



**Tender No. BRC-EN-PAO-SANJ-GTX Lin125  
For**

**Name of Work** "Construction of formation, allied formation protection works like construction of toe wall, retaining wall, drains, pitching etc, and Track laying (including Procurement of P. Way Materials), for providing Connectivity from Panoli (IR) to New Sanjali (DFCCIL) and from Gothangam (IR) to New Gothangam (DFCCIL), in the jurisdiction of CGM-Vadodara-DFCCIL.

**E-TENDER  
DOCUMENT  
TECHNICAL BID  
(PACKET-B)**

Single Stage-Two Packet Open Online E-Tender  
(PARTICIPATION THROUGH E-TENDER ONLY)  
E-tendering site- <https://www.ireps.gov.in> / its link at [www.dfccil.com](http://www.dfccil.com)  
(Help desk of IREPS: 011 -23761525)

**Employer:**  
**DEDICATED FREIGHT CORRIDOR CORPORATION OF  
INDIA LIMITED A GOVERNMENT OF INDIA (Ministry of  
Railways) ENTERPRISE**

**CGM OFFICE :**  
(Chief General Manager, Vadodara, Dedicated Freight Corridor Corporation of India Limited, 4th floor, Block-A, Narmada Naher Bhavan (Sardar Sarovar Narmada Nigam Ltd. Building), Chhani Jakat Naka, Vadodara, Pin . 390024)

**CORPORATE OFFICE**  
DFCCIL, 5<sup>th</sup> Floor, Supreme Court Metro Station Building  
Complex, New Delhi-110001

## 1.2.1 GENERAL INFORMATION / DATA SHEET

|   |  |
|---|--|
| <b>Tender Notice No.</b>  | <b>BRC-EN-PAO-SANJ-GTXLIN125</b>   |
| Name of the work  | “Construction of formation, allied formation protection works like construction of toe wall, retaining wall, drains, pitching etc, and Track laying (including Procurement of P. Way Materials), for providing Connectivity from Panoli (IR) to New Sanjali (DFCCIL) and from Gothangam (IR) to New Gothangam (DFCCIL), in the jurisdiction of CGM-Vadodara-DFCCIL.  |
| Employer  | Chief General Manager/ General Manager-Coord/Vadodara.<br><b>Address:</b> Dedicated Freight Corridor Corporation of India Limited, 4th floor, Block-A, Narmada Naher Bhavan (Sardar Sarovar Narmada Nigam Ltd. Building), Chhani Jakat Naka, Vadodara, Pin. 390002.  |
| Engineer  | Employer (DFCCIL) /Employer’s authorized Engineer  |
| Type of Tender  | Open E-Tender ( <b>Single stage Two Packet</b> )   |
| Type of Contract  | Works Contracts  |
| Estimated Cost  | <b>Rs. 90,43,24,547 /- (Including GST)</b> (Rupees Ninety crores Fourty three lakhs Twenty Four thousand Five Hundred Fourty Seven Only).  |
| GST   | Rates mentioned in the Price Schedule are inclusive with GST.  |
| Period of Contract/Completion Period                              | 9 Months ( <b>including Monsoon</b> )  |
| Bid Security  | Rs. 90,43,300/- (Rs. Ninety lakhs Fourty Three thousand Three Hundred only)<br>The Bid Security shall be submitted in favour of DFCCIL in the form as detailed in Para 1.3.8 of Preamble & General Instructions to Tenderers (Part-I, Chapter-III).<br>The original Bank Guarantee of Bid Security (also called Earnest Money) have to be submitted at the Employer’s office before the scheduled date and time of submission of the tender. |
| Cost of Tender Document   | <b>Nil</b>   |
| E-tendering website   | <b>http://www.ireps.gov.in</b><br>For any help, please contact IREPS Helpdesk at 011-23761525  |
| Date of uploading of NIT & Bid documents (online publishing date) | <b>On Date 05.01.2023</b>  |

|  |   |
|--|---|
| Date of document download (Online)                                   | <b>From Date 05.01.2023 from 11:30 Hrs</b>  |
| Issue of Corrigendum, if any   | <b>Up to three days prior</b> to the last date of submission of Bid (on websites <a href="http://www.ireps.gov.in">http://www.ireps.gov.in</a> and <a href="http://www.dfccil.com">www.dfccil.com</a> )   |
| Pre-Bid Meeting  | <b>On 11.01.2023 at 11:30 Hrs</b><br>At office of Employer:<br><b>Address:</b> Chief General Manager, Dedicated Freight Corridor Corporation of India Limited, 4th floor, Block-A, Narmada Naher Bhavan (Sardar Sarovar Narmada Nigam Ltd. Building), Chhani Jakat Naka, Vadodara, Pin. 390024  |
| Date & Time of Submission of Tender                                  | On or before date <b><u>31.01.2023 and time upto 15:00- hrs</u></b>   |
| Date and Time of Opening of Tender (Technical bids -Packet A) online | <b><u>Date 31.01.2023 at 15:30 hrs</u></b>  |
| Date and Time of Opening of Tender (Financial Bid (Packet-B) online  | Will be notified later to the qualified bidder in technical eligibility criteria  |
| Validity of offer  | 120 days from the date of opening of the Technical Bid of the Tender  |
| Security Deposit   | As per Clause 16.1 of GCC   |
| Performance Bank Guarantee   | Performance Guarantee (PG) have to be submitted within 21 (twenty-one) days from the date of issue of Letter of Acceptance (LOA), amounting to 3% of the contract value in the form as given in clause 16.4 of GCC  |
| Defect Liability Period  | 12 Months.  |
| Security Deposit   | 5% of Contract value  |
| Performance Bank Guarantee   | Performance Guarantee (PG) have to be submitted within 21 (twenty-one) days from the date of issue of Letter of Acceptance (LOA), amounting to 3% of the contract value in the form as given in clause 16.4 of GCC  |
| DFCCIL's Bank Account  | The DFCCIL's Bank Account details is as under for making deposit in cash for the purpose of Security Deposit/ Performance Guarantee is as under:<br>Name of Account: Dedicated Freight Corridor Corporation of India Limited<br>Name of Bank: Union Bank of India<br>Account No: 310601010040591<br>Type of Account: Equity Account<br>IFSC Code: UBIN0546836 |

## SUMMARY OF PRICES

Name of work: "Construction of formation, allied formation protection works like construction of toe wall, retaining wall, drains, pitching etc, and Track laying (including Procurement of P. Way Materials), for providing Connectivity from Panoli (IR) to New Sanjali (DFCCIL) and from Gothangam (IR) to New Gothangam (DFCCIL), in the jurisdiction of CGM-Vadodara-DFCCIL

| Component      |   | Value of Component (Rs.) |
|----------------|---|--------------------------|
| I              | Earthwork/blanketing in formation / cutting, and allied formation protection works like construction of Toe wall, retaining wall, drains, pitching etc. | 60,06,32,282.00          |
| II             | Permanent Way works involving track linking, assembling, insertion of Point & Crossings.  | 30,36,92,265.00          |
| Total (I & II) |   | 90,43,24,547.00          |

Note : The rates should be quoted for combined schedule i.e single rate for both Components I & II.

## Explanatory Notes for BOQ:

- i. All WR USSOR 2019 items & NS Items containing, if any discrepancy is found in item no., nomenclature, rates, units etc. the description as given in the Engineers decision shall be final.
- ii. The rates shall also be inclusive of all taxes (Including GST) legally leviable and quoted any other taxes, octroi license fee and royalty charges etc. if any.
- iii. Contractor should bear the fact in mind while quoting the rates that GST will be paid by Contractor as per prevailing rate for further deposition of GST to State Govt. and/or Central Govt. as applicable. Documentary evidence of deposition of GST will be produced by contractor.
- iv. The contractor should adhere to Anti Profiteering Provisions as per section 171 of the CGST Act. Incase due to change in the rates of GST / Change in law, the contractor gets any credits / benefits, the same shall be passed on to DFCCIL by way of reduction in prices.

| Name of Work   | Construction of formation, allied formation protection works like construction of toe wall, retaining wall, drains, pitching etc, and Track laying (including Procurement of P. Way Materials), for providing Connectivity from Panoli (IR) to New Sanjali (DFCCIL) and from Gothangam (IR) to New Gothangam (DFCCIL), in the jurisdiction of CGM-Vadodara-DFCCIL |   |       |      |                   |                 |        |              |
|--|---|---|-------|------|-------------------|-----------------|--------|--------------|
| <b>COMPONENT-I</b>   |   |   |       |      |                   |                 |        |              |
| <b>Earthwork/blanketing in formation / cutting, and allied formation protection works like construction of Toe wall, retaining wall, drains, pitching etc.</b> |   |   |       |      |                   |                 |        |              |
| <b>Schedule : A : Part-I-WRUSSOR- 2019</b>   |   |   |       |      |                   |                 |        |              |
| Sr No  | Item Code   | Description   | Qty   | Unit | Basic Unit rate ₹ | %age Escalation | Rate ₹ | Amount ₹     |
|  | 11010   | Earthwork in cutting (classified) in formation, trolley refuges, side drains, level crossing approaches, platforms, catch water drains, diversion of nallah & finishing to required dimension and slopes to obtain a neat appearance to standard profile inclusive of all labour, machine & materials and removing & leading all cut spoils either to make spoil dumps beyond 10m from cutting edge or for filling in embankment with leads within 2 km on either side of cutting edge, lifts, ascent, descent, loading, unloading, all taxes / royalty, clearance of site and all incidental charges, bailing & pumping out water, if required, etc. complete as per directions of the Engineer-in-Charge. The work is to be executed as per latest / updated edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow. Cut trees shall be property of Railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract. {Note - (i) All usable earth arising from cut spoils shall be led into bank formation and Unusable spoils shall be dumped / stacked (ii) All hard rock /and boulders not fit for filling will be stacked by the contractor and will be property of the Railways.} |       |      |                   |                 |        |              |
| 1  | 11011   | In all conditions and classifications of soil except rock   | 37716 | Cum  | 149.60            | 61.25           | 241.23 | 90,98,230.68 |

|   |       |   |           |     |        |       |        |                 |
|---|-------|---|-----------|-----|--------|-------|--------|-----------------|
| 2 | 12010 | Earthwork in filling in embankment , guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds, if provided, platforms etc. with earth, suitable for embankment as per RDSO latest Specifications and guidelines GE: G-14 of Soil Quality Class SQ1, excavated from outside railway boundary entirely arranged by the contractor at his own cost including all leads, lifts, ascents, descents, crossing of nallahs or any other obstructions. The item shall include demarcation and setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope of old bank, all handling/re-handling, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as a complete job. The payment shall be made as per finished profile and the rate shall include all costs including taxes, octroi, royalty etc. except for mechanical compaction which shall be paid extra under relevant item. Cut trees shall be property of railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract. | 491706    | Cum | 277.41 | 62.07 | 449.60 | 22,10,70,224.48 |
| 3 | 12020 | Earthwork in filling in embankment , guide bunds, around buried type abutments, bridge gaps, trolley refuges, rain bunds, if provided, platforms etc. with earth, suitable for embankment as per RDSO latest Specifications and guidelines GE: G-14 of Soil Quality Class SQ2, excavated from outside railway boundary entirely arranged by the contractor at his own cost including all leads, lifts, ascents, descents, crossing of nallahs or any other obstructions. The item shall include demarcation and   | 103068.07 | Cum | 298.85 | 50.45 | 449.62 | 4,63,41,447.60  |

