

**INDIAN OIL CORPORATION LIMITED**  
**Mathura RC Office**

**PURCHASE REQUISITION FOR SERVICES**

|                             |                         |
|-----------------------------|-------------------------|
| Creation Date : 18.05.2026  | PR No. : 10349782       |
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**Total estimate value:** Rs.162,092,931.20

| Outline Level       | Quantity | Unit | Rate | Amount |
|---------------------|----------|------|------|--------|
| Item no.Service no. |          |      |      |        |
| Service Description |          |      |      |        |

**00010 SUPPLY COMPONENTS**

**Plant:** 1521 Mathura RC Office  
**Material Group:** Services  
**Account Assignments:** F -Order  
**Order no.:** 926932  
**G/L Account:** 5999999999

**00010**

SUPPLY COMPONENTS

**00020**

TANK LORRY FILLING

**00030**

"Supply of Microprocessor based Coriolis mass flow meter for Bitumen application along with display unit and mounting accessories with adjustable screw support etc complete as per specifications and tender document for loading of Bitumen for temperature upto 200 Degree.

Note: In case MFM is not having inbuilt ASTM table, vendor has to supply Flow Computers along with accessories as per tender document at no additional cost to IOCL."

|              |               |           |                   |                      |
|--------------|---------------|-----------|-------------------|----------------------|
| <b>00040</b> | <b>14.000</b> | <b>EA</b> | <b>828,772.00</b> | <b>11,602,808.00</b> |
|--------------|---------------|-----------|-------------------|----------------------|

For product (Bitumen) line size 100 mm- TLF

**00050**

"Supply of Penumatic type Multistage Piston type Digital Control Valve

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(DCV) suitable for temperature upto 200 Degree with secure locking arrangement of the needle valves to avoid manual throttling of the needle valves after final tuning of the DCV has been done, secure key ,tubing arrangement etc along with accessories complete as per specifications and tender document.

|              |               |           |                   |                     |
|--------------|---------------|-----------|-------------------|---------------------|
| <b>00060</b> | <b>14.000</b> | <b>EA</b> | <b>343,794.00</b> | <b>4,813,116.00</b> |
|--------------|---------------|-----------|-------------------|---------------------|

For product (Bitumen) line size 100 mm - TLF

|              |               |           |                   |                     |
|--------------|---------------|-----------|-------------------|---------------------|
| <b>00070</b> | <b>14.000</b> | <b>EA</b> | <b>204,307.00</b> | <b>2,860,298.00</b> |
|--------------|---------------|-----------|-------------------|---------------------|

Supply of pneumatic operated ON-OFF Valve along with actuator suitable for temperature upto 200 Degree along with accessories, tubing arrangement as per installation drawing etc for line size 100 mm complete as per specifications and tender document. Service:Bitumen

|              |               |           |                   |                     |
|--------------|---------------|-----------|-------------------|---------------------|
| <b>00080</b> | <b>14.000</b> | <b>EA</b> | <b>126,570.00</b> | <b>1,771,980.00</b> |
|--------------|---------------|-----------|-------------------|---------------------|

Supply of pneumatic operated, ON-OFF plug Valve suitable for temperature upto 200 Degree along with accessories, tubing arrangement as per installation drawing etc for line size 25 mm along with NRV complete as per specifications and tender document. Service:Air

|              |               |           |                  |                   |
|--------------|---------------|-----------|------------------|-------------------|
| <b>00090</b> | <b>14.000</b> | <b>EA</b> | <b>38,857.00</b> | <b>543,998.00</b> |
|--------------|---------------|-----------|------------------|-------------------|

"Supply of flameproof cum weather proof, Head mounted Temperature transmitter (Class 150/300) along with display unit, RTD, Thermo well, mounting accessories etc complete as per specifications and tender document. (Mounting at each TLF loading point on main product for line size 100 mm)

|              |               |            |                  |                   |
|--------------|---------------|------------|------------------|-------------------|
| <b>00100</b> | <b>14.000</b> | <b>SET</b> | <b>65,358.00</b> | <b>915,012.00</b> |
|--------------|---------------|------------|------------------|-------------------|

Supply of online proving valves manifold comprising of 4 nos. of 100 NB, full bore, zero leakage, fire safe ball valves suitable for temperature upto 200 Degree along with associated piping, Pipe/Tee connection, WNRF Flange, SS spiral gaskets, copper jumpers, fasteners, pipe fittings etc for each loading point assembly for making

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity      | Unit      | Rate              | Amount              |
|--|---------------|-----------|-------------------|---------------------|
| arrangement to connect Mobile<br>master meter for proving of TLF MFM<br>complete as per specifications and<br>tender documents.  |               |           |                   |                     |
| <b>00110</b>   | <b>14.000</b> | <b>EA</b> | <b>195,760.00</b> | <b>2,740,640.00</b> |
| Supply of top loading arm along<br>with Heat tracing arrangement to<br>maintain the temp of 160 Degree of<br>size 100 mm NB along with 1 no.<br>full bore isolation ball valve<br>(100 mm) , bonding clip (for<br>bonding of loading arm with<br>TT),Heat resistance paint etc<br>complete as p<br>er specifications and tender<br>document. Scope includes the LRB<br>mineral wool mattresses of density<br>120 kg/cum conforming to IS:8183 i<br>n required thicknes insulation<br>along with SS cladding. Heat<br>tracing item will be paid<br>seperately. Application: Bitumen |               |           |                   |                     |
| <b>00120</b>   | <b>1.000</b>  | <b>EA</b> | <b>305,022.00</b> | <b>305,022.00</b>   |
| "Supply of Ex-proof Rack Monitors<br>for TT overfill protection system<br>along with accessories like 10 pin<br>gantry plug, ATC copper coi<br>led cable of minimum 8m as per API<br>RP1004 including required support<br>for mounting of the Rack Monitor<br>and gantry plug, etc complete<br>as per specifications and tender<br>document.<br>Note: In addition to above, minimum<br>2 nos. portable Rack Monitor/Tester<br>along with accessories and 2 nos.<br>lockable bypass switch are<br>to be provided against total<br>supply of Rack Monitor."                          |               |           |                   |                     |
| <b>00130</b>   | <b>14.000</b> | <b>EA</b> | <b>53,047.00</b>  | <b>742,658.00</b>   |
| "Supply of Resistance - Capacitance<br>type Tank Truck grounding unit<br>along with accessories like 3 nos.<br>of heavy duty flexible coiled<br>cables with high quality rugged,<br>heavy duty SS/ brass grounding<br>socket, FLP double compression<br>glands, Ex-Plug, mounting structure  |               |           |                   |                     |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity       | Unit      | Rate              | Amount              |
|---|----------------|-----------|-------------------|---------------------|
| etc, complete as per specification and tender documents.<br>(2 nos. of coiled cable with socket for TT earthing relay interlocks and 1 no. for separate earthing of TT) "   |                |           |                   |                     |
| <b>00140</b><br>Supply of heavy duty SS/brass earthing bolt compatible with offered earthing socket of the grounding unit for mounting on the Tank t<br>ruck along with accessories like SS nut, lock washer etc complete as per specification and tender document. | <b>500.000</b> | <b>EA</b> | <b>641.00</b>     | <b>320,500.00</b>   |
| <b>00150</b><br>Supply of Ex-proof field mounted Remote Interaction Terminal (RIT) cum Driver Ack Push Button station along with FLP double compression glands and Ex-Proof-plugs, structural supports etc complete as per specifications and tender documents.     | <b>14.000</b>  | <b>EA</b> | <b>12,854.00</b>  | <b>179,956.00</b>   |
| <b>00160</b><br>Supply of Exd/FLP ESD push button stations, mushroom head type, with protection cover to avoid accidental activation along with mounting structure complete as per specification and tender document.   | <b>1.000</b>   | <b>EA</b> | <b>4,333.00</b>   | <b>4,333.00</b>     |
| <b>00170</b><br>Supply of Microprocessor based Field mounted dual arm Batch Controller in Flameproof and weather proof enclosure along with accessories like double compression glands, Exd Plugs, hoods etc complete as per specification and tender document.     |                |           |                   |                     |
| <b>00180</b><br>For TLF product loading   | <b>14.000</b>  | <b>EA</b> | <b>287,961.00</b> | <b>4,031,454.00</b> |
| <b>00190</b><br>Supply of intrinsically safe / flameproof type proximity card   |                |           |                   |                     |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity         | Unit      | Rate              | Amount              |
|---|------------------|-----------|-------------------|---------------------|
| reader along with mounting<br>accessories etc complete as per<br>specificat<br>ions and tender document for<br>authorisation of TT at   |                  |           |                   |                     |
| <b>00200</b>  | <b>14.000</b>    | <b>EA</b> | <b>44,345.00</b>  | <b>620,830.00</b>   |
| TLF bays (1 no. Per bay)  |                  |           |                   |                     |
| <b>00210</b>  | <b>1.000</b>     | <b>EA</b> | <b>44,345.00</b>  | <b>44,345.00</b>    |
| License area Entry barrier gates  |                  |           |                   |                     |
| <b>00220</b>  | <b>1.000</b>     | <b>EA</b> | <b>44,345.00</b>  | <b>44,345.00</b>    |
| License area Exit barrier gates   |                  |           |                   |                     |
| <b>00230</b>  | <b>1.000</b>     | <b>EA</b> | <b>44,345.00</b>  | <b>44,345.00</b>    |
| Security Entry barrier gates  |                  |           |                   |                     |
| <b>00240</b>  | <b>1.000</b>     | <b>EA</b> | <b>44,345.00</b>  | <b>44,345.00</b>    |
| Security Exit barrier gates   |                  |           |                   |                     |
| <b>00250</b>  | <b>2.000</b>     | <b>EA</b> | <b>44,345.00</b>  | <b>88,690.00</b>    |
| Near Security Gate/TT parking ( for<br>TT registration )  |                  |           |                   |                     |
| <b>00260</b>  | <b>1.000</b>     | <b>EA</b> | <b>44,345.00</b>  | <b>44,345.00</b>    |
| Weigh Bridge  |                  |           |                   |                     |
| <b>00270</b>  | <b>1.000</b>     | <b>EA</b> | <b>44,345.00</b>  | <b>44,345.00</b>    |
| Drum Filling Yard Entry   |                  |           |                   |                     |
| <b>00280</b>  | <b>1.000</b>     | <b>EA</b> | <b>44,345.00</b>  | <b>44,345.00</b>    |
| Drum Filling Yard Exit  |                  |           |                   |                     |
| <b>00290</b>  | <b>1,000.000</b> | <b>EA</b> | <b>181.00</b>     | <b>181,000.00</b>   |
| Supply, configuration and testing<br>of Scratch proof, waterproof Smart<br>cards along with messages printed<br>compatible with proximity car<br>d reader complete as per<br>specifications and tender document.  |                  |           |                   |                     |
| <b>00300</b>  | <b>15.000</b>    | <b>MT</b> | <b>284,053.00</b> | <b>4,260,795.00</b> |
| "Supply & design of pre-fabricated<br>Metering Skid (MS structure)<br>including mounting of complete<br>metering equipments as per BOQ. The<br>m<br>etering assembly comprises of :<br>Main product line: Spool piece with<br>tapping for additive dosing, MFM,<br>Spool piece with tapping for<br>Temperature Transmitter installa<br>tion with tapping for connecting<br>outlet of TRV, DCV, Online Master<br>Meter proving manifold, Spool Piece<br>with tapping, ON-Off valve &<br>TRV installation.<br>Note: Skid to be mounted with Batch |                  |           |                   |                     |

