C+D)/10 | | | Rs: 728.30 |

IRR-CAW-5-3 **Providing and laying 25 cm thick sand blanket below embankment** including cost of all materials, machinery, labour, spreading to specified thickness etc., complete with initial lead upto 50 m and all lifts.

DATA

| RATE ANALYSIS | | | UNIT : 100.00 sqm | | |
|---|------------------|---------------|-------------------|-------------|---------------|
| A. MATERIALS: | | | | | |
| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Sand for Filling | cum | 25.00 | 460.00 | 11500.00 |
| | | | 0.00 | 0.00 | |
| Total cost of Materials | | | | Rs: | 11500.00 |
| B. MACHINERY: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |
| C. LABOUR: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 2450.00 |
| labour component/unit qty | | | 24.50 | | |
| Add contractor's profit and overhead charges | | | 13.615% | 3.30 | |
| labour component/unit qty (including contractor's profit) | | | <u>27.80</u> | | |
| ABSTRACT: | | | | | |
| A. Cost of Materials | | | | Rs: | 11500.00 |
| B. Hire charges of Machinery | | | | Rs: | 0.00 |
| C. Cost of Labour | | | | Rs: | 2450.00 |
| | | | | Total | Rs: 13950.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | | | 13.615% | Rs: 1899.29 |
| Total cost for | | | | 100.00 sqm | Rs: 15849.29 |
| Rate per | sqm | (A+B+C+D)/100 | | | Rs: 158.50 |

IRR-CAW-5-3-A **Providing and laying sand blanket below embankment** including cost of all materials, machinery, labour, spreading to specified thickness etc., complete with initial lead upto 50 m and all lifts.

(New Item3- 2011--
12)

DATA

RATE ANALYSIS

UNIT :

100.00 cum

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------|------|----------|-------------|---------------|
| 1 | Sand for Filling | cum | 100.00 | 460.00 | 46000.00 |
| | | | 0.00 | 0.00 | |
| Total cost of Materials | | | | Rs: | 46000.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|---------------|
| 1 | mazdoor | Day | 20.00 | 490.00 | 9800.00 |
| Total cost of Labour | | | | Rs: | 9800.00 |

labour component/unit qty

98.00

Add contractor's profit and overhead charges

13.615% 13.30

labour component/unit qty (including contractor's profit)

111.30

ABSTRACT:

A. Cost of Materials

Rs: 46000.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 9800.00

Total Rs: 55800.00

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 7597.17

Total cost for

100.00 cum

Rs: 63397.17

Rate per cum

(A+B+C+D)/100

Rs: 634.00

IRR-CAW-5-4

Providing and constructing dry rubble rock-toe using rubble and stone chips from approved source including cost of all materials, machinery, labour, hand packing rubble and stone chips, finishing top and sides to required slopes etc., complete with initial lead upto 50 m and all lifts.

DATA

RATE ANALYSIS

UNIT :

100.00 cum

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Rubble | cum | 100.00 | 359.00 | 35900.00 |
| 2 | Stone chips | cum | 15.00 | 385.00 | 5775.00 |
| 3 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 41743.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | |
| | | | 0.00 | 0.00 | |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class-II | Day | 7.00 | 525.00 | 3675.00 |
| 3 | mazdoor | Day | 19.00 | 490.00 | 9310.00 |
| Total cost of Labour | | | | Rs: | 13625.00 |

labour component/unit qty

136.30

Add contractor's profit and overhead charges

13.615% 18.60

labour component/unit qty (including contractor's profit)

154.90

ABSTRACT:

A. Cost of Materials

Rs: 41743.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 13625.00

Total Rs: 55368.00

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 7538.35

Total cost for

100.00 cum

Rs: 62906.35

Rate per cum

(A+B+C+D)/100

Rs: 629.10

IRR-CAW-5-5

Providing and constructing longitudinal and cross graded filter drains using sand and 20 mm down graded aggregates satisfying specified filter criteria in layers as per specifications including cost of all materials, machinery, labour, laying to required slopes, compaction etc., complete with initial lead upto 50 m and all lifts.

DATA

RATE ANALYSIS

UNIT :

100.00 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Sand (Un-Screened) | cum | 76.80 | 605.00 | 46464.00 |
| 2 | Coarse aggregate 20-10 mm 75 % | cum | 17.40 | 1313.00 | 22846.20 |
| 3 | Coarse aggregate 10 mm down 25 % | cum | 5.80 | 967.00 | 5608.60 |
| Total cost of Materials | | | | Rs: | 74918.80 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 36.00 | 490.00 | 17640.00 |
| Total cost of Labour | | | | Rs: | 18280.00 |

labour component/unit qty

182.80

Add contractor's profit and overhead charges

13.615% 24.90

labour component/unit qty (including contractor's profit)

207.70**ABSTRACT:**

A. Cost of Materials

Rs: 74918.80

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 18280.00

Total Rs: **93198.80**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 12689.02

Total cost for

100.00 cum

Rs: **105887.82****Rate per****cum**

(A+B+C+D)/100

Rs. **1058.90**

IRR-CAW-5-6

Laying Longitudinal Drains and Transverse drains of Size 600 x600 x750 mm in Bed and

filling with 12 mm to 40 mm HG machine Crushed metal and sand in bed including

Excavation of drains and Cost of procuring of all materials including 50 m lead and for all lifts.

DATA:

RATE ANALYSIS

Unit:

100 mt**A. MATERIALS:**

| Sl.No | Particulars | Unit | Qty | Rate in Rs | Amount in Rs. |
|-------------------------|----------------------|------|------|------------|----------------|
| 1 | 12 mm to 40 mm metal | Cum | 13.5 | 1265.00 | 17077.50 |
| 2 | Sand (Un-Screened) | cum | 36 | 605.00 | 21780.00 |
| Total cost of Materials | | | | Rs. | 38857.5 |

B. MACHINERY

| Sl.No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------------------------|------|----------|-------------|---------------|
| 1 | Excavation of drain with Excavator | Cum | 45 | 39.00 | 1755.00 |
| Total hire charges of Machinery | | | | Total Rs. | 1755 |

C. LABOUR

| Sl.No | Particulars | Unit | Qty | Rate in Rs | Amount in Rs. |
|----------------------|-------------------------|------|------|------------|----------------|
| 1 | Labour for Sand laying | Cum | 5.14 | 490.00 | 2518.60 |
| 2 | Labour for Metal laying | Cum | 1.93 | 490.00 | 945.70 |
| Total cost of Labour | | | | Rs. | 3464.30 |

labour component/unit qty

34.60

Add contractor's profit and overhead charges

13.615% 4.70

labour component/unit qty (including contractor's profit)

39.30**ABSTRACT**

A. Cost of Materials

Rs. 38857.5

B. Hire charges of Machinery

Rs. 1755

C. Cost of Labour

Rs. 3464.3

Total Rs: **44076.80**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 6001.06

Total cost for

100.00 mt

Rs: **50077.86****Rate per****mt**

(A+B+C+D)/100

Rs. **500.80**

IRR-CAW-5-7

Laying and fixing of 100 mm Dia 300 mm long precast porous CC plugs in bed and sides

using 0.787 Kgs of cement per each using 20 mm HG metal and placing in local filters of size

600x600x750 mm in size including Excavation of drains and Cost of procuring of all materials

including 50 m lead and for all lifts.

(Thickness of lining=100 mm)

DATA

Rate Analysis

Unit

1 Plug

A. MATERIALS:

| Sl.No | Particulars | Unit | Qty | Rate in Rs | Amount in Rs. |
|-------------------------|---------------------|------|-------|------------|---------------|
| 1 | Coarse aggregate | Cum | 0.122 | 1313.00 | 160.19 |
| 2 | Sand (Un-Screened) | cum | 0.188 | 605.00 | 113.63 |
| 3 | Cement | Kg | 0.787 | 3.68 | 2.90 |
| Total cost of materials | | | | Rs. | 276.72 |

B. MACHINERY

| Sl.No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------------------------|------|----------|-------------|---------------|
| 1 | Excavation of drain with Excavator | Cum | 0.27 | 39.00 | 10.53 |
| 2 | Machine mixing Charges | Cum | 0.002 | 463.10 | 0.93 |
| Total hire charges of Machinery | | | | Total Rs. | 11.46 |

C. LABOUR

| Sl.No | Particulars | Unit | Qty | Rate in Rs | Amount in Rs. |
|----------------------|-------------|------|------|------------|---------------|
| 1 | Mazdoor | Day | 0.30 | 490.00 | 147.00 |
| Total cost of Labour | | | | Rs. | 147.00 |

labour component/unit qty

147.00

Add contractor's profit and overhead charges

13.615% 20.01

labour component/unit qty (including contractor's profit)

167.01

ABSTRACT

A. Cost of Materials

Rs. 276.72

B. Hire charges of Machinery

Rs. 11.46

C. Cost of Labour

Rs. 147.00

Total Rs. **435.18**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs. 59.25

Total cost for

1.00 Plug

Rs. **494.43**

Rate per each plug

(A+B+C+D)/1.0

Rs. **494.43**

IRR-CAW-5-8

Providing and constructing 0.50 m thick vertical or inclined graded filter media consisting of 15 cm thick sand layers and 20 cm thick 20 mm down coarse aggregate layer using approved materials satisfying specified filter criteria as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete with initial lead upto **50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

100.00 cum

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Sand (Un-Screened) | cum | 60.00 | 605.00 | 36300.00 |
| 2 | Coarse aggregate 20-10 mm 75 % | cum | 30.00 | 1313.00 | 39390.00 |
| 3 | Coarse aggregate 10 mm down 25 % | cum | 10.00 | 967.00 | 9670.00 |
| Total cost of Materials | | | | Rs. | 85360.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs. | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 36.00 | 490.00 | 17640.00 |
| Total cost of Labour | | | | Rs. | 18280.00 |

labour component/unit qty

182.80

Add contractor's profit and overhead charges

13.615% 24.90

labour component/unit qty (including contractor's profit)

207.70

ABSTRACT:

A. Cost of Materials

Rs. 85360.00

B. Hire charges of Machinery

Rs. 0.00

C. Cost of Labour

Rs. 18280.00

Total Rs. **103640.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs. 14110.59

Total cost for

100.00 cum

Rs. **117750.59**

Rate per cum

(A+B+C+D)/100.0

Rs. **1177.50**

IRR-CAW-5-9

Providing and constructing graded filter media below and behind rock-toe consisting of 20 cm thick sand, 15 cm thick 20 mm down and 15 cm thick 40 mm down size graded coarse aggregates satisfying filter criteria behind rock-toe and 15 cm thick sand, 20 cm thick 20 mm down coarse aggregate and 65 cm thick 40 mm down size coarse aggregate satisfying filter criteria below rock-toe as per specifications including cost of all materials, machinery, labour, laying to required slope, compaction etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

176.00 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------|------|----------|-------------|------------------|
| 1 | Sand (Un-Screened) | cum | 58.77 | 605.00 | 35555.85 |
| 2 | Coarse aggregate 40-20 mm | cum | 52.70 | 1265.00 | 66665.50 |
| 3 | Coarse aggregate 20-10 mm | cum | 50.70 | 1313.00 | 66569.10 |
| 4 | Coarse aggregate 10 mm down | cum | 13.80 | 967.00 | 13344.60 |
| Total cost of Materials | | | | Rs: | 182135.05 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoors | Day | 60.00 | 490.00 | 29400.00 |
| Total cost of Labour | | | | Rs: | 30040.00 |

labour component/unit qty

170.70

Add contractor's profit and overhead charges

13.615% 23.20

labour component/unit qty (including contractor's profit)

193.90**ABSTRACT:**

A. Cost of Materials

Rs: 182135.05

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 30040.00

Total Rs: **212175.05**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 28887.63

Total cost for

176.00 cum

Rs: **241062.68****Rate per cum**

(A+B+C+D)/176.0

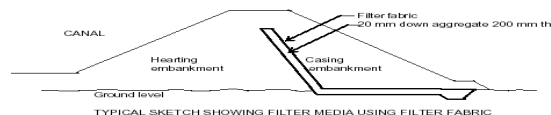
Rs. **1369.70**

IRR-CAW-5-10

(a)

Providing and laying filter media consisting of 2 layers of poly-propeline nonwoven filter fabric and 200 mm thick 20 mm down graded coarse aggregate for embankment including cost of all materials, machinery, labour, forming toe drain etc., complete with lead upto 50 m for aggregate and all leads for fabric and all lifts.

Using 200 gsm filter fabric.



DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | PP filter fabric 200 gsm | sqm | 210.00 | 108.00 | 22680.00 |
| 2 | 20 - 10 mm CA @ 75 % | cum | 15.00 | 1313.00 | 19695.00 |
| | 10 mm down CA @ 25 % | cum | 5.00 | 967.00 | 4835.00 |
| Total Cost of materials | | | | Rs: | 47210.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 7.00 | 490.00 | 3430.00 |
| Total cost of Labour | | | | Rs: | 4070.00 |

labour component/unit qty

40.70

Add contractor's profit and overhead charges

13.615% 5.50

labour component/unit qty (including contractor's profit)

46.20

ABSTRACT:

| | | | | |
|---|--|------------------------|-------|---------------|
| A. Cost of Materials | | | Rs: | 47210.00 |
| B. Hire charges of Machinery | | | Rs: | 0.00 |
| C. Cost of Labour | | | Rs: | 4070.00 |
| | | | Total | Rs: 51280.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 6981.77 |
| Total cost for | | 100.00 sqm | Rs: | 58261.77 |
| Rate per sqm | | (A+B+C+D)/100.0 | Rs: | 582.60 |

- IRR-CAW-5-11 **Providing and laying filter media consisting of 2 layers of poly-propeline nonwoven filter fabric and 200 mm thick 20 mm down graded coarse aggregate for embankment including cost of all materials, machinery, labour, forming toe drain etc., complete with lead upto 50 m for aggregate and all leads for fabric and all lifts.**
- (b)
- b. **Using 250 gsm filter fabric.**

Data

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | PP filter fabric 250 gsm | sqm | 210.00 | 122.00 | 25620.00 |
| 2 | 20 - 10 mm CA @ 75 % | cum | 15.00 | 1313.00 | 19695.00 |
| | 10 mm down CA @ 25 % | cum | 5.00 | 967.00 | 4835.00 |
| Total cost of Materials | | | | Rs: | 50150.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 7.00 | 490.00 | 3430.00 |
| Total cost of Labour | | | | Rs: | 4070.00 |

labour component/unit qty 40.70
 Add contractor's profit and overhead charges 13.615% 5.50
 labour component/unit qty (including contractor's profit) **46.20**

ABSTRACT:

| | | | | |
|---|--|------------------------|-------|---------------|
| A. Cost of Materials | | | Rs: | 50150.00 |
| B. Hire charges of Machinery | | | Rs: | 0.00 |
| C. Cost of Labour | | | Rs: | 4070.00 |
| | | | Total | Rs: 54220.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 7382.05 |
| Total cost for | | 100.00 sqm | Rs: | 61602.05 |
| Rate per sqm | | (A+B+C+D)/100.0 | Rs: | 616.00 |

IRR-CAW-6

ROCK FILL WORKS :

IRR-CAW-6-1

Providing and **constructing rockfill casing to canal embankment** with graded stones and spalls from **approved quarry** including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing surface to required slopes etc., **complete with initial lead upto 50 m and all lifts.**

DATA

RATE ANALYSISUNIT : **100.00 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------------|------|----------|-------------|-----------------|
| 1 | Rubble stones (at quarry) | cum | 100.00 | 359.00 | 35900.00 |
| 2 | Stone chips / spalls (at quarry) | | 15.00 | 385.00 | 5775.00 |
| Total cost of Materials | | | | Rs: | 41675.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------|------|----------|-------------|----------------|
| 1 | Mason Cl- II | Day | 6.00 | 525.00 | 3150.00 |
| 2 | mazdoor | Day | 8.00 | 490.00 | 3920.00 |
| Total cost of Labour | | | | Rs: | 7070.00 |

labour component/unit qty 70.70
 Add contractor's profit and overhead charges 13.615% 9.60
 labour component/unit qty (including contractor's profit) **80.30**

ABSTRACT:

| | | | | | |
|---|--|------------------------|--|-------|---------------|
| A. Cost of Materials | | | | Rs: | 41675.00 |
| B. Hire charges of Machinery | | | | Rs: | 0.00 |
| C. Cost of Labour | | | | Rs: | 7070.00 |
| | | | | Total | Rs: 48745.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: | 6636.63 |
| Total cost for | | 100.00 cum | | Rs: | 55381.63 |
| Rate per cum | | (A+B+C+D)/100.0 | | Rs: | 553.80 |

IRR-CAW-6-2 Providing and **constructing rockfill casing to canal embankment** with graded stones and spalls **available in dump yard (spoil bank)** including cost of all materials, machinery, labour, spreading stones and spalls in layers, hand packing, wedging, finishing surface to required slopes etc., **complete with initial lead upto 50 m and all lifts.**

Note: Stones and spalls available in dump yard shall be issued at specified issue rate.

DATA

RATE ANALYSISUNIT : **100.00 cum****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Rubble stones at dump yard | cum | 100.00 | 181.00 | 18100.00 |
| 2 | Stone chips (spalls) at dump yard | | 15.00 | 209.00 | 3135.00 |
| Total cost of Materials | | | | Rs: | 21235.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------|------|----------|-------------|----------------|
| 1 | Mason Cl- II | Day | 6.00 | 525.00 | 3150.00 |
| 2 | Crowbarman | Day | 2.00 | 525.00 | 1050.00 |
| 3 | mazdoor | Day | 10.00 | 490.00 | 4900.00 |
| Total cost of Labour | | | | Rs: | 9100.00 |

labour component/unit qty 91.00
 Add contractor's profit and overhead charges 13.615% 12.40
 labour component/unit qty (including contractor's profit) **103.40**

ABSTRACT:

| | | | | | |
|---|--|------------------------|--|-------|---------------|
| A. Cost of Materials | | | | Rs: | 21235.00 |
| B. Hire charges of Machinery | | | | Rs: | 0.00 |
| C. Cost of Labour | | | | Rs: | 9100.00 |
| | | | | Total | Rs: 30335.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | | Rs: | 4130.11 |
| Total cost for | | 100.00 cum | | Rs: | 34465.11 |
| Rate per cum | | (A+B+C+D)/100.0 | | Rs: | 344.70 |

IRR-CAW-7

CANAL LINING WORKS :

IRR-CAW-7-1

Providing cohesive non-swelling (CNS) soil lining to canals using soil from **approved borrow area** including spreading soil in **layers of thickness not more than 15 cm**, breaking clods, watering, compacting to density control of **not less than 98 percent** or as stipulated, dressing to required profile etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSISUNIT : **394.00 cum****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Shovel 0.5 cum | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 2 | Angle dozer 90 hp | Hour | 3.00 | 1531.00 | 4593.00 |
| | Fuel / Energy charges | Hour | 3.00 | 999.10 | 2997.30 |
| 3 | Tipper 5 cum | Hour | 24.00 | 404.90 | 9717.60 |
| | Fuel / Energy charges | Hour | 24.00 | 490.80 | 11779.20 |
| 4 | Pump 5 hp (diesel) | Hour | 4.00 | 9.10 | 36.40 |
| | Fuel / Energy charges | Hour | 4.00 | 129.80 | 519.20 |
| 5 | Water tanker 8000 ltr | Hour | 4.00 | 380.50 | 1522.00 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 6 | Diesel road roller 8-10 tonne | Hour | 11.50 | 179.20 | 2060.80 |
| | Fuel / Energy charges | Hour | 11.50 | 1168.60 | 13438.90 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 62355.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Dozer | Hour | 3.00 | 304.20 | 912.60 |
| 3 | Crew for Tipper | Hour | 24.00 | 228.20 | 5476.80 |
| 4 | Crew for Pump | Hour | 4.00 | 143.50 | 574.00 |
| 5 | Crew for Water tanker | Hour | 4.00 | 225.20 | 900.80 |
| 6 | Crew for Road roller | Hour | 11.50 | 278.30 | 3200.45 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 38.00 | 490.00 | 18620.00 |
| Total cost of Labour | | | | Rs: | 33398.25 |

labour component/unit qty

84.80

Add contractor's profit and overhead charges

13.615% 11.50

labour component/unit qty (including contractor's profit)

96.30**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 62355.20

C. Cost of Labour

Rs: 33398.25

Total Rs: **95753.45**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 13036.83

Total cost for

394.00 cum

Rs: **108790.28****Rate per****cum**

(A+B+C+D)/394.0

Rs: **276.10**

IRR-CAW-7-2

Providing cohesive non-swelling (CNS) soil lining to canals using soil from approved borrow

area including spreading soil in layers of thickness **not more than 15 cm**, breaking clods, watering, compacting to density control of **not less than 95 percent** or as stipulated, dressing to required profile etc., complete **with initial lead upto 1 km and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

394.00 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Shovel 0.5 cum | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 2 | Angle dozer 90 hp | Hour | 3.00 | 1531.00 | 4593.00 |
| | Fuel / Energy charges | Hour | 3.00 | 999.10 | 2997.30 |
| 3 | Tipplers 5 cum | Hour | 24.00 | 404.90 | 9717.60 |
| | Fuel / Energy charges | Hour | 24.00 | 490.80 | 11779.20 |
| 4 | Pump 5 hp (diesel) | Hour | 4.00 | 9.10 | 36.40 |
| | Fuel / Energy charges | Hour | 4.00 | 129.80 | 519.20 |
| 5 | Water tanker 8000 ltr | Hour | 4.00 | 380.50 | 1522.00 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 6 | Diesel road roller 8-10 tonnes | Hour | 10.00 | 179.20 | 1792.00 |
| | Fuel / Energy charges | Hour | 10.00 | 1168.60 | 11686.00 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 60333.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 2 | Crew for Dozer | Hour | 3.00 | 304.20 | 912.60 |
| 3 | Crew for Tipper | Hour | 24.00 | 228.20 | 5476.80 |
| 4 | Crew for Pump | Hour | 4.00 | 143.50 | 574.00 |
| 5 | Crew for Water tanker | Hour | 4.00 | 225.20 | 900.80 |
| 6 | Crew for Road roller | Hour | 10.00 | 278.30 | 2783.00 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 38.00 | 490.00 | 18620.00 |
| Total cost of Labour | | | | Rs: | 32980.80 |

labour component/unit qty

83.70

Add contractor's profit and overhead charges

13.615% 11.40

labour component/unit qty (including contractor's profit)

95.10

ABSTRACT:

| | | | | |
|---|-----------------|--|-------|------------------|
| A. Cost of Materials | | | Rs: | 0.00 |
| B. Hire charges of Machinery | | | Rs: | 60333.50 |
| C. Cost of Labour | | | Rs: | 32980.80 |
| | | | Total | Rs: 93314.30 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | | Rs: | 12704.74 |
| Total cost for | 394.00 cum | | Rs: | 106019.04 |
| Rate per cum | (A+B+C+D)/394.0 | | Rs: | 269.10 |

IRR-CAW-7-3 **Providing cohesive non-swelling (CNS) soil lining to canal using soil collected in heaps**
along the edge of canal requiring CNS soil lining as part of the disposal of excavated soil from
canal excavation in CNS soil reach including spreading in **layers of thickness not more than**
15 cm, breaking clods, watering, compacting to density control of **not less than 95 percent**
or as stipulated, dressing to required profile etc., complete with **lead upto upto 50 m and all**
lifts.

DATA:

RATE ANALYSISUNIT : **394.00 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Angle Dozer 90 hp | Hour | 1.50 | 1531.00 | 2296.50 |
| | Fuel / Energy charges | Hour | 1.50 | 999.10 | 1498.65 |
| 2 | Pump 5 hp (diesel) | Hour | 5.00 | 9.10 | 45.50 |
| | Fuel / Energy charges | Hour | 5.00 | 129.80 | 649.00 |
| 3 | Water tanker 8000 ltr | Hour | 5.00 | 380.50 | 1902.50 |
| | Fuel / Energy charges | Hour | 5.00 | 490.80 | 2454.00 |
| 4 | Diesel road roller 8-10 tonne | Hour | 13.00 | 179.20 | 2329.60 |
| | Fuel / Energy charges | Hour | 13.00 | 1168.60 | 15191.80 |
| 5 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 26537.55 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 1.50 | 304.20 | 456.30 |
| 2 | Crew for Pump | Hour | 5.00 | 143.50 | 717.50 |
| 3 | Crew for Water tanker | Hour | 5.00 | 225.20 | 1126.00 |
| 4 | Crew for Road roller | Hour | 13.00 | 278.30 | 3617.90 |
| 5 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 6 | mazdoor | Day | 38.00 | 490.00 | 18620.00 |
| Total cost of Labour | | | | Rs: | 25817.70 |

| | |
|---|--------------|
| labour component/unit qty | 65.50 |
| Add contractor's profit and overhead charges | 13.615% 8.90 |
| labour component/unit qty (including contractor's profit) | 74.40 |

ABSTRACT:

| | | | | |
|---|-----------------|--|-------|-----------------|
| A. Cost of Materials | | | Rs: | 0.00 |
| B. Hire charges of Machinery | | | Rs: | 26537.55 |
| C. Cost of Labour | | | Rs: | 25817.70 |
| | | | Total | Rs: 52355.25 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | | Rs: | 7128.17 |
| Total cost for | 394.00 cum | | Rs: | 59483.42 |
| Rate per cum | (A+B+C+D)/394.0 | | Rs: | 151.00 |

IRR-CAW-7-4 **Providing and fixing 20 x 20 x 75 cm size top surface neatly dressed canal bed level**
stones including cost of all materials, labour, excavation, fixing in position to correct level etc.,
complete with lead upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **32 Nos.****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------|------|----------|-------------|---------------|
| 1 | Rough stone 20x20x75 cm | Each | 32.00 | 27.00 | 864.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 864.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Stone chiseller Cl- I | Day | 2.00 | 580.00 | 1160.00 |
| 3 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 2780.00 |

| | |
|---|---------------|
| labour component/unit qty | 86.90 |
| Add contractor's profit and overhead charges | 13.615% 11.80 |
| labour component/unit qty (including contractor's profit) | 98.70 |

ABSTRACT:

| | | |
|------------------------------|-----|----------------|
| A. Cost of Materials | Rs: | 864.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2780.00 |
| Total | Rs: | 3644.00 |

| | | | |
|---|-----------------------|-----|----------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 496.13 |
| Total cost for | 32.00 Nos. | Rs: | 4140.13 |
| Rate per each | (A+B+C+D)/32.0 | Rs: | 129.40 |

IRR-CAW-7-5 Providing, fabricating and **placing in position reinforcement steel bars for RCC works** including cleaning, straightening, cutting, bending, hooking, lapping, tying with 1.25 mm dia. soft annealed steel wire, welding wherever required including cost of all materials, machinery, labour etc., complete **with initial lead upto 50 and all lifts.**

DATA

RATE ANALYSISUNIT : **1000.00 kg****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Rein.Steel with 5 % wastage | kg | 1050.00 | 52.50 | 55125.00 |
| 2 | Binding wire 1.25 mm dia | kg | 8.00 | 64.00 | 512.00 |
| 3 | Sundries (chairs / spacers etc) | LS | 10.00 | 34.00 | 340.00 |
| Total cost of Materials | | | | Rs: | 55977.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|----------------|
| 1 | Bar bender | Day | 6.00 | 700.00 | 4200.00 |
| 2 | mazdoor | Day | 11.00 | 490.00 | 5390.00 |
| Total cost of Labour | | | | Rs: | 9590.00 |

| | |
|---|--------------|
| labour component/unit qty | 9.60 |
| Add contractor's profit and overhead charges | 13.615% 1.30 |
| labour component/unit qty (including contractor's profit) | 10.90 |

ABSTRACT:

| | | |
|------------------------------|-----|-----------------|
| A. Cost of Materials | Rs: | 55977.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 9590.00 |
| Total | Rs: | 65567.00 |

| | | | |
|---|-------------------------|-----|-----------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 8926.95 |
| Total cost for | 1000.00 kg | Rs: | 74493.95 |
| Rate per kg | (A+B+C+D)/1000.0 | Rs: | 74.50 |

IRR-CAW-7-6 Providing and **laying 75 mm thick in-situ M-15** (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete with **20 mm down size** approved, clean, hard, graded aggregates **for canal lining using vibrating cylinder type mechanical paver** including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete **with initial lead upto 1 km and all lifts.**
(43 Gr Cement content: 300 kg /cum (22.5 kg/ sqm) for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum equivalent:79.2 cum including the extra quantity of concrete for curvatures and bends etc.,)

DATA:

RATE ANALYSISUNIT : **960 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------|------|----------|-------------|------------------|
| 1 | Cement 43 Gr | kg | 23760.00 | 3.68 | 87436.80 |
| 2 | Coarse aggregate 20-10 mm | cum | 41.18 | 1313.00 | 54074.59 |
| | Coarse aggregate 10-4.75 mm | cum | 22.18 | 967.00 | 21444.19 |
| 3 | Fine aggregate (Un-Screened) | cum | 35.64 | 605.00 | 21562.20 |
| 4 | Super plasticiser | kg | 95.04 | 55.00 | 5227.20 |
| 5 | PVC sealing strip | Rm | 640.00 | 44.00 | 28160.00 |
| 6 | Use rate of paving cylinder | sqm | 960.00 | 0.89 | 857.70 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 218932.68 |

| B. MACHINERY: | | | | | |
|---------------------------------|-------------------------------------|------|----------|-------------|-----------------|
| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Batching plant | Hour | 8.00 | 351.80 | 2814.40 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 2 | Transit mixer 3 Nos | Hour | 24.00 | 668.90 | 16053.60 |
| | Fuel / Energy charges | Hour | 24.00 | 1428.30 | 34279.20 |
| 3 | Mechanical paver | Hour | 8.00 | 312.30 | 2498.40 |
| | Lubricants etc @ 5 % | Hour | 8.00 | 15.62 | 124.92 |
| 4 | DG set for batching plant 50 KVA | Hour | 8.00 | 73.30 | 586.40 |
| | Fuel / Energy charges | Hour | 8.00 | 1558.10 | 12464.80 |
| 5 | DG set for paver 30 KVA | Hour | 8.00 | 58.70 | 469.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1038.70 | 8309.60 |
| 6 | Shovel 0.5 cum / Loader | Hour | 2.00 | 915.70 | 1831.40 |
| | Fuel / Energy charges | Hour | 2.00 | 779.00 | 1558.00 |
| 7 | Water tanker | Hour | 8.00 | 380.50 | 3044.00 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 8 | Pump 5 hp(diesel) 2 Nos. 4 hrs each | Hour | 8.00 | 9.10 | 72.80 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 9 | Sundries (power line etc) | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 92287.52 |

| C. LABOUR: | | | | | |
|----------------------|-------------------------|------|----------|-------------|-----------------|
| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Transit mixer | Hour | 24.00 | 365.00 | 8760.00 |
| 3 | Crew for Concrete paver | Hour | 8.00 | 549.10 | 4392.80 |
| 4 | Crew for DG set | Hour | 16.00 | 171.60 | 2745.60 |
| 5 | Crew for Shovel | Hour | 2.00 | 304.20 | 608.40 |
| 6 | Crew for Water tanker | Hour | 8.00 | 225.20 | 1801.60 |
| 7 | Crew for Pump | Hour | 16 | 143.50 | 2296.00 |
| 8 | Mason Class I | Day | 2 | 585.00 | 1170.00 |
| 9 | Mechanic | Day | 1 | 590.00 | 590.00 |
| 10 | Fitter | Day | 1 | 590.00 | 590.00 |
| 11 | Electrician | Day | 1 | 650.00 | 650.00 |
| 12 | work inspector | Day | 2 | 640.00 | 1280.00 |
| 13 | mazdoor (BP site) | Day | 5 | 490.00 | 2450.00 |
| 14 | mazdoor (Paver site) | Day | 10 | 490.00 | 4900.00 |
| Total cost of Labour | | | | Rs: | 35752.80 |

| | |
|---|--------------|
| labour component/unit qty | 37.20 |
| Add contractor's profit and overhead charges | 13.615% 5.10 |
| labour component/unit qty (including contractor's profit) | 42.30 |

ABSTRACT:

| | | |
|---|-----------------|-----------------------------|
| A. Cost of Materials | Rs: | 218932.68 |
| B. Hire charges of Machinery | Rs: | 92287.52 |
| C. Cost of Labour | Rs: | 35752.8 |
| | Total Rs: | 346973 |
| Add for shifting & re-erection of BP @ | 2% | Rs: 6939.4601 |
| Add for LH / RH shifting & erection of Paver @ | 0.5% | Rs: 1734.865 |
| Add for ledge cutting / erection of tracks etc @ | 1% | Rs: 3469.73 |
| | Total Rs: | 359117.06 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: 48893.79 |
| Lead Charges for 1 Km for FA | 35.64 cum @ | 38.288255 Rs./Cum 1364.5934 |
| Lead Charges for 1 Km for CA | 63.36 cum @ | 36.924875 Rs./Cum 2339.56 |
| Total cost for | 960.00 sqm | Rs: 411715.00 |
| Rate per sqm | (A+B+C+D)/960.0 | Rs. 428.90 |

IRR-CAW-7-7 Providing and **laying 80 mm thick in-situ M-15** (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete with **20 mm down size** approved, clean, hard, graded aggregates **for canal lining using vibrating cylinder type mechanical paver** including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete **with initial lead upto 1 km and all lifts.**
(43 Gr Cement content: 300 kg /cum (24 kg/ sqm) for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum equivalent concrete volume:84.48 cum including the extra quantity of concrete for curvatures and bends etc.,)

DATA:

| RATE ANALYSIS | | | UNIT : | | 960 sqm |
|---|-------------------------------------|-----------------|------------|-------------------------|-----------|
| A. MATERIALS: | | | | | |
| Sl No | particulars | Unit | Quantity | Rate | Amount |
| | | | | in Rs. | in Rs. |
| 1 | Cement 43 Gr | kg | 25344.00 | 3.68 | 93265.92 |
| 2 | Coarse aggregate 20-10 mm | cum | 43.93 | 1313.00 | 57679.56 |
| | Coarse aggregate 10-4.75 mm | cum | 23.65 | 967.00 | 22873.80 |
| 3 | Fine aggregate (Un-Screened) | cum | 38.02 | 605.00 | 22999.68 |
| 4 | Super plasticiser | kg | 101.38 | 55.00 | 5575.68 |
| 5 | PVC sealing strip | Rm | 640.00 | 44.00 | 28160.00 |
| 6 | Use rate of paving cylinder | sqm | 960.00 | 0.89 | 857.70 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| | Total cost of Materials | | | Rs: | 231582.35 |
| B. MACHINERY: | | | | | |
| Sl No | Description | Unit | Quantity | Rate | Amount |
| | | | | in Rs. | in Rs. |
| 1 | Batching plant | Hour | 8.00 | 351.80 | 2814.40 |
| | Fuel / Energy charges | Hour | 8.00 | 380.70 | 3045.60 |
| 2 | Transit mixer 3 Nos | Hour | 24.00 | 668.90 | 16053.60 |
| | Fuel / Energy charges | Hour | 24.00 | 1428.30 | 34279.20 |
| 3 | Mechanical paver | Hour | 8.00 | 312.30 | 2498.40 |
| | Lubricants etc @ 5 % | Hour | 8.00 | 15.62 | 124.92 |
| 4 | DG set for batching plant 50 KVA | Hour | 8.00 | 73.30 | 586.40 |
| | Fuel / Energy charges | Hour | 8.00 | 1558.10 | 12464.80 |
| 5 | DG set for paver 30 KVA | Hour | 8.00 | 58.70 | 469.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1038.70 | 8309.60 |
| 6 | Shovel 0.5 cum / Loader | Hour | 2.00 | 915.70 | 1831.40 |
| | Fuel / Energy charges | Hour | 2.00 | 779.00 | 1558.00 |
| 7 | Water tanker | Hour | 8.00 | 380.50 | 3044.00 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 8 | Pump 5 hp(diesel) 2 Nos. 4 hrs each | Hour | 8.00 | 9.10 | 72.80 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 9 | Sundries (power line etc) | LS | 5.00 | 34.00 | 170.00 |
| | Total hire charges of Machinery | | | Rs: | 92287.52 |
| C. LABOUR: | | | | | |
| Sl No | Description | Unit | Quantity | Rate | Amount |
| | | | | in Rs. | in Rs. |
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Transit mixer | Hour | 24.00 | 365.00 | 8760.00 |
| 3 | Crew for Concrete paver | Hour | 8.00 | 549.10 | 4392.80 |
| 4 | Crew for DG set | Hour | 16.00 | 171.60 | 2745.60 |
| 5 | Crew for Shovel | Hour | 2.00 | 304.20 | 608.40 |
| 6 | Crew for Water tanker | Hour | 8.00 | 225.20 | 1801.60 |
| 7 | Crew for Pump | Hour | 16 | 143.50 | 2296.00 |
| 8 | Mason Class I | Day | 2 | 585.00 | 1170.00 |
| 9 | Mechanic | Day | 1 | 590.00 | 590.00 |
| 10 | Fitter | Day | 1 | 590.00 | 590.00 |
| 11 | Electrician | Day | 1 | 650.00 | 650.00 |
| 12 | work inspector | Day | 2 | 640.00 | 1280.00 |
| 13 | mazdoor (BP site) | Day | 5 | 490.00 | 2450.00 |
| 14 | mazdoor (Paver site) | Day | 10 | 490.00 | 4900.00 |
| | Total cost of Labour | | | Rs: | 35752.80 |
| labour component/unit qty | | | 37.20 | | |
| Add contractor's profit and overhead charges | | | 13.615% | 5.10 | |
| labour component/unit qty (including contractor's profit) | | | | 42.30 | |
| ABSTRACT: | | | | | |
| A. Cost of Materials | | | Rs: | | 231582.35 |
| B. Hire charges of Machinery | | | Rs: | | 92287.52 |
| C. Cost of Labour | | | Rs: | | 35752.8 |
| | | | Total | Rs: | 359622.67 |
| Add for shifting & re-erection of BP @ | | | 2% | Rs: | 7192.4534 |
| Add for LH / RH shifting & erection of Paver @ | | | 0.5% | Rs: | 1798.1133 |
| Add for ledge cutting / erection of tracks etc @ | | | 1% | Rs: | 3596.2267 |
| | | | Total | Rs: | 372209.46 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | | | 13.615% | Rs: | 50676.32 |
| Lead Charges for 1 Km for FA | | | 38.02 | cum @ 38.288255 Rs./Cum | 1455.5663 |
| Lead Charges for 1 Km for CA | | | 67.58 | cum @ 36.924875 Rs./Cum | 2495.53 |
| Total cost for | | | 960.00 sqm | Rs: | 426836.88 |
| Rate per | sqm | (A+B+C+D)/960.0 | | Rs. | 444.60 |

IRR-CAW-7-8

Providing and **laying 100 mm thick in situ M-15** (28 days cube compressive strength not less than 15 N /Sqmm) grade cement concrete with **20 mm down size** approved, clean, hard, graded aggregates **for canal lining using, vibrating, cylinder type mechanical paver** including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, finishing, forming contraction joints, fixing PVC joint sealing strips, curing, shifting of paver from one side to other side of canal etc., complete **with initial lead upto 1 Km and all lifts.**
(43 Gr Cement content: 300 kg /cum (30 kg/ sqm) for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum equivalent concrete volume:88 cum including the extra quantity of concrete for curvatures and bends etc.,)

DATA:

| RATE ANALYSIS | | UNIT | | : | 800 Sqm | |
|---------------|------------------------------|------|-------|-------------|-----------|--|
| A. MATERIALS: | | | | | | |
| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount | |
| 1 | Cement 43 Gr | Kg | 26400 | 3.68 | 97152.00 | |
| 2 | Coarse aggregate 20-10 mm | cum | 45.76 | 1313.00 | 60082.88 | |
| | Coarse aggregate 10-4.75 mm | cum | 24.64 | 967.00 | 23826.88 | |
| 3 | Fine aggregate (Un-Screened) | cum | 39.6 | 605.00 | 23958.00 | |
| 4 | Super plasticiser | kg | 105.6 | 55.00 | 5808.00 | |
| 5 | PVC sealing strip | Rm | 533 | 44.00 | 23452.00 | |
| 6 | Use rate of paving cylinder | sqm | 800 | 0.8934375 | 714.75 | |
| | Total cost of Materials | | | Rs. | 234994.51 | |

B. MACHINERY:

| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount |
|-------|--------------------------------------|------|------|-------------|-----------------|
| 1 | Batching plant | Hour | 8 | 351.80 | 2814.40 |
| | Fuel / Energy charges | Hour | 8 | 380.70 | 3045.60 |
| 2 | Transit mixer 3 Nos | Hour | 24 | 668.90 | 16053.60 |
| | Fuel / Energy charges | Hour | 24 | 1428.30 | 34279.20 |
| 3 | Mechanical paver | Hour | 8 | 312.30 | 2498.40 |
| | lubricants etc @ 5% | Hour | 8 | 15.62 | 124.92 |
| 4 | DG set for batching plant 50 KVA | Hour | 8 | 73.30 | 586.40 |
| | Fuel / Energy charges | Hour | 8 | 1558.10 | 12464.80 |
| 5 | DG set for paver 30 KVA | Hour | 8 | 58.70 | 469.60 |
| | Fuel / Energy charges | Hour | 8 | 1038.70 | 8309.60 |
| 6 | Shovel 0.5 cum / Loader | Hour | 2.00 | 915.70 | 1831.40 |
| | Fuel / Energy charges | Hour | 2.00 | 779.00 | 1558.00 |
| 7 | Water tanker | Hour | 8 | 380.50 | 3044.00 |
| | Fuel / Energy charges | Hour | 8 | 490.80 | 3926.40 |
| 8 | Pump 5 hp (diesel) 2 Nos. 4 hrs each | Hour | 8 | 9.10 | 72.80 |
| | Fuel / Energy charges | Hour | 8 | 129.80 | 1038.40 |
| | Total hire charges of Machinery | | | Rs. | 92117.52 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Transit mixer | Hour | 24.00 | 365.00 | 8760.00 |
| 3 | Crew for Concrete paver | Hour | 8.00 | 549.10 | 4392.80 |
| 4 | Crew for DG set | Hour | 16.00 | 171.60 | 2745.60 |
| 5 | Crew for Shovel | Hour | 2.00 | 304.20 | 608.40 |
| 6 | Crew for Water tanker | Hour | 8 | 225.20 | 1801.60 |
| 7 | Crew for Pump | Hour | 8 | 143.50 | 1148.00 |
| 8 | Mason Class I | Day | 2 | 585.00 | 1170.00 |
| 9 | Mechanic | Day | 1 | 590.00 | 590.00 |
| 10 | Fitter | Day | 1 | 590.00 | 590.00 |
| 11 | Electrician | Day | 1 | 650.00 | 650.00 |
| 12 | work inspector | Day | 2 | 640.00 | 1280.00 |
| 13 | mazdoor (BP site) | Day | 5 | 490.00 | 2450.00 |
| 14 | mazdoor (Paver site) | Day | 10 | 490.00 | 4900.00 |
| | Total cost of Labour | | | Rs. | 34604.80 |

labour component/unit qty 43.30

Add contractor's profit and overhead charges 13.615% 5.90

labour component/unit qty (including contractor's profit) **49.20****ABSTRACT**

| | | |
|---|------------------|-----------------------------|
| A. Cost of Materials | Rs. | 234994.51 |
| B. Hire charges of Machinery | Rs. | 92117.52 |
| C. Cost of Labour | Rs. | 34604.80 |
| | TOTAL Rs. | 361716.83 |
| Add for shifting & re-erection of BP @ | 2% Rs. | 7234.3366 |
| Add for LH / RH shifting & erection of Paver @ | 0.5% Rs. | 1808.5842 |
| Add for ledge cutting / erection of tracks etc @ | 1% Rs. | 3617.1683 |
| | Total | Rs: 374376.92 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | Rs: 50971.42 |
| Lead Charges for 1 Km for FA | 39.60 cum @ | 38.288255 Rs./Cum 1516.2149 |
| Lead Charges for 1 Km for CA | 70.40 cum @ | 36.924875 Rs./Cum 2599.51 |
| Total cost for | 800.00 Sqm | Rs: 429464.07 |
| Rate per Sqm | (A+B+C+D)/800.0 | Rs. 536.80 |

IRR-CAW-7-9

Dismantling, shifting and re-erecting mechanical concrete paver and DG set with all accessories across canal CD work or other locations wherever shifting and re-erecting is necessary including aligning paver correctly for continuing canal lining work, cost of all materials, machinery, labour etc., complete with all leads and lifts.

Note:

Local shifting and re-erection of paver for LH and RH side lining included in concrete lining rates under items IRR-CAW-7-7 and IRR-CAW-7-8 and saperate rate for shifting shall not be allowed.

DATA:

| RATE ANALYSIS | | | UNIT : | | 1.00 Shifting | |
|-------------------------|-------------|------|----------|-------------|---------------|--|
| A. MATERIALS: | | | | | | |
| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. | |
| 1 | NIL | | 0.00 | 0.00 | | |
| Total cost of Materials | | | | Rs: | 0.00 | |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------------------|------|----------|-------------|----------------|
| 1 | Tipper | Hour | 4.00 | 404.90 | 1619.6 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.8 |
| 2 | Sundries (ropes / rails etc) | LS | 1.00 | 34.00 | 34 |
| Total hire charges of Machinery | | | | Rs: | 2144.40 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|----------------|
| 1 | Crew for Tipper | Hour | 4.00 | 228.20 | 912.8 |
| 2 | Crew for Paver | Hour | 8.00 | 549.10 | 4392.8 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940 |
| Total cost of Labour | | | | Rs: | 8245.60 |

labour component/unit qty

8245.60

Add contractor's profit and overhead charges

13.615% 1122.60

labour component/unit qty (including contractor's profit)

9368.20**ABSTRACT:**

A. Cost of Materials

Rs: 0.00

B. Hire charges of Machinery

Rs: 2144.40

C. Cost of Labour

Rs: 8245.60

Total Rs: **10390.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1414.6

Total cost for

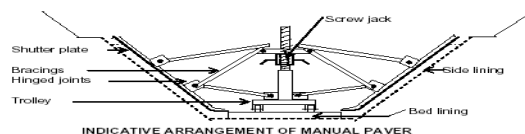
1.00 Shifting

Rs: **11804.60****Rate per Shifting**

(A+B+C+D)/1.0

Rs. **11804.60**

IRR-CAW-7-10 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N /sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal(150mm thick)** including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts. (Cement content : 250 kg / cum)** (**43 Gr Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement), CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)**



DATA

RATE ANALYSIS

UNIT :

28.17 cum**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 7042.5 | 3.68 | 25916.4 |
| | Cement for incidentals @ 5 kg / cum | kg | 140.85 | 3.68 | 518.328 |
| 2 | Coarse aggregate 40-20 mm | cum | 12.68 | 1265.00 | 16035.773 |
| | Coarse aggregate 20-10 mm | cum | 7.61 | 1313.00 | 9986.5467 |
| | Coarse aggregate 10 mm below | cum | 5.07 | 967.00 | 4903.2702 |
| 3 | Fine aggregate (Un-Screened) | cum | 11.27 | 605.00 | 6817.14 |
| 4 | Super Plasticizer | kg | 28.17 | 55.00 | 1549.35 |
| 6 | Use rate of manual paver | sqm | 180 | 53.94 | 9708.71 |
| 7 | Sundries | LS | 2 | 34.00 | 68 |
| Total cost of Materials | | | | Rs: | 75503.52 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 16.00 | 80.50 | 1288 |
| | Fuel / Energy charges | Hour | 16.00 | 259.70 | 4155.2 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.9 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.5 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.8 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 16.00 | 6.90 | 110.4 |
| | Fuel / Energy charges | Hour | 16.00 | 27.50 | 440 |
| Total hire charges of Machinery | | | | Rs: | 6934.35 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|-------------------------------|------|----------|----------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 16.00 | 286.00 | 4576 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.2 |
| 4 | Crew for Needle vibrator | Hour | 16.00 | 205.90 | 3294.4 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640 |
| 6 | Mason Class-I | Day | 2.00 | 585.00 | 1170 |
| 7 | Fitter | Day | 1.00 | 590.00 | 590 |
| 8 | mazdoor | | | | |
| | for batching materials | Day | 22.00 | 490.00 | 10780 |
| | for loading mortar pans | Day | 8.00 | 490.00 | 3920 |
| | for laying and moving paver | Day | 6.00 | 490.00 | 2940 |
| | for conveying concrete | Day | 28.17 | 490.00 | 13803.3 |
| | for cleaning/ washing/ curing | Day | 2.00 | 490.00 | 980 |
| Total cost of Labour | | | | Rs. | 42990.65 |
| labour component/unit qty | | | 1526.10 | | |
| Add contractor's profit and overhead charges | | | 13.615% | 207.80 | |
| labour component/unit qty (including contractor's profit) | | | | 1733.90 | |

ABSTRACT:

| | | |
|---|-----------------|----------------------|
| A. Cost of Materials | Rs. | 75503.52 |
| B. Hire charges of Machinery | Rs. | 6934.35 |
| C. Cost of Labour | Rs. | 42990.65 |
| Total | Rs. | 125428.52 |
| | | |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 17077.09 |
| Total cost for | 28.17 cum | Rs. 142505.61 |
| Rate per cum | (A+B+C+D)/28.17 | Rs. 5058.80 |

IRR-CAW-7-11 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N/sqm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregate **for bed and side lining of canal(100 mm thick)** including, finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead up to 50 m and all lifts (Cement content: 250 kg/cum)** (**43 Gr Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement), CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)**

DATA

RATE ANALYSIS

UNIT:

27 cum**A. MATERIALS:**

| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount |
|-------------------------|-------------------------------------|------|-------|-------------|-----------------|
| 1 | Cement for mix | kg | 6750 | 3.68 | 24840.00 |
| 2 | Cement for incidentals @ 5 Kg / cum | kg | 135 | 3.68 | 496.80 |
| | Coarse aggregate 40mm | cum | 12.15 | 1265.00 | 15369.75 |
| | Coarse aggregate 20 mm . | cum | 7.29 | 1313.00 | 9571.77 |
| | Coarse aggregate 10 mm . | cum | 4.86 | 967.00 | 4699.62 |
| 3 | Fine aggregate (Un-Screened) | cum | 10.8 | 605.00 | 6534.00 |
| 4 | Super Plasticizer | kg | 27 | 55.00 | 1485.00 |
| 5 | Use rate of manual paver | sqm | 270 | 53.94 | 14563.07 |
| Total cost of Materials | | | | Total Rs. | 77560.01 |
| | | | | Rs. | 77560.01 |

B. MACHINERY:

| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount |
|---------------------------------|-------------------------------------|------|-------|-------------|----------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 16.00 | 80.50 | 1288.00 |
| | Fuel / Energy charges | Hour | 16.00 | 259.70 | 4155.20 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 40 mm die (petrol) | Hour | 4.00 | 6.90 | 27.60 |
| | Fuel / Energy charges | Hour | 4.00 | 27.50 | 110.00 |
| Total hire charges of Machinery | | | | Rs. | 6521.55 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 16.00 | 286.00 | 4576 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.2 |
| 4 | Crew for Needle vibrator | Hour | 16.00 | 205.90 | 3294.4 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640 |
| 6 | Mason Class-I | Day | 2.00 | 585.00 | 1170 |
| 7 | Fitter | Day | 1.00 | 590.00 | 590 |
| 8 | mazdoor | | | | |
| | for batching materials | Day | 22.00 | 490.00 | 10780 |
| | for loading mortar pans | Day | 8.00 | 490.00 | 3920 |
| | for laying and moving paver | Day | 6.00 | 490.00 | 2940 |
| | for conveying concrete | Day | 27.00 | 490.00 | 13230 |
| | for cleaning/ washing/ curing | Day | 2.00 | 490.00 | 980 |
| Total cost of Labour | | | | Rs. | 42417.35 |

| | |
|---|----------------|
| labour component/unit qty | 1571.00 |
| Add contractor's profit and overhead charges | 13.615% 213.90 |
| labour component/unit qty (including contractor's profit) | 1784.90 |

ABSTRACT:

| | | |
|--|-----|------------------|
| A. Cost of Materials including royalty charges | Rs. | 77560.01 |
| B. Hire charges of Machinery | Rs. | 6521.55 |
| C. Cost of Labour | Rs. | 42417.35 |
| Total Rs. | | 126498.91 |

| | | |
|---|-----------------------|----------------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 17222.83 |
| Total cost for | 27.00 cum | Rs: 143721.74 |
| Rate per cum | (A+B+C+D)/27.0 | Rs. 5323.00 |

IRR-CAW-7-12 Providing and **laying 100mm thick insitu vibrated M-10** (28 days cube compressive strength-not less than 10.00 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal lining using vibrating cylindertype mechanical paver** including cost of all materials mechninery labour batching mixing placing in position forming contraction joints fixing pvc joint seiling strips shifting of paver from one side of canal to other side etc.complete **with 1 km lead & all lifts.**
(Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSIS

UNIT

:

800 Sqm**A. MATERIALS:**

| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount |
|-------|------------------------------|------|----------|-------------|------------------|
| 1 | Cement 43 Gr | Kg | 22000.00 | 3.68 | 80960 |
| 2 | Coarse aggregate 40 mm | cum | 39.60 | 1265.00 | 50094 |
| | Coarse aggregate 20 mm | cum | 23.76 | 1313.00 | 31196.88 |
| | Coarse aggregate 10 mm | cum | 15.84 | 967.00 | 15317.28 |
| 3 | Fine aggregate (Un-Screened) | cum | 35.20 | 605.00 | 21296 |
| 4 | Super plasticiser | kg | 88.00 | 55.00 | 4840 |
| 5 | PVC sealing strip | Rm | 533.00 | 44.00 | 23452 |
| 6 | Use rate of paving cylinder | sqm | 800.00 | 0.893 | 714.75 |
| | Total cost of Materials | | | Rs. | 227870.91 |

B. MACHINERY:

| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount |
|-------|--------------------------------------|------|-------|-------------|-----------------|
| 1 | Batching plant | Hour | 8.00 | 351.80 | 2814.4 |
| 2 | Transit mixer 3 Nos | Hour | 24.00 | 668.90 | 16053.6 |
| | Fuel / Energy charges | Hour | 24.00 | 1428.30 | 34279.2 |
| 3 | Mechanical paver | Hour | 5.00 | 312.30 | 1561.5 |
| | lubricants etc @ 5% | Hour | 5.00 | 15.62 | 78.075 |
| 4 | DG set for batching plant 50 KVA | Hour | 8.00 | 73.30 | 586.4 |
| | Fuel / Energy charges | Hour | 8.00 | 1558.10 | 12464.8 |
| 5 | DG set for paver 30 KVA | Hour | 8.00 | 58.70 | 469.6 |
| | Fuel / Energy charges | Hour | 8.00 | 1038.70 | 8309.6 |
| 6 | Shovel 0.5 cum / Loader | Hour | 2.00 | 915.70 | 1831.40 |
| | Fuel / Energy charges | Hour | 2.00 | 779.00 | 1558.00 |
| 7 | Water tanker | Hour | 8.00 | 380.50 | 3044 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.4 |
| 8 | Pump 5 hp (diesel) 2 Nos. 4 hrs each | Hour | 8.00 | 9.10 | 72.8 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.4 |
| | Total hire charges of Machinery | | | Rs. | 88088.18 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Transit mixer | Hour | 24.00 | 365.00 | 8760.00 |
| 3 | Crew for Concrete paver | Hour | 8.00 | 549.10 | 4392.80 |
| 4 | Crew for DG set | Hour | 16.00 | 171.60 | 2745.60 |
| 5 | Crew for Shovel | Hour | 2.00 | 304.20 | 608.40 |
| 6 | Crew for Water tanker | Hour | 8 | 225.20 | 1801.60 |
| 7 | Crew for Pump | Hour | 8 | 143.50 | 1148.00 |
| 8 | Mason Class I | Day | 2 | 585.00 | 1170.00 |
| 9 | Mechanic | Day | 1 | 590.00 | 590.00 |
| 10 | Fitter | Day | 1 | 590.00 | 590.00 |
| 11 | Electrician | Day | 1 | 650.00 | 650.00 |
| 12 | work inspector | Day | 2 | 640.00 | 1280.00 |
| 13 | mazdoor (BP site) | Day | 5 | 490.00 | 2450.00 |
| 14 | mazdoor (Paver site) | Day | 10 | 490.00 | 4900.00 |
| | Total cost of Labour | | | Rs: | 34604.80 |

| | |
|---|--------------|
| labour component/unit qty | 43.30 |
| Add contractor's profit and overhead charges | 13.615% 5.90 |
| labour component/unit qty (including contractor's profit) | 49.20 |

ABSTRACT:

| | | | |
|---|-----------------|------------------|----------------------|
| A. Cost of Materials | | Rs. | 227870.91 |
| B. Hire charges of Machinery | | Rs. | 88088.18 |
| C. Cost of Labour | | Rs. | 34604.80 |
| | | TOTAL Rs. | 350563.89 |
| Add for shifting & re-erection of BP @ | 2% | Rs. | 7011.28 |
| Add for LH / RH shifting & erection of Paver @ | 0.5% | Rs. | 1752.82 |
| Add for ledge cutting / erection of tracks etc @ | 1% | Rs. | 3505.64 |
| | | Total | Rs: 362833.63 |
| D. Add for contractor's profit and overheads on (A+B+C+other percentages) | 13.615% | | Rs: 49399.8 |
| Lead Charges for 1 Km for FA | 35.20 | cum @ | 38.288255 Rs./Cum |
| Lead Charges for 1 Km for CA | 79.20 | cum @ | 36.924875 Rs./Cum |
| Total cost for | 800.00 | Sqm | Rs: 416505.62 |
| Rate per Sqm | (A+B+C+D)/800.0 | | Rs. 520.60 |

IRR-CAW-7-13 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N /sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal** including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts. (Cement content : 250 kg / cum)**
(Cement content: 250 kg / cum for use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)

DATA

RATE ANALYSISUNIT : **27.00 cum****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 6750 | 3.68 | 24840 |
| | Cement for incidentals @ 5 kg / cum | kg | 135 | 3.68 | 496.8 |
| 2 | Coarse aggregate 20-10 mm | cum | 14.04 | 1313.00 | 18434.52 |
| | Coarse aggregate 10 mm below | cum | 7.56 | 967.00 | 7310.52 |
| 3 | Fine aggregate (Un-Screened) | cum | 12.15 | 605.00 | 7350.75 |
| 4 | Super Plasticizer | kg | 27 | 55.00 | 1485 |
| 5 | Use rate of manual paver | sqm | 270 | 53.94 | 14563.07 |
| 6 | Sundries | LS | 2 | 34.00 | 68 |
| Total cost of Materials | | | | Rs: | 74548.66 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 16.00 | 80.50 | 1288 |
| | Fuel / Energy charges | Hour | 16.00 | 259.70 | 4155.2 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.9 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.5 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.8 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 16.00 | 6.90 | 110.4 |
| | Fuel / Energy charges | Hour | 16.00 | 27.50 | 440 |
| Total hire charges of Machinery | | | | Rs: | 6934.35 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 16.00 | 286.00 | 4576 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.2 |
| 4 | Crew for Vibrator | Hour | 16.00 | 205.90 | 3294.40 |
| 5 | Mason Class-I | Day | 2.00 | 585.00 | 1170 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640 |
| 7 | Fitter | Day | 1.00 | 590.00 | 590 |
| 8 | mazdoor | | | | |
| | for batching materials | Day | 22.00 | 490.00 | 10780 |
| | for loading mortar pans | Day | 8.00 | 490.00 | 3920 |
| | for laying and moving paver | Day | 6.00 | 490.00 | 2940 |
| | for conveying concrete | Day | 27.00 | 490.00 | 13230 |
| | for cleaning/ washing/ curing | Day | 2.00 | 490.00 | 980 |
| Total cost of Labour | | | | Rs: | 42417.35 |

| | |
|---|----------------|
| labour component/unit qty | 1571.00 |
| Add contractor's profit and overhead charges | 13.615% 213.90 |
| labour component/unit qty (including contractor's profit) | 1784.90 |

ABSTRACT:

| | | | |
|---|----------------|--------------|----------------------|
| A. Cost of Materials | | Rs: | 74548.66 |
| B. Hire charges of Machinery | | Rs: | 6934.35 |
| C. Cost of Labour | | Rs: | 42417.35 |
| | | Total | Rs: 123900.36 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 16869.03 |
| Total cost for | 27.00 cum | Rs: | 140769.39 |
| Rate per cum | (A+B+C+D)/27.0 | Rs: | 5213.70 |

IRR-CAW-7-14 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal(150 mm thick)** including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**
(Cement content: 290 kg / cum for use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA

RATE ANALYSIS

UNIT :

24.92 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 7226.8 | 3.68 | 26594.62 |
| | Cement for incidentals @ 5 kg / cum | kg | 124.6 | 3.68 | 458.528 |
| 2 | Coarse aggregate 40-20 mm | cum | 11.21 | 1265.00 | 14185.71 |
| | Coarse aggregate 20-10 mm | cum | 6.73 | 1313.00 | 8834.3892 |
| | Coarse aggregate 10 mm below | cum | 4.49 | 967.00 | 4337.58 |
| 3 | Fine aggregate (Un-Screened) | cum | 9.97 | 605.00 | 6030.64 |
| 4 | Super Plasticizer | kg | 28.91 | 55.00 | 1589.90 |
| 5 | Use rate of manual paver | sqm | 166.14 | 53.94 | 8961.14 |
| 6 | Sundries | LS | 2 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 71060.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 16.00 | 80.50 | 1288.00 |
| | Fuel / Energy charges | Hour | 16.00 | 259.70 | 4155.20 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 16.00 | 6.90 | 110.40 |
| | Fuel / Energy charges | Hour | 16.00 | 27.50 | 440.00 |
| Total hire charges of Machinery | | | | Rs: | 6934.35 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 16.00 | 286.00 | 4576 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.2 |
| 4 | Crew for Vibrator | Hour | 16.00 | 205.90 | 3294.40 |
| 5 | Mason Class-I | Day | 2.00 | 585.00 | 1170 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640 |
| 7 | Fitter | Day | 1.00 | 590.00 | 590 |
| 8 | mazdoor | | | | |
| | for batching materials | Day | 22.00 | 490.00 | 10780 |
| | for loading mortar pans | Day | 8.00 | 490.00 | 3920 |
| | for laying | Day | 6.00 | 490.00 | 2940 |
| | for conveying concrete | Day | 24.92 | 490.00 | 12210.8 |
| | for cleaning/ washing/ curing | Day | 2.00 | 490.00 | 980 |
| Total cost of Labour | | | | Rs: | 41398.15 |

labour component/unit qty

1661.20

Add contractor's profit and overhead charges

13.615% 226.20

labour component/unit qty (including contractor's profit)

1887.40**ABSTRACT:**

A. Cost of Materials

Rs: 71060.50

B. Hire charges of Machinery

Rs: 6934.35

C. Cost of Labour

Rs: 41398.15

Total Rs: 119393.00

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 16255.36

Total cost for

24.92 cum

Rs: **135648.36****Rate per cum**

(A+B+C+D)/24.92

Rs. **5443.40**

IRR-CAW-7-15 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal(100 mm thick)** including finishing the junction of bed and sides to required curvature, cost of all materials, machinery, labour, formwork including supports, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**
(Cement content: 300 kg / cum for use of super plasticiser(0.4% by wt. of cement),
CA : 0.80 cum, Blending Ratio of CA--65:35, FA : 0.45 cum)

DATA

RATE ANALYSIS

UNIT :

23.10 cum

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 6930 | 3.68 | 25502.4 |
| | Cement for incidentals @ 5 kg / cum | kg | 115.5 | 3.68 | 425.04 |
| 2 | Coarse aggregate 20-10 mm | cum | 12.01 | 1313.00 | 15771.756 |
| | Coarse aggregate 10 mm below | cum | 6.47 | 967.00 | 6254.556 |
| 3 | Fine aggregate (Un-Screened) | cum | 10.40 | 605.00 | 6288.975 |
| 4 | Super Plasticizer | kg | 27.72 | 55.00 | 1524.60 |
| 6 | Use rate of manual paver | sqm | 231 | 53.94 | 12459.51 |
| 7 | Sundries | LS | 2 | 34.00 | 68 |
| Total cost of Materials | | | | Rs: | 68294.84 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 16.00 | 80.50 | 1288 |
| | Fuel / Energy charges | Hour | 16.00 | 259.70 | 4155.2 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.9 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.5 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.8 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 16.00 | 6.90 | 110.4 |
| | Fuel / Energy charges | Hour | 16.00 | 27.50 | 440 |
| Total hire charges of Machinery | | | | Rs: | 6934.35 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 16.00 | 286.00 | 4576 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.2 |
| 4 | Crew for Vibrator | Hour | 16.00 | 205.90 | 3294.4 |
| 5 | Mason Class-I | Day | 2.00 | 585.00 | 1170 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640 |
| 7 | Fitter | Day | 1.00 | 590.00 | 590 |
| 8 | mazdoor | | | | |
| | for batching materials | Day | 22.00 | 490.00 | 10780 |
| | for loading mortar pans | Day | 8.00 | 490.00 | 3920 |
| | for laying and moving paver | Day | 6.00 | 490.00 | 2940 |
| | for conveying concrete | Day | 23.10 | 490.00 | 11319 |
| | for cleaning/ washing/ curing | Day | 2.00 | 490.00 | 980 |
| Total cost of Labour | | | | Rs: | 40506.35 |

labour component/unit qty

1753.50

Add contractor's profit and overhead charges

13.615% 238.70

labour component/unit qty (including contractor's profit)

1992.20

ABSTRACT:

A. Cost of Materials

Rs: 68294.84

B. Hire charges of Machinery

Rs: 6934.35

C. Cost of Labour

Rs: 40506.35

Total Rs: 115735.54

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 15757.39

Total cost for

23.10 cum

Rs: **131492.93**

Rate per cum (A+B+C+D)/23.10

Rs: **5692.30**

IRR-CAW-7-16 Providing and **laying 150mm thick insitu vibrated M-15** (28 days cube compressive strength-not less than 15.00 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for bed and side lining of canal lining using vibrating cylindertype mechanical paver** including cost of all materials machinery labour batching mixing placing in position forming contraction joints fixing pvc joint sealing strips shifting of paver from one side of canal to other side etc.complete **with 1km lead & all lifts.**
(43 Gr Cement content: 300 kg /cum (45 kg/ sqm) for use of super plasticiser(0.4% by wt. of cement),CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.44 cum equivalent concrete volume:132 cum including the extra quantity of concrete for curvatures and bends etc.,)

DATA:

RATE ANALYSIS

UNIT

:

800 Sqm

A. MATERIALS:

| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount |
|-------------------------|------------------------------|------|----------|-------------|------------------|
| 1 | Cement 43 Gr | Kg | 39600.00 | 3.68 | 145728 |
| 2 | Coarse aggregate 20 mm | cum | 68.64 | 1313.00 | 90124.32 |
| | Coarse aggregate 10 mm | cum | 36.96 | 967.00 | 35740.32 |
| 3 | Fine aggregate (Un-Screened) | cum | 58.08 | 605.00 | 35138.4 |
| 4 | Super plasticiser | kg | 158.40 | 55.00 | 8712 |
| 5 | PVC sealing strip | Rm | 533.00 | 44.00 | 23452 |
| 6 | Use rate of paving cylinder | sqm | 800.00 | 0.893 | 714.75 |
| Total cost of Materials | | | | Rs. | 339609.79 |

B. MACHINERY:

| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount |
|---------------------------------|--------------------------------------|------|-------|-------------|----------|
| 1 | Batching plant | Hour | 8.00 | 351.80 | 2814.4 |
| 2 | Transit mixer 3 Nos | Hour | 24.00 | 668.90 | 16053.6 |
| | Fuel / Energy charges | Hour | 24.00 | 1428.30 | 34279.2 |
| 3 | Mechanical paver | Hour | 5.00 | 312.30 | 1561.5 |
| | lubricants etc @ 5% | Hour | 5.00 | 15.62 | 78.075 |
| 4 | DG set for batching plant 50 KVA | Hour | 8.00 | 73.30 | 586.4 |
| | Fuel / Energy charges | Hour | 8.00 | 1558.10 | 12464.8 |
| 5 | DG set for paver 30 KVA | Hour | 8.00 | 58.70 | 469.6 |
| | Fuel / Energy charges | Hour | 8.00 | 1038.70 | 8309.6 |
| 6 | Shovel 0.5 cum / Loader | Hour | 2.00 | 915.70 | 1831.40 |
| | Fuel / Energy charges | Hour | 2.00 | 779.00 | 1558.00 |
| 7 | Water tanker | Hour | 8.00 | 380.50 | 3044 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.4 |
| 8 | Pump 5 hp (diesel) 2 Nos. 4 hrs each | Hour | 8.00 | 9.10 | 72.8 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.4 |
| Total hire charges of Machinery | | | | Rs. | 88088.18 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|---------------|
| 1 | Crew for Batching plant | Hour | 8.00 | 439.80 | 3518.40 |
| 2 | Crew for Transit mixer | Hour | 24.00 | 365.00 | 8760.00 |
| 3 | Crew for Concrete paver | Hour | 8.00 | 549.10 | 4392.80 |
| 4 | Crew for DG set | Hour | 16.00 | 171.60 | 2745.60 |
| 5 | Crew for Shovel | Hour | 2.00 | 304.20 | 608.40 |
| 6 | Crew for Water tanker | Hour | 8 | 225.20 | 1801.60 |
| 7 | Crew for Pump | Hour | 8 | 143.50 | 1148.00 |
| 8 | Mason Class I | Day | 2 | 585.00 | 1170.00 |
| 9 | Mechanic | Day | 1 | 590.00 | 590.00 |
| 10 | Fitter | Day | 1 | 590.00 | 590.00 |
| 11 | Electrician | Day | 1 | 650.00 | 650.00 |
| 12 | work inspector | Day | 2 | 640.00 | 1280.00 |
| 13 | mazdoor (BP site) | Day | 5 | 490.00 | 2450.00 |
| 14 | mazdoor (Paver site) | Day | 10 | 490.00 | 4900.00 |
| Total cost of Labour | | | | Rs: | 34604.80 |

labour component/unit qty

43.30

Add contractor's profit and overhead charges

13.615% 5.90

labour component/unit qty (including contractor's profit)

49.20

ABSTRACT

A. Cost of Materials

Rs. 339609.79

B. Hire charges of Machinery

Rs. 88088.18

C. Cost of Labour

Rs. 34604.80

TOTAL Rs. 462302.77

Add for shifting & re-erection of BP @

2% Rs. 9246.06

Add for LH / RH shifting & erection of Paver @

0.5% Rs. 2311.51

Add for ledge cutting / erection of tracks etc @

1% Rs. 4623.03

Total Rs. 478483.37

D. Add for contractor's profit and overheads on (A+B+C+other percentages)

13.615% Rs. 65145.51

Lead Charges for 1 Km for FA

58.08

cum @ 38.288255 Rs./Cum 2223.7819

Lead Charges for 1 Km for CA

105.60

cum @ 36.924875 Rs./Cum 3899.27

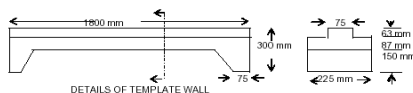
Total cost for

800.00 Sqm Rs. 549751.92

Rate per Sqm (A+B+C+D)/800.0

Rs. 687.20

IRR-CAW-7-17 Providing and fixing pre-cast RCC template walls consisting of 0.05 cum M-15 grade concrete using 20 mm down size coarse aggregates and 10 kg reinforcement steel moulded as per specifications and drawing in CM 1:4 proportion including cost of all materials, machinery, labour, formwork, fabricating and placing reinforcement steel, mixing, laying, conveying and fixing in position including necessary excavation for seating, finishing joints in CM 1:4, curing etc., complete with initial lead upto 1 km and all lifts.