|   |       |  |           |     |          |        |          |                 |
|---|-------|--|-----------|-----|----------|--------|----------|-----------------|
|   |       | setting out of profile, site clearance, removing of shrubs, roots of vegetations growth, heavy grass, benching of existing slope of old bank, all handling/re-handling, spreading in layers with motor grader, bringing the moisture content to OMC, mechanical compaction to specified density and dressing of bank to final profile as a complete job. The payment shall be made as per finished profile and the rate shall include all costs including taxes, octroi, royalty etc. except for mechanical compaction which shall be paid extra under relevant item. Cut trees shall be property of railways and to be deposited in the railway godown unless specified otherwise in the Special Conditions of Contract. Note: Payment under this item shall be made only up to the thickness as approved by Engineer-in Charge. Any additional thickness executed shall be paid under the item of Earthwork in filling in embankment for Soil Quality Class SQ1. |           |     |          |        |          |                 |
| 4 | 12040 | Extra for mechanical compaction of soil in embankment with contractor's rollers of suitable capacity, type and size to achieve specified density as per specification, testing as per IS codes including cost of water, T&P, consumable and all labour as a complete job. The work is to be executed as per Latest edition of "Guidelines for Earthwork in Railway Projects" issued by RDSO, Lucknow.  | 552375.54 | Cum | 18.58    | 101.51 | 37.44    | 2,06,81,248.44  |
| 5 | 12050 | Providing of Blanketing over finished formation as per latest RDSO specifications and procedures by supplying materials of approved quality, spreading in layers not exceeding in 30cm in thickness in loose conditions and levelling by motor grader and compacting by vibro roller of required capacity upto desired degree of compaction, finishing to correct profile with all lead  | 60669.54  | Cum | 1,540.16 | 54.56  | 2,380.47 | 14,44,22,098.52 |

|  |       |  |  |  |  |  |  |  |
|--|-------|--|--|--|--|--|--|--|
|  |       | <p>and lift, complete in all respect to the satisfaction of the Engineer-in-Charge. Rate includes all labour, material, tools, plants, machinery, testing equipment, testing charges, taxes, Royalties, Octroi etc. and all other incidental charges including compaction. Note:( i) The work shall be carried out as per RDSO Guidelines and specifications for Design of Formation for Heavy Axle Load (Report No. RDSO/2007/GE: 0014 of November, 2009) for mechanically produced blanketing material for Railway Formation. (ii) The Quality Control tests as prescribed vide RDSO/2007/ GE:0014 with up to date amendment shall be arranged at site by the Contractor, for which no separate payment will be made. (iii) The tenderer is requested to go through specifications of blanketing material as per GE-0014 RDSO specifications. The blanketing material is expected to be manufactured in quarry/ site with pug mill type blender from stone crushed material of required quality as per specification with the grading falling in the enveloping curve. The rate includes the CBR tests, Los Angels Abrasion test, Impact tests, Atterberg limits, Grain size analysis, MDD and all quality tests as per specifications to be carried as per the laid down frequency on blanketing material/ compacted finished blanket surface. (iv) Measurement will be made on finished profile after compaction</p> |  |  |  |  |  |  |
|  | 13100 | <p>Providing and removing barricading with the help of portable fencing along running track where work is to be done in close vicinity of track. Fencing shall consist of self supporting steel angles of size 50mm x 50mm x 6mm, 1.5m long provided with hooks etc. and embedded in CC 1:2:4 block of size 0.23m x 0.23m x</p>  |  |  |  |  |  |  |



|    |       |  |       |         |          |         |           |              |
|----|-------|--|-------|---------|----------|---------|-----------|--------------|
|    |       | 0.23m placed at c/c distance of 2m along track. 12mm dia rods in three horizontal layers shall be tack welded with angle posts. {Note : Released material will be property of the contractor after completion of work. Cost of cement to be paid separately}   |       |         |          |         |           |              |
| 6  | 13102 | With provision of painting verticals & horizontals with red luminous paints / strips of 30cm each with a gap of 30 cm  | 8000  | Metre   | 107.40   | 0.00    | 107.40    | 8,59,200.00  |
|    | 13050 | Turfing / planting, including all lead & lift and watering as required until properly rooted with. Note - Initially payment of only 40% will be made. Balance 60% will be paid only after 3 months of maintenance period, if the turfing is properly rooted.   |       |         |          |         |           |              |
| 7  | 13051 | Turfing with sods, 10cm thick and 20cm square closely laid   | 70000 | 100 Sqm | 6,167.22 | 128.82  | 14,111.83 | 98,78,282.96 |
| 8  | 13052 | Turfing with planted doob grass  | 53.13 | 100 Sqm | 6,301.69 | 0.00    | 6,301.69  | 3,348.09     |
| 9  | 13053 | Planting Sarkanda / sarpat or any other suitable species approved by the engineer  | 1     | 100 Sqm | 7,099.10 | 0.00    | 7,099.10  | 70.99        |
|    | 14010 | Supplying, laying Non-woven Needle Punched and Mechanically or Thermally bonded type Geotextile for use as Separator/Filtration for Railway formation as per RDSO Specification No. RDSO/2018/GE:IRS-0004 - Part I made of Polypropylene / Polyethylene / Polyamide or combination there of having apparent opening size of $\leq 85$ microns and elongation at failure $> 50\%$ in both directions including transportation labour, lead & lift complete as directed by Engineer in-charge. |       |         |          |         |           |              |
| 10 | 14011 | On top of subgrade or prepared subgrade before laying blanketing layer with minimum strengths in Grab test, Trapezoidal Tear test and Puncture test of 700N, 250 N and 1800 N respectively.  | 17000 | Sqm     | 154.86   | (-)8.42 | 141.82    | 24,10,953.40 |
| 11 | 51080 | Providing and laying Filter Material as per RDSO Specifications underneath pitching in slopes complete as per drawing and Technical Specification  | 1875  | Cum     | 2,923.26 | 0.00    | 2,923.26  | 54,81,112.50 |

|                                     |       |   |       |     |          |      |          |                        |
|-------------------------------------|-------|---|-------|-----|----------|------|----------|------------------------|
| 12                                  | 52030 | Supply and laying of quarry dust including consolidation, supply of all materials, labour, lead, lift, tools, plants, crossing of tracks as per drawing and technical specification as directed by the Engineer in charge in case loose slush is encountered at site of foundation before casting the foundation or laying the filtering media. | 10000 | Cum | 1,029.95 | 0.00 | 1,029.95 | 1,02,99,500.00         |
| <b>Sub Total Schedule A- Part-I</b> |       |   |       |     |          |      |          | <b>47,05,45,717.66</b> |

| <b>COMPONENT-I</b>   |           |  |       |      |              |                |
|--|-----------|--|-------|------|--------------|----------------|
| <b>Earthwork/blanketing in formation / cutting, and allied formation protection works like construction of Toe wall, retaining wall, drains, pitching etc.</b> |           |  |       |      |              |                |
| <b>Schedule : B -NS items</b>  |           |  |       |      |              |                |
| Sr No  | Item Code | Description  | Qty   | Unit | Basic rate ₹ | Amount ₹       |
| 13   | NS/1      | Supplying and laying Bi-Axial geogrid made from virgin high density polypropylene, having aperture size 65mmx65mm and ultimate tensile strength of 30KN/m with minimum junction efficiency of 95% & Minimum Radial stiffness of 350Kn/m ( @ 0.5% Strain) and laying below Subgrade or prepared Subgrade of formation or Ballast or at any other location as directed by Engineer in charge. The rate inclusive of cost of required materials, labours,, equipment, plants, machineries, tools, manufacturing, curing , handling, loading, transportation, fuel, lead lift , unloading, laying, aligning, levelling, joining, testing & commissioning etc.  | 48000 | Sqm  | 265.54       | 1,27,45,920.00 |
| 14   | NS/2      | Supplying & Fixing of Erosion Control Geomat (for Surficial Erosion Control) Consisting of 2 layers of Polymeric netting having aperture size 20mmx20mm maximum and middle layer of Coir as per specification of work including dressing of slopes to proper profile & moving loose rubbles, muck and leading to the point as directed by the Engineer In charge. Profile for laying of Geomat Anchoring in top anchor trench, seaming of adjacent panel of Geomat with HDPE twine, fabrication, fixing of Pin on Slope/Berm including top of Cutting for anchoring of Geomat as per approved scheme and providing of grass sods/seeds and placing over Geomat so as to completely cover it, including watering for 3 months with all labour, tools and materials along with lead lift etc Complete. | 45000 | Sqm  | 282.15       | 1,26,96,750.00 |

|    |      |   |                             |     |        |                       |
|----|------|---|-----------------------------|-----|--------|-----------------------|
| 15 | NS/4 | <p>Providing and laying and anchoring a layer of geocells with nominal opening of 450 cm<sup>2</sup> to 1250 cm<sup>2</sup>, as approved by engineer, having depth from 150mm to 200mm and perforations between 11% to 16%, to server as transition between formation and track structure in bridge approaches as per specifications &amp; conditions attached and filling the cells with required fill with contractor own materials and labours. Geo-Cell shall meet the Minimum requirement as per RDSO latest Specifications and guidelines GE: G-14</p> <p>The rate inclusive of cost of required materials, labours, equipment, plants, machineries, tools, manufacturing, curing, handling, loading, transportation, fuel, lead lift, unloading, laying, aligning, levelling, joining, testing &amp; commissioning etc.</p>  | 5610                        | Sqm | 607.42 | 34,07,626.20          |
| 16 | NS/5 | <p>Providing and laying and anchoring a layer of geocells with nominal opening of 450 cm<sup>2</sup> to 1250 cm<sup>2</sup>, as approved by engineer, having depth from 75mm to 100m and perforations between 11% to 16% for erosion control of soil slope including supplying as per design, drawings and specification. The Geocell shall meet the minimum specifications and requirements specified in section 705 MORTH specification, with contractor's own labour, materials, tools plants equipment, machineries etc. The rate also includes cost of loading unloading, lead lift, transportation, fuel, fixing, anchoring, filling of cells with specified materials and all other incidentals including all other items to complete the work as per these specifications. The rate inclusive of cost of required materials, labours, equipment, plants, machineries, tools, manufacturing, curing, handling, loading, transportation, fuel, lead lift, unloading, laying, aligning, levelling, joining, testing &amp; commissioning etc.</p> | 25000                       | Sqm | 303.71 | 75,92,750.00          |
| 17 | NS/6 | <p>Surface Dressing and Preparation of Slope of Embankment &amp; Repair of Cess/Slope of Formation by Cutting/filling to achieve required level and slopes, compaction as per guide line including removing vegetations and inequalities, and disposal of Rubbish /Organic material lead up to 50m and lift up to 1.5m</p> <p>The rate inclusive of cost of required materials, labours,, equipment, plants, machineries, tools, manufacturing, curing , handling, loading, transportation, fuel, lead lift , unloading, laying, aligning, levelling, joining, testing &amp; commissioning etc.</p>   | 40000                       | Sqm | 35.91  | 14,36,400.00          |
| 18 | NS/7 | <p>Side Slope Compaction of Earth &amp; blanket on the existing formation, with contractors own roller, machinery, equipment, labours, fuels tools &amp; plants etc complete.</p>   | 40000                       | Sqm | 101.36 | 40,54,400.00          |
|    |      |   | <b>Sub Total Schedule B</b> |     |        | <b>4,19,33,846.20</b> |

