



**Tender No. AII/EN/WC/ROBs/1(2015-16) DATE: 02.02.2016**

**For**

Construction of 2 Nos. Two Lane ROBs (including approaches & LHS) in lieu of Level crossings No. 104 & 108 at Km. 555/4-5 at Sirohi Road Yard & Km. 565/0-1 at Banas Yard of Madar-Palanpur Section of Ajmer Division of North Western Railway.

**FINANCIAL BID  
(PACKET-B)**

**TENDER DOCUMENT  
February - 2016**

**Employer:  
DEDICATED FREIGHT CORRIDOR CORPORATION OF INDIA LIMITED  
(A GOVERNMENT OF INDIA ENTERPRISE)  
Under  
MINISTRY OF RAILWAYS**

## GENERAL INFORMATION / DATA SHEET

|  |   |
|--|---|
| TENDER NOTICE NO.  | <b>AII/EN/WC/ROBs/1(2015-16)      DATE: 02.02.2016</b>  |
| Name of the work   | Construction of 2 Nos. Two Lane ROBs (including approaches & LHS) in lieu of Level crossings No. 104 & 108 at Km. 555/4-5 at Sirohi Road Yard & Km. 565/0-1 at Banas Yard of Madar-Palanpur Section of Ajmer Division of North Western Railway. |
| (a) Tender Value   | <b>Rs 51,25,51,880/-</b>  |
| (b) Completion Period  | <b>20 months</b>  |
| (c) Earnest Money  | <b>Rs. 27,12,800/-</b>  |
| (d) Date and Time of Issue of Tender                               | <b>From 05.02.2015 to 09.03.2016 on all working days from 10:00 hrs. to 17:00 hrs. &amp; on 10.03.2016 from 10:00 hrs. to 12:00 hrs. against the prescribed fee of Rs. 25000/- which is not refundable.</b>                                     |
| (e) Last date and Time of submission of Tender                     | <b>10.03.2016 upto 15:00 hrs</b>  |
| (f) Date and Time of Opening of Tender (Technical bids - Packet A) | <b>10.03.2016 at 15:30 hrs</b>  |
| (g) Validity of offer  | 90 days   |
| (h) Retention Money / Security Deposit                             | 5 % of Contract Value   |
| (i) Performance Bank Guarantee                                     | Performance Guarantee (PG) have to submit within 30(thirty) days from the date of issue of Letter of Acceptance (LOA), amounting to 5% of the contract value in the form as give in clause 16.4 of GCC.   |

**SUMMARY OF PRICES**

**Name of work:-** Construction of 2 Nos. Two Lane ROBs (including approaches & LHS) in lieu of Level crossings No. 104 & 108 at Km. 555/4-5 at Sirohi Road Yard & Km. 565/0-1 at Banas Yard of Madar-Palanpur Section of Ajmer Division of North Western Railway.

| Sl. No. | Description of works   | Cost as per RUIDP SOR 2013 | Rates to be quoted in figures & words (Clearly mention above / below / at par on updated DFCCIL Rate / cost given in column 3) |
|---------|--|----------------------------|--|
| 1       | 2  | 3                          | 4  |
| 1.      | Execution of all works as per Schedule "A"<br><b>(Items as per RUIDP SOR 2013)</b> | <b>50,06,73,370.10</b>     | .....%age Above/ Below/ At par (in figures)<br>.....   |
| 2.      | Execution of all works as per Schedule "B"<br><b>(NS Items)</b>                    | <b>81,78,509.30</b>        | .....<br>%age Above/ Below/ At par (In words) on the schedule.   |
| 3.      | Execution of all works as per Schedule "C"<br><b>(NS Items-Misc.)</b>              | <b>37,00,000.00</b>        |  |
|         | <b>Grand Total</b>   | <b>51,25,51,879.40</b>     |  |

**Notes:-**

- (i) The above prices are inclusive of all taxes, duties including Excise duty, Sales Tax, Octroi, Local levies, Works Contract Tax etc.
- (ii) The tenderer should quote single percentage above / par / below for complete schedule cost.
- (iii) If the uniform percentage quoted by the Tenderer does not clearly indicate whether the rates are above/at par/below the estimated rates then through sign convention it will be considered to be on plus side and evaluated accordingly.
- (iv) Rate of item payable to contractor shall be as per above/below/at par on rates of schedule.

Signature of the Tenderer (s) with Seal

**SCHEDULE -1 SCHEDULE OF PRICES & TOTAL PRICES**

| <b>SCHEDULE-A : RUIDP SOR 2013 ITEMS</b> |                               |   |             |            |                   |               |
|--|-------------------------------|---|-------------|------------|-------------------|---------------|
| <b>Sr. No.</b>                           | <b>Refer (RUIDP SOR 2013)</b> | <b>Particulars</b>  | <b>Unit</b> | <b>Qty</b> | <b>Rate (Rs.)</b> | <b>Amount</b> |
| 1.                                       | 1.1                           | Carriage of material by mechanical transport including loading, unloading and stacking  |             |            |                   |               |
| 2.                                       | 1.1.1                         | Earth@lead for 5 Km   | Cum         | 3235       | 88.98             | 287850.3      |
| 3.                                       | 1.1.3                         | Stone,boulders, gravelly material@lead for 5 Km   | Cum         | 300        | 83.74             | 25122         |
| 4.                                       | 1.1.5                         | Brick Tiles @ lead for 5 Km   | Cum         | 300        | 113.89            | 34167         |
|  | 2.1                           | Cutting of trees, including cutting of trunks, branches and removal of stumps, roots, stacking of serviceable material with all lifts and up to a lead of 1000 mtrs and earth filling in the depression/pit to required compaction as per MoRT&H specification clause 201. (Measurment of girth to be done at height of 1 m above ground level)   |             |            |                   |               |
| 5.                                       | 2.1.1                         | Girth from 300 mm to 600 mm   | each        | 20         | 938               | 18760         |
| 6.                                       | 2.1.2                         | Girth from 600 mm to 900 mm   | each        | 18         | 1180              | 21240         |
| 7.                                       | 2.1.3                         | Girth from 900 mm to 1800 mm  | each        | 32         | 1880              | 60160         |
| 8.                                       | 2.1.4                         | Girth from 1800 mm to 2700 mm   | each        | 7          | 3390              | 23730         |
| 9.                                       | 2.1.5                         | Girth above 2700 mm   | each        | 2          | 6410              | 12820         |
| 10.                                      | 2.2                           | Clearing Grass and Removal of Rubbish (Maximum 150mm) by manual means and disposal at a lead of 50 metres as per MoRT&H specification clause 201  | hectare     | 1          | 17100             | 17100         |
|  | 2.3                           | Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to a lead of 50 metres from road boundary including removal and disposal of top organic soil not exceeding 150 mm in thickness as directed by Engineer |             |            |                   |               |
| 11.                                      | 2.3.1                         | In area of light jungle   | hectare     | 0.2        | 51200             | 10240         |
| 12.                                      | 2.3.2                         | In area of thorny jungle  | hectare     | 3.05       | 60300             | 183915        |
|  | 2.4                           | Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead of 50 metres as directed by Engineer                        |             |            |                   |               |
| 13.                                      | 2.4.1                         | Lime Concrete, cement concrete grade M-10 (1:5:10) and below  | cum         | 153        | 317               | 48501         |
| 14.                                      | 2.4.2                         | Cement concrete M-15 & M-20 and PCC blocks  | Cum         | 153        | 771               | 117963        |
|  | 2.4.4                         | Dismantling Brick / Tile work   |             |            |                   |               |
| 15.                                      | 2.4.4.2                       | In cement mortar  | Cum         | 257        | 249               | 63993         |

|     |         |  |      |       |      |         |
|-----|---------|--|------|-------|------|---------|
|     | 2.4.5   | Dismantling Stone Masonry  |      |       |      |         |
| 16. | 2.4.5.2 | Rubble Stone Masonry in cement mortar  | Cum  | 153   | 249  | 38097   |
|     | 2.9     | Dismantling of flexible pavements and disposal of dismantled materials up to a lead of 50 metres, stacking serviceable and unserviceable materials separately as directed by Engineer.   |      |       |      |         |
| 17. | 2.9.1   | Bituminous courses   | Cum  | 1830  | 1020 | 1866600 |
| 18. | 2.9.2   | Granular Course  | Cum  | 2382  | 682  | 1624524 |
| 19. | 2.10    | Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled materials up to a lead of 1000 metres, stacking serviceable and unserviceable materials separately as per MoRT&H specification clause 202.  | Cum  | 263   | 976  | 256688  |
| 20  | 2.16    | Removal of telephone / electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and upto lead of 1000 meters and stacking serviceable material and unserviceable material separately as per MoRT&H specification clause 202.  | each | 20    | 717  | 14340   |
|     | 4.2     | Earth work in excavation for roadway, including trimming bottom and side slopes in accordance with requirement of line, grades and cross sections, including disposal of surplus material with all lift and lead upto 1.0 km as per MoRT&H specification clause 301.   |      |       |      |         |
| 21  | 4.2.1   | In all type of soil.   | cum  | 1156  | 171  | 197676  |
| 22  | 4.4     | Construction of embankment with approved material obtained from borrow pit with all lifts and leads, transporting to site, spreading, grading to required slope and compacting by vibratory roller 8-10 tonne to meet requirement of table 300-2 including cost of compensation for earth taken from private land complete as per MoRT&H specification clause 305. (Lead taken upto 5 km)  | cum  | 4170  | 196  | 817320  |
| 23  | 4.6     | Construction of subgrade and earthen shoulders with approved material obtained from borrow area with all lifts & leads, transporting to site, spreading, grading to required slope and compacted in layers not exceeding 200mm thickness at OMC, with vibratory roller of 80-100 KN static weight or more to attain a density 97% maximum dry density to meet requirement of table No.300-2 as per MoRT&H specification clause 305. (Lead taken upto 5 km) | cum  | 11161 | 223  | 2488903 |
|     | 4.8     | Compacting original ground   |      |       |      |         |