| Outline Level       | Quantity | Unit | Rate | Amount |
|---------------------|----------|------|------|--------|
| Item no.Service no. |          |      |      |        |
| Service Description |          |      |      |        |

Controller, Rack Monitor(as applicable), Grounding unit, RIT cum Driver's Ack Push button stations, card reader, FLP sockets, FLP junctions boxes (Power, Signal and Control), FLP power isolator switch, interconnecting cables from respective equipment to JBs, cable trays with collar height of 50mm with covers, glands, support, MS structure, nuts, bolts, gaskets, Tees, bends, elbows, WNRF flanges, nozzles, plugs, isolators, Stud Bolts, Blind Flanges (if applicable) , any other equipment if required as per design Engineering etc complete as per specification and tender document.  
Note: Stud Bolts, Blind Flanges (if applicable)

"  
**00310**

"Note:

1. All the equipments, JBs, cable trays, interconnecting cables etc as stated above to be installed and loop tested at factory. Complete assembly to be dispatched at site. The skid to be designed and fabricated by the party taking into consideration of all the equipment sizing, space available for mounting of the skid at the bottom of the gantry etc. The design Engineering along with weight calculation of individual skid excluding equipments to be submitted to IOCL prior to taking up fabrication job for review purpose. Payment shall be made based on theoretical weight calculation of the skid excluding weight of equipments, JBs, cable trays. The rate is inclusive of transportation of the skid to site etc complete in all respect.

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity | Unit | Rate       | Amount     |
|--|----------|------|------------|------------|
| 2. All unuse nozzle/ tapping/<br>opening to be blind flanged.  |          |      |            |            |
| 3. Skid to be manufactured and<br>tested at OEM premises before<br>sending to site.  |          |      |            |            |
| 4. Flanges/Blind flange should be<br>FCS WNRF, B16.5 Class 150 RF ASTM<br>105, 125-250 RA Finish."   |          |      |            |            |
| <b>00320</b>   |          |      |            |            |
| "Supply of barrier gate of minimum<br>boom length of 4/5 m along with<br>accessories, controllers etc<br>complete as per specification and<br>tender document for installation at<br>following location.<br>Note: Length of boom barrier<br>mentioned is tentative and boom<br>barrier to be supplied as per<br>length finalized during design<br>Engineerin<br>g. " |          |      |            |            |
| <b>00330</b>   | 1.000    | SET  | 214,373.00 | 214,373.00 |
| License area Entry gate  |          |      |            |            |
| <b>00340</b>   | 1.000    | SET  | 214,373.00 | 214,373.00 |
| License area Exit gate   |          |      |            |            |
| <b>00350</b>   | 1.000    | SET  | 214,373.00 | 214,373.00 |
| Security Exit gate   |          |      |            |            |
| <b>00360</b>   | 1.000    | SET  | 214,373.00 | 214,373.00 |
| Security Entry gate  |          |      |            |            |
| <b>00370</b>   | 1.000    | SET  | 214,373.00 | 214,373.00 |
| TT Parking Entry   |          |      |            |            |
| <b>00380</b>   | 1.000    | SET  | 214,373.00 | 214,373.00 |
| Drum Filling Yard Entry  |          |      |            |            |
| <b>00390</b>   | 1.000    | SET  | 214,373.00 | 214,373.00 |
| Drum Filling Yard Exit   |          |      |            |            |
| <b>00400</b>   |          |      |            |            |
| DISPLAY BOARDS   |          |      |            |            |
| <b>00410</b>   | 1.000    | EA   | 485,878.00 | 485,878.00 |
| Supply of weather proof LED bay<br>queuing display board (Minimum 15<br>lines x 100 mm Character height x<br>25 characters per line) for out<br>door installation at TT parking<br>area / S&D building along with<br>accessories like public address<br>system, speakers, amplifier, mike,<br>st<br>ructural steel for mounting of the                               |          |      |            |            |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit       | Rate                | Amount              |
|--|--------------|------------|---------------------|---------------------|
| same, canopy/sunshade etc complete<br>as per specifications and tender<br>document.  |              |            |                     |                     |
| <b>00420</b>   | <b>1.000</b> | <b>EA</b>  | <b>238,886.00</b>   | <b>238,886.00</b>   |
| Supply of LED monitor of minimum<br>55" along with required hardware<br>and software for interfacing with<br>TAS, lockable enclosure (wall /<br>ceiling mounted) for mounting the<br>monitor along with accessories at<br>Driver's Rest Room for repeat<br>display of Bay Queue Display board<br>complete as per specification and<br>tender document. Kindly note, no<br>additional payment shall be made<br>for any additional hardware/ s<br>software/ cable etc required for<br>integration of the monitor with TAS.   |              |            |                     |                     |
| <b>00430</b>   | <b>7.000</b> | <b>EA</b>  | <b>32,497.00</b>    | <b>227,479.00</b>   |
| "Supply of weather proof single<br>line coloured display board with<br>scroll and flash effects (Each line<br>of min. 25 mm Character height<br>x 11 characters per line) for<br>outdoor application near Security<br>Gate/ TT parking Area and license<br>area Entry barrier Gate along wit<br>h mounting structure, SS canopy/<br>sunshade, accessories etc complete<br>as per specifications and tender<br>document for displaying the T<br>T Registration no. in bilingual<br>(English + local language) of<br>reported TT whose proximity card<br>has been shown on the PCR adjacent t<br>o the display board for TT<br>reporting at security gate/TT<br>parking area, TT status at Security<br>entry gate and the bay no.<br>(Bilingual)<br>etc of the authorised TT reported<br>at license area Entry Gate<br>Note : (i) 1 line for display in<br>English & local language as a<br>rolling display" |              |            |                     |                     |
| <b>00440</b>   | <b>1.000</b> | <b>SET</b> | <b>1,277,036.00</b> | <b>1,277,036.00</b> |
| Supply of Mobile Master meter<br>(Master MFM) proving system for   |              |            |                     |                     |



| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate      | Amount     |
|---|----------|------|-----------|------------|
| line size 100mm consisting of<br>Master Mass flow meter with display<br>unit<br>, Master Temperature Transmitter<br>with RTD with Thermo-well, Mounting<br>accessories suitable for<br>installation on 4" line size, 2<br>nos. i<br>solation ball valve of 100 mm,<br>trolley mounted Master Meter Skid<br>with suitable wheels, FLP JB, FLP<br>double compression glands, power<br>& signal adapter along with<br>accessories for Master Meter, FRLS<br>Copper Power & Signal Cable of<br>minimum 10 m or as per site<br>requireme<br>nt with compatible FLP plugs for<br>MFM along with integration of<br>Mobile Master MFM with TAS and<br>integration of temperature<br>transmitte<br>r with Master MFM, supports for<br>mounting the equipments, pipes,<br>flanges, reducers, gaskets, nuts,<br>SS bolts & studs etc complete as p<br>er specification and tender<br>document. |          |      |           |            |
| <b>00450</b><br>TLF Header line instruments   |          |      |           |            |
| <b>00460</b><br>Supply of flameproof cum weather<br>proof, Temperature transmitter<br>(Class 150/300) along with display<br>unit, RTD, Thermo well, canopy/su<br>nshade with mounting accessories<br>etc complete as per specifications<br>and tender document.   |          |      |           |            |
| <b>00470</b><br>TLF Product Header<br>(VG-40+VG-30+VG-10+VG40+CRMB55+CRMB6<br>0) (2"300#RF)   | 6.000    | EA   | 38,857.00 | 233,142.00 |
| <b>00480</b><br>Supply of flameproof cum weather<br>proof, min SIL 2 certified smart<br>pressure transmitter ,display unit<br>& keypad , bleed ring with isol<br>ation ball valve/ss manifold with  |          |      |           |            |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate              | Amount              |
|---|---------------|-----------|-------------------|---------------------|
| isolation valve, canopy/sunshade<br>with mounting accessories etc on<br>the TLF main header line complet<br>e as per specifications and tender<br>document. (Transmitter will have<br>IEC & ATEX certified minimum along<br>with any other certification<br>as stated else where in tender)<br>(Range 0-15 kg/cm2) (Class 150/300)  |               |           |                   |                     |
| <b>00490</b><br>TLF Product Header with Remote<br>Seal- (VG-40+VG-30+VG-10+VG40+CRMB55+<br>CRMB60) (2"300#RF)   | <b>6.000</b>  | <b>EA</b> | <b>71,892.00</b>  | <b>431,352.00</b>   |
| <b>00500</b><br>Pressure transmitter -Instrument<br>Air ( TLF Header-2 No, PPH - 1No<br>& Air vessel) (3/4"150#)  | <b>4.000</b>  | <b>EA</b> | <b>57,781.00</b>  | <b>231,124.00</b>   |
| <b>00510</b><br>Tank Farm Management System   |               |           |                   |                     |
| <b>00520</b><br>"Supply of minimum SIL 2 certified<br>Non - contact type Radar level<br>gauges with instrument accuracy of<br>+/- 1 mm or better along with m<br>ounting accessories etc complete as<br>per specification and tender<br>document. (Transmitter will have<br>IEC & ATEX certified minimum alon<br>g with any other certification as<br>stated else where in tender).<br>Note :<br>1. Radar Gauges shall have inbuilt<br>Air Purging System. Pneumatic Air<br>Line will be installed till the top<br>of the tank. Supply of Tubin<br>g, fittings and valves for<br>connecting Air Line from Tank Top<br>to the Radar Gauge is included in<br>this item.<br>2. Antenna of the Radar Guage<br>shall be suitable for Bitument<br>Application." |               |           |                   |                     |
| <b>00530</b><br>For Cone Roof Vertical tanks<br>(Primary and Secondary Radar Gauges<br>- New - 2 x 2 Tanks+ CRMB (HAG)- 6<br>X 1)   | <b>10.000</b> | <b>EA</b> | <b>392,778.00</b> | <b>3,927,780.00</b> |
| <b>00540</b>  |               |           |                   |                     |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate              | Amount              |
|---|---------------|-----------|-------------------|---------------------|
| Supply of multi point temperature averaging sensor (MST) along with mounting accessories, spool piece of minimum 500 mm etc complete as per specification and tender document. Vendor to consider additional 500 mm length for the same for MST.  |               |           |                   |                     |
| <b>00550</b>  | <b>2.000</b>  | <b>EA</b> | <b>207,143.00</b> | <b>414,286.00</b>   |
| With minimum 8 elements temperature sensor (for above ground tanks - Bitumen)   |               |           |                   |                     |
| <b>00560</b>  | <b>6.000</b>  | <b>EA</b> | <b>201,717.00</b> | <b>1,210,302.00</b> |
| With minimum 1 element temperature sensor (For AG Horizontal Tanks)   |               |           |                   |                     |
| <b>00570</b>  | <b>19.000</b> | <b>EA</b> | <b>55,880.00</b>  | <b>1,061,720.00</b> |
| Supply of flameproof cum weather proof, min SIL 2 certified smart pressure transmitter with remote seal (4" 300#RF ), display unit & keypad, 1 no. isolation ball valve of 100 mm, bleed ring with valves, canopy/sunshade with mounting accessories etc for density measurement complete as per specifications and tender document. (Transmitter will have IEC & ATEX certified minimum along with any other certification as stated else where in tender) (Range 0-2 kg/cm2) (100 mm) |               |           |                   |                     |
| <b>00580</b>  |               |           |                   |                     |
| Supply of Tank Side indicator , canopy/sunshade along with mounting accessories etc complete as per specification and tender document for displaying respective tank inventory data. (TSI will have IEC & ATEX certified minimum along with any other certification as stated else where in tender)   |               |           |                   |                     |
| <b>00590</b>  | <b>10.000</b> | <b>EA</b> | <b>43,230.00</b>  | <b>432,300.00</b>   |
| For Vertical Product tanks - (Primary & Secondary Radar Gauges)   |               |           |                   |                     |
| <b>00600</b>  |               |           |                   |                     |
| Supply of top mounted minimum SIL2  |               |           |                   |                     |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity      | Unit       | Rate                | Amount              |
|--|---------------|------------|---------------------|---------------------|
| certified Overfill detector<br>(vibrating fork type) of suitable<br>for bitumen application,adequate pr<br>obe length along with mounting<br>accessories, spool piece of minimum<br>500mm, proof testing equipment, etc<br>complete as per specification<br>and tender document.   |               |            |                     |                     |
| <b>00610</b>   | <b>25.000</b> | <b>EA</b>  | <b>143,538.00</b>   | <b>3,588,450.00</b> |
| For Vertical Product tanks + AG HT   |               |            |                     |                     |
| <b>00620</b>   | <b>1.000</b>  | <b>SET</b> | <b>854,613.00</b>   | <b>854,613.00</b>   |
| Supply of parallel redundant<br>Communication Interface Units (CIU)<br>for both primary and secondary<br>gauges including all accessories et<br>c for tank farm management system<br>complete as per specification and<br>tender document.   |               |            |                     |                     |
| <b>00630</b>   | <b>1.000</b>  | <b>SET</b> | <b>1,020,404.00</b> | <b>1,020,404.00</b> |
| Supply of 1 no. of Redundant TFMS<br>Server (Rack type ) along 1 no.<br>rack type (1U) LED monitor of<br>minimum size of 18.5" suitable for 2<br>4x7 operation, Licensed OS (latest<br>supported by TFMS software),<br>Licensed Antivirus, Licensed latest<br>MS Office professional, TFMS li<br>censed software from Radar Gauge<br>OEM etc complete as per<br>specification and tender document. |               |            |                     |                     |
| <b>00640</b>   |               |            |                     |                     |
| Push Buttons Outside Dyke Walls  |               |            |                     |                     |
| <b>00650</b>   |               |            |                     |                     |
| Supply of Exd/FLP Local Push button<br>station cum indication lamp out<br>side tank farm dyke wall for remote<br>opening and closing of MOVs<br>from LPBS, canopy/sunshade along<br>with FLP double compression<br>gland,TBs, mounting structure,<br>accessories etc complete as per<br>specifi<br>cations and tender document.  |               |            |                     |                     |
| <b>00660</b>   | <b>57.000</b> | <b>EA</b>  | <b>16,668.00</b>    | <b>950,076.00</b>   |
| For MOVs (A/G product tank's inlet,<br>outlet and recirculation etc. Line  |               |            |                     |                     |
| <b>00670</b>   |               |            |                     |                     |
| ESD PUSH BUTTON STATION  |               |            |                     |                     |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit       | Rate                | Amount              |
|---|---------------|------------|---------------------|---------------------|
| <b>00680</b>  |               |            |                     |                     |
| Supply of Exd/FLP ESD push button stations, mushroom head type, with protection cover to avoid accidental activation along with clus  |               |            |                     |                     |
| ter LED indicaton, canopy/sunshade along with FLP double compression gland, TBs, mounting structure, accessories etc complete as per specification and tender document.   |               |            |                     |                     |
| <b>00690</b>  | <b>7.000</b>  | <b>EA</b>  | <b>4,333.00</b>     | <b>30,331.00</b>    |
| Local ESD Push Button Station ( TLF - 2 no.CRMB TLF - 1 No, P/H - 1 no. each, CRMB Plant - 1 No, Drum Filling Plant - 1 No. )-Housin  |               |            |                     |                     |
| g Colour should be Orange as per IS-5   |               |            |                     |                     |
| <b>00700</b>  | <b>10.000</b> | <b>EA</b>  | <b>4,333.00</b>     | <b>43,330.00</b>    |
| Plant ESD Push Button Station ( TLF - 1 no., PH - 1 No each, Tank Dykes- 5 No, CRMB Plant - 1 No, Drum Filling Plant - 1 No )-Housin  |               |            |                     |                     |
| g Colour should be Red as per IS-5  |               |            |                     |                     |
| <b>00710</b>  | <b>3.000</b>  | <b>EA</b>  | <b>4,333.00</b>     | <b>12,999.00</b>    |
| Supply of ESD push button stations (for indoor application), mushroom head type with protection cover to avoid accidental activation along with mounting structure complete as per specification and tender document. (Plant ESD at (i) control room - 1 no., (ii) security room - 1 no., (iii) TM's cabin - 1 no.) |               |            |                     |                     |
| <b>00720</b>  |               |            |                     |                     |
| Control Room equipments   |               |            |                     |                     |
| <b>00730</b>  | <b>1.000</b>  | <b>SET</b> | <b>4,390,414.00</b> | <b>4,390,414.00</b> |
| "Supply of redundant fault tolerant Integrated Process PLC along with PLC Panels, Marshalling Panels, limit switches, Input Output modules, Power supply units, Relays with base, barriers, TBs, Redundant host communication ports, Serial Interface Modules, HART mod   |               |            |                     |                     |
| ules, other communication modules, HMI , wirings, glands, plugs, other modules/ hardware required for   |               |            |                     |                     |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate                | Amount              |
|--|--------------|-----------|---------------------|---------------------|
| interfacing with all the required field and control room equipments including spare requirements, licenses, tags, GUI, licensed OPC compliant software etc complete as per specification and tender document.<br>Note: Any other hardware, software, OPC server, Historian Server, storage, functional control key board etc required as per tender specification and design requirements, the same to be provided by the vendor at no additional cost to IOCL."   |              |           |                     |                     |
| <b>00740</b><br>"Supply of Complete Terminal Automation Software along with required licences, dongle/keys, GUI, SCADA etc meeting the complete functional and technical requirements of the tender document.<br>Vendor to provide required software, licences, dongle/keys, GUI, SCADA etc for TAS Management Server, Distributed Control System, Operator work stations, Alarm display and annunciation OIC, Engineering Work Stations(for DCS), Web Server, OPC Server, Historian Server / work station, any other devices connected to Control & Management LAN of the integrated Distributed Control System complete as per specification and tender document.<br>TAS software shall be interfaced with following but not limited to major sub-systems / equipments alongwith GUI development for monitoring, logging, reporting, controls & interlocks etc as per specification and tender document. | <b>1.000</b> | <b>LS</b> | <b>2,783,818.00</b> | <b>2,783,818.00</b> |