| <b>COMPONENT-I</b>   |                  |   |            |             |                          |                        |               |                 |
|--|------------------|---|------------|-------------|--------------------------|------------------------|---------------|-----------------|
| <b>Earthwork/blanketing in formation / cutting, and allied formation protection works like construction of Toe wall, retaining wall, drains, pitching etc.</b> |                  |   |            |             |                          |                        |               |                 |
| <b>Schedule : C-WRUSSOR- 2019</b>  |                  |   |            |             |                          |                        |               |                 |
| <b>Sr No</b>   | <b>Item Code</b> | <b>Description</b>  | <b>Qty</b> | <b>Unit</b> | <b>Basic Unit rate ₹</b> | <b>%age Escalation</b> | <b>Rate ₹</b> | <b>Amount ₹</b> |
| 19   | 21100            | Conducting determination of California Bearing Ratio as per IS:2720 Each  | 30         | Each        | 1,337.94                 | 0                      | 1,337.94      | 40,138.20       |
|  |                  | Earthwork in excavation by mechanical means (Hydraulic Excavator)/Manual Means for foundations and floors of the bridges, retaining walls etc. including setting out, dressing of sides, ramming of bottom, getting out the excavated material, back filling in layers with approved material and consolidation of the layers by ramming and watering etc. including all lift, disposal of surplus soil up to a lead of 300m, all types of shoring and strutting with all labour and material complete as per drawing and technical specification as directed by Engineer in charge. Note: This item will be used for excavation work in connection with other miscellaneous works also. like side drains, foundation for OHE masts and other miscellaneous structures in connection with Gauge Conversion, Doubling, New lines |            |             |                          |                        |               |                 |
| 20   | 22011            | All Kind of Soils   | 3500       | Cum         | 193.27                   | (-)9.77                | 174.38        | 6,10,356.32     |
|  | 22030            | Providing and laying in position Plain cement concrete of specified Nominal Mix for miscellaneous works like side drains, foundation for OHE masts and other miscellaneous structures excluding the cost of Cement, cantering and shuttering - All work up to plinth level  |            |             |                          |                        |               |                 |
| 21   | 22031            | 1:2:4 (1 Cement: 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)  | 1200       | Cum         | 2,802.79                 | 1.67                   | 2,849.46      | 34,19,515.91    |
| 22   | 22070            | Providing and fixing Weep Holes in Abutments, Wing walls and Return walls etc.,of new bridges with 110mm dia UPVC pipe Type A ISI marked with all contractor's  | 100        | Rm          | 232.54                   | 0.00                   | 232.54        | 23,254.00       |

|    |       |  |          |     |          |      |          |              |
|----|-------|--|----------|-----|----------|------|----------|--------------|
|    |       | men, material, transportation, all taxes as per specifications and as directed by Engineer-in-Charge.  |          |     |          |      |          |              |
| 23 | 14020 | Supplying & laying of drainage composite for use behind abutments, wing walls, return walls and Retaining walls Geo composite drain (Vertical) as per RDSO Specification No. RDSO/2018/GE:IRS- 0006 latest version with all material, labour, equipment, tools and plants, lead, lift etc. complete in all respects as per the direction of Engineer-in-Charge.  | 3440     | Sqm | 684.68   | 0.00 | 684.68   | 23,55,299.20 |
| 24 | 52170 | Providing and laying of filter media consisting of granular materials of GW, GP, SW groups as per IS:1498 (latest) in required profile behind boulder filling of abutments, wing walls / return walls etc. above bed level with all labour and material complete job as per drawing and technical specification of RDSO Guidelines.  | 1496     | Cum | 2,633.59 | 0.00 | 2,633.59 | 39,39,850.64 |
| 25 | 25020 | Providing and applying two coats of coal tar or bitumen conforming to IS:3117– latest version on the top and sides of RCC box/slabs @ 1.70 kg/sqm after cleaning the surface with all labour and materials complete job as directed by the Engineer  | 12598.07 | Sqm | 170.28   | 3.15 | 175.64   | 22,12,773.14 |
| 26 | 52300 | Supplying & placing of Mechanically Woven Double Twisted Hexagonal Shaped Wire Mesh Gabion Boxes of required sizes, Mesh Type 10cm x 12cm, Zn and PVC coated Mesh Wire dia. 2.7/3.7mm (ID/OD), edges of meshes mechanically edged / selvedge with heavy coating of galvanization as per EN 10223-3/ASTM A 975 with partitions at every 1m interval and properly packed with approx. 150mm size boulders including transportation and placing at indicated places as per direction of engineer-in-charge including contractor's tools, plants, labour, royalty charges etc. complete in all respect and stitching with lacing wire of dia. 2.2/3.2mm (ID/OD) @ 5% by weight of Gabion boxes, carrying the material by head load from nearest approach with all safety precautions and all | 100      | Cum | 3,189.13 | 0.00 | 3,189.13 | 3,18,913.00  |

|    |       |   |      |     |           |         |           |              |
|----|-------|---|------|-----|-----------|---------|-----------|--------------|
|    |       | leads and lifts.  |      |     |           |         |           |              |
| 27 | 52260 | Supplying, spreading and filling coarse sand (no cohesive materials to be used) of approved quality including watering and ramming in foundation, plinth, behind the abutment, wing wall, retaining wall in layers not exceeding 150mm thick including its compaction as per direction of Engineer-in-charge. The rate includes all lead, lift, ascent, descent, crossing of Railway line etc. complete with contractor's labour, materials, tools and plant.   | 100  | Cum | 2,136.57  | 0.00    | 2,136.57  | 2,13,657.00  |
| 28 | 41390 | Supplying fabricating and erecting welded and/or bolted and/or riveted steel work in built up sections, trusses and framed work, staging, racks etc.for Steel Structures other than bridge girders, using RSJ, tees, angles and channels/flats, plates, gussets, round or square bars, cleats, bolts etc., with contractors own steel including cutting, bending, straightening, drilling, riveting, hoisting, fixing, erecting, welding, bolting etc., with Providing stiffeners wherever required as per approved drawing including applying a priming coat of a approved steel primer with all contractor's materials, labour, tools & plants, lead & lift including crossing of tracks if required etc., complete as per specification and as directed by Engineer-in-charge. | 40   | MT  | 79,811.87 | (-)1.23 | 78,827.52 | 31,53,207.36 |
| 29 | 41220 | Surface preparation of steel work of bridge plate/composite girders by cleaning with scrappers and/or wire brushes to remove all rust and loose or perished paint to prepare perfectly clean & dry bare metal surface free from all dirt/foreign material & ready for initial coat of paint. Rate includes cost of labour, consumables, brushes, tools & plants, ladders, scaffoldings, jhoola, hanging scaffolding staging etc.  | 2000 | Sqm | 52.52     | 0.00    | 52.52     | 1,05,040.00  |
|    | 41260 | Painting cleaned bridge plate/composite girders including all scaffolding, shuttering and strutting along with provision of Jhoola / hanging scaffolding ladders etc.   |      |     |           |         |           |              |

|    |       |  |      |      |          |         |          |             |
|----|-------|--|------|------|----------|---------|----------|-------------|
|    |       | where required   |      |      |          |         |          |             |
| 30 | 41261 | With one coat ready mix Zinc Chromate conforming to IS:104 with DFT of 25-30 Microns followed by one coat of Zinc Chromate red oxide conforming to IS:2074 DFT of 25 Microns   | 2000 | Sqm  | 102.50   | 0.00    | 102.50   | 2,05,000.00 |
| 31 | 41263 | With two coats Aluminium paints in dual containers conforming to IS:2339 with DFT of 12 - 14 Microns for each coat.  | 2000 | Sqm  | 109.63   | 0.00    | 109.63   | 2,19,260.00 |
| 32 | 21220 | Hiring of JCB/Hitachi for levelling and dressing ground/dismantling structures ,Removal of jungle, clearing of earth, lowering high cess etc., along side the track between up and down lines obstructing drainages of rain water, clearing of bushes obstructing visibility at curves and Level Crossings with all lead and lift etc. complete and as directed by the Engineer-in-charge .All labour, tools and plants consumables stores including supply of JCB/Hitachi with crew to be provided by the contractor at his own cost. The contractor shall arrange road permit for vehicle for all the States of operation, as per instructions of engineer in-charge and vehicle shall not be more than three years old. Payment shall be made for actual working hours at site. | 400  | Hrs  | 1,284.42 | (-)6.60 | 1199.65  | 4,79,589.31 |
| 33 | 52230 | Providing cast in situ bridge number plaques as per Railway drawing in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm notch in Bridge parapet coping duly engraving the letter and figures and an arrow indicating the direction of flow and finishing the top exposed surface with cement mortar 1:3, painting letters and figures with two coats of black enamel paint on two coats of white background with all labour, tools, cement, paint etc. with all leads and lifts.   | 22   | Each | 803.83   | 0.00    | 803.83   | 17,684.26   |
| 34 | 52240 | Providing cast in-situ plaques for bridge foundations details of size 45cmx45cmx5cm in cement concrete 1:2:4 mix using 20mm hard stone aggregate embedded in 30mm deep notch over  | 11   | Each | 1,218.86 | 0.00    | 1,218.86 | 13,407.46   |

|                             |       |   |    |       |          |          |          |                       |
|-----------------------------|-------|---|----|-------|----------|----------|----------|-----------------------|
|                             |       | abutment & piers, engraving the letters & figures with CM 1:3 and finished smooth including painting letters and figures with 2 coats of black enamel and plaque with white enamel with all labour, tools, cement, paint, curing etc. as a complete job.  |    |       |          |          |          |                       |
|                             | 52250 | Providing & laying non pressure NP-4 Class RCC pipe with collars, jointing with 1:2 cement and ordinary sand mortar including testing of joints, but excluding earthwork with all labour and material as a complete job. Cement for mortar will be paid separately.(Pipes of 600mm dia and above will be laid using crane/hydra). |    |       |          |          |          |                       |
| 35                          | 52253 | 600mm dia.  | 40 | Metre | 2,493.92 | (-)13.32 | 2,161.73 | 86,469.19             |
| 36                          | 52254 | 900mm dia.  | 40 | Metre | 4,267.29 | 0        | 4,267.29 | 1,70,691.60           |
| <b>Sub Total Schedule C</b> |       |   |    |       |          |          |          | <b>1,75,84,376.59</b> |