|    |         |  |     |      |      |         |
|----|---------|--|-----|------|------|---------|
| 24 | 4.8.2   | Loosening and recompacting original ground below embankment including Loosening leveling and recompacting original ground supporting embankment to facilitate placement of of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling by vibratory roller 8-10 tonne so as to achieve minimum dry density as given in table 300-2 for embankment construction as per MoRT&H specification clause 305.3.4. | Cum | 1002 | 23   | 23046   |
|    | 4.9     | Earth work in excavation in foundation, trenches etc. including dressing of sides and ramming of bottoms, including getting out the excavated material, refilling after laying pipe/ foundation and disposal of surplus excavated material at a lead upto 50m suitable site as per direction of Engineer for following depths, below natural ground / Road top level   |     |      |      |         |
|    | 4.9.1   | In all types soils/ saturated soil such as moorum, sand, sandy silt, clay, black cotton soil, kankar, etc.   |     |      |      |         |
| 25 | 4.9.1.1 | Depth upto 1.5m .  | Cum | 9653 | 169  | 1631357 |
| 26 | 4.9.1.2 | Add extra for over all depth of excavation above 1.5 m and upto 3.0m over item no 4.9.1.1  | Cum | 2233 | 25.5 | 56941.5 |
| 27 | 4.9.1.3 | Add extra for over all depth of excavation above 3.0 m and upto 4.5m over item no 4.9.1.1  | Cum | 1019 | 54.5 | 55535.5 |
| 28 | 4.9.1.4 | Add extra for over all depth of excavation above 4.5 m and upto 6.0m over item no 4.9.1.1  | Cum | 155  | 88   | 13640   |
|    | 4.9.2   | In ordinary rock   |     |      |      |         |
| 29 | 4.9.2.1 | Depth upto 1.5m .  | Cum | 907  | 730  | 662110  |
| 30 | 4.9.2.2 | Add extra for over all depth of excavation above 1.5 m and upto 3.0m over item no 4.9.2.1  | Cum | 835  | 109  | 91015   |
| 31 | 4.9.2.3 | Add extra for over all depth of excavation above 3.0 m and upto 4.5m over item no 4.9.2.1  | Cum | 325  | 236  | 76700   |
| 32 | 4.9.2.4 | Add extra for over all depth of excavation above 4.5 m and upto 6.0m over item no 4.9.2.1  | Cum | 45   | 380  | 17100   |
|    | 4.9.3   | In hard rock (required blasting) including Blasting materials  |     |      |      |         |
| 33 | 4.9.3.1 | Depth upto 1.5m .  | Cum | 180  | 1190 | 214200  |
| 34 | 4.9.3.2 | Add extra for over all depth of excavation above 1.5 m and upto 3.0m over item no 4.9.3.1  | Cum | 180  | 239  | 43020   |
| 35 | 4.9.3.3 | Add extra for over all depth of excavation above 3.0 m and upto 4.5m over item no 4.9.3.1  | Cum | 180  | 525  | 94500   |
| 36 | 4.9.3.4 | Add extra for over all depth of excavation above 4.5 m and upto 6.0m over item no 4.9.3.1  | Cum | 10   | 869  | 8690    |
|    | 4.9.4   | In hard rock (Blasting prohibited)   |     |      |      |         |
| 37 | 4.9.4.1 | Depth upto 1.5m .  | Cum | 105  | 2360 | 247800  |
| 38 | 4.9.4.2 | Add extra for over all depth of excavation above 1.5 m and upto 3.0m over item no 4.9.4.1  | Cum | 105  | 472  | 49560   |

|    |          |   |       |      |       |         |
|----|----------|---|-------|------|-------|---------|
| 39 | 4.9.4.3  | Add extra for over all depth of excavation above 3.0 m and upto 4.5m over item no 4.9.4.1   | Cum   | 105  | 1040  | 109200  |
| 40 | 4.9.4.4  | Add extra for over all depth of excavation above 4.5m and upto 6.0m over item no 4.9.4.1  | Cum   | 30   | 1720  | 51600   |
|    | 4.10     | Add extra over item no 4.9.1, 4.9.2, 4.9.3 and 4.9.4 in RUIDP SOR for excavation in saturated soil, silt and sludge where pumping or bailing out of water is required including shoring strutting where required and dewatering, where width is upto 6 metre  |       |      |       |         |
|    | 4.10.1   | Excavation depth from ground level 0.0 to 9.0 m   |       |      |       |         |
| 41 | 4.10.1.1 | Excavation from Encountered depth of water table 0.0 to 1.5 m   | Cum   | 895  | 34    | 30430   |
| 42 | 4.10.1.2 | Excavation from Encountered depth of water table 1.5 to 3.0 m   | Cum   | 675  | 67.5  | 45562.5 |
| 43 | 4.10.1.3 | Excavation from Encountered depth of water table 3.0 to 4.5 m   | Cum   | 465  | 135   | 62775   |
| 44 | 4.10.1.4 | Excavation from Encountered depth of water table 4.5 to 6.0 m   | Cum   | 105  | 203   | 21315   |
|    | 5.18     | <b>SITE OFFICE</b>  |       |      |       |         |
| 45 | 5.18.1   | Providing, arranging, managing and maintaining 500 sq.ft. well furnished office and well equipped Laboratory with 3 tables, 10 chairs, 2 steel almirah, one computer with printer & operator, sufficient number of display etc. to the satisfaction of the Project Manager including Electrical, Water expenses etc. For execution of this item the date of start shall be considered only when the Contractor has actually rented/constructed the required premises established the office & Laboratory as per requirement. This item shall remain valid only for original contact period; no additional payment shall be made for whatsoever reason even if time extension is provided or date of completion is extended. This office and laboratory including furniture and all other equipment shall be property of contractor after completion of Project. | month | 40   | 18000 | 720000  |
|    | 7.1      | Providing, laying, spreading and compacting of granular sub-base by providing close graded Material, mixing in a mechanical mix plant at OMC, carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per MoRT&H specification clause - 401 including all material, labour, machinery, lighting, guarding and maintenance of diversion.   |       | -    | -     | -       |
| 46 | 7.1.1    | Grading - I Material  | Cum   | 3973 | 1080  | 4290840 |

|    |       |  |     |         |      |           |
|----|-------|--|-----|---------|------|-----------|
|    | 7.5   | Providing laying, spreading and compacting stone aggregates of specific sizes as per Table 400-7 to Water Bound Macadam specification including spreading in uniform thickness; hand packing, rolling with power roller 8-10 tonnes, in stages to proper grade and camber, applying and brooming requisite type of screening (Table 400-8) binding materials to fill up the interstices of coarse aggregates, watering (with water browser) and compacting to required density, making necessary earthen bund to protect edges as per clause 404 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion complete   |     |         |      |           |
| 47 | 7.5.4 | Crusher Broken Grade III (53-22.4mm)   | Cum | 360     | 1480 | 532800    |
| 48 | 7.6   | Providing, laying, spreading (with paver finisher only) and compacting wet mix macadam (WMM) base course comprising of graded stone aggregate and granular material conforming to MoRT&H specifications (Table 400-II) in layers of equal compacted thickness each consolidated, including pre-mixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tippers to site, laying in uniform layers in base course on a well prepared sub-base/ base course and compacting with power vibratory-roller to achieve the desired density complete as per MoRT&H specification clause - 406 including all material, labour, machinery, lighting, guarding and maintenance of diversion. | Cum | 4147    | 1300 | 5391100   |
| 49 | 8.1   | Providing and applying priming coat over prepared surface of granular base with bitumen emulsion as per IS:8887 and approved quality @ 0.60kg/sqm with the help of spray set fitted on bitumen container (boiler) after cleaning the surface including removing of binding material and other foreign matter with wire brushes and small picks, sweeping with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.   | sqm | 20567   | 27   | 555309    |
| 50 | 8.2   | Extra for additional bitumen emulsion used in above item for every 1kg per 10 sqm  | sqm | 30850.5 | 4.5  | 138827.25 |
| 51 | 8.3   | Providing and applying tack coat on the prepared surface with bitumen emulsion as per IS:8887 and approved quality @0.2kg/ sqm with the help of spray set fitted on bitumen container (boiler) after cleaning the surface with brooms or soft brushes and finally dusting with old gunny bags and compressed air to receive bituminous   | sqm | 23746   | 9.5  | 225587    |



|    |        |   |     |         |      |          |
|----|--------|---|-----|---------|------|----------|
|    |        | treatment complete as per clause 502 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.  |     |         |      |          |
| 52 | 8.4    | Extra for additional bitumen emulsion used in above item for every 1kg per 10 sqm [for 0.015kg/Sqm Rate $4.5 \times 0.15 = 0.675$ ]   | sqm | 3561.90 | 4.50 | 16028.55 |
|    | 8.8    | Providing and laying 50-75 mm compacted thick design mix (approved by Engineer) Dense Bituminous Macadam on prepared surface with specified graded crushed aggregates as per Table 500-9, 500-10 with bitumen binder set (including cost of anti-stripping compound wherever required) for base/ binder course including loading of material with F.E. loader, heating and mixing of stone aggregate, filler and bitumen in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensor control as per clause 504.3.5 to the required level and grade, compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa to achieve the desired density (approximately 2.3 tonne/cum) complete as per clause 507 of MoRT&H specification but excluding primer/tack coat, including all material, labour, machinery, lighting, guarding and maintenance of diversion. |     |         |      |          |
| 53 | 8.8.2  | Grade-II with Bitumen VG-grade 30 @ 4.50 %, lime filler @ 2% (percent by weight of total mix)   | Cum | 1635    | 7130 | 11657550 |
|    | 8.10   | Providing and laying 30-45 mm compacted thickness Bituminous Concrete as per design mix (approved by Engineer) on prepared surface with specified grade stone aggregate as per Table - 500-18 with bitumen for wearing course including loading of aggregate with F.E. loader and hot mixing of stone aggregate and bitumen (including cost of anti-stripping compound wherever required) in computerised hot mix plant, transporting the mixed material by tippers to paver and laying with paver finisher fitted with electronic sensing device (as per clause 504-3.5) to the required level and grade and compacting by power rollers and vibratory rollers or 150 to 250 KN pneumatic tyred roller with TP = 0.7 Mpa, to achieve the desired density complete as per clause 509 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion but excluding primer/tack coat.   |     |         |      |          |
| 54 | 8.10.2 | Grade-II with bitumen of grade CRMB-60 @ 6% (percent by weight of total mix)  | Cum | 916     | 8870 | 8124920  |