Date: 18.05.2026

| Outline Level  | Quantity | Unit | Rate | Amount |
|--|----------|------|------|--------|
| Item no.Service no.  |          |      |      |        |
| Service Description  |          |      |      |        |
| <ul style="list-style-type: none"> <li>- TAS- Management Server</li> <li>- TLF Automation System (TT reporting, registration &amp; entry system, TT Queuing, FAN generation, Bay allocation, Interface with TLF equipments like BCU, MFM, Barrier Gates, Bay Queue Display, Bay allocation Display, Auto flushing, TT loading, Invoice generated display, Proximity card readers etc)</li> <li>-Weigh bridge System</li> <li>-Valve Automation System including sequencing as per tender (MOVs, MCS Interface etc)</li> <li>-Tank Farm Management System ( TFMS Server, Primary &amp; Secondary Radar Gauging, AOPS, Level transmitters, TSI, MSTW, CIU etc)</li> <li>-Tank Temperature control system</li> <li>- Pipeline/ Refinery PLC Interface</li> <li>- MCC, Pump, Borewell, DG Sets, Air compressors etc.</li> <li>- PA paging Interface "</li> </ul> |          |      |      |        |
| <b>00750</b>   |          |      |      |        |
| <ul style="list-style-type: none"> <li>"- FAS Interface &amp; DG Set</li> <li>- CCTV systems</li> <li>- Access Control System</li> <li>- ESD System, Emergency panel, Power ESD, Local ESD, Wailing sirens</li> <li>- Pressure Transmitters &amp; Temperature transmitter</li> <li>- UPS &amp; Power distribution boards etc .</li> <li>- Interface with IOCL SAP through firewall</li> <li>- Steam control Station interface</li> <li>- Master MFM integration</li> <li>- Steam leak detection system in tanks</li> <li>- Date Entry Terminal for Manual counting of Loaded Drums</li> <li>- Any other Third Party Interface/ devices as per scope of the work order etc</li> </ul> <p>Note: The offered software shall also includes fault detection module and Web Server software for remote viewing over IOCL Intranet</p>                              |          |      |      |        |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate                | Amount              |
|--|--------------|-----------|---------------------|---------------------|
| across India as detatiled in the<br>tender document.<br>"  |              |           |                     |                     |
| <b>00760</b>   | <b>1.000</b> | <b>EA</b> | <b>1,083,164.00</b> | <b>1,083,164.00</b> |
| "Supply of redundant TAS Management<br>Server (Rack type mountable in 19""<br>rack ) along with 1 no. rack type<br>(1U) LED monitor of minimu<br>m size of 19"" suitable for 24x7<br>operation working on redundant<br>(Primary and Secondary) hot standby<br>mode , keyboard drawer, optical<br>mouse and combo 4 port KVM switch,<br>OS, Antivirus, SQL, oracle, RDBMS<br>(license copy) etc complete as per<br>specifications and Tender D<br>ocument.<br>OR<br>Supply of Dual Mode Redundant<br>Grade with built in redundancy TAS<br>Management Server (Rack type<br>mountable in 19"" rack ) along with<br>1<br>no. rack type (1U) LED monitor of<br>minimum size of 19"" suitable for<br>24x7 operation, keyboard drawer,<br>optical mouse and combo 4 port<br>KVM switch, OS, Antivirus, SQL,<br>oracle, RDBMS (license copy) etc<br>complete as per specifications and<br>Tender Document.<br>TAS Management Servers (TAS-MS)<br>shall have either of the above<br>mentioned configuration meeting the<br>complete specification and tender<br>requirements.<br>In addition, the TAS-MS shall be<br>configured to have Zero Downtime to<br>repair, Full data redundancy shall<br>be provided using proven tec<br>hnology , it shall also provide<br>port level redundancy.The system<br>solution shall be capable of self<br>fault detection and isolation, al<br>l necessary hardware/software<br>configuration etc to achieve the<br>same shall be included." |              |           |                     |                     |
| <b>00770</b>   |              |           |                     |                     |



| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate              | Amount            |
|--|--------------|-----------|-------------------|-------------------|
| <p>"Supply of 42 U Rack Enclosure cabinet/System cabinet with 19"" rack size, along with accessories like limit switches, earthing arrangements, breaker, fuses, terminal blocks and wiring etc complete as per specification and tender document for mounting of below mentioned equipments.<br/>Note: Biometric fingerprint cum contactless smart card reader for front &amp; back door seperately to be provided in panels used for housing TAS-MS, CCTV servers, CIUs, NAS/SAN."</p> |              |           |                   |                   |
| <b>00780</b>   | <b>1.000</b> | <b>EA</b> | <b>119,554.00</b> | <b>119,554.00</b> |
| <p>"For mounting of TAS Management Servers along with associated rack type monitors &amp; keyboard, mouse, 4 port industrial grade KVM switches, power adapters, networking &amp; OFC components, Ethernet switch, GSM modems, MCBs etc as per specification and tender document.<br/>Note : Necessary Hardware for installing existing Tower Type Server on Rack Enclosures shall be supplied."</p>   |              |           |                   |                   |
| <b>00790</b>   | <b>1.000</b> | <b>EA</b> | <b>119,554.00</b> | <b>119,554.00</b> |
| <p>"For mounting of TFMS Servers along with associated rack type monitors &amp; keyboard, mouse, 4 port industrial grade KVM switches, power adapters, networking &amp; OFC components, Ethernet switch, GSM modems, MCBs etc as per specification and tender document.<br/>Note : Necessary Hardware for installing existing Tower Type Server on Rack Enclosures shall be supplied."</p>   |              |           |                   |                   |
| <b>00800</b>   | <b>1.000</b> | <b>EA</b> | <b>119,554.00</b> | <b>119,554.00</b> |
| <p>For mounting of Rack mounted Master Control Stations for MOVs along with power adaptors, MCBs, required accessories etc as per specification and tender document.</p>   |              |           |                   |                   |
| <b>00810</b>   | <b>1.000</b> | <b>EA</b> | <b>119,554.00</b> | <b>119,554.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate              | Amount            |
|---|--------------|-----------|-------------------|-------------------|
| For mounting of Network equipments along with power adaptors, MCBs, required accessories etc as per specification and tender document.  |              |           |                   |                   |
| <b>00820</b><br>"Supply of Operator Interface Console Computer (OIC) with minimum 32"" colour LED monitor, wireless keyboard and mouse for mounting of the same in OIC console, KVM Switch, software, SCADA, GUI, OS, Antivirus, MS office professional etc. complete as per specifications and tender document. CPU shall be kept in Panel room in 42 U Rack. Note: 1. CPU of control room shall be kept in Panel room in 42 U Rack. KVM extender & reciever is to be supplied at no additional cost<br>2. 5 numbers of 32"" LED monitors, wireless keyboard and mouse are to be supplied as a part of this item.<br>3. Connectivity of all the system / CPU to these monitors will be there all the time. At any point of time four system/CPU's display will be available on these monitors.<br>4. Panel Mounted System/CPU to be connected to the 5 monitors - 2 nos. OICs , 1 no. CCTV client ,1 no. EWS ,1 no. Web server etc.<br>" |              |           |                   |                   |
| <b>00830</b><br>19" Rack type in Control Room ( 2 OICs, 1 for alarm Display)  | <b>3.000</b> | <b>EA</b> | <b>248,784.00</b> | <b>746,352.00</b> |
| <b>00840</b><br>Tower mounted type in TM's Cabin  | <b>1.000</b> | <b>EA</b> | <b>262,239.00</b> | <b>262,239.00</b> |
| <b>00850</b><br>Supply of Engineering Workstation rack type (EWS) with minimum 27" colour LED monitor, standard keyboard, mouse, DCS software, HMI software, SCADA, GUI, OS, Antivirus, MS office professional etc. complete as per specifications and  | <b>1.000</b> | <b>EA</b> | <b>360,696.00</b> | <b>360,696.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate              | Amount            |
|---|--------------|-----------|-------------------|-------------------|
| tender document. (Locations: 1 no<br>. in CR for DCS)   |              |           |                   |                   |
| <b>00860</b>  |              |           |                   |                   |
| Supply of Tank Truck Entry System<br>(TTES) Workstation with minimum 27"<br>colour LED monitor, standard<br>keyboard, mouse, software, SCADA,<br>GUI, OS, Antivirus etc. complete<br>as per specifications and tender<br>document. (Locations: 2 nos. in<br>S&D + 1 no. in Weighbridge room<br>)  |              |           |                   |                   |
| <b>00870</b>  | <b>2.000</b> | <b>EA</b> | <b>204,073.00</b> | <b>408,146.00</b> |
| Tower type in S&D and Weighbridge<br>Room   |              |           |                   |                   |
| <b>00880</b>  | <b>1.000</b> | <b>EA</b> | <b>513,447.00</b> | <b>513,447.00</b> |
| "Supply of Web Server (Rack type<br>mountable in 19"" rack ) , Rack<br>type CPU - 2U Max., KVM Switch, web<br>application software, SCADA, G<br>UI, OS, Antivirus etc located in<br>panel Room complete as per<br>specifications and Tender Document.<br>Note: CPU of control room shall be<br>kept in Panel room in 42 U Rack.<br>KVM extender & reciever is to be<br>supplied at no additional cost"  |              |           |                   |                   |
| <b>00890</b>  |              |           |                   |                   |
| "Supply of Terminal servers (rack<br>mounted) with inbuilt/externally<br>mounted lightening and Surge<br>Protection Device Type for all Seri<br>al ports, for interfacing and<br>integration of card readers, Bay<br>Queue display units (Indoor &<br>outdoor), LED Display unit for TT<br>repor<br>ting & Bay allocation with TAS in<br>case the above listed equipments do<br>not come with open communication<br>protocol compatible to be dir<br>ectly interfaced with DCS Serial /<br>MODBUS TCP IP module complete as<br>per specification and tender<br>document.<br>Note: Terminal Servers to be<br>configured in Dual Redundant mode.<br>Terminal server to be provided with |              |           |                   |                   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate              | Amount            |
|---|--------------|-----------|-------------------|-------------------|
| DB9-female-to-terminal-block adapter for connections as per site condition."  |              |           |                   |                   |
| <b>00900</b><br>16 ports at Control Room  | <b>2.000</b> | <b>EA</b> | <b>231,908.00</b> | <b>463,816.00</b> |
| <b>00910</b><br>"Supply of 24 ports Layer 3 Managed Ethernet Switches (10/100/1000 MBPS) with SFP, copper, fibre modules/ports along with accessories for connecting Plant management LAN equipments like CCTV System, TAS - MS Server/ Redundant OPC server, TFMS Server, TFMS work station, OICs, IOCL intranet for SAP connectivity through fire wall, Network printers, Access Control Server, Web Server Access over IOCL Intranet, connecting to OIC/ work stations etc which needs to be connected to both Plant Management LAN and Plant Control LAN for getting the entire GUIs of Complete Terminal Automation System and any other third party devices which needs OPC for interfacing with DCS etc.<br>Note:<br>1. Ethernet Switches to be configured in Dual Redundant mode.<br>2. OFC ports to be provided for connecting interbuilding LANs and any other equipment which are to be connected to above switch and the communication is through OFC cable." | <b>2.000</b> | <b>EA</b> | <b>424,901.00</b> | <b>849,802.00</b> |
| <b>00920</b><br>"Supply of 24 ports Layer 2 Managed Ethernet Switches (10/100/1000 MBPS) along with SFP, copper, fibre modules, accessories for connecting equipments installed in Plant Control LAN like TAS- MS Servers, OICs, TTES, EWS, OPC Servers, Fire fighting OICs, Alarm Disp   | <b>2.000</b> | <b>EA</b> | <b>277,228.00</b> | <b>554,456.00</b> |

| Outline Level       | Quantity | Unit | Rate | Amount |
|---------------------|----------|------|------|--------|
| Item no.Service no. |          |      |      |        |
| Service Description |          |      |      |        |

lay OIC, DCS, inter connecting building work stations etc as per system architecture and design requirement complete as per specification and tender document.

Note:

1. The switches are to be configured in Dual Redundant mode.
2. OFC ports to be provided for connecting interbuilding LANs, and any other equipment which are to be connected to above switch and the communication is through OFC cable."

**00930**

"Supply of minimum 10 ports ( 8 nos. copper ports and 2 nos. optical ports) Layer 2 Industrial grade Managed Ethernet Switches along with accessories for connecting BCU with TAS, equipments installed in S&D room, Lock room, Security room, Terminal Manager room and other TAS equipments as per system architecture and design requirement complete as per specification and tender document.