**COMPONENT-I**

**Earthwork/blanketing in formation / cutting, and allied formation protection works like construction of Toe wall, retaining wall, drains, pitching etc.**

**Schedule: D- NS Items**

| Sr No | Item Code | Description   | Qty  | Unit | Basic rate ₹ | Amount ₹       |
|-------|-----------|---|------|------|--------------|----------------|
| 37    | NS/1      | Providing and laying Cement Concrete or RCC M25/M30/M35/M40 in Precast for raft, abutment, dirt wall, return wall, wing wall, retaining wall, approach slab, slab for inspection steps, coping for bridge, slab/CC Block for pitching, Drains of required size & Shapes, L wall of various ht and size, footpath, other miscellaneous works etc using well graded stone aggregates of 20mm Nominal size , Transportation to site from Casting yard/Factory, launching laying, aligning , joining, fixing, painting (if any) the precast items including road movement to nearest approachable point and short leading by rail lorry ( where ever required) etc, as directed by The Engineer.<br>The rate inclusive of cost of required materials, labours,, equipment, plants, machineries, tools, manufacturing, curing , handling, loading, transportation, fuel, lead lift , unloading, laying, aligning, levelling, joining, testing & commissioning etc. | 6000 | Cum  | 7,129.18     | 4,27,75,080.00 |
| 38    | NS/2      | Providing and casting in-situ controlled CC of M-15 grade, with 20mm downgraded crushed stone aggregates of required size including required formwork, shuttering and supporting arrangement and transporting concrete from batching plant by transit   | 1875 | Cum  | 3,817.03     | 71,56,931.25   |



|    |      |  |     |      |           |              |
|----|------|--|-----|------|-----------|--------------|
|    |      | mixture placing it in position, compacting with needle vibrator including curing with all labour, material, machinery all lead, lift etc. complete as per drawing and technical specification and as directed by Engineer In charge. (Reinforcement steel shall be paid separately)  |     |      |           |              |
| 39 | NS/3 | Providing and casting in-situ controlled RCC/CC of M-20 grade, with 20mm downgraded crushed stone aggregates of required size for approach slab, drop walls, Curtain walls wearing coat, railing, slabs etc including required formwork, shuttering and supporting arrangement and transporting concrete from batching plant by transit mixture placing it in position, compacting with needle vibrator including curing with all labour, material, machinery all lead, lift etc. complete as per drawing and technical specification and as directed by Engineer In charge. (Reinforcement steel shall be paid separately)                      | 47  | Cum  | 5,744.61  | 2,69,996.67  |
| 40 | NS/4 | Providing and casting in-situ controlled RCC/CC of M-25 grade, with 20mm downgraded crushed stone aggregates of required size for approach slab, Toe wall wearing coat, railing, slabs etc including required formwork, shuttering and supporting arrangement and transporting concrete from batching plant by transit mixture placing it in position, compacting with needle vibrator including curing with all labour, material, machinery all lead, lift etc. complete as per drawing and technical specification & as directed by Engineer In charge. (Reinforcement steel shall be paid separately)   | 450 | Cum  | 5,917.69  | 26,62,960.50 |
| 41 | NS/5 | Providing and casting in-situ controlled RCC/CC of M-30 grade, with 20mm downgraded crushed stone aggregates of required size for approach slab, wearing coat, railing, slabs, RCC Box, Foundations & Pier, Abutments etc including required formwork, shuttering and supporting arrangement and transporting concrete from batching plant by transit mixture placing it in position, compacting with needle vibrator including curing with all labour, material, machinery all lead, lift etc. complete as per drawing and technical specification & as directed by Engineer In charge. (Reinforcement steel shall be paid separately)          | 198 | Cum  | 6,112.16  | 12,10,207.68 |
| 42 | NS/6 | 2nd Step plate load test to measure Deformation Modulus EV2 of Compacted Layers /Subsoil   | 27  | Each | 36,633.45 | 9,89,103.15  |
|    | NS/7 | Fabrication, Manufacturing & Transportation of Reinforced Concrete elements of M45 grade design mix concrete (i) Fabrication & manufacturing of Prestressed Concrete (Pre-tensioned) elements such as panel, column etc. as per approved drawing in Controlled Factory Environment with approved methodology by using long line casting method. Concreting should be done by batch mixing plant with capable of producing zero slump concrete, transported through mechanical arrangement & laid on the bed, finishing, curing and also provision of steam curing. Cutting, making necessary cut-out/holes of required sizes for services in PSC |     |      |           |              |

|    |      |  |      |      |          |              |
|----|------|--|------|------|----------|--------------|
|    |      | <p>element after achieving required strength, yard handling &amp; stacking all complete as per approved shop drawings &amp; design mix as per the direction of the Engineer-in-charge. Transportation of Precast PSC Elements from casting yard to site of work by suitable Truck/Trailer with proper accessories, including the cost of loading, unloading &amp; stacking at site with the help of required capacity cranes. (iii) The rate is inclusive of all ingredients i.e. cement, sand, aggregate, admixtures, water etc. including handling, batching, mixing, transporting, placing and vibrating of concrete, curing, scaffolding, shuttering, formwork, mould, staging, lifting arrangement as per approved drawing etc. with all lead and lift with contractor's own labour, tools &amp; plants machineries all taxes etc complete as required for successful completion of the item. Note-1: No payment shall be made for damaged Precast elements. Note-2: In case of change of size of precast RCC element, payment shall be adjusted on volumetric pro-rata basis.</p>  |      |      |          |              |
| 43 | a    | RCC Panel of Size as per Approved Drawing  | 1750 | Each | 1,060.20 | 18,55,350.00 |
| 44 | b    | RCC Column of Size as per Approved Drawing   | 350  | Each | 1,411.96 | 4,94,186.00  |
|    | NS/8 | <p>Fabrication, Manufacturing &amp; Transportation of Precast RCC elements of M30 grade design mix concrete (i) Fabrication and manufacturing of precast concrete element such as foundation &amp; column cap as per approved drawing, manufactured in controlled factory environment with approved methodology including moulds, mixing, transporting and placing of concrete, vibrating, curing, finishing, making necessary cut-out/holes of required sizes for services, yard handling &amp; stacking all complete as per IS:11447:1985 and as per approved shop drawings and design mix as per the direction of Engineer in Charge (Cost of steel for reinforcement shall be paid separately under relevant item). (ii) Transportation of Precast RCC Elements from casting yard to site of work by suitable Truck/Trailer with proper accessories, including the cost of loading, unloading &amp; stacking at site with the help of required capacity cranes. (iii) The rate is inclusive of all ingredients i.e. cement, sand, aggregate, admixtures, water etc. including handling, batching, mixing, transporting, placing and vibrating of concrete, curing, scaffolding, shuttering, formwork, mould, staging etc. with all lead and lift with contractor's own labour, tools &amp; plants machineries all taxes etc complete as required for successful completion of the item. Note-1: No payment shall be made for damaged Precast elements. Note-2: In case of change of size of precast RCC element, payment shall be adjusted on volumetric pro-rata basis.</p> |      |      |          |              |
| 45 | a    | RCC Foundation as per Approved drawing.  | 350  | Each | 3,443.81 | 12,05,333.50 |
| 46 | b    | Column Cap as per Approved drawing   | 350  | Each | 79.53    | 27,835.50    |

|    |      |   |                             |      |        |                       |
|----|------|---|-----------------------------|------|--------|-----------------------|
|    | NS/9 | Erection & Installation of Precast PSC/RCC elements in correct & final position with proper line, level and plumb at site making all arrangements (i.e cranes, push-pull jacks & all other T&P) for lifting, placing, Steel Props for holding in position after Erection & Alignment of elements, within erection tolerance as per IS: 15916 as per approved shop drawings and all complete as per the direction of Engineer-in- Charge. Note-1: The rate is inclusive of all contractor's labour, materials, including machineries, tools & plants, grouting etc. complete. Note-2: In case of change of size of precast RCC element, payment shall be adjusted on volumetric pro-rata basis. <b>Cement for grouting shall be paid separately.</b> |                             |      |        |                       |
| 47 | a    | RCC Panel of Size as per Approved drawing.  | 1750                        | Each | 186.95 | 3,27,162.50           |
| 48 | b    | RCC Column (H-Section) as per Approved drawing.   | 1750                        | Each | 249.27 | 4,36,222.50           |
| 49 | c    | RCC Foundation as per Approved drawing.   | 350                         | Each | 682.21 | 2,38,773.50           |
| 50 | d    | Column Cap as per Approved drawing.   | 350                         | Each | 15.58  | 5,453.00              |
|    |      |   | <b>Sub Total Schedule D</b> |      |        | <b>5,96,54,595.75</b> |

**COMPONENT-I**

**Earthwork/blanketing in formation / cutting, and allied formation protection works like construction of Toe wall, retaining wall, drains, pitching etc.**

**Schedule : E : WRUSSOR- 2019**

| Sr No                       | Item Code | Description   | Qty      | Unit | Basic Unit rate ₹ | %age Escalation | Rate ₹   | Amount ₹            |
|-----------------------------|-----------|---|----------|------|-------------------|-----------------|----------|---------------------|
|                             | 25060     | 025060 Supply and using Cement at Worksite  |          |      |                   |                 |          |                     |
| 51                          | 25062     | Ordinary Portland Cement 53 grade   | 325      | MT   | 6,689.69          | -9.78           | 6,035.60 | 19,61,517.45        |
|                             | 25070     | Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete |          |      |                   |                 |          |                     |
| 52                          | 25072     | Thermo-Mechanically Treated bars of grade Fe-500D or more.  | 57402.83 | Kg   | 73.03             | -9.78           | 65.89    | 37,82,138.49        |
| <b>Sub Total Schedule E</b> |           |   |          |      |                   |                 |          | <b>57,43,655.94</b> |

**COMPONENT-I**

**Earthwork/blanketing in formation / cutting, and allied formation protection works like construction of Toe wall, retaining wall, drains, pitching etc.**