|    |        |   |       |       |     |         |
|----|--------|---|-------|-------|-----|---------|
| 55 | 8.16   | Providing and laying 25 mm thick bitumen mastic asphalt wearing course with paving grade bitumen meeting the requirements given in table 500-29 (including cost of anti-stripping compound wherever required) @ 14-17% (by weight) as per job mix formula, coarse aggregate as per Table 500-32, fine aggregate as per Table 500-31 and lime stone powder as filler, prepared by using mastic cooker and laid to required level and grade after cleaning the surface, including providing antiskid surface with bitumen precoated finegrained hard stone chipping of 13.2 mm nominal size @ 0.005cum per 10 sqm and at an approximate spacing of 10 cm center to center in both directions, pressed into surface when the temperature of surfaces not less than 100 degree Centigrade, protruding 1 mm to 4 mm over mastic surface, all complete including all material, labour, machinery, lighting, guarding and maintenance of diversion complete as per clause 515 of MoRT&H specification. | Sqm   | 6009  | 544 | 3268896 |
| 56 | 10.1   | Providing and fixing precast cement concrete M-20 grade (Using mechanical Concrete Mixer) kerb stone top and bottom width 115 and 165 mm respectively, 250 mm high on 150 mm thick PCC M-10 grade foundation as per design, including fixing at site as per clause 408 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.  | metre | 4370  | 244 | 1066280 |
|    | 10.5   | Painting two coats on specified surface with synthetic enamel paint of approved brand and shade, after thorough cleaning and necessary filling to give even shade as per clause 803 of MoRT&H Specification including all material, labour.   |       |       |     |         |
| 57 | 10.5.1 | On New Plastered concrete Surface   | Sqm   | 19477 | 83  | 1616591 |
| 58 | 10.8   | Providing and laying marking of center line and stop line etc with hot thermoplastic compound 2.5 mm thick on road/ plain surface, including reflectorising glass beads @ 250 gms per sqm area with special applicator machine, as per IRC:35 including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control involved. The finished surface to be level, uniform and free from streaks and holes as per clause 803 of MoRT&H Specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.  | Sqm   | 909   | 803 | 729927  |
|    | 10.9   | Providing and fixing of retro- reflectorised cautionary, mandatory and informatory sign as per IRC :67 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminium sheeting, 1.5 mm thick supported on   |       |       |     |         |

|    |         |  |       |      |       |         |
|----|---------|--|-------|------|-------|---------|
|    |         | a mild steel angle iron post 3 metre long and size 75 mm x 75 mm x 6 mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing including all material, labour.   |       |      |       |         |
| 59 | 10.9.1  | 90 cm equilateral triangle   | each  | 20   | 4130  | 82600   |
| 60 | 10.9.3  | 60 cm circular   | each  | 20   | 3660  | 73200   |
| 61 | 10.9.4  | 80 mm x 60 mm rectangular  | each  | 20   | 5050  | 101000  |
| 62 | 10.9.7  | 90 cm high octagon   | each  | 8    | 6390  | 51120   |
|    | 10.13   | Providing and erecting overhead signs with a corrosion resistant 2mm thick aluminium alloy sheet reflectorised with high intensity retro-reflective sheeting of encapsulated lens type with vertical and lateral clearance given in clause 802.2 and 802.3 and installed as per clause 802.7 over a designed support system of galvanised steel trestles and trusses of sections and type as per structural design requirements and approved plans.  |       |      |       |         |
| 63 | 10.13.1 | Truss and Vertical Support   | tonne | 18   | 86900 | 1564200 |
| 64 | 10.13.2 | Aluminium alloy plate for over head sign   | Sqm   | 152  | 1300  | 197600  |
| 65 | 10.17   | Providing and fixing 50 mm dia G.I. steel pipe railing in 3 rows duly painted on medium weight steel channels (ISMC series) 100 mm x 50 mm, 1.2 metres high above ground, 2 m centre to centre, complete as per approved drawings including all material, labour.  | Metre | 500  | 2210  | 1105000 |
| 66 | 10.19   | Providing and fixing CAT's eye made of aluminium alloy size 75x100x22mm having 21 biconvex lenses embedded in circular disk of AS plastic on each side on road surface complete including all material, labour, diversion.   | Each  | 1556 | 195   | 303420  |
| 67 | 10.22   | Providing and fixing "SWISS" type bollard 134cm height made out of 1.25mm thick M.S. sheet welded in conical section having upper dia 15cm and lower dia 20cm with another attachment of mandatory 7mm thick plate and fixed with the help of 7cm long, 30cm dia chrome plated MS tube, this part is fixed on the body with another attachment of a cap 30x7cm, whole body is painted in black stove enamel and mandatory plate in azure blue with one compulsory keep left arrow with 10mm border reflective strip each of 7.5cm on body complete in all respect including all material, labour, diversion. | Each  | 60   | 1480  | 88800   |
| 68 | 10.23   | Providing and fixing of hazard marker made out of 2mm thick MS angle iron 25x25x3mm and fixed on channel posts 75x75x6 mm and hold fast at bottom whole body is painted in white stove enamel and 6 nos. 5cm dia reflective sheet on white reflective background with additional border of 1.25cm all around it  | Each  | 26   | 495   | 12870   |

|    |        |  |     |      |      |         |
|----|--------|--|-----|------|------|---------|
|    |        | complete in all respect including all material, labour, diversion.   |     |      |      |         |
| 69 | 12.1   | Filling of Pot- holes and patch repairs with Built up Spray Grout in two layers with 53-22.4mm size of aggregate upto 75mm depth and removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 506, compacting with 8-10 tonne power roller, trimming and finishing the surface to form a smooth continuous surface complete using Bitumen VG-grade 30 as per clause 503, 506 & 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion..   | Sqm | 2100 | 262  | 550200  |
| 70 | 12.2   | Filling of Pot- holes and patch repairs with open graded premix surfacing 20mm thick compacted with bitumen binder VG-grade 30 @ 14.60 kg/10 sqm and aggregate in Hot mix plant, transporting the mixed material with tipper and laying manually to the required level and grade, rolling with power roller, 8-10 tonne, removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material as per clause 511, compacting, trimming and finishing the surface to form a smooth continuous surface complete as per clause 3004.2 of MoRT&H specification including all material, labour, machinery, lighting, guarding and maintenance of diversion.. | Sqm | 1470 | 120  | 176400  |
|    | 13.4   | Providing, laying and compacting plain/ reinforced cement concrete of specified grade in foundation/ leveling course/ pile cap using concrete mixer and vibrater complete including cost of form work, as per drawing and technical specifications and as per clause 1100,1500,1700,2100 of MoRT&H specification including all scaffolding material, labour, machinery   |     |      |      |         |
| 71 | 13.4.1 | PCC Grade M -15  | Cum | 516  | 3840 | 1981440 |
| 72 | 13.4.2 | PCC Grade M -20  | Cum | 100  | 4310 | 431000  |
|    | 13.5   | Providing, laying and compacting design mix plain/ reinforced cement concrete of specified grade in foundation/ leveling course/pile cap using batching plant, transit mixer and concrete pump and vibrater including cost of form work, complete as per drawing and technical specifications as per clause 1100, 1500,1700,2100 of MoRT&H specification.  |     |      |      |         |

|    |        |  |                  |         |       |          |
|----|--------|--|------------------|---------|-------|----------|
|    |        | including all material, labour, machinery, and maintenance of diversion  |                  |         |       |          |
| 73 | 13.5.8 | RCC Grade M -35  | Cum              | 745     | 5100  | 3799500  |
| 74 | 13.24  | Providing and laying TMT bar reinforcement at any level in foundation/ pile/ pile cap complete as per drawing and clause 1600 of MoRT&H Specification including all material, labour and machinery.  | tonne            | 103     | 64600 | 6653800  |
|    | 14.6   | Providing and laying structural plain/ reinforced cement concrete (design mix) of specified grade in substructure at all levels using concrete mixer and vibrater, including cost of form work, as per drawing and technical specifications complete as per clause 1500, drawing and technical specifications complete as per clause 1500, 1700 and 2200 of MoRT&H specification including all material, labour, scaffolding etc.  |                  |         |       |          |
| 75 | 14.6.5 | RCC Grade M -25  | Cum              | 100     | 5150  | 515000   |
| 76 | 14.6.7 | RCC Grade M -35  | Cum              | 4261    | 5250  | 22370250 |
|    | 14.8   | Providing weep holes in brick/ stone masonry/ Plain/ Reinforced concrete abutment, wing wall/ return wall with following dia AC pipe, extending through the full width of the structure with slope of 1V : 20H towards drawing face complete as per drawing, technical specifications and clause 2205 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.  |                  |         |       |          |
| 77 | 14.8.1 | 100 mm dia   | metre            | 826     | 104   | 85904    |
| 78 | 14.9   | Supplying, fitting and fixing in position true to line and level Elastomeric Bearing conforming to IRC:83 (Part-II) section IX and clause 2005 of MoRT&H specification complete including all accessories as per drawing and technical specification and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc.   | Cubic centimetre | 1375920 | 0.75  | 1031940  |
| 79 | 14.10  | Supplying, fitting and fixing in position true to line and level POTPTFE bearing consisting of a metal piston supported by a disc or unreinforced elastomer confined within a metal cylinder, sealing rings, dust seals, PTFE surface sliding against stainless steel mating surface, complete assembly to be of cast steel/fabricated structural steel, metal and elastomer elements to be as per IRC: 83 part-I & II respectively and other parts conforming to BS: 5400, section 9.1 & 9.2 and clause 2006 of MoRT&H Specifications complete as per drawing and approved technical specifications and as per clause 2000 & 2200 of MoRT&H Specification including all scaffolding, material, labour, machinery etc. | per tonne load   | 9900    | 308   | 3049200  |

|    |         |  |     |        |      |           |
|----|---------|--|-----|--------|------|-----------|
| 80 | 14.11   | Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2504.2.2. of MoRT&H specifications with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and technical specification including all material, labour, machinery as per clause 710.1.4 of IRC:78 and clause 2200 of MoRT&H specification.   | Cum | 5841   | 1150 | 6717150   |
|    | 14.12   | Back filing in foundation, trench behind abutment, wing wall and return wall etc and below pipe bed in layers not exceeding 20cm in depth, consolidating each deposited layer compacted by mechanical means with all lead and lift as per drawing and technical specification including all material, labour, machinery as per clause 2100 and 2200 of MoRT&H specification including all material, labour, machinery.   |     |        |      |           |
| 81 | 14.12.1 | Using selected granular material (as per clause 2200 of MoRT&H).   | Cum | 1373   | 836  | 1147828   |
| 82 | 14.14   | Providing and laying precast cement concrete M-30 Grade 100mm thick paving blocks of approved shape and size (not less than 0.20 sqm), over 100mm thick PCC M-10 Grade bedding (duly compacted) including filling of joints with cement sand mortar (1:3) complete as per drawing and specification and as approved by Engineer.   | Sqm | 1960   | 975  | 1911000   |
| 83 | 14.16   | Fabrication, Welding, Riveting, bolting by HSFG bolts wherever required, supply, transportation to site, Assembling, Launching, Erecting of steel girder spans as per drawings and specifications approved by Railway and department for composite construction i.e. (Steel +RCC) of superstructure of the Road Over Bridge with contractor's own mild steel conforming to IS: 2062 Grade 250(B) with all welds, rivets, nuts bolts rivet materials, weld materials, HSFG bolts, service bolts, with other ancillary steel structures fixed to the girder where necessary in proper level and alignment and as per technical specifications etc. with contractor's own materials, fabrication, machinery, templates, fixtures, equipments tools and plants, transportation to site, skilled/ unskilled labour, excise duty., Octroi, sales tax and other taxes, all leads and lifts, descent, loading, unloading, crossing one or more Railway track if required etc. complete and as per technical specifications. The rate shall also be inclusive of cold straightening of deformed and bent girder parts | kg  | 868000 | 136  | 118048000 |