DATA

RATE ANALYSIS

UNIT :

20.00 template

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|------|----------|-------------|---------------|
| 1 | Cement 43 Gr | kg | 310.00 | 3.68 | 1140.8 |
| 2 | Sand (Un-Screened) | cum | 0.50 | 605.00 | 302.5 |
| 3 | Coarse aggregate 20-10 mm | cum | 0.50 | 1313.00 | 656.5 |
| | Coarse aggregate 10-4.75 mm | cum | 0.30 | 967.00 | 290.1 |
| 4 | Reinforcement steel | kg | 200.00 | 52.50 | 10500 |
| 5 | Binding wire | kg | 3.00 | 64.00 | 192 |
| 6 | Use rate of mould | set | 20.00 | 66.38 | 1327.5256 |
| 7 | Sundries(water charges & misc.) | LS | 1.00 | 34.00 | 34 |
| Total cost of Materials | | | | Rs: | 14443.43 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Hand mixer | Hour | 8.00 | 5.00 | 40 |
| | | | 8.00 | 0.00 | 0 |
| Total hire charges of Machinery | | | | Rs: | 40.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640 |
| 2 | Mason Class I for fixing | Day | 1.00 | 585.00 | 585 |
| 3 | Mason Class II for casting | Day | 2.00 | 525.00 | 1050 |
| 4 | Bar bender | Day | 1.00 | 700.00 | 700 |
| 5 | mazdoor (casting yard) | Day | 4.00 | 490.00 | 1960 |
| | mazdoor (for fixing) | Day | 2.00 | 490.00 | 980 |
| | mazdoor for conveying | Day | 2.00 | 490.00 | 980 |
| Total cost of Labour | | | | Rs: | 6895.00 |

labour component/unit qty

344.80

Add contractor's profit and overhead charges

13.615% 46.90

labour component/unit qty (including contractor's profit)

391.70**ABSTRACT:**

A. Cost of Materials including serignorage charges

Rs: 14443.43

B. Hire charges of Machinery

Rs: 40.00

C. Cost of Labour

Rs: 6895.00

Total Rs: 21378.43

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 2910.67

Lead Charges for 1 Km for FA

0.50

cum @

38.288255 Rs./Cum

19.144128

Lead Charges for 1 Km for CA

0.80

cum @

36.924875 Rs./Cum

29.54

Lead Charges for 1Km for Steel (including Loading and Unloading Charges)

0.20

tonne @

231.888215 Rs./Tonne

46.377643

Total cost for

20.00 template

Rs: 24384.16

Rate per template

(A+B+C+D)/20.0

Rs. **1219.20**

IRR-CAW-7-18 Providing and fixing 50 mm dia perforated GI pressure relief pipes 12.50 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., **complete with all leads and lifts.**

DATA

RATE ANALYSIS

UNIT :

10 Nos.

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|---------------|
| 1 | GI pipe 50 mm dia 10 Nos | Rm | 1.25 | 277.00 | 346.25 |
| 2 | GI plate & Alluminium lid (hinged) | LS | 10.00 | 34.00 | 340 |
| Total cost of Materials | | | | Rs: | 686.25 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------|------|----------|-------------|---------------|
| 1 | Drilling 8 mm dia holes | LS | 0.50 | 34.00 | 17 |
| | | | 0.00 | | |
| Total hire charges of Machinery | | | | Rs: | 17.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|---------------|
| 1 | Pipe fitter | Day | 0.50 | 655.00 | 327.5 |
| | mazdoor | Day | 0.50 | 490.00 | 245 |
| Total cost of Labour | | | | Rs: | 572.50 |

labour component/unit qty

57.30

Add contractor's profit and overhead charges

13.615% 7.80

labour component/unit qty (including contractor's profit)

65.10**ABSTRACT:**

A. Cost of Materials

Rs: 686.25

B. Hire charges of Machinery

Rs: 17.00

C. Cost of Labour

Rs: 572.50

Total Rs: 1275.75

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 173.69

Total cost for

10.00 Nos.

Rs: 1449.44

Rate per each

(A+B+C+D)/10.0

Rs. **144.90**

IRR-CAW-7-19 Providing and fixing 50 mm dia perforated GI pressure relief pipes 22.50 cm long with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., **complete with all leads and lifts.**

DATA

RATE ANALYSIS

UNIT :

10 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|---------------|
| 1 | GI pipe 50 mm dia 10 Nos | Rm | 2.25 | 277.00 | 623.25 |
| 2 | GI plate & Alluminium lid (hinged) | LS | 10.00 | 34.00 | 340 |
| Total cost of Materials | | | | Rs: | 963.25 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------|------|--------------|-------------|---------------|
| 1 | Drilling 8 mm dia holes | LS | 5.00 0.00 | 34.00 | 170 |
| Total hire charges of Machinery | | | | Rs: | 170.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|---------------|
| 1 | Pipe fitter | Day | 0.50 | 655.00 | 327.5 |
| | mazdoor | Day | 0.50 | 490.00 | 245 |
| Total cost of Labour | | | | Rs: | 572.50 |

labour component/unit qty

57.30

Add contractor's profit and overhead charges

13.615% 7.80

labour component/unit qty (including contractor's profit)

65.10**ABSTRACT:**

A. Cost of Materials

Rs: 963.25

B. Hire charges of Machinery

Rs: 170.00

C. Cost of Labour

Rs: 572.50

Total Rs: **1705.75**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 232.24

Total cost for

10.00 Nos.

Rs: **1937.99****Rate per****No.**

(A+B+C+D)/10.0

Rs. **193.80**

IRR-CAW-7-20

Providing and **fixing 50 mm dia perforated GI pressure relief pipes 30 cm long** with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all **leads and lifts.**

DATA

RATE ANALYSIS

UNIT :

10 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|----------------|
| 1 | GI pipe 50 mm dia 10 Nos | Rm | 3.00 | 277.00 | 831.00 |
| 2 | GI plate & Alluminium lid (hinged) | LS | 10.00 | 34.00 | 340.00 |
| Total cost of Materials | | | | Rs: | 1171.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------|------|--------------|-------------|---------------|
| 1 | Drilling 8 mm dia holes | LS | 7.00 0.00 | 34.00 | 238.00 |
| Total hire charges of Machinery | | | | Rs: | 238.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|---------------|
| 1 | Pipe fitter | Day | 0.50 | 655.00 | 327.50 |
| | mazdoor | Day | 0.50 | 490.00 | 245.00 |
| Total cost of Labour | | | | Rs: | 572.50 |

labour component/unit qty

57.30

Add contractor's profit and overhead charges

13.615% 7.80

labour component/unit qty (including contractor's profit)

65.10**ABSTRACT:**

A. Cost of Materials

Rs: 1171.00

B. Hire charges of Machinery

Rs: 238.00

C. Cost of Labour

Rs: 572.50

Total Rs: **1981.50**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 269.78

Total cost for

10.00 Nos.

Rs: **2251.28****Rate per****No.**

(A+B+C+D)/10.0

Rs. **225.10**

IRR-CAW-7-21

Providing and **fixing 50 mm dia perforated GI pressure relief pipes 45 cm long** with one end closed with perforated GI plate and other end provided with alluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all **leads and lifts.**

DATA

RATE ANALYSIS

UNIT :

10 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|----------------|
| 1 | GI pipe 50 mm dia 10 Nos | Rm | 4.50 | 277.00 | 1246.50 |
| 2 | GI plate & Aluminium lid (hinged) | LS | 10.00 | 34.00 | 340.00 |
| Total cost of Materials | | | | Rs: | 1586.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------|------|---------------|-------------|---------------|
| 1 | Drilling 8 mm dia holes | LS | 10.00 0.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | Rs: | 340.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|---------------|
| 1 | Pipe fitter | Day | 0.50 | 655.00 | 327.50 |
| | mazdoor | Day | 0.50 | 490.00 | 245.00 |
| Total cost of Labour | | | | Rs: | 572.50 |

labour component/unit qty

57.30

Add contractor's profit and overhead charges

13.615% 7.80

labour component/unit qty (including contractor's profit)

65.10**ABSTRACT:**

A. Cost of Materials

Rs: 1586.50

B. Hire charges of Machinery

Rs: 340.00

C. Cost of Labour

Rs: 572.50

Total Rs: **2499.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 340.24

Total cost for

10.00 Nos.

Rs: **2839.24****Rate per****No.**

(A+B+C+D)/10.0

Rs. **283.90**

IRR-CAW-7-22

Providing and **fixing 50 mm dia perforated GI pressure relief pipes 75 cm long** with one end closed with perforated GI plate and other end provided with aluminium lid hinged to pipe including cost of all materials, labour, drilling 8 mm dia holes etc., complete with all **leads and lifts.**

DATA:

Consider 10 Nos perforated 50 mm dia GI pipes 75 cm long each.

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|----------------|
| 1 | GI pipe 50 mm dia | Rm | 7.50 | 277.00 | 2077.50 |
| 2 | GI plate & Aluminium lid (hinged) | LS | 10.00 | 34.00 | 340.00 |
| Total cost of Materials | | | | Rs: | 2417.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------|------|---------------|-------------|---------------|
| 1 | Drilling 8 mm dia holes | LS | 15.00 0.00 | 34.00 | 510.00 |
| Total hire charges of Machinery | | | | Rs: | 510.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|---------------|
| 1 | Pipe fitter | Day | 0.50 | 655.00 | 327.50 |
| 2 | mazdoor | Day | 0.50 | 490.00 | 245.00 |
| Total cost of Labour | | | | Rs: | 572.50 |

labour component/unit qty

57.30

Add contractor's profit and overhead charges

13.615% 7.80

labour component/unit qty (including contractor's profit)

65.10**ABSTRACT:**

A. Cost of Materials

Rs: 2417.50

B. Hire charges of Machinery

Rs: 510.00

C. Cost of Labour

Rs: 572.50

Total Rs: **3500.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 476.53

Total cost for

10.00 Nos.

Rs: **3976.53****Rate per****No.**

(A+B+C+D)/10.0

Rs. **397.70**

IRR-CAW-7-23

Providing and **fixing 100 mm dia perforated PVC pipes 40 cm long for Weep holes** including cost of all materials, labour, drilling 8 mm dia holes etc. complete with all **leads and lifts.**

DATA

RATE ANALYSIS

UNIT:

10 Nos.

A. MATERIALS:

| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------|------|-------|-------------|----------------|
| 1 | PVC pipe 100 mm dia 10 Nos | Rm | 10.00 | 164.00 | 1640.00 |
| Total cost of Materials | | | | Rs. | 1640.00 |

B. MACHINERY

| Sl.No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | |
| | | | 0.00 | 0.00 | |
| Total hire charges of Machinery | | | | Rs. | 0.00 |

C. LABOUR

| Sl.No | Particulars | Unit | Qty | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|------|-------------|---------------|
| 1 | Pipe fitter | Day | 0.25 | 655.00 | 163.75 |
| 2 | Mazdoor | Day | 0.25 | 490.00 | 122.50 |
| Total cost of Labour | | | | Rs. | 286.25 |

labour component/unit qty 28.60
 Add contractor's profit and overhead charges 13.615% 3.90
 labour component/unit qty (including contractor's profit) **32.50**

ABSTRACT

| | | |
|------------------------------|-----|----------------|
| A. Cost of Materials | Rs. | 1640.00 |
| B. Hire charges of Machinery | Rs. | 0.00 |
| C. Cost of Labour | Rs. | 286.25 |
| Total | Rs. | 1926.25 |

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs. 262.26
 Total cost for 10.00 Nos. Rs. **2188.51**
Rate per No. (A+B+C+D)/10.0 Rs. **218.90**

IRR-CAW-7-24 **Drilling 32 mm dia pressure relief hole below pressure relief pipe** for bed and side lining of canal laid on rock including cost of all materials, machinery, labour etc., complete with all **leads and lifts.**

DATA:

RATE ANALYSIS

UNIT :

10 Nos.

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|---------------|
| 1 | Use rate of drill rod 1.6 m long | Rm | 10.00 | 26.01 | 260.13 |
| | Reconditioning charges @ 10% | | | | 26.01 |
| 2 | Use rate of air hose 2 Nos. | Hour | 2.00 | 11.00 | 22.00 |
| Total cost of Materials | | | | Rs. | 308.15 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|----------------|
| 1 | Air compressor 8.5 cmm diesel | Hour | 1.00 | 237.70 | 237.70 |
| | Fuel / Energy charges | Hour | 1.00 | 1460.70 | 1460.70 |
| 2 | Jack hammer 2 Nos. | Hour | 2.00 | 17.30 | 34.60 |
| | Fuel / Energy charges | Hour | 2.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs. | 1733.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Air compressor | Hour | 1.00 | 274.60 | 274.60 |
| 2 | Crew for Jack hammer | Hour | 2.00 | 429.00 | 858.00 |
| Total cost of Labour | | | | Rs. | 1132.60 |

labour component/unit qty 113.30
 Add contractor's profit and overhead charges 13.615% 15.40
 labour component/unit qty (including contractor's profit) **128.70**

ABSTRACT:

| | | |
|------------------------------|-----|----------------|
| A. Cost of Materials | Rs. | 308.15 |
| B. Hire charges of Machinery | Rs. | 1733.00 |
| C. Cost of Labour | Rs. | 1132.60 |
| Total | Rs. | 3173.75 |

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs. 432.11
 Total cost for 10.00 Nos. Rs. **3605.86**
Rate per No. (A+B+C+D)/10.0 Rs. **360.60**

IRR-CAW-7-25 Providing and **forming 35 x 35 x 40 cm deep filter drain** consisting of 75 mm thick 10 mm down coarse aggregate around pressure relief pipe and 75 mm thick sand around coarse aggregate filter including cost of all materials, labour, excavation of pit etc., complete with **lead upto 50 m and all lifts.**

DATA

RATE ANALYSIS

UNIT :

10 Nos.**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------|------|----------|-------------|---------------|
| 1 | Coarse aggregate 10-4.75 mm | cum | 0.15 | 967.00 | 145.05 |
| 2 | Sand (Un-Screened) | cum | 0.35 | 605.00 | 211.75 |
| Total cost of Materials | | | | Rs: | 356.80 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------|------|----------|-------------|---------------|
| 1 | Mason Cl- II | Day | 0.10 | 525.00 | 52.50 |
| 2 | mazdoor | Day | 0.10 | 490.00 | 49.00 |
| Total cost of Labour | | | | Rs: | 101.50 |

labour component/unit qty

10.20

Add contractor's profit and overhead charges

13.615% 1.40

labour component/unit qty (including contractor's profit)

11.60**ABSTRACT:**

A. Cost of Materials

Rs: 356.80

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 101.50

Total Rs: **458.30**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 62.4

Total cost for

10.00 Nos.

Rs: **520.70****Rate per****No.**

(A+B+C+D)/10.0

Rs: **52.10**

IRR-CAW-7-26

Providing and fixing 25 to 40 mm thick Shahabad / Talikota / other similar stone slabs with pointing and finishing joints neatly in CM 1:3 proportion for canal / field channel lining including cutting slabs to required size, mixing mortar, finishing joints neatly, curing etc., complete with lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------|------|----------|-------------|-----------------|
| 1 | Shahabad Stone slabs | sqm | 105.00 | 266.00 | 27930.00 |
| 2 | Cement 43 Gr | kg | 200.00 | 3.68 | 736.00 |
| 3 | Sand (Screened) | cum | 0.40 | 700.00 | 280.00 |
| Total cost of Materials | | | | Rs: | 28946.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | 5 hp pump (diesel) | Hour | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | Hour | 2.00 | 129.80 | 259.60 |
| Total hire charges of Machinery | | | | Rs: | 277.80 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--|------|----------|-------------|----------------|
| 1 | Operator pump | Hour | 2.00 | 143.50 | 287.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Mason Class I | Day | 4.00 | 585.00 | 2340.00 |
| 4 | Mason Class II | Day | 2.00 | 525.00 | 1050.00 |
| 5 | mazdoor | Day | 8.00 | 490.00 | 3920.00 |
| 6 | Cartman with Double Bullock cart for water | Day | 1.00 | 585.00 | 585.00 |
| Total cost of Labour | | | | Rs: | 8822.00 |

labour component/unit qty

88.20

Add contractor's profit and overhead charges

13.615% 12.00

labour component/unit qty (including contractor's profit)

100.20**ABSTRACT:**

A. Cost of Materials

Rs: 28946.00

B. Hire charges of Machinery

Rs: 277.80

C. Cost of Labour

Rs: 8822.00

Total Rs: **38045.80**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 5179.94

Total cost for

100.00 sqm

Rs: **43225.74****Rate per****sqm**

(A+B+C+D)/100.0

Rs: **432.30**

IRR-CAW-7-27 **Fixing PCC slabs** of various sizes in **CM 1 : 3** proportion to the side slopes of canal including preparing bed, flush pointing joints in CM 1 : 3 propn, cost of all materials (excluding PCC slabs), labour, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|----------------|
| 1 | Cement 43 Gr | kg | 240.00 | 3.68 | 883.20 |
| 2 | Sand (Screened) | cum | 0.50 | 700.00 | 350.00 |
| Total cost of Materials | | | | Rs: | 1233.20 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | 5 hp pump (diesel) | Hour | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | Hour | 2.00 | 129.80 | 259.60 |
| Total hire charges of Machinery | | | | Rs: | 277.80 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--|------|----------|-------------|----------------|
| 1 | Operator pump | Hour | 2.00 | 143.50 | 287.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Mason Class I | Day | 4.00 | 585.00 | 2340.00 |
| 4 | mazdoor | Day | 9.00 | 490.00 | 4410.00 |
| 5 | Cartman with Double Bullock cart for water | Day | 1.00 | 585.00 | 585.00 |
| Total cost of Labour | | | | Rs: | 8262.00 |

labour component/unit qty

82.60

Add contractor's profit and overhead charges

13.615% 11.20

labour component/unit qty (including contractor's profit)

93.80**ABSTRACT:**

A. Cost of Materials

Rs: 1233.20

B. Hire charges of Machinery

Rs: 277.80

C. Cost of Labour

Rs: 8262.00

Total Rs: **9773.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1330.59

Total cost for

100.00 sqm

Rs: **11103.59****Rate per sqm**

(A+B+C+D)/100.0

Rs: **111.00**

IRR-CAW-7-28 **Fixing PCC lug slabs** of various sizes in **CM 1 : 3** proportion for supporting PCC slab lining including necessary excavation, refilling, flush pointing joints in CM 1 : 3 propn, cost of all materials (excluding PCC lug slabs), labour, finishing, curing etc., complete with initial lead **upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

100.00 Rm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------|------|----------|-------------|---------------|
| 1 | Cement 43 Gr | kg | 58.00 | 3.68 | 213.44 |
| 2 | Sand (Screened) | cum | 0.12 | 700.00 | 84.00 |
| Total cost of Materials | | | | Rs: | 297.44 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | 5 hp pump (diesel) | Hour | 1.00 | 9.10 | 9.10 |
| | Fuel / Energy charges | Hour | 1.00 | 129.80 | 129.80 |
| Total hire charges of Machinery | | | | Rs: | 138.90 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--|------|----------|-------------|----------------|
| 1 | Operator pump | Hour | 1.00 | 143.50 | 143.50 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Mason Class I | Day | 2.00 | 585.00 | 1170.00 |
| 4 | Mason Class II | Day | 1.00 | 525.00 | 525.00 |
| 5 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| 6 | Cartman with Double Bullock cart for water | Day | 1.00 | 585.00 | 585.00 |
| Total cost of Labour | | | | Rs: | 5513.50 |

labour component/unit qty

55.10

Add contractor's profit and overhead charges

13.615% 7.50

labour component/unit qty (including contractor's profit)

62.60

ABSTRACT:

| | | | | |
|---|--|------------------------|-------|--------------|
| A. Cost of Materials | | | Rs: | 297.44 |
| B. Hire charges of Machinery | | | Rs: | 138.90 |
| C. Cost of Labour | | | Rs: | 5513.50 |
| | | | Rs: | 5949.84 |
| | | | Total | |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 810.07 |
| Total cost for | | 100.00 Rm | Rs: | 6759.91 |
| Rate per Rm | | (A+B+C+D)/100.0 | Rs. | 67.60 |

IRR-CAW-7-29 **Fixing 30 cm height pre-cast drops for field channels as directed including excavation, etc., complete with all leads and lifts.**

DATA:

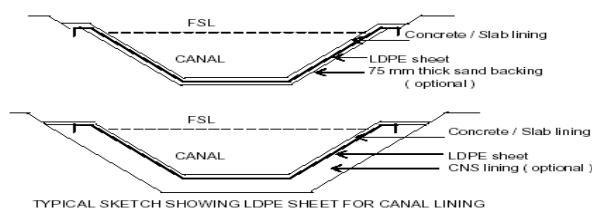
| RATE ANALYSIS | | | | UNIT : | 7 Nos. |
|---|----------------|------|---------------|-------------|----------------|
| A. MATERIALS: | | | | | |
| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Nil | | 0.00 | 0.00 | |
| | | | 0.00 | 0.00 | |
| Total cost of Materials | | | | Rs: | 0.00 |
| B. MACHINERY: | | | | | |
| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Nil | | 0.00 | 0.00 | |
| | | | 0.00 | 0.00 | |
| Total hire charges of Machinery | | | | Rs: | 0.00 |
| C. LABOUR: | | | | | |
| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Cl- II | Day | 1.00 | 525.00 | 525.00 |
| 3 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 1655.00 |
| labour component/unit qty | | | 236.40 | | |
| Add contractor's profit and overhead charges | | | 13.615% 32.20 | | |
| labour component/unit qty (including contractor's profit) | | | 268.60 | | |

ABSTRACT:

| | | | | |
|---|--|-----------------------|-------|---------------|
| A. Cost of Materials | | | Rs: | 0.00 |
| B. Hire charges of Machinery | | | Rs: | 0.00 |
| C. Cost of Labour | | | Rs: | 1655.00 |
| | | | Total | Rs: 1655.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 225.33 |
| Total cost for | | 7.00 Nos. | Rs: | 1880.33 |
| Rate per No. | | (A+B+C+D)/7.00 | Rs. | 268.60 |

IRR-CAW-7-30 Providing and **fixing LDPE sheet for bed and sides of canal** including cost of all materials, labour, laying, joining etc., complete **with all leads and lifts.**

a. **Using 500 micron thick LDPE sheet.**



DATA:

| RATE ANALYSIS | | | | UNIT : | 250.00 sqm |
|---------------------------------|---------------------------------|------|----------|-------------|-----------------|
| A. MATERIALS: | | | | | |
| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | LDPE sheet 500 micron thick | sqm | 275.00 | 94.00 | 25850.00 |
| 2 | Bitumen 85 / 25 and 80 / 100 Gr | kg | 4.00 | 44.00 | 176.00 |
| Total cost of Materials | | | | Rs: | 26026.00 |
| B. MACHINERY: | | | | | |
| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Joining & laying @ 10 % of sheet cost | sqm | 250.00 | 9.40 | 2350.00 |
| 2 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 2840.00 |

labour component/unit qty 11.40
 Add contractor's profit and overhead charges 13.615% 1.60
 labour component/unit qty (including contractor's profit) **13.00**

ABSTRACT:

| | | |
|---|-----------------|---------------------|
| A. Cost of Materials | Rs: | 26026.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2840.00 |
| | Total | Rs: 28866.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 3930.11 |
| Total cost for | 250.00 sqm | Rs: 32796.11 |
| Rate per sqm | (A+B+C+D)/250.0 | Rs. 131.20 |

Note : i) If the surface on which the LDPE sheet is to be laid is too rough and undulating provide average 75 mm thick sand backing to LDPE sheet.

For providing average 75 mm thick sand backing :

RATE ANALYSISUNIT : **250.00 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------|------|----------|-------------|----------------|
| 1 | Sand for filling | cum | 18.75 | 460.00 | 8625.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 8625.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|----------------|
| 1 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 2940.00 |

labour component/unit qty 11.80
 Add contractor's profit and overhead charges 13.615% 1.60
 labour component/unit qty (including contractor's profit) **13.40**

ABSTRACT:

| | | |
|---|-----------------|---------------------|
| A. Cost of Materials | Rs: | 8625.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2940.00 |
| | Total | Rs: 11565.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 1574.57 |
| Total cost for | 250.00 sqm | Rs: 13139.57 |
| Rate per sqm | (A+B+C+D)/250.0 | Rs. 52.60 |

IRR-CAW-7-31 Providing and **fixing LDPE sheet for bed and sides of canal** including cost of all materials, labour, laying, joining etc., complete **with all leads and lifts.**

b. **Using 750 micron thick LDPE sheet.**

DATA:

RATE ANALYSISUNIT : **250.00 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------|------|----------|-------------|-----------------|
| 1 | LDPE sheet 750 micron thick | | 275.00 | 134.00 | 36850.00 |
| 2 | Bitumen 85 / 25 and 80 / 100 Gr | | 4.00 | 44.00 | 176.00 |
| Total cost of Materials | | | | Rs: | 37026.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Joining & laying @ 10 % of sheet cost | sqm | 250.00 | 13.40 | 3350.00 |
| 2 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 3840.00 |

labour component/unit qty 15.40
 Add contractor's profit and overhead charges 13.615% 2.10
 labour component/unit qty (including contractor's profit) **17.50**

ABSTRACT:

| | | | | |
|---|------------------------|---------|-------|---------------|
| A. Cost of Materials | | | Rs: | 37026.00 |
| B. Hire charges of Machinery | | | Rs: | 0.00 |
| C. Cost of Labour | | | Rs: | 3840.00 |
| | | | Total | Rs: 40866.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 5563.91 |
| Total cost for | 250.00 sqm | | Rs: | 46429.91 |
| Rate per sqm | (A+B+C+D)/250.0 | | Rs: | 185.70 |

Note : i) If the surface on which the LDPE sheet is to be laid is too rough and undulating provide average 75 mm thick unscreened sand backing to LDPE sheet.
For providing average 75 mm thick sand backing add per sqm Rs: 52.60

IRR-CAW-7-32 Providing and **fixing LDPE sheet for bed and sides of canal** including cost of all materials, labour, laying, joining etc., complete **with all leads and lifts.**
Using 1000 micron thick LDPE sheet.

DATA:

RATE ANALYSISUNIT : **250.00 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------|------|----------|-------------|-----------------|
| 1 | LDPE sheet 1000 micron thick | | 275.00 | 187.00 | 51425.00 |
| 2 | Bitumen 85 / 25 and 80 / 100 Gr | | 4.00 | 44.00 | 176.00 |
| Total cost of Materials | | | | Rs: | 51601.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Joining & laying @ 10 % of sheet cost | sqm | 250.00 | 18.70 | 4675.00 |
| 2 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 5165.00 |

labour component/unit qty 20.70
Add contractor's profit and overhead charges 13.615% 2.80
labour component/unit qty (including contractor's profit) **23.50**

ABSTRACT:

| | | | | |
|---|------------------------|---------|-------|---------------|
| A. Cost of Materials | | | Rs: | 51601.00 |
| B. Hire charges of Machinery | | | Rs: | 0.00 |
| C. Cost of Labour | | | Rs: | 5165.00 |
| | | | Total | Rs: 56766.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 7728.69 |
| Total cost for | 250.00 sqm | | Rs: | 64494.69 |
| Rate per sqm | (A+B+C+D)/250.0 | | Rs: | 258.00 |

Note : i) If the surface on which the LDPE sheet is to be laid is too rough and undulating provide average 75 mm thick unscreened sand backing to LDPE sheet.
For providing average 75 mm thick sand backing add per sqm Rs: 52.60

IRR-CAW-7-33 Providing and **fixing 12 mm thick 380 mm depth tarfelt expansion joint filler boards for stone masonry lining of canal** including cost of all materials, labour etc., complete with all **leads and lifts.**

DATA:

RATE ANALYSISUNIT : **100.00 Rm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|-----------------|
| 1 | Tarfelt joint filler board 12 mm thick | sqm | 38.75 | 385.00 | 14918.75 |
| | | | 0.00 | 0.00 | |
| Total cost of Materials | | | | Rs: | 14918.75 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | |
| | | | 0.00 | 0.00 | |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------|------|----------|-------------|----------------|
| 1 | Carpenter CI- II | Day | 1.00 | 525.00 | 525.00 |
| 2 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 1015.00 |

labour component/unit qty

10.20

Add contractor's profit and overhead charges

13.615% 1.40

labour component/unit qty (including contractor's profit)

11.60**ABSTRACT:**

A. Cost of Materials

Rs: 14918.75

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 1015.00

Total Rs: **15933.75**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 2169.38

Total cost for

100.00 Rm

Rs: **18103.13****Rate per****Rm**

(A+B+C+D)/100.00

Rs. **181.00**

IRR-CAW-7-34 Providing and fixing 20 mm thick 100 mm depth tarfelt expansion joint filler boards for cement concrete lining of canal including cost of all materials, labour etc., complete with all leads and lifts.

DATA

RATE ANALYSIS

UNIT :

100.00 Rm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|----------------|
| 1 | Tarfelt joint filler board 20 mm thick | sqm | 10.00 | 593.00 | 5930.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 5930.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------|------|----------|-------------|----------------|
| 1 | Carpenter CI- II | Day | 1.00 | 525.00 | 525.00 |
| 2 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 1015.00 |

labour component/unit qty

10.20

Add contractor's profit and overhead charges

13.615% 1.40

labour component/unit qty (including contractor's profit)

11.60**ABSTRACT:**

A. Cost of Materials

Rs: 5930.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 1015.00

Total Rs: **6945.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 945.56

Total cost for

100.00 Rm

Rs: **7890.56****Rate per****Rm**

(A+B+C+D)/100.00

Rs. **78.90**

IRR-CAW-7-35 Providing and fixing 20 mm thick 150 mm depth tarfelt expansion joint filler boards for cement concrete lining of canal including cost of all materials, labour etc., complete with all leads and lifts.

DATA:

RATE ANALYSIS

UNIT :

100.00 Rm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|----------------|
| 1 | Tarfelt joint filler board 20 mm thick | sqm | 15.30 | 593.00 | 9072.90 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 9072.90 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------|------|----------|-------------|----------------|
| 1 | Carpenter CI- II | Day | 1.00 | 525.00 | 525.00 |
| 2 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 1015.00 |

labour component/unit qty

Add contractor's profit and overhead charges

13.615% 1.40

labour component/unit qty (including contractor's profit)

11.60**ABSTRACT:**

A. Cost of Materials

Rs: 9072.90

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 1015.00

Total Rs: **10087.90**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1373.47

Total cost for

100.00 Rm

Rs: **11461.37****Rate per Rm**

(A+B+C+D)/100.00

Rs. **114.60**

IRR-CAW-7-36 Providing and **forming 35 mm wide and 10 mm thick construction / contraction joints for concrete lining by mastic filler** including cost of all materials, labour etc., complete with **all leads and lifts.**

DATA:

RATE ANALYSIS

UNIT :

100.00 Rm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------|------|----------|-------------|----------------|
| 1 | Asphalt 80/100 Gr | kg | 35.00 | 44.00 | 1540.00 |
| | Sand (Screened) | cum | 0.04 | 700.00 | 28.00 |
| Total cost of Materials | | | | Rs: | 1568.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------|------|----------|-------------|---------------|
| 1 | Mason CI- II | Day | 0.50 | 525.00 | 262.50 |
| 2 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 752.50 |

labour component/unit qty

7.50

Add contractor's profit and overhead charges

13.615% 1.00

labour component/unit qty (including contractor's profit)

8.50**ABSTRACT:**

A. Cost of Materials

Rs: 1568.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 752.50

Total Rs: **2320.50**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 315.94

Total cost for

100.00 Rm

Rs: **2636.44****Rate per Rm**

(A+B+C+D)/100.00

Rs. **26.40**

IRR-CAW-7-37 **Manufacturing 550 x 550 x 55 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N /sqmm) cement concrete using 20 mm down graded coarse aggregate** including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content : 300 kg / cum with super plastizer (0.4% by wt. of cement),
CA : 0.80 cum, Blending Ratio of CA : 65:35, FA : 0.45cum
equivalent concrete volume: 3.74 cum)

DATA:

RATE ANALYSIS

UNIT :

225 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 1122.00 | 3.68 | 4128.96 |
| | | | | | 828.00 |
| | Cement for incidentals @ 1 kg / slab | kg | 225.00 | 3.68 | |
| 2 | Coarse aggregate 20-10 mm | cum | 1.94 | 1313.00 | 2553.52 |
| | Coarse aggregate 10 mm below | cum | 1.05 | 967.00 | 1012.64 |
| 3 | Fine aggregate (Un-Screened) | cum | 1.68 | 605.00 | 1018.22 |
| 4 | Super Plasticizer | kg | 4.49 | 55.00 | 246.84 |
| 5 | Use rate of moulds for 500 uses | No. | 225.00 | 6.28 | 1412.17 |
| Total cost of Materials | | | | Rs: | 11200.35 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|--------------------------------------|------|----------|-------------|--------------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.10 | 9.10 | 0.91 |
| | Fuel / Energy charges | Hour | 0.10 | 129.80 | 12.98 |
| 3 | Water tanker 8000 ltr | Hour | 0.20 | 380.50 | 76.10 |
| | Fuel / Energy charges | Hour | 0.20 | 490.80 | 98.16 |
| Total hire charges of Machinery | | | | Rs: | 1604.95 |
| Aportioned hire charges of machinery for lining slab | | | | 90% | Rs: 1444.46 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|------------------------------------|------|----------|--------------|--------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.10 | 143.50 | 14.35 |
| 3 | Crew for Water tanker | Hour | 0.20 | 225.20 | 45.04 |
| 4 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| | for batching materials / laying CC | Day | 2.00 | 490.00 | 980.00 |
| | for demoulding / oiling / laying | Day | 1.00 | 490.00 | 490.00 |
| | for shifting slabs to curing pond | Day | 1.00 | 490.00 | 490.00 |
| | for stacking after curing | Day | 1.00 | 490.00 | 490.00 |
| | for cleaning & miscellaneous | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 8077.39 |
| Aportioned cost of labour for lining slabs | | | | 90% | Rs: 7269.65 |
| labour component/unit qty | | | 32.30 | | |
| Add contractor's profit and overhead charges | | | 13.615% | 4.40 | |
| labour component/unit qty (including contractor's profit) | | | | 36.70 | |

ABSTRACT:

| | | |
|---|------------------------|---------------------|
| A. Cost of Materials | Rs: | 11200.35 |
| B. Hire charges of Machinery | Rs: | 1444.46 |
| C. Cost of Labour | Rs: | 7269.65 |
| | Total | Rs: 19914.46 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 2711.35 |
| Total cost for | 225.00 Nos. | Rs: 22625.81 |
| Rate per each | (A+B+C+D)/225.0 | Rs. 100.60 |

IRR-CAW-7-38 **Manufacturing 550 x 300 x 55 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 20 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts.**
(Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement),
CA : 0.80 cum, Blending Ratio of CA : 65:35, FA : 0.45cum,
equivalent concrete volume: 0.23 cum)

DATA: **RATE ANALYSIS** UNIT : **25 Nos.**

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|---------------|
| 1 | Cement for mix | kg | 69.00 | 3.68 | 253.92 |
| | Cement for incidentals @ 0.5 kg/slab | kg | 12.50 | 3.68 | 46.00 |
| 2 | Coarse aggregate 20-10 mm | cum | 0.12 | 1313.00 | 157.03 |
| | Coarse aggregate 10 mm below | cum | 0.06 | 967.00 | 62.27 |
| 3 | Fine aggregate (Un-Screened) | cum | 0.10 | 605.00 | 62.62 |
| 4 | Super Plasticizer | kg | 0.28 | 55.00 | 15.18 |
| 5 | Use rate of moulds for 500 uses | No. | 25.00 | 3.92 | 97.93 |
| Total cost of Materials | | | | Rs: | 694.96 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|--------------------------------------|------|----------|-------------|-------------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.10 | 9.10 | 0.91 |
| | Fuel / Energy charges | Hour | 0.10 | 129.80 | 12.98 |
| 3 | Water tanker 8000 ltr | Hour | 0.20 | 380.50 | 76.10 |
| | Fuel / Energy charges | Hour | 0.20 | 490.80 | 98.16 |
| Total hire charges of Machinery | | | | Rs: | 1604.95 |
| Aportioned hire charges of machinery for lug slabs | | | | 10% | Rs: 160.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|------------------------------------|------|----------|-------------|-------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.10 | 143.50 | 14.35 |
| 3 | Crew for Water tanker | Hour | 0.20 | 225.20 | 45.04 |
| 4 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials / laying CC | Day | 3.00 | 490.00 | 1470.00 |
| | for demoulding / oiling / laying | Day | 2.00 | 490.00 | 980.00 |
| | for shifting slabs to curing pond | Day | 1.00 | 490.00 | 490.00 |
| | for stacking after curing | Day | 1.00 | 490.00 | 490.00 |
| | for cleaning & miscellaneous | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 8077.39 |
| Aportioned cost of labour for lug slabs | | | | 10% | Rs: 807.74 |

labour component/unit qty

32.30

Add contractor's profit and overhead charges

13.615% 4.40

labour component/unit qty (including contractor's profit)

36.70**ABSTRACT:**

| | | |
|---|----------------|--------------------|
| A. Cost of Materials | Rs: | 694.96 |
| B. Hire charges of Machinery | Rs: | 160.50 |
| C. Cost of Labour | Rs: | 807.74 |
| Total | Rs: | 1663.19 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 226.44 |
| Total cost for | 25.00 Nos. | Rs: 1889.63 |
| Rate per each | (A+B+C+D)/25.0 | Rs: 75.60 |

IRR-CAW-7-39 **Manufacturing 450 x 300 x 30 mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts.**
(Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement),
CA : 0.68 cum, FA : 0.43cum)

DATA:

RATE ANALYSIS

UNIT :

225 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|----------------|
| 1 | Cement for mix | kg | 270.00 | 3.68 | 993.60 |
| | Cement for incidentals @ 0.5 kg/slab | kg | 112.50 | 3.68 | 414.00 |
| 2 | Coarse aggregate 10 mm below | cum | 0.61 | 967.00 | 591.80 |
| 3 | Fine aggregate (Un-Screened) | cum | 0.39 | 605.00 | 234.14 |
| 4 | Super Plasticizer | kg | 1.08 | 55.00 | 59.40 |
| 5 | Use rate of moulds for 250 uses | No. | 225.00 | 2.61 | 586.38 |
| Total cost of Materials | | | | Rs: | 2879.32 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|------------------------|------|----------|-------------|-------------------|
| 1 | Hand mixer 45 / 30 ltr | Hour | 8.00 | 5.00 | 40.00 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 2 | 5 hp pump (diesel) | Hour | 0.10 | 9.10 | 0.91 |
| | Fuel / Energy charges | Hour | 0.10 | 129.80 | 12.98 |
| 3 | Water tanker 8000 ltr | Hour | 0.20 | 380.50 | 76.10 |
| | Fuel / Energy charges | Hour | 0.20 | 490.80 | 98.16 |
| Total hire charges of Machinery | | | | Rs: | 228.15 |
| Aportioned hire charges of machinery for lining slab | | | | 90% | Rs: 205.34 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|------------------------------------|------|----------|-------------|--------------------|
| 1 | Crew for Pump | Hour | 0.10 | 143.50 | 14.35 |
| 2 | Crew for Water tanker | Hour | 0.20 | 225.20 | 45.04 |
| 3 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | mazdoor | | | | |
| | for batching / mixing / laying | Day | 2.00 | 490.00 | 980.00 |
| | for demoulding / cleaning / oiling | Day | 2.00 | 490.00 | 980.00 |
| | for shifting slabs to curing pond | Day | 1.00 | 490.00 | 490.00 |
| | for stacking after curing | Day | 1.00 | 490.00 | 490.00 |
| | for cleaning & miscellaneous | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 5299.39 |
| Aportioned cost of labour for lining slabs | | | | 90% | Rs: 4769.45 |

labour component/unit qty

21.20

Add contractor's profit and overhead charges

13.615% 2.90

labour component/unit qty (including contractor's profit)

24.10

ABSTRACT:

| | | | | |
|---|--|------------------------|-----|----------------|
| A. Cost of Materials | | | Rs: | 2879.32 |
| B. Hire charges of Machinery | | | Rs: | 205.34 |
| C. Cost of Labour | | | Rs: | 4769.45 |
| | | Total | Rs: | 7854.10 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 1069.34 |
| Total cost for | | 225.00 Nos. | Rs: | 8923.44 |
| Rate per each | | (A+B+C+D)/225.0 | Rs. | 39.70 |

IRR-CAW-7-40 **Manufacturing 450 x 150 x 30 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N / sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.68 cum, FA : 0.43cum)**

DATA:

RATE ANALYSIS

UNIT :

25 Nos.**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|---------------|
| 1 | Cement for mix | kg | 15.00 | 3.68 | 55.20 |
| | Cement for incidentals @ 0.3 kg/slab | kg | 7.50 | 3.68 | 27.60 |
| 2 | Coarse aggregate 10 mm below | cum | 0.03 | 967.00 | 32.88 |
| 3 | Fine aggregate (Un-Screened) | cum | 0.02 | 605.00 | 13.01 |
| 4 | Super Plasticizer | kg | 0.06 | 55.00 | 3.30 |
| 5 | Use rate of moulds for 250 uses | No. | 25.00 | 1.44 | 35.96 |
| Total cost of Materials | | | | Rs: | 167.95 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|------------------------|------|----------|-------------|------------------|
| 1 | Hand mixer 45 / 30 ltr | Hour | 8.00 | 5.00 | 40.00 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 2 | 5 hp pump (diesel) | Hour | 0.10 | 9.10 | 0.91 |
| | Fuel / Energy charges | Hour | 0.10 | 129.80 | 12.98 |
| 3 | Water tanker 8000 ltr | Hour | 0.20 | 380.50 | 76.10 |
| | Fuel / Energy charges | Hour | 0.20 | 490.80 | 98.16 |
| Total hire charges of Machinery | | | | Rs: | 228.15 |
| Aportioned hire charges of machinery for lug slabs | | | | 10% | Rs: 22.82 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|------------------------------------|------|----------|-------------|-------------------|
| 1 | Crew for Pump | Hour | 0.10 | 143.50 | 14.35 |
| 2 | Crew for Water tanker | Hour | 0.20 | 225.20 | 45.04 |
| 3 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| | for batching / mixing / laying | Day | 2.00 | 490.00 | 980.00 |
| | for demoulding / cleaning / oiling | Day | 1.00 | 490.00 | 490.00 |
| | for shifting slabs to curing pond | Day | 1.00 | 490.00 | 490.00 |
| | for stacking after curing | Day | 1.00 | 490.00 | 490.00 |
| | for cleaning & miscellaneous | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 5299.39 |
| Aportioned cost of labour for lug slabs | | | | 10% | Rs: 529.94 |

labour component/unit qty 21.20
Add contractor's profit and overhead charges 13.615% 2.90
labour component/unit qty (including contractor's profit) **24.10**

ABSTRACT:

| | | | | |
|---|--|-----------------------|-----|---------------|
| A. Cost of Materials | | | Rs: | 167.95 |
| B. Hire charges of Machinery | | | Rs: | 22.82 |
| C. Cost of Labour | | | Rs: | 529.94 |
| | | Total | Rs: | 720.70 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 98.12 |
| Total cost for | | 25.00 Nos. | Rs: | 818.82 |
| Rate per each | | (A+B+C+D)/25.0 | Rs. | 32.80 |

IRR-CAW-7-41 **Manufacturing 600 x 300 x 100mm size PCC lining slabs in M-15 grade (28 days cube compressive strength not less than 15 N/Sqmm) cement concrete using 20mm down grades coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts. (Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement), CA : 0.80 cum, FA : 0.45cum, Blending Ratio of CA-65:35)**

DATA:

RATE ANALYSISUNIT: **225**

Nos.

A. MATERIALS :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | Kg | 1215 | 3.68 | 4471.20 |
| 2 | Cement for incidentals @ 0.5kg/slab | Kg | 112.5 | 3.68 | 414.00 |
| 3 | Coarse aggregate 20 mm below | Cum | 2.11 | 1313.00 | 2765.18 |
| 4 | Coarse aggregate 10 mm below | Cum | 1.13 | 967.00 | 1096.58 |
| 5 | Fine aggregate (Un-Screened) | Cum | 1.82 | 605.00 | 1102.61 |
| 6 | Super Plasticizer | kg | 4.86 | 55.00 | 267.30 |
| 7 | Use rate of moulds for 250 uses | No. | 225 | 1.23 | 276.75 |
| Total Cost of Materials Rs. | | | | | 10393.62 |

B. MACHINERY :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|-----------------------|------|----------|-------------|----------------|
| 1 | Diesel mixer 300/200 | Hour | 8 | 47.30 | 378.40 |
| | Fuel/Energy charges | Hour | 8 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.1 | 9.10 | 0.91 |
| | Fuel/Energy charges | Hour | 0.1 | 129.80 | 12.98 |
| 3 | Water tanker 8000 ltr | Hour | 0.2 | 380.50 | 76.10 |
| | Fuel/Energy charges | Hour | 0.2 | 490.80 | 98.16 |
| Total hire charges of Machinery Rs. | | | | | 1604.95 |
| Aporioned hire charges of machinery @ 90% for lining slab Rs. | | | | | 1444.46 |

C. LABOUR :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|-----------------------------------|------|----------|-------------|----------------|
| 1 | Crew for Pump | Hour | 0.1 | 143.50 | 14.35 |
| 2 | Crew for water tanker | Hour | 0.2 | 225.20 | 45.04 |
| 3 | Mason Class-I | Day | 2 | 585.00 | 1170.00 |
| 4 | Class II Mason | Day | 1 | 525.00 | 525.00 |
| 5 | Mazdoor | Day | 2 | 490.00 | 980.00 |
| | For batching materials/laying | Day | 2 | 490.00 | 980.00 |
| | For demoulding/cleaning/oiling | Day | 1 | 490.00 | 490.00 |
| | For shifting slabs to curing pond | Day | 1 | 490.00 | 490.00 |
| | For stacking after curing | Day | 1 | 490.00 | 490.00 |
| | For cleaning & miscellaneous | Day | 1 | 490.00 | 490.00 |
| Total Cost of Labour Rs. | | | | | 5184.39 |
| Aporioned cost of labour for lining slabs Rs. | | | | | 4665.95 |

labour component/unit qty 20.70
 Add contractor's profit and overhead charges 13.615% 2.80
 labour component/unit qty (including contractor's profit) **23.50**

ABSTRACT :

| | | |
|---|-------------|---------------------|
| A. Cost of Materials | Rs. | 10393.619 |
| B. Hire Charges of machinery | Rs. | 1444.46 |
| C. Cost of Labour | Rs. | 4665.95 |
| Total | Rs. | 16504.02 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. 2247.02 |
| Total cost for | 225.00 Nos. | Rs. 18751.04 |
| Rate per each (A+B+C+D)/225.0 | | Rs. 83.30 |

IRR-CAW-7-42 **Manufacturing 400 x 400 x 30 mm size PCC lining slabs in M-15 grade** (28 days cube compressive strength not less than 15 N / sqmm)cement concrete using **10 mm down graded** coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement),
CA : 0.68 cum, FA : 0.43cum)

DATA:

RATE ANALYSIS

UNIT :

225 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|----------------|
| 1 | Cement for mix | kg | 324.00 | 3.68 | 1192.32 |
| | Cement for incidentals @ 0.5 kg/slab | kg | 112.50 | 3.68 | 414.00 |
| 2 | Coarse aggregate 10 mm below | cum | 0.73 | 967.00 | 710.16 |
| 3 | Fine aggregate (Un-Screened) | cum | 0.46 | 605.00 | 280.96 |
| 4 | Super Plasticizer | kg | 1.30 | 55.00 | 71.28 |
| 5 | Use rate of moulds for 250 uses | No. | 225.00 | 2.64 | 593.55 |
| Total cost of Materials | | | | Rs: | 3262.28 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|------------------------|------|----------|-------------|-------------------|
| 1 | Hand mixer 45 / 30 ltr | Hour | 8.00 | 5.00 | 40.00 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 2 | 5 hp pump (diesel) | Hour | 0.10 | 9.10 | 0.91 |
| | Fuel / Energy charges | Hour | 0.10 | 129.80 | 12.98 |
| 3 | Water tanker 8000 ltr | Hour | 0.20 | 380.50 | 76.10 |
| | Fuel / Energy charges | Hour | 0.20 | 490.80 | 98.16 |
| Total hire charges of Machinery | | | | Rs: | 228.15 |
| Aportioned hire charges of machinery for lining slab | | | | 90% | Rs: 205.34 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|------------------------------------|------|----------|-------------|--------------------|
| 1 | Crew for Pump | Hour | 0.10 | 143.50 | 14.35 |
| 2 | Crew for Water tanker | Hour | 0.20 | 225.20 | 45.04 |
| 3 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | mazdoor | | | | |
| | for batching / mixing / laying | Day | 2.00 | 490.00 | 980.00 |
| | for demoulding / cleaning / oiling | Day | 2.00 | 490.00 | 980.00 |
| | for shifting slabs to curing pond | Day | 1.00 | 490.00 | 490.00 |
| | for stacking after curing | Day | 1.00 | 490.00 | 490.00 |
| | for cleaning & miscellaneous | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 5299.39 |
| Aportioned cost of labour for lining slabs | | | | 90% | Rs: 4769.45 |

labour component/unit qty

21.20

Add contractor's profit and overhead charges

13.615% 2.90

labour component/unit qty (including contractor's profit)

24.10**ABSTRACT:**

A. Cost of Materials

Rs: 3262.28

B. Hire charges of Machinery

Rs: 205.34

C. Cost of Labour

Rs: 4769.45

Total

Rs: **8237.06**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1121.48

Total cost for

225.00 Nos.

Rs: **9358.54****Rate per each**

(A+B+C+D)/225.0

Rs. **41.60**

IRR-CAW-7-43

Manufacturing 400 x 150 x 30 mm size PCC lug slabs in M-15 grade (28 days cube compressive strength not less than 15 N /sqmm) cement concrete using 10 mm down graded coarse aggregate including cost of all materials, machinery, labour, batching, mixing, laying, compacting, formwork, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content : 300 kg / cum with super plastcizer (0.4% by wt. of cement),
CA : 0.68 cum, FA : 0.43cum)

DATA:

RATE ANALYSIS

UNIT :

25 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|---------------|
| 1 | Cement for mix | kg | 13.50 | 3.68 | 49.68 |
| | Cement for incidentals @ 0.3 kg/slab | kg | 7.50 | 3.68 | 27.60 |
| 2 | Coarse aggregate 10 mm below | cum | 0.03 | 967.00 | 29.59 |
| 3 | Fine aggregate (Un-Screened) | cum | 0.02 | 605.00 | 11.71 |
| 4 | Super Plasticizer | kg | 0.05 | 55.00 | 2.97 |
| 5 | Use rate of moulds for 250 uses | No. | 25.00 | 1.40 | 34.97 |
| Total cost of Materials | | | | Rs: | 156.51 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|------------------------|------|----------|-------------|------------------|
| 1 | Hand mixer 45 / 30 ltr | Hour | 8.00 | 5.00 | 40.00 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 2 | 5 hp pump (diesel) | Hour | 0.10 | 9.10 | 0.91 |
| | Fuel / Energy charges | Hour | 0.10 | 129.80 | 12.98 |
| 3 | Water tanker 8000 ltr | Hour | 0.20 | 380.50 | 76.10 |
| | Fuel / Energy charges | Hour | 0.20 | 490.80 | 98.16 |
| Total hire charges of Machinery | | | | Rs: | 228.15 |
| Aportioned hire charges of machinery for lug slabs | | | | 10% | Rs: 22.82 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|------------------------------------|------|----------|-------------|-------------------|
| 1 | Crew for Pump | Hour | 0.10 | 143.50 | 14.35 |
| 2 | Crew for Water tanker | Hour | 0.20 | 225.20 | 45.04 |
| 3 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | mazdoor | | | | |
| | for batching / mixing / laying | Day | 2.00 | 490.00 | 980.00 |
| | for demoulding / cleaning / oiling | Day | 2.00 | 490.00 | 980.00 |
| | for shifting slabs to curing pond | Day | 1.00 | 490.00 | 490.00 |
| | for stacking after curing | Day | 1.00 | 490.00 | 490.00 |
| | for cleaning & miscellaneous | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 5299.39 |
| Aportioned cost of labour for lug slabs | | | | 10% | Rs: 529.94 |

labour component/unit qty 21.20
 Add contractor's profit and overhead charges 13.615% 2.90
 labour component/unit qty (including contractor's profit) **24.10**

ABSTRACT:

| | | |
|---|------------|-------------------|
| A. Cost of Materials | Rs: | 156.51 |
| B. Hire charges of Machinery | Rs: | 22.82 |
| C. Cost of Labour | Rs: | 529.94 |
| Total | Rs: | 709.27 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 96.57 |
| Total cost for | 25.00 Nos. | Rs: 805.84 |
| Rate per each (A+B+C+D)/25.0 | | Rs: 32.20 |

IRR-CAW-7-44 Providing and **laying uncoursed rubble stone masonry in CM 1 : 5 proportion for canal side** lining using stones and chips from **approved quarry** including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Thickness of the masonry assumed: 0.3 m, rubble stones : 0.96 cum, Stone Chips : 0.15cum, Through Stones 20 x 20 x 30cm : 1/sqm)

DATA:

RATE ANALYSIS

UNIT :

10.00 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Cement 43 Gr | kg | 1152.00 | 3.68 | 4239.36 |
| 2 | Sand (Screened) | cum | 4.00 | 700.00 | 2800.00 |
| | | | | | 3446.40 |
| 3 | Uncoursed rubble stones at quarry | cum | 9.60 | 359.00 | |
| 4 | Through stones 20x20x30 cm | Nos | 32.00 | 24.00 | 768.00 |
| 5 | Stone chips at quarry | cum | 1.50 | 385.00 | 577.50 |
| Total cost of Materials | | | | Rs: | 11831.26 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | 5 hp pump (diesel) | Hour | 4.00 | 9.10 | 36.40 |
| | Fuel / Energy charges | Hour | 4.00 | 129.80 | 519.20 |
| Total hire charges of Machinery | | | | Rs: | 555.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--|------|----------|-------------|----------------|
| 1 | Operator pump | Hour | 4.00 | 143.50 | 574.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Mason Class I | Day | 2.00 | 585.00 | 1170.00 |
| 4 | Mason Class II | Day | 2.00 | 525.00 | 1050.00 |
| 5 | mazdoor | Day | 8.00 | 490.00 | 3920.00 |
| 6 | Cartman with Double Bullock cart for water | Day | 1.00 | 585.00 | 585.00 |
| Total cost of Labour | | | | Rs: | 7939.00 |

labour component/unit qty 793.90
 Add contractor's profit and overhead charges 13.615% 108.10
 labour component/unit qty (including contractor's profit) **902.00**

ABSTRACT:

| | | | | |
|---|----------------|-------|-----|-----------------|
| A. Cost of Materials | | | Rs: | 11831.26 |
| B. Hire charges of Machinery | | | Rs: | 555.60 |
| C. Cost of Labour | | | Rs: | 7939.00 |
| | | Total | Rs: | 20325.86 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | | Rs: | 2767.37 |
| Total cost for | 10.00 cum | | Rs: | 23093.23 |
| Rate per cum | (A+B+C+D)/10.0 | | Rs: | 2309.30 |

IRR-CAW-7-45 Providing and **laying uncoursed rubble stone masonry in CM 1:5 proportion for canal side lining using stones** from approved quarry including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete with initial lead upto 50m and all lifts.(without pin headers) : 1.1 cum)
(Thickness of the Masonry assumed: 0.3 m , rubble stones

DATA: **RATE ANALYSIS** UNIT: **10** Cum

A. MATERIALS :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Cement 43 Gr | Kg | 979.2 | 3.68 | 3603.46 |
| 2 | Sand (Screened) | Cum | 3.4 | 700.00 | 2380.00 |
| 3 | Uncoursed rubble stones at quarry | Cum | 11 | | 3949.00 |
| | | | | 359.00 | |
| Total Cost of Materials Rs. | | | | | 9932.456 |

B. MACHINERY :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Hand Mixing Charges | Hour | 8 | 5.00 | 40.00 |
| 2 | 5 hp pump (diesel) | Hour | 4 | 9.10 | 36.40 |
| | Fuel / Energy charges | Hour | 5 | 129.80 | 649.00 |
| Total hire charges of Machinery Rs. | | | | | 725.40 |

C. LABOUR :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------------------|--|------|----------|-------------|-----------------|
| 1 | Operator pump | Hour | 4 | 143.50 | 574.00 |
| 2 | Mason Class I | Day | 13 | 585.00 | 7605.00 |
| 3 | Mason Class II | Day | 6 | 525.00 | 3150.00 |
| 4 | Mazdoor | Day | 29 | 490.00 | 14210.00 |
| 5 | Cartman with Double Bullock cart for water | Day | 1 | 585.00 | 585.00 |
| Total Cost of Labour Rs. | | | | | 26124.00 |

labour component/unit qty 2612.40
Add contractor's profit and overhead charges 13.615% 355.70
labour component/unit qty (including contractor's profit) **2968.10**

ABSTRACT :

| | | | | |
|---|----------------|-------|-----|-----------------|
| A. Cost of Materials | | | Rs. | 9932.456 |
| B. Hire Charges of Machinery | | | Rs. | 725.4 |
| C. Cost of Labour | | | Rs. | 26124.00 |
| | | Total | Rs: | 36781.86 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | | Rs: | 5007.85 |
| Total cost for | 10.00 Cum | | Rs: | 41789.71 |
| Rate per Cum | (A+B+C+D)/10.0 | | Rs: | 4179.00 |

IRR-CAW-7-46 Providing and **laying uncoursed rubble stone masonry in CM 1 : 5 proportion for canal side lining using stones** and chips from canal excavation including cost of all materials, machinery, labour, forming weep holes at specified interval, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(rubble stones : 0.96 cum, Stone Chips : 0.15cum, Through Stones 20 x 20 x 30cm : 1/sqm)

Note: Stones and chips will be issued from dump yard at specified issue rate.

DATA: **RATE ANALYSIS** UNIT : **10.00 cum**

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------|------|----------|-------------|--------------------|
| 1 | Cement 43 Gr | kg | 1144.00 | 3.68 | 4209.92 |
| 2 | Sand (Screened) | cum | 4.00 | 700.00 | 2800.00 |
| 3 | Uncoursed rubble at dump yard | cum | 9.60 | 181.00 | 1737.60 |
| 4 | Through stones 20x20x30 cm | Nos | 32.00 | 24.00 | 768.00 |
| 5 | Stone chips at dump yard | cum | 1.50 | 209.00 | 313.50 |
| Total cost of Materials | | | | | Rs: 9829.02 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | 5 hp pump (diesel) | Hour | 4.00 | 9.10 | 36.40 |
| | Fuel / Energy charges | Hour | 4.00 | 129.80 | 519.20 |
| Total hire charges of Machinery | | | | Rs: | 555.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--|------|----------|-------------|----------------|
| 1 | Operator pump | Hour | 4.00 | 143.50 | 574.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Mason Class I | Day | 2.00 | 585.00 | 1170.00 |
| 4 | Mason Class II | Day | 2.00 | 525.00 | 1050.00 |
| 5 | Crowbarman | Day | 1.00 | 525.00 | 525.00 |
| 6 | mazdoor | Day | 9.00 | 490.00 | 4410.00 |
| 7 | Cartman with Double Bullock cart for water | Day | 1.00 | 585.00 | 585.00 |
| Total cost of Labour | | | | Rs: | 8954.00 |

labour component/unit qty 895.40
 Add contractor's profit and overhead charges 13.615% 121.90
 labour component/unit qty (including contractor's profit) **1017.30**

ABSTRACT:

| | | |
|---|----------------|---------------------|
| A. Cost of Materials | Rs: | 9829.02 |
| B. Hire charges of Machinery | Rs: | 555.60 |
| C. Cost of Labour | Rs: | 8954.00 |
| Total | Rs: | 19338.62 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 2632.95 |
| Total cost for | 10.00 cum | Rs: 21971.57 |
| Rate per cum | (A+B+C+D)/10.0 | Rs. 2197.20 |

IRR-CAW-7-47 Providing and **laying uncoursed rubble stone masonry in CM 1:5 proportion for canal side lining** using stones from canal excavation including cost of all materials, machinery, labour, forming weep holes at specified intervals, finishing, curing etc., complete **with initial lead upto 50m and all lifts.**
(rubble stones : 1.1cum, cement : 98kg, sand 0.34 cum)

DATA:

RATE ANALYSISUNIT: **10**

Cum

A. MATERIALS :

| SI. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------|-------------------------------|------|----------|-------------|---------------|
| 1 | Cement 43 Gr | Kg | 980 | 3.68 | 3606.40 |
| 2 | Sand (Screened) | Cum | 3.4 | 700.00 | 2380.00 |
| 3 | Uncoursed rubble at dump yard | Cum | 11 | 181.00 | 1991.00 |
| Total Cost of Materials Rs. | | | | | 7977.4 |

B. MACHINERY :

| SI. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Hand Mixing Charges | Hour | 8 | 5.00 | 40.00 |
| 2 | 5 hp pump (diesel) | Hour | 4 | 9.10 | 36.40 |
| | Fuel / Energy charges | Hour | 5 | 129.80 | 649.00 |
| Total hire charges of Machinery Rs. | | | | | 725.40 |

C. LABOUR :

| SI. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Operator pump | Hour | 4 | 143.50 | 574.00 |
| 2 | Mason Class I | Day | 13 | 585.00 | 7605.00 |
| 3 | Mason Class II | Day | 6 | 525.00 | 3150.00 |
| 4 | Mazdoor | Day | 29 | 490.00 | 14210.00 |
| 5 | Cartman with double bullock cart | Day | 1 | 585.00 | 585.00 |
| Total Cost of Labour Rs. | | | | | 26124.00 |

labour component/unit qty 2612.40
 Add contractor's profit and overhead charges 13.615% 355.70
 labour component/unit qty (including contractor's profit) **2968.10**

ABSTRACT :

| | | |
|---|----------------|---------------------|
| A. Cost of Materials | Rs. | 7977.4 |
| B. Hire Charges of Machinery | Rs. | 725.4 |
| C. Cost of Labour | Rs. | 26124.00 |
| Total | Rs: | 34826.80 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: 4741.67 |
| Total cost for | 10.00 Cum | Rs: 39568.47 |
| Rate per Cum | (A+B+C+D)/10.0 | Rs. 3956.80 |

IRR-CAW-8

ROCK PITCHING:

IRR-CAW-8-1

Providing and **constructing 25 cm thick dry rubble stone pitching with pin headers at 2 per sqm** including cost of all materials, labour, hand packing, finishing etc., complete with initial **lead upto 50 m and all lifts.**
(rubble stones : 0.23 cum/sqm, Stone Chips : 0.0375cum/sqm, Pin Headers 30cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Uncoursed rubble stones at quarry | cum | 23.00 | 359.00 | 8257.00 |
| 2 | Pin header (Through stone) 30 cm | Nos | 200.00 | 24.00 | 4800.00 |
| 3 | Stone chips at quarry | cum | 3.75 | 385.00 | 1443.75 |
| Total cost of Materials | | | | Rs: | 14500.75 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nill | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class II | Day | 5.00 | 525.00 | 2625.00 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 6205.00 |

labour component/unit qty

62.10

Add contractor's profit and overhead charges

13.615% 8.50

labour component/unit qty (including contractor's profit)

70.60**ABSTRACT:**

A. Cost of Materials

Rs: 14500.75

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 6205.00

Total

Rs: **20705.75**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 2819.09

Total cost for

100.00 sqm

Rs: **23524.84****Rate per****sqm**

(A+B+C+D)/100.0

Rs. **235.20**

Note: If 15 cm thick murum bed is to be provided below pitching
 (Murum : 0.18 cum/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|----------------|
| 1 | Murum | cum | 18.00 | 215.00 | 3870.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 3870.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nill | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|----------------|
| 1 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 1960.00 |

labour component/unit qty

19.60

Add contractor's profit and overhead charges

13.615% 2.70

labour component/unit qty (including contractor's profit)

22.30**ABSTRACT:**

A. Cost of Materials

Rs: 3870.00

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 1960.00

Total

Rs: **5830.00**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 793.75

Total cost for

100.00 sqm

Rs: **6623.75****Rate per****sqm**

(A+B+C+D)/100.0

Rs. **66.20**

IRR-CAW-8-1-A Providing and **constructing 22.5 cm thick dry rubble stone pitching with pin headers at 2 per**
(New Item4 - 2011-12)

sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.
(rubble stones : 0.207 cum/sqm, Stone Chips : 0.03375cum/sqm, Pin Headers 30cm : 2/sqm)
(For Maintenance works)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Uncoursed rubble stones at quarry | cum | 20.70 | 359.00 | 7431.30 |
| 2 | Pin header (Through stone) 30 cm | Nos | 200.00 | 24.00 | 4800.00 |
| 3 | Stone chips at quarry | cum | 3.375 | 385.00 | 1299.38 |
| Total cost of Materials | | | | Rs: | 13530.68 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class II | Day | 5.00 | 525.00 | 2625.00 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 6205.00 |

labour component/unit qty

62.10

Add contractor's profit and overhead charges

13.615% 8.50

labour component/unit qty (including contractor's profit)

70.60**ABSTRACT:**

| | | |
|------------------------------|-----|-----------------|
| A. Cost of Materials | Rs: | 13530.68 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 6205.00 |
| Total | Rs: | 19735.68 |

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 2687.01

Total cost for

100.00 sqm

Rs: **22422.69****Rate per sqm** (A+B+C+D)/100.0Rs: **224.20**

IRR-CAW-8-2 Providing and **constructing 25 cm thick dry rubble stone pitching** including cost of all materials, labour, hand packing, finishing etc., complete
(rubble stones : 0.275 cum/sqm)

DATA:

RATE ANALYSISUNIT: **100****Sqm.****A. MATERIALS :**

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------|-----------------------------------|------|----------|-------------|---------------|
| 1 | Uncoursed rubble stones at quarry | Cum | 27.50 | 359.00 | 9872.50 |
| Total Cost of Materials Rs. | | | | | 9872.5 |

B. MACHINERY :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0 | 0 | 0 |
| | | | 0 | 0 | 0 |
| Total hire charges of Machinery Rs. | | | | | 0 |

C. LABOUR :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------------------|----------------|------|----------|-------------|-----------------|
| 1 | Mason Class II | Day | 5.50 | 525.00 | 2887.50 |
| 2 | Mazdoor | Day | 24.75 | 490.00 | 12127.50 |
| Total Cost of Labour Rs. | | | | | 15015.00 |

labour component/unit qty

150.20

Add contractor's profit and overhead charges

13.615% 20.40

labour component/unit qty (including contractor's profit)

170.60

ABSTRACT :

| | | | |
|---|---|--------|---------------|
| A. Cost of Materials | | Rs. | 9872.5 |
| B. Hire Charges of Machinery | | Rs. | 0 |
| C. Cost of Labour | | Rs. | 15015.00 |
| | Total | Rs. | 24887.50 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. | 3388.43 |
| Total cost for | 100.00 Sqm. | Rs. | 28275.93 |
| Rate per Sqm. | (A+B+C+D)/100.0 | Rs. | 282.80 |
| NOTE: | If 15 cm thick murum bed is to be provided below pitching add (As per rate analysis under item IRR-CAW-8-1- Note) | in Rs. | 66.20 |

IRR-CAW-8-2-A Providing and **constructing 225 mm thick dry rubble stone pitching** including cost of all materials, labour, (New Item5 - 2011-12) hand packing, finishing etc., complete
(rubble stones : 0.2475 cum/sqm) (For Maintenance Works)

DATA:

RATE ANALYSIS

UNIT: 100

Sqm.