**Schedule: F: NS Items**

| Sr No                              | Item Code | Description  | Qty | Unit | Basic rate ₹              | Amount ₹               |
|------------------------------------|-----------|--|-----|------|---------------------------|------------------------|
| 53                                 | NS/1      | Demolishing Brick work/RCC Work manually/Mechanical Means in cluding stacking of steel Bars or & Disposal of unservicable materials as per direction of Engineer/Employer, with contractors own labour, machinary, fuel etc. complete. | 500 | Cum  | 500.00                    | 2,50,000.00            |
| 54                                 | NS/2      | Miscellaneous Item Required for execution of Work not Covered in Para 1% Cost of Above schedule  |     | LS   |                           | 49,20,089.86           |
| <b>Sub Total Schedule F</b>        |           |  |     |      |                           | <b>51,70,089.86</b>    |
| <b>Gross Total of Component -I</b> |           |  |     |      | <b>(Sch-A +B+C+D+E+F)</b> | <b>60,06,32,282.00</b> |

| COMPONENT- II , Permanent Way works involving track linking, assembling, insertion of Point & Crossings. |           |  |             |      |                   |                  |        |            |
|--|-----------|--|-------------|------|-------------------|------------------|--------|------------|
| SCHEDULE 'A' - (WR SSOR 2019)  |           |  |             |      |                   |                  |        |            |
| Sr No  | Item Code | Description  | Unit        | Qty  | Basic Unit rate ₹ | % age Escalation | Rate ₹ | Amount ₹   |
| 55   | 121110    | Installation of reference points for track centre line in main and loop lines, in straight or curve portion, SRJ for turnouts, heel of crossing (HOC), locations of derailing switches, switch expansion joints etc. away from formation on firm ground at known offset with MS Angles of 50mmx50mmx5mm thick , protected by surrounding concrete of size 30cm x 30cm x 45cm of nominal mix 1:3:6, including painting to pegs, as directed by Engineer In charge. NOTE(Earth work and Cement concrete will be paid under relevant items) | Each        | 30   | 433.85            | (-) 6.60         | 405.22 | 12156.48   |
| 56   | 121131    | Linking of BG track on prepared formation to correct gauge & alignment with Railway's track materials including spreading sleepers at specified spacing, squaring, pairing & fixing rails to sleepers with all types of rail fittings & fastenings including their lubrication as per IRPWM standards. Rate is inclusive of kutcha packing to make track fit for 20 kmph speed : (NOTE: Rail cutting and Hole drilling shall be paid separately) (a) For sleeper density of 1660 sleepers per km.  | Track metre | 9500 | 304.41            | (-) 6.60         | 284.32 | 2701029.93 |
| 57   | 121132    | Linking of BG track on prepared formation to correct gauge & alignment with Railway's track materials including spreading sleepers at specified spacing, squaring, pairing & fixing rails to sleepers with all types of rail fittings & fastenings including their lubrication as per IRPWM standards. Rate is inclusive of kutcha packing to make track fit for 20 kmph speed : (NOTE: Rail cutting and Hole drilling shall be paid separately) (b) For sleeper density of 1540 sleepers per km   | Track metre | 1000 | 282.63            | (-) 6.60         | 263.98 | 263976.42  |

|    |        |  |             |       |         |             |         |           |
|----|--------|--|-------------|-------|---------|-------------|---------|-----------|
| 58 | 121140 | Laying of BG new IRS SEJ (Switch Expansion Joint) on PSC / Wooden sleepers with cutting of rails, as required and lubrication including gauging, aligning rails, providing temporary connection with adequate welding gap with adjoining rail and ensuring proper track geometry for 30 kmph speed Note:[The rates will include leading of SEJ sleepers, SEJ fittings for a free lead of 250 metres and providing reference posts with kachcha and first packing and making ballast profile as per IRPWM, Welding, Cutting of rails & Drilling of holes will be paid separately.]  | Set         | 4     | 7382.51 | (-)<br>6.60 | 6895.26 | 27581.06  |
| 59 | 121181 | Shifting / Slewing the existing or newly assembled track under line block to correct locations & alignment and attending to one round kutcha packing during line block or non-block period, as directed by Engineer in-charge Maximum Shifting / Slewing upto 1 metre  | Track metre | 200   | 312.85  | (-)<br>6.60 | 292.2   | 58440.38  |
| 60 | 121182 | Shifting / Slewing the existing or newly assembled track under line block to correct locations & alignment and attending to one round kutcha packing during line block or non-block period, as directed by Engineer in-charge Maximum Shifting / Slewing for more than 1 metre & upto 2 metres   | Track metre | 200   | 394.02  | (-)<br>6.60 | 368.01  | 73602.94  |
| 61 | 131203 | De-stressing of LWR/CWR with contractor's labours, tools & equipments inclusive of all lead & lift. Activities include cutting of LWR/CWR into convenient panels of specified length, removal of ERCs, liners, greasing of ERCs and liner contact area, lifting rails and keeping them on rollers provided at every 15 sleepers, working out elongation of rail ends depending on prevailing site conditions, pulling rails with the help of Hydraulic Tensor to achieve the desired elongation, cutting rails, as required, removing rollers and placing rail in position, re-fixing ERCs & liners and adjustment of gap at SEJs : Note: (1) Welding of rail joints will be paid separately. 2. Rail cutting and Hole drilling shall be paid separately (3) Opening and closing of LC if required will be paid separately. 4. As per instructions of IR manual. | Track metre | 10500 | 82.55   | (-)<br>6.60 | 77.1    | 809567.85 |

|    |        |   |                  |       |         |             |         |            |
|----|--------|---|------------------|-------|---------|-------------|---------|------------|
| 62 | 131400 | Drilling holes of 16mm to 22mm dia. on PSC sleepers including special layout sleepers and fixing the dowels with adhesive of approved quality for fixing check rails & guard rails, as directed by engineer in-charge   | Each             | 100   | 286.7   | (-)<br>6.60 | 267.78  | 26777.78   |
| 63 | 131530 | Anti-corrosive painting of rail on running track on web, foot etc. including liner contact area (excluding bottom of foot) and fishing plane as per requirement with two coats of bituminous emulsion without mica (IP No. 56192 and RDSO Specification No. IRS-P-30-1996) of reputed make including surface preparation, i.e. cleaning with wire brush / sand paper as a complete job as per Para 250 of Indian Railways Permanent Way Manual .Note : 60% of payment shall be made if painting on one side is done   | Running<br>Metre | 21000 | 133.92  | (-)<br>6.60 | 125.08  | 2626706.88 |
| 64 | 131552 | Marking, inscribing, painting, writing, bordering etc. on new / old iron surface at various locations of Points & Crossings with details of turn-in / turn-out reference station mark on rail web for one set, duly preparing surface with contractor's wire brush and applying two coats of yellow synthetic enamel paint of approved quality as background and stenciling the details to suitable size, as described for every curve reference station mark / switch / crossing details with black enamel paint of approved quality complete, as directed : [NOTE: Stenciling of letters is only permitted. No hand written letters are accepted.] 1 in 12 Turnout  | Set              | 8     | 1464.15 | (-)<br>6.60 | 1367.52 | 10940.13   |
| 65 | 131554 | Marking, inscribing, painting, writing, bordering etc. on new / old iron surface at various locations of Points & Crossings with details of turn-in / turn-out reference station mark on rail web for one set, duly preparing surface with contractor's wire brush and applying two coats of yellow synthetic enamel paint of approved quality as background and stenciling the details to suitable size, as described for every curve reference station mark / switch / crossing details with black enamel paint of approved quality complete, as directed : [NOTE: Stenciling of letters is only permitted. No hand written letters are accepted.] Derailing Switch | Set              | 2     | 464.67  | (-)<br>6.60 | 434     | 868        |

|    |        |   |                |       |        |             |        |           |
|----|--------|---|----------------|-------|--------|-------------|--------|-----------|
| 66 | 161012 | Quick cutting with abrasive rail cutter of all types of rail sections including wear resistant, head hardened rails upto 110 UTS, with contractors tools & plants, equipment, consumable with all lead & lift etc. complete as directed by Engineer in-charge. Abrasive Rail Cutter will be as per RDSO Specification No. TM/SM/1 (Rev. 01 of 2007) with latest status of RDSO; Rail Cutting Wheel Abrasive Disc will be as per RDSO Specification No. TM/SM/2 ( Rev. 01 of 2007) - 60 Kg - 90 UTS  | Each           | 100   | 269.35 | (-)<br>6.60 | 251.57 | 25157.29  |
| 67 | 161021 | Drilling holes of 16 mm to 32 mm dia. with Rail Drilling machine in all types of rail section with contractor's tools & plants, equipment, consumable with all lead & lift etc. complete, as directed by Engineer in-charge. Rail Drilling Machine will be as per RDSO Specification No. TM/SM/3, dated 24.04.1991 for -Outside Track   | Each           | 50    | 87.74  | (-)<br>6.60 | 81.95  | 4097.46   |
| 68 | 121120 | Compaction of ballast in layer, laid on new formation at all the locations with smooth wheeled power roller of 8-10 tonne capacity to sufficient number of passes to form consolidated ballast bed of 100mm - 150mm thickness to a width of 3.5m to 4.5m symmetrical to centre line of proposed track, to suit finished formation to correct line & level with all ascents & descents, as directed by Engineer in-charge. {Note : (1) Rate is inclusive of (a) providing ramp for taking roller to formation and removing the same & making good formation after completion of work; (b) redistribution & leveling of excess ballast while rolling to obtain uniform plane cambered surface; (2) 1.6 times to linear length of turnout shall be paid for work on turnout} | Track<br>metre | 21000 | 38.6   | (-)<br>6.60 | 36.05  | 757100.40 |
| 69 | 81100  | Boxing of ballast as per profile mentioned in IR's LWR Manual including cess dressing on both sides of track. The work will include removing excess ballast from track and putting the same in crib and shoulder by leading to a maximum of 50m including crossing of track, de-weeding on ballast section etc and as directed by Engineer- In charge   | Track<br>metre | 10500 | 31.06  | (-)<br>6.60 | 29.01  | 304605.42 |