|    |           |  |     |      |       |          |
|----|-----------|--|-----|------|-------|----------|
|    |           | before their assembly. The structural steel to be used should be manufactured by SAIL/ RINL/ TISCO/ ESSAR/ JINDAL only. For Painting prior approval for superior brand/ make of the paint should be taken from engineer in charge.   |     |      |       |          |
|    |           | The rate shall be inclusive of supply, erection and dismantling of staging and scaffolding and other temporary arrangements required for the purpose of assembly, erection and launching of girders. The rate shall also be inclusive of cold straightening of deformed and bent girder parts before/after their assembly  |     |      |       |          |
|    |           | Metalising girder/ girder component such as cross girder, top chord channels, bracing etc of BG new steel girder as directed by engineer with epoxy paint spray not less than two layers after preparing surface by sand/grit blasting as per provision laid in Appendix VI of IRS B-1179 code ( latest alteration) including one coat wash primer one coat epoxy zinc crome primer and two coat of epoxy paint with approved paint conforming to IS specification for fabrication & erection of steel girder bridge ( RS B 1-79) as corrected up to date with contractor's own materials, tools, plants, labour, handling, rehandling if any including all lead, lifts descents, crossing of track/ obstruction etc. complete in all respectand as per direction of the engineer. |     |      |       |          |
|    |           | Note: 1. The fabrication of girders must be got done from RDSO approved firms only.  |     |      |       |          |
|    |           | 2. For Payment purpose, nominal weight of the girder as per drawing will only be considered.   |     |      |       |          |
|    | 14.17     | Providing and laying structural reinforced/ prestressed cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrater in superstructure at all levels including cost of steel form work complete as per clause 1500, 1600 and 1700 of MoRT&H specification including all scaffolding, material,labour, machinery etc   |     |      |       |          |
|    | 14.17.4   | RCC/PSC Grade M -40  |     |      |       |          |
| 84 | 14.17.4.2 | For T-beam & slab  | Cum | 2042 | 6410  | 13089220 |
|    | 14.18     | Providing, precasting, transportation and placing in position at all level precast pre/post-tensioned specified grade girders complete as per drawing and clause 1800 & 2300 of MoRT&H specifications including all material, labour, machinery including suitable crane etc.  |     |      |       |          |
| 85 | 14.18.1   | RCC M-40   | Cum | 2109 | 21200 | 44710800 |



|    |         |   |       |       |       |          |
|----|---------|---|-------|-------|-------|----------|
|    | 14.21   | Providing and laying structural Reinforced cement concrete (design mix) of specified grade using mechanical concrete mixer and vibrator in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 &1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc.  |       |       |       |          |
| 86 | 14.21.1 | RCC M-30  | Cum   | 528.4 | 5980  | 3159832  |
| 87 | 14.21.2 | RCC M-35  | Cum   | 456   | 6010  | 2740560  |
|    | 14.22   | Providing and laying structural Reinforced cement concrete (design mix) of specified grade using batching plant, transit mixer, concrete pump and vibrator in approach slab, friction slab, edge beam, footpath and kerb as per approved drawing and specification as directed by the Engineer as per clause 1500 &1700 of MoRT&H specification including all scaffolding, material, labour, machinery etc  |       |       |       |          |
| 88 | 14.22.2 | RCC M-35  | Cum   | 50    | 6340  | 317000   |
| 89 | 14.22.3 | RCC M-40  | Cum   | 44    | 6410  | 282040   |
| 90 | 14.23   | Designing, providing and erection of Precast RCC facia panels of thickness 180mm made with M-35 Grade concrete batching plant, transit mixer, concrete pump and vibrator for retaining earth with all elements and accessories including reinforcing element, complete as per approved drawing and clause 3100 of MoRT&H specifications including all material, labour, machinery etc. (Scope of work includes designing, getting approval, casting in yard including reinforcement, curing, storing, transporting, lifting, placing in position, erection with all necessary fasteners etc complete)                   | Sqm   | 8205  | 4620  | 37907100 |
| 91 | 14.24   | Providing, placing and compacting to desired density approved backfill material in layers as per approved methodology including testing for reinforced fill portion and random fill portion in the approaches between the Reinforced Soil (RS) wall panels as pre approved drawings as per clause 3103 of MoRT&H specification The soil should be predominately coarse grained not more than 10% of particle should pass 75 micron sieve The item shall be measured and paid for the finished volume of backfill and sub-grade placed in position excluding the volume of filter media at base and behind the RS walls. | Cum   | 27980 | 383   | 10716340 |
| 92 | 14.25   | Supplying, fitting and placing TMT bar reinforcement in sub structure/ superstructure at all level complete as per drawing and clause 1600 & 2200 of MoRT&H Specification including all material, labour, machinery etc.  | tonne | 1363  | 65700 | 89549100 |



|    |         |  |       |     |      |         |
|----|---------|--|-------|-----|------|---------|
| 93 | 14.27   | Providing and laying reinforced cement concrete wearing coat M-30 grade at any level including formwork and reinforcement @ 75kg/cum complete as per drawing and technical specification and as per clause 2702 of MoRT&H Specification including all material, labour, machinery etc.   | Cum   | 54  | 9720 | 524880  |
|    | 14.28   | Providing and laying Precast Reinforced cement concrete slab for footpath and median with approved finish, constructed with specified grade concrete as per dimensions in the approved drawing and at locations directed by the Engineer including form work and excluding reinforcement and complete as per clause 1500 & 1700 of MoRT&H specification including all material, labour, machinery.   |       |     |      |         |
| 94 | 14.28.2 | RCC M-25   | Cum   | 184 | 5200 | 956800  |
| 95 | 14.28.3 | RCC M-30   | Cum   | 145 | 5220 | 756900  |
| 96 | 14.29   | Construction of precast/ cast-in-situ RCC railing M-30 grade, true to line and grade, center to center spacing between vertical post not to exceed 2000mm leaving adequate space between vertical post for expansion, complete as per drawing and technical specification and as per clause 1500, 1600, 1700 & 2703 of MoRT&H Specification including all material, labour, machinery etc.   | Metre | 60  | 1590 | 95400   |
| 97 | 14.30   | Providing and fixing Mild steel railing including painted, complete as per drawing and technical specification and as per clause 1900 & 2703.2 of MoRT&H Specification including all material, labour, machinery etc.  | Metre | 110 | 2870 | 315700  |
| 98 | 14.32   | Providing, laying and fixing of strip seal expansion joint catering to maximum horizontal movement upto 70 mm complete as per approved drawings and as per clause 2600 of MoRT&H specifications to be installed by manufacturer's authorized representative ensuring to compliance to manufacturer's instruction for installation including preparing the edges of bridge, welding to exposed reinforcement, concreting with design mix of grade of bridge or M-35 whichever is richer including all material, labour, machinery etc complete. | Metre | 212 | 9060 | 1920720 |
| 99 | 14.33   | Providing and erecting Drainage Spouts with 0.15m long GI pipe 150mm dia and GI bolt 10mm dia with Galvanised MS flat clamp complete as per drawing and Technical specification as per clause 2705 of MoRT&H specifications including all material, labour, machinery etc.   | Each  | 124 | 862  | 106888  |

|     |         |   |       |      |      |         |
|-----|---------|---|-------|------|------|---------|
|     | 14.35   | Providing and constructing of Reinforced cement concrete crash barrier at the edges of the road, approaches to bridge structures and medians, constructed with specified grade concrete using mechanical mixer and vibrator with 450 mm long at expansion joints filled with pre-moulded asphalt filler board, keyed to the structure on which it is built and installed as per design and dimensions in the approved drawing and at locations directed by the Engineer, all as specified as per clause 809 of MoRT&H specification including all material, labour scaffolding etc  |       |      |      |         |
| 100 | 14.35.3 | RCC M-35  | Cum   | 497  | 5790 | 2877630 |
| 101 | 14.38   | Providing and erecting a "Thrie" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 85 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 2 m high with 1.15 m below ground level, all steel parts and fittings to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a space of channel section 150 x 75 x 5 mm, 546 mm long complete as per clause 810 of MoRT&H specification including all material, labour machinery etc.  | Metre | 201  | 4240 | 852240  |
| 102 | 14.39   | Providing and fixing G.I. Pipes railing of 80 mm dia. (Class B) over brackets of 16 mm thick MS plate with 200 mm at bottom & 120 mm at top with 200 mm height welded to 16 mm thick MS Plates of size 200 X 175 anchored with 400 mm long 4-12 mm dia. steel bars at the top of RCC crash barrier @1.0m c/c including fixing arrangement as per the drawing, clause 800 of MoRTH specification and as per the direction of the Engineer.   | Metre | 1100 | 1170 | 1287000 |
| 103 | 14.41   | Providing and applying elastic, elastomeric membrane forming system with anti carbonation and breathing properties. The system should be based on solvent free acrylic polymer with selected minerals fillers and should be ultra violet resistant, crack bridging type, carbonation resistant, breathable, environment friendly, water proofing coating. for anti carbonation equivalent air layer thickness denoted as R or SDCO2 $\geq$ 50mm and for breathability equivalent air layer thickness denoted as SDH2O shall be $\leq$ 4mm for vapour transmitting barrier. The system consist of one coat primer namely PREMIX 250 or equivalent @ 75-100 g/sqm. The consumption of main polymer namely EMCECOLORFLEX or equivalent to give film thickness of 200-225 microns(solid content,70% $\pm$ 3%) should be | sqm   | 20   | 355  | 7100    |

|     |         |   |       |      |      |         |
|-----|---------|---|-------|------|------|---------|
|     |         | application (either by roller or brush)and surface smoothness of concrete. The total dry film thickness of the coating should be min. 200 microns for the above system. Polymer coating should be in suitable shades, including cost of materials, cleaning, chipping and removing the dirt particles of the concrete slabs with wire brush & water, labour charges for filling the bug holes, cracks, joints etc. with one component polymer modified fine repair and cosmetic mortar, labour for applying above coating, scaffolding charges, all inclusive taxes.  |       |      |      |         |
| 104 | 14.42   | Providing, fixing, maintaining, shifting & refixing, barricading of minimum 2.0 mtr height at stipulated active site of the same project site, made with angle iron frame of 50x50x5mm and GI sheet of 0.63mm thick including primer painted initially, painting, lettering & border with reflective paint at the time of every shifing, traffic diversion arrangement, safety guard, suitable lightning arrangement during night, complete in all respect till completion of the project as per technical specification and direction of Engineer-In-charge and same shall be possessed by the contractor after completion of the Project. Payment under this item will be released:<br>(1) 50% At the time of Providing new barricading at the time of start of project at location and plan as approved by the Engineer & certification.<br>(2) 50% After completion of project including shifting re-erecting and maintaining the barricading in position, during entire construction tenure with requisite manpower /flagman etc. complete for guiding traffic and safety etc and dismantling after completion of project. | Sqm   | 2003 | 2650 | 5307950 |
|     | 19.6    | Providing, lowering, laying in trenches, aligning, fixing in position and double flanged (welded) centrifugally (spun) Ductile iron ISI marked K-9 grade pipes as per IS:8329-2000 (amended upto date), (including jointing and jointing material) complete including all material, labour, hydraulic testing and commissioning as per Technical Specifications and as per direction of Engineer  |       |      |      |         |
| 105 | 19.6.2  | 150 mm  | Metre | 20   | 3490 | 69800   |
|     | 19.14   | Providing, lowering, laying, aligning, fixing in position at and jointing at all level/ depths ISI marked HDPE pipes of PE-100 grade & PN-6 for potable water as per IS 4984 (amended upto date) in trenches in complete including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer.  |       |      |      |         |
| 106 | 19.14.1 | 90 mm dia   | metre | 5278 | 218  | 1150604 |
| 107 | 19.14.5 | 160 mm dia  | metre | 8482 | 664  | 5632048 |
| 108 | 19.14.9 | 250 mm dia  | metre | 112  | 1610 | 180320  |