A. MATERIALS :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------|---------------------------|------|----------|-------------|---------------|
| 1 | Rough Stone for Revetment | Cum | 24.75 | 166.00 | 4108.50 |
| 2 | Stone Chips at Quarry | Cum | 3.40 | 385.00 | 1309.00 |
| Total Cost of Materials Rs. | | | | | 5417.5 |

B. MACHINERY :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0 | 0 | 0 |
| Total hire charges of Machinery Rs. | | | | | 0 |

C. LABOUR :

| Sl. No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------------------|----------------|------|----------|-------------|-----------------|
| 1 | Mason Class II | Day | 4.95 | 525.00 | 2598.75 |
| 2 | Mazdoor | Day | 22.28 | 490.00 | 10914.75 |
| Total Cost of Labour Rs. | | | | | 13513.50 |

labour component/unit qty

135.10

Add contractor's profit and overhead charges

13.615% 18.40

labour component/unit qty (including contractor's profit)

153.50

ABSTRACT :

| | | | |
|---|-----------------|-----|-----------------|
| A. Cost of Materials | | Rs. | 5417.5 |
| B. Hire Charges of Machinery | | Rs. | 0 |
| C. Cost of Labour | | Rs. | 13513.50 |
| | Total | Rs. | 18931.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs. | 2577.46 |
| Total cost for | 100.00 Sqm. | Rs. | 21508.46 |
| Rate per Sqm. | (A+B+C+D)/100.0 | Rs. | 215.10 |

IRR-CAW-8-3 Providing and **constructing 30 cm thick dry rubble stone pitching with pin headers at 2 per sqm** including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.
(rubble stones : 0.275 cum/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|------|----------|-------------|---------------------|
| 1 | Uncoursed rubble stones at quarry | cum | 27.50 | 359.00 | 9872.50 |
| 2 | Pin header (Through stone) 30 cm | Nos | 200.00 | 24.00 | 4800.00 |
| 3 | Stone chips at quarry | cum | 4.50 | 385.00 | 1732.50 |
| Total cost of Materials | | | | | Rs: 16405.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|-----------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | | Rs: 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|--------------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class II | Day | 5.00 | 525.00 | 2625.00 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | | Rs: 6205.00 |

| | |
|---|--------------|
| labour component/unit qty | 62.10 |
| Add contractor's profit and overhead charges | 13.615% 8.50 |
| labour component/unit qty (including contractor's profit) | <u>70.60</u> |

ABSTRACT:

| | | |
|------------------------------|-----|-----------------|
| A. Cost of Materials | Rs: | 16405.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 6205.00 |
| Total | Rs: | <u>22610.00</u> |

| | | | |
|---|---|-----|-----------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 3078.35 |
| Total cost for | 100.00 sqm | Rs: | 25688.35 |
| Rate per sqm | (A+B+C+D)/100.0 | Rs: | 256.90 |
| NOTE: | If 15 cm thick murum bed is to be provided below pitching add (As per rate analysis under item IRR-CAW-8-1- Note) | | 66.20 |

IRR-CAW-8-4 Providing and **Constructing 30 cm thick dry rubble stone pitching** including cost of all materials,labour,hand packing,finishing etc.,complete
(rubble stones : 0.33 cum/sqm)

DATA: **RATE ANALYSIS** UNIT : **100.00 sqm**

A. MATERIALS :

| SI No | Particulars | Unit | Quantity | Rate | in Rs | Amount in Rs |
|------------------------------|-----------------------------------|------|----------|------|--------|-----------------|
| 1 | Uncoursed rubble stones at Quarry | Cum | 33.00 | | 359.00 | 11847.00 |
| (Included in material Rate) | | | | | | |
| Total Cost of materials Rs : | | | | | | 11847.00 |

B.MACHINERY :

| SI No | Description | Unit | Quantity | Rate | in Rs | Amount in Rs |
|--------------------------------------|-------------|------|----------|------|-------|--------------|
| 1 | Nil | | 0.00 | | 0.00 | |
| | | | 0.00 | | 0.00 | |
| Total hire charges of machinery Rs : | | | | | | 0.00 |

C.LABOUR :

| SI No | Description | Unit | Quantity | Rate | in Rs | Amount in Rs |
|---------------------------|----------------|------|----------|------|--------|-----------------|
| 1 | Mason Class II | Day | 6.60 | | 525.00 | 3465.00 |
| 2 | Mazdoor | Day | 29.70 | | 490.00 | 14553.00 |
| Total cost of labour Rs : | | | | | | 18018.00 |

| | |
|---|---------------|
| labour component/unit qty | 180.20 |
| Add contractor's profit and overhead charges | 13.615% 24.50 |
| labour component/unit qty (including contractor's profit) | <u>204.70</u> |

ABSTRACT

| | | |
|---|-----|-----------------|
| A. Cost of Materials including ryolty charges | Rs: | 11847.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 18018.00 |
| Total | Rs: | <u>29865.00</u> |

| | | | |
|---|---|------|-----------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 4066.12 |
| Total cost for | 100.00 sqm | Rs: | 33931.12 |
| Rate per sqm | (A+B+C+D)/100.0 | Rs: | 339.30 |
| NOTE: | If 15 cm thick murum bed is to be provided below pitching Add (As per rate analysis under item IRR-CAW-8-1 - Note) | Rs : | 66.20 |

IRR-CAW-8-5 Providing and **constructing 45 cm thick dry rubble stone pitching with pin headers at 2 per sqm** including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.
(rubble stones : 0.40 cum/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Uncoursed rubble stones at quarry | cum | 40.00 | 359.00 | 14360.00 |
| 2 | Pin header (Through stone) 45 cm | Nos | 200.00 | 43.00 | 8600.00 |
| 3 | Stone chips at quarry | cum | 6.75 | 385.00 | 2598.75 |
| Total cost of Materials | | | | Rs: | 25558.75 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | |
| | | | 0.00 | 0.00 | |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class II | Day | 7.00 | 525.00 | 3675.00 |
| 3 | mazdoor | Day | 9.00 | 490.00 | 4410.00 |
| Total cost of Labour | | | | Rs: | 8725.00 |

labour component/unit qty

87.30

Add contractor's profit and overhead charges

13.615% 11.90

labour component/unit qty (including contractor's profit)

99.20**ABSTRACT:**

A. Cost of Materials

Rs: 25558.75

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 8725.00

Total

Rs: **34283.75**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 4667.73

Total cost for

100.00 sqm

Rs: **38951.48****Rate per****sqm**

(A+B+C+D)/100.0

Rs: **389.50**

NOTE: If 15 cm thick murum bed is to be provided below pitching add
(As per rate analysis under item
IRR-CAW-8-1 - Note)

66.20

IRR-CAW-8-6

Providing and **Constructing 45 cm thick dry rubble stone pitching**

including cost of all materials,labour,hand packing,finishing etc.,complete

(rubble stones : 0.495 cum/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS :**

| Sl No | Particulars | Unit | Quantity | Rate in Rs | Amount in Rs |
|------------------------------|-----------------------------------|------|----------|------------|-----------------|
| 1 | Uncoursed rubble stones at Quarry | Cum | 49.50 | 359.00 | 17770.50 |
| | (Included in material Rate) | | | | |
| Total Cost of materials Rs : | | | | | 17770.50 |

B.MACHINERY :

| Sl No | Description | Unit | Quantity | Rate in Rs | Amount in Rs |
|--------------------------------------|-------------|------|----------|------------|--------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of machinery Rs : | | | | | 0.00 |

C.LABOUR :

| Sl No | Description | Unit | Quantity | Rate in Rs | Amount in Rs |
|---------------------------|----------------|------|----------|------------|-----------------|
| 1 | Mason Class II | Day | 9.90 | 525.00 | 5197.50 |
| 2 | Mazdoor | Day | 44.55 | 490.00 | 21829.50 |
| Total cost of labour Rs : | | | | | 27027.00 |

labour component/unit qty

270.30

Add contractor's profit and overhead charges

13.615% 36.80

labour component/unit qty (including contractor's profit)

307.10

ABSTRACT

| | | | |
|---|---|------|---------------|
| A. Cost of Materials including ryolty charges | | Rs: | 17770.50 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 27027.00 |
| | Total | Rs: | 44797.50 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 6099.18 |
| Total cost for | 100.00 sqm | Rs: | 50896.68 |
| Rate per sqm | (A+B+C+D)/100.0 | Rs. | 509.00 |
| If 15 cm thick murum bed is to be provided below pitching | | | |
| NOTE: | Add (As per rate analysis under item IRR-CAW-8-1 - Note) | Rs : | 66.20 |

IRR-CAW-8-7 Providing and **constructing 30 cm thick rubble stone pitching** set in **CM 1: 5** proportion with **pin headers at 2 per sqm** in including cost of all materials, labour, packing chips and mortar, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(rubble stones : 0.275 cum/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Uncoursed rubble stones at quarry | cum | 27.50 | 359.00 | 9872.50 |
| 2 | Pin header (Through stone) 30 cm | Nos | 200.00 | 24.00 | 4800.00 |
| 3 | Stone chips @ 15 % at quarry | cum | 4.50 | 385.00 | 1732.50 |
| 4 | Cement | kg | 3000.00 | 3.68 | 11040.00 |
| 5 | Sand (Screened) | cum | 10.50 | 700.00 | 7350.00 |
| Total cost of Materials | | | | Rs: | 34795.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | 5 hp pump (diesel) | | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | | 2.00 | 129.80 | 259.60 |
| Total hire charges of Machinery | | | | Rs: | 277.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|---------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Pump | Hour | 2.00 | 143.50 | 287.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Mason Class II | Day | 5.00 | 525.00 | 2625.00 |
| 4 | mazdoor | Day | 12.00 | 490.00 | 5880.00 |
| 5 | Catman with double bullock cart | Day | 2.00 | 585.00 | 1170.00 |
| Total cost of Labour | | | | Rs: | 10602.00 |

| | |
|---|---------------|
| labour component/unit qty | 106.00 |
| Add contractor's profit and overhead charges | 13.615% 14.40 |
| labour component/unit qty (including contractor's profit) | 120.40 |

ABSTRACT:

| | | | |
|---|--|-----|---------------|
| A. Cost of Materials | | Rs: | 34795.00 |
| B. Hire charges of Machinery | | Rs: | 277.80 |
| C. Cost of Labour | | Rs: | 10602.00 |
| | Total | Rs: | 45674.80 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 6218.62 |
| Total cost for | 100.00 sqm | Rs: | 51893.42 |
| Rate per sqm | (A+B+C+D)/100.0 | Rs. | 518.90 |
| If 15 cm thick murum bed is to be provided below pitching add | | | |
| NOTE: | (As per rate analysis under item IRR-CAW-8-1 - Note) | | 66.20 |

IRR-CAW-8-8 Providing and **Constructing 30 cm thick rubble stone pitching** set in **CM 1:5** Proportion including cost of all materials,labour, packing chips and mortar ,finishing etc.,complete
(rubble stones : 0.33 cum/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 Sqm**A. MATERIALS :**

| SI No | Particulars | Unit | Quantity | Rate in Rs | Amount in Rs |
|-------------------------|-----------------------------------|------|----------|------------|-----------------|
| 1 | Uncoursed rubble stones at Quarry | Cum | 33.00 | 359.00 | 11847.00 |
| 2 | Cement | Kg | 3232.00 | 3.68 | 11893.76 |
| 3 | Sand (Screened) | Cum | 11.22 | 700.00 | 7854.00 |
| Total Cost of materials | | | | Rs : | 31594.76 |

B.MACHINERY :

| SI No | Description | Unit | Quantity | Rate in Rs | Amount in Rs |
|--------------------------------------|-------------|------|----------|------------|--------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| Total hire charges of machinery Rs : | | | | | 0.00 |

C.LABOUR :

| SI No | Description | Unit | Quantity | Rate in Rs | Amount in Rs |
|---------------------------|----------------|------|----------|------------|----------------|
| 1 | Mason Class I | Day | 0.54 | 585.00 | 315.90 |
| 2 | Mason Class II | Day | 1.26 | 525.00 | 661.50 |
| 3 | Mazdoor | Day | 2.80 | 490.00 | 1372.00 |
| Total cost of labour Rs : | | | | | 2349.40 |

labour component/unit qty

23.50

Add contractor's profit and overhead charges

13.615% 3.20

labour component/unit qty (including contractor's profit)

26.70**ABSTRACT**

A. Cost of Materials

Rs: 31594.76

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 2349.40

Total

Rs: 33944.16

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 4621.5

Total cost for

100.00 Sqm

Rs: **38565.66****Rate per****Sqm**

(A+B+C+D)/100.0

Rs. **385.70**

If 15 cm thick murum bed is to be provided below pitching

Add (As per rate analysis under item IRR-CAW-8-1 - Note)

Rs :

66.20

IRR-CAW-8-9

Providing and constructing 30 cm thick dry khandki stone pitching using 20 to 25 cm size khandki stones with pin headers at 2 per sqm including cost of all materials, labour, hand packing, finishing etc., complete with initial lead upto 50 m and all lifts.
(Khandki stones 20- 25 cm height : 1200 Nos/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|---------------------|
| 1 | Khandki stones 20-25 cm height | Nos | 1200.00 | 19.00 | 22800.00 |
| 2 | Pin header (Through stone) 30 cm | Nos | 200.00 | 24.00 | 4800.00 |
| 3 | Stone chips | cum | 4.50 | 385.00 | 1732.50 |
| Total cost of Materials | | | | | Rs: 29332.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|-----------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | | Rs: 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|--------------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class II | Day | 5.00 | 525.00 | 2625.00 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | | Rs: 6205.00 |

labour component/unit qty

62.10

Add contractor's profit and overhead charges

13.615% 8.50

labour component/unit qty (including contractor's profit)

70.60**ABSTRACT:**

A. Cost of Materials

Rs: 29332.50

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 6205.00

Total

Rs: 35537.50

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 4838.43

Total cost for

100.00 sqm

Rs: **40375.93****Rate per****sqm**

(A+B+C+D)/100.0

Rs. **403.80**

If 15 cm thick murum bed is to be provided below pitching add

(As per rate analysis under item IRR-CAW-8-1 - Note)

66.20

IRR-CAW-8-10 Providing and **constructing 45 cm thick dry khandki stone pitching using 25 to 30 cm size khandki stones with pin headers at 2 per sqm** including cost of all materials, labour, hand packing, finishing etc., complete with **initial lead upto 50 m and all lifts.**
(Khandki stones 25- 30 cm height : 1200 Nos/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Khandki stones 25-30 cm height | Nos | 730.00 | 20.00 | 14600.00 |
| 2 | Pin headers 45 cm | Nos | 200.00 | 43.00 | 8600.00 |
| 3 | Stone chips | cum | 6.75 | 385.00 | 2598.75 |
| Total cost of Materials | | | | Rs: | 25798.75 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class II | Day | 7.00 | 525.00 | 3675.00 |
| 3 | mazdoor | Day | 9.00 | 490.00 | 4410.00 |
| Total cost of Labour | | | | Rs: | 8725.00 |

labour component/unit qty

87.30

Add contractor's profit and overhead charges

13.615% 11.90

labour component/unit qty (including contractor's profit)

99.20**ABSTRACT:**

A. Cost of Materials

Rs: 25798.75

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 8725.00

Total

Rs: **34523.75**

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 4700.41

Total cost for

100.00 sqm

Rs: **39224.16****Rate per****sqm**

(A+B+C+D)/100.0

Rs. **392.20**

NOTE: If 15 cm thick murum bed is to be provided below pitching add
 (As per rate analysis under item IRR-CAW-8-1 - Note)

66.20

IRR-CAW-8-11 Providing and **constructing 30 cm thick khandki stone pitching using 20 to 25 cm size khandki stones with pin headers at 2 per sqm** set in **CM 1 : 5** proportion with pointing joints in CM 1:3 proportion including cost of all materials, labour, packing chips and mortar, finishing, curing etc. complete with **initial lead upto 50 m and all lifts.**
(Khandki stones 20- 25 cm height : 1200 Nos/sqm, Stone Chips : 0.045cum/sqm, Pin Headers 30cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Khandki stones 20-25 cm height | Nos | 1200.00 | 19.00 | 22800.00 |
| 2 | Pin headers 30 cm long | Nos | 200.00 | 24.00 | 4800.00 |
| 3 | Stone chips @ 15 % at quarry | cum | 4.50 | 385.00 | 1732.50 |
| 4 | Cement | kg | 2902.00 | 3.68 | 10679.36 |
| 5 | Sand (Screened) | cum | 9.67 | 700.00 | 6769.00 |
| Total cost of Materials | | | | Rs: | 46780.86 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | 5 hp diesel pump | Hour | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | Hour | 2.00 | 129.80 | 259.60 |
| Total hire charges of Machinery | | | | Rs: | 277.80 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Pump | Hour | 2.00 | 143.50 | 287.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Cartman with double bullock cart | Day | 2.00 | 585.00 | 1170.00 |
| 4 | Mason Class II | Day | 5.00 | 525.00 | 2625.00 |
| 5 | mazdoor | Day | 11.00 | 490.00 | 5390.00 |
| Total cost of Labour | | | | Rs: | 10112.00 |

labour component/unit qty

101.10

Add contractor's profit and overhead charges

13.615% 13.80

labour component/unit qty (including contractor's profit)

114.90

ABSTRACT:

| | | | | |
|---|--|---------|-----|---------------|
| A. Cost of Materials | | | Rs: | 46780.86 |
| B. Hire charges of Machinery | | | Rs: | 277.80 |
| C. Cost of Labour | | | Rs: | 10112.00 |
| | | Total | Rs: | 57170.66 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 7783.79 |
| Total cost for | 100.00 sqm | | Rs: | 64954.45 |
| Rate per sqm | (A+B+C+D)/100.0 | | Rs: | 649.50 |
| NOTE: | If 15 cm thick murum bed is to be provided below pitching add (As per rate analysis under item IRR-CAW-8-1 - Note) | | | |
| | | | | 66.20 |

IRR-CAW-8-12 Providing and constructing 45 cm thick khandki stone pitching using 25 to 30 cm stones with pin headers at 2 per sqm set in CM 1 : 5 proportion with pointing joints in CM 1 : 3 proportion including cost of all materials, labour, packing chips and mortar, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Khandki stones 25- 30 cm height : 730 Nos/sqm, Stone Chips : 0.0675cum/sqm, Pin Headers 45cm : 2/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Khandki stones 25-30 cm height | Nos | 730.00 | 20.00 | 14600.00 |
| 2 | Pin headers 45 cm | Nos | 200.00 | 43.00 | 8600.00 |
| 3 | Stone chips @ 15 % at quarry | cum | 6.75 | 385.00 | 2598.75 |
| 4 | Cement | kg | 4050.00 | 3.68 | 14904.00 |
| 5 | Sand (Screened) | cum | 13.99 | 700.00 | 9793.00 |
| Total cost of Materials | | | | Rs: | 50495.75 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | 5 hp diesel pump | Hour | 4.00 | 9.10 | 36.40 |
| | Fuel / Energy charges | Hour | 4.00 | 129.80 | 519.20 |
| Total hire charges of Machinery | | | | Rs: | 555.60 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Pump | Hour | 4.00 | 143.50 | 574.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | Cartman with double bullock cart | Day | 2.00 | 585.00 | 1170.00 |
| 4 | Mason Class II | Day | 7.00 | 525.00 | 3675.00 |
| 5 | mazdoor | Day | 16.00 | 490.00 | 7840.00 |
| Total cost of Labour | | | | Rs: | 13899.00 |

| | |
|---|---------------|
| labour component/unit qty | 139.00 |
| Add contractor's profit and overhead charges | 13.615% 18.90 |
| labour component/unit qty (including contractor's profit) | 157.90 |

ABSTRACT:

| | | | | |
|---|--|---------|-----|---------------|
| A. Cost of Materials | | | Rs: | 50495.75 |
| B. Hire charges of Machinery | | | Rs: | 555.60 |
| C. Cost of Labour | | | Rs: | 13899.00 |
| | | Total | Rs: | 64950.35 |
| D. Add for contractor's profit and overheads on (A+B+C) | | 13.615% | Rs: | 8842.99 |
| Total cost for | 100.00 sqm | | Rs: | 73793.34 |
| Rate per sqm | (A+B+C+D)/100.0 | | Rs: | 737.90 |
| NOTE: | If 15 cm thick murum bed is to be provided below pitching add (As per rate analysis under item IRR-CAW-8-1 - Note) | | | |
| | | | | 66.20 |

IRR-CAW-8-13 Providing 10 cm thick approved type grass turfing to the side slopes of canal including cost of all materials, labour, watering for minimum 15 days etc., complete with lead 50 m and all lifts.
(FA : 2 cum/sqm)

DATA:

RATE ANALYSIS

UNIT :

100.00 sqm**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------|------|----------|-------------|----------------|
| 1 | Turfing sods | sqm | 100.00 | 28.00 | 2800.00 |
| 2 | Sand for filling | cum | 2.00 | 460.00 | 920.00 |
| Total cost of Materials | | | | Rs: | 3720.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------------------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.10 | 640.00 | 64.00 |
| 2 | Cartman with double bullock cart | Day | 2.00 | 585.00 | 1170.00 |
| 3 | mazdoor | Day | 14.00 | 490.00 | 6860.00 |
| Total cost of Labour | | | | Rs: | 8094.00 |

labour component/unit qty

80.90

Add contractor's profit and overhead charges

13.615% 11.00

labour component/unit qty (including contractor's profit)

91.90**ABSTRACT:**

| | | |
|------------------------------|-----|-----------------|
| A. Cost of Materials | Rs: | 3720.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 8094.00 |
| Total | Rs: | 11814.00 |

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1608.48

Total cost for

100.00 sqm

Rs: **13422.48****Rate per sqm**

(A+B+C+D)/100.0

Rs. **134.20**

IRR-CAW-8-14 **Providing 10 cm Thick approved type gross turfing** to the side slopes of canal including cost of all materials ,labour,watering for minimum 15 days etc.,,complete.
with initial lead upto 50 m and all lifts (WITHOUT USING SAND)

DATA:

RATE ANALYSIS

UNIT :

100.00 Sqm**A. MATERIALS :**

| SI No | Particulars | Unit | Quantity | Rate in Rs | Amount in Rs |
|------------------------------|---------------|------|----------|------------|----------------|
| 1 | Turfing Sodds | Sqm | 100.00 | 28.00 | 2800.00 |
| Total Cost of materials Rs : | | | | | 2800.00 |

B.MACHINERY :

| SI No | Description | Unit | Quantity | Rate in Rs | Amount in Rs |
|--------------------------------------|-------------|------|----------|------------|--------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of machinery Rs : | | | | | 0.00 |

C.LABOUR :

| SI No | Description | Unit | Quantity | Rate in Rs | Amount in Rs |
|---------------------------|-----------------------------------|------|----------|------------|----------------|
| 1 | Mazdoor | Day | 7.00 | 490.00 | 3430.00 |
| 2 | Cart men with double bullock cart | Day | 2.00 | 585.00 | 1170.00 |
| Total cost of labour Rs : | | | | | 4600.00 |

labour component/unit qty

46.00

Add contractor's profit and overhead charges

13.615% 6.30

labour component/unit qty (including contractor's profit)

52.30**ABSTRACT**

| | | |
|---|-----|----------------|
| A. Cost of Materials including ryolty charges | Rs: | 2800.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 4600.00 |
| Total | Rs: | 7400.00 |

D. Add for contractor's profit and overheads on (A+B+C)

13.615%

Rs: 1007.51

Total cost for

100.00 Sqm

Rs: **8407.51****Rate per Sqm**

(A+B+C+D)/100.0

Rs. **84.10**

CHAPTER-IV

CANAL CROSS DRAINAGE WORKS - Standard Data

(WLL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)

FOR THE YEAR :2021-22

Index- code

IRR-CCDW

CANAL CROSS DRAINAGE WORKS - DATA RATES

Directions to add Seigniorage Charges and Additional Lead Charges**Seigniorage Charges:**

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic rates are inclusive of all lifts.
2. For concrete, masonry and reinforcement items **wherever** initial lead of 1km is considered in the basic rate, the additional lead as follows:

Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.

In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again

Example:

| | |
|---|-----------|
| Total lead for sand from approved sand quarry : | 15 Km |
| Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) : | 1 Km |
| Additional lead charges : | |
| Lead charges for Rs. | 102.14 |
| Lead charges for next 10 kRs. | 153.38025 |
| Total lead charges for 15 kRs. | 255.52 |
| Less 1 km initial lead charge Rs. | 38.29 (-) |
| Net additional lead charges Rs. | 217.23 |

3. The Leads for Steel shall be from the nearest market place to the Project area

4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:

Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.

(same as above)

Example:

| | |
|---|-----------|
| Total lead for earth from approved borrow area : | 15 Km |
| Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) : | 1 Km |
| Additional lead charges : | |
| Lead charges for Rs. | 102.14 |
| Lead charges for next 10 kRs. | 153.38025 |
| Total lead charges for 15 kRs. | 255.52 |
| Less 1 km initial lead charge Rs. | 38.29 (-) |
| Net additional lead charges Rs. | 217.23 |

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area. For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

CCDW - Work Items**IRR-CCDW-1 EXCAVATION & FOUNDATION TREATMENT WORKS :**

- IRR-CCDW-1-1 Excavation in all kinds of soil including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 2 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 3100.00 |

labour component/unit qty 310.00

Add contractor's profit and overhead charges 13.615% 42.20

labour component/unit qty (including contractor's profit) **352.20****ABSTRACT:**

| | | | |
|---|----------------|-----|----------------|
| A. Cost of Materials | | Rs: | 0.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 3100.00 |
| | Total | Rs: | 3100.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | | 422.07 |
| Total cost for | 10.00 cum | Rs: | 3522.07 |
| Rate per cum | (A+B+C+D)/10.0 | Rs. | 352.20 |

IRR-CCDW-1-2

Excavation for Structures- Mechanical Means (Data adopted from MORTH)

Earth work in excavation in all kinds of soils of foundation of structures as per drawing and technical specification, including setting out, construction of shoring and bracing, removal of stumps and other deleterious matter, dressing of sides and bottom and backfilling with approved material.

Depth upto 3 m

Unit = cum

Taking output = 240 cum

Unit **240.00** cum

DATA:

A. Materials:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|-------------|------|----------|-------------|---------------|
| | NIL | | 0.00 | 0.00 | 0.00 |

B. Machinery:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------|---|------|----------|-------------|-----------------|
| 1 | Hydraulic excavator 1.0 cum bucket capacity | hour | 6.00 | 1529.70 | 9178.20 |
| | Fuel/ Energy charges | hour | 6.00 | 1428.30 | 8569.80 |
| Total in Rs. | | | | | 17748.00 |

C. Labour:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------|--------------------|------|----------|-------------|----------------|
| 1 | work inspector | day | 0.32 | 640.00 | 204.80 |
| 2 | Mazdoor | day | 8.00 | 490.00 | 3920.00 |
| 3 | crew for excavator | hour | 6.00 | 304.20 | 1825.20 |
| Total in Rs. | | | | | 5950.00 |

labour component/unit qty 24.80

Add contractor's profit and overhead charges 13.615% 3.40

labour component/unit qty (including contractor's profit) **28.20**

Abstract

| | | | |
|---|------------------------|------------|-----------------|
| a) Material | | Rs | 0.00 |
| b) Machinery | | Rs | 17748.00 |
| c) Labour | | Rs | 5950.00 |
| Total | | Rs | 23698.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 3226.48 |
| Total cost for | 240.00 cum | Rs: | 26924.48 |
| Rate per cum | (A+B+C+D)/240.0 | Rs. | 112.20 |

IRR-CCDW-1-3 Excavation in **ordinary rock (including HDR) without blasting** including boulders **above 0.3 m upto 0.60 m dia.** for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., **complete with initial lead upto 50 m and initial lift upto 3 m.**

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | Crowbarman | Day | 1.25 | 525.00 | 656.25 |
| 2 | Stone breaker | Day | 1.25 | 525.00 | 656.25 |
| 3 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 4 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 4412.50 |

| | |
|---|---------------|
| labour component/unit qty | 441.30 |
| Add contractor's profit and overhead charges | 13.615% 60.10 |
| labour component/unit qty (including contractor's profit) | 501.40 |

ABSTRACT:

| | | | |
|---|-----------------------|------------|----------------|
| A. Cost of Materials | | Rs: | 0.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 4412.50 |
| | | Total | Rs: 4412.50 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 600.76 |
| Total cost for | 10.00 cum | Rs: | 5013.26 |
| Rate per cum | (A+B+C+D)/10.0 | Rs. | 501.30 |

IRR-CCDW-1-4 Excavation in **ordinary rock without blasting** for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.

(Data adopted from MORTH)

Mechanical Means

Unit = cum

DATA:

Taking output = 180 cum

Unit: **180.00** cum**A. Materials:**

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|-------------|------|----------|-------------|---------------|
| | NIL | | 0.00 | 0.00 | 0.00 |

B. Machinery:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------|---|------|----------|-------------|-----------------|
| 1.0 | Hydraulic excavator 1.0 cum bucket capacity | hour | 6.00 | 1529.70 | 9178.20 |
| | Fuel/ Energy charges | hour | 6.00 | 1428.30 | 8569.80 |
| Total in Rs. | | | | | 17748.00 |

C. Labour:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|--------------------|------|----------|-------------|----------------|
| 1 | work inspector | day | 0.24 | 640.00 | 153.60 |
| 2 | Mazdoor | day | 6.00 | 490.00 | 2940.00 |
| 3 | crew for excavator | hour | 6.00 | 304.20 | 1825.20 |
| | Total in Rs. | | | | 4918.80 |

labour component/unit qty 27.30

Add contractor's profit and overhead charges 13.615% 3.70

labour component/unit qty (including contractor's profit) **31.00****Abstract**

| | | |
|--------------|----|-----------------|
| a) Material | Rs | 0.00 |
| b) Machinery | Rs | 17748.00 |
| c) Labour | Rs | 4918.80 |
| Total | Rs | 22666.80 |

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 3086.08

Total cost for 180.00 cum Rs: **25752.88****Rate per cum** (A+B+C+D)/180.0 Rs: **143.10**

IRR-CCDW-1-5 Excavation in hard rock requiring blasting including boulders above 0.6 m upto 1.2 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.

DATA:

RATE ANALYSIS

UNIT : 100 cum

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|------------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of drill rod 1.6 m length | Rm | 43.50 | 19.51 | 848.69 |
| | Reconditioning charges @ 10% | | | | 84.87 |
| 2 | Use rate of air hose 2 Nos. | Hour | 6.00 | 0.22 | 1.32 |
| 3 | Explosive small dia (Kelvex-220) | kg | 20.00 | 69.00 | 1380.00 |
| 4 | Electric detonators | Nos | 29.00 | 10.00 | 290.00 |
| 5 | Detonating fuse coil | Rm | 70.00 | 8.00 | 560.00 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| | Total cost of Materials | | | Rs: | 3181.87 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|-----------------------------------|------|----------|-------------|----------------|
| 1 | Air compressor 8.5 cmm (diesel) | Hour | 3.00 | 237.70 | 713.10 |
| | Fuel / Energy charges | Hour | 3.00 | 1460.70 | 4382.10 |
| 2 | Jack hammers 2 Nos. | Hour | 6.00 | 17.30 | 103.80 |
| | Fuel / Energy charges | Hour | 6.00 | 0.00 | 0.00 |
| | Total hire charges of Machinery | | | Rs: | 5199.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|-------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Air compressor | Hour | 3.00 | 274.60 | 823.80 |
| 2 | Crew for Jack hammer | Hour | 6.00 | 429.00 | 2574.00 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Blaster | Day | 0.50 | 645.00 | 322.50 |
| 5 | Helper blaster | Day | 0.50 | 525.00 | 262.50 |
| 6 | Crowbarman | Day | 6.00 | 525.00 | 3150.00 |
| 7 | Stone breaker | Day | 3.00 | 525.00 | 1575.00 |
| 8 | mazdoor | Day | 51.00 | 490.00 | 24990.00 |
| | Total cost of Labour | | | Rs: | 34337.80 |

labour component/unit qty 343.40

Add contractor's profit and overhead charges 13.615% 46.80

labour component/unit qty (including contractor's profit) **390.20**

ABSTRACT:

| | | | |
|---|------------------------|------------|---------------|
| A. Cost of Materials | | Rs: | 3181.87 |
| B. Hire charges of Machinery | | Rs: | 5199.00 |
| C. Cost of Labour | | Rs: | 34337.80 |
| | Total | Rs: | 42718.67 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 5816.15 |
| Total cost for | 100.00 cum | Rs: | 48534.824 |
| Rate per cum | (A+B+C+D)/100.0 | Rs. | 485.30 |

IRR-CCDW-1-6 Excavation in hard rock of all toughness by blasting including boulders above 1.2 m dia. for foundations of canal cross drainage and other appurtenant structures and placing the excavated rock neatly in specified dump area or stack yard as directed etc., complete with initial lead upto 50 m and initial lift upto 3 m.

DATA:

RATE ANALYSIS

UNIT : 100.00 cum

A. MATERIALS:

| Sl No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------------|------|----------|-------------|---------------|
| 1 | Explosive small dia (Kelvex-220) | kg | 32.00 | 69.00 | 2208.00 |
| 2 | Ordinary detonator | No. | 8.00 | 7.00 | 56.00 |
| 3 | Electric detonator | No. | 104.00 | 10.00 | 1040.00 |
| 4 | Detonating fuse coil | Rm | 150.00 | 8.00 | 1200.00 |
| 5 | Use rate of air hose 2 Nos. | Hour | 16.00 | 11.00 | 176.00 |
| 6 | Use rate of drill rod | Rm | 98.30 | 26.01 | 2557.11 |
| | Reconditioning charges @ 10% | | | | 255.71 |
| Total cost of Materials | | | | Rs: | 7492.82 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|---------------|
| 1 | Air compressor 8.5 cmm (diesel) | Hour | 8.00 | 237.70 | 1901.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1460.70 | 11685.60 |
| 2 | Jack hammer 2 Nos | Hour | 16.00 | 17.30 | 276.80 |
| | Fuel / Energy charges | Hour | 16.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 13864.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------|------|----------|-------------|---------------|
| 1 | Crew for Air compressor | Hour | 8.00 | 274.60 | 2196.80 |
| 2 | Crew for Jack hammer | Hour | 16.00 | 429.00 | 6864.00 |
| 3 | Blaster licensed | Day | 1.00 | 645.00 | 645.00 |
| 4 | Helper blasting | Day | 1.00 | 525.00 | 525.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | Crowbarman | Day | 6.00 | 525.00 | 3150.00 |
| 7 | Stone breaker | Day | 6.00 | 525.00 | 3150.00 |
| 8 | mazdoor | Day | 51.00 | 490.00 | 24990.00 |
| Total cost of Labour | | | | Rs: | 42160.80 |

| | |
|---|---------------|
| labour component/unit qty | 421.60 |
| Add contractor's profit and overhead charges | 13.615% 57.40 |
| labour component/unit qty (including contractor's profit) | <u>479.00</u> |

ABSTRACT:

| | | | |
|---|------------------------|------------|---------------|
| A. Cost of Materials | | Rs: | 7492.82 |
| B. Hire charges of Machinery | | Rs: | 13864.00 |
| C. Cost of Labour | | Rs: | 42160.80 |
| | Total | Rs: | 63517.62 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 8647.92 |
| Total cost for | 100.00 cum | Rs: | 72165.54 |
| Rate per cum | (A+B+C+D)/100.0 | Rs. | 721.70 |

IRR-CCDW-1-7 Excavation in hard rock with blasting prohibited for foundations of canal cross drainage and other appurtenant structures and placing the excavated rock neatly in or stack yard as directed etc., complete with specified dump area initial lead upto 50 m and initial lift upto 3 m.

Hard Rock (blasting prohibited)**(Data adopted from MORTH)**

Unit = cum

DATA:

Taking output = 10 cum

Mechanical Means

10.00 cum

A. Materials:

| SI No | Description | Unit | Quantity | Rate | Amount |
|-------|-------------|------|----------|--------|-------------|
| | | | | in Rs. | in Rs. |
| | NIL | | 0.00 | 0.00 | 0.00 |

b) Machinery

| SI No | Description | Unit | Quantity | Rate | Amount |
|-------|--|------|----------|---------|----------------|
| | | | | in Rs. | in Rs. |
| 1.0 | Air Compressor 250 cft with 2 leads of pneumatic breaker | hour | 6.00 | 204.10 | 1224.60 |
| | Fuel/ Energy charges | hour | 6.00 | 1168.60 | 7011.60 |
| | Total in Rs. | | | | 8236.20 |

c) Labour

| SI No | Description | Unit | Quantity | Rate | Amount |
|-------|---------------------|------|----------|--------|----------------|
| | | | | in Rs. | in Rs. |
| 1 | work inspector | day | 0.20 | 640.00 | 128.00 |
| 2 | Mazdoor | day | 5.00 | 490.00 | 2450.00 |
| 3 | crew for compressor | hour | 6.00 | 274.60 | 1647.60 |
| | Total in Rs. | | | | 4225.60 |

labour component/unit qty 422.60

Add contractor's profit and overhead charges 13.615% 57.50

labour component/unit qty (including contractor's profit) **480.10****Abstract**

| | | | |
|---|----------------|-----|-----------------|
| a) Material | | Rs | 0.00 |
| b) Machinery | | Rs | 8236.20 |
| c) Labour | | Rs | 4225.60 |
| Total | | Rs | 12461.80 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | | 1696.67 |
| Total cost for | 10.00 cum | Rs: | 14158.47 |
| Rate per cum | (A+B+C+D)/10.0 | Rs. | 1415.80 |

IRR-CCDW-1-8 Providing and fixing **25 mm dia 2.50 m long cold twisted deformed steel anchor rods** with 1.25 m length driven into 32 mm dia hole drilled in bed rock and remaining length embedded in concrete / masonry including cost of all materials, machinery, labour, drilling and cleaning hole, driving anchor rod, grouting hole with thick cement slurry etc., complete with initial lead **upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **10.00 Nos.****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|---------------------------------|------|----------|-------------|----------------|
| 1 | Cement for grouting | kg | 5.00 | 3.68 | 18.40 |
| 2 | 25 mm dia steel | kg | 101.00 | 52.50 | 5302.50 |
| 3 | Use rate of 32 mm dia drill rod | Rm | 12.50 | 26.01 | 325.17 |
| | Reconditioning charges @ | 10% | | | 32.52 |
| 4 | Use rate of air hose | Hour | 2.00 | 11.00 | 22.00 |
| | Total cost of Materials | | | Rs: | 5700.58 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|-----------------------------------|------|----------|-------------|----------------|
| 1 | Air compressor 8.5 cmm (diesel) | Hour | 1.00 | 237.70 | 237.70 |
| | Fuel / Energy charges | Hour | 1.00 | 1460.70 | 1460.70 |
| 2 | Jack hammer 2 Nos | Hour | 2.00 | 17.30 | 34.60 |
| | Fuel / Energy charges | Hour | 2.00 | 0.00 | 0.00 |
| | Total hire charges of Machinery | | | Rs: | 1733.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------|-------------------------|------|----------|-------------|----------------|
| 1 | Crew for Air compressor | Hour | 1.00 | 274.60 | 274.60 |
| 2 | Crew for Jack hammer | Hour | 2.00 | 429.00 | 858.00 |
| 3 | Mason Class-II | Day | 0.50 | 525.00 | 262.50 |
| 4 | Bar bender | Day | 0.50 | 700.00 | 350.00 |
| 5 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 6 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| | Total cost of Labour | | | Rs: | 2555.10 |

| | |
|---|---------------|
| labour component/unit qty | 255.50 |
| Add contractor's profit and overhead charges | 13.615% 34.80 |
| labour component/unit qty (including contractor's profit) | <u>290.30</u> |

ABSTRACT:

| | | | |
|---|-----------------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 5700.58 |
| B. Hire charges of Machinery | | Rs: | 1733.00 |
| C. Cost of Labour | | Rs: | 2555.10 |
| | Total | Rs: | 9988.68 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 1359.96 |
| Total cost for | 10.00 Nos. | Rs: | 11348.64 |
| Rate per each | (A+B+C+D)/10.0 | Rs. | 1134.90 |

IRR-CCDW-2 **STEEL AND CEMENT CONCRETE WORKS :**

IRR-CCDW-2-1 Providing, fabricating and **placing in position reinforcement steel bars for RCC works** including cleaning, straightening, cutting, bending, hooking, lapping, welding wherever required, tying with 1.25 mm dia soft annealed steel wire, including cost of all materials, machinery, labour etc., **complete with initial lead upto 50 and all lifts.**

DATA:

RATE ANALYSISUNIT : **1000.00 kg****A. MATERIALS:**

| Sl No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Rein.Steel with 5 % wastage | kg | 1050.00 | 52.50 | 55125.00 |
| 2 | Binding wire 1.25 mm dia | kg | 8.00 | 64.00 | 512.00 |
| 3 | Sundries (chairs / spacers etc) | LS | 3.00 | 34.00 | 102.00 |
| Total cost of Materials | | | | Rs: | 55739.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

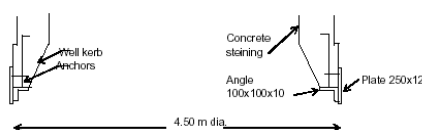
| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Bar bender | Day | 6.00 | 700.00 | 4200.00 |
| 3 | mazdoor | Day | 11.00 | 490.00 | 5390.00 |
| Total cost of Labour | | | | Rs: | 10230.00 |

| | |
|---|--------------|
| labour component/unit qty | 10.20 |
| Add contractor's profit and overhead charges | 13.615% 1.40 |
| labour component/unit qty (including contractor's profit) | <u>11.60</u> |

ABSTRACT:

| | | | |
|---|-------------------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 55739.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 10230.00 |
| | Total | Rs: | 65969.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 8981.68 |
| Total cost for | 1000.00 kg | Rs: | 74950.68 |
| Rate per kg | (A+B+C+D)/1000.0 | Rs. | 75.00 |

IRR-CCDW-2-2 Providing, fabricating and **fixing in position structural steel cutting edge** consisting of 100 x 100 x 10 mm angle and 250 x 12 mm plate for sinking for sinking 4.50 m outer diameter foundation wells including cost of all materials, machinery, labour, bending, welding, providing anchors etc., **complete with initial lead upto 50 m and all lifts.**



DETAILS OF FOUNDATION WELL CUTTING EDGE

DATA:

RATE ANALYSISUNIT : **615.00 kg****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------------|------|----------|-------------|-----------------|
| 1 | Str.Steel angle with 2.5 % wastage | kg | 216.10 | 50.50 | 10913.05 |
| 2 | Str.Steel plate with 2.5 % wastage | kg | 342.30 | 52.00 | 17799.60 |
| 3 | Steel for anchors | kg | 56.60 | 52.50 | 2971.50 |
| 4 | Acetyline gas | cum | 0.50 | 350.00 | 175.00 |
| 5 | Oxygen gas | cum | 1.50 | 43.00 | 64.50 |
| 6 | Welding electrodes | Nos | 300.00 | 14.00 | 4200.00 |
| 7 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 36293.65 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Bending machine | Hour | 8.00 | 38.40 | 307.20 |
| | Fuel / Energy charges | Hour | 8.00 | 126.90 | 1015.20 |
| 2 | Welding set | Hour | 30.00 | 15.10 | 453.00 |
| | Fuel / Energy charges | Hour | 30.00 | 101.50 | 3045.00 |
| 3 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | Rs: | 5160.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Str. Steel fabricator | Day | 2.00 | 700.00 | 1400.00 |
| 2 | Welder / Gas cutter | Day | 5.00 | 575.00 | 2875.00 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 7365.00 |

labour component/unit qty

12.00

Add contractor's profit and overhead charges

13.615%

1.60

labour component/unit qty (including contractor's profit)

13.60**ABSTRACT:**

A. Cost of Materials

Rs: 36293.65

B. Hire charges of Machinery

Rs: 5160.40

C. Cost of Labour

Rs: 7365.00

Total Rs: **48819.05**

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs:

6646.71

Total cost for

615.00 kg

Rs:

55465.76**Rate per kg**

(A+B+C+D)/615.0

Rs.

90.20

IRR-CCDW-2-3 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N /sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

(Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),**CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)**

Data

RATE ANALYSISUNIT : **15.38 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 3998.80 | 3.68 | 14715.58 |
| | Cement for incidentals @ 3 kg / cum | kg | 46.14 | 3.68 | 169.80 |
| 2 | Coarse aggregate 40-20 mm | cum | 6.92 | 1265.00 | 8755.07 |
| | Coarse aggregate 20-10 mm | cum | 4.15 | 1313.00 | 5452.36 |
| | Coarse aggregate 10 mm below | cum | 2.77 | 967.00 | 2677.04 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.15 | 605.00 | 3721.96 |
| 4 | Super Plasticizer | kg | 16.00 | 55.00 | 879.74 |
| 5 | Use rate of shuttering for 40 uses | sqm | 15.38 | 280.45 | 4313.34 |
| | Scaffolding @ of shuttering | 10% | | | 431.33 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 41133.22 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|----------------|------------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 2632.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 7 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 15.38 | 490.00 | 7536.20 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 8 | Labour cost for shuttering | sqm | 15.38 | 120.75 | 1857.14 |
| | Labour cost for scaffolding @ | 10% | | | 185.71 |
| Total cost of Labour | | | | Rs: | 24346.20 |

labour component/unit qty 1583.00

Add contractor's profit and overhead charges 13.615% 215.50

labour component/unit qty (including contractor's profit) **1798.50****ABSTRACT:**

| | | |
|---|-----------------|---------------------|
| A. Cost of Materials | Rs: | 41133.22 |
| B. Hire charges of Machinery | Rs: | 2632.75 |
| C. Cost of Labour | Rs: | 24346.20 |
| | Total | Rs: 68112.17 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 9273.47 |
| Total cost for | 15.38 cum | Rs: 77385.64 |
| Rate per cum | (A+B+C+D)/15.38 | Rs. 5031.60 |

IRR-CCDW-2-4 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

(Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),

CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum)

DATA:

RATE ANALYSISUNIT : **14.40 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|----------------|------------------|
| 1 | Cement for mix | kg | 3600.00 | 3.68 | 13248.00 |
| | Cement for incidentals @ 3 kg / cum | kg | 43.20 | 3.68 | 158.98 |
| 2 | Coarse aggregate 80-40 mm | cum | 4.94 | 697.00 | 3442.62 |
| | Coarse aggregate 40-20 mm | cum | 4.23 | 1265.00 | 5355.50 |
| | Coarse aggregate 20-10 mm | cum | 2.82 | 1313.00 | 3705.81 |
| | Coarse aggregate 10 mm below | cum | 2.12 | 967.00 | 2046.95 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.04 | 605.00 | 3049.20 |
| 4 | Super Plasticizer | kg | 14.40 | 55.00 | 792.00 |
| 5 | Use rate of shuttering for 40 uses | sqm | 14.40 | 280.45 | 4038.50 |
| | Scaffolding @ of shuttering | 10% | | | 403.85 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 36258.40 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------------------|------|----------|----------------|------------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 8.00 | 80.50 | 644.00 |
| | Fuel / Energy charges | Hour | 8.00 | 259.70 | 2077.60 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 60 mm dia (petrol) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 41.30 | 330.40 |
| Total hire charges of Machinery | | | | Rs: | 4050.35 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 14.40 | 490.00 | 7056.00 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 8 | Labour cost for shuttering | sqm | 14.40 | 120.75 | 1738.80 |
| | Labour cost for scaffolding @ | 10% | | | 173.88 |
| Total cost of Labour | | | | Rs: | 23735.83 |

labour component/unit qty

1648.30

Add contractor's profit and overhead charges

13.615% 224.40

labour component/unit qty (including contractor's profit)

1872.70**ABSTRACT:**

A. Cost of Materials

Rs: 36258.40

B. Hire charges of Machinery

Rs: 4050.35

C. Cost of Labour

Rs: 23735.83

Total Rs: 64044.58

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs: 8719.67

Total cost for

14.40 cum Rs: 72764.25

Rate per cum(A+B+C+D)/14.40 Rs: **5053.10**

IRR-CCDW-2-5 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

(Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),

CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSIS

UNIT : **16.36 cum**

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|----------------|------------------|
| 1 | Cement for mix | kg | 3599.20 | 3.68 | 13245.06 |
| | Cement for incidentals @ 3 kg / cum | kg | 49.08 | 3.68 | 180.61 |
| 2 | Coarse aggregate 40-20 mm | cum | 7.36 | 1265.00 | 9312.93 |
| | Coarse aggregate 20-10 mm | cum | 4.42 | 1313.00 | 5799.78 |
| | Coarse aggregate 10 mm below | cum | 2.94 | 967.00 | 2847.62 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.54 | 605.00 | 3959.12 |
| 4 | Super Plasticizer | kg | 14.40 | 55.00 | 791.82 |
| 5 | Use rate of shuttering for 40 uses | sqm | 16.36 | 280.45 | 4588.18 |
| | Scaffolding @ of shuttering | 10% | | | 458.82 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 41200.95 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|----------------|------------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 2632.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 16.36 | 490.00 | 8016.40 |
| 8 | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 9 | Labour cost for shuttering | sqm | 16.36 | 120.75 | 1975.47 |
| 10 | Labour cost for scaffolding @ | 10% | | | 197.55 |
| Total cost of Labour | | | | Rs: | 24956.57 |

labour component/unit qty 1525.50

Add contractor's profit and overhead charges 13.615% 207.70

labour component/unit qty (including contractor's profit) **1733.20**

ABSTRACT:

| | | | |
|---|------------------------|------------|----------------|
| A. Cost of Materials | | Rs: | 41200.95 |
| B. Hire charges of Machinery | | Rs: | 2632.75 |
| C. Cost of Labour | | Rs: | 24956.57 |
| | Total | Rs: | 68790.26 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 9365.79 |
| Total cost for | 16.36 cum | Rs: | 78156.05 |
| Rate per cum | (A+B+C+D)/16.36 | Rs. | 4777.30 |

IRR-CCDW-2-6 Providing and laying **insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**
(Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum)

DATA:

RATE ANALYSISUNIT : **14.55 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 3201.00 | 3.68 | 11779.68 |
| | Cement for incidentals @ 3 kg / cum | kg | 43.65 | 3.68 | 160.63 |
| 2 | Coarse aggregate 80-40 mm | cum | 4.99 | 697.00 | 3478.48 |
| | Coarse aggregate 40-20 mm | cum | 4.28 | 1265.00 | 5411.29 |
| | Coarse aggregate 20-10 mm | cum | 2.85 | 1313.00 | 3744.41 |
| | Coarse aggregate 10 mm below | cum | 2.14 | 967.00 | 2068.27 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.09 | 605.00 | 3080.96 |
| 4 | Super Plasticizer | kg | 12.80 | 55.00 | 704.22 |
| 5 | Use rate of shuttering for 40 uses | sqm | 14.55 | 280.45 | 4080.56 |
| | Scaffolding @ of shuttering | 10% | | | 408.06 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 34933.57 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 8.00 | 80.50 | 644.00 |
| | Fuel / Energy charges | Hour | 8.00 | 259.70 | 2077.60 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 60 mm dia (petrol) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 41.30 | 330.40 |
| Total hire charges of Machinery | | | | Rs: | 4050.35 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 14.55 | 490.00 | 7129.50 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 8 | Labour cost for shuttering | sqm | 14.55 | 120.75 | 1756.91 |
| | Labour cost for scaffolding @ | 10% | | | 175.69 |
| Total cost of Labour | | | | Rs: | 23829.25 |

| | |
|---|----------------|
| labour component/unit qty | 1637.70 |
| Add contractor's profit and overhead charges | 13.615% 223.00 |
| labour component/unit qty (including contractor's profit) | 1860.70 |

ABSTRACT:

| | | | |
|---|------------------------|------------|----------------|
| A. Cost of Materials | | Rs: | 34933.57 |
| B. Hire charges of Machinery | | Rs: | 4050.35 |
| C. Cost of Labour | | Rs: | 23829.25 |
| | Total | Rs: | 62813.17 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 8552.01 |
| Total cost for | 14.55 cum | Rs: | 71365.18 |
| Rate per cum | (A+B+C+D)/14.55 | Rs. | 4904.80 |

IRR-CCDW-2-7 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates for foundation filling including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts. (Cement content : 220 kg / cum)**
(Cement content: 310 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **14.19 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 4398.90 | 3.68 | 16187.95 |
| | Cement for incidentals @ 3 kg / cum | kg | 42.57 | 3.68 | 156.66 |
| 2 | Coarse aggregate 40-20 mm | cum | 6.39 | 1265.00 | 8077.66 |
| | Coarse aggregate 20-10 mm | cum | 3.83 | 1313.00 | 5030.50 |
| | Coarse aggregate 10 mm below | cum | 2.55 | 967.00 | 2469.91 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.68 | 605.00 | 3433.98 |
| 4 | Super Plasticizer | kg | 17.60 | 55.00 | 967.76 |
| 5 | Use rate of shuttering for 40 uses | sqm | 14.19 | 280.45 | 3979.60 |
| | Scaffolding @ of shuttering | 10% | | | 397.96 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 40718.97 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 2632.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 14.19 | 490.00 | 6953.10 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 8 | Labour cost for shuttering | sqm | 14.19 | 120.75 | 1713.44 |
| | Labour cost for scaffolding @ | 10% | | | 171.34 |
| Total cost of Labour | | | | Rs: | 23605.04 |

labour component/unit qty 1663.50

Add contractor's profit and overhead charges 13.615% 226.50

labour component/unit qty (including contractor's profit) **1890.00****ABSTRACT:**

| | | |
|---|---------------------|-----------------|
| A. Cost of Materials | Rs: | 40718.97 |
| B. Hire charges of Machinery | Rs: | 2632.75 |
| C. Cost of Labour | Rs: | 23605.04 |
| | Total Rs: | 66956.76 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 9116.16 |
| Total cost for | 14.19 cum Rs: | 76072.92 |
| Rate per cum | (A+B+C+D)/14.19 Rs. | 5361.00 |

IRR-CCDW-2-8 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for sub-structure / super- structure works** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **15.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|----------------|------------------|
| 1 | Cement for mix | kg | 4800.00 | 3.68 | 17664.00 |
| | Cement for incidentals @ 5 kg / cum | kg | 75.00 | 3.68 | 276.00 |
| 2 | Coarse aggregate 40-20 mm | cum | 6.75 | 1265.00 | 8538.75 |
| | Coarse aggregate 20-10 mm | cum | 4.05 | 1313.00 | 5317.65 |
| | Coarse aggregate 10 mm below | cum | 2.70 | 967.00 | 2610.90 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.00 | 605.00 | 3630.00 |
| 4 | Super Plasticizer | kg | 19.20 | 55.00 | 1056.00 |
| 5 | Use rate of shuttering | sqm | 30.00 | 280.45 | 8413.53 |
| | Scaffolding @ of shuttering | 25% | | | 2103.38 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 49627.21 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|----------------|------------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 2632.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying including lifting | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying concrete | Day | 15.00 | 490.00 | 7350.00 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 8 | Labour cost for shuttering | sqm | 15.00 | 120.75 | 1811.25 |
| | Labour cost for scaffolding @ | 25% | | | 452.81 |
| Total cost of Labour | | | | Rs: | 24871.21 |

labour component/unit qty 1658.10

Add contractor's profit and overhead charges

13.615% 225.80

labour component/unit qty (including contractor's profit)

1883.90**ABSTRACT:**

A. Cost of Materials

Rs: 49627.21

B. Hire charges of Machinery

Rs: 2632.75

C. Cost of Labour

Rs: 24871.21

Total Rs: 77131.18

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs: 10501.41

Total cost for

15.00 cum Rs: 87632.59

Rate per cum(A+B+C+D)/15.0 Rs: **5842.20**

IRR-CCDW-2-9 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for sub-structure / super- structure works** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.** **(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)**

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 5200.80 | 3.68 | 19138.94 |
| | Cement for incidentals @ 5 kg / cum | kg | 78.80 | 3.68 | 289.98 |
| 2 | Coarse aggregate 20-10 mm | cum | 8.20 | 1313.00 | 10760.30 |
| | Coarse aggregate 10 mm below | cum | 4.41 | 967.00 | 4267.18 |
| 3 | Fine aggregate (Un-Screened) | cum | 7.09 | 605.00 | 4290.66 |
| 4 | Super Plasticizer | kg | 20.80 | 55.00 | 1144.18 |
| 5 | Use rate of shuttering | sqm | 31.52 | 280.45 | 8839.82 |
| | Scaffolding @ of shuttering | 25% | | | 2209.95 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 50958.01 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 2632.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying concrete | Day | 15.76 | 490.00 | 7722.40 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 8 | Labour cost for shuttering | sqm | 31.52 | 120.75 | 3806.04 |
| | Labour cost for scaffolding @ | 25% | | | 951.51 |
| Total cost of Labour | | | | Rs: | 27737.10 |

labour component/unit qty 1760.00

Add contractor's profit and overhead charges 13.615% 239.60

labour component/unit qty (including contractor's profit) **1999.60****ABSTRACT:**

| | | |
|---|---------------------|------------------|
| A. Cost of Materials | Rs: | 50958.01 |
| B. Hire charges of Machinery | Rs: | 2632.75 |
| C. Cost of Labour | Rs: | 27737.10 |
| | Total Rs: | 81327.86 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 11072.79 |
| Total cost for | 15.76 cum Rs: | 92400.651 |
| Rate per cum | (A+B+C+D)/15.76 Rs. | 5863.00 |

IRR-CCDW-2-10 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for sub-structure / super- structure works** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.** (Cement content: 280 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.71 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 4398.80 | 3.68 | 16187.58 |
| | Cement for incidentals @ 5 kg / cum | kg | 78.55 | 3.68 | 289.06 |
| 2 | Coarse aggregate 20-10 mm | cum | 8.17 | 1313.00 | 10726.16 |
| | Coarse aggregate 10 mm below | cum | 4.40 | 967.00 | 4253.64 |
| 3 | Fine aggregate (Un-Screened) | cum | 7.07 | 605.00 | 4277.05 |
| 4 | Super Plasticizer | kg | 17.60 | 55.00 | 967.74 |
| 5 | Use rate of shuttering for 40 uses | sqm | 31.42 | 280.45 | 8811.77 |
| | Scaffolding @ of shuttering | 25% | | | 2202.94 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 47732.95 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 2632.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying concrete | Day | 15.71 | 490.00 | 7697.90 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 8 | Labour cost for shuttering | sqm | 31.42 | 120.75 | 3793.97 |
| | Labour cost for scaffolding @ | 25% | | | 948.49 |
| Total cost of Labour | | | | Rs: | 27697.51 |

labour component/unit qty 1763.00

Add contractor's profit and overhead charges 13.615% 240.00

labour component/unit qty (including contractor's profit) **2003.00****ABSTRACT:**

| | | |
|---|---------------------|------------------|
| A. Cost of Materials | Rs: | 47732.95 |
| B. Hire charges of Machinery | Rs: | 2632.75 |
| C. Cost of Labour | Rs: | 27697.51 |
| | Total Rs: | 78063.20 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 10628.31 |
| Total cost for | 15.71 cum Rs: | 88691.513 |
| Rate per cum | (A+B+C+D)/15.71 Rs. | 5645.50 |

IRR-CCDW-2-11 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for sub-structure / super- structure works** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **18.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 3960.00 | 3.68 | 14572.80 |
| | Cement for incidentals @ 5 kg / cum | kg | 90.00 | 3.68 | 331.20 |
| 2 | Coarse aggregate 20-10 mm | cum | 9.36 | 1313.00 | 12289.68 |
| | Coarse aggregate 10 mm below | cum | 5.04 | 967.00 | 4873.68 |
| 3 | Fine aggregate (Un-Screened) | cum | 8.10 | 605.00 | 4900.50 |
| 4 | Super Plasticizer | kg | 15.84 | 55.00 | 871.20 |
| 5 | Use rate of shuttering for 40 uses | sqm | 36.00 | 280.45 | 10096.24 |
| | Scaffolding @ of shuttering | 25% | | | 2524.06 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 50476.36 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 4 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 2632.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 7 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying concrete | Day | 18.00 | 490.00 | 8820.00 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 8 | Labour cost for shuttering | sqm | 36.00 | 120.75 | 4347.00 |
| | Labour cost for scaffolding @ | 25% | | | 1086.75 |
| Total cost of Labour | | | | Rs: | 29510.90 |

labour component/unit qty 1639.50

Add contractor's profit and overhead charges 13.615% 223.20

labour component/unit qty (including contractor's profit) **1862.70****ABSTRACT:**

| | | |
|---|--------------------|------------------|
| A. Cost of Materials | Rs: | 50476.36 |
| B. Hire charges of Machinery | Rs: | 2632.75 |
| C. Cost of Labour | Rs: | 29510.90 |
| | Total Rs: | 82620.01 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 11248.71 |
| Total cost for | 18.00 cum Rs: | 93868.718 |
| Rate per cum | (A+B+C+D)/18.0 Rs: | 5214.90 |

IRR-CCDW-2-12 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for well kerb** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: If water is to be brought from other place add only lead charges @ 500 ltr / cum.
(Cement content: 350 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 5250.00 | 3.68 | 19320.00 |
| 2 | Coarse aggregate 20-10 mm | cum | 7.80 | 1313.00 | 10241.40 |
| | Coarse aggregate 10 mm below | cum | 4.20 | 967.00 | 4061.40 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.75 | 605.00 | 4083.75 |
| 4 | Super Plasticizer | kg | 21.00 | 55.00 | 1155.00 |
| 5 | Use rate of curved shutter (40 uses) | sqm | 82.50 | 308.50 | 25450.93 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 64329.48 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 15.00 | 490.00 | 7350.00 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 82.50 | 120.75 | 9961.88 |
| Total cost of Labour | | | | Rs: | 31853.83 |

labour component/unit qty 2123.60

Add contractor's profit and overhead charges 13.615% 289.10

labour component/unit qty (including contractor's profit) **2412.70****ABSTRACT:**

| | | |
|---|----------------|--------------------|
| A. Cost of Materials | Rs: | 64329.48 |
| B. Hire charges of Machinery | Rs: | 1761.45 |
| C. Cost of Labour | Rs: | 31853.83 |
| | Total | Rs: 97944.76 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 13335.18 |
| Total cost for | Rs: | 111279.94 |
| Rate per cum | (A+B+C+D)/15.0 | Rs. 7418.70 |

IRR-CCDW-2-13 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for well steining** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing **etc., complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **15.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 4800.00 | 3.68 | 17664.00 |
| | Cement for incidentals @ 2 kg / cum | kg | 30.00 | 3.68 | 110.40 |
| 2 | Coarse aggregate 40-20 mm | cum | 6.75 | 1265.00 | 8538.75 |
| | Coarse aggregate 20-10 mm | cum | 4.05 | 1313.00 | 5317.65 |
| | Coarse aggregate 10 mm below | cum | 2.70 | 967.00 | 2610.90 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.00 | 605.00 | 3630.00 |
| 4 | Super Plasticizer | kg | 19.20 | 55.00 | 1056.00 |
| 5 | Use rate of curved shutter (40 uses) | sqm | 60.00 | 308.50 | 18509.77 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 57454.47 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 15.00 | 490.00 | 7350.00 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 60.00 | 120.75 | 7245.00 |
| Total cost of Labour | | | | Rs: | 29136.95 |

labour component/unit qty 1942.50

Add contractor's profit and overhead charges

13.615% 264.50

labour component/unit qty (including contractor's profit)

2207.00**ABSTRACT:**

A. Cost of Materials

Rs: 57454.47

B. Hire charges of Machinery

Rs: 1761.45

C. Cost of Labour

Rs: 29136.95

Total Rs: 88352.87

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs: 12029.24

Total cost for

15.00 cum Rs: **100382.11****Rate per cum**(A+B+C+D)/15.0 Rs: **6692.10**

IRR-CCDW-2-14 Providing and **laying insitu M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for well bottom plug by tremie or skip box method** including cost of all materials, machinery, labour, batching, mixing, placing in position as per detailed specifications etc., **complete with initial lead upto 50 m and all lifts. (Cement content : 350 kg / cum)** (Cement content: 350 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **14.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|------------------------------|------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 4900.00 | 3.68 | 18032.00 |
| 2 | Coarse aggregate 20-10 mm | cum | 7.28 | 1313.00 | 9558.64 |
| | Coarse aggregate 10 mm below | cum | 3.92 | 967.00 | 3790.64 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.30 | 605.00 | 3811.50 |
| 4 | Super Plasticizer | kg | 19.60 | 55.00 | 1078.00 |
| TOTAL | | | | Rs: | 36270.78 |
| Add for tremie arrangement @ | | | | 1% | Rs: 362.71 |
| Total cost of Materials | | | | Rs: | 36633.49 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Sundries(Hopper etc.) | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 1656.25 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Fitter shuttering | Day | 1.00 | 525.00 | 525.00 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | mazdoor | | | | |
| | for erecting/ dismantling tremie | Day | 4.00 | 490.00 | 1960.00 |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for feeding tremie hopper | Day | 2.00 | 490.00 | 980.00 |
| | for conveying concrete | Day | 16.00 | 490.00 | 7840.00 |
| Total cost of Labour | | | | Rs: | 21654.75 |

labour component/unit qty 1546.80

Add contractor's profit and overhead charges 13.615% 210.60

labour component/unit qty (including contractor's profit) **1757.40****ABSTRACT:**

| | | |
|---|----------------|---------------------|
| A. Cost of Materials | Rs: | 36633.49 |
| B. Hire charges of Machinery | Rs: | 1656.25 |
| C. Cost of Labour | Rs: | 21654.75 |
| Total | Rs: | 59944.49 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 8161.44 |
| Total cost for | 14.00 cum | Rs: 68105.93 |
| Rate per cum | (A+B+C+D)/14.0 | Rs. 4864.70 |

IRR-CCDW-2-15 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for well top plug** including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with **initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 280 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **14.29 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 4001.20 | 3.68 | 14724.42 |
| 2 | Coarse aggregate 40-20 mm | cum | 6.43 | 1265.00 | 8134.58 |
| | Coarse aggregate 20-10 mm | cum | 3.86 | 1313.00 | 5065.95 |
| | Coarse aggregate 10 mm below | cum | 2.57 | 967.00 | 2487.32 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.72 | 605.00 | 3458.18 |
| 4 | Super Plasticizer | kg | 16.00 | 55.00 | 880.26 |
| Total cost of Materials | | | | Rs: | 34750.71 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 14.29 | 490.00 | 7002.10 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| Total cost of Labour | | | | Rs: | 21544.05 |

labour component/unit qty 1507.60

Add contractor's profit and overhead charges 13.615% 205.30

labour component/unit qty (including contractor's profit) **1712.90****ABSTRACT:**

| | | |
|---|---------------------|-----------------|
| A. Cost of Materials | Rs: | 34750.71 |
| B. Hire charges of Machinery | Rs: | 1761.45 |
| C. Cost of Labour | Rs: | 21544.05 |
| | Total Rs: | 58056.21 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 7904.35 |
| Total cost for | 14.29 cum Rs: | 65960.56 |
| Rate per cum | (A+B+C+D)/14.29 Rs. | 4615.90 |

IRR-CCDW-2-16 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for well cap** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**

(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),

CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 5200.80 | 3.68 | 19138.94 |
| | Cement for incidentals @ 5 kg / cum | kg | 78.80 | 3.68 | 289.98 |
| 2 | Coarse aggregate 20-10 mm | cum | 8.20 | 1313.00 | 10760.30 |
| | Coarse aggregate 10 mm below | cum | 4.41 | 967.00 | 4267.18 |
| 3 | Fine aggregate (Un-Screened) | cum | 7.09 | 605.00 | 4290.66 |
| 4 | Super Plasticizer | kg | 20.80 | 55.00 | 1144.18 |
| 5 | Use rate of curved shutter (40 uses) | sqm | 15.76 | 280.45 | 4419.91 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 44328.15 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 15.76 | 490.00 | 7722.40 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 15.76 | 120.75 | 1903.02 |
| Total cost of Labour | | | | Rs: | 24167.37 |

labour component/unit qty 1533.50

Add contractor's profit and overhead charges 13.615% 208.80

labour component/unit qty (including contractor's profit) **1742.30****ABSTRACT:**

A. Cost of Materials Rs: 44328.15

B. Hire charges of Machinery Rs: 1761.45

C. Cost of Labour Rs: 24167.37

Total Rs: 70256.97

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 9565.49

Total cost for 15.76 cum Rs: **79822.46****Rate per cum** (A+B+C+D)/15.76 Rs: **5064.90**

IRR-CCDW-2-17 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates **for piers and abutments** including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum)

DATA: **RATE ANALYSIS** UNIT : **14.40 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 3600.00 | 3.68 | 13248.00 |
| | Cement for incidentals @ 5 kg / cum | kg | 72.00 | 3.68 | 264.96 |
| 2 | Coarse aggregate 80-40 mm | cum | 4.94 | 697.00 | 3442.62 |
| | Coarse aggregate 40-20 mm | cum | 4.23 | 1265.00 | 5355.50 |
| | Coarse aggregate 20-10 mm | cum | 2.82 | 1313.00 | 3705.81 |
| | Coarse aggregate 10 mm below | cum | 2.12 | 967.00 | 2046.95 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.04 | 605.00 | 3049.20 |
| 4 | Super Plasticizer | kg | 14.40 | 55.00 | 792.00 |
| 5 | Use rate of shuttering for 40 uses | sqm | 39.60 | 294.47 | 11661.16 |
| 6 | Scaffolding @ of shuttering | 30% | | | 3498.35 |
| Total cost of Materials | | | | Rs: | 47064.55 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 8.00 | 80.50 | 644.00 |
| | Fuel / Energy charges | Hour | 8.00 | 259.70 | 2077.60 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 60 mm dia (petrol) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 41.30 | 330.40 |
| Total hire charges of Machinery | | | | Rs: | 3179.05 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 6.00 | 490.00 | 2940.00 |
| | for conveying concrete | Day | 14.40 | 490.00 | 7056.00 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 39.60 | 120.75 | 4781.70 |
| | Labour cost for scaffolding @ | 30% | | | 1434.51 |
| Total cost of Labour | | | | Rs: | 29284.16 |

labour component/unit qty 2033.60

Add contractor's profit and overhead charges 13.615% 276.90

labour component/unit qty (including contractor's profit) **2310.50****ABSTRACT:**

| | | |
|---|-----------------|----------------------|
| A. Cost of Materials | Rs: | 47064.55 |
| B. Hire charges of Machinery | Rs: | 3179.05 |
| C. Cost of Labour | Rs: | 29284.16 |
| | Total | Rs: 79527.76 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 10827.7 |
| Total cost for | 14.40 cum | Rs: 90355.455 |
| Rate per cum | (A+B+C+D)/14.40 | Rs. 6274.70 |

IRR-CCDW-2-18 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates **for piers and abutments** including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum)

DATA:

RATE ANALYSISUNIT : **14.55 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|----------------|------------------|
| 1 | Cement for mix | kg | 3201.00 | 3.68 | 11779.68 |
| | Cement for incidentals @ 5 kg / cum | kg | 72.75 | 3.68 | 267.72 |
| 2 | Coarse aggregate 80-40 mm | cum | 4.99 | 697.00 | 3478.48 |
| | Coarse aggregate 40-20 mm | cum | 4.28 | 1265.00 | 5411.29 |
| | Coarse aggregate 20-10 mm | cum | 2.85 | 1313.00 | 3744.41 |
| | Coarse aggregate 10 mm below | cum | 2.14 | 967.00 | 2068.27 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.09 | 605.00 | 3080.96 |
| 4 | Super Plasticizer | kg | 12.80 | 55.00 | 704.22 |
| 5 | Use rate of shuttering for 40 uses | sqm | 40.01 | 294.47 | 11782.63 |
| 6 | Scaffolding @ of shuttering | 30% | | | 3534.79 |
| Total cost of Materials | | | | Rs: | 45852.45 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|----------------|------------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 8.00 | 80.50 | 644.00 |
| | Fuel / Energy charges | Hour | 8.00 | 259.70 | 2077.60 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 60 mm dia (petrol) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 41.30 | 330.40 |
| Total hire charges of Machinery | | | | Rs: | 3179.05 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 6.00 | 490.00 | 2940.00 |
| | for conveying concrete | Day | 14.55 | 490.00 | 7129.50 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 40.01 | 120.75 | 4831.51 |
| | Labour cost for scaffolding @ | 30% | | | 1449.45 |
| Total cost of Labour | | | | Rs: | 29422.41 |

labour component/unit qty 2022.20

Add contractor's profit and overhead charges 13.615% 275.30

labour component/unit qty (including contractor's profit) **2297.50****ABSTRACT:**

A. Cost of Materials Rs: 45852.45

B. Hire charges of Machinery Rs: 3179.05

C. Cost of Labour Rs: 29422.41

Total Rs: 78453.91

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 10681.5

Total cost for 14.55 cum Rs: **89135.41****Rate per cum** (A+B+C+D)/14.55 Rs. **6126.10**

IRR-CCDW-2-19 Providing and **laying insitu vibrated M-10** (28 days cube compressive strength not less than 10 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for piers and abutments** including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 220 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **16.36 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|----------------|------------------|
| 1 | Cement for mix | kg | 3599.20 | 3.68 | 13245.06 |
| | Cement for incidentals @ 5 kg / cum | kg | 81.80 | 3.68 | 301.02 |
| 2 | Coarse aggregate 40-20 mm | cum | 7.36 | 1265.00 | 9312.93 |
| | Coarse aggregate 20-10 mm | cum | 4.42 | 1313.00 | 5799.78 |
| | Coarse aggregate 10 mm below | cum | 2.94 | 967.00 | 2847.62 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.54 | 605.00 | 3959.12 |
| 4 | Super Plasticizer | kg | 14.40 | 55.00 | 791.82 |
| 5 | Use rate of shuttering for 40 uses | sqm | 44.99 | 294.47 | 13248.37 |
| 6 | Scaffolding @ of shuttering | 30% | | | 3974.51 |
| Total cost of Materials | | | | Rs: | 53480.24 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|----------------|------------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 5.00 | 490.00 | 2450.00 |
| | for conveying concrete | Day | 16.36 | 490.00 | 8016.40 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 44.99 | 120.75 | 5432.54 |
| | Labour cost for scaffolding @ 30% | | | | 1629.76 |
| Total cost of Labour | | | | Rs: | 30600.66 |

labour component/unit qty 1870.50

Add contractor's profit and overhead charges 13.615% 254.70

labour component/unit qty (including contractor's profit) **2125.20****ABSTRACT:**

| | | |
|---|---------------------|-----------------|
| A. Cost of Materials | Rs: | 53480.24 |
| B. Hire charges of Machinery | Rs: | 1761.45 |
| C. Cost of Labour | Rs: | 30600.66 |
| | Total Rs: | 85842.34 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 11687.44 |
| Total cost for | 16.36 cum Rs: | 97529.78 |
| Rate per cum | (A+B+C+D)/16.36 Rs. | 5961.50 |

IRR-CCDW-2-20 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for cantiliver / counterfort retaining walls** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 320 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

Note: If water is to be brought from other place add only lead charges @ 500 ltr / cum.