|    |        |  |      |     |         |             |         |           |
|----|--------|--|------|-----|---------|-------------|---------|-----------|
| 70 | 91051  | 25mm gap Cess Welding and finishing of rail joints as per IR's AT Welding Manual with RDSO approved welding portion and competent welder, labour, tools, equipment complete. Item also includes use of weld trimming machine and grinding of weld finished to meet the weld tolerances and also anti corrosive painting & marking of welded joint, as directed by engineer in-charge : For 60 Kg Rail, Single shot crucible fitted with Automatic Tapping Thimble Technology, 3 pieces Mould (Zircon washed) and Compressed Air Petrol heating technique | Each | 100 | 5694.67 | (-)<br>6.60 | 5318.82 | 531882.18 |
|    | 171110 | Loading of 52kg / 60kg PSC line and special sleepers beyond 2.7 metre length including existing fittings and fastenings in Depot / Station / Mid-section between stations in a neat manner to departmental material train (DMT) or contractor's / Railway's Truck/Trailer with crane or any other means including crossing of one track with free lead upto 250 metre and lift upto 5 metre, if required with contractor's labour, tools & plants, machinery, consumables etc. -   |      |     |         |             |         |           |
| 71 | 171114 | In Wagon/Truck / Trailer where mechanical handling is possible and traffic block is not required.  | MT   | 500 | 120.45  | (-)<br>6.60 | 112.5   | 56250.15  |
| 72 | 201140 | Manufacturing, supplying and fixing Curve Indicator / Point Indicator / SEJ Boards to be provided at various locations on formation, made out of MS sheet 2mm thick of size 450mm x 300mm duly fixed with MS frame of 25mm x 25mm x 3mm angle welded to 50mm x 50mm x 3mm MS angle, 1000mm long post split and bent 100mm at bottom end with all lead & lift as per specification and including painting of details with enamel paint, as directed by Engineer in-charge (Earthwork & concreting will be paid separately)                                | Each | 50  | 830.52  | (-)<br>6.60 | 775.71  | 38785.28  |
| 73 | 211050 | Casting and positioning of pre-cast cement concrete Fouling Mark as per approved drawing at station yard, duly painting letters of Fouling Mark, complete in all respects with all labour, materials including cement, tools and plants etc.   | cum  | 6   | 7908.22 | (-)<br>6.60 | 7386.28 | 44317.66  |

|    |        |   |      |       |        |             |        |           |
|----|--------|---|------|-------|--------|-------------|--------|-----------|
| 74 | 211021 | Erection or removal of temporary Engineering Indicator Board or any other board at specified locations without causing infringement to track etc. complete and as directed For erection   | Each | 15    | 262.97 | (-)<br>6.60 | 245.61 | 3684.21   |
| 75 | 211022 | Erection or removal of temporary Engineering Indicator Board or any other board at specified locations without causing infringement to track etc. complete and as directed For removal  | Each | 15    | 215.68 | (-)<br>6.60 | 201.45 | 3021.68   |
| 76 | 171014 | Loading of rails of any section and length upto 14 metres in Wagons / Truck / Tractor including lead upto 50 metres and lift upto 5 metres - In Wagon where mechanical handling is possible and traffic block is not required or in Truck/Tractor.  | MT   | 50    | 121.57 | (-)<br>6.60 | 113.55 | 5677.32   |
| 77 | 171063 | Unloading of rails of any section and length upto 13 metre, in neat manner for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Tractor including lead upto 250 metre, lift upto 5 metre and stacking in prescribed manner - In Wagon where mechanical handling is possible and traffic block is not required or in Truck / Tractor | MT   | 50    | 72.96  | (-)<br>6.60 | 68.14  | 3407.23   |
| 78 | 171172 | Loading all types of P. Way fittings and fastenings into Wagons / Truck / Tractor - Not involving traffic block   | MT   | 85.25 | 122.53 | (-)<br>6.60 | 114.44 | 9756.27   |
| 79 | 171192 | Unloading all types of P.Way fittings and fastenings for Railway usage from departmental material train (DMT) or contractor's / Railway's Truck/Tractor with lead upto 250 metre & lift upto 5 metre - Not involving traffic block  | MT   | 85.25 | 103.49 | (-)<br>6.60 | 96.66  | 8240.23   |
| 80 | 171131 | Leading all types of P.Way materials by road vehicles to destination excluding loading / unloading, with contractor's vehicle, crew, consumables, labour, tools & plants etc. Lead upto 10 Km   | MT   | 150   | 98.97  | (-)<br>6.60 | 92.44  | 13865.70  |
| 81 | 171132 | Leading all types of P.Way materials by road vehicles to destination excluding loading / unloading, with contractor's vehicle, crew, consumables, labour, tools & plants etc. Extra to Item no. 171131 for additional lead over 10 Km for every 5 Km lead or part thereof upto 100 Kms  | MT   | 2700  | 29.57  | (-)<br>6.60 | 27.62  | 74569.63  |
| 82 | 171133 | Leading all types of P.Way materials by road vehicles to destination excluding loading / unloading, with contractor's vehicle, crew, consumables, labour, tools & plants  | MT   | 9000  | 13.61  | (-)<br>6.60 | 12.71  | 114405.66 |

|    |        |  |             |       |        |             |        |            |
|----|--------|--|-------------|-------|--------|-------------|--------|------------|
|    |        | etc. Extra to Items no. 171131 & 171132 for additional lead beyond 100 Km for every 5 Km or part thereof upto 400 Kms  |             |       |        |             |        |            |
| 83 | 171134 | Leading all types of P.Way materials by road vehicles to destination excluding loading / unloading, with contractor's vehicle, crew, consumables, labour, tools & plants etc. Extra to Items no. 171131, 171132 & 171133 for additional lead beyond 400 Km for every 5 Km or part thereof upto 1000 Kms  | MT          | 18000 | 13.36  | (-)<br>6.60 | 12.48  | 224608.32  |
|    | 131010 | Through packing of track, as described in Para-224 of Indian Railways Permanent Way Manual -   |             |       |        |             |        |            |
| 84 | 131011 | For Sleeper Density of 1540 Sleepers/Km or more  | Track Metre | 21000 | 112.14 | (-)<br>6.60 | 104.74 | 2199513.96 |
| 85 | 81061  | Lifting and packing for regrading the existing BG track to required height / level in stages not exceeding 75mm or part thereof at a time, providing permissible ramp for the track, insertion of moorum / sand / stone ballast uniformly under the existing track and placing the same to safe approved gradient, gauge, cushion including levelling and one round of through packing to allow train movement at restricted speed of 30 kmph for a specified length with all leads & lifts and fixing, marking, painting rail level posts, tiebars at every 30m interval. {Note : Lifting of track shall be done in stages as per procedure laid down in Para 233 of IRPWM to get the proposed final level as per approved working profile, as directed by engineer in-charge} - In PSC sleeper track | Track metre | 10500 | 190.46 | (-)<br>6.60 | 177.89 | 1867841.22 |
| 86 | 131231 | Fixing Joggled Fish Plates with bolt / clamp (supplied by Railway) in running track conditions at welds on rail, as directed by engineer in-charge (drilling of holes in rail will be paid separately) : With 2 bolts  | Set         | 100   | 143.04 | (-)<br>6.60 | 133.6  | 13359.94   |
| 87 | 131250 | Providing wooden blocks at rail joints duly transporting Railway's released wooden sleepers, cutting into blocks, providing bearing plate with rail screw / dog spikes and doing packing, if required, as directed under traffic conditions [Note: Wooden blocks, Bearing plates, rail   | Each        | 20    | 178.19 | (-)<br>6.60 | 166.43 | 3328.59    |

|    |        |   |      |    |          |             |          |           |
|----|--------|---|------|----|----------|-------------|----------|-----------|
|    |        | screws/dog spikes will be supplied free by Railways.]   |      |    |          |             |          |           |
| 88 | 131270 | Maintenance of track on main line & loops, Points & crossings etc. including special attention to section for carrying out vari {Note : (1) Contractor shall arrange one gang at any point of time comprising of minimum 20 labours with sufficient experience in P.Way working and one P.Way Supervisor. (2) In case, contractor provides less no. of Labour / Supervisor, payment will be deducted @ 10% of the accepted rate per person}ous maintenance works listed in Indian Railways P.Way Manual / Bridge Manual / LWR Manual for safe running of goods and passenger trains with contractor's tools / labours etc. complete, as directed by Engineer in-charge.   | Day  | 60 | 17248.69 | (-)<br>6.60 | 16110.28 | 966616.59 |
| 89 | 201116 | Manufacturing, fabricating and supplying retro- reflective sign boards, made of 2mm thick aluminium sheet or 3mm thick aluminium composite sheet, face to be fully covered with high intensity encapsulated type heat activated retro- reflective sheeting conforming to type-IV of ASTM-D4956-01 in yellow & black or other colour combination including subject matter, message, symbols, borders etc. as approved by Engineer In-charge or as per IRPWM guidelines, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class-2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back- support frame of M.S. angle iron of size 25mm x 25mm x 3mm along with theft resistant measures, mounted and fixed with 2 nos. M.S. angles of size 35mm x 35mm x 5mm to a vertical post made up of M.S. Tee section ISMT 50mm x 50mm x 6mm, back side of board shall be with non-peelable weather- proof paint, consisting of one coat of zinc chromate primer and two coats of epoxy paint. Vertical post shall have black & white anti-corrosive paint or powder coating complete, as directed Caution Indicator Board. | Each | 5  | 5257.93  | (-)<br>6.60 | 4910.91  | 24554.53  |

|    |        |  |      |   |         |             |         |          |
|----|--------|--|------|---|---------|-------------|---------|----------|
| 90 | 201117 | Manufacturing, fabricating and supplying retro- reflective sign boards, made of 2mm thick aluminium sheet or 3mm thick aluminium composite sheet, face to be fully covered with high intensity encapsulated type heat activated retro- reflective sheeting conforming to type-IV of ASTM-D4956-01 in yellow & black or other colour combination including subject matter, message, symbols, borders etc. as approved by Engineer In-charge or as per IRPWM guidelines, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class-2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back- support frame of M.S. angle iron of size 25mm x 25mm x 3mm along with theft resistant measures, mounted and fixed with 2 nos. M.S. angles of size 35mm x 35mm x 5mm to a vertical post made up of M.S. Tee section ISMT 50mm x 50mm x 6mm, back side of board shall be with non-peelable weather- proof paint, consisting of one coat of zinc chromate primer and two coats of epoxy paint. Vertical post shall have black & white anti-corrosive paint or powder coating complete, as directed Speed Indicator Board | Each | 5 | 4490.65 | (-)<br>6.60 | 4194.27 | 20971.34 |
| 91 | 201119 | Manufacturing, fabricating and supplying retro- reflective sign boards, made of 2mm thick aluminium sheet or 3mm thick aluminium composite sheet, face to be fully covered with high intensity encapsulated type heat activated retro- reflective sheeting conforming to type-IV of ASTM-D4956-01 in yellow & black or other colour combination including subject matter, message, symbols, borders etc. as approved by Engineer In-charge or as per IRPWM guidelines, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class-2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back- support frame of M.S. angle iron of size 25mm x 25mm x 3mm along with theft resistant measures, mounted and fixed with 2 nos. M.S. angles of size 35mm x  | Each | 5 | 6708.62 | (-)<br>6.60 | 6265.85 | 31329.26 |