|     |         |  |                    |       |      |         |
|-----|---------|--|--------------------|-------|------|---------|
| 109 | 29.2    | Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete:  | Kg                 | 24000 | 74.5 | 1788000 |
|     | 29.25   | Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.  |                    |       |      |         |
| 110 | 29.25.2 | In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.   | Kg                 | 4100  | 88.5 | 362850  |
|     | 30.20   | Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand).  |                    |       |      |         |
| 111 | 30.20.3 | Dark shade using ordinary cement.  | sqm                | 1845  | 660  | 1217700 |
|     | 31.41   | Providing and fixing on wall face Unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion. (i) Single socketed pipes  |                    |       |      |         |
| 112 | 31.41.2 | 110 mm diameter  | metre              | 5977  | 220  | 1314940 |
|     | 32.35   | Finishing walls wit Acrylic Smooth exterior paint of required shade  |                    |       |      |         |
| 113 | 32.35.1 | New work ( two or more coat applied @ 1.67 ltr./10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg / 10 sqm.)  | Sqm                | 13711 | 77   | 1055747 |
|     | 32.41   | Finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete.   |                    |       |      |         |
| 114 | 32.41.1 | On steel work  | sqm                | 20    | 118  | 2360    |
| 115 | 32.41.2 | On concrete work   | sqm                | 1198  | 122  | 146156  |
|     | 32.50   | Painting with synthetic enamel paint of approved brand and manufacturer of required colour to give even shade.   |                    |       |      |         |
| 116 | 32.50.1 | Two or more coats on new work  | sqm                | 351   | 66.5 | 23341.5 |
| 117 | 32.68   | Add extra over items of Cement Plaster / Cement Concrete Flooring/ Plain or RCC work providing and mixing admixture of synthetic fibre 6 mm / 12 mm @ rate of 125 gm.pack per 50 kg.of Cement or in the ratio of as specified by manufacture specification and direction of the Engineer with all leads and lifts. | Per Pack<br>125 gm | 40000 | 53   | 2120000 |
|     | 35.22   | Cleaning and removal of earth, silt, sludge, kankar, boulder, building material and garbage in existing nallah/drains including construction of bye pass arrangement to bypass water with 1.5m lift from ground level and lead upto 50 m   |                    |       |      |         |

|     |         |  |       |      |        |        |
|-----|---------|--|-------|------|--------|--------|
|     |         | including foul & saturated condition where pumping out or bailing out of water is required, including shoring, shuttering where required and dewatering. Making access for disposal and dressing disposal side as per the directed of the Engineer.  |       |      |        |        |
| 118 | 35.22.1 | Depth upto 1.50 m  | Cum   | 1925 | 286    | 550550 |
| 119 | 39.1    | Trenching in specified soil up to a depth of 60 cm .including removal and stacking of serviceable materials and then disposal by spreading and neatly leveling within a lead of 50 meters and making up the trenches area to proper levels by filling with earth or earth mixed with sludge or/and farm -yard manure before and after flooding with water(excluding cost of imported earth and sludge or farm yard manure) | Cum   | 21   | 170    | 3570   |
| 120 | 39.3    | Supplying and stacking good earth at site of work.Note: 1) Loading, unloading and carriage to be paid extra as per actual lead.2) Earth measured in stacks will be reduced by 20% for payment  | Cum   | 50   | 167    | 8350   |
| 121 | 39.4    | Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stacking.  | Cum   | 10   | 847    | 8470   |
|     | 39.12   | Grassing with 'Doobs' grass including watering and maintenance of the lawn for 30 days or more till the grass forms a thick lawn free from weeds and fit for moving including supplying good earth if needed.  |       |      |        |        |
| 122 | 39.12.2 | In rows 7.5 cm apart in either direction   | sqm   | 200  | 26     | 5200   |
| 123 | 39.22   | Planting permanent hedges including digging of trenches, 60 cm wide and 45 cm deep, refilling the excavated earth mixed with farmyard manure, supplied at the rate of 4.65 cum per 100 metres and supplying and planting hedge plants at 30 cm apart.  | Metre | 200  | 219    | 43800  |
| 124 | 39.23   | Maintenance of Hedge for one year  | Metre | 200  | 181    | 36200  |
| 125 | 39.24   | Planting Flowering Plants and Shrubs in Central Verge  | Km    | 0.4  | 80300  | 32120  |
| 126 | 39.25   | Maintenance of Flowering Plants and Shrubs in Central Verge for one Year.  | Km    | 0.4  | 176100 | 70440  |
| 127 | 39.30   | Planting of trees by the road side (Avenue trees) in 0.60 m dia holes, 1 m deep dug in the ground, mixing the soil with decayed farm yard/sludge manure, planting the saplings, backfilling the trench, watering, fixing the tree guard and maintaining the plants for one year.   | Each  | 400  | 1040   | 416000 |
| 128 | 39.36   | Providing and fixing MS iron tree guard 60 cm dia and 2 metre high above ground level formed of 4 Nos (25 x 6 mm) and 8 Nos (25 x 3 mm) vertical MS riveted to 3 Nos (25 x 6 mm) iron rings in two halves, bolted together with 8 mm dia and 30 mm long bolts including painting two   | Each  | 400  | 1990   | 796000 |

|     |           |  |         |      |      |        |
|-----|-----------|--|---------|------|------|--------|
|     |           | coats with paint of approved brand over a coat of priming, complete in all respects.   |         |      |      |        |
|     |           | Electrical Items for Road Light  |         |      |      |        |
|     | 43.4      | S&F following sizes of ISI marked steel conduit along with heavy duty accessories in surface /recessed using saddles, clamps, fasteners as required including cutting the wall and making good the same as required.   |         |      |      |        |
| 129 | 43.4.5    | 50 mm Group 1  | R. mtr. | 550  | 298  | 163900 |
|     | 44.1      | Supplying and drawing FR PVC insulated & unsheathed flexible copper conductor ISI marked (IS:694) of 1.1 kV grade and approved make in existing surface or recessed conduit/casing capping including making connections etc. as required.  |         |      |      |        |
| 130 | 44.1.7    | 2 x 2.5 sq.mm group 1  | Mtr.    | 3585 | 36   | 129060 |
| 131 | 44.1.9    | 3 x 2.5 sq.mm group 1  | Mtr.    | 200  | 55   | 11000  |
|     | 46.1      | P&F 240/415 V MCB of breaking capacity not less than 10 KA (B/ C/ D tripping characteristic) ISI marked IS 8828(1996)]/ conforming to IEC 60898 in existing board/sheets including making connections with lugs, testing etc. as required.   |         |      |      |        |
|     | 46.1.2    | Double pole MCB  |         |      |      |        |
| 132 | 46.1.2.1  | 6 A to 32 A rating group 1   | Each    | 229  | 488  | 111752 |
|     | 46.5      | P&F Recessed/ Surface mounting heavy duty horizontal type sheet steel Distribution board phophatised/ powder painted complete with copper bus bar, shorting link ,neutral link, earth link and din bar, conforming to IS13032 & IS8623 including making internal DB terminations with copper lugs , testing etc. as required                           |         |      |      |        |
|     | 46.5.6    | Double door (Three phase) Per phase isolation  |         |      |      |        |
| 133 | 46.5.6.2  | 2+12 Way   | Each    | 9    | 9750 | 87750  |
|     | 46.10     | P&F recessed/ surface mounting heavy duty Vertical type sheet steel Distribution board with provision of 8 way incomer, phophatised ,powder painted complete with insulated copper bus bar , neutral link, earth link and din bar, conforming to IS13032 & IS8623 including making internal DB terminations with copper lugs ,testing etc. as required |         |      |      |        |
|     | 46.10.2   | Double door (Three phase)  |         |      |      |        |
| 134 | 46.10.2.4 | 12 Way   | Each    | 9    | 8740 | 78660  |
|     | 48.22     | P&F of thermoplastic/ PVC cable junction boxes of following minimum sizes with IP65/ IP55 protection including threaded cable glands made of polyamide material, terminals complete in all respect.  |         |      |      |        |
| 135 | 48.22.4   | 150 x 110 x 70 (mm)) (10 Sq. mm)   | Each    | 40   | 642  | 25680  |