DATA:

RATE ANALYSISUNIT : **16.25 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 5200.00 | 3.68 | 19136.00 |
| | Cement for incidentals @ 5 kg / cum | kg | 81.25 | 3.68 | 299.00 |
| 2 | Coarse aggregate 40-20 mm | cum | 7.31 | 1265.00 | 9250.31 |
| | Coarse aggregate 20-10 mm | cum | 4.39 | 1313.00 | 5760.79 |
| | Coarse aggregate 10 mm below | cum | 2.93 | 967.00 | 2828.48 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.50 | 605.00 | 3932.50 |
| 4 | Super Plasticizer | kg | 20.80 | 55.00 | 1144.00 |
| 5 | Use rate of shuttering for 40 uses | sqm | 52.81 | 280.45 | 14811.32 |
| | Scaffolding @ of shuttering | 25% | | | 3702.83 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 60882.23 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 5.00 | 490.00 | 2450.00 |
| | for conveying concrete | Day | 16.25 | 490.00 | 7962.50 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 52.81 | 120.75 | 6377.11 |
| | Labour cost for scaffolding @ | 25% | | | 1594.28 |
| Total cost of Labour | | | | Rs: | 31455.84 |

labour component/unit qty 1935.70

Add contractor's profit and overhead charges 13.615% 263.50

labour component/unit qty (including contractor's profit) **2199.20****ABSTRACT:**

| | | |
|---|---------------------|------------------|
| A. Cost of Materials | Rs: | 60882.23 |
| B. Hire charges of Machinery | Rs: | 1761.45 |
| C. Cost of Labour | Rs: | 31455.84 |
| | Total Rs: | 94099.51 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 12811.65 |
| Total cost for | 16.25 cum Rs: | 106911.16 |
| Rate per cum | (A+B+C+D)/16.25 Rs: | 6579.10 |

IRR-CCDW-2-21 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **with placing and sinking plums of size 150 to 80 mm upto 15 percent for gravity type retaining walls / piers / abutments** etc., including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.765cum, Blending Ratio of CA-50:30:20, FA : 0.34 cum,
plums of size 150 to 80 mm : 0.25cum)

DATA: **RATE ANALYSIS** UNIT : **18.09 cum**

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|----------------|------------------|
| 1 | Cement for mix | kg | 4703.40 | 3.68 | 17308.51 |
| | Cement for incidentals @ 4 kg / cum | kg | 72.36 | 3.68 | 266.28 |
| 2 | Coarse aggregate 40-20 mm | cum | 6.92 | 1265.00 | 8753.07 |
| | Coarse aggregate 20-10 mm | cum | 4.15 | 1313.00 | 5451.12 |
| | Coarse aggregate 10 mm below | cum | 2.77 | 967.00 | 2676.43 |
| 3 | Plums of size 150 to 80 mm | cum | 4.52 | 385.00 | 1741.16 |
| 4 | Fine aggregate (Un-Screened) | cum | 6.15 | 605.00 | 3721.11 |
| 5 | Super Plasticizer | kg | 18.81 | 55.00 | 1034.75 |
| | Use rate of shuttering for 40 uses | sqm | 49.75 | 280.45 | 13951.74 |
| 6 | Scaffolding @ of shuttering | 30% | | | 4185.52 |
| Total cost of Materials | | | | Rs: | 59089.71 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|----------------|------------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 60 mm dia (petrol) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 41.30 | 330.40 |
| Total hire charges of Machinery | | | | Rs: | 1874.25 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 5.00 | 490.00 | 2450.00 |
| | for placing plums | Day | 2.00 | 490.00 | 980.00 |
| | for conveying concrete | Day | 15.38 | 490.00 | 7536.20 |
| | for conveying plums | Day | 2.00 | 490.00 | 980.00 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour for shuttering | sqm | 49.75 | 120.75 | 6007.01 |
| | Labour for scaffolding @ | 30% | | | 1802.10 |
| Total cost of Labour | | | | Rs: | 32827.26 |

labour component/unit qty 1814.70

Add contractor's profit and overhead charges 13.615% 247.10

labour component/unit qty (including contractor's profit) **2061.80****ABSTRACT:**

| | | |
|---|-----------------|----------------------|
| A. Cost of Materials | Rs: | 59089.71 |
| B. Hire charges of Machinery | Rs: | 1874.25 |
| C. Cost of Labour | Rs: | 32827.26 |
| | Total | Rs: 93791.22 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 12769.68 |
| Total cost for | 18.09 cum | Rs: 106560.90 |
| Rate per cum | (A+B+C+D)/18.09 | Rs. 5890.60 |

IRR-CCDW-2-22 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **40 mm down size** approved, clean, hard, graded aggregates **for cast in-situ pipes** including cost of all materials, machinery, labour, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., complete with **initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 260 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.90cum, Blending Ratio of CA--50:30:20, FA : 0.40 cum)

DATA:

RATE ANALYSISUNIT : **15.38 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 3998.80 | 3.68 | 14715.58 |
| | Cement for incidentals @ 5 kg / cum | kg | 76.90 | 3.68 | 282.99 |
| 2 | Coarse aggregate 40-20 mm | cum | 6.92 | 1265.00 | 8755.07 |
| | Coarse aggregate 20-10 mm | cum | 4.15 | 1313.00 | 5452.36 |
| | Coarse aggregate 10 mm below | cum | 2.77 | 967.00 | 2677.04 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.15 | 605.00 | 3721.96 |
| 4 | Super Plasticizer | kg | 16.00 | 55.00 | 879.74 |
| 5 | Use rate of shuttering for 40 uses | sqm | 30.76 | 294.47 | 9058.01 |
| | Scaffolding @ of shuttering | 15% | | | 1358.70 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 46918.45 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 15.38 | 490.00 | 7536.20 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour for shuttering | sqm | 30.76 | 120.75 | 3714.27 |
| | Labour for scaffolding @ | 15% | | | 557.14 |
| Total cost of Labour | | | | Rs: | 26349.56 |

labour component/unit qty 1713.20

Add contractor's profit and overhead charges 13.615% 233.30

labour component/unit qty (including contractor's profit) **1946.50****ABSTRACT:**

A. Cost of Materials Rs: 46918.45

B. Hire charges of Machinery Rs: 1761.45

C. Cost of Labour Rs: 26349.56

Total Rs: 75029.46

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 10215.26

Total cost for 15.38 cum Rs: **85244.72****Rate per cum** (A+B+C+D)/15.38 Rs: **5542.60**

IRR-CCDW-2-23 Providing and **laying insitu vibrated M-15** (28 days cube compressive strength not less than 15 N / sq mm) grade cement concrete using **80 mm down size** approved, clean, hard, graded aggregates **for cast in-situ pipes** including cost of all materials, labour, machinery, formwork, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 250 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.98cum, Blending Ratio of CA--35:30:20:15, FA : 0.35 cum)

DATA:

RATE ANALYSISUNIT : **14.40 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 3600.00 | 3.68 | 13248.00 |
| | Cement for incidentals @ 5 kg / cum | kg | 72.00 | 3.68 | 264.96 |
| 2 | Coarse aggregate 80-40 mm | cum | 4.94 | 697.00 | 3442.62 |
| | Coarse aggregate 40-20 mm | cum | 4.23 | 1265.00 | 5355.50 |
| | Coarse aggregate 20-10 mm | cum | 2.82 | 1313.00 | 3705.81 |
| | Coarse aggregate 10 mm below | cum | 2.12 | 967.00 | 2046.95 |
| 3 | Fine aggregate (Un-Screened) | cum | 5.04 | 605.00 | 3049.20 |
| 4 | Super Plasticizer | kg | 14.40 | 55.00 | 792.00 |
| 5 | Use rate of shuttering for 40 uses | sqm | 28.80 | 294.47 | 8480.84 |
| 6 | Scaffolding @ of shuttering | 15% | | | 1272.13 |
| Total cost of Materials | | | | Rs: | 41658.01 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 600/400 ltr (diesel) | Hour | 8.00 | 80.50 | 644.00 |
| | Fuel / Energy charges | Hour | 8.00 | 259.70 | 2077.60 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 60 mm dia (petrol) | Hour | 8.00 | 7.20 | 57.60 |
| | Fuel / Energy charges | Hour | 8.00 | 41.30 | 330.40 |
| Total hire charges of Machinery | | | | Rs: | 3179.05 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 14.40 | 490.00 | 7056.00 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 28.80 | 120.75 | 3477.60 |
| | Labour cost for scaffolding @ | 15% | | | 521.64 |
| Total cost of Labour | | | | Rs: | 25597.19 |

labour component/unit qty 1777.60

Add contractor's profit and overhead charges 13.615% 242.00

labour component/unit qty (including contractor's profit) **2019.60****ABSTRACT:**

| | | |
|---|---------------------|-----------------|
| A. Cost of Materials | Rs: | 41658.01 |
| B. Hire charges of Machinery | Rs: | 3179.05 |
| C. Cost of Labour | Rs: | 25597.19 |
| | Total Rs: | 70434.25 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 9589.62 |
| Total cost for | 14.40 cum Rs: | 80023.87 |
| Rate per cum | (A+B+C+D)/14.40 Rs. | 5557.20 |

IRR-CCDW-2-24 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for deck slab & kerb** including cost of all materials,machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 5200.80 | 3.68 | 19138.94 |
| | Cement for incidentals @ 5 kg / cum | kg | 78.80 | 3.68 | 289.98 |
| 2 | Coarse aggregate 20-10 mm | cum | 8.20 | 1313.00 | 10760.30 |
| | Coarse aggregate 10 mm below | cum | 4.41 | 967.00 | 4267.18 |
| 3 | Fine aggregate (Un-Screened) | cum | 7.09 | 605.00 | 4290.66 |
| 4 | Super Plasticizer | kg | 20.80 | 55.00 | 1144.18 |
| 5 | Use rate of shuttering for 30 uses | sqm | 39.40 | 343.00 | 13514.26 |
| | Scaffolding @ of shuttering | 250% | | | 33785.64 |
| 6 | Sundries | LS | 1.00 | 34.00 | 34.00 |
| Total cost of Materials | | | | Rs: | 87225.14 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying concrete | Day | 15.76 | 490.00 | 7722.40 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 39.40 | 120.75 | 4757.55 |
| | Labour cost for scaffolding @ | 250% | | | 11893.88 |
| Total cost of Labour | | | | Rs: | 39990.78 |

labour component/unit qty 2537.50

Add contractor's profit and overhead charges 13.615% 345.50

labour component/unit qty (including contractor's profit) **2883.00****ABSTRACT:**

A. Cost of Materials Rs: 87225.14

B. Hire charges of Machinery Rs: 1761.45

C. Cost of Labour Rs: 39990.78

Total Rs: 128977.36

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 17560.27

Total cost for 15.76 cum Rs: **146537.63****Rate per cum** (A+B+C+D)/15.76 Rs: **9298.10**

IRR-CCDW-2-25 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for columns and beams** including cost of all materials, labour, machinery, formwork, scaffolding, cleaning, batching, mixing, placing in position, levelling, vibrating, **finishing, curing etc.,complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum.**
(Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement),
CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 5200.80 | 3.68 | 19138.94 |
| | Cement for incidentals @ 5 kg / cum | kg | 78.80 | 3.68 | 289.98 |
| 2 | Coarse aggregate 20-10 mm | cum | 8.20 | 1313.00 | 10760.30 |
| | Coarse aggregate 10 mm below | cum | 4.41 | 967.00 | 4267.18 |
| 3 | Fine aggregate (Un-Screened) | cum | 7.09 | 605.00 | 4290.66 |
| 4 | Super Plasticizer | kg | 20.80 | 55.00 | 1144.18 |
| 5 | Use rate of shuttering | sqm | 78.80 | 280.45 | 22099.54 |
| | Scaffolding @ of shuttering | 50% | | | 11049.77 |
| 6 | Sundries | LS | 1.00 | 34.00 | 34.00 |
| Total cost of Materials | | | | Rs: | 73074.56 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 15.76 | 490.00 | 7722.40 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 78.80 | 120.75 | 9515.10 |
| | Labour cost for scaffolding @ | 50% | | | 4757.55 |
| Total cost of Labour | | | | Rs: | 36537.00 |

labour component/unit qty 2318.30

Add contractor's profit and overhead charges 13.615% 315.60

labour component/unit qty (including contractor's profit) **2633.90****ABSTRACT:**

| | | |
|---|---------------------|------------------|
| A. Cost of Materials | Rs: | 73074.56 |
| B. Hire charges of Machinery | Rs: | 1761.45 |
| C. Cost of Labour | Rs: | 36537.00 |
| | Total Rs: | 111373.01 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 15163.43 |
| Total cost for | Rs: | 126536.44 |
| Rate per cum | (A+B+C+D)/15.76 Rs. | 8029.00 |

IRR-CCDW-2-26 Providing and **laying insitu M- 20** (28 days cube compressive strength not less than 20 N / sqmm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for wearing coat** including cost of all materials, machinery, labour, formwork, cleaning, batching, mixing, placing in position in alternate panels, levelling, compacting, finishing, curing, packing joints with asphalt mortar etc., complete **with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum. to the data (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)**

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 5200.80 | 3.68 | 19138.94 |
| | Cement for incidentals @ 5 kg / cum | kg | 78.80 | 3.68 | 289.98 |
| 2 | Coarse aggregate 20-10 mm | cum | 8.20 | 1313.00 | 10760.30 |
| | Coarse aggregate 10 mm below | cum | 4.41 | 967.00 | 4267.18 |
| 3 | Fine aggregate (Un-Screened) | cum | 7.09 | 605.00 | 4290.66 |
| 4 | Super Plasticizer | kg | 20.80 | 55.00 | 1144.18 |
| 5 | Use rate of shuttering | sqm | 7.88 | 280.45 | 2209.95 |
| 6 | Sundries (asphalt mortar etc) | LS | 5.00 | 34.00 | 170.00 |
| Total cost of Materials | | | | Rs: | 42271.19 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (petrol) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 2.00 | 585.00 | 1170.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 4.00 | 490.00 | 1960.00 |
| | for conveying concrete | Day | 15.76 | 490.00 | 7722.40 |
| | for cleaning/ washing/ curing | Day | 2.00 | 490.00 | 980.00 |
| 7 | Labour cost for shuttering | sqm | 7.88 | 120.75 | 951.51 |
| Total cost of Labour | | | | Rs: | 24780.86 |

labour component/unit qty 1572.40

Add contractor's profit and overhead charges 13.615% 214.10

labour component/unit qty (including contractor's profit) **1786.50****ABSTRACT:**

| | | |
|---|---------------------|-----------------|
| A. Cost of Materials | Rs: | 42271.19 |
| B. Hire charges of Machinery | Rs: | 1761.45 |
| C. Cost of Labour | Rs: | 24780.86 |
| | Total Rs: | 68813.50 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 9368.96 |
| Total cost for | 15.76 cum Rs: | 78182.46 |
| Rate per cum | (A+B+C+D)/15.76 Rs. | 4960.80 |

IRR-CCDW-2-27 Providing and **laying insitu vibrated M-20** (28 days cube compressive strength not less than 20 N / sq mm) grade cement concrete using **20 mm down size** approved, clean, hard, graded aggregates **for troughs** including cost of all materials, machinery, labour, formwork, scaffolding, cleaning, batching, mixing, placing in position,levelling, vibrating, finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

Note: **If water is to be brought from other place add only lead charges @ 500 ltr / cum. to the data (Cement content: 330 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA--65:35, FA : 0.45 cum)**

DATA:

RATE ANALYSISUNIT : **15.76 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 5200.80 | 3.68 | 19138.94 |
| | Cement for incidentals @ 5 kg / cum | kg | 78.80 | 3.68 | 289.98 |
| 2 | Coarse aggregate 20-10 mm | cum | 8.20 | 1313.00 | 10760.30 |
| | Coarse aggregate 10 mm below | cum | 4.41 | 967.00 | 4267.18 |
| 3 | Fine aggregate (Un-Screened) | cum | 7.09 | 605.00 | 4290.66 |
| 4 | Super Plasticizer | kg | 20.80 | 55.00 | 1144.18 |
| 5 | Use rate of shuttering for 40 uses | sqm | 70.92 | 280.45 | 19889.59 |
| | Scaffolding @ of shuttering | 25% | | | 4972.40 |
| 6 | Sundries | LS | 0.50 | 34.00 | 17.00 |
| Total cost of Materials | | | | Rs: | 64770.23 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Needle vibrator 40 mm dia (diesel) | Hour | 8.00 | 6.90 | 55.20 |
| | Fuel / Energy charges | Hour | 8.00 | 27.50 | 220.00 |
| Total hire charges of Machinery | | | | Rs: | 1761.45 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Needle vibrator | Hour | 8.00 | 205.90 | 1647.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | | | | |
| | for batching materials | Day | 11.00 | 490.00 | 5390.00 |
| | for loading mortar pans | Day | 4.00 | 490.00 | 1960.00 |
| | for laying | Day | 5.00 | 490.00 | 2450.00 |
| | for conveying concrete | Day | 15.76 | 490.00 | 7722.40 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering | sqm | 70.92 | 120.75 | 8563.59 |
| | Labour cost for scaffolding @ | 25% | | | 2140.90 |
| Total cost of Labour | | | | Rs: | 33948.84 |

labour component/unit qty 2154.10

Add contractor's profit and overhead charges 13.615% 293.30

labour component/unit qty (including contractor's profit) **2447.40****ABSTRACT:**

A. Cost of Materials Rs: 64770.23

B. Hire charges of Machinery Rs: 1761.45

C. Cost of Labour Rs: 33948.84

Total Rs: 100480.51

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 13680.42

Total cost for 15.76 cum Rs: **114160.93****Rate per cum (A+B+C+D)/15.76 Rs: 7243.70**IRR-CCDW-3 **FOUNDATION WELL SINKING WORKS :**IRR-CCDW-3-1 **Sinking RCC wells vertically for foundation of piers and abutments in all kinds of soil, sand**

DATA: Unit = Running meter

Taking output = 1m

diameter of well = 6.00m

(i) Depth below bed level upto 3.0m

Rate of sinking = 0.50 m /hour

a) Labour

0.12 Mate (Mason CI- II) 525.00 day 63.00

1.00 Sinker (skilled) 585.00 day 585.00

2.00 Sinking helper (Semi skilled) 490.00 day 980.00

sub total (a) 1628.00

b) Machinery

| | | |
|---|-------------|---------|
| 2.00 Hire & running charges of crane with grab bucket of 0.75 cum capacity and accessories. | 476.90 hour | 953.80 |
| Fuel Charges | 490.80 hour | 981.60 |
| Crew Charges | 225.20 hour | 450.40 |
| Consumables in sinking @ 10% of machinery charges | | 238.58 |
| sub total (b) | | 2624.38 |
| sub total (a+b) | | 4252.38 |

c) Add for Contractor's profit and overhead charges on (A+B) 13.615% 578.96

Rate per metre = (a+b+c)/1.0 4831.34

or say (Rate upto 3.0m for 6.0 m well sinking)

4831.30

labour component/unit qty 2078.40

Contractor's profit and overhead charges 13.615% 283.00

labour component/unit qty(including contractor's profit) 2361.40

- (ii) Beyond 3m and upto 10m depth
Rate of sinking = 0.33 m per hour.

a) Labour

| | | |
|-------------------------------------|------------|---------|
| 0.15 Mate (Mason Cl- II) | 525.00 day | 78.75 |
| 1.25 Sinker (skilled) | 585.00 day | 731.25 |
| 2.50 Sinking helper (Semi skilled) | 490.00 day | 1225.00 |
| sub total (a) | | 2035.00 |

b) Machinery

| | | |
|---|-------------|---------|
| 3.00 Hire & running charges of crane with grab bucket of 0.75 cum capacity and accessories. | 476.90 hour | 1430.70 |
| Fuel Charges | 490.80 hour | 1472.40 |
| Crew Charges | 225.20 hour | 675.60 |
| Consumables in sinking @ 10% of machinery charges | | 357.87 |
| sub total (b) | | 3936.57 |
| sub total (a+b) | | 5971.57 |

c) Add for Contractor's profit and overhead charges on (A+B) 13.615% 813.03

Rate per metre = (a+b+c) 6784.60

or say (Rate for 3.0m to 10m well sinking) **6784.60**

labour component/unit qty 2710.60

Contractor's profit and overhead charges 13.615% 369.00

labour component/unit qty(including contractor's profit) 3079.60

IRR-CCDW-3-2 **Filling foundation wells with sand in layers of 25 to 30 cm and compacting by watering, ramming as directed including cost of all materials, machinery, labour etc., complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT : **15.00 cum**

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------|------|----------|-------------|----------------|
| 1 | Sand for filling | cum | 15.75 | 460.00 | 7245.00 |
| | | | | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 7245.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nill | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 2 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 2120.00 |

labour component/unit qty 141.30

Add contractor's profit and overhead charges 13.615% 19.20

labour component/unit qty (including contractor's profit) 160.50

ABSTRACT:

| | | | |
|---|-----------------------|------------|---------------|
| A. Cost of Materials | | Rs: | 7245.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 2120.00 |
| | Total | Rs: | 9365.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 1275.04 |
| Total cost for | 15.00 cum | Rs: | 10640.04 |
| Rate per cum | (A+B+C+D)/15.0 | Rs. | 709.30 |

IRR-CCDW-4 **MASONRY WORKS :**

- IRR-CCDW-4-1 Providing and **constructing un-coursed rubble stone masonry** with approved stones in **CM 1 : 4** proportion for **sub-structure portions of return walls / abutments** etc., including cost of all materials, machinery, labour, scaffolding, cleaning, packing cement mortar, wedging stone chips, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 143 kg / cum of masonry, rubble stones : 0.85cum, FA : 0.40 cum, Stone Chips : 0.15 cum)

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Cement | kg | 1430.00 | 3.68 | 5262.40 |
| 2 | Rubble stones | cum | 8.50 | 359.00 | 3051.50 |
| 3 | Stone chips | cum | 1.50 | 385.00 | 577.50 |
| 4 | Sand (Screened) | cum | 4.00 | 700.00 | 2800.00 |
| Total cost of Materials | | | | Rs: | 11691.40 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| Total hire charges of Machinery | | | | Rs: | 940.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|---|------|----------|-------------|----------------|
| 1 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | Mason Class-II | Day | 2.00 | 525.00 | 1050.00 |
| 6 | mazdoor | | | | |
| | for conveying rubble stones | Day | 4.00 | 490.00 | 1960.00 |
| | for preparing mortar | Day | 2.00 | 490.00 | 980.00 |
| | for loading mortar pans | Day | 1.00 | 490.00 | 490.00 |
| | for laying & packing mortar | Day | 3.00 | 490.00 | 1470.00 |
| | for washing rubble / finishing / curing | Day | 1.00 | 490.00 | 490.00 |
| | for conveying mortar / chips | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 9921.95 |

| | |
|---|----------------|
| labour component/unit qty | 992.20 |
| Add contractor's profit and overhead charges | 13.615% 135.10 |
| labour component/unit qty (including contractor's profit) | 1127.30 |

ABSTRACT:

| | | | |
|---|-----------------------|------------|----------------|
| A. Cost of Materials | | Rs: | 11691.40 |
| B. Hire charges of Machinery | | Rs: | 940.75 |
| C. Cost of Labour | | Rs: | 9921.95 |
| | Total | Rs: | 22554.10 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 3070.74 |
| Total cost for | 10.00 cum | Rs: | 25624.84 |
| Rate per cum | (A+B+C+D)/10.0 | Rs. | 2562.50 |

IRR-CCDW-4-2 Providing and **constructing un-coursed rubble stone masonry** with approved stones in **CM 1 : 4** proportion for **super-structure portions of return walls / abutments** etc., including cost of all materials, machinery, labour, scaffolding, cleaning, packing cement mortar, wedging stone chips, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 143 kg / cum of masonry, rubble stones : 0.85cum, FA : 0.40 cum, Stone Chips : 0.15 cum)

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Cement | kg | 1430.00 | 3.68 | 5262.40 |
| 2 | Rubble stones | cum | 8.50 | 359.00 | 3051.50 |
| 3 | Stone chips | cum | 1.50 | 385.00 | 577.50 |
| 4 | Sand (Screened) | cum | 4.00 | 700.00 | 2800.00 |
| TOTAL | | | | Rs: | 11691.40 |
| Add for scaffolding @ | | | | 2.5% | Rs: 292.29 |
| Total cost of Materials | | | | Rs: | 11983.69 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| Total hire charges of Machinery | | | | Rs: | 940.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | Mason Class-II | Day | 2.00 | 525.00 | 1050.00 |
| 6 | mazdoor | | | | |
| | for conveying rubble stones | Day | 4.00 | 490.00 | 1960.00 |
| | for preparing mortar | Day | 2.00 | 490.00 | 980.00 |
| | for loading mortar pans | Day | 1.00 | 490.00 | 490.00 |
| | for laying & packing mortar | Day | 3.00 | 490.00 | 1470.00 |
| | for washing rubble / finishing / curing | Day | 1.00 | 490.00 | 490.00 |
| | for conveying mortar / chips | Day | 4.00 | 490.00 | 1960.00 |
| TOTAL | | | | Rs: | 9921.95 |
| Add for labour for scaffolding @ | | | | 2.5% | Rs: 248.05 |
| Total cost of Labour | | | | Rs: | 10170.00 |

labour component/unit qty 1017.00

Add contractor's profit and overhead charges 13.615% 138.50

labour component/unit qty (including contractor's profit) **1155.50****ABSTRACT:**

| | | |
|---|----------------|--------------------|
| A. Cost of Materials | Rs: | 11983.69 |
| B. Hire charges of Machinery | Rs: | 940.75 |
| C. Cost of Labour | Rs: | 10170.00 |
| | Total Rs: | 23094.43 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 3144.31 |
| Total cost for | Rs: | 26238.74 |
| Rate per cum | (A+B+C+D)/10.0 | Rs. 2623.90 |

IRR-CCDW-4-3 Providing and **constructing coursed rubble masonry second sort** in **CM 1:4** proportion with stones from approved source including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, finishing, curing etc., complete with **initial lead upto 50 m and initial lift upto 3m.**

(Cement content: 133 kg / cum of masonry, rubble stones : 0.45cum, FA : 0.35 cum, Stone Chips : 0.15 cum, Khandki stones 25 x 25 x 30 cm : 180 Nos, Header stones 25 x 25x 45 cm : 60 Nos)

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|----------------------------|------|----------|-------------|-----------------|
| 1 | Cement | kg | 1330.00 | 3.68 | 4894.40 |
| 2 | Header stones 25x25x45 cm | Nos | 60.00 | 43.00 | 2580.00 |
| 3 | Khandki stones 25x25x30 cm | Nos | 180.00 | 20.00 | 3600.00 |
| 4 | Rubble stones | cum | 4.50 | 359.00 | 1615.50 |
| 5 | Stone chips | cum | 1.50 | 385.00 | 577.50 |
| 6 | Sand (Screened) | cum | 3.50 | 700.00 | 2450.00 |
| TOTAL | | | | Rs: | 15717.40 |
| Add for scaffolding materials @ | | | | 2.5% | Rs: 392.94 |
| Total cost of Materials | | | | Rs: | 16110.34 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| Total hire charges of Machinery | | | | Rs: | 940.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Stone chiseller CI -II | Day | 3.00 | 525.00 | 1575.00 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | Mason Class-II | Day | 2.00 | 525.00 | 1050.00 |
| 7 | mazdoor | | | | |
| | for conveying stones / rubble | Day | 4.00 | 490.00 | 1960.00 |
| | for preparation of mortar | Day | 3.00 | 490.00 | 1470.00 |
| | for loading mortar pans | Day | 1.00 | 490.00 | 490.00 |
| | for laying & packing mortar | Day | 3.00 | 490.00 | 1470.00 |
| | for washing rubble / finishing / curing | Day | 1.00 | 490.00 | 490.00 |
| | for conveying mortar / chips | Day | 2.00 | 490.00 | 980.00 |
| TOTAL | | | | Rs: | 11006.95 |
| Add for labour for scaffolding @ | | | | 2.5% | Rs: 275.17 |
| Total cost of Labour | | | | Rs: | 11282.12 |

labour component/unit qty 1128.20

Add contractor's profit and overhead charges 13.615% 153.60

labour component/unit qty (including contractor's profit) **1281.80****ABSTRACT:**

| | | |
|---|----------------|---------------------|
| A. Cost of Materials | Rs: | 16110.34 |
| B. Hire charges of Machinery | Rs: | 940.75 |
| C. Cost of Labour | Rs: | 11282.12 |
| | Total | Rs: 28333.21 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 3857.57 |
| Total cost for | 10.00 cum | Rs: 32190.78 |
| Rate per cum | (A+B+C+D)/10.0 | Rs: 3219.08 |

IRR-CCDW-4-4 Providing and **constructing coursed rubble masonry first sort** in **CM 1:4** proportion with stones from approved source including cost of all materials, machinery, labour, scaffolding, ramps, cleaning, packing mortar, wedging stone chips, finishing, curing etc., complete with **initial lead upto 50 m and initial lift upto 3 m.**

(Cement content: 133 kg / cum of masonry, rubble stones : 0.45cum, FA : 0.35 cum, Stone Chips : 0.15 cum, Khandki stones 25 x 25 x 30 cm : 180 Nos, Header stones 25 x 25x 45 cm : 60 Nos)

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------------------------------|----------------------------|------|----------|-------------|-----------------|
| 1 | Cement | kg | 1330.00 | 3.68 | 4894.40 |
| 2 | Header stones 25x25x45 cm | Nos | 60.00 | 43.00 | 2580.00 |
| 3 | Khandki stones 25x25x30 cm | Nos | 180.00 | 20.00 | 3600.00 |
| 4 | Rubble stones | cum | 4.50 | 359.00 | 1615.50 |
| 5 | Stone chips | cum | 1.50 | 385.00 | 577.50 |
| 6 | Sand (Screened) | cum | 3.50 | 700.00 | 2450.00 |
| TOTAL | | | | Rs: | 15717.40 |
| Add for scaffolding materials @ 2.5% | | | | Rs: | 392.94 |
| Total cost of Materials | | | | Rs: | 16110.34 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| Total hire charges of Machinery | | | | Rs: | 940.75 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------------|---|------|----------|-------------|-----------------|
| 1 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 4 | Stone chiseller CI -II | Day | 6.00 | 525.00 | 3150.00 |
| 5 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 6 | Mason Class-II | Day | 2.00 | 525.00 | 1050.00 |
| 7 | mazdoor | | | | |
| 8 | for conveying rubble/ stones | Day | 4.00 | 490.00 | 1960.00 |
| | for preparation of mortar | Day | 3.00 | 490.00 | 1470.00 |
| | for loading mortar pans | Day | 1.00 | 490.00 | 490.00 |
| | for laying & packing mortar | Day | 3.00 | 490.00 | 1470.00 |
| | for washing rubble / finishing / curing | Day | 1.00 | 490.00 | 490.00 |
| | for conveying mortar / chips | Day | 2.00 | 490.00 | 980.00 |
| TOTAL | | | | Rs: | 12581.95 |
| Add for labour for scaffolding @ 2.5% | | | | Rs: | 314.55 |
| Total cost of Labour | | | | Rs: | 12896.50 |

labour component/unit qty 1289.60

Add contractor's profit and overhead charges 13.615% 175.60

labour component/unit qty (including contractor's profit) **1465.20****ABSTRACT:**

| | | |
|---|----------------|---------------------|
| A. Cost of Materials | Rs: | 16110.34 |
| B. Hire charges of Machinery | Rs: | 940.75 |
| C. Cost of Labour | Rs: | 12896.50 |
| | Total | Rs: 29947.58 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 4077.36 |
| Total cost for | 10.00 cum | Rs: 34024.94 |
| Rate per cum | (A+B+C+D)/10.0 | Rs. 3402.50 |

IRR-CCDW-4-5 Providing cement mortar pointing to coursed rubble face stone masonry in CM 1 : 2

proportion by volume including raking and cleaning joints for 50 mm depth, pressing cement mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--|-----------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 456.00 | 3.68 | 1678.08 |
| 2 | Sand (Screened) | cum | 0.75 | 700.00 | 525.00 |
| TOTAL | | | | Rs: | 2203.08 |
| Add for scaffolding / ramps etc @ 2.5% | | | | Rs: | 55.08 |
| Total cost of Materials | | | | Rs: | 2258.16 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Mason Cl- I | Day | 10.00 | 585.00 | 5850.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 10.00 | 490.00 | 4900.00 |
| Total cost of Labour | | | | Rs: | 11390.00 |

labour component/unit qty 113.90

Add contractor's profit and overhead charges 13.615% 15.50

labour component/unit qty (including contractor's profit) **129.40****ABSTRACT:**

| | | |
|---|---------------------|-----------------|
| A. Cost of Materials | Rs: | 2258.16 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 11390.00 |
| Total | Rs: | 13648.16 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 1858.2 |
| Total cost for | 100.00 sqm Rs: | 15506.36 |
| Rate per sqm | (A+B+C+D)/100.0 Rs. | 155.10 |

IRR-CCDW-4-6 Providing cement mortar pointing to coursed rubble face stone masonry in CM 1 : 3

proportion by volume including raking and cleaning joints for 50 mm depth, pressing cement mortar into joints, cost of all materials, labour, scaffolding, finishing, curing etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------------|-----------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 322.00 | 3.68 | 1184.96 |
| 2 | Sand (Screened) | cum | 0.75 | 700.00 | 525.00 |
| TOTAL | | | | Rs: | 1709.96 |
| Add for scaffolding / ramps etc @ | | | | 2.5% Rs: | 42.75 |
| Total cost of Materials | | | | Rs: | 1752.71 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Mason Cl- I | Day | 10.00 | 585.00 | 5850.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 10.00 | 490.00 | 4900.00 |
| Total cost of Labour | | | | Rs: | 11390.00 |

labour component/unit qty 113.90

Add contractor's profit and overhead charges 13.615% 15.50

labour component/unit qty (including contractor's profit) **129.40****ABSTRACT:**

| | | |
|---|---------------------|-----------------|
| A. Cost of Materials | Rs: | 1752.71 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 11390.00 |
| Total | Rs: | 13142.71 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 1789.38 |
| Total cost for | 100.00 sqm Rs: | 14932.09 |
| Rate per sqm | (A+B+C+D)/100.0 Rs. | 149.30 |

IRR-CCDW-4-7 **Providing 12 mm thick plastering in cement mortar 1:3** proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------------|-----------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 629.00 | 3.68 | 2314.72 |
| 2 | Sand (Screened) | cum | 1.32 | 700.00 | 924.00 |
| TOTAL | | | | Rs: | 3238.72 |
| Add for scaffolding / ramps etc @ | | | | 2.5% | Rs: 80.97 |
| Total cost of Materials | | | | Rs: | 3319.69 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Mason Cl- I | Day | 10.00 | 585.00 | 5850.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 20.00 | 490.00 | 9800.00 |
| Total cost of Labour | | | | Rs: | 16290.00 |

labour component/unit qty 162.90

Add contractor's profit and overhead charges 13.615% 22.20

labour component/unit qty (including contractor's profit) **185.10****ABSTRACT:**

| | | |
|---|-----------------|---------------------|
| A. Cost of Materials | Rs: | 3319.69 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 16290.00 |
| | Total | Rs: 19609.69 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 2669.86 |
| Total cost for | 100.00 sqm | Rs: 22279.55 |
| Rate per sqm | (A+B+C+D)/100.0 | Rs. 222.80 |

IRR-CCDW-4-8 **Providing 12 mm thick plastering in cement mortar 1:4** proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------------|-----------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 472.00 | 3.68 | 1736.96 |
| 2 | Sand (Screened) | cum | 1.32 | 700.00 | 924.00 |
| TOTAL | | | | Rs: | 2660.96 |
| Add for scaffolding / ramps etc @ | | | | 2.5% | Rs: 66.52 |
| Total cost of Materials | | | | Rs: | 2727.48 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Mason Cl- I | Day | 10.00 | 585.00 | 5850.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 20.00 | 490.00 | 9800.00 |
| Total cost of Labour | | | | Rs: | 16290.00 |

| | |
|---|---------------|
| labour component/unit qty | 162.90 |
| Add contractor's profit and overhead charges | 13.615% 22.20 |
| labour component/unit qty (including contractor's profit) | 185.10 |

ABSTRACT:

| | | | |
|---|------------------------|------------|------------------|
| A. Cost of Materials | | Rs: | 2727.48 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 16290.00 |
| | Total | Rs: | 19017.48 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 2589.23 |
| Total cost for | 100.00 sqm | Rs: | 21606.714 |
| Rate per sqm | (A+B+C+D)/100.0 | Rs. | 216.10 |

IRR-CCDW-4-9 **Providing 20 mm thick plastering in cement mortar 1:3 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------------|-----------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 1050.00 | 3.68 | 3864.00 |
| 2 | Sand (Screened) | cum | 2.20 | 700.00 | 1540.00 |
| TOTAL | | | | Rs: | 5404.00 |
| Add for scaffolding / ramps etc @ | | | | 2.5% | Rs: 135.10 |
| Total cost of Materials | | | | Rs: | 5539.10 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Mason Cl- I | Day | 15.00 | 585.00 | 8775.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 25.00 | 490.00 | 12250.00 |
| Total cost of Labour | | | | Rs: | 21665.00 |

| | |
|---|---------------|
| labour component/unit qty | 216.70 |
| Add contractor's profit and overhead charges | 13.615% 29.50 |
| labour component/unit qty (including contractor's profit) | 246.20 |

ABSTRACT:

| | | | |
|---|------------------------|------------|-----------------|
| A. Cost of Materials | | Rs: | 5539.10 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 21665.00 |
| | Total | Rs: | 27204.10 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 3703.84 |
| Total cost for | 100.00 sqm | Rs: | 30907.94 |
| Rate per sqm | (A+B+C+D)/100.0 | Rs. | 309.10 |

IRR-CCDW-4-10 **Providing 20 mm thick plastering in cement mortar 1:4 proportion by volume including cost of all materials, machinery, labour, scaffolding, cleaning joints, smooth finishing, curing etc., complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **100.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-----------------------------------|-----------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 788.00 | 3.68 | 2899.84 |
| 2 | Sand (Screened) | cum | 2.20 | 700.00 | 1540.00 |
| TOTAL | | | | Rs: | 4439.84 |
| Add for scaffolding / ramps etc @ | | | | 2.5% | Rs: 111.00 |
| Total cost of Materials | | | | Rs: | 4550.84 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------|------|--------------|--------------|---------------|
| 1 | Nil (Manual mixing) | | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Mason CI- I | Day | 15.00 | 585.00 | 8775.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 25.00 | 490.00 | 12250.00 |
| Total cost of Labour | | | | Rs: | 21665.00 |

labour component/unit qty 216.70

Add contractor's profit and overhead charges 13.615% 29.50

labour component/unit qty (including contractor's profit) **246.20****ABSTRACT:**

| | | |
|---|-----------------|----------------------|
| A. Cost of Materials | Rs: | 4550.84 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 21665.00 |
| Total | Rs: | 26215.84 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 3569.29 |
| Total cost for | 100.00 sqm | Rs: 29785.126 |
| Rate per sqm | (A+B+C+D)/100.0 | Rs. 297.90 |

IRR-CCDW-5 **COPING & RAILING WORKS :**

IRR-CCDW-5-1 Providing and fixing **10 cm thick roughly dressed burnt stone slabs for coping** set in **CM 1: 6** proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto **50 m and all lifts.**
(Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm,
Burnt stone slab 10 cm thick 1.05 sqm/ sqm)

DATA:

RATE ANALYSISUNIT : **10.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 75.00 | 3.68 | 276.00 |
| 2 | Sand (Screened) | cum | 0.30 | 700.00 | 210.00 |
| 3 | Burnt stone slab 10 cm thick | sqm | 10.50 | 324.00 | 3402.00 |
| Total cost of Materials | | | | Rs: | 3888.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------|------|--------------|--------------|---------------|
| 1 | Nil (Manual mixing) | | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------------|------|----------|-------------|----------------|
| 1 | Mason CI- II | Day | 1.00 | 525.00 | 525.00 |
| 2 | Stone chiseller CI- II | Day | 1.00 | 525.00 | 525.00 |
| 3 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 4 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 2350.00 |

labour component/unit qty 235.00

Add contractor's profit and overhead charges 13.615% 32.00

labour component/unit qty (including contractor's profit) **267.00****ABSTRACT:**

| | | |
|---|----------------|-------------------|
| A. Cost of Materials | Rs: | 3888.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2350.00 |
| Total | Rs: | 6238.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 849.3 |
| Total cost for | 10.00 sqm | Rs: 7087.3 |
| Rate per sqm | (A+B+C+D)/10.0 | Rs. 708.70 |

IRR-CCDW-5-2 Providing and fixing **10 cm thick one line dressed burnt stone slabs for coping** set in **CM 1 : 6** proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto **50 m and all lifts.**
(Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm thick 1.05 sqm/ sqm)

DATA:

RATE ANALYSISUNIT : **10.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 75.00 | 3.68 | 276.00 |
| 2 | Sand (Screened) | cum | 0.30 | 700.00 | 210.00 |
| 3 | Burnt stone slab 10 cm thick | sqm | 10.50 | 324.00 | 3402.00 |
| Total cost of Materials | | | | Rs: | 3888.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Mason CI- II | Day | 1.00 | 525.00 | 525.00 |
| 2 | Stone chiseller CI- I | Day | 4.00 | 580.00 | 2320.00 |
| 3 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 4 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 4145.00 |

labour component/unit qty 414.50

Add contractor's profit and overhead charges 13.615% 56.40

labour component/unit qty (including contractor's profit) **470.90****ABSTRACT:**

| | | |
|---|--------------------|----------------|
| A. Cost of Materials | Rs: | 3888.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 4145.00 |
| | Total Rs: | 8033.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 1093.69 |
| Total cost for | 10.00 sqm Rs: | 9126.69 |
| Rate per sqm | (A+B+C+D)/10.0 Rs. | 912.70 |

IRR-CCDW-5-3 Providing and fixing **10 cm thick two line dressed burnt stone slabs for coping** set in **CM 1 : 6** proportion by volume with pointing to joints in CM 1 : 3 proportion by volume including cost of all materials, machinery, labour, finishing, curing etc., complete with initial lead upto **50 m and all lifts.**
(Cement content: 7.5 kg / sqm, FA : 0.030 cum/sqm, Burnt stone slab 10 cm thick 1.05 sqm/ sqm)

DATA:

RATE ANALYSISUNIT : **10.00 sqm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 75.00 | 3.68 | 276.00 |
| 2 | Sand (Screened) | cum | 0.30 | 700.00 | 210.00 |
| 3 | Burnt stone slab 10 cm thick | sqm | 10.50 | 324.00 | 3402.00 |
| Total cost of Materials | | | | Rs: | 3888.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------------|------|----------|-------------|----------------|
| 1 | Mason CI- II | Day | 1.00 | 525.00 | 525.00 |
| 2 | Stone chiseller CI-I | Day | 8.00 | 580.00 | 4640.00 |
| 3 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 4 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 6465.00 |

labour component/unit qty 646.50

Add contractor's profit and overhead charges 13.615% 88.00

labour component/unit qty (including contractor's profit) **734.50****ABSTRACT:**

| | | |
|---|--------------------|-----------------|
| A. Cost of Materials | Rs: | 3888.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 6465.00 |
| Total | Rs: | 10353.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 1409.56 |
| Total cost for | 10.00 sqm Rs: | 11762.56 |
| Rate per sqm | (A+B+C+D)/10.0 Rs: | 1176.30 |

IRR-CCDW-5-4 Providing and **laying insitu M-15** (28 days cube compressive strength not less than 15 N / sqmm) grade cement concrete using **20 mm down size** approved clean, hard, graded aggregates for coping slab including cost of all materials, machinery, labour, formwork, cleaning surface, batching, mixing, placing in position, levelling, compacting, finishing, curing etc., **complete with initial lead upto 50 m and initial lift upto 3 m.**
(Cement content: 300 kg / cum with use of super plasticiser(0.4% by wt. of cement), CA : 0.80cum, Blending Ratio of CA-65:35, FA : 0.45 cum)

DATA:

RATE ANALYSISUNIT : **14.67 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|-----------------|
| 1 | Cement for mix | kg | 4401.00 | 3.68 | 16195.68 |
| | Cement for incidentals @ 5 kg / cum | kg | 73.35 | 3.68 | 269.93 |
| 2 | Coarse aggregate 20-10 mm | cum | 7.63 | 1313.00 | 10016.09 |
| | Coarse aggregate 10 mm below | cum | 4.11 | 967.00 | 3972.05 |
| 3 | Fine aggregate (Un-Screened) | cum | 6.60 | 605.00 | 3993.91 |
| 4 | Super Plasticizer | kg | 17.60 | 55.00 | 968.22 |
| 5 | Use rate of shuttering | sqm | 80.69 | 280.45 | 22628.19 |
| 6 | Sundries | sqm | 1.00 | 34.00 | 34.00 |
| Total cost of Materials | | | | Rs: | 58078.07 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Concrete mixer 300/200 ltr (diesel) | Hour | 8.00 | 47.30 | 378.40 |
| | Fuel / Energy charges | Hour | 8.00 | 129.80 | 1038.40 |
| 2 | 5 hp pump (diesel) | Hour | 0.50 | 9.10 | 4.55 |
| | Fuel / Energy charges | Hour | 0.50 | 129.80 | 64.90 |
| 3 | Water tanker 8000 ltr | Hour | 1.00 | 380.50 | 380.50 |
| | Fuel / Energy charges | Hour | 1.00 | 490.80 | 490.80 |
| Total hire charges of Machinery | | | | Rs: | 2357.55 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--|------|----------|-------------|-----------------|
| 1 | Crew for Concrete mixer | Hour | 8.00 | 286.00 | 2288.00 |
| 2 | Crew for Pump | Hour | 0.50 | 143.50 | 71.75 |
| 3 | Crew for Water tanker | Hour | 1.00 | 225.20 | 225.20 |
| 4 | Mason Class-I | Day | 1.00 | 585.00 | 585.00 |
| 5 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 6 | mazdoor | Day | 11.00 | 490.00 | 5390.00 |
| | for batching materials | Day | 4.00 | 490.00 | 1960.00 |
| | for loading mortar pans | Day | 3.00 | 490.00 | 1470.00 |
| | for conveying concrete | Day | 14.67 | 490.00 | 7188.30 |
| | for cleaning/ washing/ curing | Day | 1.00 | 490.00 | 490.00 |
| 7 | Labour cost for shuttering/scaffolding | sqm | 80.69 | 120.75 | 9742.71 |
| Total cost of Labour | | | | Rs: | 30050.96 |

| | |
|---|----------------|
| labour component/unit qty | 2048.50 |
| Add contractor's profit and overhead charges | 13.615% 278.90 |
| labour component/unit qty (including contractor's profit) | 2327.40 |

ABSTRACT:

| | | | |
|---|-----------------|-----|------------------|
| A. Cost of Materials | | Rs: | 58078.07 |
| B. Hire charges of Machinery | | Rs: | 2357.55 |
| C. Cost of Labour | | Rs: | 30050.96 |
| | Total | Rs: | 90486.58 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 12319.75 |
| Total cost for | 14.67 cum | Rs: | 102806.33 |
| Rate per cum | (A+B+C+D)/14.67 | Rs. | 7007.90 |

IRR-CCDW-5-5 Providing and **constructing protective railing** consisting of in-situ railing posts of size 15 x 15 cm at bottom, 10 x 10 cm at top and 75 cm height at 2 m centre to centre in **M-20** grade concrete using **20 mm down size** graded aggregates and with each post reinforced by 4 Nos. of 8 mm dia main bars embedded in kerb concrete for a depth of 40 cm and 5 Nos. of 6 mm dia. stirrups including fixing 3 rows of 40 mm dia. GI pipes with one coat of red oxide primer and two coats of synthetic enamel paint, cost of all materials, machinery, labour, formwork, finishing, curing etc., complete **with lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **10.00 Rm****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 30.00 | 3.68 | 110.40 |
| 2 | 20-10 mm coarse aggregate | cum | 0.04 | 1313.00 | 52.52 |
| 3 | 10-4.75 mm coarse aggregate | cum | 0.02 | 967.00 | 19.34 |
| 4 | Fine aggregate (Un-Screened) | cum | 0.04 | 605.00 | 24.20 |
| 5 | Reinforcement steel | kg | 16.39 | 52.50 | 860.48 |
| 6 | 40 mm dia GI pipes B class | Rm | 30.00 | 237.00 | 7110.00 |
| 7 | Use rate of shuttering | sqm | 3.00 | 280.45 | 841.35 |
| 8 | Sundries (paints/ binding wire etc) | LS | 4.00 | 34.00 | 136.00 |
| Total cost of Materials | | | | Rs: | 9154.29 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------|------|----------|-------------|----------------|
| 1 | Mason Class I | Day | 0.50 | 585.00 | 292.50 |
| 2 | Bar bender | Day | 0.50 | 700.00 | 350.00 |
| 3 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 4 | mazdoor | Day | 1.50 | 490.00 | 735.00 |
| 5 | Painter CI- II | Day | 0.50 | 525.00 | 262.50 |
| 6 | Fitter shuttering | Day | 0.50 | 525.00 | 262.50 |
| Total cost of Labour | | | | Rs: | 2222.50 |

| | |
|---|---------------|
| labour component/unit qty | 222.30 |
| Add contractor's profit and overhead charges | 13.615% 30.30 |
| labour component/unit qty (including contractor's profit) | 252.60 |

ABSTRACT:

| | | | |
|---|----------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 9154.29 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 2222.50 |
| | Total | Rs: | 11376.79 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 1548.95 |
| Total cost for | 10.00 Rm | Rs: | 12925.74 |
| Rate per Rm | (A+B+C+D)/10.0 | Rs. | 1292.60 |

IRR-CCDW-6 **HUME PIPE LAYING & JOINTING WORKS :**

IRR-CCDW-6-1 Laying and jointing 300 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto **50 m and all lifts.**
(Cement content: 9.9 kg / joint, FA : 0.01cum/joint, Hemp Yarn : 0.091kg/joint)

DATA:

RATE ANALYSISUNIT : **10.00 Joints****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|---------------|
| 1 | Cement | kg | 99.00 | 3.68 | 364.32 |
| 2 | Sand (Screened) | cum | 0.10 | 700.00 | 70.00 |
| 3 | Hemp yarn | kg | 0.91 | 79.00 | 71.89 |
| Total cost of Materials | | | | Rs: | 506.21 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | Mason Cl- II | Day | 2.00 | 525.00 | 1050.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 3160.00 |

labour component/unit qty 316.00

Add contractor's profit and overhead charges 13.615% 43.00

labour component/unit qty (including contractor's profit) **359.00****ABSTRACT:**

| | | |
|---|--------------------|----------------|
| A. Cost of Materials | Rs: | 506.21 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 3160.00 |
| | Total Rs: | 3666.21 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 499.15 |
| Total cost for | 10.00 Joints Rs: | 4165.36 |
| Rate per joint | (A+B+C+D)/10.0 Rs: | 416.50 |

Note:

- (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-2 Laying and jointing 450 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto **50 m and all lifts.**
(Cement content: 17.4 kg / joint, FA : 0.022cum/joint, Hemp Yarn : 0.127kg/joint)

DATA:

RATE ANALYSISUNIT : **10.00 Joints****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|---------------|
| 1 | Cement | kg | 174.00 | 3.68 | 640.32 |
| 2 | Sand (Screened) | cum | 0.22 | 700.00 | 154.00 |
| 3 | Hemp yarn | kg | 1.27 | 79.00 | 100.33 |
| Total cost of Materials | | | | Rs: | 894.65 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | Mason CI- II | Day | 2.00 | 525.00 | 1050.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 3160.00 |

labour component/unit qty 316.00

Add contractor's profit and overhead charges 13.615% 43.00

labour component/unit qty (including contractor's profit) **359.00****ABSTRACT:**

| | | |
|---|----------------|--------------------|
| A. Cost of Materials | Rs: | 894.65 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 3160.00 |
| Total | Rs: | 4054.65 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 552.04 |
| Total cost for | 10.00 Joints | Rs: 4606.69 |
| Rate per joint | (A+B+C+D)/10.0 | Rs. 460.70 |

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
 (2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-3 Laying and **jointing 600 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2** proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**
(Cement content: 24.8 kg / joint, FA : 0.025cum/joint, Hemp Yarn : 0.22kg/joint)

DATA:

RATE ANALYSISUNIT : **10.00 Joints****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 248.00 | 3.68 | 912.64 |
| 2 | Sand (Screened) | cum | 0.25 | 700.00 | 175.00 |
| 3 | Hemp yarn | kg | 2.20 | 79.00 | 173.80 |
| Total cost of Materials | | | | Rs: | 1261.44 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | Mason CI- II | Day | 2.50 | 525.00 | 1312.50 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 3912.50 |

labour component/unit qty 391.30

Add contractor's profit and overhead charges 13.615% 53.30

labour component/unit qty (including contractor's profit) **444.60****ABSTRACT:**

| | | |
|---|----------------|--------------------|
| A. Cost of Materials | Rs: | 1261.44 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 3912.50 |
| Total | Rs: | 5173.94 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 704.43 |
| Total cost for | 10.00 Joints | Rs: 5878.37 |
| Rate per joint | (A+B+C+D)/10.0 | Rs. 587.80 |

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
 (2) For NP4 Class - 20% extra over the rates of NP2 Class

- IRR-CCDW-6-4 Laying and jointing 700 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 32.1 kg / joint, FA : 0.031cum/joint, Hemp Yarn : 0.25kg/joint)

DATA:

RATE ANALYSIS

UNIT : 10.00 Joints

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|---------------|
| 1 | Cement | kg | 321.00 | 3.68 | 1181.28 |
| 2 | Sand (Screened) | cum | 0.31 | 700.00 | 217.00 |
| 3 | Hemp yarn | kg | 2.50 | 79.00 | 197.50 |
| Total cost of Materials | | | | Rs: | 1595.78 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------|------|--------------|--------------|---------------|
| 1 | Nill (Manual mixing) | | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | Mason Cl- II | Day | 2.50 | 525.00 | 1312.50 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 3912.50 |

labour component/unit qty 391.30

Add contractor's profit and overhead charges 13.615% 53.30

labour component/unit qty (including contractor's profit) 444.60

ABSTRACT:

| | | |
|---|--------------------|---------|
| A. Cost of Materials | Rs: | 1595.78 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 3912.50 |
| | Total Rs: | 5508.28 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 749.95 |
| Total cost for | 10.00 Joints Rs: | 6258.23 |
| Rate per joint | (A+B+C+D)/10.0 Rs. | 625.80 |

Note:

- (1) For NP3 Class - 10% extra over the rates of NP2 Class
(2) For NP4 Class - 20% extra over the rates of NP2 Class

- IRR-CCDW-6-5 Laying and jointing 800 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 39.6 kg / joint, FA : 0.039cum/joint, Hemp Yarn : 0.31kg/joint)

DATA:

RATE ANALYSIS

UNIT : 10.00 Joints

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|---------------|
| 1 | Cement | kg | 396.00 | 3.68 | 1457.28 |
| 2 | Sand (Screened) | cum | 0.39 | 700.00 | 273.00 |
| 3 | Hemp yarn | kg | 3.10 | 79.00 | 244.90 |
| Total cost of Materials | | | | Rs: | 1975.18 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---------------------------|------|--------------|--------------|---------------|
| 1 | Nill (Manual mixing) | | 0.00 0.00 | 0.00 0.00 | 0.00 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | Mason CI- II | Day | 3.00 | 525.00 | 1575.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 4665.00 |

labour component/unit qty 466.50

Add contractor's profit and overhead charges 13.615% 63.50

labour component/unit qty (including contractor's profit) **530.00****ABSTRACT:**

| | | |
|---|----------------|--------------------|
| A. Cost of Materials | Rs: | 1975.18 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 4665.00 |
| Total | Rs: | 6640.18 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 904.06 |
| Total cost for | 10.00 Joints | Rs: 7544.24 |
| Rate per joint | (A+B+C+D)/10.0 | Rs. 754.40 |

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
 (2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-6 Laying and **jointing 900 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2** proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto **50 m and all lifts.**
(Cement content: 44.6 kg / joint, FA : 0.045cum/joint, Hemp Yarn : 0.34kg/joint)

DATA:

RATE ANALYSISUNIT : **10.00 Joints****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|----------------|
| 1 | Cement | kg | 446.00 | 3.68 | 1641.28 |
| 2 | Sand (Screened) | cum | 0.45 | 700.00 | 315.00 |
| 3 | Hemp yarn | kg | 3.40 | 79.00 | 268.60 |
| Total cost of Materials | | | | Rs: | 2224.88 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | Mason CI- II | Day | 3.00 | 525.00 | 1575.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 4665.00 |

labour component/unit qty 466.50

Add contractor's profit and overhead charges 13.615% 63.50

labour component/unit qty (including contractor's profit) **530.00****ABSTRACT:**

| | | |
|---|----------------|--------------------|
| A. Cost of Materials | Rs: | 2224.88 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 4665.00 |
| Total | Rs: | 6889.88 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 938.06 |
| Total cost for | 10.00 Joints | Rs: 7827.94 |
| Rate per joint | (A+B+C+D)/10.0 | Rs. 782.80 |

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
 (2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-7 Laying and jointing 1000 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 49.5 kg / joint, FA : 0.05cum/joint, Hemp Yarn : 0.377kg/joint)

DATA:

RATE ANALYSIS

UNIT : 10.00 Joints

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|---------------|
| 1 | Cement | kg | 495.00 | 3.68 | 1821.60 |
| 2 | Sand (Screened) | cum | 0.50 | 700.00 | 350.00 |
| 3 | Hemp yarn | kg | 3.77 | 79.00 | 297.83 |
| Total cost of Materials | | | | Rs: | 2469.43 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | Mason Cl- II | Day | 3.00 | 525.00 | 1575.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 5155.00 |

labour component/unit qty

515.50

Add contractor's profit and overhead charges

13.615%

70.20

labour component/unit qty (including contractor's profit)

585.70

ABSTRACT:

A. Cost of Materials

Rs: 2469.43

B. Hire charges of Machinery

Rs: 0.00

C. Cost of Labour

Rs: 5155.00

Total

Rs: 7624.43

D. Add for contractor's profit and overheads on (A+B+C)

13.615% Rs:

1038.07

Total cost for

10.00 Joints

Rs:

8662.5

Rate per joint

(A+B+C+D)/10.0

Rs.

866.30

Note:

(1) For NP3 Class - 10% extra over the rates of NP2 Class

(2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-8 Laying and jointing 1100 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2 proportion by volume including cost of all materials (excluding pipes and collars), machinery, labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto 50 m and all lifts.
(Cement content: 56.9 kg / joint, FA : 0.058cum/joint, Hemp Yarn : 0.415kg/joint)

DATA:

RATE ANALYSIS

UNIT : 10.00 Joints

A. MATERIALS:

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|-------------|---------------|
| 1 | Cement | kg | 569.00 | 3.68 | 2093.92 |
| 2 | Sand (Screened) | cum | 0.58 | 700.00 | 406.00 |
| 3 | Hemp yarn | kg | 4.15 | 79.00 | 327.85 |
| Total cost of Materials | | | | Rs: | 2827.77 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|-------------|---------------|
| 1 | Nil | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|----------------|------------------|
| 1 | Mason CI- II | Day | 3.00 | 525.00 | 1575.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 5155.00 |

labour component/unit qty 515.50

Add contractor's profit and overhead charges 13.615% 70.20

labour component/unit qty (including contractor's profit) **585.70****ABSTRACT:**

| | | |
|---|----------------|--------------------|
| A. Cost of Materials | Rs: | 2827.77 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 5155.00 |
| Total | Rs: | 7982.77 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 1086.85 |
| Total cost for | 10.00 Joints | Rs: 9069.62 |
| Rate per joint | (A+B+C+D)/10.0 | Rs: 907.00 |

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
 (2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-6-9 Laying and **jointing 1200 mm dia. NP- 2 class or IRC standard hume pipes in CM 1 : 2**
 proportion by volume including cost of all materials (excluding pipes and collars), machinery,
 labour, aligning, packing joints with hemp, finishing, curing etc., complete with initial lead upto
50 m and all lifts.

(Cement content: 66.8 kg / joint, FA : 0.069cum/joint, Hemp Yarn : 0.453kg/joint)

DATA:

RATE ANALYSISUNIT : **10.00 Joints****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------|------|----------|----------------|------------------|
| 1 | Cement | kg | 668.00 | 3.68 | 2458.24 |
| 2 | Sand (Screened) | cum | 0.69 | 700.00 | 483.00 |
| 3 | Hemp yarn | kg | 4.53 | 79.00 | 357.87 |
| Total cost of Materials | | | | Rs: | 3299.11 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|----------------|------------------|
| 1 | Nill | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|----------------|------------------|
| 1 | Mason CI- II | Day | 4.00 | 525.00 | 2100.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 7.00 | 490.00 | 3430.00 |
| Total cost of Labour | | | | Rs: | 6170.00 |

labour component/unit qty 617.00

Add contractor's profit and overhead charges 13.615% 84.00

labour component/unit qty (including contractor's profit) **701.00****ABSTRACT:**

| | | |
|---|----------------|---------------------|
| A. Cost of Materials | Rs: | 3299.11 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 6170.00 |
| Total | Rs: | 9469.11 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 1289.22 |
| Total cost for | 10.00 Joints | Rs: 10758.33 |
| Rate per joint | (A+B+C+D)/10.0 | Rs: 1075.80 |

Note: (1) For NP3 Class - 10% extra over the rates of NP2 Class
 (2) For NP4 Class - 20% extra over the rates of NP2 Class

IRR-CCDW-7 **BACK FILLING & OTHER WORKS :**

IRR-CCDW-7-1 **Providing rubble / boulder and sand filling behind abutment and return walls in layers**
including cost of all materials, machinery, labour, watering, ramming etc., complete with initial
lead upto 50 m and initial lift upto 3 m.

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------|------|----------|----------------|------------------|
| 1 | Rubble / Boulder | cum | 10.00 | 359.00 | 3590.00 |
| 2 | Sand for filling | cum | 4.00 | 460.00 | 1840.00 |
| Total cost of Materials | | | | Rs: | 5430.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|----------------|------------------|
| 1 | Nill | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|----------------|------------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | Mason CI II | Day | 1.00 | 525.00 | 525.00 |
| 3 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 2805.00 |

labour component/unit qty 280.50

Add contractor's profit and overhead charges 13.615% 38.20

labour component/unit qty (including contractor's profit) **318.70****ABSTRACT:**

| | | |
|---|--------------------|---------------|
| A. Cost of Materials | Rs: | 5430.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2805.00 |
| | Total Rs: | 8235.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 1121.2 |
| Total cost for | 10.00 cum Rs: | 9356.2 |
| Rate per cum | (A+B+C+D)/10.0 Rs. | 935.60 |

IRR-CCDW-7-2 **Providing and filling murrum / gravelly soil (CNS soil) for foundation or around pipes**
including breaking clods, spreading in layers of 10 to 15 cm, watering, compaction by earth
masters to achieve density control of not less than 95 percent etc., complete with lead
upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|----------------|------------------|
| 1 | Murum | cum | 12.00 | 215.00 | 2580.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 2580.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|----------------|------------------|
| 1 | Nill | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------------------------|------|----------|----------------|------------------|
| 1 | Cartman with double bullock cart | Day | 0.50 | 585.00 | 292.50 |
| 2 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 3552.50 |

| | |
|---|---------------|
| labour component/unit qty | 355.30 |
| Add contractor's profit and overhead charges | 13.615% 48.40 |
| labour component/unit qty (including contractor's profit) | 403.70 |

ABSTRACT:

| | | | |
|---|-----------------------|-----|----------------|
| A. Cost of Materials | | Rs: | 2580.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 3552.50 |
| | Total | Rs: | 6132.50 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 834.94 |
| Total cost for | 10.00 cum | Rs: | 6967.44 |
| Rate per cum | (A+B+C+D)/10.0 | Rs. | 696.70 |

IRR-CCDW-7-3 Providing and **filling murum / gravely soil (CNS soil)** for foundation or above pipes including breaking clods, spreading in **layers of 10 to 15 cm**, watering, compaction by power roller to achieve density control of **not less than 98 percent** etc., complete with lead upto **50 m and all lifts**.

DATA:

RATE ANALYSISUNIT : **10.00 cum****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|----------------|
| 1 | Murum | cum | 12.00 | 215.00 | 2580.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 2580.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|---------------|
| 1 | Diesel road roller 8-10 tonne | Hour | 0.17 | 179.20 | 30.58 |
| | Fuel / Energy charges | Hour | 0.17 | 1168.60 | 199.42 |
| Total hire charges of Machinery | | | | Rs: | 230.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------------------------|------|----------|-------------|----------------|
| 1 | Operator road roller | Hour | 0.17 | 278.30 | 47.49 |
| 2 | Cartman with double bullock cart | Day | 0.50 | 585.00 | 292.50 |
| 3 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 4 | mazdoor | Day | 1.50 | 490.00 | 735.00 |
| Total cost of Labour | | | | Rs: | 1394.99 |

| | |
|---|---------------|
| labour component/unit qty | 139.50 |
| Add contractor's profit and overhead charges | 13.615% 19.00 |
| labour component/unit qty (including contractor's profit) | 158.50 |

ABSTRACT:

| | | | |
|---|-----------------------|-----|----------------|
| A. Cost of Materials | | Rs: | 2580.00 |
| B. Hire charges of Machinery | | Rs: | 230.00 |
| C. Cost of Labour | | Rs: | 1394.99 |
| | Total | Rs: | 4204.99 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% | Rs: | 572.51 |
| Total cost for | 10.00 cum | Rs: | 4777.50 |
| Rate per cum | (A+B+C+D)/10.0 | Rs. | 477.80 |

IRR-CCDW-7-4 Providing and **fixing one line dressed 111x35x25 cm thick IRC standard kilometre stone** in **cement concrete M-10** grade with **40 mm down size** aggregates including excavating pit of size 70x45x40 cm, embedding the stone by 30 cm in concrete, providing 2 coats synthetic enamel paint of approved quality and colour to exposed surfaces and lettering as directed, cost of all materials, labour, finishing, curing etc., complete **with initial lead upto 50 m and all lifts**.

DATA:

RATE ANALYSISUNIT : **4 Nos.****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|----------------|
| 1 | One line dressed Km stone | No. | 4.00 | 539.00 | 2156.00 |
| 2 | 40-20 mm coarse aggregate | cum | 0.20 | 1265.00 | 253.00 |
| 3 | 20-10 mm coarse aggregate | cum | 0.15 | 1313.00 | 196.95 |
| 4 | 10-4.75 mm coarse aggregate | cum | 0.10 | 967.00 | 96.70 |
| 5 | Sand (Un-Screened) | cum | 0.20 | 605.00 | 121.00 |
| 6 | Cement | kg | 100.00 | 3.68 | 368.00 |
| 7 | Synthetic enamel paint I st quality | ltr | 1.00 | 238.00 | 238.00 |
| 8 | Sundries (brush / oil etc) | LS | 4.00 | 34.00 | 136.00 |
| Total cost of Materials | | | | Rs: | 3565.65 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | Mason Cl- II | Day | 1.00 | 525.00 | 525.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| 4 | Painter Cl- I | Day | 1.00 | 655.00 | 655.00 |
| Total cost of Labour | | | | Rs: | 2310.00 |

labour component/unit qty 577.50

Add contractor's profit and overhead charges 13.615% 78.60

labour component/unit qty (including contractor's profit) **656.10****ABSTRACT:**

| | | |
|---|-------------------|----------------|
| A. Cost of Materials | Rs: | 3565.65 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2310.00 |
| | Total Rs: | 5875.65 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 799.97 |
| Total cost for | 4.00 Nos. Rs: | 6675.62 |
| Rate per No. | (A+B+C+D)/4.0 Rs: | 1668.90 |

IRR-CCDW-7-5 Providing and **fixing one line dressed 65x15x10 cm thick IRC standard hectometre stone in cement concrete M-10** grade with **40 mm down size** aggregates including excavating pit of size 50x45x40 cm, embedding the stone by 30 cm in concrete, providing 2 coats synthetic enamel paint of approved quality and colour to exposed surfaces and lettering as directed, cost of all materials, labour, finishing, curing etc., complete **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **4 Nos.****A. MATERIALS:**

| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------------|------|----------|-------------|----------------|
| 1 | One line dressed hectometre stone | No. | 4.00 | 304.00 | 1216.00 |
| 2 | 40-20 mm coarse aggregate | cum | 0.20 | 1265.00 | 253.00 |
| 3 | 20-10 mm coarse aggregate | cum | 0.15 | 1313.00 | 196.95 |
| 4 | 10-4.75 mm coarse aggregate | cum | 0.10 | 967.00 | 96.70 |
| 5 | Sand (Un-Screened) | cum | 0.20 | 605.00 | 121.00 |
| 6 | Cement | kg | 100.00 | 3.68 | 368.00 |
| 7 | Synthetic enamel paint I st quality | ltr | 0.40 | 238.00 | 95.20 |
| 8 | Sundries (brush / oil etc) | LS | 1.00 | 34.00 | 34.00 |
| Total cost of Materials | | | | Rs: | 2380.85 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | (Manual mixing) | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|----------------|------------------|
| 1 | Mason CI- II | Day | 1.00 | 525.00 | 525.00 |
| 2 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 3 | mazdoor | Day | 1.00 | 490.00 | 490.00 |
| 4 | Painter CI- I | Day | 0.50 | 655.00 | 327.50 |
| Total cost of Labour | | | | Rs: | 1982.50 |

labour component/unit qty 495.60

Add contractor's profit and overhead charges 13.615% 67.50

labour component/unit qty (including contractor's profit) **563.10****ABSTRACT:**

A. Cost of Materials Rs: 2380.85

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 1982.50

Total Rs: 4363.35

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 594.07

Total cost for 4.00 Nos. Rs: **4957.42****Rate per No.** (A+B+C+D)/4.0 Rs. **1239.40**

CHAPTER-V
HYDRAULIC GATES AND ALLIED EQUIPMENT - Standard Data

(WLL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)

FOR THE YEAR : 2021-22

IRR-GAW

GATE HOIST AND ALLIED WORKS - DATA RATES

- 1 All materials / bought out components for embedded parts, gates, hoists and allied works shall conform to relevant Indian standards / technical specifications and approved drawings.
- 2 The basic rates are EXCLUSIVE of preparation of designs / drawings / material schedules etc., as per specifications and other technical data including revisions.
If designs & drawings are to be done by private agency 2% of estimated cost be added
- 3 The basic rates are inclusive of cost of all materials, machinery, labour, fabrication, erection, commissioning and testing of gates, hoists and other related components as per technical specifications.
- 4 The basic rates are inclusive of finishing, wastage of materials, incidental works, temporary supports, all enabling works, profit, overheads, small tools / plants, hidden cost on labour etc.
- 5 The basic rates are inclusive of duties (excise), levies and all other incidental charges but exclusive of GST. Separate provision shall be made in the estimate towards such tax on works contract at the rate prevailing at the time of preparation of estimate.
- 6 The basic rates are inclusive of all leads and lifts including rehandling.
- 7 no provision is made for stitch welding and it is part of welding work
- 8 The basic rates are inclusive of preparatory works such as rectification of damages, repairing shop painting, cleaning, positioning and anchoring first stage embedments,
- 9 The basic rates are not inclusive of painting with or without sand blasting, and are to be added to the rate as per schedule rates formulated in the same chapter as per applicability and specifications
- 10 The basic rates are exclusive of cost of river diversion arrangements, dewatering, desilting, secondary concreting of EM parts etc., which form part of civil works.
- 11 DESIGNS AND DRAWING CHARGES AT 2% BE ADDED EXTRA TO THE ESTIMATES, IF CONTRACTOR'S SCOPE OF WORK INVOLVES DESIGNS COMPONENT ALSO
- 12 Add AREA ALLOWANCES AS APPLICABLE ON LABOUR COMPONENT ONLY (SHOWN UNDER EACH ITEM)
- 13 Add contractors profit and overheads at 13.615% to all items
- 14 Painting Charges added extra to the data items as per applicability wherever necessary
- 15 HOIST EQUIPMENT 1.-where sand blasting is not possible, hand and power tool cleaning be adopted - Guidance may be taken from Mechanical workshop in this regard
2. Machined surfaces should not be painted
3. for maintenance unless sand blasting is essential hand and power tool cleaning be adopted
- 16 Painting of Hoast Gates is to be done as per IS 14177:1994

DATA and RATES ---GATE / HOIST AND ALLIED WORKS -

(STORED WITH E-N-C & TO INCORPORATE CHANGES YEARLY/AS NEEDED)

GAW - Work Items**Index- code**

IRR-GAW

TYPES OF GATES:

IRR-GAW-1

A. SPILLWAY RADIAL GATES

IRR-GAW-1-1

E.M Parts and anchorages

fabrication, supply, erection, testing and **commissioning of Embedded parts for radial gate** consists of sill beam, wall plates, anchor girders , yoke girders, tie flats, trunnion supports etc., including cost of all materials, machinery, labour, welding, finishing, with leads and lifts & all accessories **(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under items in this chapter and add as applicable separately)**

Drawing no. MD/CDO/VRSP/90-92/85-86 (Vengalaraya Sagar - Gomukhi Project)

Vent Size: 12.00 X 6.6 Mtrs

Use rate of materials :

| | | | | |
|------------------------------------|-----|-----------------|-----|------------|
| Cost of welding set @ | Rs: | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | : | 1000 hours |
| Use rate of welding set per hour | | (cost / life) | Rs: | 7.84 |
| Cost of gas cutting set @ | Rs: | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | : | 600 hours |
| Use rate of gas cutting set per hr | | (cost / life) | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : **15.300 tonne****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|-------------------|
| 1 | Str steel angle / beam / channel / bars | kg | 3467.00 | 50.50 | 175083.50 |
| 2 | Structural steel plate / flats | kg | 11261.00 | 52.00 | 585572.00 |
| 3 | Stainless steel plate / flats | kg | 515.00 | 289.00 | 148835.00 |
| 4 | MS bolts and nuts | kg | 48.00 | 86.00 | 4128.00 |
| 5 | Oxygen gas | cum | 158.00 | 43.00 | 6794.00 |
| 6 | Acetyline gas | cum | 53.00 | 350.00 | 18550.00 |
| 7 | Welding electrodes | Nos | 11520.00 | 14.00 | 161280.00 |
| 8 | Welding electrodes (LH) | Nos | 2880.00 | 19.00 | 54720.00 |
| 9 | Welding electrodes (stainless steel) | Nos | 1160.00 | 23.00 | 26680.00 |
| 10 | Use rate welding holder set | Hour | 1945.00 | 7.84 | 15256.58 |
| 11 | Use rate gas cutting torch set | Hour | 158.00 | 23.18 | 3661.65 |
| 12 | Sundries | LS | 100.00 | 34.00 | 3400.00 |
| Total cost of Materials | | | | Rs: | 1203960.73 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---|------|----------|-------------|------------------|
| 1 | Welding transformer | Hour | 1945.00 | 15.10 | 29369.50 |
| | Fuel / Energy charges | Hour | 1945.00 | 101.50 | 197417.50 |
| 2 | Tower crane/heavy duty tyre mounted crane | Hour | 16.00 | 749.10 | 11985.60 |
| | Fuel / Energy charges | Hour | 16.00 | 220.00 | 3520.00 |
| 3 | Plate shearing machine | Hour | 16.00 | 39.80 | 636.80 |
| | Fuel / Energy charges | Hour | 16.00 | 169.20 | 2707.20 |
| 4 | Pug cutting machine | Hour | 76.00 | 6.50 | 494.00 |
| | Fuel / Energy charges | Hour | 76.00 | 4.20 | 319.20 |
| 5 | Mobile crane 16 Tonnes | Hour | 22.00 | 2071.20 | 45566.40 |
| | Fuel / Energy charges | Hour | 22.00 | 1704.20 | 37492.40 |
| 6 | Stationery derrick crane | Hour | 64.00 | 75.00 | 4800.00 |
| | Fuel / Energy charges | Hour | 64.00 | 0.00 | 0.00 |
| 7 | Grinding machine | Hour | 30.00 | 20.20 | 606.00 |
| | Fuel / Energy charges | Hour | 30.00 | 42.30 | 1269.00 |
| 8 | Drilling machines | Hour | 30.00 | 20.20 | 606.00 |
| | Fuel / Energy charges | Hour | 30.00 | 42.30 | 1269.00 |
| 9 | Planing machine | Hour | 100.00 | 111.40 | 11140.00 |
| | Fuel / Energy charges | Hour | 100.00 | 126.90 | 12690.00 |
| 10 | Bending Machine | Hour | 30.00 | 38.40 | 1152.00 |
| | Fuel / Energy charges | Hour | 30.00 | 126.90 | 3807.00 |
| 11 | Sundries | LS | 100.00 | 34.00 | 3400.00 |
| Total hire charges of Machinery | | | | Rs: | 370247.60 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Tower crane | Hour | 16.00 | 243.40 | 3894.40 |
| 2 | Crew for Mobile crane 16 T | Hour | 22.00 | 685.20 | 15074.40 |
| 3 | Crew for Shearing machine | Hour | 16.00 | 182.50 | 2920.00 |
| 4 | Crew for Planing machine | Hour | 100.00 | 274.60 | 27460.00 |
| 5 | Crew for Drilling machine | Hour | 30.00 | 251.60 | 7548.00 |
| 6 | Crew for Grinding machine | Hour | 30.00 | 251.60 | 7548.00 |
| 7 | Crew for Bending machine | | 30.00 | 171.60 | 5148.00 |
| 8 | Foreman | Day | 15.00 | 645.00 | 9675.00 |
| 9 | Marker / Fabricator / Erector | Day | 75.00 | 700.00 | 52500.00 |
| 10 | Gas cutter | Day | 20.00 | 575.00 | 11500.00 |
| 11 | Welder (General) | Day | 212.00 | 575.00 | 121900.00 |
| 12 | Welder (X - ray) | Day | 48.00 | 645.00 | 30960.00 |
| 13 | Khalasi | Day | 345.00 | 575.00 | 198375.00 |
| 14 | Helper fabrication / erection | Day | 255.00 | 525.00 | 133875.00 |
| 15 | Electrician | Day | 5.00 | 650.00 | 3250.00 |
| Total cost of Labour | | | | Rs: | 631627.80 |
| Add towards highly skilled labour charges @ 30% on total cost of labour | | | | | 189488.34 |
| Total Cost of Labour | | | | | 821116.14 |

| | |
|---|-----------------|
| labour component/unit qty | 53667.70 |
| Add contractor's profit and overhead charges | 13.615% 7306.90 |
| labour component/unit qty (including contractor's profit) | 60974.60 |

ABSTRACT:

| | | | |
|---|-----------------------|-----|-------------------|
| A. Cost of Materials | | Rs: | 1203960.73 |
| B. Hire charges of Machinery | | Rs: | 370247.60 |
| C. Cost of Labour | | Rs: | 821116.14 |
| | Total | Rs: | 2395324.47 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 2395324.47 |
| E. Add for transportation upto work site @ | 3% | Rs: | 71859.73 |
| | Total | Rs: | 2467184.20 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 335907.13 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 705.754 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 2812.14 |
| Total cost for | 15.300 tonne | Rs: | 2806609.23 |
| | Rate per tonne | Rs: | 183438.50 |

RADIAL GATES**A-2 Gates**

IRR-GAW-1-2 fabrication, supply, erection, testing and **commissioning of radial gate** consisting of skin plate, stiffeners, horizontal girders, radial arms, trunnion assemblies, tie beam, pulley supports, bracings, rubber seals, clamps etc., with all accessories **for spillway/canals** including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings

(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

Drawing no. MD/CDO/VRSP/170-172/85-86(Vengalaraya Sagar - Gomukhi Project)

Vent Size: 12 X 6.6 Mtr

Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | : | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | : | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : **29.000** tonne**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|-------------------|
| 1 | Structural steel : | | | | |
| | Angles / beams / channels / bars | kg | 9700.00 | 50.50 | 489850.00 |
| | Plates / flats | kg | 16850.00 | 52.00 | 876200.00 |
| 2 | Cast steel components : | | | | |
| | Trunnion hubs / Guide rollers | kg | 2100.00 | 193.00 | 405300.00 |
| 3 | Alluminium / Bronze alloy components : | | | | |
| | Bush for Trunnion / Guide roller | kg | 350.00 | 962.00 | 336700.00 |
| 4 | Bolt / Nut / Washer : | | | | |
| | GI bolts / nuts / washers | kg | 250.00 | 142.00 | 35500.00 |
| 5 | Zinc/Babbit Metal | kg | 50.00 | 190.00 | 9500.00 |
| 6 | Rubber seals : | | | | |
| | Bottom seal | Rm | 12.00 | 670.00 | 8040.00 |
| | Side seals (Z - type) | Rm | 14.00 | 1372.00 | 19208.00 |
| 7 | Oxygen gas | cum | 228.00 | 43.00 | 9804.00 |
| 8 | Acetyline gas | cum | 76.00 | 350.00 | 26600.00 |
| 9 | Welding electrodes (std) | Nos | 1000.00 | 14.00 | 14000.00 |
| 10 | Welding electrodes (LH) | Nos | 250.00 | 19.00 | 4750.00 |
| 11 | Use rate welding holder set | Hour | 156.00 | 7.84 | 1223.66 |
| 12 | Use rate gas cutting torch set | Hour | 228.00 | 23.18 | 5283.90 |
| 13 | Sundries | LS | 500.00 | 34.00 | 17000.00 |
| Total cost of Materials | | | | Rs: | 2258959.56 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|------------------|
| 1 | Welding transformer | Hour | 156.00 | 15.10 | 2355.60 |
| | Fuel / Energy charges | Hour | 156.00 | 101.50 | 15834.00 |
| 2 | Plate shearing machine | Hour | 29.00 | 39.80 | 1154.20 |
| | Fuel / Energy charges | Hour | 29.00 | 169.20 | 4906.80 |
| 3 | Pug cutting machine | Hour | 114.00 | 6.50 | 741.00 |
| | Fuel / Energy charges | Hour | 114.00 | 4.20 | 478.80 |
| 4 | Bending machine | Hour | 116.00 | 38.40 | 4454.40 |
| | Fuel / Energy charges | Hour | 116.00 | 126.90 | 14720.40 |
| 5 | Tower crane 5 t capacity | Hour | 29.00 | 749.10 | 21723.90 |
| | Fuel / Energy charges | Hour | 29.00 | 220.00 | 6380.00 |
| 6 | Mobile derrick crane | Hour | 58.00 | 476.90 | 27660.20 |
| | Fuel / Energy charges | Hour | 58.00 | 490.80 | 28466.40 |
| 7 | Stationery derrick crane | Hour | 58.00 | 75.00 | 4350.00 |
| | Fuel / Energy charges | Hour | 58.00 | 0.00 | 0.00 |
| 8 | Grinding machine | Hour | 58.00 | 20.20 | 1171.60 |
| | Fuel / Energy charges | Hour | 58.00 | 42.30 | 2453.40 |
| 9 | Drilling machines | Hour | 58.00 | 20.20 | 1171.60 |
| | Fuel / Energy charges | Hour | 58.00 | 42.30 | 2453.40 |
| 10 | Mobile Crane 30 T | Hour | 100.00 | 2915.70 | 291570.00 |
| | Fuel / Energy charges | Hour | 100.00 | 1927.00 | 192700.00 |
| 11 | Sundries | LS | 500.00 | 34.00 | 17000.00 |
| Total hire charges of Machinery | | | | Rs: | 641745.70 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|------------------|
| 1 | Crew for Mobile crane 30T | Hour | 100.00 | 685.20 | 68520.00 |
| 2 | Crew for Tower crane | Hour | 29.00 | 243.40 | 7058.60 |
| 3 | Crew for Bending machine | Hour | 116.00 | 171.60 | 19905.60 |
| 4 | Crew for Drilling machine | Hour | 58.00 | 251.60 | 14592.80 |
| 5 | Crew for Grinding machine | Hour | 58.00 | 251.60 | 14592.80 |
| 6 | Foreman | Day | 29.00 | 645.00 | 18705.00 |
| 7 | Marker / Fabricator / Erector | Day | 145.00 | 700.00 | 101500.00 |
| 8 | Gas cutter | Day | 29.00 | 575.00 | 16675.00 |
| 9 | Welder (General) | Day | 17.00 | 575.00 | 9775.00 |
| 10 | Welder (X - ray) | Day | 5.00 | 645.00 | 3225.00 |
| 11 | Khalasi | Day | 493.00 | 575.00 | 283475.00 |
| 12 | Helper fabrication / erection | Day | 667.00 | 525.00 | 350175.00 |
| 13 | Electrician | Day | 15.00 | 650.00 | 9750.00 |
| Total cost of Labour | | | | Rs: | 917949.80 |

Add towards highly skilled labour charges @ 30% on total cost of labour **275384.94**
Total Cost of Labour 1193334.74

labour component/unit qty 41149.50
Add contractor's profit and overhead charges 13.615% 5602.50
labour component/unit qty (including contractor's profit) **46752.00**

ABSTRACT:

| | | | |
|---|-----------------------|-----|------------------|
| A. Cost of Materials | | Rs: | 2258959.56 |
| B. Hire charges of Machinery | | Rs: | 641745.70 |
| C. Cost of Labour | | Rs: | 1193334.74 |
| | Total | Rs: | 4094040.00 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 4094040.00 |
| E. Add for transportation upto work site @ | 3% | Rs: | 122821.20 |
| | Total | Rs: | 4216861.20 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 574125.65 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 1337.704 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 5330.2 |
| Total cost for | 29.000 tonne | Rs: | 4797654.76 |
| | Rate per tonne | Rs: | 165436.40 |

IRR-GAW-1-3 RADIAL GATES-ROPE DRUM HOISTS WITH HOIST BRIDGES

fabrication, supply, erection, testing and **commissioning of electrically operated rope drum hoist of adequate capacity** consisting of base frames, rope drums, connecting shaft, gear system, brake system, electric motor, wire ropes, gate position indicator, manual operation arrangement etc., with all accessories for spillway radial gate including cost of all materials, machinery, labour,, greasing, providing hand railing and approach staircase with gate to hoist platform, , complete as per specifications and approved drawings
(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perscedule of rates under itemsinthis chapter and add as applicable separately)

DATA: Rope drum hoist for radial gate consists of embedded parts for anchorages, hoist supporting structure, pulley supporting structures, pulleys, drive stool, rope drums, couplings, shafts, gears and pinions, plummer blocks, worm reducer, floating shaft, electric motor, hand operation assembly, brake, wire rope, gate position indicator, switch box etc. with related accessories. Consider rope drum hoist for radial gate for spillway opening of size 15 m x 9 m for analysis. Details of material / Gas cutting / Welding considered for rate analysis are based on rope drum hoist drawings for 15 m x 9 m spillway gate

Size of gate for 15 x 9 m spillway opening: Length :15 m Height :9.75 m

Capacity of hoist required in tonnes : 1.5 x 57.669 : 86.504
say : 90.00 tonnes
Weight of hoist with all accessories is assumed at 0.175 tonne per tonne capacity of hoist.
Weight of hoist with all accessories (0.175 x 90) : 15.75 tonnes
The actual weight of spillway radial gate rope drum hoist as per : 15.44 tonnes
Consider actual weight for data rate analysis.

| | | | |
|---|--|---|------------|
| 1 | Requirement of materials : as per fabrication drawings | | |
| | a. Structural steel conforming to IS : 2062 : | | |
| | Angles / Beams / Channels / Bars with 2.5 % wastage | : | 2571.00 kg |
| | Plates / Flats with 2.5 % wastage | : | 3632.00 kg |
| | b. Cast steel components conforming to IS : 1030 : | | |
| | Rope drums 2 Nos / Gears 4 Nos | : | 3680.00 kg |
| | Pinions | : | 218.00 kg |
| | Pulleys 720 PCD 6 Nos | : | 1080.00 kg |
| | Plummer blocks / Hubs | : | 322.00 kg |
| | c. Alloy steel components conforming to IS : 1570 : | | |
| | Shafts (carbon steel) | : | 557.00 kg |
| | Pins (stainless steel) | : | 546.00 kg |
| | d. Aluminium/ Bronze alloy components conforming to IS : 305 : | | |
| | Bearings / Bush | : | 144.00 kg |
| | e. Bolt / Nut / Washers conforming to IS : 1363 : | | |
| | MS Bolts / Nuts / Washers with 2.5 % wastage | : | 85.00 kg |
| | f. Steel wire rope conforming to IS : 2266 : | | |
| | 36 mm dia 6 / 37 construction 2 Nos 50 m each @ 4.48 kg / Rr | : | 448.00 kg |
| | g. Other components : | | |
| | Manual operation assembly | : | 1 No. |
| | Worm reducer | : | 1 No. |
| | Electric motor 20 hp | : | 1 No. |
| | Gate position indicator | : | 1 No. |
| | Ele-magnetic brake | : | 1 No. |
| | Wire rope sockets | : | 2 Nos |
| | MS pipe 300 mm dia 13.32 Rm @ 75 kg / Rm | : | 1000 kg |
| | Electric cable / switch / control panel etc | : | 1 set |
| | h. Welding electrodes : | | |
| | Welding electrodes for stitch welding at 10 % of total with 2.5 % | : | 530 Nos |
| | Welding electrodes (LH) for run welding at 90 % of total with 2 | : | 4776 Nos |
| 2 | Cutting : | | |
| | Length of cutting assuming cutting for 2 sides | : | 255 Rm |
| | Add for variations (cutting for more than 2 sides / odd shapes) | : | 25 Rm |
| | Total | : | 280 Rm |
| | For cutting structural steel sections to required sizes gas cutting is assumed. | | |
| | Length of steel to be cut by using gas manually | : | 150 m |
| | Length of steel to be cut by gas using pug cutting machine | : | 130 m |
| | Time for gas cutting manually assuming average cutting progre | : | 75 hours |
| | Time for gas cutting by pug cutting machine at (av) 3 m / hour | : | 44 hours |
| | Acetelyne gas @ 0.6 cum / hour (119 x 0.60) | : | 71 cum |
| | Oxygen gas @ 1.8 cum / hour (119 x 1.80) | : | 213 cum |
| | Use of gas cutting torch with 50 min / hr working (75 x 60 / 50) | : | 90 hours |
| | Use of pug cutting machine with 50 min / hr working (44 x 60 / | : | 53 hours |
| 3 | Welding : | | |
| | Length of welding | : | 447 Rm |
| | For stich welding @ 2 hrs usage / shift & @ 15 electrodes / hr | | |
| | (530 / 15) x 8 / 2 | : | 141 hours |
| | For run welding @ 6 hrs usage / shift & @ 15 electrodes / hr | | |
| | (4776 / 15) x 8 / 6 | : | 425 hours |
| | Total | : | 566 hours |
| | Deploy welding transformer for 566 hours. | | |
| | Deploy welding transformer for 566 hours. | | |
| | Fuel / Energy charges @ 25 % hrs for stitch welding & @ 75 % hrs for run welding. | | |
| | (141 x 0.25 + 425 x 0.75) | : | 354 hours |
| 4 | Requirement of other machinery : | | |
| | For lifting and placing in position hoist drums, worm reducers, gears, floating shafts etc deploy tower crane for 4 hours. | | |
| | For handling and erection mobile derrick crane for 50 hours considered. | | |
| | For drilling holes for bolts 16 hours use of drilling machine considered. | | |
| | For grinding and finishing weld joints 8 hours use of grinding machine considered | | |

5 Requirement of work force :

| Work component | Foreman | Marker / Fabricator / Erector / | Gas cutter/ Welder | Helper |
|---|-----------|---------------------------------------|-----------------------|------------|
| Cutting sections 143 hours | 9 | 18 | 18 | 36 |
| Drilling holes for pins / bolts fixing | 1 | 2 | --- | 2 |
| Fabricating by stitch welding 141 hours | 9 | 18 | --- | 36 |
| Run welding 425 hours | 5 | --- | 53 | 53 |
| Erection of anchors | 2 | 2 | --- | 4 |
| Erection of drums and gears | 2 | 4 | --- | 16 |
| Erection of floating shaft / pulleys | 1 | 2 | --- | 4 |
| Erection of worm reducers / brake / motor | 1 | 2 | --- | 4 |
| Erection of other accessories | 1 | 2 | --- | 2 |
| Erection of control panel / cabling | 1 | 1 | --- | 2 |
| Checking and trial running without ropes | 1 | 2 | --- | 4 |
| Rope fixing and checking | 1 | 2 | --- | 8 |
| Finishing / cleaning | --- | 1 | --- | 2 |
| Trial running for lifting / lowering gate | 1 | 2 | --- | 2 |
| Total : | 35 | 58 | 71 | 175 |

6 Excise duty on supply :

Excise duty is applicable on supply of fabricated parts. The cost of materials is inclusive of all taxes/ duties. Therefore, for purpose of rate analysis 75 percent of total cost excluding the cost of materials (assuming 25 % erection cost) is considered for assessing excise duty.