Note:

1. Ethernet switches for BCU communication shall have suitable mounting arrangement to mount inside FLP JB's.
2. The switches are to be configured in Dual Redundant mode.
3. All OICs, Workstations, Servers other than that of CCTV, ACS & TFMS are to be connected to both plant management and control LAN so that all the GUIs can be seen in all the PCs irrespective of its nomenclature like TTES, OIC, EWS, TM PC etc.
4. Printers to be connected to Plant Management LAN and to be configured to all PCs, Workstation, TTES etc so that printout command

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate              | Amount            |
|--|--------------|-----------|-------------------|-------------------|
| can be issued from any of the Machine."  |              |           |                   |                   |
| <b>00940</b><br>For BCU integration at TLF (copper ports of 10/100/1000 MBPS)  | <b>6.000</b> | <b>EA</b> | <b>83,098.00</b>  | <b>498,588.00</b> |
| <b>00950</b><br>For connecting all MODBUS TCP IP devices ( like BCU, any other devices) to DCS Ethernet port directly for integration (copper ports of 10/100/1000 MBPS)   | <b>2.000</b> | <b>EA</b> | <b>83,098.00</b>  | <b>166,196.00</b> |
| <b>00960</b><br>At Admin Building for TM cabin - copper ports of 10/100/1000 MBPS [control LAN - 2 nos.]   | <b>6.000</b> | <b>EA</b> | <b>83,098.00</b>  | <b>498,588.00</b> |
| <b>00970</b><br>At Security Room/Weighbridge room/S&D - copper ports of 10/100/1000 MBPS [control LAN - 2 nos]   | <b>6.000</b> | <b>EA</b> | <b>83,098.00</b>  | <b>498,588.00</b> |
| <b>00980</b><br>Supply of Layer 2 Managed Ethernet Switches along with SFP, copper, fibre modules, accessories, etc for IOCL LAN network/CCTV Integration/ACS Integration etc (Non redundant ) complete as per specification and tender document.  |              |           |                   |                   |
| <b>00990</b><br>24 ports ( 8 optical & 16 Copper ports) - at Control room  | <b>1.000</b> | <b>EA</b> | <b>205,484.00</b> | <b>205,484.00</b> |
| <b>01000</b><br>24 ports ( 4 optical & 20 Copper ports) - at Admin Building  | <b>1.000</b> | <b>EA</b> | <b>145,537.00</b> | <b>145,537.00</b> |
| <b>01010</b><br>"Supply of Wall mounted/wheel mounted Network Rack-minimum 19U 19"" Rack for mounting of Terminal Server/Ethernet switches/LIU/ OFC components along with accessories like power sockets, MCBs, fan, mounting accessories etc complete in all respective at (i) Admin Building, (ii) Security room (iii) S&D Room" | <b>3.000</b> | <b>EA</b> | <b>86,709.00</b>  | <b>260,127.00</b> |
| <b>01020</b><br>"Supply of Wall mounted/wheel  | <b>3.000</b> | <b>EA</b> | <b>51,400.00</b>  | <b>154,200.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate         | Amount       |
|---|----------|------|--------------|--------------|
| mounted Network Rack-minimum 12U<br>19"" Rack for mounting of Terminal<br>Server/Ethernet switches/LIU/ OFC<br>components along with accessories<br>like power sockets, MCBs, fan,<br>mounting accessories etc complete<br>in all respective at<br>(i) Weigh Bridge Room (ii)<br>Stockyard (iii) Spare "  |          |      |              |              |
| <b>01030</b><br>Supply of industrial grade<br>redundant Serial to Ethernet<br>converter of 8 port with mounting<br>accessories etc complete in all<br>respect as<br>per specification and tender<br>document.   |          |      |              |              |
| <b>01040</b><br>Serial to Ethernet converter of 8<br>port- TLF MFM and Rack Monitor<br>integration work   | 4.000    | SET  | 109,141.00   | 436,564.00   |
| <b>01050</b><br>Supply of Monochrome Laser Printer<br>along with accessories for TAS and<br>TFMS report printing in control<br>room (2 nos.), Security Room(2<br>Nos) S&D Room (2 Nos)  | 6.000    | EA   | 79,988.00    | 479,928.00   |
| <b>01060</b><br>Supply of thermal printer for<br>printing of FAN as per<br>specifications and tender document   | 2.000    | EA   | 18,235.00    | 36,470.00    |
| <b>01070</b><br>Supply of parallel redundant UPS<br>of minimum capacity of 30 KVA or as<br>per load calculation (whichever is<br>higher) for entire TAS equ<br>ipments and third party devices<br>integrated with TAS and powered<br>through TAS UPS with 30% spare<br>capacity for future load connection.<br>The scope also includes supply of<br>parallel battery bank (2x50%) for<br>minimum back up time of ½ hour at<br>full load (rated capacity) alo<br>ng with stand, supports for<br>mounting of the UPS and batteries<br>etc complete as per specification<br>and tender document. The batteries s | 1.000    | SET  | 4,692,454.00 | 4,692,454.00 |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate              | Amount            |
|---|--------------|-----------|-------------------|-------------------|
| hall be Sealed Maintenance free<br>type Ni-Cd batteries.  |              |           |                   |                   |
| <b>01080</b>  | <b>1.000</b> | <b>LS</b> | <b>389,843.00</b> | <b>389,843.00</b> |
| "Supply of UPS Power Distribution<br>Panel along with Biometric<br>fingerprint cum contactless smart<br>card reader anlong with camera both<br>s<br>ide seperate with accessoriesfor<br>for powering DCS Panel,TAS-MS,<br>OIC, EWS, TFMS System, TTES,<br>printers, Bay Instruments other<br>contro<br>l room equipments, Tank Farm<br>Instruments, CCTV system, Fire<br>Detection System, Access control<br>system, Bay Queue Display boards,<br>other<br>display boards, header line<br>instruments and any other TAS<br>equipments where UPS power are<br>required for smooth un-interrupted<br>operati<br>on as per OEMs recommendation.<br>Miscellaneous Instrumentation<br>comprising of suitable MCCBs for<br>Isolation, MCB etc are to be provi<br>ded. The panel shall be complete in<br>all respects with necessary<br>indication lamps for powering,<br>necessary control wiring Digital<br>volt<br>meter, Digital ammeter at both side<br>etc as per specifications and<br>tender document.<br>Note: Minimum 20% spare power<br>points to be made available for<br>future use." |              |           |                   |                   |
| <b>01090</b>  |              |           |                   |                   |
| Supply of Open desk operator<br>consoles, chairs, printer tables<br>etc complete as per specification<br>and tender document.   |              |           |                   |                   |
| <b>01100</b>  | <b>5.000</b> | <b>EA</b> | <b>135,996.00</b> | <b>679,980.00</b> |
| Open desk operator consoles for<br>mounting of monitor in single/two<br>tier , key boards, mouse,<br>accesscories e.g. Telephone,VHF  |              |           |                   |                   |



| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate              | Amount            |
|---|--------------|-----------|-------------------|-------------------|
| sets,<br>Master control station for PA<br>paging,storage for record keeping<br>etc complete as per specification<br>and tender document.  |              |           |                   |                   |
| <b>01110</b>  | <b>7.000</b> | <b>EA</b> | <b>14,127.00</b>  | <b>98,889.00</b>  |
| Chairs (Godrej Interio Ace Mid Back<br>High Performance Chair or<br>equivalent)   |              |           |                   |                   |
| <b>01120</b>  | <b>5.000</b> | <b>EA</b> | <b>14,497.00</b>  | <b>72,485.00</b>  |
| Standard Printer Tables of Godrej<br>or equivalent make   |              |           |                   |                   |
| <b>01130</b>  | <b>5.000</b> | <b>EA</b> | <b>14,497.00</b>  | <b>72,485.00</b>  |
| Standard Computer Table of Godrej<br>or equivalent make for installation<br>of OIC, TFMS client PC  |              |           |                   |                   |
| <b>01140</b>  | <b>1.000</b> | <b>EA</b> | <b>157,130.00</b> | <b>157,130.00</b> |
| Supply of minimum 55" HD LED Touch<br>monitor along with 2 no. of hooter,<br>ACK push button, mounting<br>accessories, cables etc for critica<br>l alarms display & annunciation<br>complete as per specifications and<br>tender document.  |              |           |                   |                   |
| <b>01150</b>  | <b>1.000</b> | <b>EA</b> | <b>157,130.00</b> | <b>157,130.00</b> |
| Supply of minimum 55" HD LED Touch<br>monitor mounting accessories,<br>cables etc for control room OIC<br>complete as per specifications and<br>tender document.  |              |           |                   |                   |
| <b>01160</b>  |              |           |                   |                   |
| Automatic Fire Detection and Alarm<br>System  |              |           |                   |                   |
| <b>01170</b>  | <b>1.000</b> | <b>EA</b> | <b>513,091.00</b> | <b>513,091.00</b> |
| "Supply of microprocessor based<br>automatic Fire Alarm Panel along<br>with required Software, and<br>hardware like Control module,<br>monitor m<br>odule, fault isolation module (in<br>built/ External), mounting<br>structure support etc complete as<br>per standard design engineering, spe<br>cification and tender document.<br>Location : Control Room" |              |           |                   |                   |
| <b>01180</b>  | <b>1.000</b> | <b>EA</b> | <b>82,876.00</b>  | <b>82,876.00</b>  |
| "Supply of Repeater Panel along<br>with software, hardware, mounting  |              |           |                   |                   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity       | Unit      | Rate             | Amount            |
|---|----------------|-----------|------------------|-------------------|
| accessories etc required as per<br>standard design Engineer, specifi<br>cations and tender document<br>complete in all respect.<br>(Tentative location : Security Gate<br>- 1 no.)"   |                |           |                  |                   |
| <b>01190</b>  |                |           |                  |                   |
| Supply of addressable type<br>detectors along with accessories,<br>fault isolation module (Inbuilt/<br>External), structural supports etc<br>re<br>quired as per standard design<br>engineering, specification and<br>tender document complete in all<br>respect. |                |           |                  |                   |
| <b>01200</b>  | <b>100.000</b> | <b>EA</b> | <b>3,404.00</b>  | <b>340,400.00</b> |
| Combination/Multi-sensor Detector   |                |           |                  |                   |
| <b>01210</b>  | <b>10.000</b>  | <b>EA</b> | <b>2,677.00</b>  | <b>26,770.00</b>  |
| Heat Detector- Rate of Rise Type  |                |           |                  |                   |
| <b>01220</b>  | <b>2.000</b>   | <b>EA</b> | <b>85,612.00</b> | <b>171,224.00</b> |
| Hydrogen Dtetector- Battery Room  |                |           |                  |                   |
| <b>01230</b>  |                |           |                  |                   |
| Supply of Manual Call Point along<br>with accessories, fault isolation<br>module (Inbuilt/ External) and<br>structural supports etc required<br>as per standard design engineering,<br>specification and tender document<br>complete in all respect.              |                |           |                  |                   |
| <b>01240</b>  | <b>10.000</b>  | <b>EA</b> | <b>8,052.00</b>  | <b>80,520.00</b>  |
| Ex-proof and weather proof<br>MCP-Outdoor   |                |           |                  |                   |
| <b>01250</b>  | <b>15.000</b>  | <b>EA</b> | <b>4,961.00</b>  | <b>74,415.00</b>  |
| Weather proof MCP-Indoor  |                |           |                  |                   |
| <b>01260</b>  |                |           |                  |                   |
| Supply of Hooter along with<br>accessories, fault isolation module<br>(inbuilt/ External), structural<br>supports etc required as per standar<br>d design engineering, specification<br>and tender document complete in all<br>respect.                           |                |           |                  |                   |
| <b>01270</b>  | <b>15.000</b>  | <b>EA</b> | <b>6,752.00</b>  | <b>101,280.00</b> |
| Weather proof Hooter  |                |           |                  |                   |
| <b>01280</b>  | <b>50.000</b>  | <b>EA</b> | <b>92.00</b>     | <b>4,600.00</b>   |
| Supply of Response Indicator along<br>with accessories, mounting  |                |           |                  |                   |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit       | Rate              | Amount            |
|--|--------------|------------|-------------------|-------------------|
| structure etc required as per<br>standard design engineering,<br>specificati<br>on and tender document complete in<br>all respect.   |              |            |                   |                   |
| <b>01290</b><br>Access Control System  |              |            |                   |                   |
| <b>01300</b><br>Supply of half man height double<br>lane turnstile (tripod) with<br>controller along with accessories,<br>mounting structure, pressure sensor<br>etc required as per standard<br>design engineering, specification<br>and tender document complete in all<br>respect. (Location : At security<br>entry gate -1 no., security exit<br>gate - 1 no.) | <b>2.000</b> | <b>SET</b> | <b>176,275.00</b> | <b>352,550.00</b> |
| <b>01310</b><br>Supply of half man height<br>bi-directional turnstile (tripod)<br>with controller along with<br>accessories, mounting structure,<br>pressure sen<br>sor etc required as per standard<br>design engineering, specification<br>and tender document complete in all<br>respect. (Location : As per A<br>CS Layout)                                    | <b>5.000</b> | <b>EA</b>  | <b>163,840.00</b> | <b>819,200.00</b> |
| <b>01320</b><br>Supply of Retractable Bidirectional<br>Dual Lane Flap barrier with<br>controller along with accessories,<br>mounting structure, pressure sen<br>sor etc required as per standard<br>design, engineering, specification<br>and tender document complete in all<br>respect. (Location: Admin bu<br>ilding entry/exit)                                | <b>1.000</b> | <b>SET</b> | <b>374,792.00</b> | <b>374,792.00</b> |
| <b>01330</b><br>Supply of face detection cum<br>fingerprint cum contactless type<br>smart card reader with controller<br>along with electromagnetic door lock<br>of 600 lb for single door/double<br>door, 2 nos. of door position<br>magnetic contact with buzzer etc as<br>per specifications and tender do  | <b>6.000</b> | <b>EA</b>  | <b>140,442.00</b> | <b>842,652.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity       | Unit      | Rate              | Amount              |
|--|----------------|-----------|-------------------|---------------------|
| cument. (Location : As per ACS Layout)   |                |           |                   |                     |
| <b>01340</b><br>"Supply of Biometric fingerprint cum contactless type smart card reader along with accessories, software , programming kit etc required as per standard design engineering, specification and tender document complete in all respect.<br>(Location : As per ACS Layout)<br>Note: 1. One number Authentication device (Biometric reader), Bar/QR code reader and Site kiosk shall be in scope of supply of vendor at no additional cost to IOCL" | <b>18.000</b>  | <b>EA</b> | <b>120,510.00</b> | <b>2,169,180.00</b> |
| <b>01350</b><br>Supply of Door Frame Metal Detector, 2 nos. hand held metal detector along with accessories, mounting structure etc complete as per specification and tender document.   | <b>2.000</b>   | <b>EA</b> | <b>95,023.00</b>  | <b>190,046.00</b>   |
| <b>01360</b><br>Supply of 2"size SS 304 guiding rail along with mounting accessories complete as per specification and tender document near turnstil<br>e/ tripod/flap barrier etc to prevent un-authorised movement.  | <b>100.000</b> | <b>M</b>  | <b>862.00</b>     | <b>86,200.00</b>    |
| <b>01370</b><br>Supply and configuration of Proximity smart access cards as per the specification and tender document.   | <b>500.000</b> | <b>EA</b> | <b>181.00</b>     | <b>90,500.00</b>    |
| <b>01380</b><br>Supply of Access Control System Software for setup, configuration, operation, events, history and archiving, alarm monitoring, recording, printing, time and attendance etc. complete as per specification and tender document including hardwired interface with TAS for ESD input.   | <b>1.000</b>   | <b>LS</b> | <b>428,060.00</b> | <b>428,060.00</b>   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate              | Amount            |
|---|--------------|-----------|-------------------|-------------------|
| <b>01390</b><br>IP BASED CCTV SURVEILLANCE SYSTEM   |              |           |                   |                   |
| <b>01400</b><br>Supply of HD IP Fixed Dome camera with IR and MFZ lens (5MP) along with power supply unit (POE based), with inbuilt/external surge protection unit and mounting accessories etc complete as per specifications and Tender Document.             | <b>5.000</b> | <b>EA</b> | <b>55,439.00</b>  | <b>277,195.00</b> |
| <b>01410</b><br>Supply of HD IP PTZ Camera (5MP) along with power supply unit (POE based) with POE injector (industrial grade),with inbuilt/external surge protection unit and mounting accessories etc complete as per specifications and Tender Document.     | <b>4.000</b> | <b>EA</b> | <b>84,691.00</b>  | <b>338,764.00</b> |
| <b>01420</b><br>Supply of IP Fixed Bullet cameras with MFZ lens (8MP) # 4K resolution along with power supply unit (POE based), with inbuilt/external surge protection unit and mounting accessories etc complete as per specifications and Tender Document.    | <b>2.000</b> | <b>EA</b> | <b>89,570.00</b>  | <b>179,140.00</b> |
| <b>01430</b><br>Supply of IP Fixed Box cameras with varifocal lens (8MP) # 4K resolution along with power supply unit (POE based), with inbuilt/external surge protection unit and mounting accessories etc complete as per specifications and Tender Document. | <b>1.000</b> | <b>EA</b> | <b>82,173.00</b>  | <b>82,173.00</b>  |
| <b>01440</b><br>Supply of Integral Explosion Proof HD IP Fixed Cameras and MFZ lens (2MP) along with power supply unit , with inbuilt/external surge protection unit and mounting accessories etc complete as per specifications and Tender Document.           | <b>1.000</b> | <b>EA</b> | <b>240,294.00</b> | <b>240,294.00</b> |
| <b>01450</b><br>Supply of 4 port Industrial grade layer 2 Managed POE based Ethernet  | <b>5.000</b> | <b>EA</b> | <b>60,481.00</b>  | <b>302,405.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate             | Amount           |
|--|--------------|-----------|------------------|------------------|
| Switch for connecting Cameras with<br>4 Nos. RJ copper port and 2<br>Nos. optical fibre ports with<br>inbuilt/external surge protector<br>(Type 1+2) at the input power<br>supply as per specifications and<br>Tender<br>Document.   |              |           |                  |                  |
| <b>01460</b>   | <b>5.000</b> | <b>EA</b> | <b>18,275.00</b> | <b>91,375.00</b> |
| Supply of outdoor weatherproof<br>housing (IP 65 or better) suitable<br>for installing Layer 2 switch,<br>PSU, LIU and adaptor for Ethernet<br>switch/media convertor surge<br>protectors and other accessories of<br>CCTV cameras. Supply of required<br>OFC components & accessories like<br>LIU, splice trays, loaded adaptor,<br>blank plates, UTP cables, Fibre<br>patch cords, pigtails, tags, ties,<br>Ethernet cable with RJ45 con<br>nector etc complete in all respect<br>for functioning of CCTV camera.The<br>scope also includes supply of<br>blinding plugs, double compress<br>ion cable glands etc as per<br>specifications and Tender Document.                                     |              |           |                  |                  |
| <b>01470</b>   |              |           |                  |                  |
| "Design, fabrication and supply of<br>Heavy Duty self supported Hot Dip<br>Galvanized Poles for mounting of<br>CCTV cameras along with civi<br>l foundation along with GI<br>foundation bolt, mounting brackets,<br>ladder arrangement (taking into<br>account of safety during climbing)<br>on<br>the pole for installation and<br>maintenance of cameras, SS nut &<br>bolts for fixing camera and other<br>accessories required for complete<br>installation and commissioning of<br>the pole, submission of structural<br>stability certificate based on<br>existing soil bearing capacity a<br>nd wind speed from Govt.<br>Engineering colleges etc complete<br>as per specifications and Tender |              |           |                  |                  |