|     |           |  |      |       |      |         |
|-----|-----------|--|------|-------|------|---------|
|     | 51.1      | P/Laying XLPE insulated / P.V.C. sheathed cable of 1.1 KV grade with aluminium conductor Armoured of IS:7098-I/1554-1 approved make in ground as per IS:1255 including excavation of 30cmx75cm size trench, 25 cm thick under layer of sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection, testing etc. as required of size.  |      |       |      |         |
|     | 51.1.2    | 4.0 Sq.mm  |      |       |      |         |
| 136 | 51.1.2.1  | 2 core group-2   | Mtr. | 1100  | 104  | 114400  |
|     | 51.1.4    | 10.0 Sq.mm   |      |       |      |         |
| 137 | 51.1.4.3  | 4 core group-2   | Mtre | 17280 | 149  | 2574720 |
|     | 51.1.6    | 25 Sq.mm   |      |       |      |         |
| 138 | 51.1.6.4  | 4 core, group-I  | Mtre | 550   | 221  | 121550  |
|     | 51.1.7    | 35.0 Sq.mm   |      |       |      |         |
| 139 | 51.1.7.4  | 3.5 core, group-I  | Mtre | 200   | 245  | 49000   |
|     | 51.1.8    | 50.0 Sq.mm   |      |       |      |         |
| 140 | 51.1.8.4  | 3.5 core group-2   | Mtre | 8700  | 263  | 2288100 |
|     | 51.1.11   | 120.0 Sq.mm  |      |       |      |         |
| 141 | 51.1.11.4 | 3.5 core group-2   | Mtre | 5290  | 505  | 2671450 |
|     | 51.1.13   | 185.0 Sq.mm  |      |       |      |         |
| 142 | 51.1.13.4 | 3.5 core group-I   | Mtre | 6170  | 834  | 5145780 |
|     | 53.1      | P & Laying XLPE insulated IS:7098/II/85 of approved make H.T.cable for working voltage 11 K.V.Earthed direct in ground including excavation of 30cmx100cm size trench, 25cm layer of river sand, IInd class bricks covering, refilling earth, compaction of earth, making necessary connection testing etc.as required of size.  |      |       |      |         |
| 143 | 53.1.7    | 3 core 185.0 Sq.mm   | Mtre | 3800  | 1280 | 4864000 |
|     | 53.2      | Providing & making heat shrinkable type indoor/outdoor/straight through terminations/joint kit of approved make suitable for XLPE insulated 11 KV cable, with required components, prepration of cable ends,testing etc. as required of following sizes .  |      |       |      |         |
|     | 53.2.2    | Outdoor  |      |       |      |         |
| 144 | 53.2.2.3  | 3 core 120/150/185/225 Sq.mm   | Set  | 34    | 3465 | 117810  |
|     | 53.2.3    | Straight Through   |      |       |      |         |
| 145 | 53.2.3.3  | 3 core 120/150/185/225 Sq.mm   | Set  | 8     | 8160 | 65280   |
| 146 | 55.1      | Pipe Earthing as per IS:3043 with perforated 3.0 Mtr. Long, 40 mm dia. ' B ' class G.I. Pipe including all accessories like nut, bolts, reducer, nipple, wire meshed funnel, and C.C. finished chamber covered with hinged type with locking arrangement C.I. Cover, C.I. Frame of size 300mm x 300 mm and embodying the pipe complete with alternate layers salt and coke/ charcoal, testing of earth resistance as required. | each | 43    | 1650 | 70950   |



|     |           |   |      |     |       |         |
|-----|-----------|---|------|-----|-------|---------|
|     | 55.4      | S & Laying following size earth wire/strip in horizontal or vertical run in ground/surface/ recess including riveting, soldering, saddles, making connection etc. as required.  |      |     |       |         |
| 147 | 55.4.5    | 8 SWG G.I. Wire   | Mtr. | 500 | 8     | 4000    |
|     | 59.3      | P & F IP-65 protected street light luminaire on existing bracket suitable for HPSV/ MH LAMP, made out from powder coated single piece die cast aluminium housing, electrochemically brightened and anodized POT optics aluminium reflector, heat resistant and toughened glass cover and accessories like copper ballast, electronic ignitor, capacitor, holder prewired up to terminal block etc. as required including making connection testing etc. as required (without lamp)  |      |     |       |         |
| 148 | 59.3.3    | 1 X 250 Watt group-I  | Each | 40  | 5740  | 229600  |
|     | 59.12     | P & F high pressure sodium vapour/ High pressure mercury vapour/ Metal halide/ halogen lamp as required   |      |     |       |         |
|     | 59.12.1   | HPSV Elleptical lamp normal output  |      |     |       |         |
| 149 | 59.12.1.3 | 250 watt group-I  | Each | 40  | 578   | 23120   |
|     | 59.21     | Supply and erection of Octagonal pole of following length and dimension as per table E-20 with base plate on the cement concrete foundation of M-15 grade (1:1.5:3) with the help of anchor bolts of grade 6.8 (IS 1367 P III ). The pole shall be made of S-355JO grade steel sheet , folded lengthwise to obtained Octagonal shape, having single longitudinal seam weld and hot dipped galvanised internally & externally in accordance with IS 2629. The pole shall have a weatherproof flush door and locking arrangements. The complete work shall be supervised and certified by the manufacturers for satisfactory supply, erection, testing and commissioning.( SEE TABLE) |      |     |       |         |
| 150 | 59.21.4   | 10 Mtr. Group 1   | Each | 229 | 19600 | 4488400 |
|     | 59.22     | Supply, Erection and Fixing of hot dipped galvanised Overhang (60 X 3.25 mm) with cap (250 x 137.9 x 4.05 mm) over the existing poles   |      |     |       |         |
| 151 | 59.22.1   | Single arm overhang group 1   | Each | 229 | 935   | 214115  |
|     | 59.34     | P/ F IP-65/ IP-66 protected street light luminaries on existing bracket. Fixture made from powder coated single piece pressure die cast aluminum housing with heat dissipation fins on housing with high power LEDs of CREE/ NICHIA/ OSRAM/ PHILIPS make. Diffuser /glass cover for ensuring IP-65 protection for lamp and control gear compartment, system lumen output of 1500—8500 high power LED. Integrated driver shall be high efficiency having efficiency more than 85 % and in compliance to IEC standards. System life of 25000 burning hours with 70 % of   |      |     |       |         |



|     |           |  |      |     |       |         |
|-----|-----------|--|------|-----|-------|---------|
|     |           | initial lumens maintained. Fixture shall be in CE compliance.  |      |     |       |         |
|     | 59.34.1   | IP-65 protected LED street light luminaries  |      |     |       |         |
| 152 | 59.34.1.4 | LED street light fixture 110-120 watt group-I  | Each | 221 | 43000 | 9503000 |
|     | 60.3      | Supply and erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect   |      |     |       |         |
| 153 | 60.3.2    | 9.0 Mtr long as per Discom specification   | Each | 15  | 3220  | 48300   |
|     | 60.4      | Supply and erection of GI stay set as per Discom specification complete with long stay rod with anchor plate including stay clamps turn buckle and G.I stay wire tightened through strain insulator, in cement concrete 1:3:6 including excavation of pit-re-filling etc as reqd.  |      |     |       |         |
| 154 | 60.4.2    | Stay set of dia 16mm,1.8m long stay rod and anchor plate 300x300x6.4mm   | Each | 24  | 785   | 18840   |
|     | 60.9      | Supplying and drawing overhead steel core Aluminium conductor (ACSR) ISI marked (IS 398 part II-1996) on existing cross arms through insulator with all necessary T&P required including binding and twisting etc. complete in all respect as required as per Discom specification.  |      |     |       |         |
| 155 | 60.9.5    | 100 sqmm of (6/4.72 mm+1/1.57 mm) (Dog)  | Mtr  | 150 | 89    | 13350   |
|     | 60.18     | Supply and fixing 11kV Disc insulator (IS 731/1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specification of Discom).  |      |     |       |         |
| 156 | 60.18.1   | B & S type hardware & insulator  | Each | 30  | 965   | 28950   |
| 157 | 60.18.2   | T & C type hardware & insulator  | Each | 60  | 650   | 39000   |
| 158 | 60.20     | Supplying and laying earth conductor from electrode to source in ground/ floor/ wall on iron saddles etc as required including making connection duly soldered or crimped 7/3.15 mm hot dipped stay wire.  | Mtr  | 480 | 20    | 9600    |
| 159 | 60.22     | Supply and fixing of pillar box made of 2mm CRCA MS sheet of 415 volts 3 phase 4 wire triple pole and neutral type, complete in all respect as required. Including knife switch, HRC fuses with copper one piece U contacts base, brass studs and nuts, copper busbar for main and interconnection, MS angle frame of 50 x 50 x 6 mm grouted with C.C. of M-10 grade to achieve the height of 1.5 feet above the road level suitable for four outgoing.(400Amp capacity) | Each | 4   | 42500 | 170000  |

|     |         |  |      |    |       |       |
|-----|---------|--|------|----|-------|-------|
| 160 | 60.23   | Supply and fixing 100 Amp, 11kV Horn gap fuse set IS 9385 on existing DP structure with 6 nos 24kV/22kV post insulator (IS:5350 part III), hot dipped hard ware, fuse wire of required size etc. complete in all respect as per specification given by Discom. (Type tested by ERDA/CPRI)  | Each | 6  | 6050  | 36300 |
| 161 | 60.24   | Supply and fixing of 11kV, 400 Amp 3pole, central pot rotating double break type isolator (IS:9921 part I toV) without earth blade operating mechanism with GI spring loaded reverse loop type fixed contact, solid hard drawn electrolytic copper tubular moving contact with silver/ nickel plated at end points, 9 nos post insulator of 12 kV (IS:2554 & IS 5350 part III), hot dipped galvanising hard ware, nut, bolts etc complete in all respect as per specification of Discom.( Type tested by ERDA/CPRI.) | Each | 6  | 13200 | 79200 |
| 162 | 60.25   | Supply and fixing of distribution type Lightning arrester 9 kV, 5 kA (IS:3070) with mounting breaking to be installed on existing DP structure. (Type tested by ERDA/CPRI.)  | Each | 18 | 2390  | 43020 |
| 163 | 60.26   | Supply and fixing double pole structure for 11/0.4 Kv substation as per Discom specification complete in all respect as required including nuts and bolts etc (excluding the cost of poles) made of MS channel of 4 nos 100 x 50 x 6mm and 4 nos 75 x 40 x 6mm and MS flat 50 x 6mm as per Discom specifications.  | Each | 9  | 8570  | 77130 |
|     | 60.31   | P&F of thermoplastic/ PVC cable junction boxes (United/ HPL make) of following sizes including clamps for holding the box, cost of DIN rail for MCB mounting, connectors for cables terminals, threaded cable glands made of polyamide material etc. complete in all respect.  |      |    |       |       |
| 164 | 60.31.5 | supply and installation of spike of M.S rod 20mm dia 3.0 mrt long for earthing of (tower/pole) drive into earth by mechanical means structure connecting the spike with cross arm top hamper PCC pole, lattics tower toearth etc. complete as per technical specification of DISCOM.   | Each | 20 | 650   | 13000 |
|     | 71.1    | Dismantling of existing LT/HTelectric lines including poles/towers, ACSR conductors, guard wires, stay wire, insulators and other electrical items of the pole coming along the alignment of the road or in the plant premises and removal and transportation as well as disposal of all the items as per the direction of engineer incharge.(Serviceable material or can-dum material.)   |      |    |       |       |
| 165 | 71.1.1  | Dismantling of 33KV Lattice Tower (580 kg/520kg) with all accessories brackets, tophammer, chakri, V-Cross arms guard bracket, stay, insulators (pin /disc) etc.   | Each | 4  | 3000  | 12000 |