7 Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : **15.440 tonne wt**
90.00 t capacity**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------------------------|--|------|----------|----------------|-------------------|
| 1 | Structural steel | | | | |
| | Angles / beams / channels / bars | kg | 2571.00 | 50.50 | 129835.50 |
| | Plates / flats | kg | 3632.00 | 52.00 | 188864.00 |
| 2 | Cast steel components : | | | | |
| | Rope drums 2 Nos / Gears 4 Nos | kg | 3680.00 | 233.00 | 857440.00 |
| | Pinions | kg | 218.00 | 224.00 | 48832.00 |
| | Pulleys 720 PCD 6 Nos | kg | 1080.00 | 193.00 | 208440.00 |
| | Plummer blocks / Hubs | kg | 322.00 | 193.00 | 62146.00 |
| 3 | Alloy steel components | | | | |
| | Shafts | kg | 557.00 | 235.00 | 130895.00 |
| | Pins | kg | 546.00 | 434.00 | 236964.00 |
| 4 | Bronze alloy components : | | | | |
| | Bronze bearings / bush | kg | 144.00 | 962.00 | 138528.00 |
| 5 | Wire rope 36 mm dia 6/37 | | | | |
| | construction | kg | 448.00 | 203.00 | 90944.00 |
| 6 | MS Bolt / Nut / Washer | kg | 85.00 | 86.00 | 7310.00 |
| 7 | Worm reducers | No. | 1.00 | 191493.00 | 191493.00 |
| 8 | Electric motor 20 hp | No. | 1.00 | 107929.00 | 107929.00 |
| 9 | Floating shaft 300 mm dia | kg | 1000.00 | 186.00 | 186000.00 |
| 10 | Manual operating system | No. | 1.00 | 28894.00 | 28894.00 |
| 11 | Gate position indicator | No. | 1.00 | 187312.00 | 187312.00 |
| 12 | Ele-magnetic brake | No. | 1.00 | 30167.00 | 30167.00 |
| | Electric cable / switch / control panel | | | | |
| 13 | etc | LS | 1.00 | 48705.00 | 48705.00 |
| 14 | Oxygen gas | cum | 213.00 | 43.00 | 9159.00 |
| 15 | Acetyline gas | cum | 71.00 | 350.00 | 24850.00 |
| 16 | Welding electrodes | Nos | 530.00 | 14.00 | 7420.00 |
| 17 | Welding electrodes (LH) | Nos | 4776.00 | 19.00 | 90744.00 |
| 18 | Grease | kg | 50.00 | 267.00 | 13350.00 |
| 19 | Use rate welding holder set | Hour | 566.00 | 7.84 | 4439.70 |
| 20 | Use rate gas cutting torch set | Hour | 90.00 | 23.18 | 2085.75 |
| 21 | Sundries (hand rail /staircase / gate e | LS | 200.00 | 34.00 | 6800.00 |
| Total cost of Materials | | | | Rs: | 3039546.95 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|------------------|
| 1 | Welding transformer | Hour | 566.00 | 15.10 | 8546.60 |
| | Fuel / Energy charges | Hour | 353.00 | 101.50 | 35829.50 |
| 2 | Tower crane 5 t capacity | Hour | 4.00 | 749.10 | 2996.40 |
| | Fuel / Energy charges | Hour | 4.00 | 220.00 | 880.00 |
| 3 | Pug cutting machine | Hour | 53.00 | 6.50 | 344.50 |
| | Fuel / Energy charges | Hour | 53.00 | 4.20 | 222.60 |
| 4 | Mobile derrick crane | Hour | 50.00 | 476.90 | 23845.00 |
| | Fuel / Energy charges | Hour | 50.00 | 490.80 | 24540.00 |
| 5 | Grinding machine | Hour | 8.00 | 20.20 | 161.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 6 | Drilling machines | Hour | 16.00 | 20.20 | 323.20 |
| | Fuel / Energy charges | Hour | 16.00 | 42.30 | 676.80 |
| 7 | Sundries | LS | 100.00 | 34.00 | 3400.00 |
| Total hire charges of Machinery | | | | Rs: | 102104.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|---------------------------------|------|----------|-------------|------------------|
| 1 | Crew for Mobile crane | Hour | 50.00 | 225.20 | 11260.00 |
| 2 | Crew for Tower crane | Hour | 4.00 | 243.40 | 973.60 |
| 3 | Crew for Drilling machine | Hour | 16.00 | 251.60 | 4025.60 |
| 4 | Crew for Grinding machine | Hour | 8.00 | 251.60 | 2012.80 |
| 5 | Foreman | Day | 35.00 | 645.00 | 22575.00 |
| | Marker / Fabricator / Erector / | | | | |
| 6 | Mechanic | Day | 58.00 | 700.00 | 40600.00 |
| 7 | Gas cutter | Day | 18.00 | 575.00 | 10350.00 |
| 8 | Welder (General) | Day | 53.00 | 575.00 | 30475.00 |
| 9 | Khalasi | Day | 20.00 | 575.00 | 11500.00 |
| 10 | Helper fabrication / erection | Day | 175.00 | 525.00 | 91875.00 |
| 11 | Electrician | Day | 3.00 | 650.00 | 1950.00 |
| Total cost of Labour | | | | Rs: | 227597.00 |

Add towards highly skilled labour charges @ 30% on total cost of labour

68279.10

Total Cost of Labour

295876.10

labour component/unit qty

3287.50

Add contractor's profit and overhead charges

13.615% 447.60

labour component/unit qty (including contractor's profit)

3735.10**ABSTRACT:**

| | | | |
|---|---|-----|-----------------|
| A. Cost of Materials | | Rs: | 3039546.95 |
| B. Hire charges of Machinery | | Rs: | 102104.60 |
| C. Cost of Labour | | Rs: | 295876.10 |
| | Total | Rs: | 3437527.65 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 3437527.65 |
| E. Add for transportation upto work site @ | 3% | Rs: | 103125.83 |
| | Total | Rs: | 3540653.48 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 482059.97 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 712.212 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 2837.872 |
| Total cost for | 15.440 tonne wt | Rs: | 4026263.54 |
| Total cost for | 90.00 t capacity | Rs: | |
| | Rate per tonne wt | Rs: | 260768.40 |
| | Rate per tonne capacity of hoist | | 44736.30 |

IRR-GAW-1-4 Walk way(cat walk)

fabrication, supply, erection and **commissioning of 1 metre wide walkway connecting spillway piers / abutments** at trunnion platform level including cost of all materials, machinery, labour, cutting, welding etc, complete as per specifications and approved drawings **(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)**

Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : **5.22 MT****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|------------------|
| 1 | Structural steel | | | | |
| | Angles / beams / channels / bars | kg | 4258.00 | 50.50 | 215029.00 |
| | Plates / flats | kg | 98.00 | 52.00 | 5096.00 |
| | Chequered plates | kg | 856.00 | 61.00 | 52216.00 |
| 2 | MS bolts / nuts / washers | kg | 8.00 | 86.00 | 688.00 |
| 3 | Oxygen gas | cum | 51.00 | 43.00 | 2193.00 |
| 4 | Acetyline gas | cum | 17.00 | 350.00 | 5950.00 |
| 5 | Welding electrodes | Nos | 1195.00 | 14.00 | 16730.00 |
| 6 | Use rate welding holder set | Hour | 150.00 | 7.84 | 1176.60 |
| 7 | Use rate gas cutting torch set | Hour | 30.00 | 23.18 | 695.25 |
| 8 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total cost of Materials | | | | Rs: | 300113.85 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Welding transformer | Hour | 150.00 | 15.10 | 2265.00 |
| | Fuel / Energy charges | Hour | 150.00 | 101.50 | 15225.00 |
| 2 | Tower crane | Hour | 6.00 | 749.10 | 4494.60 |
| | Fuel / Energy charges | Hour | 6.00 | 220.00 | 1320.00 |
| 3 | Pug cutting machine | Hour | 12.00 | 6.50 | 78.00 |
| | Fuel / Energy charges | Hour | 12.00 | 4.20 | 50.40 |
| 4 | Mobile CRANE 16T | Hour | 8.00 | 2071.20 | 16569.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1704.20 | 13633.60 |
| 5 | Grinding machine | Hour | 12.00 | 20.20 | 242.40 |
| | Fuel / Energy charges | Hour | 12.00 | 42.30 | 507.60 |
| 6 | Drilling machines | Hour | 12.00 | 20.20 | 242.40 |
| | Fuel / Energy charges | Hour | 12.00 | 42.30 | 507.60 |
| 7 | Bending Machine | Hour | 10.00 | 38.40 | 384.00 |
| | Fuel / Energy charges | Hour | 10.00 | 126.90 | 1269.00 |
| 8 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | Rs: | 57129.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|------------------|
| 1 | Crew for Mobile crane 16T | Hour | 10.00 | 685.20 | 6852.00 |
| 2 | Crew for Tower crane | Hour | 6.00 | 243.40 | 1460.40 |
| 3 | Crew for Drilling machine | Hour | 12.00 | 251.60 | 3019.20 |
| 4 | Crew for Grinding machine | Hour | 12.00 | 251.60 | 3019.20 |
| 5 | Crew for Bending machine | Hour | 10.00 | 171.60 | 1716.00 |
| 6 | Foreman | Day | 6.00 | 645.00 | 3870.00 |
| 7 | Marker / Fabricator / Erector | Day | 25.00 | 700.00 | 17500.00 |
| 8 | Gas cutter | Day | 5.00 | 575.00 | 2875.00 |
| 9 | Welder (General) | Day | 20.00 | 575.00 | 11500.00 |
| 10 | Helper fabrication / erection | Day | 200.00 | 525.00 | 105000.00 |
| 11 | Electrician | Day | 2.00 | 650.00 | 1300.00 |
| Total cost of Labour | | | | Rs: | 158111.80 |

Add towards highly skilled labour charges @ 30% on total cost of labour

47433.54

Total Cost of Labour

205545.34

labour component/unit qty

39376.50

Add contractor's profit and overhead charges

13.615% 5361.10

labour component/unit qty (including contractor's profit)

44737.60

ABSTRACT:

| | | | |
|--|--------------------|-----|------------------|
| A. Cost of Materials | | Rs: | 300113.85 |
| B. Hire charges of Machinery | | Rs: | 57129.20 |
| C. Cost of Labour | | Rs: | 205545.34 |
| | Total | Rs: | 562788.39 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 562788.39 |
| E. Add for transportation upto work site @ | 3% | Rs: | 16883.65 |
| | Total | Rs: | 579672.04 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 78922.35 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 240.786 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 959.436 |
| Total cost for | 5.22 MT | Rs: | 659794.61 |
| | Rate per MT | Rs: | 126397.40 |

IRR-GAW-2 **VERTICAL LIFT GATES-EM PARTS**

IRR-GAW-2-1 Design, fabrication, supply, erection and **commissioning of embedded parts** consisting of sill beam, slide tracks, seal seats, guide rails, dogging sets for storage of stoplog elements etc., with all accessories for spillway stop log gates and other vertical lift elements including cost of all materials, machinery, labour, etc., complete as per specifications and approved drawings
(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

Drawing No. MD/CDO/GNCP/HR/1759,1760/94 (GNSS Project)

Vent Size: 3.6 X 6.1 Mtr

Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : **6.300 tonne****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|------------------|
| 1 | Str steel angle / beam / channel / bars | kg | 1885.00 | 50.50 | 95192.50 |
| 2 | Structural steel plate / flats | kg | 3890.00 | 52.00 | 202280.00 |
| 3 | Stainless steel plate / flats | kg | 271.00 | 289.00 | 78319.00 |
| 4 | MS bolts and nuts | kg | 50.00 | 86.00 | 4300.00 |
| 5 | Oxygen gas | cum | 225.00 | 43.00 | 9675.00 |
| 6 | Acetyline gas | cum | 75.00 | 350.00 | 26250.00 |
| 7 | Welding electrodes | Nos | 1410.00 | 14.00 | 19740.00 |
| 8 | Welding electrodes (LH) | Nos | 350.00 | 19.00 | 6650.00 |
| 9 | Welding electrodes (stainless steel) | Nos | 1320.00 | 23.00 | 30360.00 |
| 10 | Use rate welding holder set | Hour | 385.00 | 7.84 | 3019.94 |
| 11 | Use rate gas cutting torch set | Hour | 225.00 | 23.18 | 5214.38 |
| 12 | Sundries | LS | 40.00 | 34.00 | 1360.00 |
| Total cost of Materials | | | | Rs: | 482360.82 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|----------------|------------------|
| 1 | Welding transformer | Hour | 385.00 | 15.10 | 5813.50 |
| | Fuel / Energy charges | Hour | 385.00 | 101.50 | 39077.50 |
| 2 | Plate shearing machine | Hour | 8.00 | 39.80 | 318.40 |
| | Fuel / Energy charges | Hour | 8.00 | 169.20 | 1353.60 |
| 3 | Pug cutting machine | Hour | 110.00 | 6.50 | 715.00 |
| | Fuel / Energy charges | Hour | 110.00 | 4.20 | 462.00 |
| 4 | Planing machine | Hour | 270.00 | 111.40 | 30078.00 |
| | Fuel / Energy charges | Hour | 270.00 | 126.90 | 34263.00 |
| 5 | Mobile Crane 16 T | Hour | 24.00 | 2071.20 | 49708.80 |
| | Fuel / Energy charges | Hour | 24.00 | 1704.20 | 40900.80 |
| 6 | Stationery derrick crane | Hour | 14.00 | 75.00 | 1050.00 |
| | Fuel / Energy charges | Hour | 14.00 | 0.00 | 0.00 |
| 7 | Grinding machine | Hour | 14.00 | 20.20 | 282.80 |
| | Fuel / Energy charges | Hour | 14.00 | 42.30 | 592.20 |
| 8 | Drilling machines | Hour | 21.00 | 20.20 | 424.20 |
| | Fuel / Energy charges | Hour | 21.00 | 42.30 | 888.30 |
| 9 | Bending Machine | Hour | 14.00 | 38.40 | 537.60 |
| | Fuel / Energy charges | Hour | 14.00 | 126.90 | 1776.60 |
| 10 | Sundries | LS | 40.00 | 34.00 | 1360.00 |
| Total hire charges of Machinery | | | | Rs: | 209602.30 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Mobile crane 16 T | Hour | 24.00 | 685.20 | 16444.80 |
| 2 | Crew for Planing machine | Hour | 270.00 | 274.60 | 74142.00 |
| 3 | Crew for Drilling machine | Hour | 21.00 | 251.60 | 5283.60 |
| 4 | Crew for Grinding machine | Hour | 14.00 | 251.60 | 3522.40 |
| 5 | Crew for Bending machine | Hour | 14.00 | 171.60 | 2402.40 |
| 6 | Foreman | Day | 32.00 | 645.00 | 20640.00 |
| 7 | Marker / Fabricator / Erector | Day | 35.00 | 700.00 | 24500.00 |
| 8 | Gas cutter | Day | 9.00 | 575.00 | 5175.00 |
| 9 | Welder (General) | Day | 46.00 | 575.00 | 26450.00 |
| 10 | Welder (X - ray) | Day | 6.00 | 645.00 | 3870.00 |
| 11 | Helper fabrication / erection | Day | 240.00 | 525.00 | 126000.00 |
| 12 | Electrician | Day | 4.00 | 650.00 | 2600.00 |
| Total cost of Labour | | | | Rs: | 311030.20 |

Add towards highly skilled labour charges @ 30% on total cost of labour

93309.06

Total Cost of Labour

404339.26

| | |
|---|-----------------|
| labour component/unit qty | 64180.80 |
| Add contractor's profit and overhead charges | 13.615% 8738.20 |
| labour component/unit qty (including contractor's profit) | 72919.00 |

ABSTRACT:

| | | | |
|---|---------|-----|------------|
| A. Cost of Materials | | Rs: | 482360.82 |
| B. Hire charges of Machinery | | Rs: | 209602.30 |
| C. Cost of Labour | | Rs: | 404339.26 |
| | Total | Rs: | 1096302.38 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 1096302.38 |
| E. Add for transportation upto work site @ | 3% | Rs: | 32889.07 |
| | Total | Rs: | 1129191.45 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 153739.42 |

Add 2 leads

| | | |
|--|-----------------|----------------------|
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | 290.604 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | 1157.94 |
| Total cost for | 6.30 tonne | Rs: 1284379.41 |
| Rate per tonne | | Rs: 203869.70 |

vertical lift gates and stop log gate elements (SLIDING GATES)IRR-GAW-2-2 Design, fabrication, supply, erection, testing and **commissioning of vertical lift gates and****stoplog gate elements**, consisting of skin plate,

horizontal and vertical girders, stiffeners, lifting pins, bronze padded slide blocks/bearings, guide shoes,

rubber seals, clamps etc., with all accessories including cost of all materials,

machinery, labour, seal fixing etc., complete as per specifications and approved drawings

(without painting on sand-blasted or mechanical cleaning surfaces which are added extra**as perschedule of rates under items in this chapter and add as applicable separately)****Drawing NO. CE/CDO/CL3/MRP/783/2002 (Spillway Stop log gate Elements of Madduvalasa Project)**

Vent Size: 12.624 X 0.50 M 16 Elements

Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of welk | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | : | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | : | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : **119.000** tonne**A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|-----------|-------------|-------------------|
| 1 | Structural steel | | | | |
| | Angles / beams / channels / bars | kg | 5280.00 | 50.50 | 266640.00 |
| | Plates / flats | kg | 112880.00 | 52.00 | 5869760.00 |
| 2 | Alloy steel components | | | | |
| | Lifting pins | kg | 520.00 | 434.00 | 225680.00 |
| 3 | Bolt / Nut / Washer | | | | |
| | GI bolts / nuts / washers | kg | 600.00 | 142.00 | 85200.00 |
| 4 | Rubber seals | | | | |
| | Bottom seal | Rm | 210.00 | 670.00 | 140700.00 |
| | Side seals | Rm | 18.00 | 1068.00 | 19224.00 |
| 5 | Oxygen gas | cum | 2714.00 | 43.00 | 116702.00 |
| 6 | Acetyline gas | cum | 905.00 | 350.00 | 316750.00 |
| 7 | Welding electrodes | Nos | 86554.00 | 14.00 | 1211756.00 |
| 8 | Welding electrodes (LH) | Nos | 16486.00 | 19.00 | 313234.00 |
| 9 | Use rate welding holder set | Hour | 12880.00 | 7.84 | 101030.72 |
| 10 | Use rate gas cutting torch set | Hour | 2714.00 | 23.18 | 62896.95 |
| 11 | Sundries | LS | 400.00 | 34.00 | 13600.00 |
| Total cost of Materials | | | | Rs: | 8743173.67 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-------------------|
| 1 | Welding transformer | Hour | 12880.00 | 15.10 | 194488.00 |
| | Fuel / Energy charges | Hour | 12880.00 | 101.50 | 1307320.00 |
| 2 | Pug cutting machine | Hour | 6440.00 | 6.50 | 41860.00 |
| | Fuel / Energy charges | Hour | 6440.00 | 4.20 | 27048.00 |
| 3 | Mobile crane 16 T | Hour | 360.00 | 2071.20 | 745632.00 |
| | Fuel / Energy charges | Hour | 360.00 | 1704.20 | 613512.00 |
| 4 | Stationery derrick crane | Hour | 238.00 | 75.00 | 17850.00 |
| | Fuel / Energy charges | Hour | 238.00 | 0.00 | 0.00 |
| 5 | Grinding machine | Hour | 238.00 | 20.20 | 4807.60 |
| | Fuel / Energy charges | Hour | 238.00 | 42.30 | 10067.40 |
| 6 | Drilling machines | Hour | 357.00 | 20.20 | 7211.40 |
| | Fuel / Energy charges | Hour | 357.00 | 42.30 | 15101.10 |
| 7 | Bending Machine | Hour | 240.00 | 38.40 | 9216.00 |
| | Fuel / Energy charges | Hour | 240.00 | 126.90 | 30456.00 |
| 8 | Sundries | LS | 180.00 | 34.00 | 6120.00 |
| Total hire charges of Machinery | | | | Rs: | 3030689.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-------------------|
| 1 | Crew for Mobile crane 16T | Hour | 360.00 | 685.20 | 246672.00 |
| 2 | Crew for Drilling machine | Hour | 357.00 | 251.60 | 89821.20 |
| 3 | Crew for Grinding machine | Hour | 238.00 | 251.60 | 59880.80 |
| 4 | Crew for Bending machine | Hour | 240.00 | 171.60 | 41184.00 |
| 5 | Foreman | Day | 120.00 | 645.00 | 77400.00 |
| 6 | Marker / Fabricator / Erector | Day | 195.00 | 700.00 | 136500.00 |
| 7 | Gas cutter | Day | 100.00 | 575.00 | 57500.00 |
| 8 | Welder (General) | Day | 1442.00 | 575.00 | 829150.00 |
| 9 | Welder (X - ray) | Day | 275.00 | 645.00 | 177375.00 |
| 10 | Khalasi | Day | 2023.00 | 575.00 | 1163225.00 |
| 11 | Helper fabrication / erection | Day | 2727.00 | 525.00 | 1431675.00 |
| 12 | Electrician | Day | 10.00 | 650.00 | 6500.00 |
| Total cost of Labour | | | | Rs: | 4316883.00 |

Add towards highly skilled labour charges @ 30% on total cost of labour **1295064.90**
Total Cost of Labour 5611947.90

labour component/unit qty 47159.20
Add contractor's profit and overhead charges 13.615% 6420.70
labour component/unit qty (including contractor's profit) **53579.90**

ABSTRACT:

| | | | |
|---|-----------------------|-----|------------------|
| A. Cost of Materials | | Rs: | 8743173.67 |
| B. Hire charges of Machinery | | Rs: | 3030689.50 |
| C. Cost of Labour | | Rs: | 5611947.90 |
| | Total | Rs: | 17385811.07 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 17385811.07 |
| E. Add for transportation upto work site @ | 3% | Rs: | 521574.33 |
| | Total | Rs: | 17907385.40 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 2438090.52 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 5489.195 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 21872.2 |
| Total cost for | 119.00 tonne | Rs: | 20372837.32 |
| | Rate per tonne | Rs: | 171200.30 |

STOP LOGS-automatic lifting beam

IRR-GAW-2-3 fabrication, supply, erection, testing and **commissioning of automatic lifting beam with all accessories for handling**, lowering and lifting of spillway stop log gate elements including cost of all materials, machinery, labour, cutting, aligning, welding, finishing, etc., complete as per specifications and drawings with all leads and lifts.
(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

DATA: Automatic lifting beam for lifting spillway stop log elements consists of fabricated beam with lifting bracket and automatic engaging / dis-engaging type hooks for under water hooking / de-hooking of gate element. Lifting beam is an independent attachment to moving gantry crane.

The actual weight of stoplog element lifting beam as per data s 3.528 tonnes

- 1 Requirement of materials :
- Structural steel conforming to IS : 2062 :
Structural steel angles / beams / channels / bars with 2.5 % wa 13 kg
Structural steel plates / flats with 2.5 % wastage 3389 kg
 - Alloy steel components conforming to IS : 1570 :
Lifting pins 101 kg
 - Alluminium / Bronze alloy components conforming to IS : 305 :
Bronze Bush 5 kg
 - Forged steel components conforming to IS : 2004 :
Lifting hooks 130 kg
 - Bolts / Nuts / Washers conforming to IS : 1363 :
MS bolts / nuts / washers with 2.5 % wastage 3 kg
MS pipe 100 mm dia 11 kg
 - Welding electrodes :
Welding electrodes for stitch welding at 10 % of total with 2.5 % 175 Nos
Welding electrodes (LH) for run welding at 90 % of total with 2 1575 Nos

- 2 Cutting :
 Length of cutting assuming cutting for 2 sides 172 Rm
 Add for variations (cutting for more than 2 sides / odd shapes) 17 Rm
 Total 189 Rm
- For cutting structural steel sections to required sizes gas cutting is assumed.
 Length of steel to be cut by using gas manually 40 m
 Length of steel to be cut by gas using pug cutting machine 149 m
 Time for gas cutting manually assuming average cutting progre 20 hours
 Time for gas cutting by pug cutting machine at (av) 3 m / hour 50 hours
 Acetelyne gas @ 0.6 cum / hour (70 x 0.60) 42 cum
 Oxygen gas @ 1.8 cum / hour (70 x 1.80) 126 cum
 Use of gas cutting torch with 50 min / hr working (20 x 60 / 50 24 hours
 Use of pug cutting machine with 50 min / hr working (50 x 60 / 60 hours
- 3 Welding :
 Length of welding 211 Rm
 For stich welding @ 2 hrs usage / shift & @ 15 electrodes / hr :
 (175 / 15) x 8 / 2 47 hours
 For run welding @ 6 hrs usage / shift & @ 15 electrodes / hr
 (1575 / 15) x 8 / 6 140 hours
 Total 187 hours
- Deploy welding transformer for 187 hours.
 Fuel / Energy charges @ 25 % hrs for stich welding & @ 75 % hrs for run welding.
 (47 x 0.25 + 140 x 0.75) 117 hours

- 5 Requirement of other machinery :
 For handling during fabrication mobile derrick crane for 4 hours and stationery derrick crane for 8 hours considered.
 For drilling holes for pins / guide shoes 2 hours use of drilling machine considered.
 For grinding and finishing weld joints 2 hours use of grinding machine considered.

- 6 Requirement of work force :

| Work component | Foreman | Marker / | Gas cutter/ | Helper |
|--|---------|--------------|-------------|--------|
| | | Fabricator / | Welder | |
| | | Erector / | | |
| Cutting sections 84 hours | 5 | 10 | 10 | 20 |
| Drilling holes for pins / bolts fixing | | 1 | --- | 1 |
| Fabricating by stich welding 47 hours | 3 | 6 | --- | 12 |
| Run welding 140 hours | 2 | --- | 18 | 18 |
| Finishing / guide shoe fixing / checking | | 1 | --- | 1 |
| Total : | 10 | 18 | 28 | 52 |

- 7 Excise duty on supply :
 Excise duty is applicable on supply of fabricated parts. The cost of materials is inclusive of all taxes/ duties. Therefore, for purpose of rate analysis 75 percent of total cost excluding the cost of materials (assuming 25 % erection cost) is considered for assessing excise duty.

- 8 Use rate of materials :
- | | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of welk | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : Gates and Allied Works - Item Unit Rates 2021-22
3.528 tonne**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|------------------|
| 1 | Structural steel | | | | |
| | Angles / beams / channels / bars | kg | 13.00 | 50.50 | 656.50 |
| | Plates / flats | kg | 3389.00 | 52.00 | 176228.00 |
| 2 | Alloy steel components | | | | |
| | Lifting pins | kg | 101.00 | 434.00 | 43834.00 |
| 3 | Bronze alloy components : | | | | |
| | Bronze bush | kg | 5.00 | 962.00 | 4810.00 |
| 4 | Forged steel components : | | | | |
| | Lifting hooks | kg | 103.00 | 274.00 | 28222.00 |
| 5 | MS pipe 100 mm dia | kg | 11.00 | 175.00 | 1925.00 |
| 6 | Bolt / Nut / Washer | | | | |
| | MS bolts / nuts / washers | kg | 3.00 | 86.00 | 258.00 |
| 7 | Oxygen gas | cum | 126.00 | 43.00 | 5418.00 |
| 8 | Acetyline gas | cum | 42.00 | 350.00 | 14700.00 |
| 9 | Welding electrodes | Nos | 175.00 | 14.00 | 2450.00 |
| 10 | Welding electrodes (LH) | Nos | 1575.00 | 19.00 | 29925.00 |
| 11 | Use rate welding holder set | Hour | 187.00 | 7.84 | 1466.83 |
| 12 | Use rate gas cutting torch set | Hour | 24.00 | 23.18 | 556.20 |
| 13 | Sundries | LS | 25.00 | 34.00 | 850.00 |
| Total cost of Materials | | | | Rs: | 311299.53 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| 1 | Welding transformer | Hour | 187.00 | 15.10 | 2823.70 |
| | Fuel / Energy charges | Hour | 117.00 | 101.50 | 11875.50 |
| 2 | Pug cutting machine | Hour | 60.00 | 6.50 | 390.00 |
| | Fuel / Energy charges | Hour | 60.00 | 4.20 | 252.00 |
| 3 | Mobile derrick crane | Hour | 4.00 | 476.90 | 1907.60 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 4 | Stationery derrick crane | Hour | 8.00 | 75.00 | 600.00 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 5 | Grinding machine | Hour | 2.00 | 20.20 | 40.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 6 | Drilling machines | Hour | 2.00 | 20.20 | 40.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 7 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | Rs: | 20402.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Mobile crane | Hour | 4.00 | 225.20 | 900.80 |
| 2 | Crew for Drilling machine | Hour | 2.00 | 251.60 | 503.20 |
| 3 | Crew for Grinding machine | Hour | 2.00 | 251.60 | 503.20 |
| 4 | Foreman | Day | 10.00 | 645.00 | 6450.00 |
| 5 | Marker / Fabricator / Erector | Day | 18.00 | 700.00 | 12600.00 |
| 6 | Gas cutter | Day | 10.00 | 575.00 | 5750.00 |
| 7 | Welder (General) | Day | 18.00 | 575.00 | 10350.00 |
| 8 | Helper fabrication / erection | Day | 52.00 | 525.00 | 27300.00 |
| 9 | Electrician | Day | 1.00 | 650.00 | 650.00 |
| Total cost of Labour | | | | Rs: | 65007.20 |

Add towards highly skilled labour charges @ 30% on total cost of labour

19502.16

Total Cost of Labour

84509.36

labour component/unit qty 23953.90

Add contractor's profit and overhead charges 13.615% 3261.30

labour component/unit qty (including contractor's profit) **27215.20**

ABSTRACT:

| | | | |
|---|-----------------------|-----|------------------|
| A. Cost of Materials | | Rs: | 311299.53 |
| B. Hire charges of Machinery | | Rs: | 20402.00 |
| C. Cost of Labour | | Rs: | 84509.36 |
| | Total | Rs: | 416210.89 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 416210.89 |
| E. Add for transportation upto work site @ | 3% | Rs: | 12486.33 |
| | Total | Rs: | 428697.21 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 58367.13 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 162.738 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 648.446 |
| Total cost for | 3.528 tonne | Rs: | 487875.52 |
| | Rate per tonne | Rs: | 138286.70 |

MOVING GANTRY CRANE-CLASS II

- IRR-GAW-2-4 fabrication, supply, erection, testing and **commissioning of adequate capacity Class- II type moving gantry crane** consisting of rail mounted gantry frame, top platform with hand railing, long / cross travel arrangements, rope drums, gear systems, electric motors, electro-magnetic brake system, cabin, control panel, wire rope, ladder, motorised cable reeling drum etc., with all accessories for operating spillway stop log gate elements and river sluice / canal sluice emergency gates including cost of all materials, machinery, labour, etc., complete **with all leads and lifts**.
(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

DATA: Moving gantry crane consists of rail mounted gantry frame with long travel arrangement, cross travel trolley with track arrangement mounted on gantry frame top platform, rope drum hoist with all accessories mounted on cross travel trolley for operating stoplog gate elements. Consider moving gantry crane for operating spillway stoplog gate element of 8.92 t weight. The same moving gantry crane can also be used for operating river sluice emergency gate. Therefore, the hoisting capacity of the gantry crane depends on the requirement of hoisting capacity for spillway stoplog element or river sluice emergency gate whichever is higher. The actual weight of moving gantry crane 30.856 t
Consider actual weight for data rate analysis.

- 1 Requirement of materials :
 - a. Structural steel conforming to IS : 2062 :

| | |
|---|-------------|
| Angles / Beams / Channels / Bars with 2.5 % wastage | 1743.00 kg |
| Plates / Flats with 2.5 % wastage | 19700.00 kg |
| Chequered plate with 2.5 % wastage | 820.00 kg |
 - b. Cast steel components conforming to IS : 1030 :

| | |
|----------------------------|------------|
| Rope drums 2 Nos / Gears | 2336.00 kg |
| Pinions | 149.00 kg |
| Wheels and Pulleys | 2255.00 kg |
| Plummer blocks / Couplings | 817.00 kg |
 - c. Forged steel components conforming to IS : 2004 :

| | |
|----------------|-----------|
| Hook / Shackle | 127.00 kg |
|----------------|-----------|
 - d. Alloy steel components conforming to IS: 1570 :

| | |
|--------|-----------|
| Shafts | 556.00 kg |
| Pins | 524.00 kg |
 - e. Aluminium/ Bronze alloy components conforming to IS : 305 :

| | |
|-----------------|-----------|
| Bearings / Bush | 181.00 kg |
|-----------------|-----------|
 - f. Bolt / Nut / Washers conforming to IS : 1363 :

| | |
|--|----------|
| MS Bolts / Nuts / Washers with 2.5 % wastage | 63.00 kg |
|--|----------|
 - g. Steel wire rope conforming to IS : 2266 :

| | |
|--|-----------|
| 28 mm dia 6 / 37 construction 150 Rm @ 2.71 kg / m | 406.00 kg |
|--|-----------|
 - h. Other components :

| | |
|------------------------|-------|
| Worm reducers | 4 Nos |
| Electric motor 17.5 hp | 1 No. |
| Electric motor 5 hp | 2 Nos |
| Electric motor 3 hp | 1 No. |

| | | | | | |
|---|---|-----------------|---------------------------------------|-----------------------|-------|
| | Ele-magnetic / Thruster brakes | 4 Nos | | | |
| | MS pipe 32 mm dia | 50 Rm | | | |
| | Electric cable / switches / control panels etc | 3 sets | | | |
| | i. Welding electrodes for stitch welding at 10 % of total with 2.5 % | 1123 Nos | | | |
| | Welding electrodes (LH) for run welding at 90 % of total with 2 | 10110 Nos | | | |
| 2 | Cutting : | | | | |
| | Length of cutting assuming cutting for 2 sides | 761 Rm | | | |
| | Add for variations (cutting for more than 2 sides / odd shapes) | 76 Rm | | | |
| | Total | 837 Rm | | | |
| | For cutting structural steel sections to required sizes gas cutting is assumed. | | | | |
| | Length of steel to be cut by using gas cutting torch manually | 250 m | | | |
| | Length of steel to be cut by gas using pug cutting machine | 587 m | | | |
| | Time for gas cutting manually assuming average cutting progre | 125 hours | | | |
| | Time for gas cutting by pug cutting machine at (av) 3 m / hour | 196 hours | | | |
| | Acetelyne gas @ 0.6 cum / hour (321 x 0.60 | 193 cum | | | |
| | Acetelyne gas @ 0.6 cum / hour (321 x 0.60 | 579 cum | | | |
| | Use of gas cutting torch with 50 min / hr working (125 x 60 | 150 hours | | | |
| | Use of pug cutting machine with 50 min / hr working (196 x 60 | 235 hours | | | |
| 3 | Welding : | | | | |
| | Length of welding | 1260 Rm | | | |
| | For stich welding @ 2 hrs usage / shift & @ 15 electrodes / hr | | | | |
| | (1123 / 15) x 8 / 2 | 300 hours | | | |
| | For run welding @ 6 hrs usage / shift & @ 15 electrodes / hr | | | | |
| | (10110 / 15) x 8 / 6 | 897 hours | | | |
| | Total | 1197 hours | | | |
| | Deploy welding transformer for 1197 hours. | | | | |
| | Fuel / Energy charges @ 25 % hrs for stitch welding & @ 75 % hrs for run welding. | | | | |
| 4 | Requirement of other machinery : | | | | |
| | For lifting and placing in position hoist drums, worm reducers, gears, floating shafts etc deploy tower crane for 6 hours. | | | | |
| | For handling and erection of portals mobile derrick crane for 100 hours considered. | | | | |
| | For drilling holes for bolts 16 hours use of drilling machine considered. | | | | |
| | For grinding and finishing weld joints 32 hours use of grinding machine considered. | | | | |
| 5 | Requirement of work force : | | | | |
| | Work component | Foreman | Marker / Fabricator / Erector / | Gas cutter/ Welder | Helpe |
| | Cutting sections 385 hours | 24 | 48 | 48 | |
| | Drilling holes for pins / bolts fixing | 1 | 2 | --- | |
| | Fabricating by stitch welding 300 hours | 19 | 38 | --- | |
| | Run welding 897 hours | 11 | --- | 112 | |
| | Assembly/Erection of wheels/ base frame | 2 | 4 | --- | |
| | Assembly/Erection of portals | 2 | 4 | --- | |
| | Assembly/Erection of top frame | 2 | 4 | --- | |
| | Assembly/Erection of CT trolley | 2 | 4 | --- | |
| | Assembly/Erection of drums / drive units | 2 | 4 | --- | |
| | Assembly/Erection of CT drive units | 1 | 2 | --- | |
| | Assembly/Erection of LT drive units | 1 | 2 | --- | |
| | Erection of cabin / railings etc | 2 | 2 | --- | |
| | Erection of control panel / cabling | 1 | 1 | --- | |
| | Checking and trial running without rope | 2 | 4 | --- | |
| | Rope fixing and checking | 1 | 2 | --- | |
| | Trial running by lifting / lowering gate | 1 | 2 | --- | |
| | Finishing / cleaning | --- | 1 | --- | |
| | Total : | 74 | 124 | 160 | |
| 6 | Excise duty on supply : | | | | |
| | Excise duty is applicable on supply of fabricated parts. The cost of materials is inclusive of all taxes/ duties. Therefore, for purpose of rate analysis 75 percent of total cost excluding the cost of materials (assuming 25 % erection cost) is considered for assessing excise duty. | | | | |
| 7 | Use rate of materials : | | | | |
| | Cost of welk | 7844.00 / Each | Rs: | 7844.00 | |
| | Life of welding set | | | 1000 hours | |
| | Use rate of (cost / life) | | Rs: | 7.84 | |
| | Cost of gas | 13905.00 / Each | Rs: | 13905.00 | |
| | Life of gas cutting set | | | 600 hours | |
| | Use rate of (cost / life) | | Rs: | 23.18 | |

DATA:

RATE ANALYSISUNIT : **30.856 tonne****A. MATERIALS:****25 t capacity**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|----------------|-------------------|
| 1 | Structural steel | | | | |
| | Angles / beams / channels / bars | kg | 1743.00 | 50.50 | 88021.50 |
| | Plates / flats | kg | 19700.00 | 52.00 | 1024400.00 |
| | Chequered plates | kg | 820.00 | 61.00 | 50020.00 |
| 2 | Cast steel components : | | | | |
| | Rope drums 2 Nos/Gears | kg | 1320.00 | 233.00 | 307560.00 |
| | pinions | kg | 1165.00 | 224.00 | 260960.00 |
| | Wheels / Pulleys | kg | 2255.00 | 193.00 | 435215.00 |
| | Plummer blocks / Couplings | kg | 817.00 | 193.00 | 157681.00 |
| 3 | Forged steel components | | | | |
| | Hook / Shackle | kg | 127.00 | 274.00 | 34798.00 |
| 4 | Alloy steel components | | | | |
| | Shafts | kg | 556.00 | 235.00 | 130660.00 |
| | Pins | kg | 524.00 | 434.00 | 227416.00 |
| 5 | Bronze alloy components : | | | | |
| | Bronze bearings / bush | kg | 181.00 | 962.00 | 174122.00 |
| 6 | Wire rope 28 mm dia 6/37 constructio | kg | 406.00 | 203.00 | 82418.00 |
| 7 | MS Bolt / Nut / Washer | kg | 63.00 | 86.00 | 5418.00 |
| 8 | MS pipe 32 mm dia for railing | Rm | 50.00 | 187.00 | 9350.00 |
| 9 | Worm reducers | Nos. | 4.00 | 191493.00 | 765972.00 |
| 10 | Electric motor 17.5 hp | No. | 1.00 | 73345.00 | 73345.00 |
| | Electric motor 5 hp | Nos. | 2.00 | 27972.00 | 55944.00 |
| | Electric motor 3 hp | No. | 1.00 | 19845.00 | 19845.00 |
| 11 | Ele-magnetic / Thruster brakes | Nos. | 4.00 | 30167.00 | 120668.00 |
| | Electric cable / switch / control panel etc | LS | 3.00 | 48705.00 | 146115.00 |
| 12 | Oxygen gas | cum | 579.00 | 43.00 | 24897.00 |
| 13 | Acetyline gas | cum | 193.00 | 350.00 | 67550.00 |
| 14 | Welding electrodes | Nos | 1123.00 | 14.00 | 15722.00 |
| 15 | Welding electrodes (LH) | Nos | 10110.00 | 19.00 | 192090.00 |
| 16 | Grease | kg | 50.00 | 267.00 | 13350.00 |
| 17 | Use rate welding holder set | Hour | 1197.00 | 7.84 | 9389.27 |
| 18 | Use rate gas cutting torch set | Hour | 150.00 | 23.18 | 3476.25 |
| 19 | Sundries | LS | 200.00 | 34.00 | 6800.00 |
| Total cost of Materials | | | | Rs: | 4503203.02 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|----------------|------------------|
| 1 | Welding transformer | Hour | 1197.00 | 15.10 | 18074.70 |
| | Fuel / Energy charges | Hour | 748.00 | 101.50 | 75922.00 |
| 2 | Tower crane 5 t capacity | Hour | 6.00 | 749.10 | 4494.60 |
| | Fuel / Energy charges | Hour | 6.00 | 220.00 | 1320.00 |
| 3 | Pug cutting machine | Hour | 235.00 | 6.50 | 1527.50 |
| | Fuel / Energy charges | Hour | 235.00 | 4.20 | 987.00 |
| 4 | Mobile derrick crane | Hour | 100.00 | 476.90 | 47690.00 |
| | Fuel / Energy charges | Hour | 100.00 | 490.80 | 49080.00 |
| 5 | Grinding machine | Hour | 32.00 | 20.20 | 646.40 |
| | Fuel / Energy charges | Hour | 32.00 | 42.30 | 1353.60 |
| 6 | Drilling machines | Hour | 16.00 | 20.20 | 323.20 |
| | Fuel / Energy charges | Hour | 16.00 | 42.30 | 676.80 |
| 7 | Sundries | LS | 500.00 | 34.00 | 17000.00 |
| Total hire charges of Machinery | | | | Rs: | 219095.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|------------------|
| 1 | Crew for Mobile crane | Hour | 100.00 | 225.20 | 22520.00 |
| 2 | Crew for Tower crane | Hour | 6.00 | 243.40 | 1460.40 |
| 3 | Crew for Drilling machine | Hour | 16.00 | 251.60 | 4025.60 |
| 4 | Crew for Grinding machine | Hour | 32.00 | 251.60 | 8051.20 |
| 5 | Foreman | Day | 74.00 | 645.00 | 47730.00 |
| 6 | Marker / Fabricator / Erector | Day | 124.00 | 700.00 | 86800.00 |
| 7 | Gas cutter | Day | 48.00 | 575.00 | 27600.00 |
| 8 | Welder (General) | Day | 112.00 | 575.00 | 64400.00 |
| 9 | Khalasi | Day | 20.00 | 575.00 | 11500.00 |
| 10 | Helper fabrication / erection | Day | 350.00 | 525.00 | 183750.00 |
| 11 | Electrician | Day | 10.00 | 650.00 | 6500.00 |
| Total cost of Labour | | | | Rs: | 464337.20 |

Add towards highly skilled labour charges @ 30% on total cost of labour **139301.16**
Total Cost of Labour 603638.36

labour component/unit qty 24145.50
Add contractor's profit and overhead charges 13.615% 3287.40
labour component/unit qty (including contractor's profit) **27432.90**

ABSTRACT:

| | | | |
|---|-----------------------------|-----|------------------|
| A. Cost of Materials | | Rs: | 4503203.02 |
| B. Hire charges of Machinery | | Rs: | 219095.80 |
| C. Cost of Labour | | Rs: | 603638.36 |
| | Total | Rs: | 5325937.18 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 5325937.18 |
| E. Add for transportation upto work site @ | 3% | Rs: | 159778.12 |
| | Total | Rs: | 5485715.29 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 746880.14 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 1423.316 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 5671.332 |
| Total cost for | 30.856 tonne | Rs: | 6239690.08 |
| | 25.000 t capacity | Rs: | |
| | Rate per tonne | Rs: | 202219.70 |
| | Rate per tonne capac | Rs: | 249587.60 |

RAIL TRACK FOR GANTRY CRANE

IRR-GAW-2-5 Design, fabrication, supply, erection and **commissioning of rail track using 45 kg / m standard**

rails on spillway bridge for movement of gantry crane for handling and operating spillway stoplog gate elements / river sluice / canal sluice emergency gate including cost of all materials, machinery, labour, complete as per specifications

(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

DATA: Rail track for moving gantry crane consists of 45 kg / m standard rails fixed by welding and bolting to anchors embedded in concrete at intervals. The width of track shall be as per the requirement of gantry long travel specifications. Consider track length of 200 m for rate analysis.

| | | |
|----|---|-----------|
| | Actual weight of materials as per data | 20.722 t |
| 1 | Requirement of materials : as per fabrication drawings | |
| a. | Structural steel conforming to IS : 2062 : | |
| | Structural steel angles / beams / channels / bars with 2.5 % wa | 1570 kg |
| | Structural steel plates / flats with 2.5 % wastage | 975 kg |
| b. | Bolt / Nut / Washer conforming to IS : 1363 : | |
| | MS bolts and nuts with 2.5 % wastage | 246 kg |
| c. | Standard Rails 45 kg / m with 2.5 % wastage | 18450 kg |
| d. | Welding electrodes : | |
| | Welding electrodes for stitch welding at 10 % of total with 2.5 % | 180 Nos |
| | Welding electrodes for run welding at 90 % of total with 2.5 % | 1625 Nos |
| 2 | Cutting : | |
| | Total length of cutting assuming cutting for 2 sides | 222 Rm |
| | For cutting structural steel sections to required sizes gas cutting is assumed. | |
| | Length of steel to be cut by using gas cutting torch manually | 222 m |
| | Time for gas cutting manually assuming average cutting progre | 111 hours |
| | Acetylene gas @ 0.6 cum / hour (111 x 0.60) | 67 cum |
| | Oxygen gas @ 1.8 cum / hour (111 x 1.80) | 201 cum |
| | Use of gas cutting torch with 50 min / hr working (111 x 60 / | 133 hours |

| | | |
|---|---|-----------|
| 3 | Welding : | |
| | Length of welding | 210 m |
| | For stitch welding @ 2 hrs usage / shift & @ 15 electrodes / hr (180 / 15) x 8 / 2 | 48 hours |
| | For run welding @ 6 hrs usage / shift & @ 15 electrodes / hr (1625 / 15) x 8 / 6 | 145 hours |
| | Total | 193 hours |

Deploy welding transformer for 193 hours.

Fuel / Energy charges @ 25 % hrs for stitch welding & @ 75 % hrs for run welding.
(48 x 0.25 + 145 x 0.75) 121 hours

- 4 Requirement of other machinery :
For drilling holes for anchor bolts 50 hours use of drilling machine considered.
For grinding edges of parts requiring finishing 8 hours use of grinding machine considered.
For handling and erection mobile derrick crane for 4 hours considered.

- 5 Requirement of work force :

| Work component | Foreman | Marker / Fabricator / Erector / | Gas cutter/ Welder | Helper |
|---|---------|---------------------------------------|-----------------------|--------|
| Cutting sections 133 hours | --- | 17 | 17 | 17 |
| Drilling holes for anchors / supports | --- | 6 | --- | 6 |
| Erection /stitch welding anchors 48 hours | 3 | 6 | --- | 6 |
| Erection of rails & fixing clamps | 2 | 2 | --- | 4 |
| Run welding 145 hours | 2 | --- | 18 | 18 |
| Finishing / checking / cleaning | 1 | 1 | --- | 1 |
| Total : | 8 | 32 | 35 | 52 |

- 6 Excise duty on supply :

Excise duty is applicable on supply of fabricated parts. The cost of materials is inclusive of all taxes/ duties. Therefore, for purpose of rate analysis 75 percent of total cost excluding the cost of materials (assuming 25 % erection cost) is considered for assessing excise duty.

- 7 Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSIS

UNIT : 200.000 Rm

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|---------------|
| 1 | Str steel angle / beam / channel / bars | kg | 1570.00 | 50.50 | 79285.00 |
| 2 | Structural steel plate / flats | kg | 975.00 | 52.00 | 50700.00 |
| 3 | Rails | kg | 18450.00 | 52.95 | 976835.25 |
| 4 | MS bolts and nuts | kg | 246.00 | 86.00 | 21156.00 |
| 5 | Oxygen gas | cum | 201.00 | 43.00 | 8643.00 |
| 6 | Acetyline gas | cum | 67.00 | 350.00 | 23450.00 |
| 7 | Welding electrodes | Nos | 1805.00 | 14.00 | 25270.00 |
| 8 | Use rate welding holder set | Hour | 193.00 | 7.84 | 1513.89 |
| 9 | Use rate gas cutting torch set | Hour | 133.00 | 23.18 | 3082.28 |
| 10 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total cost of Materials | | | | Rs: | 1190275.42 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Welding transformer | Hour | 193.00 | 15.10 | 2914.30 |
| | Fuel / Energy charges | Hour | 121.00 | 101.50 | 12281.50 |
| 2 | Mobile derrick crane | Hour | 4.00 | 476.90 | 1907.60 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 3 | Grinding machine | Hour | 8.00 | 20.20 | 161.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 4 | Drilling machines | Hour | 50.00 | 20.20 | 1010.00 |
| | Fuel / Energy charges | Hour | 50.00 | 42.30 | 2115.00 |
| 5 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | Rs: | 23031.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|-------------------------------|------|----------|-------------|------------------|
| 1 | Crew for Mobile crane | Hour | 4.00 | 225.20 | 900.80 |
| 2 | Crew for Drilling machine | Hour | 50.00 | 251.60 | 12580.00 |
| 3 | Crew for Grinding machine | Hour | 8.00 | 251.60 | 2012.80 |
| 4 | Foreman | Day | 8.00 | 645.00 | 5160.00 |
| 5 | Marker / Fabricator / Erector | Day | 32.00 | 700.00 | 22400.00 |
| 6 | Gas cutter | Day | 17.00 | 575.00 | 9775.00 |
| 7 | Welder (General) | Day | 18.00 | 575.00 | 10350.00 |
| 8 | Helper fabrication / erection | Day | 52.00 | 525.00 | 27300.00 |
| 9 | Electrician | Day | 1.00 | 650.00 | 650.00 |
| Total cost of Labour | | | | Rs: | 91128.60 |
| Add towards highly skilled labour charges @ 30% on total cost of labour | | | | | 27338.58 |
| Total Cost of Labour | | | | | 118467.18 |

| | |
|---|---------------|
| labour component/unit qty | 592.30 |
| Add contractor's profit and overhead charges | 13.615% 80.60 |
| labour component/unit qty (including contractor's profit) | 672.90 |

ABSTRACT:

| | | | |
|---|--------------------|-----|----------------|
| A. Cost of Materials | | Rs: | 1190275.42 |
| B. Hire charges of Machinery | | Rs: | 23031.60 |
| C. Cost of Labour | | Rs: | 118467.18 |
| | Total | Rs: | 1331774.20 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 1331774.20 |
| E. Add for transportation upto work site @ | 3% | Rs: | 39953.23 |
| | Total | Rs: | 1371727.42 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 186760.69 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 955.858 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 3808.704 |
| Total cost for | 200.000 Rm | Rs: | 1563252.67 |
| | Rate per Rm | Rs: | 7816.30 |

VERTICAL LIFT GATES/STOP LOGS - ROLLER MOUNTED

IRR-GAW-2-6 Design, fabrication, supply, erection, testing and **commissioning of fixed wheel type vertical lift service gate** consisting of skin plate, vertical and horizontal girders, wheels, stiffeners, lifting brackets, guide rollers, ballast blocks, teflon claded rubber seals etc., with all accessories for river sluice / canal sluice vent including cost of all materials, machinery, labour, welding, aligning finishing seal fixing etc. with all leads and lifts, complete as per specifications and approved drawings **(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)**

Drawing No. CE/CDO/DEE/DEE4/GNC/HR/2150/96,2137/98 (GNSS Project)

Gate Size: 3.66 X 6.1 Mtr

Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : Gates and Allied Works - Item Unit Rates 2021-22
10.000 tonne**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|------------------|
| 1 | Structural steel | | | | |
| | Plates / flats | kg | 7103.00 | 52.00 | 369356.00 |
| | Beams/Channels | kg | 2727.00 | 50.50 | 137713.50 |
| 2 | Alloy steel components | | | | |
| | Wheel axles / Pins | kg | 108.00 | 434.00 | 46872.00 |
| 3 | Cast steel components | | | | |
| | Wheels / Guide rollers | kg | 504.00 | 193.00 | 97272.00 |
| 4 | Alluminium / Bronze alloy components | | | | |
| | Bearings | kg | 12.00 | 962.00 | 11544.00 |
| 5 | Bolt / Nut / Washer | | | | |
| | GI bolts / nuts / washers | kg | 36.00 | 108.00 | 3888.00 |
| | MS bolts / nuts / washers | kg | 6.00 | 86.00 | 516.00 |
| 6 | Rubber seals | | | | |
| | Bottom seal (flat uncladed) | Rm | 3.72 | 670.00 | 2492.40 |
| | Side seals (bulb teflon claded) | Rm | 12.30 | 1430.00 | 17589.00 |
| | Top seal (bulb teflon claded) | Rm | 3.72 | 1430.00 | 5319.60 |
| | Corner seals (bulb teflon claded) | Nos | 2.00 | 1429.00 | 2858.00 |
| 7 | Oxygen gas | cum | 170.00 | 43.00 | 7310.00 |
| 8 | Acetyline gas | cum | 56.00 | 350.00 | 19600.00 |
| 9 | Welding electrodes | Nos | 3200.00 | 14.00 | 44800.00 |
| 10 | Welding electrodes (LH) | Nos | 800.00 | 19.00 | 15200.00 |
| 11 | Use rate welding holder set | Hour | 500.00 | 7.84 | 3922.00 |
| 12 | Use rate gas cutting torch set | Hour | 40.00 | 23.18 | 927.00 |
| 13 | Sundries | LS | 60.00 | 34.00 | 2040.00 |
| Total cost of Materials | | | | Rs: | 789219.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|------------------|
| 1 | Welding transformer | Hour | 500.00 | 15.10 | 7550.00 |
| | Fuel / Energy charges | Hour | 500.00 | 101.50 | 50750.00 |
| 2 | Pug cutting machine | Hour | 85.00 | 6.50 | 552.50 |
| | Fuel / Energy charges | Hour | 85.00 | 4.20 | 357.00 |
| 3 | Tower crane | Hour | 10.00 | 749.10 | 7491.00 |
| | Fuel / Energy charges | Hour | 10.00 | 220.00 | 2200.00 |
| 4 | Mobile crane 16 T | Hour | 30.00 | 2071.20 | 62136.00 |
| | Fuel / Energy charges | Hour | 30.00 | 1704.20 | 51126.00 |
| 5 | Stationery derrick crane | Hour | 20.00 | 75.00 | 1500.00 |
| | Fuel / Energy charges | Hour | 20.00 | 0.00 | 0.00 |
| 6 | Grinding machine | Hour | 10.00 | 20.20 | 202.00 |
| | Fuel / Energy charges | Hour | 10.00 | 42.30 | 423.00 |
| 7 | Drilling machines | Hour | 30.00 | 20.20 | 606.00 |
| | Fuel / Energy charges | Hour | 30.00 | 42.30 | 1269.00 |
| 8 | Bending machine | Hour | 10.00 | 38.40 | 384.00 |
| | Fuel / Energy charges | Hour | 10.00 | 126.90 | 1269.00 |
| 9 | Sundries | LS | 50.00 | 34.00 | 1700.00 |
| Total hire charges of Machinery | | | | Rs: | 189515.50 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|------------------|
| 1 | Crew for Mobile crane 16 T | Hour | 30.00 | 685.20 | 20556.00 |
| 2 | Crew for Tower crane | Hour | 10.00 | 243.40 | 2434.00 |
| 3 | Crew for Drilling machine | Hour | 30.00 | 251.60 | 7548.00 |
| 4 | Crew for Grinding machine | Hour | 10.00 | 251.60 | 2516.00 |
| 5 | Crew for Bending machine | Hour | 10.00 | 171.60 | 1716.00 |
| 6 | Foreman | Day | 16.00 | 645.00 | 10320.00 |
| 7 | Marker / Fabricator / Erector | Day | 50.00 | 700.00 | 35000.00 |
| 8 | Gas cutter | Day | 8.00 | 575.00 | 4600.00 |
| 9 | Welder (General) | Day | 52.00 | 575.00 | 29900.00 |
| 10 | Welder (X - ray grade) | Day | 14.00 | 645.00 | 9030.00 |
| 11 | Khalasi | Day | 170.00 | 575.00 | 97750.00 |
| 12 | Helper fabrication / erection | Day | 230.00 | 525.00 | 120750.00 |
| 13 | Electrician | Day | 4.00 | 650.00 | 2600.00 |
| Total cost of Labour | | | | Rs: | 344720.00 |

Add towards highly skilled labour charges @ 30% on total cost of labour
Total Cost of Labour

Gates and Allied Works - Item Unit Rates 2021-22
103416.00
448136.00

| | |
|---|-----------------|
| labour component/unit qty | 44813.60 |
| Add contractor's profit and overhead charges | 13.615% 6101.40 |
| labour component/unit qty (including contractor's profit) | 50915.00 |

ABSTRACT:

| | | | |
|---|-----------------------|-----|------------------|
| A. Cost of Materials | | Rs: | 789219.50 |
| B. Hire charges of Machinery | | Rs: | 189515.50 |
| C. Cost of Labour | | Rs: | 448136.00 |
| | Total | Rs: | 1426871.00 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 1426871.00 |
| E. Add for transportation upto work site @ | 3% | Rs: | 42806.13 |
| | Total | Rs: | 1469677.13 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 200096.54 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 461.276 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 1838 |
| Total cost for | 10.000 tonne | Rs: | 1672072.95 |
| | Rate per tonne | Rs: | 167207.30 |

VERTICAL LIFT GATES-ROPE DRUM HOIST UPTO 30 TON CAP. POWER OPERATED

IRR-GAW-2-7 Design, fabrication, supply, erection, testing and **commissioning of adequate capacity rope drum hoist** consisting of hoist platform, rope drum, gear system, electric motor, electro-magnetic brake system, hand operation assembly, control panel, wire rope, pulleys, ladder etc., with all accessories for operating river sluice / canal sluice service gate including cost of all materials, machinery, labour, , complete as per specifications and drawings with all leads and lifts (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under items in this chapter and add as applicable separately)

DATA: Rope drum hoist for river / canal sluice service gate consists of embedded parts for anchorage, hoist supporting structure, pulley support, pulleys, drive stool, rope drums, shafts, couplings, gears and pinions, plummer blocks, gear box, electric motor, hand operation assembly, brake, wire rope, gate position indicator, switch box etc. with related accessories.
Consider rope drum hoist for river / canal sluice service gate for vent of size 2.5 m x 3 m.

| | |
|---|---------------|
| Capacity of hoist in tonnes with 25% reserve capa : | |
| (Capacity of hoist to be rounded off to next 5 tonn : | 25.000 tonnes |
| The actual weight of river sluice service gate rope drum hoist | 6.243 t |
| Consider actual weight for data rate analysis. | |
| 1 Requirement of materials : | |
| a. Structural steel conforming to IS : 2062 : | |
| Angles / Beams / Channels / Bars with 2.5 % wastage | 1487 kg |
| Plates / Flats with 2.5 % wastage | 402 kg |
| Chequered plates with 2.5 % wastage | 290 kg |
| b. Cast steel components conforming to IS : 1030 : | |
| Rope drums 2 Nos / Gears | 1926 kg |
| Pinions | 79 kg |
| Pulleys 3 Nos / Couplings 2 Nos | 306 kg |
| Plummer blocks / Hubs | 72 kg |
| c. Alloy steel steel components conforming to IS : 1570 : | |
| Shafts | 346 kg |
| Pins | 73 kg |
| d. Alluminium/ Bronze alloy components conforming to IS : 305 : | |
| Bearings / Bush | 57 kg |
| e. Bolt / Nut / Washers conforming to IS : 1363 : | |
| MS Bolts / Nuts / Washers with 2.5 % wastage | 32 kg |
| f. Steel wire rope conforming ti IS 2266 : | |
| 28 mm dia 6 / 37 construction 1 No 120 Rm @ 2.71 kg / m | 325 kg |
| g. Other components : | |
| Manual operating system | 1 No. |
| Worm reducer | 1 No. |
| Electric motor 5 hp | 1 No. |
| Gate position indicator | 1 No. |
| Ele-magnetic brake | 1 No. |
| Electric cable / switch / control panel etc | 1 set |

- h. Welding electrodes :
- Welding electrodes for stitch welding at 10 % of total with 2.5 % 80 Nos
- Welding electrodes (LH) for run welding at 90 % of total with 2 720 Nos
- 2 Cutting :
- Length of cutting assuming cutting for 2 sides 57 Rm
- Add for variations (cutting for more than 2 sides / odd shapes) 6 Rm
- Total 63 Rm
- For cutting structural steel sections to required sizes gas cutting is assumed.
- Length of steel to be cut by using gas manually 26 m
- Length of steel to be cut by gas using pug cutting machine 37 m
- Time for gas cutting manually assuming average cutting progress 13 hours
- Time for gas cutting by pug cutting machine at (av) 3 m / hour 12 hours
- Acetylene gas @ 0.6 cum / hour (25 x 0.60) 15 cum
- Oxygen gas @ 1.8 cum / hour (25 x 1.80) 45 cum
- Use of gas cutting torch with 50 min / hr working (13 16 hours
- Use of pug cutting machine with 50 min / hr working (12 15 hours
- 3 Welding :
- Length of welding 97 Rm
- For stitch welding @ 2 hrs usage / shift & @ 15 electrodes / hr (80 / 15) x 8 / 2 21 hours
- For run welding @ 6 hrs usage / shift & @ 15 electrodes / hr (720 / 15) x 8 / 6 64 hours
- Total 85 hours
- Deploy welding transformer for 85 hours.
- Fuel / Energy charges @ 25 % hrs for stitch welding & @ 75 % hrs for run welding.
- 4 Requirement of other machinery :
- For lifting and placing in position hoist drums, worm reducers, gears, floating shafts etc deploy tower crane for 2 hours.
- For handling during fabrication and erection mobile derrick crane for 10 hours considered.
- For drilling holes for bolts 2 hours use of drilling machine considered.
- For grinding and finishing weld joints 2 hours use of grinding machine considered.
- 5 Requirement of work force :
- | Work component | Foreman | Marker /
Fabricator /
Erector / | Gas cutter/
Welder | Helper |
|---|---------|---------------------------------------|-----------------------|--------|
| Cutting sections/ drilling holes 31 hours | 2 | 4 | 4 | 8 |
| Fabricating by stitch welding 21 hours | 1 | 3 | --- | 6 |
| Run welding 64 hours | 1 | --- | 8 | 8 |
| Erection of anchors | 1 | 1 | --- | 2 |
| Erection of hoist frame | 1 | 1 | --- | 2 |
| Erection of drums / gears / shafts | 1 | 2 | --- | 4 |
| Erection of pulleys / plunger blocks | 1 | 1 | --- | 2 |
| Erection of worm reducers / brake / motor | 1 | 1 | --- | 2 |
| Erection of other accessories | 1 | 1 | --- | 2 |
| Erection of control panel / cabling | 1 | 1 | --- | 1 |
| Checking and running without rope | 1 | 1 | --- | 2 |
| Rope fixing and checking | 1 | 1 | --- | 2 |
| Trial running by lowering / lifting gate | 1 | 1 | --- | 2 |
| Final checking / Finishing / cleaning | 1 | 1 | --- | 1 |
| Total : | 15 | 19 | 12 | 44 |
- 6 Excise duty on supply :
- Excise duty is applicable on supply of fabricated parts. The cost of materials is inclusive of all taxes/ duties. Therefore, for purpose of rate analysis 75 percent of total cost excluding the cost of materials (assuming 25 % erection cost) is considered for assessing excise duty.
- 7 Use rate of materials :
- | | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

| RATE ANALYSIS | | | UNIT : 6.243 tonne wt | | |
|-------------------------|---|------|-----------------------|-------------|---------------|
| A. MATERIALS: | | | 25 t capacity | | |
| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Structural steel | | | | |
| | Angles / beams / channels / bars | kg | 1487.00 | 50.50 | 75093.50 |
| | Plates / flats | kg | 402.00 | 52.00 | 20904.00 |
| | Chequered plate | kg | 290.00 | 61.00 | 17690.00 |
| 2 | Cast steel components : | | | | |
| | Rope drums 2 Nos / Gears | kg | 1926.00 | 233.00 | 448758.00 |
| | Pinions | kg | 79.00 | 224.00 | 17696.00 |
| | Pulleys 3 Nos / Couplings 2 Nos | kg | 306.00 | 193.00 | 59058.00 |
| | Plummer blocks / Hubs | kg | 72.00 | 193.00 | 13896.00 |
| 3 | Alloy steel components | | | | |
| | Shafts | kg | 346.00 | 235.00 | 81310.00 |
| | Pins | kg | 73.00 | 434.00 | 31682.00 |
| 4 | Bronze alloy components : | | | | |
| | Bronze bearings / bush | kg | 57.00 | 962.00 | 54834.00 |
| | Wire rope 28 mm dia 6/37 | | | | |
| 5 | construction | kg | 325.00 | 203.00 | 65975.00 |
| 6 | MS Bolt / Nut / Washer | kg | 32.00 | 86.00 | 2752.00 |
| 7 | Worm reducers | No. | 1.00 | 191493.00 | 191493.00 |
| 8 | Electric motor 5 hp | No. | 1.00 | 27972.00 | 27972.00 |
| 9 | Manual operating system | No. | 1.00 | 28894.00 | 28894.00 |
| 10 | Gate position indicator | No. | 1.00 | 187312.00 | 187312.00 |
| 11 | Ele-magnetic brake | No. | 1.00 | 30167.00 | 30167.00 |
| | Electric cable / switch / control panel | | | | |
| 12 | etc | LS | 1.00 | 48705.00 | 48705.00 |
| 13 | Oxygen gas | cum | 45.00 | 43.00 | 1935.00 |
| 14 | Acetyline gas | cum | 15.00 | 350.00 | 5250.00 |
| 15 | Welding electrodes | Nos | 80.00 | 14.00 | 1120.00 |
| 16 | Welding electrodes (LH) | Nos | 720.00 | 19.00 | 13680.00 |
| 17 | Grease | kg | 50.00 | 267.00 | 13350.00 |
| 18 | Use rate welding holder set | Hour | 85.00 | 7.84 | 666.74 |
| 19 | Use rate gas cutting torch set | Hour | 16.00 | 23.18 | 370.80 |
| 20 | Sundries | LS | 25.00 | 34.00 | 850.00 |
| Total cost of Materials | | | | Rs: | 1441414.04 |

| B. MACHINERY: | | | | | |
|---------------------------------|--------------------------|------|----------|-------------|-----------------|
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Welding transformer | Hour | 85.00 | 15.10 | 1283.50 |
| | Fuel / Energy charges | Hour | 53.00 | 101.50 | 5379.50 |
| 2 | Tower crane 5 t capacity | Hour | 2.00 | 749.10 | 1498.20 |
| | Fuel / Energy charges | Hour | 2.00 | 220.00 | 440.00 |
| 3 | Pug cutting machine | Hour | 15.00 | 6.50 | 97.50 |
| | Fuel / Energy charges | Hour | 15.00 | 4.20 | 63.00 |
| 4 | Mobile derrick crane | Hour | 10.00 | 476.90 | 4769.00 |
| | Fuel / Energy charges | Hour | 10.00 | 490.80 | 4908.00 |
| 5 | Grinding machine | Hour | 2.00 | 20.20 | 40.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 6 | Drilling machines | Hour | 2.00 | 20.20 | 40.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 7 | Sundries | LS | 25.00 | 34.00 | 850.00 |
| Total hire charges of Machinery | | | | Rs: | 19538.70 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Mobile crane | Hour | 10.00 | 225.20 | 2252.00 |
| 2 | Crew for Tower crane | Hour | 2.00 | 243.40 | 486.80 |
| 3 | Crew for Drilling machine | Hour | 2.00 | 251.60 | 503.20 |
| 4 | Crew for Grinding machine | Hour | 2.00 | 251.60 | 503.20 |
| 5 | Foreman | Day | 15.00 | 645.00 | 9675.00 |
| 6 | Marker / Fabricator / Erector | Day | 19.00 | 700.00 | 13300.00 |
| 7 | Gas cutter | Day | 4.00 | 575.00 | 2300.00 |
| 8 | Welder (General) | Day | 8.00 | 575.00 | 4600.00 |
| 9 | Khalasi | Day | 4.00 | 575.00 | 2300.00 |
| 10 | Helper fabrication / erection | Day | 44.00 | 525.00 | 23100.00 |
| 11 | Electrician | Day | 2.00 | 650.00 | 1300.00 |
| Total cost of Labour | | | | Rs: | 60320.20 |
| Add towards highly skilled labour charges @ 30% on total cost of labour | | | | | 18096.06 |
| Total Cost of Labour | | | | | 78416.26 |

| | |
|---|----------------|
| labour component/unit qty | 3136.70 |
| Add contractor's profit and overhead charges | 13.615% 427.10 |
| labour component/unit qty (including contractor's profit) | 3563.80 |

ABSTRACT:

| | | | |
|---|-------------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 1441414.04 |
| B. Hire charges of Machinery | | Rs: | 19538.70 |
| C. Cost of Labour | | Rs: | 78416.26 |
| | Total | Rs: | 1539369.00 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 1539369.00 |
| E. Add for transportation upto work site @ | 3% | Rs: | 46181.07 |
| | Total | Rs: | 1585550.07 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 215872.64 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 287.976 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 1147.464 |
| Total cost for | 6.243 tonne wt | Rs: | 1802858.15 |
| | 25.000 t capacity | Rs: | |
| | Rate per tonne wt | Rs: | 288780.70 |
| Rate per tonne capacity of hoist | | Rs: | 72114.30 |

HOIST BRIDGE/ WITH TRESSELS

IRR-GAW-2-8 Design, fabrication, supply, erection and **commissioning of structural steel hoist bridge** consisting of columns, beams, bracings, stiffeners, ties, chequered plate covering, hand railing, ladder etc., with all accessories for supporting rope drum hoist for operating barrage gates including cost of all materials, machinery, labour, welding, finishing, etc., complete complete as per specifications and drawings **with all leads and lifts** (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as perschedule of rates under items in this chapter and add as applicable separately) Drawing No. CE/CDO/VRSP/215,216/86-87 (Vengalaraya Sagar - Gomukhi Project)

| | | | |
|-----------------------------|-----------------|----------------------------|------------|
| Use rate of materials : | | | |
| Cost of welk | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |
| | | Vent Size: 12 X 6.6 Mtr | |
| | | UNIT : 10.500 tonne | |

DATA:

RATE ANALYSIS

UNIT :

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|------------------|
| 1 | Structural steel angles/ beams / channels | kg | 1494.00 | 50.50 | 75447.00 |
| | Structural steel plates / flats | kg | 6564.00 | 52.00 | 341328.00 |
| | Chequered plate | kg | 2442.00 | 61.00 | 148962.00 |
| 2 | MS pipe 25 mm dia | Rm | 60.00 | 157.00 | 9420.00 |
| 3 | Bolt / Nut / Washers | kg | 18.00 | 86.00 | 1548.00 |
| 4 | Oxygen gas | cum | 105.00 | 43.00 | 4515.00 |
| 5 | Acetyline gas | cum | 35.00 | 350.00 | 12250.00 |
| 6 | Welding electrodes | Nos | 3150.00 | 14.00 | 44100.00 |
| 7 | Use rate welding holder set | Hour | 394.00 | 7.84 | 3090.54 |
| 8 | Use rate gas cutting torch set | Hour | 105.00 | 23.18 | 2433.38 |
| 9 | Sundries | LS | 50.00 | 34.00 | 1700.00 |
| Total cost of Materials | | | | Rs: | 644793.91 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|-------------|------------------|
| 1 | Welding transformer | Hour | 394.00 | 15.10 | 5949.40 |
| | Fuel / Energy charges | Hour | 394.00 | 101.50 | 39991.00 |
| 2 | Pug cutting machine | Hour | 52.00 | 6.50 | 338.00 |
| | Fuel / Energy charges | Hour | 52.00 | 4.20 | 218.40 |
| 3 | Mobile crane 30 T | Hour | 30.00 | 2915.70 | 87471.00 |
| | Fuel / Energy charges | Hour | 30.00 | 1927.00 | 57810.00 |
| 4 | Stationery derrick crane | Hour | 20.00 | 75.00 | 1500.00 |
| | Fuel / Energy charges | Hour | 20.00 | 0.00 | 0.00 |
| 5 | Drilling machine | Hour | 20.00 | 20.20 | 404.00 |
| | Fuel / Energy charges | Hour | 20.00 | 42.30 | 846.00 |
| 6 | Grinding machine | Hour | 20.00 | 20.20 | 404.00 |
| | Fuel / Energy charges | Hour | 20.00 | 42.30 | 846.00 |
| 7 | Tower Crane | Hour | 20.00 | 749.10 | 14982.00 |
| | Fuel / Energy charges | Hour | 20.00 | 220.00 | 4400.00 |
| 8 | Sundries | LS | 50.00 | 34.00 | 1700.00 |
| Total hire charges of Machinery | | | | Rs: | 216859.80 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|------------------|
| 1 | Crew for Mobile crane 30 T | Hour | 30.00 | 685.20 | 20556.00 |
| 2 | Crew for Drilling machine | Hour | 20.00 | 251.60 | 5032.00 |
| 3 | Crew for Grinding machine | Hour | 20.00 | 251.60 | 5032.00 |
| 4 | Crew for Tower Crane | Hour | 20.00 | 243.40 | 4868.00 |
| 5 | Foreman | Day | 10.00 | 645.00 | 6450.00 |
| 6 | Marker / Fabricator / Erector | Day | 50.00 | 700.00 | 35000.00 |
| 7 | Gas cutter | Day | 14.00 | 575.00 | 8050.00 |
| 8 | Welder (General) | Day | 53.00 | 575.00 | 30475.00 |
| 9 | Helper fabrication / erection | Day | 400.00 | 525.00 | 210000.00 |
| 10 | Electrician | Day | 6.00 | 650.00 | 3900.00 |
| Total cost of Labour | | | | Rs: | 329363.00 |

Add towards highly skilled labour charges @ 30% on total cost of labour

98808.90

Total Cost of Labour

428171.90

labour component/unit qty

40778.30

Add contractor's profit and overhead charges

13.615% 5552.00

labour component/unit qty (including contractor's profit)

46330.30**ABSTRACT:**

A. Cost of Materials

Rs: 644793.91

B. Hire charges of Machinery

Rs: 216859.80

C. Cost of Labour

Rs: 428171.90

Total

Rs: 1289825.61

D. Add for excise duty

0.00%

Rs: 0.00

(on 75 percent cost excluding cost of materials)

Total

Rs: 1289825.61

E. Add for transportation upto work site @

3%

Rs: 38694.77

Total

Rs: 1328520.38

| | | | |
|---|-----------------------|------------|------------------|
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 180878.05 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 484.34 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 1929.9 |
| Total cost for | 10.500 tonne | Rs: | 1511812.67 |
| | Rate per tonne | Rs: | 143982.20 |

ROPE DRUM HOIST WITHOUT HOIST BRIDGE FOR BARRAGE GATES

IRR-GAW-2-9 Design, fabrication, supply, erection, testing and **commissioning of adequate capacity rope**

drum hoist consisting of rope drum, pulleys, gear system, electric motor, electro-magnetic brake system, manual operation assembly, position indicator, control panel, wire rope etc., with all accessories for operating vertical lift roller gates for barrage including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc., **complete with all leads and lifts.**

(without painting on sand-blasted or mechanical cleaning surfaces which are added extra

as per schedule of rates under items in this chapter and add as applicable separately)

DATA: Rope drum hoist for vertical lift barrage gate consists of hoist supporting frames, pulley supports, pulleys, drive stool, rope drums, shafts, couplings, gears and pinions, plunger blocks, gear box, electric motor, hand operation assembly, brake, wire rope, gate position indicator, switch box etc. with related accessories.