|    |        |   |      |    |         |             |         |          |
|----|--------|---|------|----|---------|-------------|---------|----------|
|    |        | 35mm x 5mm to a vertical post made up of M.S. Tee section ISMT 50mm x 50mm x 6mm, back side of board shall be with non-peelable weather-proof paint, consisting of one coat of zinc chromate primer and two coats of epoxy paint. Vertical post shall have black & white anti-corrosive paint or powder coating complete, as directed Termination Indicator Board   |      |    |         |             |         |          |
| 92 | 121261 | Working of the Railway Push Trolley by arranging required semi-skilled manpower as per Railway's rules and stipulations for conducting inspections by Railway officials and as directed by Engineer in-charge. Note: 1) Labourers supplied should be capable of pushing trolley in all gradients, and levels duly observing all safety precautions as per the manual. 2) The labour engaged should be strong and literate 3) Minimum of one head Trolley man along with 3 assistant men shall be engaged at each time of Trolley run.] For Full day   | Each | 25 | 3426.46 | (-)<br>6.60 | 3200.31 | 80007.84 |
| 93 | 121262 | Working of the Railway Push Trolley by arranging required semi-skilled manpower as per Railway's rules and stipulations for conducting inspections by Railway officials and as directed by Engineer in-charge. Note: 1) Labourers supplied should be capable of pushing trolley in all gradients, and levels duly observing all safety precautions as per the manual. 2) The labour engaged should be strong and literate 3) Minimum of one head Trolley man along with 3 assistant men shall be engaged at each time of Trolley run.] For Half day (upto 4 hours)  | Each | 25 | 1792.84 | (-)<br>6.60 | 1674.51 | 41862.81 |
| 94 | 121271 | Providing Caution Watchman at a rate of one caution watchman per 8 hours shift with prescribed protection equipment from contractor at location where caution order is imposed; (Detonators, Banner Flags / HS Flags will be supplied by Railways) watchman to be on continuous vigil and exhibit necessary hand signals to the trains for their passage over caution spot : [ NOTE: 1) The above rate is for one location per day for 3 shifts of 8 hours each. 2) Banner flags and HS flags will be supplied by Railways. Contractor has to arrange 3 cell electric torch and tricolour light. 3) If Contractor fails to post watchman at any time during one | Each | 20 | 741.22  | (-)<br>6.60 | 692.3   | 13845.99 |

|    |        |   |          |      |          |             |          |           |
|----|--------|---|----------|------|----------|-------------|----------|-----------|
|    |        | day, penalty at double the accepted rates will be levied 4) The watchman nominated by the contractor will be screened for suitability as per Railway norms.] For One Shift  |          |      |          |             |          |           |
|    | 131080 | First and second through packing of points and crossing including gauging, fittings recoument, elimination of sag and to the required alignment as per provisions of Indian Railways Permanent Way Manual   |          |      |          |             |          |           |
| 95 | 131083 | 1 in 12 PSC layout  | Set      | 4    | 28217.11 | (-)<br>6.60 | 26354.78 | 105419.12 |
|    | 131090 | Third or subsequent through packing of points and crossing including gauging, fittings recoument, elimination of sag and to the required alignment as per provisions of Indian Railways Permanent Way Manual -  |          |      |          |             |          |           |
| 96 | 131093 | 1 in 12 PSC layout  | Set      | 4    | 22408.45 | (-)<br>6.60 | 20929.49 | 83717.97  |
|    | 141020 | Carrying out Through USFD testing of running rails & welds (excluding flange testing) including the full head width portion of SEJ, lead portion of points & crossings of all types of rails using 0° (4 MHz) and 70° (2 MHz) central forward & backward, 70° (2 MHz) gauge face corner forward & backward and 70° (2 MHz) field forward & backward probes by NBC (Need Based Concept) method under traffic conditions as per provisions of IR's "Manual & Specifications for Ultrasonic Testing of Rails and Welds" & related instructions, duly marking defects, submission of daily reports and storing back-up data, as specified & directed. The rates are inclusive of contractor's men, materials & machines complete unless otherwise specified and as directed : |          |      |          |             |          |           |
| 97 | 141021 | With Contractor's USFD machine  | Track Km | 10.5 | 5770.49  | (-)<br>6.60 | 5389.64  | 56591.19  |
|    | 141040 | Carrying out USFD testing of Flash Butt (FB) & Gas Pressure (GP) welds on all types of rails using 2 single crystal 45° (2 MHz) for head testing and one single crystal 70° (2 MHz) probe for web & flange testing by NBC (Need Based Concept) method under traffic conditions as per provisions of IR's "Manual & Specifications for Ultrasonic Testing of Rails and Welds" & related instructions, duly marking the   |          |      |          |             |          |           |

|                            |        |  |      |      |         |             |         |                |
|----------------------------|--------|--|------|------|---------|-------------|---------|----------------|
|                            |        | defects, submission of daily reports and storing back-up data as specified & directed. The rates are inclusive of contractor's men, materials & machines complete unless otherwise specified and directed :  |      |      |         |             |         |                |
|                            |        | With Contractor's USFD machine:  |      |      |         |             |         |                |
| 98                         | 141041 | Track having upto 3 rail panels  | Each | 1700 | 212.59  | (-)<br>6.60 | 198.56  | 337550.40      |
|                            | 141030 | Carrying out USFD testing of Alumina Thermic (AT) welds on all types of rails, using 0° (2 MHz) double crystal; 70° (2 MHz) 20mm x 20mm single crystal probe for head & flange testing; 2 nos. 45° (2 MHz) single crystal with tandem rig for testing from rail top to bottom & for half moon testing and 70° (2 MHz) 20mm x 20mm side looking probe by NBC (Need Based Concept) method under traffic conditions as per provisions of IR's "Manual & Specifications for Ultrasonic Testing of Rails and Welds" & related instructions duly marking the defects, submission of daily reports and storing back-up data as specified & directed. The rates are inclusive of contractor's men, materials & machines complete unless otherwise specified and directed |      |      |         |             |         |                |
|                            |        | With Contractor's USFD machine:  |      |      |         |             |         |                |
| 99                         | 141031 | Track having upto 3 rail panels  | Each | 100  | 211.76  | (-)<br>6.60 | 197.78  | 19778.38       |
| 100                        | 191170 | Manufacture of flared portion of Guard Rail by cutting and bending to required shape & RDSO's approved drawings. (Note : (1) Rails shall be supplied by Railways; (2) Rate is for one set, i.e. bending of two rails - left and right)   | Set  | 4    | 9015.02 | (-)<br>6.60 | 8420.03 | 33680.11       |
| 101                        | 191180 | Fixing of flared portion of guard rail including fixing of rail screws, fish plates, rubber or MS packing plate, as directed complete as per RDSO's approved drawing. (Rail screw, plate screw, fish plates etc. will be supplied by Railways)   | Set  | 4    | 4866.75 | (-)<br>6.60 | 4545.54 | 18182.18       |
| 102                        | 191190 | Drilling holes 25mm to 40mm dia. with drill twist in the foot of guard rails for fixing guard rails on bridge  | Each | 300  | 158.57  | (-)<br>6.60 | 148.1   | 44431.31       |
| 103                        | 191210 | Making notches in guard rail of specified dimension to accommodate dog spike / rail screws / guard rail bolts for bridge timber / steel channel sleeper  | Each | 200  | 126.22  | (-)<br>6.60 | 117.89  | 23577.90       |
| <b>Total of Schedule G</b> |        |  |      |      |         |             |         | 1,48,21,240.57 |



**COMPONENT-II** Permanent Way works involving track linking, assembling, insertion of Point & Crossings.**Schedule : H : NS items (Supply of Ballast)**

| Sl. No. | Item no. | Description of items   | Unit | Qty.  | Rate ₹                     | Amount ₹        |
|---------|----------|--|------|-------|----------------------------|-----------------|
| 104     | NS-1     | Supply of Machine-crushed stone ballast on cess at its final location of laying as directed by Engineer as per RDSO specifications for track ballast IRS-GE-1 of June,2016 with latest correction slips from stacked in specified quantities at location new Gothangam Yard/Gothangam Yard/Panoli-Sanjali Connecting line /outside Railway /DFCC limits/along the alignment on either side obstruct as per site requirements. Final Rate includes inspection charges by DFCCIL/Engineer if any. Note 1: Payment will be made on actual stack measurement for gross quantities without any deduction for voids in following stages: (i) 90% on receipt at site, acceptance, measurement, account, proper storage and protection against loss, damage or deterioration: and (ii) Balance 10% after spreading, leading and profiling. | Cum. | 31000 | 1856.1                     | 57539100        |
|         |          |  |      |       | <b>Total of Schedule H</b> | <b>57539100</b> |

**COMPONENT-II** Permanent Way works involving track linking, assembling, insertion of Point & Crossings.**Schedule : J : NS items (Supply of Permanent Way Materials)**

| Sl. No. | Item no. | Description of items   | Unit | Qty.  | Rate ₹  | Amount ₹   |
|---------|----------|--|------|-------|---------|------------|
| 105     | NS-2     | Supply of MS Liner for use with ERC MK-V on Concrete Sleepers (RT7008) suitable to 60Kg UIC Rail For 1676 mm gauge suitable for 25T Axle Load as per RDSO drawing no . RDSO-T-8254 & 8255 at final location of track linking as directed by Engineer . Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.                               | Sets | 34010 | 93.66   | 3185376.6  |
| 106     | NS-3     | Supply of 10mm Composite GRSP compatible with Toe load , Sleeper and Rail profile suitable for 25T Axle load on PSC Sleepers as per RDSO Drawing No. T-7010 at final location of track linking as directed by Engineer. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.  | Nos. | 34010 | 81.1    | 2758211    |
| 107     | NS-4     | Supply of Elastic fastening clips (ERCMK-V) compatible with Rail/sleeper assembly having normal Toe load on the Rail of 1045 Kg suitable for 25 T Axle load on PSC Sleeper as per RDSO Drwg. No. RDSO T-5919 at final location of track linking as directed by Engineer. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.             | Each | 68020 | 135.46  | 9213989.2  |
| 108     | NS-5     | Supply of fish Bolts with nuts for 60 Kg rails as per RDSO Drawing No. T-1899 at final location of linking/laying as directed by Engineer and unused fish bolts will be stacked as per directions of employer for which no extra payment of lead/transportation will be paid. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.        | Nos. | 200   | 103.74  | 20748      |
| 109     | NS-6     | Supply of Fish Plates one meter Long as per Standard drawing of RDSO Drg. No T-5916 at final location of linking/laying as directed by Engineer and unused fish plates will be stacked as per directions of employer for which no extra payment of lead/transportation will be paid. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency. | Nos. | 80    | 2671.71 | 213736.8   |
| 110     | NS-7     | Supply of joggled fish plates (2No. Per set) with 4 pair clams, 4 no. bolts & nuts and 8 nos special washers and wooden blocks for 60 kg Rail as per RDSO Drg No.T-4016/T-5849 at final location of linking/laying as directed by Engineer. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.  | Sets | 500   | 6056.1  | 3028050    |
| 111     | NS-8     | Supply of Mono Block Pre Stressed concrete (PSC)Sleepers for 25T Axle Load as per RDSO drawing no. T7008 including transportation at their final location of laying as directed by Engineer. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.   | Nos. | 17050 | 3343.19 | 57001389.5 |