|     |         |   |      |      |       |        |
|-----|---------|---|------|------|-------|--------|
| 166 | 71.1.6  | Dismantling of LT line /joist/rail pole (PCC 8/9 mtr height) with existing street light fixtures, brackets, top hamper, earth guarding bracket, insulators, stay etc with ACSR conductor, 3 phase/ single phase, one neutral one earthwire and one street light phase )   | Each | 139  | 1200  | 166800 |
| 167 | 71.1.9  | Dismantling and rerolling of 11KV conductor any type  | Rmt  | 2190 | 8     | 17520  |
| 168 | 71.1.13 | Dismantling and reinstallation of 11KV Feeder pillar box any type   | Each | 20   | 3000  | 60000  |
|     | 71.2    | Fabrication supply and erection of new 11 KV line poles structures with all necessary required items for stringing the ACSR conductors insulators, V - cross arms, chakri, top hamper, brackets, stay and other items including reconnection of existing service lines of service connections.  |      |      |       |        |
| 169 | 71.2.2  | 11 KV pole 10 mtr height. (single phase/3 phase) R.S joist  | Each | 11   | 10000 | 110000 |
| 170 | 71.4    | MAIN CUBICAL PANEL / STREET LIGHT CONTROL PANEL P/F testing & commissioning of kiosk type weather proof out door main cubical panel size 750 mm X 1250 mm X 500 mm (app.) made out of 14 gauge MS sheet front and back both side openable duely hinged door with locking arrangement by providing both side held draft and all required hard wares. The cubical should be dust and vermin proof followed by coat of zimpholite primer and finally two coats of enamel gray paint. The cubical should be mounted with hard ware on angle iron frame size 50 X 50 X 6 mm and 1500 legs duly painted framed be grouted 750 mm below ground level with cement concrete 1:3:6 in 1000 X 500 X 600 mm and providing brick masonry along angle iron frame above G.L. They shall be in two section comprising as follows: | Each | 10   | 55000 | 550000 |
|     |         | (i) Providing & Fixing 415 V ,TP combination double break HRC switch fuse unit ,100 Amp. Rating for incoming supply with HRC fuse 100 Amp rating and BCH/L&T/EE/ Siemens/ ABB .   |      |      |       |        |
|     |         | (ii) Providing fixing timer switch TSQ 100 series 240 Volts, and full running service standered mounting with base of L & T or equivalent make including the cost of contactor and 63 amp. 50 Hz. 440/400volt.  |      |      |       |        |
|     |         | (iii) P/F open busbars 25mmX3mm of required length duly covered by heat shrinkable sleeves with busbar supporters   |      |      |       |        |
|     |         | (iv) Provision for residual current operated 63 Amp. 1 Pole ELCB of MA to 300 MA sensitevely as required including making connections etc.(EE/Load stop make)   |      |      |       |        |

|     |         |  |           |      |      |         |
|-----|---------|--|-----------|------|------|---------|
|     |         | (v) P/F Nos. 415 Volts Tpn combination double break switch fuse unit,63 Amp. Rating with HRC fuses (EE/mds/ SCHNEIDER bch/Siemens )for outgoing cable and making connection etc. also to have a provision for two nos. above switches.   |           |      |      |         |
|     |         | (vi) P/F of 3 nos. RYB phase indicator resistance type complete with lamp (Takaic/ac.). P/F HP danger plate of size 200 X 150 mm made of aluminium sheet 20 gauge.   |           |      |      |         |
|     |         | (vii) P/F cable glands double compression type and Al. lugs duly crimped for incoming cable and out going up to 5mm Cables.  |           |      |      |         |
|     |         | (viii) Providing 2 Nos. earth terminals including lugs and H/W duly inter connected with 8 SWG bars copper wire .  |           |      |      |         |
|     |         | (ix)Inter connection of main busbar to each out going switch and swathes to cable terminal shall be with 4 sqmm PVC copper conductor duly crimped with AL lugs.  |           |      |      |         |
|     |         | (x) Cable termination shall be fixed at backside of the panel with H/W and spring washers  |           |      |      |         |
|     |         | (xi) Light control switch with photo senser complete unit as required  |           |      |      |         |
| 171 | 71.8    | Providing cut point for LT line  | Each      | 74   | 800  | 59200   |
| 172 | 71.9    | Providing cut point for 11 KV line   | Each      | 26   | 1600 | 41600   |
| 173 | 71.12   | Providing of LT distribution pillar box, LT dis connector with 400amp I/C and 200 amp 3Nos O/G with abonite 8mm sheet, size 100mmx500mmx 700mm with top tampered for distribution transformer  | Each      | 70   | 8000 | 560000  |
| 174 | 71.14   | Providing & Laying GI pipe 125mm dia B- Class  | mtr.      | 340  | 798  | 271320  |
| 175 | 71.15   | Providing & Laying GI pipe 150mm dia B- Class  | mtr.      | 1590 | 1050 | 1669500 |
|     | 72.1    | Dismantling and re - erection of P.C.C./R.C.C. pole as per REC manual no 15/1979 conforming to IS: 2905/1966 as per requirement of sec3 in alignment, including excavation of pit and back filling with stone aggregate/boulders and soil in 0.45m consolidating each deposited layer of 0.45m by ramming and watering etc complete in all respect |           |      |      |         |
| 176 | 72.1.2  | 9.0 Mtr long as per Discom specification   | Each      | 15   | 813  | 12195   |
|     | 72.16   | Dismantling and re-fixing11kV Disc insulator (IS 731/ 1971) with minimum creepage distance of 300mm on existing bracket including all accessories like hot dipped GI spindle and nuts etc (as per specificationof Discom).   |           |      |      |         |
| 177 | 72.16.1 | B & S type insulator with hardware   | Each      | 70   | 300  | 21000   |
| 178 | 72.16.2 | T & C type insulator with hardware   | Each      | 130  | 165  | 21450   |
|     |         | <b>Machinery</b>   |           |      |      |         |
| 179 | 0168    | Providing and supply of of computer operator   | per month | 40   | 6000 | 240000  |
|     |         | <b>LABOUR</b>  |           |      |      |         |

|                              |                |  |          |     |                        |         |
|------------------------------|----------------|--|----------|-----|------------------------|---------|
| 180                          | 0218           | Skilled Beldar   | Man day  | 900 | 350                    | 315000  |
| 181                          | 0740           | GI pipe 150 mm dia "B" class.  | metre    | 100 | 1185                   | 118500  |
| 182                          | 1863           | 125 mm dia U-PVC pipes with rubber ring (working pressure 6 kg /cm <sup>2</sup> )  | metre    | 20  | 291                    | 5820    |
| 183                          | 2307           | 200 mm dia HDPE pipe PE-100 for potable water as per IS 4984   | metre    | 677 | 841                    | 569357  |
| 184                          | 2801           | Stone Aggregate (Single size) : 06 mm nominal size   | Cum      | 9   | 600                    | 5400    |
| 185                          | 2804           | Stone Aggregate (Single size) : 20 mm nominal size   | Cum      | 9   | 770                    | 6930    |
| 186                          | 2806           | Stone Aggregate (Single size) : 40 mm nominal size   | Cum      | 9   | 650                    | 5850    |
| 187                          | 4101           | Horizontal directional drilling (by trenchless technology) of suitable dia hole below natural ground level in all type of soil and pulling 200 mm dia (ID) HDPE pipe including excavation, shoring/strutting, preparation, maintaining the thrust and receiving pipe               | metre    | 678 | 545                    | 369510  |
| 188                          | RUIDP SOR 2013 | Execution of items not covered in any of the schedule under tender BOQ but essentially required to complete the contractual scope of work to Complete ROB & Approaches in all respect to be executed as per site requirement and payable as per RUIDP SOR 2013 items (Civil Works) | SOR Unit | 2   | 2500000                | 5000000 |
| <b>TOTAL OF SCHEDULE "A"</b> |                |  |          |     | <b>50,06,73,370.10</b> |         |

| <b>SCHEDULE-B: (NS Items)</b> |          |  |     |    |         |           |
|-------------------------------|----------|--|-----|----|---------|-----------|
| 1                             | NS/1-LHS | Casting, transporting and launching of precast reinforced concrete slabs in M-25 design mix for RCC boxes including launching during traffic block or without traffic block etc. as per approved drawings & design with contractor's own materials such as cement, sand, water, 6mm to 20mm well graded machine crushed stone aggregate, admixtures etc. including machine mixing of all gradients, placing, mechanical vibrating, curing etc. and providing shuttering, centering, formwork and handling, transporting to bridge sites including loading & unloading and launching including supplying, laying and levelling of required layer of sand underneath RCC slab as per approved drawing with contractor's own labour and equipments, all lead, lift, royalties, taxes etc. complete in all respect <b>except cost of reinforcement which will be paid separately under relevant SOR items.</b> | Cum | 64 | 6722.88 | 430264.32 |

|   |          |  |         |     |         |           |
|---|----------|--|---------|-----|---------|-----------|
| 2 | NS/2-LHS | Casting and transporting precast reinforced cement concrete boxes and U-Type/L-Type retaining wall segments in M35 design mix near LHS site with machine batched, machine mixed and machine vibrated design mix concrete, including the cost of cement, centering, shuttering, finishing, admixture, if required, as per IS: 9103 to retard setting of concrete/improve workability without impairing strength and durability as per direction of Engineer-in-charge. Only machine mixed and automatic weigh batched concrete/ concrete produced by Fiori shall be used during entire work. The concrete shall be placed with the help of mechanical means only. Rates are inclusive of all the materials, labour, transporting to bridge sites including loading & unloading with contractor's own labour and equipments . curing, machinery, tools, plants, taxes etc. complete in all respect except <b>cost of reinforcement which will be paid separately under relevant SOR items.</b> | Cum     | 362 | 8556.25 | 3097362.5 |
|   | NS/3-LHS | Placement of precast reinforced cement concrete components (RCC box/U-Type/L-Type segments of retaining walls) with the help of suitable capacity road crane at desired location during traffic block of short duration with all contractor's labour, tools, material, cranes, machinery, preparation of surface including cost of filling of joints by epoxy mortar, cutting of lifting hooks by gas cutting, all lead, lift, taxes etc complete in all respect.  |         |     |         |           |
| 3 | (a)      | Requiring traffic block  | MT      | 500 | 3730    | 1865000   |
| 4 | (b)      | Not requiring traffic block  | MT      | 405 | 1933    | 782865    |
| 5 | NS/4-LHS | Insertion and taking out of temporary service girder of required length as per need of site below track in short duration traffic block as per Railway approved drawing to provide temporary arrangement for casting of box/excavation of hard/rocky strata to make space for launching of RCC Box/for launching of RCC components in subsequent blocks, including making and laying sleeper cribs, bearing plate, dismantling & laying of track, cutting/filling of earth etc. as per standard drg. to make track fit for 20 Kmph speed, with contractors own labour, crane, tools and plants etc. Nothing extra will be paid to the contractor except the accepted rate, whatsoever.   | Per Job | 1   | 104200  | 104200    |