Consider rope drum hoist for operating barrage gate for clear opening of 13.72 m x 8.26 m.

Details of material / Gas cutting / Welding considered for rate analysis are based on rope drum hoist drawings for barrage gate of Hipparagi Barrage.

49.933 tonnes
say : 50.000 tonnes

Weight of hoist with all accessories is assumed at 0.1 tonne per tonne capacity of hoist as the hoist is supported on steel bridge and no anchorages and base frames are required.

Weight of hoist with all accessories (0.1 x 50) 5.00 tonnes

The actual weight of barrage gate rope drum hoist as per data : 5.069 t

Consider actual weight for data rate analysis.

1 Requirement of materials: as per fabrication drawings

a. Structural steel conforming to IS : 2062 :

Angles / Beams / Channels / Bars with 2.5 % wastage 420 kg

Plates / Flats with 2.5 % wastage 225 kg

b. Cast steel components conforming to IS : 1030 :

Rope drums 2 Nos / Gears 1290 kg

Pinions 98 kg

Pulleys 3 Nos / Couplings 2 Nos 650 kg

Plummer blocks / Hubs 250 kg

c. Alloy steel steel components conforming to IS : 1570 :

Shafts / Keys 350 kg

Pins 96 kg

d. Aluminium/ Bronze alloy components conforming to IS : 305 :

Bearings / Bush 100 kg

e. Bolt / Nut / Washers conforming to IS : 1363 :

MS Bolts / Nuts / Washers with 2.5 % wastage 26 kg

f. Steel wire rope conforming to IS 2266 :

28 mm dia 6 / 37 construction 1 No 120 Rm @ 2.71 kg / m 435 kg

g. Other components :

Manual operation assembly 1 No.

Worm reducer (size 800) 1 No.

Electric motor 12.5 hp 1 No.

Gate position indicator 1 No.

Ele-magnetic brake 1 No.

Electric cable / switch / control panel etc 1 set

h. Welding electrodes :

Welding electrodes for stitch welding at 10 % of total with 2.5 % 37 Rm

Welding electrodes (LH) for run welding at 90 % of total with 2 4 Rm

Total 41 Rm

For cutting structural steel sections to required sizes gas cutting is assumed.

| | |
|--|----------|
| Length of steel to be cut by using gas manually | 20 m |
| Length of steel to be cut by gas using pug cutting machine | 21 m |
| Time for gas cutting manually assuming average cutting progre | 10 hours |
| Time for gas cutting by pug cutting machine at (av) 3 m / hour | 7 hours |
| Acetelyne gas @ 0.6 cum / hour (17 x 0.60) | 10 cum |
| Oxygen gas @ 1.8 cum / hour (17 x 1.80) | 30 cum |
| Use of gas cutting torch with 50 min / hr working (10 x 60 | 12 hours |
| Use of pug cutting machine with 50 min / hr working (7 x 60 , | 9 hours |

2 Welding :

| | |
|---|----------|
| Length of welding | 53 Rm |
| For stich welding @ 2 hrs usage / shift & @ 15 electrodes / hr (44 / 15) x 8 / 2 | 12 hours |
| For run welding @ 6 hrs usage / shift & @ 15 electrodes / hr (392 / 15) x 8 / 6 | 35 hours |
| Total | 47 hours |

Deploy welding transformer for 47 hours.

Fuel / Energy charges @ 25 % hrs for stich welding & @ 75 % hrs for run welding.

3 Requirement of other machinery :

For lifting and placing in position hoist drums, worm reducers, gears, floating shafts etc deploy tower crane or other suitable lifting device for 2 hours.

For handling during fabrication and erection mobile derrick crane for 10 hours considered.

For drilling holes for bolts 2 hours use of drilling machine considered.

For grinding and finishing weld joints 2 hours use of grinding machine considered

4 Requirement of work force :

| Work component | Foreman | Marker / | Gas cutter/ | Helper |
|---|---------|--------------|-------------|--------|
| | | Fabricator / | Welder | |
| | | Erector / | | |
| Cutting sections/ drilling holes 23 hours | 1 | 3 | 3 | 6 |
| Fabricating by stich welding 12 hours | 1 | 2 | --- | 3 |
| Run welding 35 hours | 1 | --- | 5 | 5 |
| Erection of hoist frame | 1 | 1 | --- | 2 |
| Erection of drums / gears / shafts | 1 | 2 | --- | 4 |
| Erection of pulleys / plummer blocks | 1 | 2 | --- | 4 |
| Erection of worm reducers / brake / motor | 1 | 1 | --- | 2 |
| Erection of other accessories | 1 | 1 | --- | 2 |
| Erection of control panel / cabling | 1 | 1 | --- | 1 |
| Checking and running without rope | 1 | 1 | --- | 2 |
| Rope fixing and checking | 1 | 1 | --- | 2 |
| Trial running by lowering / lifting gate | 1 | 1 | --- | 2 |
| Final checking / Finishing / cleaning | 1 | 1 | --- | 1 |
| Total : | 13 | 17 | 8 | 36 |

5 Excise duty on supply :

Excise duty is applicable on supply of fabricated parts. The cost of materials is inclusive of all taxes/ duties. Therefore, for purpose of rate analysis 75 percent of total cost excluding the cost of materials (assuming 25 % erection cost) is considered for assessing excise duty.

6 Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of welk | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : **5.069 tonne wt****A. MATERIALS:****50.00 t capacity**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|----------------|-------------------|
| 1 | Structural steel | | | | |
| | Angles / beams / channels / bars | kg | 420.00 | 50.50 | 21210.00 |
| | Plates / flats | kg | 225.00 | 52.00 | 11700.00 |
| 2 | Cast steel components : | | | | |
| | Rope drums 2 Nos / Gears | kg | 1290.00 | 233.00 | 300570.00 |
| | Pinions | kg | 98.00 | 224.00 | 21952.00 |
| | Pulleys 3 Nos / Couplings 2 Nos | kg | 650.00 | 193.00 | 125450.00 |
| | Plummer blocks / Hubs | kg | 250.00 | 193.00 | 48250.00 |
| 3 | Alloy steel components | | | | |
| | Shafts / Keys | kg | 350.00 | 235.00 | 82250.00 |
| | Pins | kg | 96.00 | 434.00 | 41664.00 |
| 4 | Bronze alloy components : | | | | |
| | Bronze bearings / bush | kg | 100.00 | 962.00 | 96200.00 |
| 5 | construction | kg | 435.00 | 203.00 | 88305.00 |
| 6 | MS Bolt / Nut / Washer | kg | 26.00 | 86.00 | 2236.00 |
| 7 | Worm reducers | No. | 1.00 | 191493.00 | 191493.00 |
| 8 | Electric motor 12.5 hp | No. | 1.00 | 61986.00 | 61986.00 |
| 9 | Manual operating system | No. | 1.00 | 28894.00 | 28894.00 |
| 10 | Gate position indicator | No. | 1.00 | 187312.00 | 187312.00 |
| 11 | Ele-magnetic brake | No. | 1.00 | 30167.00 | 30167.00 |
| 12 | Electric cable / switch / control panel | LS | 1.00 | 48705.00 | 48705.00 |
| 13 | Oxygen gas | cum | 30.00 | 43.00 | 1290.00 |
| 14 | Acetyline gas | cum | 10.00 | 350.00 | 3500.00 |
| 15 | Welding electrodes | Nos | 44.00 | 14.00 | 616.00 |
| 16 | Welding electrodes (LH) | Nos | 392.00 | 19.00 | 7448.00 |
| 17 | Grease | kg | 50.00 | 267.00 | 13350.00 |
| 18 | Use rate welding holder set | Hour | 47.00 | 7.84 | 368.67 |
| 19 | Use rate gas cutting torch set | Hour | 12.00 | 23.18 | 278.10 |
| 20 | Sundries | LS | 25.00 | 34.00 | 850.00 |
| Total cost of Materials | | | | Rs: | 1416044.77 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|----------------|------------------|
| 1 | Welding transformer | Hour | 47.00 | 15.10 | 709.70 |
| | Fuel / Energy charges | Hour | 47.00 | 101.50 | 4770.50 |
| 2 | Tower crane 5 t capacity | Hour | 2.00 | 749.10 | 1498.20 |
| | Fuel / Energy charges | Hour | 2.00 | 220.00 | 440.00 |
| 3 | Pug cutting machine | Hour | 9.00 | 6.50 | 58.50 |
| | Fuel / Energy charges | Hour | 9.00 | 4.20 | 37.80 |
| 4 | Mobile derrick crane | Hour | 10.00 | 476.90 | 4769.00 |
| | Fuel / Energy charges | Hour | 10.00 | 490.80 | 4908.00 |
| 5 | Grinding machine | Hour | 2.00 | 20.20 | 40.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 6 | Drilling machines | Hour | 2.00 | 20.20 | 40.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 7 | Sundries | LS | 25.00 | 34.00 | 850.00 |
| Total hire charges of Machinery | | | | Rs: | 18291.70 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|----------------|------------------|
| 1 | Crew for Mobile crane | Hour | 10.00 | 225.20 | 2252.00 |
| 2 | Crew for Tower crane | Hour | 2.00 | 243.40 | 486.80 |
| 3 | Crew for Drilling machine | Hour | 2.00 | 251.60 | 503.20 |
| 4 | Crew for Grinding machine | Hour | 2.00 | 251.60 | 503.20 |
| 5 | Foreman | Day | 13.00 | 645.00 | 8385.00 |
| 6 | Marker / Fabricator / Erector | Day | 17.00 | 700.00 | 11900.00 |
| 7 | Gas cutter | Day | 3.00 | 575.00 | 1725.00 |
| 8 | Welder (General) | Day | 5.00 | 575.00 | 2875.00 |
| 9 | Khalasi | Day | 4.00 | 575.00 | 2300.00 |
| 10 | Helper fabrication / erection | Day | 36.00 | 525.00 | 18900.00 |
| 11 | Electrician | Day | 2.00 | 650.00 | 1300.00 |
| Total cost of Labour | | | | Rs: | 51130.20 |

Add towards highly skilled labour charges @ 30% on total cost of labour

15339.06

Total Cost of Labour

66469.26

| | |
|---|----------------|
| labour component/unit qty | 1329.40 |
| Add contractor's profit and overhead charges | 13.615% 181.00 |
| labour component/unit qty (including contractor's profit) | 1510.40 |

ABSTRACT:

| | | | |
|---|-------------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 1416044.77 |
| B. Hire charges of Machinery | | Rs: | 18291.70 |
| C. Cost of Labour | | Rs: | 66469.26 |
| | Total | Rs: | 1500805.73 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 1500805.73 |
| E. Add for transportation upto work site @ | 3% | Rs: | 45024.17 |
| | Total | Rs: | 1545829.90 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 210464.74 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 233.822 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 931.682 |
| Total cost for | 5.069 tonne wt | Rs: | 1757460.14 |
| | 50.000 t capacity | Rs: | |
| | Rate per tonne wt | Rs: | 346707.50 |
| Rate per tonne capacity of hoist | | Rs: | 35149.20 |

SCREW GEAR HOISTS including plat form(UPTO 10 TON CAP)

IRR-GAW-2-10

Design, fabrication, supply, erection, testing and **commissioning of adequate capacity screw gear type hoist** consisting of supporting structure, platform, ladder etc., with all accessories for operating canal escape / regulator gate including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc., complete with all leads and lifts. (without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

| | | | |
|-------|---|-----------|--------------|
| DATA: | Screw type hoist for operating gate consists of supporting structure, hoist body, hoist stem, thrust bearings, operating wheel / handle with related accessories. | | |
| | Consider screw type hoist for canal escape / regulator gate for vent opening of size 2 m x 2 m. | | |
| | Actual capacity of hoist as per data | | 3.000 tonnes |
| | Weight of hoist with all accessories is assumed at 0.3 tonne per tonne capacity of hoist. | | |
| | The actual weight of screw hoist as per data sheet | | 0.871 tonnes |
| | Consider actual weight for data rate analysis. | | |
| 1 | Requirement of materials: | | |
| | a. Structural steel conforming to IS : 2062 : | | |
| | Angles / Beams / Channels / Bars with 2.5 % wastage | 402.00 kg | |
| | Plates / Flats with 2.5 % wastage | 145.00 kg | |
| | Chequered plates with 2.5 % wastage | 176.00 kg | |
| | b. Cast iron components conforming to IS : 210 : | | |
| | Hoist body / Lock nut / Main nut | 55.00 kg | |
| | c. Alloy steel components conforming to IS : 1570 : | | |
| | Hoist stem | 75.00 kg | |
| | d. Aluminium/ Bronze alloy components conforming to IS : 305 : | | |
| | Bearings / Bush | 4.00 kg | |
| | e. Bolt / Nut / Washers conforming to IS : 1363 : | | |
| | MS Bolts / Nuts / Washers with 2.5 % wastage | 8.00 kg | |
| | MS pipe 32 mm dia | 8.8 Rm | |
| | f. Welding electrodes : | | |
| | Welding electrodes for stitch welding at 10 % of total with 2.5 % | 7 Nos | |
| | Welding electrodes for run welding at 90 % of total with 2.5 % | 66 Nos | |
| 2 | Cutting : | | |
| | Total length of cutting assuming cutting for 2 sides | 18 Rm | |
| | Add for variations (cutting for more than 2 sides / odd shapes) | 2 Rm | |
| | Total | 20 Rm | |
| | For cutting structural steel sections to required sizes gas cutting is assumed. | | |
| | Time for gas cutting manually assuming average cutting progre | 10 hours | |
| | Acetylene gas @ 0.6 cum / hour (10 x 0.60) | 6 cum | |
| | Oxygen gas @ 1.8 cum / hour (10 x 1.80) | 18 cum | |
| | Use of gas cutting torch with 50 min / hr working (10 x 60 / | 12 hours | |

- 3 Welding :
 Length of welding 10 Rm
 For stitch welding @ 2 hrs usage / shift & @ 15 electrodes / hr
 $(7 / 15) \times 8 / 2$ 2 hours
 For run welding @ 6 hrs usage / shift & @ 15 electrodes / hr
 $(66 / 15) \times 8 / 6$ 6 hours
 Total 8 hours

Deploy welding transformer for 8 hours.

Fuel / Energy charges @ 25 % hrs for stitch welding & @ 75 % hrs for run welding.

$$(2 \times 0.25 + 6 \times 0.75)$$

5 hours

- 4 Requirement of other machinery :
 For drilling holes for bolts 2 hours use of drilling machine considered.
 For grinding and finishing weld joints 2 hours use of grinding machine considered

- 5 Requirement of work force :

| Work component | Foreman | Marker / | Gas cutter/ | Helper |
|--|---------|--------------|-------------|--------|
| | | Fabricator / | Welder | |
| | | Erector / | | |
| Cutting sections / Drilling holes 14 hours | 1 | 2 | 2 | 4 |
| Fabricating / welding 8 hours | 1 | 1 | 1 | 2 |
| Erection of hoist frame / body | 1 | 1 | --- | 2 |
| Trial operation and final adjustments | 1 | 1 | --- | 1 |
| Total : | 4 | 5 | 3 | 9 |

- 6 Excise duty on supply :

Excise duty is applicable on supply of fabricated parts. The cost of materials is inclusive of all taxes/ duties. Therefore, for purpose of rate analysis 75 percent of total cost excluding the cost of materials (assuming 25 % erection cost) is considered for assessing excise duty.

- 7 Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSIS

UNIT : 0.871 tonne

3.00 t capacity

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|---------------|
| 1 | Structural steel | | | | |
| | Angles / beams / channels / bars | kg | 402.00 | 50.50 | 20301.00 |
| | Plates / flats | kg | 145.00 | 52.00 | 7540.00 |
| | Chequered plate | kg | 176.00 | 61.00 | 10736.00 |
| 2 | Cast iron components : | | | | |
| | Hoist body / Lock nut / Main nut | kg | 55.00 | 233.00 | 12815.00 |
| 3 | Alloy steel components | | | | |
| | Hoist stem | kg | 75.00 | 235.00 | 17625.00 |
| 4 | Bronze alloy components : | | | | |
| | Thrust bearings | kg | 4.00 | 962.00 | 3848.00 |
| 5 | MS Bolt / Nut / Washer | kg | 8.00 | 86.00 | 688.00 |
| 6 | Oxygen gas | cum | 18.00 | 43.00 | 774.00 |
| 7 | Acetyline gas | cum | 6.00 | 350.00 | 2100.00 |
| 8 | Welding electrodes | Nos | 7.00 | 14.00 | 98.00 |
| 9 | Welding electrodes (LH) | Nos | 66.00 | 19.00 | 1254.00 |
| 10 | Grease | kg | 2.00 | 267.00 | 534.00 |
| 11 | Use rate welding holder set | Hour | 8.00 | 7.84 | 62.75 |
| 12 | Use rate gas cutting torch set | Hour | 11.00 | 23.18 | 254.93 |
| 13 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 78698.68 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Welding transformer | Hour | 8.00 | 15.10 | 120.80 |
| | Fuel / Energy charges | Hour | 5.00 | 101.50 | 507.50 |
| 2 | Grinding machine | Hour | 2.00 | 20.20 | 40.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 3 | Drilling machines | Hour | 2.00 | 20.20 | 40.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 4 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 946.30 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Drilling machine | Hour | 2.00 | 251.60 | 503.20 |
| 2 | Crew for Grinding machine | Hour | 2.00 | 251.60 | 503.20 |
| 3 | Foreman | Day | 4.00 | 645.00 | 2580.00 |
| 4 | Marker / Fabricator / Erector | Day | 5.00 | 700.00 | 3500.00 |
| 5 | Gas cutter | Day | 2.00 | 575.00 | 1150.00 |
| 6 | Welder (General) | Day | 1.00 | 575.00 | 575.00 |
| 7 | Helper fabrication / erection | Day | 9.00 | 525.00 | 4725.00 |
| 8 | Electrician | Day | 0.50 | 650.00 | 325.00 |
| Total cost of Labour | | | | Rs: | 13861.40 |
| Add towards highly skilled labour charges @ 30% on total cost of labour | | | | | 4158.42 |
| Total Cost of Labour | | | | | 18019.82 |

| | |
|---|----------------|
| labour component/unit qty | 6006.60 |
| Add contractor's profit and overhead charges | 13.615% 817.80 |
| labour component/unit qty (including contractor's profit) | 6824.40 |

ABSTRACT:

| | | | |
|---|--------------------------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 78698.68 |
| B. Hire charges of Machinery | | Rs: | 946.30 |
| C. Cost of Labour | | Rs: | 18019.82 |
| | Total | Rs: | 97664.80 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 97664.80 |
| E. Add for transportation upto work site @ | 3% | Rs: | 2929.94 |
| | Total | Rs: | 100594.74 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 13695.97 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | | 40.178 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | | 160.09 |
| Total cost for | 0.871 tonne | Rs: | 114490.98 |
| | 3.000 t capacity | Rs: | |
| | Rate per tonne | Rs: | 131447.70 |
| | Rate per tonne capacity | Rs: | 38163.70 |

MANUAL OPERATED ROPE DRUM HOISTS

IRR-GAW-2-11 Design, fabrication, supply, erection, testing and **commissioning of adequate capacity manually operated rope drum hoist** consisting of hoist platform, rope drum, gear system, brake system, wire rope, ladder etc., with all accessories for operating canal regulator radial gate including cost of all materials, machinery, labour, welding, finishing, cleaning, .., complete **with all leads and lifts**

(without painting on sand-blasted or mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

DATA: Rope drum hoist for radial gate consists of embedded parts for anchorage, hoist supporting structure, pulley supporting structures, pulleys, drive stool, rope drums, couplings, shafts, gears and pinions, plunger blocks, worm reducer, floating shaft, hand operation assembly, brake, wire rope, gate position indicator etc. with related accessories.

Consider rope drum hoist for radial gate for canal regulator opening of size 3 m x 3.7 m.

Capacity of hoist required in tonnes with 25% reserve capacity

(Capacity of hoist to be rounded off to next 5 tonne) 10.000 tonnes

Weight of hoist with all accessories is assumed at 0.3 tonne per tonne capacity of hoist.

Weight of hoist with all accessories (0.3 x 10) 3.000 tonnes

Less weight of drive unit (electric motor / cover etc) 0.200 tonnes

Weight of manually operated hoist 2.800 tonnes

The actual weight of regulator radial gate rope drum hoist as per 2.804 tonnes

Consider actual weight for data rate analysis.

1 Requirement of materials: as per fabrication drawings

a. Structural steel conforming to IS : 2062 :

Angles / Beams / Channels / Bars with 2.5 % wastage 1229 kg

Plates / Flats with 2.5 % wastage 453 kg

Chequered plate 195 kg

b. Cast steel components conforming to IS : 1030 :

Rope drums 2 Nos / Gears 384 kg

Pinions 14 kg

Pulleys 6 Nos 108 kg

Plunger blocks / Hubs 47 kg

- c. Alloy steel components conforming to IS : 1570 :
- | | |
|--------|-------|
| Shafts | 75 kg |
| Pins | 24 kg |
- d. Alluminium/ Bronze alloy components conforming to IS : 305 :
- | | |
|-----------------|-------|
| Bearings / Bush | 11 kg |
|-----------------|-------|
- e. Bolt / Nut / Washers conforming to IS : 1363 :
- | | |
|--|-------|
| MS Bolts / Nuts / Washers with 2.5 % wastage | 64 kg |
|--|-------|
- f. Steel wire rope conforming to IS : 2266 :
- | | |
|---|-------|
| 12 mm dia 6 / 36 construction 2 Nos 35 m each @ 0.6 kg / Rm | 42 kg |
|---|-------|
- g. Other components :
- | | |
|-------------------------|---------|
| Manual operating system | 1 No. |
| Worm reducers | 1 No. |
| Wire rope sockets | 2 Nos |
| MS pipe 32 mm dia | 10.5 Rm |
- h. Welding electrodes :
- | | |
|---|---------|
| Welding electrodes for stitch welding at 10 % of total with 2.5 % | 69 Nos |
| Welding electrodes (LH) for run welding at 90 % of total with 2 | 622 Nos |
- 2 Cutting :
- | | |
|---|-------|
| Length of cutting assuming cutting for 2 sides | 73 Rm |
| Add for variations (cutting for more than 2 sides / odd shapes) | 7 Rm |
| Total | 80 Rm |
- For cutting structural steel sections to required sizes gas cutting is assumed.
- | | |
|--|----------|
| Length of steel to be cut by using gas manually | 70 Rm |
| Length of steel to be cut by gas using pug cutting machine | 20 Rm |
| Time for gas cutting manually assuming average cutting progre | 35 hours |
| Time for gas cutting by pug cutting machine at (av) 3 m / hour | 7 hours |
| Acetelyne gas @ 0.6 cum / hour (42 x 0.60) | 25 cum |
| Oxygen gas @ 1.8 cum / hour (42 x 1.80) | 75 cum |
| Use of gas cutting torch with 50 min / hr working (35 x 60) | 42 hours |
| Use of pug cutting machine with 50 min / hr working (7 x 60) | 8 hours |
- 3 Welding :
- | | |
|--|----------|
| Length of welding | 113 Rm |
| For stich welding @ 2 hrs usage / shift & @ 15 electrodes / hr | |
| (69 / 15) x 8 / 2 : | 18 hours |
| For run welding @ 6 hrs usage / shift & @ 15 electrodes / hr | |
| (622 / 15) x 8 / 6 : | 55 hours |
| Total : | 73 hours |
- Deploy welding transformer for 73 hours.
- Fuel / Energy charges @ 25 % hrs for stitch welding & @ 75 % hrs for run welding.
- | | |
|-----------------------------|----------|
| (18 x 0.25 + 55 x 0.75) : | 46 hours |
|-----------------------------|----------|
- 4 Requirement of other machinery :
- For handling of parts during fabrication and erection use of mobile derrick crane for 4 hours and stationary derrick crane for 8 hours considered.
- For drilling holes for bolts 16 hours use of drilling machine considered.
- For grinding and finishing weld joints 8 hours use of grinding machine considered

5 Requirement of work force :

| Work component | Foreman | Marker / | Gas cutter/ | Helper |
|---|---------|----------|-------------|--------|
| Cutting sections 50 hours | 3 | 6 | 6 | 12 |
| Drilling holes for pins / bolts fixing | 1 | 1 | --- | 1 |
| Fabricating by stitch welding 18 hours | 1 | 2 | --- | 4 |
| Run welding 55 hours | 1 | --- | 7 | 7 |
| Erection of anchors | 1 | 1 | --- | 1 |
| Erection of drums and gears | 1 | 2 | --- | 4 |
| Erection of floating shaft / pulleys | 1 | 1 | --- | 2 |
| Erection of worm reducers / brake | 1 | 2 | --- | 4 |
| Erection of other accessories | 1 | 1 | --- | 2 |
| Checking and trial running without ropes | 1 | 1 | --- | 2 |
| Rope fixing and checking | 1 | 1 | --- | 2 |
| Finishing / cleaning | --- | 1 | --- | 1 |
| Trial running for lifting / lowering gate | 1 | 1 | --- | 2 |
| Total : | 14 | 20 | 13 | 44 |

6 Excise duty on supply :

Excise duty is applicable on supply of fabricated parts. The cost of materials is inclusive of all taxes/ duties. Therefore, for purpose of rate analysis 75 percent of total cost excluding the cost of materials (assuming 25 % erection cost) is considered for assessing excise duty.

Use rate of materials :

| | | | | |
|-----------------------------|----------|--------|-----|------------|
| Cost of weld | 7844.00 | / Each | Rs: | 7844.00 |
| Life of welding set | | | : | 1000 hours |
| Use rate of (cost / life) | | | Rs: | 7.84 |
| Cost of gas | 13905.00 | / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | | 600 hours |
| Use rate of (cost / life) | | | Rs: | 23.18 |

DATA:

RATE ANALYSIS

UNIT :

2.804

tonne

10.00

t capacity

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------------|------|----------|----------------|------------------|
| 1 | Structural steel | | | | |
| | Angles / beams / channels / bars | kg | 1229.00 | 50.50 | 62064.50 |
| | Plates / flats | kg | 453.00 | 52.00 | 23556.00 |
| | Chequered plate | kg | 195.00 | 61.00 | 11895.00 |
| 2 | Cast steel components : | | | | |
| | Rope drums 2 Nos / Gears | kg | 384.00 | 233.00 | 89472.00 |
| | Pinions | kg | 14.00 | 224.00 | 3136.00 |
| | Pulleys 6 Nos | kg | 108.00 | 193.00 | 20844.00 |
| | Plummer blocks / Couplings | kg | 47.00 | 193.00 | 9071.00 |
| 3 | Alloy steel components | | | | |
| | Shafts | kg | 75.00 | 235.00 | 17625.00 |
| | Pins | kg | 24.00 | 434.00 | 10416.00 |
| 4 | Bronze alloy components : | | | | |
| | Bronze bearings / bush | kg | 11.00 | 962.00 | 10582.00 |
| 5 | Wire rope 12 mm dia 6/36 construction | kg | 42.00 | 203.00 | 8526.00 |
| 6 | MS Bolt / Nut / Washer | kg | 64.00 | 86.00 | 5504.00 |
| 7 | Worm reducers | No. | 1.00 | 191493.00 | 191493.00 |
| 8 | Manual operating system | No. | 1.00 | 28894.00 | 28894.00 |
| 9 | Brake | No. | 1.00 | 30167.00 | 30167.00 |
| 10 | Wire rope sockets | No | 2.00 | 4698.00 | 9396.00 |
| 11 | Oxygen gas | cum | 75.00 | 43.00 | 3225.00 |
| 12 | Acetyline gas | cum | 25.00 | 350.00 | 8750.00 |
| 13 | Welding electrodes | Nos | 69.00 | 14.00 | 966.00 |
| 14 | Welding electrodes (LH) | Nos | 622.00 | 19.00 | 11818.00 |
| 15 | Grease | kg | 10.00 | 267.00 | 2670.00 |
| 16 | Use rate welding holder set | Hour | 73.00 | 7.84 | 572.61 |
| 17 | Use rate gas cutting torch set | Hour | 42.00 | 23.18 | 973.35 |
| 18 | Sundries | LS | 25.00 | 34.00 | 850.00 |
| Total cost of Materials | | | | Rs: | 562466.46 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|--------------------------|------|----------|----------------|------------------|
| 1 | Welding transformer | Hour | 73.00 | 15.10 | 1102.30 |
| | Fuel / Energy charges | Hour | 46.00 | 101.50 | 4669.00 |
| 2 | Pug cutting machine | Hour | 8.00 | 6.50 | 52.00 |
| | Fuel / Energy charges | Hour | 8.00 | 4.20 | 33.60 |
| 3 | Mobile derrick crane | Hour | 4.00 | 476.90 | 1907.60 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 4 | Stationery derrick crane | Hour | 8.00 | 75.00 | 600.00 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| 5 | Grinding machine | Hour | 8.00 | 20.20 | 161.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 6 | Drilling machines | Hour | 16.00 | 20.20 | 323.20 |
| | Fuel / Energy charges | Hour | 16.00 | 42.30 | 676.80 |
| 7 | Sundries | LS | 25.00 | 34.00 | 850.00 |
| Total hire charges of Machinery | | | | Rs: | 12677.70 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate | Amount |
|-------|-------------------------------|----------------------|----------|--------|-----------------|
| | | | | in Rs. | in Rs. |
| 1 | Crew for Mobile crane | Hour | 4.00 | 225.20 | 900.80 |
| 2 | Crew for Drilling machine | Hour | 16.00 | 251.60 | 4025.60 |
| 3 | Crew for Grinding machine | Hour | 8.00 | 251.60 | 2012.80 |
| 4 | Foreman | Day | 14.00 | 645.00 | 9030.00 |
| 5 | Marker / Fabricator / Erector | Day | 20.00 | 700.00 | 14000.00 |
| 6 | Gas cutter | Day | 6.00 | 575.00 | 3450.00 |
| 7 | Welder (General) | Day | 7.00 | 575.00 | 4025.00 |
| 8 | Helper fabrication / erection | Day | 44.00 | 525.00 | 23100.00 |
| 9 | Electrician | Day | 2.00 | 650.00 | 1300.00 |
| | | Total cost of Labour | | Rs: | 61844.20 |

Add towards highly skilled labour charges @ 30% on total cost of labour **18553.26**
Total Cost of Labour 80397.46

labour component/unit qty 8039.70
 Add contractor's profit and overhead charges 13.615% 1094.60
 labour component/unit qty (including contractor's profit) **9134.30**

ABSTRACT:

| | | |
|---|--------------------------|----------------------|
| A. Cost of Materials | Rs: | 562466.46 |
| B. Hire charges of Machinery | Rs: | 12677.70 |
| C. Cost of Labour | Rs: | 80397.46 |
| Total | Rs: | <u>655541.62</u> |
| D. Add for excise duty | 0.00% | Rs: 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: <u>655541.62</u> |
| E. Add for transportation upto work site @ | 3% | Rs: 19666.25 |
| Total | Rs: | 675207.87 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: 91929.55 |
| Add 2 leads | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | 129.342 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | <u>515.376</u> |
| Total cost for | 2.804 tonne | Rs: <u>767782.14</u> |
| | 10.000 t capacity | |
| Rate per | tonne | Rs: 273816.70 |
| | Rate per tonne | Rs: 76778.20 |
| | capacity of hoist | |

IRR-GAW-2-
12
New Item
2015-16-2

OT SLUICE SHUTTERS Screw Gear Hoist Including Platform for below 5 Tons Capacity (Small Gates)

As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System

Fabrication, supply, erection, testing and commissioning of Embedded parts consisting of supporting structure, platform etc. with all accessories for operating canal escape/ regulator gate with all accessories including cost of all materials, machinery, labour, cutting, bending, aligning, anchoring, welding, finishing etc. complete as per Specification and approved drawings

(without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

Use rate of materials :

| | | | |
|-----------------------------|-----------------|-----|------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |

DATA:

RATE ANALYSISUNIT : **0.869 tonne****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------------|------|----------|-------------|-----------------|
| 1 | Structural steel angles/ beams / chan | kg | 445.78 | 50.50 | 22511.89 |
| 2 | Structural steel plates / flats | kg | 28.00 | 52.00 | 1456.00 |
| 3 | Chequered plate | kg | 144.80 | 61.00 | 8832.80 |
| | Cast iron Components | | | | |
| 4 | Hoist Body/lock nut/Main Nut etc. | Kg | 83.00 | 233.00 | 19339.00 |
| | Bronze Alloy Steel Components | | | | |
| 5 | Thrust Bearings | kg | 3.00 | 962.00 | 2886.00 |
| 6 | MS Bolt/Nut/ Washer | kg | 16.00 | 86.00 | 1376.00 |
| 7 | Oxygen gas | cum | 21.00 | 43.00 | 903.00 |
| 8 | Acetyline gas | cum | 7.00 | 350.00 | 2450.00 |
| 9 | Welding electrodes | Nos | 200.00 | 14.00 | 2800.00 |
| 10 | Welding electrodes (LH) | Nos | 40.00 | 19.00 | 760.00 |
| 11 | Use rate welding holder set | Hour | 72.00 | 7.84 | 564.77 |
| 12 | Use rate gas cutting torch set | Hour | 36.00 | 23.18 | 834.30 |
| 13 | Sundries | LS | 20.00 | 34.00 | 680.00 |
| Total cost of Materials | | | | Rs: | 65393.76 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Welding transformer | Hour | 30.00 | 15.10 | 453.00 |
| | Fuel / Energy charges | Hour | 30.00 | 101.50 | 3045.00 |
| 2 | Pug cutting machine | Hour | 12.00 | 6.50 | 78.00 |
| | Fuel / Energy charges | Hour | 12.00 | 4.20 | 50.40 |
| 3 | Drilling machine | Hour | 8.00 | 20.20 | 161.60 |
| | Fuel / Energy charges | Hour | 8.00 | 42.30 | 338.40 |
| 4 | Grinding machine | Hour | 36.00 | 20.20 | 727.20 |
| | Fuel / Energy charges | Hour | 36.00 | 42.30 | 1522.80 |
| 5 | Lathe machine (Screw Rod M/C) | Hour | 16.00 | 300.00 | 4800.00 |
| 6 | Sundries | LS | 10.00 | 34.00 | 340.00 |
| Total hire charges of Machinery | | | | Rs: | 11516.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Drilling machine | Hour | 8.00 | 251.60 | 2012.80 |
| 2 | Crew for Grinding machine | Hour | 36.00 | 251.60 | 9057.60 |
| 3 | Foreman | Day | 2.00 | 645.00 | 1290.00 |
| 4 | Marker / Fabricator / Erector | Day | 10.00 | 700.00 | 7000.00 |
| 5 | Gas cutter | Day | 4.00 | 575.00 | 2300.00 |
| 6 | Welder (General) | Day | 4.00 | 575.00 | 2300.00 |
| 7 | Mazdoors | Day | 6.00 | 490.00 | 2940.00 |
| 8 | Helper fabrication / erection | Day | 6.00 | 525.00 | 3150.00 |
| Total cost of Labour | | | | Rs: | 30050.40 |

labour component/unit qty 30050.40

Add contractor's profit and overhead charges 13.615% 4091.40

labour component/unit qty (including contractor's profit) **34141.80****ABSTRACT:**

| | | | |
|--|-------|-----|-----------|
| A. Cost of Materials | | Rs: | 65393.76 |
| B. Hire charges of Machinery | | Rs: | 11516.40 |
| C. Cost of Labour | | Rs: | 30050.40 |
| | Total | Rs: | 106960.56 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 106960.56 |
| E. Add for transportation upto work site @ | 3% | Rs: | 3208.82 |
| | Total | Rs: | 110169.37 |

| | | | |
|---|-----------------|------------|------------------|
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 14999.56 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | 40.084 | |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | 159.722 | |
| Total cost for | 0.869 tonne | Rs: | 125368.74 |
| Rate per tonne | | Rs: | 144267.80 |

IRR-GAW-2-
13
New Item
2015-16-3

OT SLUICE SHUTTERS EM parts for Below 5 Tons capacity (small gates)

As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System

Fabrication, supply, erection, testing and commissioning of Embedded parts consisting of sil beam, slide tracks, seal seats, Guide plates etc. with all accessories including cost of all materials, machinery, labour, etc. complete as per specifications and approved drawings.

(without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

Use rate of materials :

| | | | |
|-----------------------------|-----------------|------------|----------------|
| Cost of weld | 7844.00 / Each | Rs: | 7844.00 |
| Life of welding set | | | 1000 hours |
| Use rate of (cost / life) | | Rs: | 7.84 |
| Cost of gas | 13905.00 / Each | Rs: | 13905.00 |
| Life of gas cutting set | | | 600 hours |
| Use rate of (cost / life) | | Rs: | 23.18 |
| Height of EM parts: 5.4 M | | Gate Size: | 0.99 X 0.875 M |

DATA:

RATE ANALYSIS

UNIT : **1.334 tonne**

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------------|------|----------|-------------|-----------------|
| 1 | Structural steel angles/ beams / chan | kg | 440.57 | 50.50 | 22248.79 |
| 2 | Structural steel plates / flats | kg | 869.00 | 52.00 | 45188.00 |
| 3 | Stainless Steel Flats | kg | 25.12 | 289.00 | 7259.68 |
| 4 | Oxygen gas | cum | 12.00 | 43.00 | 516.00 |
| 5 | Acetyline gas | cum | 4.00 | 350.00 | 1400.00 |
| 6 | Welding electrodes | Nos | 210.00 | 14.00 | 2940.00 |
| 7 | Welding electrodes (Stainless Steel) | Nos | 30.00 | 23.00 | 690.00 |
| 8 | Use rate welding holder set | Hour | 62.00 | 7.84 | 486.33 |
| 9 | Use rate gas cutting torch set | Hour | 32.00 | 23.18 | 741.60 |
| 10 | Sundries | LS | 3.00 | 34.00 | 102.00 |
| Total cost of Materials | | | | Rs: | 81572.39 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Welding transformer | Hour | 30.00 | 15.10 | 453.00 |
| | Fuel / Energy charges | Hour | 30.00 | 101.50 | 3045.00 |
| 2 | Pug cutting machine | Hour | 20.00 | 6.50 | 130.00 |
| | Fuel / Energy charges | Hour | 20.00 | 4.20 | 84.00 |
| 3 | Drilling machine | Hour | 4.00 | 20.20 | 80.80 |
| | Fuel / Energy charges | Hour | 4.00 | 42.30 | 169.20 |
| 4 | Grinding machine | Hour | 20.00 | 20.20 | 404.00 |
| | Fuel / Energy charges | Hour | 20.00 | 42.30 | 846.00 |
| 5 | Sundries | LS | 3.00 | 34.00 | 102.00 |
| Total hire charges of Machinery | | | | Rs: | 5314.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Drilling machine | Hour | 4.00 | 251.60 | 1006.40 |
| 2 | Crew for Grinding machine | Hour | 20.00 | 251.60 | 5032.00 |
| 3 | Foreman | Day | 8.00 | 645.00 | 5160.00 |
| 4 | Marker / Fabricator / Erector | Day | 6.00 | 700.00 | 4200.00 |
| 5 | Gas cutter | Day | 2.00 | 575.00 | 1150.00 |
| 6 | Welder (General) | Day | 4.00 | 575.00 | 2300.00 |
| 7 | Mazdoors | Day | 4.00 | 490.00 | 1960.00 |
| 8 | Helper fabrication / erection | Day | 8.00 | 525.00 | 4200.00 |
| Total cost of Labour | | | | Rs: | 25008.40 |

labour component/unit qty 25008.40

Add contractor's profit and overhead charges 13.615% 3404.90

labour component/unit qty (including contractor's profit) **28413.30****ABSTRACT:**

| | | |
|------------------------------|-----|----------|
| A. Cost of Materials | Rs: | 81572.39 |
| B. Hire charges of Machinery | Rs: | 5314.00 |
| C. Cost of Labour | Rs: | 25008.40 |

Total Rs: 111894.79

D. Add for excise duty 0.00% Rs: 0.00

(on 75 percent cost excluding cost of materials) Total Rs: 111894.79

E. Add for transportation upto work site @ 3% Rs: 3356.84

Total Rs: 115251.64

F. Add for contractor's profit and overheads on (A+B+C+D+E) 13.615% Rs: 15691.51

Add 2 leads

Add 1 km lead charges for fabricated parts 23.06 per tonne 61.534

Unloading charges of fabricated parts Rs 91.90 per tonne 245.19

Total cost for 1.334 tonne Rs: 131249.87

Rate per tonne Rs: 98388.20

IRR-GAW-2-14

New Item
2015-16 -4

OT SLUICE SHUTTERS for Below 5 Tons capacity (small gates)

As per Guidelines of Chief Engineer, Central Designs Organization, Hyderabad Specification drawing for Krishna Delta System

Fabrication, supply, erection, testing and commissioning of Sluice Shutters consisting of skin plate, horizontal and vertical angles, stiffeners, rubber seals, clamps with all accessories for sluice shutters including cost of all materials, machinery, labour, seal fixing etc., complete as per specifications and approved drawings

(without painting on mechanical cleaning surfaces which are added extra as per schedule of rates under items in this chapter and add as applicable separately)

Use rate of materials :

Cost of weld 7844.00 / Each Rs: 7844.00

Life of welding set 1000 hours

Use rate of (cost / life) Rs: 7.84

Cost of gas 13905.00 / Each Rs: 13905.00

Life of gas cutting set 600 hours

Use rate of (cost / life) Rs: 23.18

Gate Size: 0.99 X 0.875 M

DATA:

RATE ANALYSISUNIT : Gates and Allied Works - Item Unit Rates 2021-22
0.161 tonne**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------------|------|----------|-------------|-----------------|
| 1 | Structural steel angles/ beams / chan | kg | 63.72 | 50.50 | 3217.86 |
| 2 | Structural steel plates / flats | kg | 96.50 | 52.00 | 5018.00 |
| 3 | GI Bolts/Nut/Washer | kg | 20.00 | 142.00 | 2840.00 |
| | Rubber Seals | | | | |
| 4 | Bottom Seal | Rm | 0.82 | 670.00 | 549.40 |
| 5 | Side Seal/ Top Seal | Rm | 1.75 | 1068.00 | 1869.00 |
| 6 | Oxygen gas | cum | 15.00 | 43.00 | 645.00 |
| 7 | Acetyline gas | cum | 5.00 | 350.00 | 1750.00 |
| 8 | Welding electrodes | Nos | 110.00 | 14.00 | 1540.00 |
| 9 | Use rate welding holder set | Hour | 30.00 | 7.84 | 235.32 |
| 10 | Use rate gas cutting torch set | Hour | 12.00 | 23.18 | 278.10 |
| 11 | Sundries | LS | 3.00 | 34.00 | 102.00 |
| Total cost of Materials | | | | Rs: | 18044.68 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Welding transformer | Hour | 14.00 | 15.10 | 211.40 |
| | Fuel / Energy charges | Hour | 14.00 | 101.50 | 1421.00 |
| 2 | Pug cutting machine | Hour | 4.00 | 6.50 | 26.00 |
| | Fuel / Energy charges | Hour | 4.00 | 4.20 | 16.80 |
| 3 | Drilling machine | Hour | 2.00 | 20.20 | 40.40 |
| | Fuel / Energy charges | Hour | 2.00 | 42.30 | 84.60 |
| 4 | Grinding machine | Hour | 4.00 | 20.20 | 80.80 |
| | Fuel / Energy charges | Hour | 4.00 | 42.30 | 169.20 |
| 5 | Sundries | LS | 3.00 | 34.00 | 102.00 |
| Total hire charges of Machinery | | | | Rs: | 2152.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Drilling machine | Hour | 2.00 | 251.60 | 503.20 |
| 2 | Crew for Grinding machine | Hour | 4.00 | 251.60 | 1006.40 |
| 3 | Foreman | Day | 2.00 | 645.00 | 1290.00 |
| 4 | Marker / Fabricator / Erector | Day | 3.00 | 700.00 | 2100.00 |
| 5 | Gas cutter | Day | 1.00 | 575.00 | 575.00 |
| 6 | Welder (General) | Day | 4.00 | 575.00 | 2300.00 |
| 7 | Mazdoors | Day | 4.00 | 490.00 | 1960.00 |
| 8 | Helper fabrication / erection | Day | 6.00 | 525.00 | 3150.00 |
| Total cost of Labour | | | | Rs: | 12884.60 |

labour component/unit qty 12884.60
Add contractor's profit and overhead charges 13.615% 1754.20
labour component/unit qty (including contractor's profit) **14638.80**

ABSTRACT:

| | | | |
|---|-----------------------|-----|------------------|
| A. Cost of Materials | | Rs: | 18044.68 |
| B. Hire charges of Machinery | | Rs: | 2152.20 |
| C. Cost of Labour | | Rs: | 12884.60 |
| | Total | Rs: | 33081.48 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 33081.48 |
| E. Add for transportation upto work site @ | 3% | Rs: | 992.44 |
| | Total | Rs: | 34073.92 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 4639.16 |
| Add 2 leads | | | |
| Add 1 km lead charges for fabricated parts | 23.06 per tonne | Rs: | 7.426 |
| Unloading charges of fabricated parts Rs | 91.90 per tonne | Rs: | 29.592 |
| Total cost for | 0.161 tonne | Rs: | 38750.11 |
| | Rate per tonne | Rs: | 240683.90 |

IRR-GAW-3 **SAND BLASTING AND PAINTING AS PER IS:14177-1994**

IRR-GAW-3-1 **Cleaning gates / hoists / embedded parts/lifting beams** etc, to expose fresh metal surface for painting **by sand blasting method** as per specifications including cost of all materials, labour, machinery, scaffolding, etc., complete **with initial lead for sand upto 1 km and all lifts.**

DATA: Consider 100 sqm area for cleaning by sand blasting:

1 Requirement of materials:

Sand of gradation 2mm to 1mm @ 0.10 cum / sqm

Approximately 2 cum natural river sand yields 1 cum of sand blasting grade sand after sieving in 2mm and 1 mm sieves.

Allowing 50 % extra for projections, the actual area of sand blast : 150 sqm

Requirement of processed sand (150 x 0.10) : 15.00 cum

Requirement of natural river sand (15.00 x 2) : 30.00 cum

2 Requirement of machinery:

Output of sand blasting per hour : 20 to 25 sqm

Considering 50 minutes per hour working,

Requirement of 7 cmm compressor (150 x 60 / 50 / : 8 hours

Requirement of sand blasting equipment : 8 hours

Requirement of labour:

mazdoor:

For sieving sand : 6 Nos.

For loading sand blast drum : 2 Nos.

For assisting sand blaster : 1 No.

mazdoor:

For sieving sand : 4 Nos.

For cleaning collection of rebound sand and other works : 2 Nos.

3 Use rate of materials :

Cost of 50 r 266.00 / Rm Rs: 13300.00

Life of air hose : 800 hours

Use rate of (cost / life) Rs: 16.63

Cost of sand 650.00 / Each Rs: 650.00

Life of sand blast gun nozzle : 200 hours

Use rate of (cost / life) Rs: 3.25

DATA: **RATE ANALYSIS** UNIT : 100 **sqm**

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------------------------------------|--|------|----------|-------------|-----------------|
| 1 | Sand (Screened) | cum | 30.00 | 700.00 | 21000.00 |
| 2 | Use rate of air hose | Hour | 8.00 | 16.63 | 133.00 |
| 3 | Use rate of sand blast gun nozzle | Hour | 8.00 | 3.25 | 26.00 |
| 4 | Sundries(Rust inhibitive, seive etc) | LS | 5.00 | 34.00 | 170.00 |
| Total | | | | | 21329.00 |
| Add 10% towards scaffolding/laddor @ | | | | 0.10 | 2132.90 |
| Total cost of Materials | | | | | 23461.90 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------|------|----------|-------------|-----------------|
| 1 | Air compressor 7 cmm diesel | Hour | 8.00 | 204.10 | 1632.80 |
| | Fuel / Energy charges | Hour | 8.00 | 1168.60 | 9348.80 |
| 2 | Sand blasting equipment | Hour | 8.00 | 109.30 | 874.40 |
| | Fuel / Energy charges | Hour | 8.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | | 11856.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Crew for Air compressor | Hour | 8.00 | 274.60 | 2196.80 |
| 2 | Crew for Sand blasting equipment | Hour | 8.00 | 286.00 | 2288.00 |
| 3 | mazdoor | Day | 15.00 | 490.00 | 7350.00 |
| Total cost of Labour | | | | | 11834.80 |

labour component/unit qty 118.30

Add contractor's profit and overhead charges 13.615% 16.10

labour component/unit qty (including contractor's profit) **134.40**

ABSTRACT:

| | | | |
|--|---------------------|-----|---------------|
| A. Cost of Materials | | Rs: | 23461.90 |
| B. Hire charges of Machinery | | Rs: | 11856.00 |
| C. Cost of Labour | | Rs: | 11834.80 |
| | Total | Rs: | 47152.70 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 47152.70 |
| E. Add for transportation upto work site @ | 3% | Rs: | 1414.58 |
| | Total | Rs: | 48567.28 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 6612.44 |
| Total cost for | 100.00 sqm | Rs: | 55179.72 |
| | Rate per sqm | Rs: | 551.80 |

IRR-GAW-3-2 **painting of embedded metal parts** and all types of gates, stoplogs, etc., on sand blasted surfaces with one coat of inorganic zinc silicate (airless spray preferred) 70+/- 5 and two super coats with a total thickness of 300 microns (each 150+/- 5) of solventless coal tar epoxy paint each coat 150 microns (total 300 microns) cost of all materials, labour, scaffolding etc., complete **with all leads and all lifts**

(Upstream surface of gates portion may be painted with solventless coal tar epoxy brown paint instead of solventless coal tar black. The rate for coal tar epoxy brown shall be adopted in data for Upstream side painting)

DATA: Consider 100 sqm area for painting:
Requirement of materials :

Theoretical spreading rate per one Coat of Paint 25 Sqm/Hr
Assume Losses at 30% of the spreading area (as per field observations)

Actual Spreading Area 17.50 Sqm/Hr
Total time required for 100 Sqm Area 5.71 Hr
Say 6 Hr

DATA: **RATE ANALYSIS** UNIT : **100 sqm**

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|-----------------|
| 1 | inorganic zinc silicate | ltr | 12.00 | 574.00 | 6888 |
| 2 | Thinner @ 10% | ltr | 1.20 | 93.00 | 111.6 |
| 3 | Solventless Coal tar epoxy paint | ltr | 40.00 | 280.00 | 11200 |
| 4 | Thinner @ 10% | ltr | 4.00 | 93.00 | 372 |
| 5 | Sundries (brushes, ladders, platforms etc) | | 3.00 | 34.00 | 102 |
| Total cost of Materials | | | | Rs: | 18673.60 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|----------------|
| 1 | Hire Charges of Airless Spray Gun | Hr | 6.00 | 112.70 | 676.20 |
| 2 | Hire Charges of Air Compressor-7 Cmm (diesel) | Hr | 6.00 | 204.10 | 1224.60 |
| 3 | Fuel Charges of Air Compressor | Hr | 6.00 | 1168.60 | 7011.60 |
| Total cost of Machinery | | | | Rs: | 8912.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Crew Charges of Air Compressor | Day | 6.00 | 274.60 | 1647.60 |
| 2 | Painter Class-I | Day | 20.00 | 655.00 | 13100.00 |
| 3 | Helper | Day | 20.00 | 490.00 | 9800.00 |
| Total cost of Labour | | | | Rs: | 24547.60 |

labour component/unit qty 245.50
Add contractor's profit and overhead charges 13.615% 33.40
labour component/unit qty (including contractor's profit) **278.90**

ABSTRACT:

| | | | |
|--|---------------------|-----|---------------|
| A. Cost of Materials | | Rs: | 18673.60 |
| B. Hire charges of Machinery | | Rs: | 8912.40 |
| C. Cost of Labour | | Rs: | 24547.60 |
| | Total | Rs: | 52133.60 |
| D. Add for excise duty | 0 | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 52133.60 |
| E. Add for transportation upto work site @ | 0.03 | Rs: | 1564.01 |
| | Total | Rs: | 53697.61 |
| F. Add for contractor's profit and overheads on | | | |
| (A+B+C+D+E) | 13.615% | Rs: | 7310.93 |
| Total cost for | 100.00 sqm | Rs: | 61008.54 |
| | Rate per sqm | Rs: | 610.10 |

IRR-GAW-3-3 **painting of Lifting beams, cat walks and other similar structures**-painting hoist machinery, on sand blasted surfaces with two coats of zinc phosphate primer (airless spray preferred) 40microns/coat and two coats of alkyd based micaceous iron oxide paint, 65 microns/coat cost of all materials, labour, scaffolding etc., complete **with all leads and all lifts**

DATA: Consider 100 sqm area for painting:
Requirement of materials :

Theoretical spreading rate per one Coat of Paint 25 Sqm/Hr
Assume Losses at 30% of the spreading area (as per field observations)

Actual Spreading Area 17.50 Sqm/Hr
Total time required for 100 Sqm Area 5.71 Hr
Say 6 Hr

DATA:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|----------------|
| 1 | zinc phosphate primer | ltr | 28.00 | 212.00 | 5936 |
| 2 | Thinner@10% | ltr | 2.80 | 93.00 | 260.4 |
| 3 | alkyd based micaceous iron oxide paint | ltr | 20.00 | 161.00 | 3220 |
| 4 | Thinner@10% | ltr | 2.00 | 93.00 | 186 |
| 5 | Sundries (brushes, ladders, platforms etc) | | 3.00 | 34.00 | 102 |
| Total cost of Materials | | | | Rs: | 9704.40 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|----------------|
| 1 | Hire Charges of Airless Spray Gun | Hr | 6.00 | 112.70 | 676.20 |
| 2 | Hire Charges of Air Compressor-7 Cmm (diesel) | Hr | 6.00 | 204.10 | 1224.60 |
| 3 | Fuel Charges of Air Compressor | Hr | 6.00 | 1168.60 | 7011.60 |
| Total cost of machinery | | | | RS: | 8912.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Crew Charges of Air Compressor | Day | 6.00 | 274.60 | 1647.60 |
| 2 | Painter Class-I | Day | 15.00 | 655.00 | 9825.00 |
| 3 | Helper | Day | 15.00 | 490.00 | 7350.00 |
| Total cost of Labour | | | | Rs: | 18822.60 |

labour component/unit qty 188.20
Add contractor's profit and overhead charges 13.615% 25.60
labour component/unit qty (including contractor's profit) **213.80**

ABSTRACT:

| | | | |
|------------------------------|-------|-----|----------|
| A. Cost of Materials | | Rs: | 9704.40 |
| B. Hire charges of Machinery | | Rs: | 8912.40 |
| C. Cost of Labour | | Rs: | 18822.60 |
| | Total | Rs: | 37439.40 |
| D. Add for excise duty | 0 | Rs: | 0.00 |

| | | | |
|---|---------------------|-------------|--|
| (on 75 percent cost excluding cost of materials) | | Total | Gates and Allied Works - Item Unit Rates 2021-22 |
| E. Add for transportation upto work site @ | | 0.03 | Rs: 37439.40 |
| | | | Rs: 1123.18 |
| | | Total | Rs: 38562.58 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: 5250.30 | 5250.30 |
| Total cost for | 100.00 sqm | | Rs: 43812.88 |
| | Rate per sqm | | Rs: 438.10 |

IRR-GAW-3-4 **HOISTS:STRUCTURAL COMPONENTS--painting structurals on sand blasted surfaces with**

two coats of zinc phosphate primer (airless spray preferred) 40microns/coat
and one coat 65+/-5 of alkyd based micaceous iron oxide paint
followed by two coats of synthetic enamel paint 25 microns/coat
cost of all materials, labour, scaffolding etc., complete with all leads and
all lifts

DATA: Consider 100 sqm area for painting:
Requirement of materials :

Theoretical spreading rate per one Coat of Paint 25 Sqm/Hr
Assume Losses at 30% of the spreading area (as per field obserations)

Actual Spreading Area 17.50 Sqm/Hr
Total time required for 100 Sqm Area 5.71 Hr
Say 6 Hr

DATA: **RATE ANALYSIS** UNIT : **100 sqm**

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|-----------------|
| 1 | zinc phosphate primer | ltr | 28.00 | 212.00 | 5936 |
| 2 | Thinner@10% | ltr | 2.80 | 93.00 | 260.4 |
| 3 | alkyd based micaceous iron oxide paint | ltr | 15.00 | 161.00 | 2415 |
| 4 | Thinner@10% | ltr | 1.50 | 93.00 | 139.5 |
| 5 | synthetic enamel paint | ltr | 17.00 | 238.00 | 4046 |
| 6 | Thinner@10% | ltr | 1.70 | 93.00 | 158.1 |
| 7 | Sundries (brushes,ladders,platforms etc) | | 3.00 | 34.00 | 102 |
| Total cost of Materials | | | | Rs: | 13057.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|----------------|
| 1 | Hire Charges of Airless Spray Gun | Hr | 6.00 | 112.70 | 676.20 |
| 2 | Hire Charges of Air Compressor-7 Cmm (diesel) | Hr | 6.00 | 204.10 | 1224.60 |
| 3 | Fuel Charges of Air Compressor | Hr | 6.00 | 1168.60 | 7011.60 |
| Total cost of Machinery | | | | Rs: | 8912.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Crew Charges of Air Compressor | Day | 6.00 | 274.60 | 1647.60 |
| 2 | Painter Class-I | Day | 20.00 | 655.00 | 13100.00 |
| 3 | Helper | Day | 20.00 | 490.00 | 9800.00 |
| Total cost of Labour | | | | Rs: | 24547.60 |

labour component/unit qty 245.50
Add contractor's profit and overhead charges 13.615% 33.40
labour component/unit qty (including contractor's profit) **278.90**

ABSTRACT:

| | | |
|--|-------|--------------|
| A. Cost of Materials | Rs: | 13057.00 |
| B. Hire charges of Machinery | Rs: | 8912.40 |
| C. Cost of Labour | Rs: | 24547.60 |
| | Total | Rs: 46517.00 |
| D. Add for excise duty | 0 | Rs: 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: 46517.00 |
| E. Add for transportation upto work site @ | 0.03 | Rs: 1395.51 |
| | Total | Rs: 47912.51 |

F. Add for contractor's profit and overheads on
(A+B+C+D+E)

Total cost for

13.615%

Rs:

6523.29

6523.29

100.00 sqm

Rs:

54435.80

Rate per sqm

Rs:

544.40

IRR-GAW-3-5 **HOISTS:machineryCOMPONENTS--painting hoist machinery, on sand blasted surfaces** with one coats of zinc phosphate primer (airless spray preferred) 50microns/coat and three coats of aluminium paint or synthetic enamel , 25 microns/coat cost of all materials, labour, scaffolding etc., complete with all leads and **all lifts**

DATA: Consider 100 sqm area for painting:
Requirement of materials :

Theoretical spreading rate per one Coat of Paint

25

Sqm/Hr

Assume Losses at 30% of the spreading area (as per field obserations)

Actual Spreading Area

17.50 Sqm/Hr

Total time required for 100 Sqm Area

5.71

Hr

Say

6

Hr

DATA:

RATE ANALYSIS

UNIT :

100 sqm

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|----------------|
| 1 | zinc phosphate primer | ltr | 14.00 | 212.00 | 2968 |
| 2 | Thinner@10% | ltr | 1.40 | 93.00 | 130.2 |
| 3 | aluminium paint or synthetic enamel per coat | ltr | 26.00 | 238.00 | 6188 |
| 4 | Thinner@10% | ltr | 2.60 | 93.00 | 241.8 |
| 5 | Sundries (brushes,ladders,platforms etc) | | 3.00 | 34.00 | 102 |
| Total cost of Materials | | | | Rs: | 9630.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|----------------|
| 1 | Hire Charges of Airless Spray Gun | Hr | 6.00 | 112.70 | 676.20 |
| 2 | Hire Charges of Air Compressor-7 Cmm (diesel) | Hr | 6.00 | 204.10 | 1224.60 |
| 3 | Fuel Charges of Air Compressor | Hr | 6.00 | 1168.60 | 7011.60 |
| Total cost of Machinery | | | | Rs: | 8912.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Crew Charges of Air Compressor | Day | 6.00 | 274.60 | 1647.60 |
| 2 | Painter Class-I | Day | 20.00 | 655.00 | 13100.00 |
| 3 | Helper | Day | 20.00 | 490.00 | 9800.00 |
| Total cost of Labour | | | | Rs: | 24547.60 |

labour component/unit qty

245.50

Add contractor's profit and overhead charges

13.615%

33.40

labour component/unit qty (including contractor's profit)

278.90

ABSTRACT:

A. Cost of Materials

Rs: 9630.00

B. Hire charges of Machinery

Rs: 8912.40

C. Cost of Labour

Rs: 24547.60

Total

Rs: 43090.00

D. Add for excise duty

0

Rs: 0.00

(on 75 percent cost excluding cost of materials)

Total

Rs: 43090.00

E. Add for transportation upto work site @

0.03

Rs: 1292.70

Total

Rs: 44382.70

F. Add for contractor's profit and overheads on
(A+B+C+D+E)

13.615%

Rs:

6042.70

6042.70

Total cost for

100.00 sqm

Rs:

50425.40

Rate per sqm

Rs:

504.30

IRR-GAW-4

PAINTING WITHOUT SAND BLASTING**IRR-GAW-4-1 E.M Parts for ALL TYPES OF GATES**

Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning, applying primary coat with **one** coat of **Protective Mastic** to a thickness of 70±5 microns, followed by finishing coats **2 coats** with Solventless Coal tar epoxy each coat with a DFT of 150±5 microns and total DFT of all coats including Primary coat should not be less than 350 microns with material, labour and all accessories with all leads and lifts

(in respect of Heavily rusted (30 to 40% rusted) surfaces)

DATA: Consider 100 sqm area for painting:
Requirement of materials :

Theoretical spreading rate per one Coat of Paint 25 Sqm/Hr
Assume Losses at 30% of the spreading area (as per field observations)

Actual Spreading Area 17.50 Sqm/Hr
Total time required for 100 Sqm Area 5.71 Hr
Say 6 Hr

DATA: **RATE ANALYSIS** UNIT : **100.000 Sq.m**

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Rust cleaner / inhibitor | ltr | 13 | 129 | 1677.00 |
| 2 | Protective Mastic | ltr | 25 | 472 | 11800.00 |
| 3 | Thinner@10% | ltr | 2.5 | 93.00 | 232.50 |
| 4 | Solventless Coal tar epoxy paint | ltr | 40.00 | 280.00 | 11200.00 |
| 5 | Thinner@10% | ltr | 4 | 93.00 | 372.00 |
| 6 | Wire brush | Nos | 2 | 42.00 | 84.00 |
| 7 | Sundries | LS | 3.00 | 34.00 | 102.00 |
| Total cost of Materials | | | | Rs: | 25467.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|----------------|
| 1 | Hire Charges of Airless Spray Gun | Hr | 6.00 | 112.70 | 676.20 |
| 2 | Hire Charges of Air Compressor-7 Cmm (diesel) | Hr | 6.00 | 204.10 | 1224.60 |
| 3 | Fuel Charges of Air Compressor | Hr | 6.00 | 1168.60 | 7011.60 |
| Total cost of Machinery | | | | | 8912.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Crew Charges of Air Compressor | Day | 6.00 | 274.60 | 1647.60 |
| 2 | Painter Class-I | Day | 20.00 | 655.00 | 13100.00 |
| 3 | Helper | Day | 20.00 | 490.00 | 9800.00 |
| Total cost of Labour | | | | Rs: | 24547.60 |

labour component/unit qty 245.50
Add contractor's profit and overhead charges 13.615% 33.40
labour component/unit qty (including contractor's profit) **278.90**

ABSTRACT:

| | | | |
|---|------------|-----|-----------------|
| A. Cost of Materials | | Rs: | 25467.50 |
| B. Hire charges of Machinery | | Rs: | 8912.40 |
| C. Cost of Labour | | Rs: | 24547.60 |
| | Total | Rs: | 58927.50 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 58927.50 |
| E. Add for transportation upto work site @ | 3% | Rs: | 1767.83 |
| | Total | Rs: | 60695.33 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 8263.67 |
| Total cost for | 100.00 sqm | Rs: | 68958.99 |
| Rate per sq.meter | | Rs: | 689.60 |

Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning,applying primary coat with **two** coats of Zinc chromite red oxide primer , followed by finishing coats **3 coats** with synthetic enamel paint with material, labour,and all accessories with all leads and lifts where surface cleaning by sand blasting is not feasible and based on specific recommendations of designers, it is to adopt surface preperation done manually by hand and power tool after cleaning by chemical treatment to remove grease, rust, scaling etc., and to form phosphate coating to prevent further rusting, before applying primer painting.