|     |       |   |      |      |            |             |
|-----|-------|---|------|------|------------|-------------|
| 112 | NS-9  | Supply of 60 Kg 1 in 12 -55R-60E1 (1 in 20 canted) tangential LH Turnout (without Lead Rail and without PSC sleepers) at final location of laying as directed by engineer for 1676mm guage and 25T Axle load for ballasted track including all fastenings & fittings (e.g. GRSP,GFN Liners, ERC Clips, Plate Screws, Washers etc) with thick web switch device shall consist of rails, one left hand and one right hand and two switch rails, one left hand and one right hand, complete set of PSC sleepers along with all fittings e.g. slide chairs, base plates/special base plates, breakers, rail pads, insulting bushes, washers, all stretcher bars, various blocks, bolts and nuts, any special fittings like spiring setting device etc. Coated slide chairs (Ni-Cr) with the addition of rollers on slide chairs shall be provided conforming to well established international standard and any other related components (e.g. Tongue rail, check rail, Crossing, check rail, stock rail for switch, extended leg for CMS crossing & torsion type back drive) as per DFCCIL approved drawing no. VAEVKN04743-04 including transportation and inspection charges. (For switch rail, thick web section out of a symmetrical rail section shall be used. and both, switch and stock rails shall be of special grade steel of minimum 880 grade as per IRS: T-12-2009 and have hardened heads). Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency. | Sets | 4    | 3954072.74 | 15816290.96 |
| 113 | NS-10 | Supply of Improved Switch Expansion Joint at final location of insertion as directed by engineer for 80mm Gap (Max) 60 Kg 90UTS 880 Grade SAIL rails for BG track as per RDSO dwg no. T-6902 including all fastenings & fittings (e.g. GRSP,GFN Liners, ERC Clips, Plate Screws sleepers with all fittings required, complete with all components listed in the relevant RDSO drawings with latest amendments up to date complete including transportation and unloading and inspection charges. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.  | Sets | 4    | 612251.7   | 2449006.8   |
| 114 | NS-11 | Manufacture & supply of prime quality of UIC 60 Kg/m, 880 Grade Head Hardened Class A Rails, as per Indian Railway Standard Specification for Flat Bottom Rails IRS-T-12-2009 (With latest A&C Slips) at DFCCIL Project, western Corridor. Rates are all inclusive transportation at their final location of laying as directed by Engineer and Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.   | MT   | 1320 | 79676.9    | 105173508   |
| 115 | NS-12 | Fabrication and fixing of Dead End as per RDSO drawing including painting of sleeper with contractor's red paint. Fixing with longer size bolts as directed by Engineer In-charge. Leading of Dead End rails and sleepers from Nominated place at site/store as a complete job.   | Each | 3    | 15855.79   | 47567.37    |
| 116 | NS-13 | Supply of Mono Block Pre Stressed concrete (PSC) SEJ Sleepers for 25T Axel Load as per RDSO drawing no. T-8224 (80 mm gap) including transportation at their final location of laying as directed by Engineer. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency. One set of SEJ Sleeper contains Six Sleepers.  | Sets | 4    | 21062.10   | 84248.4     |

|     |       |  |                            |       |          |                     |
|-----|-------|--|----------------------------|-------|----------|---------------------|
| 117 | NS-14 | Supply of Mono Block Pre Stressed concrete (PSC) Guard Rail Sleepers as per RDSO drawing no. T-8228 including transportation at their final location of laying as directed by Engineer. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.  | Nos.                       | 150   | 3510.35  | 526552.5            |
| 118 | NS-15 | Supply of Mono Block Pre Stressed concrete (PSC) Bridge Approach Sleepers as per RDSO drawing no. T-8229 to 8237 including transportation at their final location of laying as directed by Engineer. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.   | Sets                       | 4     | 38613.85 | 154455.4            |
| 119 | NS/16 | Supply of Rails (IU) 13M/26M/260M(60Kg) 880 Grade Rails for Guard Rails. As per specifications of IRS T-12-2009 with latest ammendment, if any. Rates are all inclusive transportation at their final location of laying as directed by Engineer and Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.   | MT                         | 25.44 | 67725.37 | 1722933.41          |
| 120 | NS/17 | Supply of Rail Screw RDSO Drawing No. T-4153. Rates are all inclusive transportation at their final location of laying as directed by Engineer and Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.   | Nos.                       | 760   | 80       | 60800               |
| 121 | NS/18 | Flash butt welding of 60 KG rails (considering 13mtr rail) and panels, as per manual for flash butt welding of rails 1996, in track or outside track, in depot or in mid section for making panels including removing and refixing the fittings, creating required gap by pulling the rails, handling of rails. Note: 60% payment will be made after execution of work and 40% will be paid after satisfactory USFD testing by contractor for which no extra payment will be made. | Each                       | 1700  | 5492.45  | 9337165             |
|     |       |  | <b>Total of Schedule J</b> |       |          | <b>210794028.94</b> |

**COMPONENT-II** Permanent Way works involving track linking, assembling, insertion of Point & Crossings.**Schedule : K : NS items**

| Sl. No. | Item no. | Description of items  | Unit        | Qty.  | Rate ₹   | Amount ₹ |
|---------|----------|---|-------------|-------|----------|----------|
| 122     | NS/19    | Providing Centre Line / Rail Level Pegs on formation at an interval of 30 metres on one side or at centre of proposed / existing track, as directed by engineer in-charge for linking of new track / CTR / Deep Screening / Lifting / Lowering works, duly embedding in formation including marking with contractor's paint..[Note: In case of hard wood peg, the hard wood will be supplied by the contractor. Excavation and concrete work will be paid separately.] With contractor's hard wood pegs   | Each        | 10500 | 115.92   | 1217160  |
|         | NS/20    | Assembling and Installation of 60 Kg 1 in 12 -555R-60E1 (1 in 20 canted)Turnout , for B.G. 60 KG rails including leads Rails as per drawing no. VAEVKN04743-04 including katcha Packing with bars or off track tampers for 20 KMPH speed. Activities of rail cutting , drilling of holes and welding of joints are not included in this item and shall be paid separately under relevant items.   |             |       |          |          |
| 123     |          | 60 Kg 1 in 12 -555R-60E1 (1 in 20 canted)Turnout  | Nos.        | 4     | 86513.6  | 346054.4 |
| 124     | NS/21    | Dismantling of existing BG track both main line and loops consisting of 90R /52 Kg /60Kg rail laid on ST /CST /Wooden /PRC sleepers of varying density other than turn outs but including trap points which shall be treated as ordinary track etc. complete as per direction of Engineer in charge and as per special conditions of contract. The item includes transportation and stacking of the released materials, except that the transportation of released Rails and sleepers shall be paid separately under relevant item beyond lead 1.0Km. The released material shall be deposited as directed by the Engineer in charge in the nominated P.Way Depot or any other location. If fittings are required to be deposited other than nominated yard, then payment of fittings shall also be made for its transportation under relevant IRUSSOR item. Nothing extra shall be paid for labour wastages in case trains are stabled in the Yards. | Track metre | 300   | 126      | 37800    |
| 125     | NS/22    | Dismantling and removal of existing dead end/sanded Dead end from the existing track including levelling of bed up to formation level loading leading and stacking of dismantled material from the site of work to the store/ at nominated place in respective yards or at location as directed by engineer.  | Each        | 2     | 12388.44 | 24776.88 |
| 126     | NS/23    | Tamping of the newly laid BG track on PSC /Wooden sleepers with Railway's Tie Tamping machines in two or three round including picking up slacks to raise the speed in Stages as given in the Special Conditions or sectional speed which ever is more. The Railways shall provide Tie tamping machine along with Crews but the cost of consumable items viz. HSD oil, cotton etc. shall be borne by contractor. The rate is also inclusive of cost of day to day routine maintenance of Tie tamping machine. The contractor shall also provide his own labourers for Pre/During/Post tamping operations.<br>(a) 1st round of tamping   | Track metre | 10500 | 36       | 378000   |

|                            |       |   |             |       |       |                   |
|----------------------------|-------|---|-------------|-------|-------|-------------------|
| 127                        | NS/24 | Tamping of the newly laid BG track on PSC /Wooden sleepers with Railway's Tie Tamping machines in two or three round including picking up slacks to raise the speed in Stages as given in the Special Conditions or sectional speed which ever is more. The Railways shall provide Tie tamping machine along with Crews but the cost of consumable items viz. HSD oil, cotton etc. shall be borne by contractor. The rate is also inclusive of cost of day to day routine maintenance of Tie tamping machine. The contractor shall also provide his own labourers for Pre/During/Post tamping operations.<br>(b) 2nd round of tamping | Track metre | 10500 | 22    | 231000            |
| 128                        | NS/25 | Picking up of stone ballast from Railways Stack and leading the same including spreading uniformly on BG formation as per BG standard profile as per IRPWM and LWR manual including dressing and boxing etc. complete with a lead up to 200 M including crossing of track.  | Cum         | 20000 | 176   | 3520000           |
| 129                        | NS/26 | (a) Extra for leads beyond 200 M but upto 1000 M. (For NS25)  | Cum         | 7000  | 31    | 217000            |
| 130                        | NS/27 | Extra beyond 1000 M but up to 5000 M. (For NS25)  | Cum         | 4000  | 32    | 128000            |
| 131                        | NS/28 | Extra over item No. 1 (NS-1) of Schedule B, if Ballast is to be stacked in private land in case sufficient railway Land is not available. Final Rate includes inspection charges for inspection by RITES/DFCCIL/Any other DFCCIL approved agency.   | Cum.        | 10000 | 65.44 | 654400            |
| <b>Total of Schedule K</b> |       |   |             |       |       | <b>6754191.28</b> |

| <b>COMPONENT-II</b> Permanent Way works involving track linking, assembling, insertion of Point & Crossings. |          |   |         |      |             |              |                        |
|--|----------|---|---------|------|-------------|--------------|------------------------|
| <b>Schedule : L : (WR SSOR 2019)</b>   |          |   |         |      |             |              |                        |
| Sl. No.  | Item no. | Description of items  | Unit    | Qty. | Base Rate   | Escalation % | Amount ₹               |
| 132  | NS/29    | Misc. WR USSOR 2019 - 1-ver-1 items of work required for successful completion of work as deemed necessary by Engineer. | lumpsum | 1    | 14757713.29 | (-)6.6       | 13783704.21            |
| <b>Total of Schedule L</b>   |          |   |         |      |             |              | 13783704.21            |
| <b>Gross Total of Component -II (Sch G+H+J+K+L)</b>  |          |   |         |      |             |              | <b>303692265.00</b>    |
| <b>Gross Total of Component -I +II</b>   |          |   |         |      |             |              | <b>90,43,24,547.00</b> |

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