|   |          |   |         |   |       |       |
|---|----------|---|---------|---|-------|-------|
| 6 | NS/5-LHS | Removing of existing any type of track for insertion of RCC boxes, laying, linking & lifting of any type of track on newly laid RCC box on either side of LHS including cutting of rails, drilling of holes, subsequent through packing to make track fit for 75Kmph & de-stressing of LWR/CWR of any type of track and picking up of stone ballast (new or retrieved) including loading & leading of ballast from stacks | Per Job | 1 | 73900 | 73900 |
|   |          | Various activities involved in this work along with their tentative scope are:  |         |   |       |       |
|   |          | (i) Removing of existing track - 39.0mtr  |         |   |       |       |
|   |          | (ii) Removing ballast from track & keeping it away from site of work.   |         |   |       |       |
|   |          | (iii) After insertion of RCC boxes, putting back existing ballast at (ii) above and supplying& putting in track additional quantity of ballast so as to provide minimum ballast cushion of 300mm to 350mm in compacted condition.   |         |   |       |       |
|   |          | (iv) Re-laying & linking of track - 39.0mtr   |         |   |       |       |
|   |          | (v) Lifting of track in stages of 50/75mm for required length to ensure ballast cushion of 300mm to 350mm as per site conditions minimum ballast supply 50.0cum on each LHS.  |         |   |       |       |
|   |          | (vi) Cutting of any type of rails – 4 to 8 nos.   |         |   |       |       |
|   |          | (vii) Drilling of 31.75mm/26.5mm or similar dia holes in rails of any section- 16 nos   |         |   |       |       |
|   |          | (viii) Subsequent through packings to make track fit for 75Kmph-50.0mtr either side of LHS  |         |   |       |       |
|   |          | (ix) Local de-stressing of LWR/CWR 100.0m on either side of LHS.  |         |   |       |       |
|   |          | (x) AT welding of rail joints on any type of rail on single rail/SWP/LWR with Railway prefabricated moulds and railway portions as per IRS specifications T-19-2012 ( amended up to date)   |         |   |       |       |
|   |          | · Qty. and scope of work shown above at S.No. (i) to (x) are tentative only. The scope of these items may vary as per site conditions & as per direction of Engineer-in-charge for completing the work of LHS safely and successfully. The quoted rates are for complete job. Nothing extra shall be paid on any account.   |         |   |       |       |



|   |            |  |         |   |        |        |
|---|------------|--|---------|---|--------|--------|
| 7 | NS/6-LHS   | Laying of new BG/MG track at level crossings as per RDSO approved drawing with Railway's New/SH rails for check rails and special sleepers laid truly square at required spacing over the compacted ballast bed with contractor's own labour and T & P. The rates include fabrication of check rails as per standard drawing, fixing them on the special sleepers with the help of MS brackets, bolts, washers, plate screws etc; applying two coats of anti corrosive paint of approved quality on running as well as check rails, marking sleeper spacing, cleaning and greasing of the MCI insert and ERCs as per Para 1411 (5) of IRPWM (second reprint 2004 corrected up to date), raising of track in stages by not more than 75mm at a time to achieve clean ballast cushion of 300mm to 350mm, two rounds of packing manually to bring the longitudinal and transverse level to desired standard, dressing and boxing of ballast, providing wooden blocks between the check rails on both the ends and filling up the space between the wooden blocks by ballast to facilitate smooth movement of road traffic and any other incidental work to the entire satisfaction of the Engineer in charge. Level Crossings with 7.00 (+0.50) m long check rails. | Each LC | 2 | 5247   | 10494  |
|   |            | (Use this NS item only when a Temporary LC is required to be commissioned before construction of LHS)  |         |   |        |        |
| 8 | NS/7-LHS   | Supply, installation testing and commissioning of lifting barrier (for level crossing gate) Drawing No.SA-7974/M (Adv) Alt-3 with Gate lamps, levers with lever locks, boom locks arrangement and winch to Drg. No.SA-8132DC (Adv), complete 10 meters to spec. No. IRS-S-1078. <b>Both side of level crossing (1 set = 02 Barriers.)</b>  | Sets    | 2 | 223572 | 447144 |
|   |            | ( Use this NS item only when a Temporary LC is required to be commissioned before construction of LHS)   |         |   |        |        |
|   | NS/8 - RWH | Providing, hoisting and fixing in position upto floor two level M20 Grade precast RCC work including setting in cement mortar 1:3 (1 cement : 3 coarse sand) and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete including cost of centering, shuttering, finishing, Admixtures in recommended proportion (as per IS:9103) to accelerate, retard setting of concrete, improve workability without impairing strength and durability, excluding cost of cement and steel reinforcement, as per approved plan & direction of Engineer in charge.  |         |   |        |        |



|    |               |   |       |      |      |         |
|----|---------------|---|-------|------|------|---------|
| 9  | (a)           | In slabs for drain covers, manhole covers, flue tops etc.   | Cum   | 4.5  | 5991 | 26959.5 |
| 10 | NS/9 - RWH    | Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required- <b>In gratings, frames, guard bar, ladders, railings, brackets, gates and similar works</b>   | Kg    | 2100 | 96   | 201600  |
| 11 | NS/10- RWH    | Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes including bends etc with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1cement: 2fine sand) including testing of joints etc. complete - <b>450mm dia. R.C.C. pipe</b>   | Metre | 420  | 713  | 299460  |
| 12 | NS/11- RWH    | Drilling of bore well for specified depth in all types of soil and rock mechanically with all contractor's tools, plants, material and labour up to 75 meters-For 250 mm dia  | Metre | 168  | 690  | 115920  |
| 13 | NS/11(a)- RWH | Extra over item no. NS/11 for 75m drilling for 250 mm dia   | Metre | 168  | 138  | 23184   |
| 14 | NS/12- RWH    | Providing supplying, lowering and fixing in bore un perforated MS casing pipe 6 mm thickness up to specified depth below ground level with all contractor's tools, plants, material and labour etc. complete- <b>200 mm internal pipe</b>   | Metre | 168  | 1445 | 242760  |
| 15 | NS/13- RWH    | Extra for using slotted or perforated MS casing pipe of 200 mm internal dia   | Metre | 168  | 145  | 24360   |
| 16 | NS/14- RWH    | Dry/Wet Sinking of Circular Wells (Other than pneumatic method) in all types of strata except hard rock requiring ballasting, including bailing and pumping out water, removal of excavated soil, with all labour and material required for sinking as per drawing and direction of the Engineer in charge, disposal of surplus soil upto 1 Km lead in the adjoining bank/embankment (The compaction to be paid separately under the relevant item)- <b>From initial level of cutting edge &amp; Up to 3m depth</b> | Cum.  | 59   | 155  | 9145    |
| 17 | NS/14(a)- RWH | Extra over item no. NS/14 for From 3m to 10m depth  | Cum.  | 154  | 203  | 31262   |

|  |           |  |           |     |                   |         |
|--|-----------|--|-----------|-----|-------------------|---------|
| 18                                     | NS/15-RWH | Providing and laying in position machine mixed, machine vibrated and machine batched Design Mix Cement Concrete M35 grade (Cast - in Situ) using 20 mm graded crushed stone aggregate and coarse sand of approved quality in the following elements of well including finishing, using Admixtures in recommended proportions( as per IS 9103), if approved in Mix design, to accelerate, retard setting of concrete, improve workability without impairing strength and durability complete as per drawings and technical specifications as directed by Engineer. Payment for reinforcement and shuttering shall be paid extra.- <b>In Steining of wells</b> | Cum.      | 50  | 4718              | 235900  |
| 19                                     | NS/16-RWH | Centring and shuttering including strutting, propping etc. and removal of form for well Kerb & Steining  | Sqm       | 488 | 312               | 152256  |
| 20                                     | NS/17-RWH | All in One Bajri aggregate 20 mm size  | Cum       | 9   | 497               | 4473    |
|  | NS/18     | Transportation of any Railway material (relieving girders, cross girders etc.)   |           |     |                   |         |
| 21                                     | (a)       | Lead up to 10 Km.  | MT        | -   | 258               | -       |
| 22                                     | (b)       | Extra lead beyond 10 Kms. For every kilometre or part thereof  | MTKM      | -   | 3.55              | -       |
| <b>TOTAL OF SCHEDULE "B"</b>           |           |  |           |     | <b>8178509.30</b> |         |
| <b>SCHEDULE - C: (NS Items-Misc.)</b>  |           |  |           |     |                   |         |
| <b>Vehicle for Inspection</b>          |           |  |           |     |                   |         |
|  | NS/19     | Providing One vehicles of SUV category INNOVA/ SCORPIO or equivalent with Driver and POL for requirement of Employer/ client as directed for any single day purpose movements limited to 150 kms per day & 12 hours average duty complete. ( No other payment will be admissible except Toll tax and that will be reimbursable separately as per actual receipts).   | Per day   | 120 | 2500              | 300000  |
|  | NS/20     | Providing One vehicles of category INDIGO/SWIFT or equivalent with Driver and POL for requirement of Employer/ client as directed limited to 3000 kms per month & 12 hours/day average duty complete . ( No other payment will be admissible except Toll tax and that will be reimbursable separately as per actual receipts). This item is additional to supply of vehicle mentioned in the tender document any where as incidental to the work.  | Per Month | 40  | 35000             | 1400000 |
| <b>Designing &amp; Drawing Portion</b> |           |  |           |     |                   |         |
|  | NS/21     | Detailed Design and Drawing Preparation Consultancy work for ROB   |           |     |                   |         |

|  |  |    |   |                        |        |
|--|--|----|---|------------------------|--------|
| a.   | Submission of all Detailed Design, Detailed Working /Construction Drawing etc. to DFCCIL after proof checked by IIT Delhi/ NIT/any other proof checking consultant approved by DFCCIL , and approved Clients and Railways for Foundation, Sub-Structure and Approaches for ROB and RUB both. | LS | 2 | 350000                 | 700000 |
| b.   | Submission of all Detailed Design, Detailed Working /Construction Drawing etc. to DFCCIL after proof checked by IIT Delhi/ NIT/any other proof checking consultant approved by DFCCIL and approved Clients and Railways for Super Structure and any leftover part for ROB and RUB both.      | LS | 2 | 350000                 | 700000 |
| c.   | Submission and approval of detailed launching scheme / placement of girders for Railway portion within Railway Boundary duly approved by Railways and CRS complete.  | LS | 2 | 175000                 | 350000 |
| d.   | Providing design support during construction like modifications in design, redesign / clarifications as per site requirement and submission of completion drawing / report (Upon issue of completion certificate this item will be considered)   | LS | 2 | 125000                 | 250000 |
| <b>TOTAL OF SCHEDULE "C"</b>                                   |  |    |   | <b>37,00.000.00</b>    |        |
| <b>TOTAL COST OF WORK<br/>(Total of Schedule A, B &amp; C)</b> |  |    |   | <b>51,25,51,879.40</b> |        |

# Last Page of Tender