DATA: Consider 100 sqm area for painting:
Requirement of materials :

Theoretical spreading rate per one Coat of Paint 25 Sqm/Hr
Assume Losses at 30% of the spreading area (as per field obserations)

Actual Spreading Area 17.50 Sqm/Hr
Total time required for 100 Sqm Area 5.71 Hr
Say 6 Hr

DATA: **RATE ANALYSIS** UNIT : **100.000 Sq.m**

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Rust cleaner / inhibitor | ltr | 13 | 129 | 1677.00 |
| 2 | Zinc Chromite Red Oxide Primer | ltr | 28 | 169 | 4732.00 |
| 3 | Thinner@10% | ltr | 2.8 | 93.00 | 260.40 |
| 4 | Synthetic enamel Paint | ltr | 17.00 | 238.00 | 4046.00 |
| 5 | Thinner@10% | ltr | 1.7 | 93.00 | 158.10 |
| 6 | Wire brush | Nos | 2 | 42.00 | 84.00 |
| 7 | Sundries | LS | 3.00 | 34.00 | 102.00 |
| Total cost of Materials | | | | | 11059.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|----------------|
| 1 | Hire Charges of Airless Spray Gun | Hr | 6.00 | 112.70 | 676.20 |
| 2 | Hire Charges of Air Compressor-7 Cmm (diesel) | Hr | 6.00 | 204.10 | 1224.60 |
| 3 | Fuel Charges of Air Compressor | Hr | 6.00 | 1168.60 | 7011.60 |
| Total cost of Machinery | | | | | 8912.40 |

C. LABOUR

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Crew Charges of Air Compressor | Day | 6.00 | 274.60 | 1647.60 |
| 2 | Painter Class-I | Day | 20.00 | 655.00 | 13100.00 |
| 3 | Helper | Day | 20.00 | 490.00 | 9800.00 |
| Total cost of Labour | | | | | 24547.60 |

labour component/unit qty 245.50
Add contractor's profit and overhead charges 13.615% 33.40
labour component/unit qty (including contractor's profit) **278.90**

ABSTRACT:

| | | | |
|---|---------|-----|---------------|
| A. Cost of Materials | | Rs. | 11059.50 |
| B. Hire charges of Machinery | | Rs. | 8912.40 |
| C. Cost of Labour | | Rs. | 24547.60 |
| | Total | Rs. | 44519.50 |
| D. Add for excise duty | 0.00% | Rs. | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs. | 44519.50 |
| E. Add for transportation upto work site @ | 3% | Rs. | 1335.59 |
| | Total | Rs. | 45855.09 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs. | 6243.17 |
| Total cost for 100.00 sqm | | Rs. | 52098.25 |
| Rate per sq.meter | | | 521.00 |

WALK WAYS(CAT WALKS), LIFTING BEAMS,etc,
 IRR-GAW-4-4 **Surface cleaning of metal surfaces by chemical cleaners** and then by hand and power tool cleaners and removing dust. After cleaning,applying primary coat with **one** coat of Zinc rich epoxy primer to a thickness of 40 microns ,followed by finishing coats **2 coats** with Solventless Coal tar epoxy with material, labour and all accessories **with all leads and lifts**

DATA: Consider 100 sqm area for painting:
 Requirement of materials :

Theoretical spreading rate per one Coat of Paint 25 Sqm/Hr
 Assume Losses at 30% of the spreading area (as per field obserations)

Actual Spreading Area 17.50 Sqm/Hr
 Total time required for 100 Sqm Area 5.71 Hr
 Say 6 Hr

DATA: **RATE ANALYSIS** UNIT : **100.000** Sq.m

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Rust cleaner / inhibitor | ltr | 13 | 129 | 1677.00 |
| 2 | Zinc rich epoxy primer | ltr | 14 | 613 | 8582.00 |
| 3 | Thinner@10% | ltr | 1.4 | 93.00 | 130.20 |
| 4 | Solvetnless Coal tar epoxy paint | ltr | 40 | 280 | 11200.00 |
| 5 | Thinner@10% | ltr | 4 | 93.00 | 372.00 |
| 6 | Wire brush | Nos | 2 | 42 | 84.00 |
| 7 | Sundries | LS | 3 | 34 | 102.00 |
| Total cost of Materials | | | | Rs: | 22147.20 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---|------|----------|-------------|----------------|
| 1 | Hire Charges of Airless Spray Gun | Hr | 6.00 | 112.70 | 676.20 |
| 2 | Hire Charges of Air Compressor-7 Cmm (diesel) | Hr | 6.00 | 204.10 | 1224.60 |
| 3 | Fuel Charges of Air Compressor | Hr | 6.00 | 1168.60 | 7011.60 |
| Total cost of Machinery | | | | Rs: | 8912.40 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|-----------------|
| 1 | Crew Charges of Air Compressor | Day | 6.00 | 274.60 | 1647.60 |
| 2 | Painter Class-I | Day | 13.00 | 655.00 | 8515.00 |
| 3 | Helper | Day | 13.00 | 490.00 | 6370.00 |
| Total cost of Labour | | | | Rs: | 16532.60 |

labour component/unit qty 165.30
 Add contractor's profit and overhead charges 13.615% 22.50
 labour component/unit qty (including contractor's profit) **187.80**

ABSTRACT:

| | | | |
|---|--------------------------|-----|---------------|
| A. Cost of Materials | | Rs: | 22147.20 |
| B. Hire charges of Machinery | | Rs: | 8912.40 |
| C. Cost of Labour | | Rs: | 16532.60 |
| | Total | Rs: | 47592.20 |
| D. Add for excise duty | 0.00% | Rs: | 0.00 |
| (on 75 percent cost excluding cost of materials) | Total | Rs: | 47592.20 |
| E. Add for transportation upto work site @ | 3% | Rs: | 1427.77 |
| | Total | Rs: | 49019.97 |
| F. Add for contractor's profit and overheads on (A+B+C+D+E) | 13.615% | Rs: | 6674.07 |
| Total cost for | 100.00 sqm | Rs: | 55694.03 |
| | Rate per sq.meter | Rs: | 556.90 |

CHAPTER-VI

PRELIMINARY AND MAINTENANCE WORKS - Standard Data

(STORED WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)

For the Year:2021-22

Index- code

IRR-PMW

PRELIMINARY & MAINTENANCE WORKS - DATA RATES

Directions to add Seigniorage Charges and Additional Lead Charges**Seigniorage Charges:**

1. The unit rate for work item in the Standard Data is **exclusive of Seigniorage Charges** wherever applicable.
2. The appropriate Seigniorage Charges for relevant materials are to be added in the Part-B of the estimate

Additional Lead and Lift Charges:

1. Unless otherwise specified the basic rates are inclusive of all lifts.
2. For concrete, masonry and reinforcement items **wherever** initial lead of 1km is considered in the basic rate, the additional lead as follows:
Additional lead charges for Steel, sand, coarse aggregate, stones and stone chips shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.
In case of Cement and Steel, Loading and unloading charges are already added in the work item while arriving the unit rate and hence should not be added again

Example:

| | | | |
|---|-------------------------------------|-----|-----------|
| Total lead for sand from approved sand quarry : | | | 15 Km |
| Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) : | | | 1 Km |
| Additional lead charges : | Lead charges for 5 km | Rs. | 102.14 |
| | Lead charges for next 10 km | Rs. | 153.38 |
| | Total lead charges for 15 km /cum | Rs. | 255.52 |
| | Less 1 km initial lead charges /cum | Rs. | 38.29 (-) |
| | Net additional lead charges / cum | Rs. | 217.23 |

3. The Leads for Steel shall be from the nearest market place to the Project area

4. For earth/rockfill embankments **wherever** initial lead of 1km is considered in the basic rate, the additional lead charges are to be added as follows:
Additional lead charges for Earth, Murrum etc., shall be worked out for total lead involved and 1 km lead charges included in basic rate shall be deducted from total lead charges. No loading and unloading charges shall be allowed for any item.
(same as above)

Example:

| | | | |
|---|-------------------------------------|-----|-----------|
| Total lead for earth from approved borrow area : | | | 15 Km |
| Initial lead included in the basic rate in the basic item rate in the data (i.e., item specification) : | | | 1 Km |
| Additional lead charges : | Lead charges for 5 km | Rs. | 102.14 |
| | Lead charges for next 10 km | Rs. | 153.38 |
| | Total lead charges for 15 km /cum | Rs. | 255.52 |
| | Less 1 km initial lead charges /cum | Rs. | 38.29 (-) |
| | Net additional lead charges / cum | Rs. | 217.23 |

5. The initial lead up to 50 m as mentioned in some standard data items is meant for manual lead within the working area.
For conveyance of materials, the lead required from quarry/Borrow area/ Dump Area to worksite shall be added to the data without deducting the 50 m initial lead charges

PMW - Work ItemsIRR-PMW-1 **JUNGLE CLEARANCE :**

IRR-PMW-1-1 **Clearing thin jungle growth (more than 50 percent open space) including bushes upto 30 cm / parthenium and other weeds** including burning or disposing off the same as directed etc., complete.

DATA:

RATE ANALYSISUNIT : **1000 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 1790.00 |

labour component/unit qty 1.80
Add contractor's profit and overhead charges 13.615% 0.20
labour component/unit qty (including contractor's profit) **2.00**

ABSTRACT:

| | | | |
|---|-------------------------|------------|-------------|
| A. Cost of Materials | | Rs: | 0.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 1790.00 |
| | Total | Rs: | 1790.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | | 243.7085 |
| Total cost for 1000.00 sqm | Rs: | | 2033.71 |
| Rate per sqm | (A+B+C+D)/1000.0 | Rs. | 2.00 |

IRR-PMW-1-2 **Clearing thick jungle growth (less than 50 percent open space) including bushes upto 30 cm / parthenium and other weeds** including burning or disposing off the same as directed etc., complete.

DATA:

RATE ANALYSISUNIT : **1000 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 2770.00 |

| | |
|---|--------------|
| labour component/unit qty | 2.80 |
| Add contractor's profit and overhead charges | 13.615% 0.40 |
| labour component/unit qty (including contractor's profit) | 3.20 |

ABSTRACT:

| | | | |
|---|-------------------------|------------|-------------|
| A. Cost of Materials | | Rs: | 0.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 2770.00 |
| | Total | Rs: | 2770.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | | 377.1355 |
| Total cost for 1000.00 sqm | Rs: | | 3147.14 |
| Rate per sqm | (A+B+C+D)/1000.0 | Rs. | 3.10 |

IRR-PMW-1-3 **Removing stumps, tree roots, roots of bamboo clusters etc., upto 1.50 m girth** including excavation, stacking the materials neatly and levelling the surface etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSISUNIT : **18 Nos.****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 2 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 1140.00 |

| | |
|---|--------------|
| labour component/unit qty | 63.30 |
| Add contractor's profit and overhead charges | 13.615% 8.60 |
| labour component/unit qty (including contractor's profit) | 71.90 |

ABSTRACT:

| | | | |
|------------------------------|-------|-----|---------|
| A. Cost of Materials | | Rs: | 0.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 1140.00 |
| | Total | Rs: | 1140.00 |

| | | |
|---|---------------------------|----------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 155.211 |
| Total cost for | 18.00 Nos. Rs: | 1295.21 |
| Rate per each | (A+B+C+D)/18.0 Rs. | 72.00 |

IRR-PMW-1-4 **Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 1.50 m and upto 3.0 m** including excavation, stacking the materials neatly and levelling the area etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **8 Nos.****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 2 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 1140.00 |

labour component/unit qty 142.50
 Add contractor's profit and overhead charges 13.615% 19.40
 labour component/unit qty (including contractor's profit) **161.90**

ABSTRACT:

| | | |
|------------------------------|-----|----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 1140.00 |
| Total | Rs: | 1140.00 |

| | | |
|---|--------------------------|----------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 155.211 |
| Total cost for | 8.00 Nos. Rs: | 1295.20 |
| Rate per each | (A+B+C+D)/8.0 Rs. | 161.90 |

IRR-PMW-1-5 **Removing stumps, tree roots, roots of bamboo cluster etc., with girth above 3.0 m and upto 5.0 m** including excavation, stacking the materials neatly and levelling the area etc., **complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **5 Nos.****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 2280.00 |

labour component/unit qty 456.00
 Add contractor's profit and overhead charges 13.615% 62.10
 labour component/unit qty (including contractor's profit) **518.10**

ABSTRACT:

| | | |
|------------------------------|-----|----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2280.00 |
| Total | Rs: | 2280.00 |

| | | |
|---|--------------------------|----------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 310.422 |
| Total cost for | 5.00 Nos. Rs: | 2590.42 |
| Rate per each | (A+B+C+D)/5.0 Rs. | 518.10 |

IRR-PMW-1-6 **Additional rate for every 0.5 m increase in girth of tree stump / stumps of bamboo cluster beyond 5 m.**

DATA:

RATE ANALYSIS

UNIT :

7 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | work inspector | Day | 0.22 | 640.00 | 140.80 |
| 2 | mazdoor | Day | 0.88 | 490.00 | 428.75 |
| Total cost of Labour | | | | Rs: | 569.55 |

labour component/unit qty 81.40
 Add contractor's profit and overhead charges 13.615% 11.10
 labour component/unit qty (including contractor's profit) **92.50**

ABSTRACT:

| | | |
|---|-------------------|---------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 569.55 |
| Total | Rs: | 569.55 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 77.5442325 |
| Total cost for | 7.00 Nos. Rs: | 647.09 |
| Rate per each | (A+B+C+D)/7.0 Rs. | 92.40 |

IRR-PMW-1-7

Cutting and stacking bamboos excluding removing stumps and roots etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS

UNIT :

150 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 2770.00 |

labour component/unit qty 18.47
 Add contractor's profit and overhead charges 13.615% 2.51
 labour component/unit qty (including contractor's profit) **21.00**

ABSTRACT:

| | | |
|---|---------------------|----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2770.00 |
| Total | Rs: | 2770.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 377.1355 |
| Total cost for | 150.00 Nos. Rs: | 3147.14 |
| Rate per each | (A+B+C+D)/150.0 Rs. | 21.00 |

IRR-PMW-1-8

Cutting and removing jauliflora bushes upto 1.5 m girth excluding removal of stumps and including burning or disposing off the materials as directed with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS

UNIT :

100 Nos.**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 1790.00 |

labour component/unit qty 17.90
 Add contractor's profit and overhead charges 13.615% 2.40
 labour component/unit qty (including contractor's profit) **20.30**

ABSTRACT:

| | | |
|------------------------------|-----|---------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 1790.00 |
| Total | Rs: | 1790.00 |

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 243.7085
 Total cost for 100.00 Nos Rs: **2033.71**
Rate per each (A+B+C+D)/100.0 Rs. **20.30**

IRR-PMW-1-9 **Cutting and removing jauliflora bushes above 1.5 m upto 3.0 m girth** excluding removal of stumps and including burning or disposing off the materials as directed **with initial lead upto 50 m and all lifts.**

DATA: **RATE ANALYSIS** UNIT : **50 Nos**

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 1790.00 |

labour component/unit qty 35.80
 Add contractor's profit and overhead charges 13.615% 4.90
 labour component/unit qty (including contractor's profit) **40.70**

ABSTRACT:

| | | |
|------------------------------|-----|---------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 1790.00 |
| Total | Rs: | 1790.00 |

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 243.7085
 Total cost for 50.00 Nos Rs: **2033.71**
Rate per each (A+B+C+D)/50.0 Rs. **40.70**

IRR-PMW-1-10 **Cutting trees above 0.3 m and upto 0.6 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA: **RATE ANALYSIS** UNIT : **14 Nos.**

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Use rate of ropes etc | LS | 0.25 | 169.00 | 42.25 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 42.25 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 2 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 1630.00 |

labour component/unit qty 116.40
 Add contractor's profit and overhead charges 13.615% 15.80
 labour component/unit qty (including contractor's profit) **132.20**

ABSTRACT:

| | | |
|---|--------------------|----------------|
| A. Cost of Materials | Rs: | 42.25 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 1630.00 |
| Total | Rs: | 1672.25 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 227.6768375 |
| Total cost for | 14.00 Nos. Rs: | 1899.93 |
| Rate per each | (A+B+C+D)/14.0 Rs. | 135.70 |

IRR-PMW-1-11 **Cutting trees above 0.6 m and upto 1.2 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT : 4 Nos.

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Use rate of ropes etc | LS | 0.25 | 169.00 | 42.25 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 42.25 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 2 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 1630.00 |

labour component/unit qty 407.50
 Add contractor's profit and overhead charges 13.615% 55.50
 labour component/unit qty (including contractor's profit) **463.00**

ABSTRACT:

| | | |
|---|-------------------|----------------|
| A. Cost of Materials | Rs: | 42.25 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 1630.00 |
| Total | Rs: | 1672.25 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 227.6768375 |
| Total cost for | 4.00 Nos. Rs: | 1899.93 |
| Rate per each | (A+B+C+D)/4.0 Rs. | 475.00 |

IRR-PMW-1-12 **Cutting trees above 1.2 m and upto 1.8 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT : 2 Nos.

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Use rate of ropes etc | LS | 0.25 | 169.00 | 42.25 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 42.25 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 2 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 1630.00 |

labour component/unit qty 815.00
 Add contractor's profit and overhead charges 13.615% 111.00
 labour component/unit qty (including contractor's profit) **926.00**

ABSTRACT:

| | | | |
|---|----------------------|------------|---------------|
| A. Cost of Materials | | Rs: | 42.25 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 1630.00 |
| | Total | Rs: | 1672.25 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | | 227.6768375 |
| Total cost for | 2.00 Nos. | Rs: | 1899.93 |
| Rate per each | (A+B+C+D)/2.0 | Rs. | 950.00 |

IRR-PMW-1-13 **Cutting trees above 1.8 m and upto 2.4 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

1 No.

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Use rate of ropes etc | LS | 0.25 | 169.00 | 42.25 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 42.25 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 2 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 1630.00 |

labour component/unit qty 1630.00

Add contractor's profit and overhead charges 13.615% 221.90

labour component/unit qty (including contractor's profit) 1851.90

ABSTRACT:

| | | | |
|---|----------------------|------------|----------------|
| A. Cost of Materials | | Rs: | 42.25 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 1630.00 |
| | Total | Rs: | 1672.25 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | | 227.6768375 |
| Total cost for | 1.00 No. | Rs: | 1899.93 |
| Rate per each | (A+B+C+D)/1.0 | Rs. | 1899.90 |

IRR-PMW-1-14 **Cutting trees above 2.4 m and upto 3.0 m girth** excluding removal of stumps and including stacking the materials neatly as directed **with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

1 Nos.

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Use rate of ropes etc | LS | 0.50 | 169.00 | 84.50 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 84.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | work inspector | Day | 0.25 | 640.00 | 160.00 |
| 2 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 2610.00 |

labour component/unit qty 2610.00

Add contractor's profit and overhead charges 13.615% 355.40

labour component/unit qty (including contractor's profit) 2965.40

ABSTRACT:

| | | | |
|---|----------------------|------------|----------------|
| A. Cost of Materials | | Rs: | 84.50 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 2610.00 |
| | Total | Rs: | 2694.50 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | | 366.856175 |
| Total cost for | 1.00 Nos. | Rs: | 3061.36 |
| Rate per each | (A+B+C+D)/1.0 | Rs. | 3061.40 |

IRR-PMW-1-15 **Additional rate for cutting tree for every 0.5 m increase in girth of tree beyond 3 m.**

DATA:

RATE ANALYSIS

UNIT :

1 No**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------|------|----------|-------------|---------------|
| 1 | Use rate of ropes etc | LS | 0.15 | 169.00 | 25.35 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 25.35 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | work inspector | Day | 0.10 | 640.00 | 64.00 |
| 2 | mazdoor | Day | 1.75 | 490.00 | 857.50 |
| Total cost of Labour | | | | Rs: | 921.50 |

labour component/unit qty 921.50
 Add contractor's profit and overhead charges 13.615% 125.50
 labour component/unit qty (including contractor's profit) **1047.00**

ABSTRACT:

A. Cost of Materials Rs: 25.35
 B. Hire charges of Machinery Rs: 0.00
 C. Cost of Labour Rs: 921.50
Total Rs: 946.85
 D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 128.9136275
 Total cost for 1.00 No Rs: **1075.76**
Rate per each (A+B+C+D)/1.0 Rs: 1075.80

IRR-PMW-1-16 **Cutting and burning or disposing off Apu / Jundu from marshy areas as directed with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSIS

UNIT :

1000 sqm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 12.00 | 490.00 | 5880.00 |
| Total cost of Labour | | | | Rs: | 6520.00 |

labour component/unit qty 6.50
 Add contractor's profit and overhead charges 13.615% 0.90
 labour component/unit qty (including contractor's profit) **7.40**

ABSTRACT:

A. Cost of Materials Rs: 0.00
 B. Hire charges of Machinery Rs: 0.00
 C. Cost of Labour Rs: 6520.00
Total Rs: 6520.00
 D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 887.698
 Total cost for 1000.00 sqm Rs: **7407.70**
Rate per sqm (A+B+C+D)/1000.0 Rs: 7.40

IRR-PMW-2 **PRELIMINARY WORKS :**IRR-PMW-2-1 **Earthwork excavation for trial pits / borrow pits and other investigation works in all kinds of soil including boulders upto 30 cm dia and disposing off excavated soil as directed with lead upto 10 m and lift upto 3 m.**

DATA:

RATE ANALYSIS

UNIT :

10 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 3260.00 |

labour component/unit qty 326.00

Add contractor's profit and overhead charges 13.615% 44.38

labour component/unit qty (including contractor's profit) **370.40****ABSTRACT:**

A. Cost of Materials Rs: 0.00

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 3260.00

Total Rs: 3260.00

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 443.849

Total cost for 10.00 cum Rs: **3703.85****Rate per cum (A+B+C+D)/100.0 Rs. 370.40**

IRR-PMW-2-2

Earthwork excavation for trial pits / borrow pits and other investigation works in soft rock including disposing off the excavated rock as directed with lead upto 10 m and lift upto 3 m.

DATA:

RATE ANALYSIS

UNIT :

10 cum**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | Crowbarman | Day | 1.00 | 525.00 | 525.00 |
| 3 | mazdoor | Day | 7.50 | 490.00 | 3675.00 |
| Total cost of Labour | | | | Rs: | 4520.00 |

labour component/unit qty 452.00

Add contractor's profit and overhead charges 13.615% 61.50

labour component/unit qty (including contractor's profit) **513.50****ABSTRACT:**

A. Cost of Materials Rs: 0.00

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 4520.00

Total Rs: 4520.00

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 615.398

Total cost for 10.00 cum Rs: **5135.40****Rate per cum (A+B+C+D)/10.0 Rs. 513.50**

IRR-PMW-2-3

Conducting geophysical investigation studies by electrical resistivity method in stages of 5m for sub-surface details such as depth of formations, shear zones, classification of strata, depth of water table etc., including cost of all materials, equipments, labour, analysing and reporting the details of field studies conducted etc., complete excluding cost of transportation arrangements.

DATA:

RATE ANALYSIS

UNIT :

20 Stages**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------|------|----------|-------------|---------------|
| 1 | Sundries (misc. consumables) | | 5.00 | 34.00 | 170.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 170.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|---|-------------|----------|-------------|------------------|
| 1 | Electric resistivity meter Battery / charging cost etc @ | Hour 20% | 8.00 | 95.70 | 765.60 153.12 |
| Total hire charges of Machinery | | | | Rs: | 918.72 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|------------------------|------|----------|-------------|----------------|
| 1 | Geophysist / Geologist | Day | 2.00 | 1170.00 | 2340.00 |
| 2 | Graduate Engineer | Day | 1.00 | 1170.00 | 1170.00 |
| 3 | Lab Assistant | Day | 1.00 | 670.00 | 670.00 |
| 4 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 6140.00 |

labour component/unit qty 307.00

Add contractor's profit and overhead charges 13.615% 41.80

labour component/unit qty (including contractor's profit) **348.80****ABSTRACT:**

A. Cost of Materials Rs: 170.00

B. Hire charges of Machinery Rs: 918.72

C. Cost of Labour Rs: 6140.00

Total Rs: **7228.72**

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 984.190228

Total cost for 20.00 Stages Rs: **8212.91****Rate per stage** (A+B+C+D)/20.0 Rs: **410.60**

IRR-PMW-2-4

Drilling 80 mm dia hole through over-burden using casing shoe bit vertical or inclined upto 10 degrees to vertical as directed including cost of all materials, machinery, labour, water charges, reaming, collection of wash samples at suitable intervals, logging and labelling, supplying honne wood core box, fixing casing pipes (excluding cost of casing pipes) etc., **complete for depth upto 30 m from surface.**

Note: 1. For drilling through over-burden beyond 30 m from surface increase the basic rate per Rm by 10 percent.

Data:

RATE ANALYSISUNIT : **3.00 Rm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of casing shoe bit | Rm | 3.00 | 118.67 | 356.00 |
| 2 | Use rate of reamer shell | Rm | 3.00 | 29.11 | 87.33 |
| 3 | Use rate of extension rod set 16.5 m | Rm | 3.00 | 1.63 | 4.90 |
| 4 | Use rate of honne core box | Rm | 3.00 | 210.83 | 632.50 |
| Total cost of Materials | | | | Rs: | 1080.73 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Core drilling machine | Hour | 1.00 | 281.90 | 281.90 |
| | Fuel / Energy charges | Hour | 1.00 | 389.50 | 389.50 |
| 2 | 5 hp pump (diesel) 2 Nos. | Hour | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | Hour | 2.00 | 129.80 | 259.60 |
| 3 | Sundries (samplers etc) | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 1017.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Crew for Core drilling machine | Hour | 1.00 | 365.00 | 365.00 |
| 2 | Crew for Pump | Hour | 2.00 | 143.50 | 287.00 |
| 3 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 1632.00 |

labour component/unit qty 544.00

Add contractor's profit and overhead charges 13.615% 74.10

labour component/unit qty (including contractor's profit) **618.10****ABSTRACT:**

A. Cost of Materials Rs: 1080.73

B. Hire charges of Machinery Rs: 1017.20

C. Cost of Labour Rs: 1632.00

Total Rs: **3729.93**

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 507.8304914

Total cost for 3.00 Rm Rs: **4237.76****Rate per Rm** (A+B+C+D)/3.0 Rs: **1412.60**

IRR-PMW-2-5

Drilling 76 mm dia (NX) core hole in hard rock using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging and labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., **complete for depth upto 30 m from surface.**

Data:

RATE ANALYSIS

UNIT :

3.00 Rm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of diamond core bit | Rm | 3.00 | 872.00 | 2616.00 |
| 2 | Use rate of reamer shell | Rm | 3.00 | 87.33 | 262.00 |
| 3 | Use rate of double tube core barrel | Rm | 3.00 | 232.42 | 697.25 |
| 4 | Use rate of extension rod set 16.5 m | Rm | 3.00 | 21.78 | 65.34 |
| 5 | Use rate of honne core box | Rm | 3.00 | 474.38 | 1423.13 |
| Total cost of Materials | | | | Rs: | 5063.72 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Core drilling machine | Hour | 8.00 | 281.90 | 2255.20 |
| | Fuel / Energy charges | Hour | 8.00 | 389.50 | 3116.00 |
| 2 | 5 hp pump (diesel) 2 Nos. | Hour | 16.00 | 9.10 | 145.60 |
| | Fuel / Energy charges | Hour | 16.00 | 129.80 | 2076.80 |
| 3 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 7763.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Crew for Core drilling machine | Hour | 8.00 | 365.00 | 2920.00 |
| 2 | Crew for Pump | Hour | 16.00 | 143.50 | 2296.00 |
| 3 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 6196.00 |

labour component/unit qty 2065.30
 Add contractor's profit and overhead charges 13.615% 281.20
 labour component/unit qty (including contractor's profit) **2346.50**

ABSTRACT:

| | | |
|---|-------------------|-----------------|
| A. Cost of Materials | Rs: | 5063.72 |
| B. Hire charges of Machinery | Rs: | 7763.60 |
| C. Cost of Labour | Rs: | 6196.00 |
| Total | Rs: | 19023.32 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 2590.024337 |
| Total cost for | 3.00 Rm Rs: | 21613.34 |
| Rate per Rm | (A+B+C+D)/3.0 Rs: | 7204.40 |

- NOTE: 1. For drilling in hard rock beyond 30 m upto 60 m from surface increase the basic rate per Rm by 25 percent.
 2. For drilling in hard rock beyond 60 m upto 90 m from surface increase the basic rate per Rm by 40 percent.

IRR-PMW-2-5-A

New Item 2015-16-5 **Drilling 76 mm dia (NX) core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface for Primary and Secondary Holes**

Data:

RATE ANALYSIS

UNIT :

3.00 Rm**A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of diamond core bit | Rm | 3.00 | 1237.46 | 3712.39 |
| 2 | Use rate of reamer shell | Rm | 3.00 | 52.40 | 157.20 |
| 4 | Use rate of extension rod set 16.5 m | Rm | 3.00 | 13.07 | 39.20 |
| Total cost of Materials | | | | Rs: | 3908.80 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Core drilling machine | Hour | 4.78 | 281.90 | 1346.35 |
| | Fuel / Energy charges | Hour | 4.78 | 389.50 | 1860.25 |
| 2 | 5 hp pump (diesel) 2 Nos. | Hour | 9.55 | 9.10 | 86.92 |
| | Fuel / Energy charges | Hour | 9.55 | 129.80 | 1239.85 |
| 3 | Sundries | LS | 2.99 | 34.00 | 101.66 |
| Total hire charges of Machinery | | | | Rs: | 4635.04 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Crew for Core drilling machine | Hour | 4.78 | 365.00 | 1743.24 |
| 2 | Crew for Pump | Hour | 9.55 | 143.50 | 1370.43 |
| 3 | mazdoor | Day | 1.19 | 490.00 | 583.10 |
| Total cost of Labour | | | | Rs: | 3696.77 |

labour component/unit qty 1232.30
 Add contractor's profit and overhead charges 13.615% 167.80
 labour component/unit qty (including contractor's profit) **1400.10**

ABSTRACT:

| | | |
|---|-------------------|-----------------|
| A. Cost of Materials | Rs: | 3908.80 |
| B. Hire charges of Machinery | Rs: | 4635.04 |
| C. Cost of Labour | Rs: | 3696.77 |
| Total | Rs: | 12240.60 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 1666.557931 |
| Total cost for | 3.00 Rm Rs: | 13907.16 |
| Rate per Rm | (A+B+C+D)/3.0 Rs: | 4635.70 |

- NOTE: 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the basic rate per Rm by 25 percent.
 2. For drilling in all types of rocks (other than hard rock) including masonry/CC m from surface increase the basic beyond 60 m upto 90 rate per Rm by 40 percent.

IRR-PMW-2-5-B

New Item 2015-16-6 **Drilling 76 mm dia (NX) core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging and labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface for Test Holes**

Data:

RATE ANALYSISUNIT : **3.00 Rm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of diamond core bit | Rm | 3.00 | 1237.46 | 3712.39 |
| 2 | Use rate of reamer shell | Rm | 3.00 | 52.40 | 157.20 |
| 3 | Use rate of double tube core barrel | Rm | 3.00 | 139.45 | 418.35 |
| 4 | Use rate of extension rod set 16.5 m | Rm | 3.00 | 13.07 | 39.20 |
| 5 | Use rate of honne core box | Rm | 3.00 | 474.38 | 1423.13 |
| Total cost of Materials | | | | Rs: | 5750.27 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Core drilling machine | Hour | 4.78 | 281.90 | 1346.35 |
| | Fuel / Energy charges | Hour | 4.78 | 389.50 | 1860.25 |
| 2 | 5 hp pump (diesel) 2 Nos. | Hour | 9.55 | 9.10 | 86.92 |
| | Fuel / Energy charges | Hour | 9.55 | 129.80 | 1239.85 |
| 3 | Sundries | LS | 2.99 | 34.00 | 101.66 |
| Total hire charges of Machinery | | | | Rs: | 4635.04 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Crew for Core drilling machine | Hour | 4.78 | 365.00 | 1743.24 |
| 2 | Crew for Pump | Hour | 9.55 | 143.50 | 1370.71 |
| 3 | mazdoor | Day | 1.19 | 490.00 | 585.06 |
| Total cost of Labour | | | | Rs: | 3699.01 |

labour component/unit qty 1233.00

Add contractor's profit and overhead charges 13.615% 167.90

labour component/unit qty (including contractor's profit) **1400.90****ABSTRACT:**

| | | |
|---|---------------|---------------------|
| A. Cost of Materials | Rs: | 5750.27 |
| B. Hire charges of Machinery | Rs: | 4635.04 |
| C. Cost of Labour | Rs: | 3699.01 |
| | Total | Rs: 14084.32 |
| D. Add for contractor's profit and overheads on | 13.615% Rs: | 1917.580681 |
| Total cost for | 3.00 Rm | Rs: 16001.90 |
| Rate per Rm | (A+B+C+D)/3.0 | Rs. 5334.00 |

- NOTE: 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the basic rate per Rm by 25 percent.
 2. For drilling in all types of rocks (other than hard rock) including masonry/CC m from surface increase the basic beyond 60 m upto 90 rate per Rm by 40 percent.

IRR-PMW-2-6

Drilling 47 mm (BX)dia core hole in hard rock using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, collection of core samples, logging, labelling, supplying honne wood core box and redrilling in case of collapse of sides etc., complete for depth upto 30 m from surface.

Data:

RATE ANALYSISUNIT : **3.00 Rm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of diamond core bit | Rm | 3.00 | 726.33 | 2179.00 |
| 2 | Use rate of reamer shell | Rm | 3.00 | 87.33 | 262.00 |
| 3 | Use rate of double tube core barrel | Rm | 3.00 | 232.42 | 697.25 |
| 4 | Use rate of extension rod set 16.5 m | Rm | 3.00 | 21.78 | 65.34 |
| 5 | Use rate of honne core box | Rm | 3.00 | 474.38 | 1423.13 |
| Total cost of Materials | | | | Rs: | 4626.72 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Core drilling machine | Hour | 8.00 | 281.90 | 2255.20 |
| | Fuel / Energy charges | Hour | 8.00 | 389.50 | 3116.00 |
| 2 | 5 hp pump (diesel) 2 Nos. | Hour | 16.00 | 9.10 | 145.60 |
| | Fuel / Energy charges | Hour | 16.00 | 129.80 | 2076.80 |
| 3 | Sundries | LS | 5.00 | 34.00 | 170.00 |
| Total hire charges of Machinery | | | | Rs: | 7763.60 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Crew for Core drilling machine | Hour | 8.00 | 365.00 | 2920.00 |
| 2 | Crew for Pump | Hour | 16.00 | 143.50 | 2296.00 |
| 3 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 6196.00 |

| | |
|---|----------------|
| labour component/unit qty | 2065.30 |
| Add contractor's profit and overhead charges | 13.615% 281.20 |
| labour component/unit qty (including contractor's profit) | 2346.50 |

ABSTRACT:

| | | |
|------------------------------|-----|-----------------|
| A. Cost of Materials | Rs: | 4626.72 |
| B. Hire charges of Machinery | Rs: | 7763.60 |
| C. Cost of Labour | Rs: | 6196.00 |
| Total | Rs: | 18586.32 |

| | | |
|---|---------------|---------------------|
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 2530.526787 |
| Total cost for | 3.00 Rm | Rs: 21116.84 |
| Rate per Rm | (A+B+C+D)/3.0 | Rs: 7038.90 |

- NOTE: 1. For drilling in hard rock beyond 30 m upto 60 m from surface increase the basic rate for drilling upto 30 m from surface by 25 percent per Rm.
 2. For drilling in hard rock beyond 60 m upto 90 m from surface increase the basic rate for drilling upto 30 m from surface by 40 percent per Rm.

IRR-PMW-2-6-A

New Item 2015-16-7 **Drilling 47 mm (BX) dia core hole in all types of rocks (other than Hard Rock) including Masonry/CC (where drilling is not possible by casing shoe) using diamond core bit vertical / inclined upto 10 degree to vertical as directed including cost of all materials, machinery, labour, water charges, and redrilling in case of collapse of sides etc., complete for depth upto 30 m**

Data:

RATE ANALYSISUNIT : **3.00 Rm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--------------------------------------|------|----------|-------------|----------------|
| 1 | Use rate of diamond core bit | Rm | 3.00 | 1030.75 | 3092.24 |
| 2 | Use rate of reamer shell | Rm | 3.00 | 52.40 | 157.20 |
| 4 | Use rate of extension rod set 16.5 m | Rm | 3.00 | 13.07 | 39.20 |
| Total cost of Materials | | | | Rs: | 3288.65 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Core drilling machine | Hour | 4.78 | 281.90 | 1346.35 |
| | Fuel / Energy charges | Hour | 4.78 | 389.50 | 1860.25 |
| 2 | 5 hp pump (diesel) 2 Nos. | Hour | 9.55 | 9.10 | 86.92 |
| | Fuel / Energy charges | Hour | 9.55 | 129.80 | 1239.85 |
| 3 | Sundries | LS | 2.99 | 34.00 | 101.66 |
| Total hire charges of Machinery | | | | Rs: | 4635.04 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|--------------------------------|------|----------|-------------|----------------|
| 1 | Crew for Core drilling machine | Hour | 4.78 | 365.00 | 1743.24 |
| 2 | Crew for Pump | Hour | 9.55 | 143.50 | 1370.43 |
| 3 | mazdoor | Day | 1.19 | 490.00 | 583.10 |
| Total cost of Labour | | | | Rs: | 3696.77 |

| | |
|---|----------------|
| labour component/unit qty | 1232.30 |
| Add contractor's profit and overhead charges | 13.615% 167.80 |
| labour component/unit qty (including contractor's profit) | 1400.10 |

ABSTRACT:

| | | |
|------------------------------|-----|-----------------|
| A. Cost of Materials | Rs: | 3288.65 |
| B. Hire charges of Machinery | Rs: | 4635.04 |
| C. Cost of Labour | Rs: | 3696.77 |
| Total | Rs: | 11620.45 |

| | | |
|---|---------------|---------------------|
| D. Add for contractor's profit and overheads on | 13.615% Rs: | 1582.124321 |
| Total cost for | 3.00 Rm | Rs: 13202.57 |
| Rate per Rm | (A+B+C+D)/3.0 | Rs: 4400.90 |

- NOTE: 1. For drilling in all types of rocks (other than hard rock) including masonry/CC beyond 30 m upto 60 m from surface increase the basic rate per Rm by 25 percent.
 2. For drilling in all types of rocks (other than hard rock) including masonry/CC m from surface increase the basic beyond 60 m upto 90 rate per Rm by 40 percent.

IRR-PMW-2-7

Providing and fixing **20 x 20 x 75 cm size roughly dressed boundary / demarcation / chainage / arrow stones** including cost of all materials, labour, engraving marks, fixing in position, murum filling etc., complete with **lead upto 50 m and all lifts**.

Data:

RATE ANALYSISUNIT : **18 Nos.****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------|------|----------|-------------|---------------|
| 1 | Rough stone 20x20x75 cm | Each | 18.00 | 27.00 | 486.00 |
| 2 | Murum | cum | 1.00 | 215.00 | 215.00 |
| Total cost of Materials | | | | Rs: | 701.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Stone chiseller Cl- I | Day | 1.00 | 580.00 | 580.00 |
| 3 | mazdoor | Day | 3.00 | 490.00 | 1470.00 |
| Total cost of Labour | | | | Rs: | 2690.00 |

labour component/unit qty 149.40
 Add contractor's profit and overhead charges 13.615% 20.30
 labour component/unit qty (including contractor's profit) **169.70**

ABSTRACT:

| | | |
|---|-------------|----------------|
| A. Cost of Materials | Rs: | 701.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2690.00 |
| Total | Rs: | 3391.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 461.68465 |
| Total cost for 18.00 Nos. | Rs: | 3852.68 |
| Rate per each (A+B+C+D)/18.0 | Rs. | 214.00 |

IRR-PMW-2-8 Providing and fixing **20 x 20 x 75 cm size temporary bench mark stone in CC 1 : 4 : 8** using **40 mm down size** graded coarse aggregate including cost of all materials, labour, dressing top surface, engraving BM data etc., complete **with lead upto 50 m and all lifts.**

Data:

RATE ANALYSIS

UNIT : 10 Nos.

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------------------------|------|----------|-------------|----------------|
| 1 | Rough stone 20x20x75 cm | Each | 10.00 | 27.00 | 270.00 |
| 2 | Cement for CC & top finishing | kg | 91.00 | 3.68 | 334.88 |
| 3 | Coarse aggregate 40-20 mm | cum | 0.25 | 1265.00 | 316.25 |
| | Coarse aggregate 20-10 mm | cum | 0.15 | 1313.00 | 196.95 |
| | Coarse aggregate 10-4.75 mm | cum | 0.10 | 967.00 | 96.70 |
| 4 | Sand (Un-Screened) | cum | 0.25 | 605.00 | 151.25 |
| Total cost of Materials | | | | Rs: | 1366.03 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Stone chiseller Cl- I | Day | 3.00 | 580.00 | 1740.00 |
| 3 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 4340.00 |

labour component/unit qty 434.00
 Add contractor's profit and overhead charges 13.615% 59.10
 labour component/unit qty (including contractor's profit) **493.10**

ABSTRACT:

| | | |
|---|-------------|----------------|
| A. Cost of Materials | Rs: | 1366.03 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 4340.00 |
| Total | Rs: | 5706.03 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 776.8759845 |
| Total cost for 10.00 Nos. | Rs: | 6482.91 |
| Rate per each (A+B+C+D)/10.0 | Rs. | 648.30 |

NOTE: For providing 30 cm thick compacted murum bed in B.C soil area including additional excavation for thickness of murum bedding add per Each Rs: 4.00

IRR-PMW-2-9 Providing and fixing **20 x 20 x 75 cm size permanent bench mark stone in CC 1 : 3 : 6** block of size 90 x 90 x 120 cm using **40 mm down size** graded coarse aggregate and providing 35 cm thick 30 cm high UCR masonry in CM 1 : 5 proportion protective wall around the BM stone, including cost of all materials, labour, dressing top surface of stone, engraving BM data on top surface, excavation, finishing, curing etc., complete **with lead upto 50 m and all lifts.**

Data:

RATE ANALYSIS

UNIT : 1 No.

A. MATERIALS:

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-----------------------------|------|----------|-------------|----------------|
| 1 | Rough stone 20x20x75 cm | Each | 1.00 | 27.00 | 27.00 |
| 2 | Cement | kg | 262.00 | 3.68 | 964.16 |
| 3 | Coarse aggregate 40-20 mm | cum | 0.50 | 1265.00 | 632.50 |
| | Coarse aggregate 20-10 mm | cum | 0.30 | 1313.00 | 393.90 |
| | Coarse aggregate 10-4.75 mm | cum | 0.20 | 967.00 | 193.40 |
| 4 | Rubble stone at quarry | cum | 0.25 | 359.00 | 89.75 |
| 5 | Stone chips at quarry | cum | 0.04 | 385.00 | 15.40 |
| 6 | Sand (Un-Screened) | cum | 0.60 | 605.00 | 363.00 |
| Total cost of Materials | | | | Rs: | 2679.11 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Stone chiseller Cl- I | Day | 0.50 | 580.00 | 290.00 |
| 3 | Mason Cl- II | Day | 1.00 | 525.00 | 525.00 |
| 4 | mazdoor | Day | 5.00 | 490.00 | 2450.00 |
| Total cost of Labour | | | | Rs: | 3905.00 |

labour component/unit qty 3905.00
 Add contractor's profit and overhead charges 13.615% 531.70
 labour component/unit qty (including contractor's profit) **4436.70**

ABSTRACT:

| | | |
|---|-------------------|----------------|
| A. Cost of Materials | Rs: | 2679.11 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 3905.00 |
| Total | Rs: | 6584.11 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 896.4265765 |
| Total cost for | 1.00 No. Rs: | 7480.54 |
| Rate per each | (A+B+C+D)/1.0 Rs. | 7480.50 |

IRR-PMW-3

MAINTENANCE WORKS :

IRR-PMW-3-1

Removing dry stone rock-toe / rivetment and filter layers below rock-toe/ rivetment
 including stacking all materials separately as directed with initial lead upto 50 m and all lifts.

Data:

RATE ANALYSISUNIT : **105 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Cl- II | Day | 6.00 | 525.00 | 3150.00 |
| 3 | mazdoor | Day | 48.00 | 490.00 | 23520.00 |
| Total cost of Labour | | | | Rs: | 27310.00 |

labour component/unit qty 260.10
 Add contractor's profit and overhead charges 13.615% 35.40
 labour component/unit qty (including contractor's profit) **295.50**

ABSTRACT:

| | | |
|---|---------------------|-----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 27310.00 |
| Total | Rs: | 27310.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 3718.2565 |
| Total cost for | 105.00 cum Rs: | 31028.26 |
| Rate per cum | (A+B+C+D)/105.0 Rs. | 295.50 |

IRR-PMW-3-2

Re-constructing 60 cm thick hand packed rough stone revetment with through
 stones at 1.5 m c / c over a backing of 45 cm thick graded filter media consisting of sand, 10 mm and 40 mm size graded aggregates satisfying filter criteria laid in layers of 15 cm thick each using sand from approved quarry and stones and filter aggregates obtained from revetment removed for re-construction including cost of all machinery, labour, laying filter and stones to specified slopes, wedging with chips, finishing etc. complete with initial lead upto 50 m and all lifts.

Data:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------------------------|------|----------|-------------|----------------|
| 1 | Sand (Un-Screened) (from quarry) | cum | 15.30 | 605.00 | 9256.50 |
| 2 | Coarse aggregate 10 mm (available) | cum | 15.30 | 0.00 | 0.00 |
| 3 | Coarse aggr. 40-20 mm (available) | cum | 15.30 | 0.00 | 0.00 |
| 4 | Stone chips (available) | cum | 9.00 | 0.00 | 0.00 |
| 5 | Rough stones (available) | cum | 57.60 | 0.00 | 0.00 |
| 6 | Through stones (available) | Nos | 44.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 9256.50 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Cl- II | Day | 5.00 | 525.00 | 2625.00 |
| 3 | mazdoor | Day | 33.00 | 490.00 | 16170.00 |
| Total cost of Labour | | | | Rs: | 19435.00 |

labour component/unit qty 194.40

Add contractor's profit and overhead charges 13.615% 26.50

labour component/unit qty (including contractor's profit) **220.90****ABSTRACT:**

A. Cost of Materials Rs: 9256.50

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 19435.00

Total Rs: **28691.50**

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 3906.347725

Total cost for 100.00 sqm Rs: **32597.85****Rate per sqm** (A+B+C+D)/100.0 Rs. **326.00**

IRR-PMW-3-3

Re-constructing dry rubble rock-toe and filter media for rock-toe consisting of sand 20 mm and 80 mm size graded aggregates satisfying filter criteria laid in layers of 15 cm thick each using sand from approved quarry and stones and filter aggregates obtained from rock-toe removed for re-construction including cost of all machinery, labour, laying filter and stones to specified slopes, wedging with chips, finishing etc. complete with initial lead upto **50 m and all lifts.**

Data:

RATE ANALYSISUNIT : **100 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|----------------|
| 1 | Rubble (available) | cum | 58.20 | 0.00 | 0.00 |
| 2 | Stone chips (available) | cum | 8.70 | 0.00 | 0.00 |
| 3 | 80-20 mm filter (available) | cum | 19.40 | 0.00 | 0.00 |
| 4 | 20 mm down filter (available) | cum | 12.10 | 0.00 | 0.00 |
| 5 | Sand (Un-Screened) (fresh from quarry) | cum | 9.80 | 605.00 | 5929.00 |
| Total cost of Materials | | | | Rs: | 5929.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Cl- II | Day | 7.00 | 525.00 | 3675.00 |
| 3 | mazdoor | Day | 48.00 | 490.00 | 23520.00 |
| Total cost of Labour | | | | Rs: | 27835.00 |

labour component/unit qty 278.40

Add contractor's profit and overhead charges 13.615% 37.90

labour component/unit qty (including contractor's profit) **316.30****ABSTRACT:**

A. Cost of Materials Rs: 5929.00

B. Hire charges of Machinery Rs: 0.00

C. Cost of Labour Rs: 27835.00

Total Rs: **33764.00**

D. Add for contractor's profit and overheads on (A+B+C) 13.615% Rs: 4596.9686

Total cost for 100.00 cum Rs: **38360.97****Rate per cum** (A+B+C+D)/100.0 Rs. **383.60**

IRR-PMW-3-4

Removing and resetting disturbed Yarguntla / Shahabad / Talikot / PCC / Other types of slab lining set in CM 1 : 3 including flush cement mortar pointing in CM 1 : 3 with lead upto **50 m and all lifts.**

Data:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------|------|----------|-------------|---------------|
| 1 | Cement 43 Gr | kg | 101.00 | 3.68 | 371.68 |
| 2 | Sand (Screened) | cum | 0.21 | 700.00 | 147.00 |
| Total cost of Materials | | | | Rs: | 518.68 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|--|------|----------|--------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class I | Day | 4.00 | 585.00 | 2340.00 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| 4 | Cartman with Double Bullock cart for water | Day | 1.00 | 585.00 | 585.00 |
| Total cost of Labour | | | | Rs: | 6505.00 |
| labour component/unit qty | | | | 65.10 | |
| Add contractor's profit and overhead charges | | | | 13.615% 8.90 | |
| labour component/unit qty (including contractor's profit) | | | | 74.00 | |

ABSTRACT:

| | | |
|---|---------------------|----------------|
| A. Cost of Materials | Rs: | 518.68 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 6505.00 |
| Total | Rs: | 7023.68 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 956.274032 |
| Total cost for | 100.00 sqm Rs: | 7979.95 |
| Rate per sqm | (A+B+C+D)/100.0 Rs. | 79.80 |

IRR-PMW-3-5 **Removing and resetting disturbed dry rubble / khandki stone pitching 25 to 45 cm**
thick including packing, wedging, finishing etc., complete with all leads and lifts.

Data:

RATE ANALYSISUNIT : **100 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|----------------|------|----------|--------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | Mason Class II | Day | 6.00 | 525.00 | 3150.00 |
| 3 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 6730.00 |
| labour component/unit qty | | | | 67.30 | |
| Add contractor's profit and overhead charges | | | | 13.615% 9.20 | |
| labour component/unit qty (including contractor's profit) | | | | 76.50 | |

ABSTRACT:

| | | |
|---|---------------------|----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 6730.00 |
| Total | Rs: | 6730.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 916.2895 |
| Total cost for | 100.00 sqm Rs: | 7646.29 |
| Rate per sqm | (A+B+C+D)/100.0 Rs. | 76.50 |

IRR-PMW-3-6 **Removing and refixing disturbed chainage / demarcation / hectometre / guard stones**
including excavation, back filling etc., complete with all leads and lifts.

DATA:

RATE ANALYSISUNIT : **18 Nos.****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|----------------|------|----------|---------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 1620.00 |
| labour component/unit qty | | | | 90.00 | |
| Add contractor's profit and overhead charges | | | | 13.615% 12.25 | |
| labour component/unit qty (including contractor's profit) | | | | 102.30 | |

ABSTRACT:

| | | | |
|---|-----------------------|------------|---------------|
| A. Cost of Materials | | Rs: | 0.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 1620.00 |
| | Total | Rs: | 1620.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | | 220.563 |
| Total cost for | 18.00 Nos. | Rs: | 1840.56 |
| Rate per each | (A+B+C+D)/18.0 | Rs. | 102.30 |

IRR-PMW-3-7 **Removing and refixing disturbed km stone / sign board / hecto-metre stone etc.,** including excavation, back filling with available stuff after refixing, forming base platform of size 90 x 90 x 7.5 cm including watering, ramming etc complete **with all leads and lifts.**

DATA:

RATE ANALYSISUNIT : **8 Nos.****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|---------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 1620.00 |

labour component/unit qty 202.50

Add contractor's profit and overhead charges 13.615% 27.57

labour component/unit qty (including contractor's profit) **230.10****ABSTRACT:**

| | | | |
|---|-----------------------|------------|---------------|
| A. Cost of Materials | | Rs: | 0.00 |
| B. Hire charges of Machinery | | Rs: | 0.00 |
| C. Cost of Labour | | Rs: | 1620.00 |
| | Total | Rs: | 1620.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | | 220.563 |
| Total cost for | 8.00 Nos. | Rs: | 1840.56 |
| Rate per each | (A+B+C+D)/18.0 | Rs. | 230.10 |

IRR-PMW-3-8 **Providing impervious hearting for breached / damaged portion of embankment** with soil from **approved borrow areas in layers of 10 to 15 cm** before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of **not less than 98 percent** or as stipulated **by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.**

Data:

RATE ANALYSISUNIT : **480 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|---------------|
| 1 | Angle dozer | Hour | 5.00 | 1531.00 | 7655.00 |
| | Fuel / Energy charges | Hour | 5.00 | 999.10 | 4995.50 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tipppers 5.00 cum capacity 4 Nos. | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Pump 5 hp (diesel) | Hour | 2.00 | 9.10 | 18.20 |
| | Fuel / Energy charges | Hour | 2.00 | 129.80 | 259.60 |
| 5 | Water tanker 8000 ltr | Hour | 4.00 | 380.50 | 1522.00 |
| | Fuel / Energy charges | Hour | 4.00 | 490.80 | 1963.20 |
| 6 | Vibratory pad foot roller 8 tonne | Hour | 6.00 | 1237.90 | 7427.40 |
| | Fuel / Energy charges | Hour | 6.00 | 1687.90 | 10127.40 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 76256.30 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 4.00 | 304.20 | 1216.80 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 5 | Crew for Water tanker | Hour | 5.00 | 225.20 | 1126.00 |
| 6 | Crew for Roller | Hour | 6.00 | 343.20 | 2059.20 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 17808.50 |

labour component/unit qty 37.10
 Add contractor's profit and overhead charges 13.615% 5.10
 labour component/unit qty (including contractor's profit) **42.20**

ABSTRACT:

| | | |
|---|---------------------|------------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 76256.30 |
| C. Cost of Labour | Rs: | 17808.50 |
| Total | Rs: | 94064.80 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 12806.92252 |
| Total cost for | 480.00 cum Rs: | 106871.72 |
| Rate per cum | (A+B+C+D)/480.0 Rs. | 222.60 |

IRR-PMW-3-9

Providing pervious/semi-pervious casing for breached / damaged portion of embankment with soil from **approved borrow areas** in layers of **10 to 15 cm** before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete **with initial lead upto 1 km and all lifts.**

Data:

RATE ANALYSISUNIT : **325 cum****A. MATERIALS:**

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.50 | 1531.00 | 5358.50 |
| | Fuel / Energy charges | Hour | 3.50 | 999.10 | 3496.85 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tipplers 5.00 cum capacity 3 Nos. | Hour | 24.00 | 404.90 | 9717.60 |
| | Fuel / Energy charges | Hour | 24.00 | 490.80 | 11779.20 |
| 4 | Pump 5 hp (diesel) | Hour | 1.50 | 9.10 | 13.65 |
| | Fuel / Energy charges | Hour | 1.50 | 129.80 | 194.70 |
| 5 | Water tanker 8000 ltr | Hour | 3.00 | 380.50 | 1141.50 |
| | Fuel / Energy charges | Hour | 3.00 | 490.80 | 1472.40 |
| 6 | Vibratory pad foot roller 8 tonne | Hour | 4.00 | 1237.90 | 4951.60 |
| | Fuel / Energy charges | Hour | 4.00 | 1687.90 | 6751.60 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 58503.20 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 3.50 | 304.20 | 1064.70 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 24.00 | 228.20 | 5476.80 |
| 4 | Crew for Pump | Hour | 1.50 | 143.50 | 215.25 |
| 5 | Crew for Water tanker | Hour | 3.00 | 225.20 | 675.60 |
| 6 | Crew for Roller | Hour | 4.00 | 343.20 | 1372.80 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 14478.75 |

labour component/unit qty 44.60
 Add contractor's profit and overhead charges 13.615% 6.10
 labour component/unit qty (including contractor's profit) **50.70**

ABSTRACT:

| | | |
|---|---------------------|-----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 58503.20 |
| C. Cost of Labour | Rs: | 14478.75 |
| Total | Rs: | 72981.95 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 9936.492493 |
| Total cost for | 325.00 cum Rs: | 82918.44 |
| Rate per cum | (A+B+C+D)/325.0 Rs. | 255.10 |

IRR-PMW-3-10 **Providing impervious hearting for breached / damaged portion of embankment with soil from approved dump areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.**

Data:

RATE ANALYSISUNIT : **612 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer | Hour | 4.00 | 1531.00 | 6124.00 |
| | Fuel / Energy charges | Hour | 4.00 | 999.10 | 3996.40 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tipppers 5.00 cum capacity 5 Nos. | Hour | 40.00 | 404.90 | 16196.00 |
| | Fuel / Energy charges | Hour | 40.00 | 490.80 | 19632.00 |
| 4 | Pump 5 hp (diesel) | Hour | 4.00 | 9.10 | 36.40 |
| | Fuel / Energy charges | Hour | 4.00 | 129.80 | 519.20 |
| 5 | Water tanker 8000 ltr | Hour | 7.00 | 380.50 | 2663.50 |
| | Fuel / Energy charges | Hour | 7.00 | 490.80 | 3435.60 |
| 6 | Vibratory pad foot roller 8 tonne | Hour | 7.50 | 1237.90 | 9284.25 |
| | Fuel / Energy charges | Hour | 7.50 | 1687.90 | 12659.25 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 88172.20 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 4.00 | 304.20 | 1216.80 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 40.00 | 228.20 | 9128.00 |
| 4 | Crew for Pump | Hour | 4.00 | 143.50 | 574.00 |
| 5 | Crew for Water tanker | Hour | 7.00 | 225.20 | 1576.40 |
| 6 | Crew for Roller | Hour | 7.50 | 343.20 | 2574.00 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 21722.80 |

labour component/unit qty 35.50
 Add contractor's profit and overhead charges 13.615% 4.80
 labour component/unit qty (including contractor's profit) **40.30**

ABSTRACT:

| | | |
|---|---------------------|------------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 88172.20 |
| C. Cost of Labour | Rs: | 21722.80 |
| Total | Rs: | 109895.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 14962.20425 |
| Total cost for 612.00 cum | Rs: | 124857.20 |
| Rate per cum | (A+B+C+D)/612.0 Rs: | 204.00 |

IRR-PMW-3-11 **Providing pervious /semi-pervious casing for breached /damaged portion of embankment with soil from approved dump areas in layers of 10 to 15 cm before compaction including cost of all materials, machinery, labour, all operations such as collection of soil, sorting out, spreading soil to specified thickness, breaking clods, sectioning, watering, compacting each layer to density control of not less than 98 percent or as stipulated by rolling or by using mechanical tampers etc., complete with initial lead upto 1 km and all lifts.**

Data:

RATE ANALYSISUNIT : **440 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 3.00 | 1531.00 | 4593.00 |
| | Fuel / Energy charges | Hour | 3.00 | 999.10 | 2997.30 |
| 2 | Shovel 0.50 cum capacity | Hour | 8.00 | 915.70 | 7325.60 |
| | Fuel / Energy charges | Hour | 8.00 | 779.00 | 6232.00 |
| 3 | Tipplers 5.00 cum capacity 4 Nos. | Hour | 32.00 | 404.90 | 12956.80 |
| | Fuel / Energy charges | Hour | 32.00 | 490.80 | 15705.60 |
| 4 | Pump 5 hp (diesel) | Hour | 3.00 | 9.10 | 27.30 |
| | Fuel / Energy charges | Hour | 3.00 | 129.80 | 389.40 |
| 5 | Water tanker 8000 ltr | Hour | 6.00 | 380.50 | 2283.00 |
| | Fuel / Energy charges | Hour | 6.00 | 490.80 | 2944.80 |
| 6 | Vibratory pad foot roller 8 tonne | Hour | 5.50 | 1237.90 | 6808.45 |
| | Fuel / Energy charges | Hour | 5.50 | 1687.90 | 9283.45 |
| 7 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 71614.70 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 3.00 | 304.20 | 912.60 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 32.00 | 228.20 | 7302.40 |
| 4 | Crew for Pump | Hour | 3.00 | 143.50 | 430.50 |
| 5 | Crew for Water tanker | Hour | 6.00 | 225.20 | 1351.20 |
| 6 | Crew for Roller | Hour | 5.50 | 343.20 | 1887.60 |
| 7 | work inspector | Day | 2.00 | 640.00 | 1280.00 |
| 8 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 18537.90 |

labour component/unit qty 42.10

Add contractor's profit and overhead charges 13.615% 5.70

labour component/unit qty (including contractor's profit) **47.80****ABSTRACT:**

| | | |
|------------------------------|-----|-----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 71614.70 |
| C. Cost of Labour | Rs: | 18537.90 |
| Total | Rs: | 90152.60 |

D. Add for contractor's profit and overheads on

(A+B+C) 13.615% Rs: 12274.27649

Total cost for 440.00 cum Rs: **102426.88****Rate per cum** (A+B+C+D)/440.0 Rs: **232.80**

IRR-PMW-3-12 **Repairing rain cuts / resectioning canal slopes to required lines and grades as directed**
 using available soil including dressing, clod breaking, packing, tamping etc., **complete with**
all leads and lifts.

DATA:

RATE ANALYSISUNIT : **1000 sqm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 2 | mazdoor | Day | 8.00 | 490.00 | 3920.00 |
| Total cost of Labour | | | | Rs: | 4560.00 |

labour component/unit qty 4.56

Add contractor's profit and overhead charges 13.615% 0.62

labour component/unit qty (including contractor's profit) **5.20****ABSTRACT:**

| | | |
|------------------------------|-----|----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 4560.00 |
| Total | Rs: | 4560.00 |

D. Add for contractor's profit and overheads on

(A+B+C) 13.615% Rs: 620.844

Total cost for 1000.00 sqm Rs: **5180.84****Rate per sqm** (A+B+C+D)/1000.0 Rs: **5.20**

IRR-PMW-3-13 **Cleaning drainage gallery, adits, instrumentation galleries etc., by scrubbing / brushing**
 including chiselling and removing leached lime deposit and disposing off all the waste material
 out side adits in specified location etc., **complete with all leads and lifts.**

DATA:

RATE ANALYSISUNIT : **100 Rm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------|------|----------|-------------|---------------|
| 1 | Wire brush | Each | 5.00 | 42.00 | 210.00 |
| 2 | Coir brush | Each | 10.00 | 48.00 | 480.00 |
| 3 | Sundries (brooms, gloves etc) | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 758.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-----------------|------|----------|-------------|----------------|
| 1 | Chiseller Cl II | Day | 2.00 | 525.00 | 1050.00 |
| 2 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 3990.00 |

labour component/unit qty 39.90
 Add contractor's profit and overhead charges 13.615% 5.40
 labour component/unit qty (including contractor's profit) **45.30**

ABSTRACT:

| | | |
|---|---------------------|----------------|
| A. Cost of Materials | Rs: | 758.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 3990.00 |
| Total | Rs: | 4748.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 646.4402 |
| Total cost for 100.00 Rm | Rs: | 5394.44 |
| Rate per Rm | (A+B+C+D)/100.0 Rs. | 53.90 |

IRR-PMW-3-14 **Cleaning dam parapet inner face and top using oxalic acid and water by scrubbing / brushing and washing to remove all surface coatings etc., complete .**

DATA:

RATE ANALYSISUNIT : **100 Rm****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|---------------------------------|------|----------|-------------|----------------|
| 1 | Oxalic acid | ltr | 5.00 | 76.00 | 380.00 |
| 2 | Wire brush | Each | 5.00 | 42.00 | 210.00 |
| 3 | Coir brush | Each | 10.00 | 48.00 | 480.00 |
| 4 | Sundries (brooms, gloves etc) | LS | 2.00 | 34.00 | 68.00 |
| Total cost of Materials | | | | Rs: | 1138.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|----------------|
| 1 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 2940.00 |

labour component/unit qty 29.40
 Add contractor's profit and overhead charges 13.615% 4.00
 labour component/unit qty (including contractor's profit) **33.40**

ABSTRACT:

| | | |
|---|---------------------|----------------|
| A. Cost of Materials | Rs: | 1138.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2940.00 |
| Total | Rs: | 4078.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 555.2197 |
| Total cost for 100.00 Rm | Rs: | 4633.22 |
| Rate per Rm | (A+B+C+D)/100.0 Rs. | 46.30 |

IRR-PMW-3-20 **Excavation and removal of silt and silt mixed with sand from canal bed in dry condition including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with initial lead upto 50 m and all lifts.**

DATA:

RATE ANALYSISUNIT : **10 cum****A. MATERIALS:**

| SI No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|----------------|
| 1 | mazdoor | Day | 4.00 | 490.00 | 1960.00 |
| Total cost of Labour | | | | Rs: | 1960.00 |

labour component/unit qty 196.00
 Add contractor's profit and overhead charges 13.615% 26.70
 labour component/unit qty (including contractor's profit) **222.70**

ABSTRACT:

| | | |
|---|--------------------|----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 1960.00 |
| Total | Rs: | 1960.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 266.854 |
| Total cost for | 10.00 cum Rs: | 2226.85 |
| Rate per cum | (A+B+C+D)/10.0 Rs. | 222.70 |

IRR-PMW-3-21 **Excavation and removal of silt or silt mixed with sand in slussy condition from canal bed**
 including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with initial lead upto 50 m and all lifts.

DATA:

RATE ANALYSIS

UNIT : 12 cum

A. MATERIALS:

| Sl No | particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total hire charges of Machinery | | | | Rs: | 0.00 |

C. LABOUR:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|-------------|------|----------|-------------|----------------|
| 1 | mazdoor | Day | 6.00 | 490.00 | 2940.00 |
| Total cost of Labour | | | | Rs: | 2940.00 |

labour component/unit qty 245.00
 Add contractor's profit and overhead charges 13.615% 33.40
 labour component/unit qty (including contractor's profit) **278.40**

ABSTRACT:

| | | |
|---|--------------------|----------------|
| A. Cost of Materials | Rs: | 0.00 |
| B. Hire charges of Machinery | Rs: | 0.00 |
| C. Cost of Labour | Rs: | 2940.00 |
| Total | Rs: | 2940.00 |
| D. Add for contractor's profit and overheads on (A+B+C) | 13.615% Rs: | 400.281 |
| Total cost for | 12.00 cum Rs: | 3340.28 |
| Rate per cum | (A+B+C+D)/12.0 Rs. | 278.40 |

IRR-PMW-3-22 **Providing homogeneous embankment** using soil from approved borrow

New Item5 - 2010-11 **area in layers of 25 to 30 cm** before compaction including cost of all materials, machinery, labour, all operations such as excavation, sorting out, transportation, spreading soil in layer of specified thickness, breaking clods, sectioning, etc., complete with initial lead upto 1 km and all lifts.

RATE ANALYSIS**A. MATERIALS:**

Unit: 807.00 cum

| Sl No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| Sl No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 2.70 | 1531.00 | 4133.70 |
| | Fuel / Energy charges | Hour | 2.70 | 999.10 | 2697.57 |
| 2 | Shovel 0.85 cum capacity | Hour | 8.00 | 1529.70 | 12237.60 |
| | Fuel / Energy charges | Hour | 8.00 | 1428.30 | 11426.40 |
| 3 | Tippers 5.00 cum capacity 5 Nos. | Hour | 40.00 | 404.90 | 16196.00 |
| | Fuel / Energy charges | Hour | 40.00 | 490.80 | 19632.00 |
| Total hire charges of Machinery | | | | Rs: | 66323.27 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------|------|----------|-------------|-----------------|
| 1 | Crew for Dozer | Hour | 2.70 | 304.20 | 821.34 |
| 2 | Crew for Shovel | Hour | 8.00 | 304.20 | 2433.60 |
| 3 | Crew for Tipper | Hour | 40.00 | 228.20 | 9128.00 |
| 4 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 5 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 14002.94 |

labour component/unit qty 17.40

Add contractor's profit and overhead charges 13.615% 2.40

labour component/unit qty (including contractor's profit) **19.80****ABSTRACT:**

| | |
|---|---------------------|
| A. Cost of Materials | Rs: 0.00 |
| B. Hire charges of Machinery | Rs: 66323.27 |
| C. Cost of Labour | Rs: 14002.94 |
| Total | Rs: 80326.21 |
| D. Add for contractor's profit and overheads on (A+B+C) | Rs: 10936.41 |
| Total cost for | Rs: 91262.62 |
| Rate per cum | Rs: 113.10 |

IRR-PMW-3-23

New Item 6 - 2010-11

(For Minor Works)

Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as watering, compacting to density control of **not less than 95 percent** or as stipulated using **8T roller etc., complete with initial lead upto 1 km and all lifts.**

RATE ANALYSIS

| A. MATERIALS: | | UNIT : 807.00 cum | | | |
|-------------------------|-------------|-------------------|----------|-------------|--------------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |

B. MACHINERY:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|---------------------------------|-----------------------------------|------|----------|-------------|-----------------|
| 1 | Angle dozer 90 hp | Hour | 2.70 | 1531.00 | 4133.70 |
| | Fuel / Energy charges | Hour | 2.70 | 999.10 | 2697.57 |
| 2 | Pump 5 hp (ele) | Hour | 4.00 | 2.70 | 10.80 |
| | Fuel / Energy charges | Hour | 4.00 | 42.30 | 169.20 |
| 3 | Water tanker 8000 ltr | Hour | 8.00 | 380.50 | 3044.00 |
| | Fuel / Energy charges | Hour | 8.00 | 490.80 | 3926.40 |
| 4 | Vibratory pad foot roller 8 tonne | Hour | 6.40 | 1237.90 | 7922.56 |
| | Fuel / Energy charges | Hour | 6.40 | 1687.90 | 10802.56 |
| 5 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 32774.79 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|-----------------------|------|----------|-------------|----------------|
| 1 | Crew for Dozer | Hour | 2.70 | 304.20 | 821.34 |
| 4 | Crew for Pump | Hour | 4.00 | 107.60 | 430.40 |
| 5 | Crew for Water tanker | Hour | 8.00 | 225.20 | 1801.60 |
| 6 | Crew for Roller | Hour | 6.40 | 343.20 | 2196.48 |
| 7 | work inspector | Day | 1.00 | 640.00 | 640.00 |
| 8 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 6869.82 |

labour component/unit qty 8.50

Add contractor's profit and overhead charges 13.615% 1.20

labour component/unit qty (including contractor's profit) **9.70****ABSTRACT:**

| | |
|---|---------------------|
| A. Cost of Materials | Rs: 0.00 |
| B. Hire charges of Machinery | Rs: 32774.79 |
| C. Cost of Labour | Rs: 6869.82 |
| Total | Rs: 39644.61 |
| D. Add for contractor's profit and overheads on (A+B+C) | Rs: 5397.61 |
| Total cost for | Rs: 45042.22 |
| Rate per cum | Rs: 55.80 |

IRR-PMW-3-24

New Item 7 - 2010-11

Providing homogeneous embankment using soil from approved borrow area in layers of 25 to 30 cm before compaction including cost of all materials, machinery, labour, all operations such as compacting to density control of **not less than 90 percent** or as stipulated using **2T roller etc., complete with initial lead upto 1 km and all lifts.**

RATE ANALYSIS

| A. MATERIALS: | | UNIT : 807.00 cum | | | |
|---------------------------------|------------------------|-------------------|----------|-------------|----------------|
| SI No | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | NIL | | 0.00 | 0.00 | 0.00 |
| | | | 0.00 | 0.00 | 0.00 |
| Total cost of Materials | | | | Rs: | 0.00 |
| B. MACHINERY: | | | | | |
| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
| 1 | Tractor with 2T Roller | Hour | 10.00 | 345.00 | 3450.00 |
| 2 | Sundries | LS | 2.00 | 34.00 | 68.00 |
| Total hire charges of Machinery | | | | Rs: | 3518.00 |

C. LABOUR:

| SI No | Description | Unit | Quantity | Rate in Rs. | Amount in Rs |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | work inspector | Day | 0.50 | 640.00 | 320.00 |
| 2 | mazdoor | Day | 2.00 | 490.00 | 980.00 |
| Total cost of Labour | | | | Rs: | 1300.00 |

labour component/unit qty 1.60
 Add contractor's profit and overhead charges 13.615% 0.20
 labour component/unit qty (including contractor's profit) **1.80**

ABSTRACT**T:**

| | |
|-----------------------------------|--------------------|
| A. Cost of Materials | Rs: 0.00 |
| B. Hire charges of Machinery | Rs: 3518.00 |
| C. Cost of Labour | Rs: 1300.00 |
| Total | Rs: 4818.00 |
| (A+B+C) | Rs: 655.9707 |
| Total cost for 807.00 cum | Rs: 5473.97 |
| Rate per cum (A+B+C+D)/807 | Rs: 6.80 |

IRR-PMW-3-25
 (New Item 2012-13-3)

Weed Removal by Manual Means

IRR-PMW-3-25(a) **Removal of Water Hyacinth up to 30 cm thick**

RATE ANALYSISUnit : **2000 Sqm****A. MATERIALS**

| Sl. No. | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total Cost of Materials | | | | Rs. | 0.00 |

B. MACHINERY

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total hire charges of Machinery | | | | Rs. | 0.00 |

C. LABOUR

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Work Inspector | Day | 3.5 | 640.00 | 2240 |
| 2 | Mazdoor | Day | 28 | 490.00 | 13720 |
| Total Cost of Labour | | | | Rs. | 15960.00 |

ABSTRACT:

| | | |
|---|---------|-----------------|
| A.COST OF MATERIALS | Rs. | 0.00 |
| B.COST OF MACHINERY | Rs. | 0.00 |
| C.COST OF LABOUR | Rs. | 15960.00 |
| Total | | 15960.00 |
| D. Add for Contractor's Profit and overheads | 13.615% | 2172.954 |
| Total Cost for removal weed in the extent of 2000 Sqm | | 18132.95 |
| Rate per Sqm (A+B+C+D)/2000 | | 9.1 |

IRR-PMW-3-25(b) **Removal of Water Hyacinth beyond 30 cm thick**

RATE ANALYSISUnit : **2000 Sqm****A. MATERIALS**

| Sl. No. | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total Cost of Materials | | | | Rs. | 0.00 |

B. MACHINERY

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total hire charges of Machinery | | | | Rs. | 0.00 |

C. LABOUR

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Work Inspector | Day | 5 | 640.00 | 3200 |
| 2 | Mazdoor | Day | 38 | 490.00 | 18620 |
| Total Cost of Labour | | | | Rs. | 21820.00 |

ABSTRACT:

| | | |
|---|---------|-----------------|
| A.COST OF MATERIALS | Rs. | 0.00 |
| B.COST OF MACHINERY | Rs. | 0.00 |
| C.COST OF LABOUR | Rs. | 21820.00 |
| Total | | 21820.00 |
| D. Add for Contractor's Profit and overheads | 13.615% | 2970.793 |
| Total Cost for removal weed in the extent of 2000 Sqm | | 24790.79 |
| Rate per Sqm (A+B+C+D)/2000 | | 12.4 |

IRR-PMW-3-25(c) **Clearing Alchi Tilla**

RATE ANALYSISUnit : **2000 Sqm****A. MATERIALS**

| Sl. No. | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total Cost of Materials | | | | Rs. | 0.00 |

B. MACHINERY

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total hire charges of Machinery | | | | Rs. | 0.00 |

C. LABOUR

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Work Inspector | Day | 3 | 640.00 | 1920 |
| 2 | Mazdoor | Day | 26 | 490.00 | 12740 |
| Total Cost of Labour | | | | Rs. | 14660.00 |

ABSTRACT:

| | | |
|--|-----------------------|-----------------|
| A.COST OF MATERIALS | Rs. | 0.00 |
| B.COST OF MACHINERY | Rs. | 0.00 |
| C.COST OF LABOUR | Rs. | 14660.00 |
| Total | | 14660.00 |
| D. Add for Contractor's Profit and overheads | 14% | 1995.959 |
| Total Cost for removal weed in the extent of | 2000 Sqm | 16655.96 |
| Rate per Sqm | (A+B+C+D)/2000 | 8.3 |

IRR-PMW-3-25(d) **Removal of Jammu****RATE ANALYSIS**Unit : **2000 Sqm****A. MATERIALS**

| Sl. No. | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total Cost of Materials | | | | Rs. | 0.00 |

B. MACHINERY

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total hire charges of Machinery | | | | Rs. | 0.00 |

C. LABOUR

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Work Inspector | Day | 2.5 | 640.00 | 1600 |
| 2 | Mazdoor | Day | 22 | 490.00 | 10780 |
| Total Cost of Labour | | | | Rs. | 12380.00 |

ABSTRACT:

| | | |
|--|-----------------------|-----------------|
| A.COST OF MATERIALS | Rs. | 0.00 |
| B.COST OF MACHINERY | Rs. | 0.00 |
| C.COST OF LABOUR | Rs. | 12380.00 |
| Total | | 12380.00 |
| D. Add for Contractor's Profit and overheads | 14% | 1685.537 |
| Total Cost for removal weed in the extent of | 2000 Sqm | 14065.54 |
| Rate per Sqm | (A+B+C+D)/2000 | 7 |

IRR-PMW-3-25(e) **Removal of Imponaea, Cornea****RATE ANALYSIS**Unit : **2000 Sqm****A. MATERIALS**

| Sl. No. | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total Cost of Materials | | | | Rs. | 0.00 |

B. MACHINERY

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total hire charges of Machinery | | | | Rs. | 0.00 |

C. LABOUR

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|-----------------|
| 1 | Work Inspector | Day | 3 | 640.00 | 1920 |
| 2 | Mazdoor | Day | 26 | 490.00 | 12740 |
| Total Cost of Labour | | | | Rs. | 14660.00 |

ABSTRACT:

| | | |
|--|-----------------------|-----------------|
| A.COST OF MATERIALS | Rs. | 0.00 |
| B.COST OF MACHINERY | Rs. | 0.00 |
| C.COST OF LABOUR | Rs. | 14660.00 |
| Total | | 14660.00 |
| D. Add for Contractor's Profit and overheads | 14% | 1995.959 |
| Total Cost for removal weed in the extent of | 2000 Sqm | 16655.96 |
| Rate per Sqm | (A+B+C+D)/2000 | 8.3 |

IRR-PMW-3-25(f) **Removal of Natchu, goobi, thooti, etc.****RATE ANALYSIS**Unit : **2000 Sqm**

A. MATERIALS

| Sl. No. | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total Cost of Materials | | | | Rs. | 0.00 |

B. MACHINERY

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---------------------------------|-------------|------|----------|-------------|---------------|
| 1 | NIL | | 0 | 0 | 0 |
| Total hire charges of Machinery | | | | Rs. | 0.00 |

C. LABOUR

| Sl. No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|----------------------|----------------|------|----------|-------------|----------------|
| 1 | Work Inspector | Day | 1.2 | 640.00 | 768 |
| 2 | Mazdoor | Day | 8 | 490.00 | 3920 |
| Total Cost of Labour | | | | Rs. | 4688.00 |

ABSTRACT:

| | | | |
|--|----------------|-----|----------------|
| A.COST OF MATERIALS | | Rs. | 0.00 |
| B.COST OF MACHINERY | | Rs. | 0.00 |
| C.COST OF LABOUR | | Rs. | 4688.00 |
| | Total | | 4688.00 |
| D. Add for Contractor's Profit and overheads | 14% | | 638.2712 |
| Total Cost for removal weed in the extent of | 2000 Sqm | | 5326.27 |
| Rate per Sqm | (A+B+C+D)/2000 | | 2.7 |

IRR-PMW-3-26

New Item 2015-16-8 PAINTING OF SLUICES FOR MAINTENANCE WORKS

Surface cleaning of metal surfaces by chemical cleaners and then by hand and power tool cleaners and removing dust. After cleaning, applying primary coat with **one coat** of Zinc rich epoxy primer to a thickness of 100 microns, followed by finishing coats **2 coats** with Coal tar epoxy with material, labour, and all accessories with all leads and lifts.

Data:

Rate Analysis

Unit:

100 Sqm

A. Materials

| Sl. No. | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|--|------|----------|-------------|----------------|
| 1 | Rust Cleaner/ Inhibitor | ltr | 13 | 129.00 | 1677 |
| 2 | Zinc rich epoxy primer | ltr | 14 | 613.00 | 8582 |
| 3 | Thinner@10% | ltr | 1.4 | 93.00 | 130.2 |
| 4 | Coal Tar epoxy paint | ltr | 40 | 192 | 7680 |
| 5 | Thinner@10% | ltr | 4 | 93.00 | 372 |
| 6 | Wire Brush | ltr | 2 | 42 | 84 |
| 7 | Sundries (brushes, Ladders, platforms) | LS | 3 | 34 | 102 |
| Total Cost of Materials | | | | | 18627.2 |

B. Machinery

| Sl. No. | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|-------------|------|----------|-------------|---------------|
| | NIL | | | | |
| Total Cost of Machinery | | | | | 0 |

C. Labour

| Sl. No. | Particulars | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|-------------------------|------------------|------|----------|-------------|---------------|
| 1 | Painter Class-II | Day | 20 | 525.00 | 10500 |
| 2 | Helper | Day | 20 | 490.00 | 9800 |
| Total Cost of Machinery | | | | | 20300 |

Labour Component/ Unit Qty. 203

Add Contractor's Profit and and Overhead Charges @ 13.615% 27.63845

Labour Component/ Unit Qty (including contractor' profit) **230.63845****ABSTRACT:****A. Cost of Materials:** 18627.2**B. Hire Charges of Machinery** 0**C. Cost of Labour** 20300Total **38927.2**

D. Add for Excise Duty on 75% cost excluding cost of materials) 0% 0

Total **38927.2**

E. Add for transportation Charges upto worksite @ 3% 1167.816

Total **40095.016**

F. Add for Contractor's Profit and Overhead Charges @13.615% 13.615% 5458.94

Total Cost per 100 Sqm 45553.95

Rate per Sqm **455.5**

IRR-PMW-3-27
New Item2018-19**A. Lifting of water from rivers/drains to agricultural fields and where there is no element of excavation-
Water lifting charges using Electrical driven pump**

Rate Analysis

| MACHINERY: | | | | | | | | | | |
|------------|---------------------------------------|----------|----------|-------------------|----------|--------|------------|--------|-----------|--|
| | | | | Hp_hr calculation | | | | | | |
| | | | | 5 hP | | 10 HP | | 20 HP | | |
| SI No | Description | Unit | Quantity | Rate | Amount | Rate | Amount | Rate | Amount | |
| | | | | in Rs. | in Rs. | in Rs. | in Rs. | in Rs. | in Rs. | |
| 1 | Electric pump | Hour | 1 | 2.70 | 2.7 | 5.90 | 5.9 | 11.20 | 11.2 | |
| 2 | Fuel / Energy charges | Hour | 1 | 42.30 | 42.3 | 84.60 | 84.6 | 169.20 | 169.2 | |
| 3 | Total hire charges of Machinery | per hour | | | 45 | | 90.5 | | 180.4 | |
| 4 | Add Contractor's Profit and Overheads | | @ | 0.13615 | 6.12675 | | 12.321575 | | 24.56146 | |
| 5 | Total hire charges of Machinery | | | per hour | 51.12675 | | 102.821575 | | 204.96146 | |
| 6 | Total hire charges of Machinery | | | per hphr | 10.22535 | | 10.2821575 | | 10.248073 | |
| 7 | Average of three | | | per hphr | 10.25 | | | | | |

Other pumping arrangements including pipes, labour, pump operator etc.,

| A. MATERIALS: | | | | | |
|---------------|--|------|----------|--------|-------------|
| SI No | Particulars | Unit | Quantity | Rate | Amount |
| | | | | in Rs. | in Rs. |
| 1 | Use rate of G.I.pipe 100 mm dia | Hour | 1 | 7.35 | 7.347375 |
| 2 | Sundries(Starter/Switches etc) | LS | 0.2 | 34.00 | 6.8 |
| | Total cost of Materials | | | Rs: | 14.147375 |
| B. LABOUR: | | | | | |
| SI No | Description | Unit | Quantity | Rate | Amount |
| | | | | in Rs. | in Rs. |
| 1 | Crew charges for Pump | Hour | 1 | 107.60 | 107.6 |
| 2 | Laying & dismantling pipe | LS | 0.05 | 34.00 | 1.7 |
| 3 | mazdoor | Day | 0.1 | 490 | 49 |
| | Total cost of Labour | | | Rs: | 158.3 |
| | Total cost for Materials and Labour | | per hour | | 172.447375 |
| | Add Contractor's Profit and and Overhead Charges @ | | 13.62% | | 23.47871011 |
| | Total cost of Materials and Labour | | per hour | | 195.93 |

**B. Lifting of water from rivers/drains to agricultural fields and where there is no element of excavation-
Water lifting charges using Diesel driven pump**

Rate Analysis

| MACHINERY: | | | | | | | | | |
|-------------------|---------------------------------------|------|----------|----------|------------|--------|-----------|--------|----------|
| Hp_hr calculation | | | | | | | | | |
| | | | | 5 HP | | 10 HP | | 20 HP | |
| SI No | Description | Unit | Quantity | Rate | Amount | Rate | Amount | Rate | Amount |
| | | | | in Rs. | in Rs. | in Rs. | in Rs. | in Rs. | in Rs. |
| 1 | Diesel Pump | Hour | 1 | 9.10 | 9.1 | 13.70 | 13.7 | 43.50 | 43.5 |
| 2 | Fuel / Energy charges | Hour | 1 | 129.80 | 129.8 | 259.70 | 259.7 | 519.40 | 519.4 |
| 3 | Total hire charges of Machinery | | | per hour | 138.9 | | 273.4 | | 562.9 |
| 4 | Add Contractor's Profit and Overheads | | @ | 0.13615 | 18.911235 | | 37.22341 | | 76.63884 |
| 5 | Total hire charges of Machinery | | | per hour | 157.811235 | | 310.62341 | | 639.5388 |
| 6 | Total hire charges of Machinery | | | per hphr | 31.562247 | | 31.062341 | | 31.97694 |
| 7 | Average of the above three | | | per hphr | 31.53 | | | | |

Other pumping arrangements including pipes, labour, pump operator etc.,

| A. MATERIALS: | | | | | |
|---------------|--|------|----------|--------|-------------|
| SI No | Particulars | Unit | Quantity | Rate | Amount |
| | | | | in Rs. | in Rs. |
| 1 | Use rate of G.I.pipe 100 mm dia | Hour | 1 | 7.35 | 7.347375 |
| 2 | Sundries(miscellaneous expenses) | LS | 0.2 | 34.00 | 6.8 |
| | Total cost of Materials | | | Rs: | 14.147375 |
| B. LABOUR: | | | | | |
| SI No | Description | Unit | Quantity | Rate | Amount |
| | | | | in Rs. | in Rs. |
| 1 | Crew charges for Pump | Hour | 1 | 143.50 | 143.5 |
| 2 | Laying & dismantling pipe | LS | 0.05 | 34.00 | 1.7 |
| 3 | mazdoor | Day | 0.1 | 490 | 49 |
| | Total cost of Labour | | | Rs: | 194.2 |
| | Total cost for Materials and Labour | | per hour | | 208.347375 |
| | Add Contractor's Profit and and Overhead Charges @ | | 13.62% | | 28.36649511 |
| | Total cost of Materials and Labour | | per hour | | 236.71 |

(Common to all Departments)

Index_code

COM_MWRK

A. Manual Works

New extra items-- common item for all earth works using only manual labour for all other works without involving contractors

| | | | |
|------------|--|---------|--------|
| COM_MWRK-1 | (Manual)Excavation in all kinds of soil including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) With 3 Cum per day output | per cum | 163.30 |
| COM_MWRK-2 | (Manual)Excavation in all kinds of soil/ HDR including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) With 2.5 Cum per day output | per cum | 196.00 |
| COM_MWRK-3 | (Manual)Excavation in soft rock (including F&F) without blasting, including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) Soft rock 1.33 Cum/Day | per cum | 368.40 |
| COM_MWRK-4 | (Manual)Excavation in hard rock, including boulders upto 0.30 m dia. for foundations of canal cross drainage and other appurtenant structures and placing excavated stuff neatly in specified dump area or disposing off the same as directed etc., complete with initial lead upto 10 m and initial lift upto 1.5 m. (Without involving the contractors for specified works) Hard rock 0.67Cum/ day | per cum | 731.30 |

COM-LDLFT

Chapter VII

LEAD/LIFT/LOADING & UNLOADING CHARGES
(WLL BE WITH E-N-C & TO INCORPORATE CHANGES YEARLY/ AS NEEDED)
FOR THE YEAR : 2021-22

LEAD, LIFT, LOADING AND UNLOADING CHARGES FOR MATERIALS

COM-LDLFT

1. For total lead upto 150 m (including initial lead) lead charges by head load only shall be adopted irrespective of mode of conveyance.
2. For total lead exceeding 150 m conveyance by mechanical means only shall be adopted irrespective of mode of conveyance.
3. The rates for loading at quarry including idle hire charges of trucks and hire charges per for each kilometer and upto 5 km are cumulative and inclusive of total charges for preceding lead.
4. Unless otherwise specified lead charges for Earth / Sand / Gravel / Aggregates and Stones are for loose volume and not for compacted or in-situ volume.
5. The rates for lift charges, lead charges, hire charges are cumulative and inclusive of rates for preceding lift, lead and hire charges
6. Lift charges are not payable where conveyance of materials is by mechanical means to final placing point.
7. Loading and unloading charges are not payable for conveyance by head load.
8. Loading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 50 m wherever specified.
9. Loading and unloading charges are not payable for conveyance by mechanical means for disposal of excavated materials beyond initial lead of 1 km wherever specified.
10. The rates for unloading of materials except earth, sand, gravel, coarse aggregate, rubble, size stone and cut stone are inclusive of stacking.
11. Hire charges are per 1KM for tippers and trucks for transport of materials from work site to dump yard & other places are cumulative and includes previous km upto 5 kms
12. The lead & lift charges are exclusive of contractor's profit and overhead charges of 13.615%
13. The loading & unloading charges are exclusive of contractor's profit and overhead charges of 13.615%
14. During the BoCE meeting held on 10.06.2015, the BoCEs has recommended to withdraw lead charges, loading and unloading charges for Cement as per the minutes of meeting of Sub-Committee held on 29.06.2015. (The conveyance charges, loading & unloading charges for cement are displayed for information purpose only).
15. As per the BOCE meeting held on 21.08.2019 in order to simplify the procedure of adding lead charges to the data items in the CFMS work module, the BOCE recommended to delete the contractor profit and over head charges from the calculation of Lead, Lift, Loading and Unloading charges. But at the time of preparation of estimates the contractor profit and over head charges on Lead, Lift, Loading and Unloading charges shall be added as usual.

FOR THE YEAR: 2021-22

COM-LDLFT-1

A. (Lead) Conveyance Charges for materials by head load

| Sl No. | Total distance (Total lead includes initial lead) | Earth / Sand /Gravel / Murrum/ Lime/ Surki/ Size stone / Cut stone Rubble / Coarse aggregate Rs/ Cum | Cement / Reinforce- ment steel Str steel Rs / tonne | PCC slab/ Shahbad slab / CC block/ BS slab/ Late-rite / Wood Rs / cum |
|--------|--|--|---|--|
| 1 | 2 | 3 | 4 | 5 |
| 1 | Total lead upto 50 m (covered by item rate) | initial lead | initial lead | initial lead |
| 2 | Total lead upto 100 m | 70.00 | 40.80 | 89.10 |
| 3 | Total lead upto 150 m | 140.00 | 81.70 | 178.20 |

Notes: 1. No loading or unloading charges are admissible for conveyance by head load.
 2. For total lead exceeding 150 m conveyance charges by mechanical means only shall be adopted irrespective of mode of conveyance.

COM-LDLFT-2

B.(Lead) Conveyance charges for machinery per kilometer for transporting materials by tippers and trucks excluding loading, unloading and idle hire charges of machinery.
FOR THE YEAR: 2021-22

(No loading and unloading charges allowed for machinery loading and unloading)

| SI No. | Distance | (Lead) charges for trucks and tippers for Earth / Sand /Gravel / Murrum/ Lime/ Surki/ per cu.meter | (Lead) charges for trucks and tippers for Rubble/Size stones/ Cut Stones/ Coarse aggregate per cu.meter | (Lead) charges for trucks and tippers for Cement/ Steel/ RCC poles/ AC & GI sheets/ Packed materials/tonne | (Lead) charges for trucks and tippers per cu.meter for PCC slabs/ Shahabad slabs/ CC & Laterite blocks/ Wood/ cum | (Lead) charges for per cu.meter for water/ 1000 litres | (Lead) charges for trucks per 1000 Nos. of Bricks |
|--------|-------------------------------------|--|---|--|---|--|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | Lead upto 1 km | 33.70 | 32.50 | 20.30 | 47.80 | 20.60 | 54.10 |
| 2 | Lead upto 2 km | 47.20 | 45.50 | 28.40 | 66.90 | 28.80 | 75.80 |
| 3 | Lead upto 3 km | 62.90 | 60.60 | 37.90 | 89.20 | 38.40 | 101.10 |
| 4 | Lead upto 4 km | 76.40 | 73.60 | 46.00 | 108.30 | 46.60 | 122.70 |
| 5 | Lead upto 5 km | 89.90 | 86.60 | 54.10 | 127.40 | 54.80 | 144.40 |
| 6 | for Every km beyond 5 km upto 30 km | 13.50 | 13.00 | 8.10 | 19.10 | 8.20 | 21.70 |
| 7 | for Every km beyond 30 km | 11.20 | 10.80 | 6.80 | 15.90 | 6.90 | 18.10 |

COM-LDLFT-3

C. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (idle hire charges of trucks are not added)

| SI No. | Description of item | Earth / Sand /Gravel / Murrum/ / Surki/ Rs / cum | Rubble/ size stone/ cut stone/ Coarse aggregate,Lime in Rs/cum | cement in Rs/tonne | steel in Rs./tonne | brick work Rs/1000 No |
|--------|---------------------|--|--|--------------------|--------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Loading | 23.20 | 46.50 | 76.70 | 91.90 | 63.90 |
| 2 | Unloading | 11.60 | 23.25 | 76.70 | 91.90 | 63.90 |

COM-LDLFT-4

D. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (including idle hire charges of trucks)

| SI No. | Description of item | Earth / Sand /Gravel / Murrum/ / Surki/ Rs / cum | Rubble/ size stone/ cut stone/ Coarse aggregate,Lime in Rs/cum | cement in Rs/tonne | steel in Rs./tonne | brick work Rs/1000 No |
|--------|---------------------|--|--|--------------------|--------------------|-----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Loading | 121.70 | 144.90 | 184.90 | 200.20 | 242.60 |
| 2 | Unloading | 44.30 | 72.45 | 184.90 | 200.20 | 242.60 |

E. LOADING AND UNLOADING CHARGES BY MECHANICAL MEANS (including idle hire charges of trucks)

| SI No. | Description of item | Earth / Sand /Gravel / Murrum/ / Surki/ Rs / cum | Rubble/ size stone/ cut stone/ Coarse aggregate,Lime in Rs/cum |
|--------|---------------------|--|--|
| 1 | 2 | 3 | 4 |
| 1 | Loading | 54.10 | 107.60 |
| 2 | Unloading | 17.00 | 17.00 |

COM-LDLFT-5

F. LIFT CHARGES FOR MATERIALS BY HEAD LOAD

| SI No. | Total lift (Total lift includes initial lift) | Earth / Sand /Gravel / Murrum/ Lime/ Surki/ Size stone / Cut stone / Rubble / Coarse aggregate Rs / cum | Cement / Reinforcement steel Str steel Rs / tonne | PCC slab/ Shahabad slab / CC block/ BS slab / Laterite / Wood Rs / cum |
|--------|---|---|---|--|
| 1 | 2 | 3 | 4 | 5 |
| 1 | Total lift upto 3 m (covered by item rate) | Initial lift | Initial lift | Initial lift |
| 2 | For Every 1.00 Lift beyond initial lift of 3 meters | 8.20 | 5.90 | 10.90 |

COM-LDLFT-6

DETAILED DATA

LEAD / LIFT / LOADING & UNLOADING CHARGES - DATA RATES

I. GENERAL DATA FOR LEAD / LIFT / LOADING & UNLOADING:

A. DATA FOR LEAD CHARGES BY HEAD LOAD :

For the purpose of working out conveyance charges by head load the category of materials as classified in (I) above are grouped together as under :

CATEGORY : Earth / Sand / Gravel / Murrum / Lime / Surki / Coarse aggregate / Rubble stone / Size stone / Cut stone

In this group materials which are comparatively lighter and generally conveyed by head load by light / heavy mazdoor are included. Method of conveyance, approximate weight per load and time required to cover specified additional distance will be generally same. Therefore common data is considered for conveyance by head load for materials under this category.

CATEGORY : Cement in bag / Reinforcement steel / Structural steel sections

In this group the materials in packed / rolled / fabricated condition which are heavier per load compared to the materials under Category above and which can not be split into small quantities for the purpose of conveyance are included. The unit of measurement for these materials is per tonne.

CATEGORY : PCC slab / Shahabad stone slab / CC block / Laterite stone / BS slab / Wood

In this group the materials in moulded condition / cut to standard size which are heavier per load compared to materials under Category above are included.

COM-DTL-LDLFT-1

A. (Lead) Conveyance Charges for materials by head load

CATEGORY : Earth / Sand / Gravel / Murrum / Lime / Surki / Coarse aggregate / Rubble stone / Size stone / Cut stone

Lead: Upto 50 m :

This is initial lead and cost is covered under item basic rate.

Lead: Upto 100 m :

| | | |
|---|-------|------------|
| Average distance to be covered beyond initial lead of 50 m | 25 | m |
| Average speed of conveyance by head load | 60 | m / minute |
| Round trip cycle time for 25 m considering 50 min/ hr working (2 x 25 x 60 / 50 / 60) | 1 | min |
| No. of trips per day for additional lead (8 x 60 / 1) | 480 | |
| Quantity of material by head load per load | 0.015 | cum |
| Quantity of material by head load per day (480 x 0.015) say | 7 | cum |
| Deploy one mazdoor for every 50 m additional lead beyond initial lead. | | |
| Unit: | 7 | cum |

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|-------------|----------|----------|-------------|---------------|
| 1 | Mazdoor | Day | 1 | 490 | 490 |
| Total for materials under this Category for | | 7 | cum | Rs: | 490 |
| | | Rate per | cum | Rs: | 70.00 |

Lead: Upto 150 m :

Average distance to be covered beyond initial of 50 m : 50 m
Deploy two mazdoors for conveyance beyond initial lead.

| | | | | | |
|---|-------------|----------|----------|-------------|---------------|
| | | | Unit: | 7 | cum |
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Mazdoor | Day | 2 | 490 | 980 |
| Total for materials under this Category for | | 7 | cum | Rs: | 980 |
| | | Rate per | cum | Rs: | 140.00 |

CATEGORY : Cement in bag / Reinforcement steel / Structural steel sections**Lead: Upto 50 m :**

This is initial lead and cost is covered under item basic rate.

Lead: Upto 100 m :

| | | |
|---|-----|------------|
| Average distance to be covered beyond initial lead of 50 m | 25 | m |
| Average speed of conveyance by head load | 30 | m / minute |
| Round trip cycle time for 25 m considering 50 min/ hr working (2 x 25 x 60 / 50 / 30) | 2 | min |
| No. of trips per day for lead upto 100 m (8 x 60 / 2) | 240 | |
| Quantity of material by head load per load | 50 | kg |
| Quantity of material by head load per day (240 x 50 / 1000) | 12 | tonne |
| Deploy one mazdoor for every 50 m additional lead beyond initial lead. | | |
| Unit: | 12 | tonne |

| SI No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|---|--------------------------------|-------|----------|-------------|---------------|
| 1 | Cement /steel handling mazdoor | Day | 1 | 490 | 490 |
| Total for materials under this Category for | | 12.00 | tonne | Rs: | 490 |
| | Rate per | tonne | Rs: | | 40.80 |

Lead: Upto 150 m :

Average distance to be covered beyond initial of 50 m : 50 m
 Deploy two mazdoors for conveyance beyond initial lead.

| | | Unit: | 12 | tonne | |
|---|--------------------------------|-------|----------|-------------|---------------|
| SI No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Cement /steel handling Mazdoor | Day | 2 | 490 | 980 |
| Total for materials under this Category for | | 12.00 | tonne | Rs: | 980 |
| | Rate per | tonne | Rs: | 81.70 | |

CATEGORY : PCC slab / Shahabad stone slab / CC block / Laterite stone / BS slab / Wood**Lead: Upto 50 m :**

This is initial lead and cost is covered under item basic rate.

Lead: Upto 100 m :

Average distance to be covered beyond initial lead of 50 m 25 m
 Average speed of conveyance by head load 40 m / minute
 Round trip cycle time for 25 m considering 50 min/ hr working
 (2 x 25 x 60 / 50 / 40) 1.5 min
 No. of trips per day for lead upto 100 m (8 x 60 / 1.5) 320
 Quantity of material by head load per load 0.017 cum
 Quantity of material by head load per day (320 x 0.017) say 5.5 cum
 Deploy one mazdoor for every 50 m additional lead beyond initial lead.

| | | Unit: | 5.5 | cum | |
|---|-------------|-------|----------|-------------|---------------|
| SI No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Mazdoor | Day | 1 | 490 | 490 |
| Total for materials under this Category for | | 5.5 | cum | Rs: | 490 |
| | Rate per | cum | Rs: | | 89.10 |

Lead: Upto 150 m :

Average distance to be covered beyond initial of 50 m : 50 m
 Deploy two mazdoors for conveyance beyond initial lead.

| | | Unit: | 5.5 | cum | |
|---|-------------|-------|----------|-------------|---------------|
| SI No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Mazdoor | Day | 2 | 490 | 980 |
| Total for materials under this Category for | | 5.5 | cum | Rs: | 980 |
| | Rate per | cum | Rs: | | 178.20 |

COM-DTL-LDLFT-2

B. (Lead) Conveyance charges for machinery per kilometer for transporting materials by tippers and trucks excluding loading, unloading and idle hire charges of machinery.**CATEGORY : Earth / Sand / Gravel / Murrum / Lime / Surki /**

| For total lead upto 1 km | | Unit: | 5 | cum | |
|--------------------------|---------------------|-------|-----------|-------------|---------------|
| SI No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Tipper hire charges | Hour | 0.15 | 404.90 | 60.74 |
| | Fuel charges | Hour | 0.15 | 490.80 | 73.62 |
| 2 | Crew charges | Hour | 0.15 | 228.20 | 34.23 |
| | | | Total Rs: | | 168.59 |
| | Total for | 5 | cum | Rs: | 168.59 |
| | Rate per cum | | | | 33.70 |

| For total lead more than 1 km upto 2 km | | Unit: | 5 | cum | |
|---|---------------------|-------|-----------|-------------|---------------|
| SI No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Tipper hire charges | Hour | 0.21 | 404.90 | 85.03 |
| | Fuel charges | Hour | 0.21 | 490.80 | 103.07 |
| 2 | Crew charges | Hour | 0.21 | 228.20 | 47.92 |
| | | | Total Rs: | | 236.02 |
| | Total for | 5 | cum | Rs: | 236.02 |
| | Rate per cum | | | | 47.20 |

| For total lead more than 2 km upto 3 km | | | Unit: | 5 | cum |
|---|---------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Tipper hire charges | Hour | 0.28 | 404.90 | 113.37 |
| | Fuel charges | Hour | 0.28 | 490.80 | 137.42 |
| 2 | Crew charges | Hour | 0.28 | 228.20 | 63.90 |
| | | | Total Rs: | | 314.69 |
| | Total for | 5 | cum | Rs: | 314.69 |
| | Rate per cum | | | | 62.90 |

| For total lead more than 3 km upto 4 km | | | Unit: | 5 | cum |
|---|---------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Tipper hire charges | Hour | 0.34 | 404.90 | 137.67 |
| | Fuel charges | Hour | 0.34 | 490.80 | 166.87 |
| 2 | Crew charges | Hour | 0.34 | 228.20 | 77.59 |
| | | | Total Rs: | | 382.13 |
| | Total for | 5 | cum | Rs: | 382.13 |
| | Rate per cum | | | | 76.40 |

| For total lead more than 4 km upto 5 km | | | Unit: | 5 | cum |
|---|---------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Tipper hire charges | Hour | 0.4 | 404.90 | 161.96 |
| | Fuel charges | Hour | 0.4 | 490.80 | 196.32 |
| 2 | Crew charges | Hour | 0.4 | 228.20 | 91.28 |
| | | | Total Rs: | | 449.56 |
| | Total for | 5 | cum | Rs: | 449.56 |
| | Rate per cum | | | | 89.90 |

| For lead beyond 5 km upto 30 km for every km | | | Unit: | 5 | cum |
|--|---------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Tipper hire charges | Hour | 0.06 | 404.90 | 24.29 |
| | Fuel charges | Hour | 0.06 | 490.80 | 29.45 |
| 2 | Crew charges | Hour | 0.06 | 228.20 | 13.69 |
| | | | Total Rs: | | 67.43 |
| | Total for | 5 | cum | Rs: | 67.43 |
| | Rate per cum | | | | 13.50 |

| For lead beyond 30 km for every km | | | Unit: | 5 | cum |
|------------------------------------|---------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Tipper hire charges | Hour | 0.05 | 404.90 | 20.25 |
| | Fuel charges | Hour | 0.05 | 490.80 | 24.54 |
| 2 | Crew charges | Hour | 0.05 | 228.20 | 11.41 |
| | | | Total Rs: | | 56.20 |
| | Total for | 5 | cum | Rs: | 56.20 |
| | Rate per cum | | | | 11.20 |

CATEGORY : Coarse aggregate / Rubble stone / Size stone / Cut stone

| For total lead upto 1 km | | | Unit: | 5 | cum |
|--------------------------|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.15 | 366.90 | 55.04 |
| | Fuel charges | Hour | 0.15 | 490.80 | 73.62 |
| 2 | Crew charges | Hour | 0.15 | 225.20 | 33.78 |
| | | | Total Rs: | | 162.44 |
| | Total for | 5 | cum | Rs: | 162.44 |
| | Rate per cum | | | | 32.50 |

| For total lead more than 1 km upto 2 km | | | Unit: | 5 | cum |
|---|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.21 | 366.90 | 77.05 |
| | Fuel charges | Hour | 0.21 | 490.80 | 103.07 |
| 2 | Crew charges | Hour | 0.21 | 225.20 | 47.29 |
| | | | Total Rs: | | 227.41 |
| | Total for | 5 | cum | Rs: | 227.41 |
| | Rate per cum | | | | 45.50 |

| For total lead more than 2 km upto 3 km | | | Unit: | 5 | cum |
|---|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.28 | 366.90 | 102.73 |
| | Fuel charges | Hour | 0.28 | 490.80 | 137.42 |
| 2 | Crew charges | Hour | 0.28 | 225.20 | 63.06 |
| | | | Total Rs: | | 303.21 |
| | Total for | 5 | cum | Rs: | 303.21 |
| | Rate per cum | | | | 60.60 |

| For total lead more than 3 km upto 4 km | | | Unit: | 5 | cum |
|---|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.34 | 366.90 | 124.75 |
| | Fuel charges | Hour | 0.34 | 490.80 | 166.87 |
| 2 | Crew charges | Hour | 0.34 | 225.20 | 76.57 |
| | | | Total Rs: | | 368.19 |
| | Total for | 5 | cum | Rs: | 368.19 |
| | Rate per cum | | | | 73.60 |

| For total lead more than 4 km upto 5 km | | | Unit: | 5 | cum |
|---|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.4 | 366.90 | 146.76 |
| | Fuel charges | Hour | 0.4 | 490.80 | 196.32 |
| 2 | Crew charges | Hour | 0.4 | 225.20 | 90.08 |
| | | | Total Rs: | 0.00 | 433.16 |
| | Total for | 5 | cum | Rs: | 433.16 |
| | Rate per cum | | | | 86.60 |

| For lead beyond 5 km upto 30 km for every km | | | Unit: | 5 | cum |
|--|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.06 | 366.90 | 22.01 |
| | Fuel charges | Hour | 0.06 | 490.80 | 29.45 |
| 2 | Crew charges | Hour | 0.06 | 225.20 | 13.51 |
| | | | Total Rs: | | 64.97 |
| | Total for | 5 | cum | Rs: | 64.97 |
| | Rate per cum | | | | 13.00 |

| For lead beyond 30 km for every km | | | Unit: | 5 | cum |
|------------------------------------|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.05 | 366.90 | 18.35 |
| | Fuel charges | Hour | 0.05 | 490.80 | 24.54 |
| 2 | Crew charges | Hour | 0.05 | 225.20 | 11.26 |
| | | | Total Rs: | | 54.15 |
| | Total for | 5 | cum | Rs: | 54.15 |
| | Rate per cum | | | | 10.80 |

CATEGORY : Cement/ Steel/ Pipes/ RCC poles/ AC & GI sheets/ Packed materials

| For total lead upto 1 km | | | Unit: | 8 | tonne |
|--------------------------|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.15 | 366.90 | 55.04 |
| | Fuel charges | Hour | 0.15 | 490.80 | 73.62 |
| 2 | Crew charges | Hour | 0.15 | 225.20 | 33.78 |
| | | | Total Rs: | | 162.44 |
| | Total for | 8 | tonne | Rs: | 162.44 |
| | Rate per tonne | | | | 20.30 |

| For total lead more than 1 km upto 2 km | | | Unit: | 8 | tonne |
|---|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.21 | 366.90 | 77.05 |
| | Fuel charges | Hour | 0.21 | 490.80 | 103.07 |
| 2 | Crew charges | Hour | 0.21 | 225.20 | 47.29 |
| | | | Total Rs: | | 227.41 |
| | Total for | 8 | tonne | Rs: | 227.41 |
| | Rate per tonne | | | | 28.40 |

| For total lead more than 2 km upto 3 km | | | Unit: | 8 | tonne |
|---|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.28 | 366.90 | 102.73 |
| | Fuel charges | Hour | 0.28 | 490.80 | 137.42 |
| 2 | Crew charges | Hour | 0.28 | 225.20 | 63.06 |
| | | | Total Rs: | | 303.21 |
| | Total for | 8 | tonne | Rs: | 303.21 |
| | Rate per tonne | | | | 37.90 |

| For total lead more than 3 km upto 4 km | | | Unit: | 8 | tonne |
|---|--------------------|------|-----------|-------------|---------------|
| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
| 1 | Truck hire charges | Hour | 0.34 | 366.90 | 124.75 |
| | Fuel charges | Hour | 0.34 | 490.80 | 166.87 |
| 2 | Crew charges | Hour | 0.34 | 225.20 | 76.57 |
| | | | Total Rs: | | 368.19 |
| | Total for | 8 | tonne | Rs: | 368.19 |
| | Rate per tonne | | | | 46.00 |

For total lead more than 4 km upto 5 km

Unit:

8

tonne

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.4 | 366.90 | 146.76 |
| | Fuel charges | Hour | 0.4 | 490.80 | 196.32 |
| 2 | Crew charges | Hour | 0.4 | 225.20 | 90.08 |
| | | | Total Rs: | | 433.16 |
| | Total for | 8 | tonne | Rs: | 433.16 |
| | Rate per tonne | | | | 54.10 |

For lead beyond 5 km upto 30 km for every km

Unit:

8

tonne

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.06 | 366.90 | 22.01 |
| | Fuel charges | Hour | 0.06 | 490.80 | 29.45 |
| 2 | Crew charges | Hour | 0.06 | 225.20 | 13.51 |
| | | | Total Rs: | | 64.97 |
| | Total for | 8 | tonne | Rs: | 64.97 |
| | Rate per tonne | | | | 8.10 |

For lead beyond 30 km for every km

Unit:

8

tonne

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.05 | 366.90 | 18.35 |
| | Fuel charges | Hour | 0.05 | 490.80 | 24.54 |
| 2 | Crew charges | Hour | 0.05 | 225.20 | 11.26 |
| | | | Total Rs: | | 54.15 |
| | Total for | 8 | tonne | Rs: | 54.15 |
| | Rate per tonne | | | | 6.80 |

CATEGORY : PCC slabs/ Shahabad slabs/ BS slabs/ CC & Laterite blocks/ Wood

For total lead upto 1 km

Unit:

3.4

cum

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.15 | 366.90 | 55.04 |
| | Fuel charges | Hour | 0.15 | 490.80 | 73.62 |
| 2 | Crew charges | Hour | 0.15 | 225.20 | 33.78 |
| | | | Total Rs: | | 162.44 |
| | Total for | 3.4 | cum | Rs: | 162.44 |
| | Rate per cum | | | | 47.80 |

For total lead more than 1 km upto 2 km

Unit:

3.4

cum

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.21 | 366.90 | 77.05 |
| | Fuel charges | Hour | 0.21 | 490.80 | 103.07 |
| 2 | Crew charges | Hour | 0.21 | 225.20 | 47.29 |
| | | | Total Rs: | | 227.41 |
| | Total for | 3.4 | cum | Rs: | 227.41 |
| | Rate per cum | | | | 66.90 |

For total lead more than 2 km upto 3 km

Unit:

3.4

cum

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.28 | 366.90 | 102.73 |
| | Fuel charges | Hour | 0.28 | 490.80 | 137.42 |
| 2 | Crew charges | Hour | 0.28 | 225.20 | 63.06 |
| | | | Total Rs: | | 303.21 |
| | Total for | 3.4 | cum | Rs: | 303.21 |
| | Rate per cum | | | | 89.20 |

For total lead more than 3 km upto 4 km

Unit:

3.4

cum

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.34 | 366.90 | 124.75 |
| | Fuel charges | Hour | 0.34 | 490.80 | 166.87 |
| 2 | Crew charges | Hour | 0.34 | 225.20 | 76.57 |
| | | | Total Rs: | | 368.19 |
| | Total for | 3.4 | cum | Rs: | 368.19 |
| | Rate per cum | | | | 108.30 |

For total lead more than 4 km upto 5 km

Unit:

3.4

cum

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.4 | 366.90 | 146.76 |
| | Fuel charges | Hour | 0.4 | 490.80 | 196.32 |
| 2 | Crew charges | Hour | 0.4 | 225.20 | 90.08 |
| | | | Total Rs: | | 433.16 |
| | Total for | 3.4 | cum | Rs: | 433.16 |
| | Rate per cum | | | | 127.40 |

For lead beyond 5 km upto 30 km for every km

Unit:

3.4

cum

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.06 | 366.90 | 22.01 |
| | Fuel charges | Hour | 0.06 | 490.80 | 29.45 |
| 2 | Crew charges | Hour | 0.06 | 225.20 | 13.51 |
| | | | Total Rs: | | 64.97 |
| | Total for | 3.4 | cum | Rs: | 64.97 |
| | Rate per cum | | | | 19.10 |

For lead beyond 30 km for every km

Unit:

3.4

cum

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------------|------|-----------|-------------|---------------|
| 1 | Truck hire charges | Hour | 0.05 | 366.90 | 18.35 |
| | Fuel charges | Hour | 0.05 | 490.80 | 24.54 |
| 2 | Crew charges | Hour | 0.05 | 225.20 | 11.26 |
| | | | Total Rs: | | 54.15 |
| | Total for | 3.4 | cum | Rs: | 54.15 |
| | Rate per cum | | | | 15.90 |

CATEGORY : water

For total lead upto 1 km

Unit:

8000

litres

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|---------------------------|------|-----------|-------------|---------------|
| 1 | Water tanker hire charges | Hour | 0.15 | 380.50 | 57.08 |
| | Fuel charges | Hour | 0.15 | 490.80 | 73.62 |
| 2 | Crew charges | Hour | 0.15 | 225.20 | 33.78 |
| | | | Total Rs: | | 164.48 |
| | Total for | 8000 | litres | Rs: | 164.48 |
| | Rate per 1000 litres | | | | 20.60 |

For total lead more than 1 km upto 2 km

Unit:

8000

litres

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|---------------------------|------|-----------|-------------|---------------|
| 1 | Water tanker hire charges | Hour | 0.21 | 380.50 | 79.91 |
| | Fuel charges | Hour | 0.21 | 490.80 | 103.07 |
| 2 | Crew charges | Hour | 0.21 | 225.20 | 47.29 |
| | | | Total Rs: | | 230.27 |
| | Total for | 8000 | litres | Rs: | 230.27 |
| | Rate per 1000 litres | | | | 28.80 |

For total lead more than 2 km upto 3 km

Unit:

8000

litres

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|---------------------------|------|-----------|-------------|---------------|
| 1 | Water tanker hire charges | Hour | 0.28 | 380.50 | 106.54 |
| | Fuel charges | Hour | 0.28 | 490.80 | 137.42 |
| 2 | Crew charges | Hour | 0.28 | 225.20 | 63.06 |
| | | | Total Rs: | | 307.02 |
| | Total for | 8000 | litres | Rs: | 307.02 |
| | Rate per 1000 litres | | | | 38.40 |

For total lead more than 3 km upto 4 km

Unit:

8000

litres

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|---------------------------|------|-----------|-------------|---------------|
| 1 | Water tanker hire charges | Hour | 0.34 | 380.50 | 129.37 |
| | Fuel charges | Hour | 0.34 | 490.80 | 166.87 |
| 2 | Crew charges | Hour | 0.34 | 225.20 | 76.57 |
| | | | Total Rs: | | 372.81 |
| | Total for | 8000 | litres | Rs: | 372.81 |
| | Rate per 1000 litres | | | | 46.60 |

For total lead more than 4 km upto 5 km

Unit:

8000

litres

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|---------------------------|------|-----------|-------------|---------------|
| 1 | Water tanker hire charges | Hour | 0.4 | 380.50 | 152.20 |
| | Fuel charges | Hour | 0.4 | 490.80 | 196.32 |
| 2 | Crew charges | Hour | 0.4 | 225.20 | 90.08 |
| | | | Total Rs: | | 438.60 |
| | Total for | 8000 | litres | Rs: | 438.60 |
| | Rate per 1000 litres | | | | 54.80 |

For lead beyond 5 km upto 30 km for every km

Unit:

8000

litres

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|---------------------------|------|-----------|-------------|---------------|
| 1 | Water tanker hire charges | Hour | 0.06 | 380.50 | 22.83 |
| | Fuel charges | Hour | 0.06 | 490.80 | 29.45 |
| 2 | Crew charges | Hour | 0.06 | 225.20 | 13.51 |
| | | | Total Rs: | | 65.79 |
| | Total for | 8000 | litres | Rs: | 65.79 |
| | Rate per 1000 litres | | | | 8.20 |

For lead beyond 30 km for every km

Unit:

8000

litres

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|---------------------------|------|-----------|-------------|---------------|
| 1 | Water tanker hire charges | Hour | 0.05 | 380.50 | 19.03 |
| | Fuel charges | Hour | 0.05 | 490.80 | 24.54 |
| 2 | Crew charges | Hour | 0.05 | 225.20 | 11.26 |
| | | | Total Rs: | | 54.83 |
| | Total for | 8000 | litres | Rs: | 54.83 |
| | Rate per 1000 litres | | | | 6.90 |

CATEGORY : Bricks (as adopted by R&B(Buildings))

For total lead upto 1 km

Unit:

3000

bricks

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|----------------------|------|-----------|-------------|---------------|
| 1 | Truck 10 T charges | Hour | 0.15 | 366.90 | 55.04 |
| | Fuel charges | Hour | 0.15 | 490.80 | 73.62 |
| 2 | Crew charges | Hour | 0.15 | 225.20 | 33.78 |
| | | | Total Rs: | | 162.44 |
| | Total for | 3000 | bricks | Rs: | 162.44 |
| | Rate per 1000 bricks | | | | 54.10 |

For total lead more than 1 km upto 2 km

Unit:

3000

bricks

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|----------------------|------|-----------|-------------|---------------|
| 1 | Truck 10 T charges | Hour | 0.21 | 366.90 | 77.05 |
| | Fuel charges | Hour | 0.21 | 490.80 | 103.07 |
| 2 | Crew charges | Hour | 0.21 | 225.20 | 47.29 |
| | | | Total Rs: | | 227.41 |
| | Total for | 3000 | bricks | Rs: | 227.41 |
| | Rate per 1000 bricks | | | | 75.80 |

For total lead more than 2 km upto 3 km

Unit:

3000

bricks

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|----------------------|------|-----------|-------------|---------------|
| 1 | Truck 10 T charges | Hour | 0.28 | 366.90 | 102.73 |
| | Fuel charges | Hour | 0.28 | 490.80 | 137.42 |
| 2 | Crew charges | Hour | 0.28 | 225.20 | 63.06 |
| | | | Total Rs: | | 303.21 |
| | Total for | 3000 | bricks | Rs: | 303.21 |
| | Rate per 1000 bricks | | | | 101.10 |

For total lead more than 3 km upto 4 km

Unit:

3000

bricks

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|----------------------|------|-----------|-------------|---------------|
| 1 | Truck 10 T charges | Hour | 0.34 | 366.90 | 124.75 |
| | Fuel charges | Hour | 0.34 | 490.80 | 166.87 |
| 2 | Crew charges | Hour | 0.34 | 225.20 | 76.57 |
| | | | Total Rs: | | 368.19 |
| | Total for | 3000 | bricks | Rs: | 368.19 |
| | Rate per 1000 bricks | | | | 122.70 |

For total lead more than 4 km upto 5 km

Unit:

3000

bricks

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|----------------------|------|-----------|-------------|---------------|
| 1 | Truck 10 T charges | Hour | 0.4 | 366.90 | 146.76 |
| | Fuel charges | Hour | 0.4 | 490.80 | 196.32 |
| 2 | Crew charges | Hour | 0.4 | 225.20 | 90.08 |
| | | | Total Rs: | | 433.16 |
| | Total for | 3000 | bricks | Rs: | 433.16 |
| | Rate per 1000 bricks | | | | 144.40 |

For lead beyond 5 km upto 30 km for every km

Unit:

3000

bricks

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|----------------------|------|-----------|-------------|---------------|
| 1 | Truck 10 T charges | Hour | 0.06 | 366.90 | 22.01 |
| | Fuel charges | Hour | 0.06 | 490.80 | 29.45 |
| 2 | Crew charges | Hour | 0.06 | 225.20 | 13.51 |
| | | | Total Rs: | | 64.97 |
| | Total for | 3000 | bricks | Rs: | 64.97 |
| | Rate per 1000 bricks | | | | 21.70 |

For lead beyond 30 km for every km

Unit:

3000

bricks

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|----------------------|------|-----------|-------------|---------------|
| 1 | Truck 10 T charges | Hour | 0.05 | 366.90 | 18.35 |
| | Fuel charges | Hour | 0.05 | 490.80 | 24.54 |
| 2 | Crew charges | Hour | 0.05 | 225.20 | 11.26 |
| | | | Total Rs: | | 54.15 |
| | Total for | 3000 | bricks | Rs: | 54.15 |
| | Rate per 1000 litres | | | | 18.10 |

COM-DTL-LDLFT-3

C. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (idle hire charges of trucks are not added)

| MORD -data | | | | | |
|------------|--|--------------|----------|----------|------------|
| 1 | Loading of Lime, Aggregate, Stone Boulder, | | | | |
| a) Loading | Brick Aggregate, Kankar, Building Rubbish, Building Rubbish, Crushed Slag, Stone for Masonry | Unit | Quantity | Rate Rs. | Amount Rs. |
| | Work by manual means including a lead upto 30 m | | | | |
| | Unit = cum | | | | |
| | Taking output = 5.5 cum | | | | |
| | Labour | | | | |
| | Head Mazdoor | day | 0.02 | 525.00 | 10.50 |
| | Mazdoor | day | 0.5 | 490 | 245.00 |
| | | Total in Rs. | | | 255.50 |
| | Rate per cum = | | | Rs. | 46.50 |

b) Unloading; 50% of the loading charges i 23.25

| | | | | | |
|------------|--|--------------|----------|----------|------------|
| 2 | Loading of Earth, Sand, Moorum, Manure, Flya | Unit | Quantity | Rate Rs. | Amount Rs. |
| a) Loading | by manual means including a lead upto 30 m | | | | |
| | Unit = cum | | | | |
| | Taking output = 5.5 cum | | | | |
| | Labour | | | | |
| | Head Mazdoor | day | 0.01 | 525.00 | 5.25 |
| | Mazdoor | day | 0.25 | 490 | 122.50 |
| | | Total in Rs. | | | 127.75 |
| | Rate per cum = | | | Rs. | 23.20 |

b) Unloading; 50% of the loading charges i 11.60

| | | | | | |
|------------|-----------------------------------|------|----------|----------|------------|
| 3 | Loading of Bricks by manual means | Unit | Quantity | Rate Rs. | Amount Rs. |
| a) Loading | including a lead upto 30 m | | | | |
| | Unit = 1000 Nos. | | | | |
| | Taking output = 2000 Nos | | | | |
| | a) Labour | | | | |
| | Head Mazdoor | day | 0.01 | 525.00 | 5.25 |
| | Mazdoor | day | 0.25 | 490 | 122.50 |
| | Cost for 2000 Nos. = | | | | 127.75 |
| | Rate per cum = | | | Rs. | 63.90 |

100% of loading charges

b) Unloading; i.e., Rs. 63.90

| | | | | | |
|------------|-----------------------------------|------|----------|----------|------------|
| 4 | Loading of Cement by manual means | Unit | Quantity | Rate Rs. | Amount Rs. |
| a) Loading | including a lead upto 30 m | | | | |
| | Unit = 1 t | | | | |
| | Taking output = 10 t | | | | |
| | a) Labour | | | | |
| | Head mazdoor | day | 0.06 | 525.00 | 31.50 |
| | Mazdoor | day | 1.5 | 490 | 735.00 |
| | Cost for 10 t = | | | | 766.50 |
| | Rate per 1 tonne = | | | Rs. | 76.70 |

b) Unloading; 100% of loading charges i.e. 76.70

| | | | | | |
|------------|---|------|----------|----------|------------|
| 5 | Loading of Structural Steel, Steel Bars by manu | Unit | Quantity | Rate Rs. | Amount Rs. |
| a) Loading | including a lead upto 30 m | | | | |
| | Unit = 1 t | | | | |
| | Taking output = 10 t | | | | |
| | a) Labour | | | | |
| | head Mazdoor | day | 0.07 | 525.00 | 36.75 |
| | Mazdoor | day | 1.8 | 490 | 882.00 |
| | Cost for 10 t = | | | | 918.75 |
| | Rate per 1 tonne = | | | Rs. | 91.90 |

100% of loading charges

b) Unloading; i.e., Rs. 91.90

| | | | | | |
|------------|--|------|----------|----------|------------|
| 6 | Loading of Bricks - 1000 Nos (Regular sizes - 225x140x70 mm) by manual means including | Unit | Quantity | Rate Rs. | Amount Rs. |
| a) Loading | | | | | |
| | Unit = 1000 Nos. | | | | |
| | Taking output = 2000 Nos. | | | | |
| | a) Labour | | | | |
| | head Mazdoor | day | 0.01 | 525.00 | 5.25 |
| | Mazdoor | day | 0.25 | 490.00 | 122.50 |
| | Cost for 2000 Nos. = | | | | 127.75 |
| | Rate per 1000 Nos. = | | | Rs. | 63.90 |

100% of loading charges

b) Unloading; i.e., Rs. 63.90

COM-DTL-LDLFT-4

D. LOADING AND UNLOADING CHARGES BY MANUAL MEANS (including idle hire charges of trucks)

| | | | | | |
|------------|--|------|----------|----------|------------|
| 1 | Loading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Building Rubbish, Crushed Slag, Stone for Mass | Unit | Quantity | Rate Rs. | Amount Rs. |
| a) Loading | Work by manual means including a lead upto 30 m | | | | |
| | Unit = cum | | | | |
| | Taking output = 5.5 cum | | | | |
| | a) Labour | | | | |
| | Head Mazdoor | day | 0.02 | 525.00 | 10.50 |
| | Mazdoor | day | 0.5 | 490 | 245.00 |
| | b) Machinery | | | | |
| | Truck 10t | hour | 0.5 | 1082.90 | 541.45 |
| | Cost for 5.5 cum = | | | | 796.95 |
| | Rate per cum = | | | Rs. | 144.90 |

b) Unloading 50% of the loading charges i.e., 72.45

| | | | | | |
|------------|--|------|----------|----------|------------|
| 2 | Loading of Earth, Sand, Moorum, Manure, Flyash | Unit | Quantity | Rate Rs. | Amount Rs. |
| a) Loading | by manual means including a lead upto 30 m | | | | |
| | Unit = cum | | | | |
| | Taking output = 5.5 cum | | | | |
| | Labour | | | | |
| | Head Mazdoor | day | 0.01 | 525.00 | 5.25 |
| | Mazdoor | day | 0.25 | 490 | 122.50 |
| | b) Machinery | | | | |
| | Truck 10t | hour | 0.5 | 1082.90 | 541.45 |
| | Cost for 5.5 cum = | | | | 669.20 |
| | Rate per cum = | | | Rs. | 121.70 |

| | | | | | |
|--------------|--|------|----------|----------|------------|
| b) Unloading | Unloading of Earth, Sand, Moorum, Manure, Flyash | Unit | Quantity | Rate Rs. | Amount Rs. |
| | by manual means including a lead upto 30 m | | | | |
| | Unit = cum | | | | |
| | Taking output = 5.5 cum | | | | |
| | a) Labour | | | | |
| | Mate | day | 0.005 | 525.00 | 2.63 |
| | Mazdoor(unskilled) | day | 0.125 | 490 | 61.25 |
| | b) Machinery | | | | |
| | Truck 10t | hour | 0.166 | 1082.90 | 179.76 |
| | Cost for 5.5 cum = | | | | 243.64 |
| | Rate per cum = | | | Rs. | 44.30 |

| | | | | | |
|------------|-----------------------------------|------|----------|----------|--------|
| 3 | Loading of Bricks by manual means | Unit | Quantity | Rate Rs. | Total |
| a) Loading | including a lead upto 30 m | | | | |
| | Unit = 1000 Nos. | | | | |
| | Taking output = 2000 Nos | | | | |
| | a) Labour | | | | |
| | Mate | day | 0.01 | 525.00 | 5.25 |
| | Mazdoor(unskilled) | day | 0.25 | 490 | 122.50 |
| | b) Machinery | | | | |
| | Truck 10t | hour | 0.33 | 1082.90 | 357.36 |
| | Cost for 2000 Nos. = | | | | 485.11 |
| | Rate per 1000 bricks = | | | Rs. | 242.60 |

b) Unloading 100% of loading charges i.e. 242.60

| | | | | | |
|------------|-----------------------------------|------|----------|----------|---------|
| 4 | Loading of Cement by manual means | Unit | Quantity | Rate Rs. | Total |
| a) Loading | including a lead upto 30 m | | | | |
| | Unit = 1 t | | | | |
| | Taking output = 10 t | | | | |
| | a) Labour | | | | |
| | Mate | day | 0.06 | 525.00 | 31.50 |
| | Mazdoor(unskilled) | day | 1.5 | 490 | 735.00 |
| | b) Machinery | | | | |
| | Truck 10t | hour | 1 | 1082.90 | 1082.90 |
| | Cost for 10 t = | | | | 1849.40 |
| | Rate per 1 tonne = | | | Rs. | 184.90 |

b) Unloading 100% of loading charges i.e. 184.90

| | | | | | |
|------------|--|------|----------|----------|---------|
| 5 | Loading of Structural Steel, Steel Bars by | Unit | Quantity | Rate Rs. | Total |
| a) Loading | manual means including a lead upto 30 m | | | | |
| | Unit = 1 t | | | | |
| | Taking output = 10 t | | | | |
| | a) Labour | | | | |
| | Mate | day | 0.07 | 525.00 | 36.75 |
| | Mazdoor(unsilled) | day | 1.8 | 490 | 882.00 |
| | b) Machinery | | | | |
| | Truck 10t | hour | 1 | 1082.90 | 1082.90 |
| | Cost for 10 t = | | | | 2001.65 |
| | Rate per 1 tonne = | | | Rs. | 200.20 |

b) Unloading 100% of loading charges i.e. 200.20

COM-DTL-LDLFT-5

E. LOADING AND UNLOADING CHARGES BY MECHANICAL MEANS (including idle hire charges of trucks)

COM-DTL-LDLFT-5-A

| | | | | | |
|------------|---|-------|----------|----------|--------|
| 1 | Loading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry work by mechanical means including a lead upto 30 m | Unit | Quantity | Rate Rs. | Total |
| a) Loading | Placing tipper at loading point, loading with front end loader excluding time for haulage and return trip. | | | | |
| | Unit = cum | | | | |
| | Taking output = 5.5 cum | | | | |
| | Time required for | | | | |
| | i) Positioning of tipper at loading point Min | 1 | | | |
| | ii) Loading by front end loader 1 cum bucket capacity @ 45 / 25 cum per hour Min | 7.33 | | | |
| | iii) Manoeuvring, reversing, dumping and turnir for return Min | - | | | |
| | iv) Waiting time, unforeseen contingencies, etc. Min | 2 | | | |
| | Total Min | 10.33 | | | |
| | a) Machinery | | | | |
| | Tipper 10 t capacity | hour | 0.17 | 1123.90 | 193.50 |
| | Front end-loader 1 cum bucket capacity @ 45 c | hour | 0.12 | 3262.20 | 398.53 |
| | per hour | | | | |
| | Cost for 5.5 cum = | | | | 592.03 |
| | Rate per cum = (a+b)/5.5 | | | Rs. | 107.60 |

b) Unloading see below. COM-LDLFT-5-B

COM-DTL-LDLFT-5-B

| | | | | | |
|------------|--|------|----------|----------|--------|
| 2 | Loading of Earth, sand, Moorum, Manure, Flyash, by mechanical means including a lead upto 30 m | Unit | Quantity | Rate Rs. | Total |
| a) Loading | Placing tipper at loading point, loading with front end loader excluding time for haulage and return trip. | | | | |
| | Unit = cum | | | | |
| | Taking output = 5.5 cum | | | | |
| | Time required for | | | | |
| | i) Positioning of tipper at loading point Min | 1 | | | |
| | ii) Loading by front end loader 1 cum bucket capacity @ 45 / 25 cum per hour Min | 3.3 | | | |
| | iii) Waiting time, unforeseen contingencies, etc. Min | 2 | | | |
| | Total Min | 6.3 | | | |
| | a) Machinery | | | | |
| | Tipper 10 t capacity | hour | 0.105 | 1123.90 | 118.01 |
| | Front end-loader 1 cum bucket capacity @ 45 c | hour | 0.055 | 3262.20 | 179.42 |
| | per hour | | | | |
| | Cost for 5.5 cum = | | | | 297.43 |
| | Rate per cum = (a+b)/5.5 | | | Rs. | 54.10 |

| | | | | | |
|--------------|--|------|----------|----------|-------|
| b) Unloading | Unloading of Earth, sand, Moorum, Manure, Flyash, lime, Aggregate, Stone boulder, Brick aggregate, Kankar, Building rubbish, Manure, Crushed Slag, Flyash, Stone for Masonry work by mechanical means including a lead upto 30 m | Unit | Quantity | Rate Rs. | Total |
| | Placing tipper at unloading point, excluding time for haulage and return trip. | | | | |
| | Taking output = 5.5 cum | | | | |
| | Time required for | | | | |
| | i) Positioning of tipper at loading point Min | 1 | | | |
| | ii) Loading by front end loader 1 cum bucket capacity @ 45 / 25 cum per hour Min | 2 | | | |
| | iii) Waiting time, unforeseen contingencies, etc. Min | 2 | | | |
| | Total | 5 | | | |
| | a) Machinery | | | | |
| | Tipper 10 t capacity | hour | 0.08 | 1123.90 | 93.66 |
| | Cost for 5.5 cum = | | | | 93.66 |
| | Rate per cum = (a+b)/5.5 | | | | 17.00 |

F. LIFT CHARGES FOR MATERIALS BY HEAD LOAD

FOR CATEGORY : Earth / Sand / Gravel / Murrum / Lime / Surki / Coarse aggregate / Rubble stone / Size stone / Cut stone

Lift : Upto 3.00 m

This is the initial lift and forms integral part of the activities in the basic rate of work item.
Lift charges are admissible only lifting effort beyond initial lift specified in the work item.

Lift : ADDITIONAL LIFT CHARGES FOR each 1 METER LIFT BEYOND 3 M INITIAL LIFT

For additional lift of 1m beyond initial lift of 3 m

one meter lift is taken equivalent to 6 meters lead

average speed of conveyance by head load

60 m/minute

Round trip cycle time for 1.00 m considering 50 min/ hr working

1 x6x 60 / 50 / 60)

0.12

min

No. of trips per day for lift 1.0 m above 3 m (8 x 60 / 0.12)

4000

Quantity of material by head load

0.015

cum

Quantity of material by head load per day (4000x 0.015)

60

cum

Deploy 1 mazdoor for every additional lift of 1.0 m beyond initial lift.

Lift : Upto 3.00 m for materials under this Category

Unit:

60

cum

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------|----------------------|----------|-------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | Mazdoor | Day | 1.00 | 490.00 | 490.00 |
| | | Total Rs: for 60 cum | | | 490.00 |
| | Rate per cum | | | | 8.20 |

FOR CATEGORY: Cement bag / Reinforcement steel / Structural steel sections

Lift : Upto 3.00 m

This is the initial lift and forms integral part of the activities in the basic rate of work item.

Lift charges are admissible only lifting effort beyond initial lift specified in the work item.

Lift : ADDITIONAL LIFT CHARGES FOR each 1 METER LIFT BEYOND 3 M INITIAL LIFT

For additional lift of 1m beyond initial lift of 3 m

one meter lift is taken equivalent to 6 meters lead

average speed of conveyance by head load

25 m/minute

Round trip cycle time for 1.00 m considering 50 min/ hr working

1 x6x 60 / 50 / 25)

0.29

min

No. of trips per day for additional lift 1.0 m above 3 m (8 x 60 / 0.29)

1655

Quantity of material by head load

50

kgs

Quantity of material by head load per day (1655x50x 0.015)

83

tons

Deploy 1 mazdoor for every additional lift of 1.5 m beyond initial lift.or2/3 mazdoor

Lift : Upto 3.00 m for materials under this Category

Unit:

83

TONS

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|----------------|-------------------------|----------|-------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | Mazdoor | Day | 1.00 | 490.00 | 490.00 |
| | | Total Rs: for 83 Tonnes | | | 490.00 |
| | Rate per tonne | | | | 5.90 |

FOR CATEGORY : PCC slab / Shahabad stone slab / CC block / Laterite stone / BS slab / Wood

Lift : Upto 3.00 m

This is the initial lift and forms integral part of the activities in the basic rate of work item.

Lift charges are admissible only lifting effort beyond initial lift specified in the work item.

Lift : ADDITIONAL LIFT CHARGES FOR EACH 1 METER LIFT BEYOND 3 M INITIAL LIFT

For additional lift of 1m beyond initial lift of 3 m

one meter lift is taken equivalent to 6 meters lead

average speed of conveyance by head load

40 m/minute

Round trip cycle time for 1.00 m considering 50 min/ hr working

1 x6x 60 / 50 / 40)

0.18

min

No. of trips per day for lift 1.0 m (8 x 60 / 0.18)

2667

Quantity of material by head load

0.017

cum

Quantity of material by head load per day (1667x 0.018)

45

cum

Deploy 1 mazdoor for every additional lift of 1.5 m beyond initial lift.or2/3 mazdoor

Lift : Upto 3.00 m for materials under Category

Unit:

45

cum

| Sl No. | Description | Unit | Quantity | Rate in Rs. | Amount in Rs. |
|--------|--------------|----------------------|----------|-------------|---------------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | Mazdoor | Day | 1.00 | 490.00 | 490.00 |
| | | Total Rs: for 45 cum | | | 490.00 |
| | Rate per cum | | | | 10.90 |

HIRE CHARGES OF MACHINERY

FOR THE YEAR : 2021-22

| S.No | Description of machinery | Unit | Hire charge in Rs | Fuel charge in Rs | Crew Charge in Rs. | Total in Rs |
|------|---|------|-------------------|-------------------|--------------------|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | Agitator car / Transit mixer 2 cum | Hour | 668.90 | 1428.30 | 365.00 | 2462.20 |
| 2 | Air compressor 5 cmm (electric) | Hour | 90.80 | 285.50 | 214.50 | 590.80 |
| 3 | Air compressor 7 cmm (diesel) | Hour | 204.10 | 1168.60 | 274.60 | 1647.30 |
| 4 | Air compressor 7 cmm (electric) | Hour | 113.40 | 380.70 | 214.50 | 708.60 |
| 5 | Air compressor 8.5 cmm (diesel) | Hour | 237.70 | 1460.70 | 274.60 | 1973.00 |
| 6 | Air compressor 8.5 cmm (electric) | Hour | 145.90 | 475.90 | 214.50 | 836.30 |
| 7 | Air compressor 15 cmm (electric) | Hour | 115.20 | 1057.50 | 228.80 | 1401.50 |
| 8 | Angle Dozer 90 hp | Hour | 1531.00 | 999.10 | 304.20 | 2834.30 |
| 9 | Batching plant 0.5 cum(6 cum/hr) | Hour | 99.50 | 126.90 | 439.80 | 666.20 |
| 10 | Batching plant 2 x 1.00 cum(15 cum/hr) | Hour | 351.80 | 380.70 | 439.80 | 1172.30 |
| 11 | Batching plant 2 x 1.50 cum(50 cum/hr) | Hour | 538.70 | 465.30 | 439.80 | 1443.80 |
| 12 | Bending machine 3000 x 12 mm | Hour | 38.40 | 126.90 | 171.60 | 336.90 |
| 13 | Clamp shell and hoisting ropes | Hour | 5.30 | 0.00 | 0.00 | 5.30 |
| 14 | Concrete bucket 1.5 cum | Hour | 14.00 | 0.00 | 0.00 | 14.00 |
| 15 | Concrete hand mixer 45 / 30 ltr | Hour | 5.00 | 0.00 | 0.00 | 5.00 |
| 16 | Concrete mixer 300 / 200 (diesel) | Hour | 47.30 | 129.80 | 286.00 | 463.10 |
| 17 | Concrete mixer 300 / 200 ltr (electric) | Hour | 46.20 | 42.30 | 286.00 | 374.50 |
| 18 | Concrete mixer 600 / 400 (diesel) | Hour | 80.50 | 259.70 | 286.00 | 626.20 |
| 19 | Concrete mixer 600 / 400 ltr (electric) | Hour | 78.90 | 84.60 | 286.00 | 449.50 |
| 20 | Concrete paver 100 sqm / hr | Hour | 312.30 | 0.00 | 549.10 | 861.40 |
| 21 | Convey mucker | Hour | 722.90 | 294.40 | 228.80 | 1246.10 |
| 22 | Core drilling machine | Hour | 281.90 | 389.50 | 365.00 | 1036.40 |
| 23 | Diesel generating set 30 KVA | Hour | 58.70 | 1038.70 | 171.60 | 1269.00 |
| 24 | Diesel generating set 50 KVA | Hour | 73.30 | 1558.10 | 171.60 | 1803.00 |
| 25 | Diesel Loco 45 hp | Hour | 337.40 | 876.40 | 214.50 | 1428.30 |
| 26 | Dewatering pump 5 hp (diesel) | Hour | 9.10 | 129.80 | 143.50 | 282.40 |
| 27 | Dewatering pump 5 hp (electric) | Hour | 2.70 | 42.30 | 107.60 | 152.60 |
| 28 | Dewatering pump 10 hp (diesel) | Hour | 13.70 | 259.70 | 143.50 | 416.90 |
| 29 | Dewatering pump 10 hp (electric) | Hour | 5.90 | 84.60 | 107.60 | 198.10 |
| 30 | Dewatering pump 20 hp (diesel) | Hour | 43.50 | 519.40 | 143.50 | 706.40 |
| 31 | Dewatering pump 20 hp (electric) | Hour | 11.20 | 169.20 | 107.60 | 288.00 |
| 32 | Drifter | Hour | 283.90 | 0.00 | 456.30 | 740.20 |
| 33 | Drilling jumbo | Hour | 335.30 | 70.10 | 228.80 | 634.20 |
| 34 | Dumper 4.5 cum | Hour | 531.00 | 654.40 | 292.00 | 1477.40 |
| 35 | Geophysical Electric resistivity meter | Hour | 95.70 | 0.00 | 0.00 | 95.70 |
| 36 | Grouting pump | Hour | 21.10 | 42.30 | 343.20 | 406.60 |
| 37 | Guniting / sand blast equipment | Hour | 109.30 | 0.00 | 286.00 | 395.30 |
| 38 | Ice plant & accessories 30 t / day | Hour | 163.60 | 1205.50 | 171.60 | 1540.70 |
| 39 | Jack hammer | Hour | 17.30 | 0.00 | 429.00 | 446.30 |
| 40 | Needle vibrator 40 mm (petrol) | Hour | 6.90 | 27.50 | 205.90 | 240.30 |
| 41 | Needle vibrator 40 mm (electric) | Hour | 7.20 | 8.50 | 205.90 | 221.60 |
| 42 | Needle vibrator 60 mm (petrol) | Hour | 7.20 | 41.30 | 205.90 | 254.40 |
| 43 | Needle vibrator 60 mm (electric) | Hour | 8.80 | 12.70 | 205.90 | 227.40 |
| 44 | Planing machine 4 m stroke | Hour | 111.40 | 126.90 | 274.60 | 512.90 |
| 45 | Plate shearing machine upto 12 mm | Hour | 39.80 | 169.20 | 182.50 | 391.50 |
| 46 | Pneumatic placer 0.5 cum | Hour | 153.30 | 0.00 | 112.10 | 265.40 |
| 47 | Pneumatic tamper | Hour | 18.30 | 0.00 | 343.20 | 361.50 |
| 48 | Pug cutting machine | Hour | 6.50 | 4.20 | 0.00 | 10.70 |
| 49 | Pusher leg | Hour | 11.90 | 0.00 | 0.00 | 11.90 |

HIRE CHARGES OF MACHINERY

FOR THE YEAR : 2021-22

| S.No | Description of machinery | Unit | Hire charge in Rs | Fuel charge in Rs | Crew Charge in Rs. | Total in Rs |
|------|---|------|-------------------|-------------------|--------------------|-------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 50 | Road roller diesel 10 t | Hour | 179.20 | 1168.60 | 278.30 | 1626.10 |
| 51 | Shovel 0.50 cum 75 hp | Hour | 915.70 | 779.00 | 304.20 | 1998.90 |
| 52 | Shovel 0.85 cum 110 hp | Hour | 1529.70 | 1428.30 | 304.20 | 3262.20 |
| 53 | Stationery derrick crane | Hour | 75.00 | 0.00 | 0.00 | 75.00 |
| 54 | Tipper 5 cum | Hour | 404.90 | 490.80 | 228.20 | 1123.90 |
| 55 | Tipping tub 1.5 cum | Hour | 57.90 | 0.00 | 0.00 | 57.90 |
| 56 | Tower crane 5 tonne | Hour | 749.10 | 220.00 | 243.40 | 1212.50 |
| 57 | Transformer 250 KVA | Hour | 5010.10 | 0.00 | 0.00 | 5010.10 |
| 58 | Truck 10 t | Hour | 366.90 | 490.80 | 225.20 | 1082.90 |
| 59 | Truck mounted derrick crane 5 t | Hour | 476.90 | 490.80 | 225.20 | 1192.90 |
| 60 | Upright drilling machine/Grinder | Hour | 20.20 | 42.30 | 251.60 | 314.10 |
| 61 | Ventilation fan 20 hp | Hour | 11.30 | 169.20 | 37.10 | 217.60 |
| 62 | Vibratory pad foot roller 8 t | Hour | 1237.90 | 1687.90 | 343.20 | 3269.00 |
| 63 | Wagon drill | Hour | 169.80 | 0.00 | 365.00 | 534.80 |
| 64 | Water tanker 8000 ltr | Hour | 380.50 | 490.80 | 225.20 | 1096.50 |
| 65 | Welding set | Hour | 15.10 | 101.50 | 0.00 | 116.60 |
| 66 | Winch 35 hp (electric) | Hour | 123.80 | 207.30 | 343.20 | 674.30 |
| 67 | Hydraulic Truck Crane 30T | Hour | 2915.70 | 1927.00 | 685.20 | 5527.90 |
| 68 | Hydraulic Truck Crane 16T | Hour | 2071.20 | 1704.20 | 685.20 | 4460.60 |
| 69 | Heavy Duty Airless Spray Painting Equipment | Hour | 112.70 | | | 112.70 |
| 70 | Concrete Placer Pump 25 Cum/Hr | Hour | 858.30 | 507.60 | 214.50 | 1580.40 |
| 71 | Tractor with 2 T roller | Hour | | | | 345 |