Date: 18.05.2026

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate             | Amount            |
|---|---------------|-----------|------------------|-------------------|
| Document of below mentioned height<br>of t<br>he pole. (Foundation drawing and<br>other details to be submitted prior<br>to installation as per tender<br>document)<br>Note: In case pole do not have<br>ladder arrangement for maintenance<br>purpose, then vendor to arrange for<br>ladder for installation & maint<br>enance purpose throughout the<br>contract period including CAMC<br>period at no additional cost to<br>IOCL." |               |           |                  |                   |
| <b>01480</b><br>10 M pole with cantilever<br>arrangement for mounting of 1 fixed<br>camera at 6m, 2 PTZ camera at 10 m<br>and LED flood light at 8m of the po<br>le across perimeter as per tender  | <b>4.000</b>  | <b>EA</b> | <b>57,042.00</b> | <b>228,168.00</b> |
| <b>01490</b><br>12 M pole with cantilever<br>arrangement  | <b>1.000</b>  | <b>EA</b> | <b>80,683.00</b> | <b>80,683.00</b>  |
| <b>01500</b><br>8 M pole with cantilever<br>arrangement for mounting of 1 fixed<br>camera at 6m and LED flood light at<br>8m of the pole across perimeter as<br>per tender  | <b>2.000</b>  | <b>EA</b> | <b>56,333.00</b> | <b>112,666.00</b> |
| <b>01510</b><br>4/6 M pole with Accessories as per<br>specification of Tender   | <b>1.000</b>  | <b>EA</b> | <b>33,671.00</b> | <b>33,671.00</b>  |
| <b>01520</b><br>"Supply of Network Attached<br>Storage ( NAS ) / Storage Attached<br>Network (SAN) for storing recorded<br>video for a minimum period 90 d<br>ays @ 15 FPS at full resolution &<br>highest Video quality of all<br>cameras (Continuous recording)<br>complete as per specifications and<br>Te<br>nder Document.<br>Note : Unit of measurement for this<br>item shall be read as TB"                                   | <b>50.000</b> | <b>EA</b> | <b>9,560.00</b>  | <b>478,000.00</b> |
| <b>01530</b><br>"Supply of CCTV client work station<br>along with client software &   |               |           |                  |                   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate              | Amount            |
|---|--------------|-----------|-------------------|-------------------|
| licenses, key board, mouse,<br>hardware & connector for repeat/<br>Dual d<br>isplay on wall mounted LED screen,<br>OS, Antivirus, etc complete as per<br>specifications and Tender Document.<br>Note: CCTV Work station shall have<br>provision to connect to 2 nos. of<br>UHD LED monitors . Required<br>hardware & software is to be provid<br>ed for the same. Incase the offered<br>work station do not have such<br>provision, then additional work<br>station to be provided meeting the<br>tender requirement at no<br>additional cost to IOCL." |              |           |                   |                   |
| <b>01540</b>  | <b>1.000</b> | <b>EA</b> | <b>303,384.00</b> | <b>303,384.00</b> |
| Rack type (2 U) with minimum 27"<br>colored LED monitor   |              |           |                   |                   |
| <b>01550</b>  | <b>1.000</b> | <b>EA</b> | <b>217,510.00</b> | <b>217,510.00</b> |
| Tower type with 27" colored LED<br>monitor  |              |           |                   |                   |
| <b>01560</b>  | <b>1.000</b> | <b>EA</b> | <b>190,110.00</b> | <b>190,110.00</b> |
| Supply of minimum 55" Ultra High<br>Definition (4K) LED Display monitor<br>along with mounting accessories<br>etc complete as per specifica<br>tions and Tender Document for<br>repeat display of CCTV output.<br>(Location : Security Room,TM room)  |              |           |                   |                   |
| Note: Number of<br>LED TV monitor to be provided as<br>per viewing window size requirement.   |              |           |                   |                   |
| <b>01570</b>  | <b>1.000</b> | <b>EA</b> | <b>438,716.00</b> | <b>438,716.00</b> |
| Supply of minimum 75" Ultra High<br>Definition (4K) LED Display monitor<br>along with mounting accessories etc<br>complete as per specificati<br>ons and Tender Document for repeat<br>display of CCTV output. (Location<br>: Control room )  |              |           |                   |                   |

Note: Number of LED TV mo



| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate              | Amount            |
|--|--------------|-----------|-------------------|-------------------|
| nitor to be provided as per viewing window size requirement.   |              |           |                   |                   |
| <b>01580</b><br>"Supply of Layer 3 Managed Gigabit Ethernet Switch with minimum 24 ports or as per site requirement + 20 % spare whichever is higher along with SFP, copper, fibre modules, accessories complete as per specifications and Tender Document.<br>Note- The switches are required to be configured in dual redundant mode "   | <b>1.000</b> | <b>EA</b> | <b>424,901.00</b> | <b>424,901.00</b> |
| <b>01590</b><br>Supply of 350 W LED flood ONLY light luminaries on Light poles up to 10M height including supply & fixing of clamps, scaffolding , temporary fire screen ifrequired, supports, nuts,bolts, earthing , required modification infixing arrangement , Supply and welding of mounting structure as persite condition , painting etc. all complete with labour and materials asper drawings, specifications and directions of the Engineer-in-Charge. | <b>1.000</b> | <b>EA</b> | <b>49,396.00</b>  | <b>49,396.00</b>  |
| <b>01600</b><br>PA PAGING SYSTEM   |              |           |                   |                   |
| <b>01610</b><br>Supply of Layer 3 Managed Gigabit Ethernet Switch with minimum 24 ports or as per site requirement whichever is higher along with SFP, copper, fibre modules, accessories complete as per specifications and Tender Document.  | <b>2.000</b> | <b>EA</b> | <b>258,457.00</b> | <b>516,914.00</b> |
| <b>01620</b><br>"Supply of 24 ports Layer 2 Managed Ethernet Switches (10/100/1000 MBPS) along with SFP, copper, fibre modules, accessories for connecting equipments etc as per system architecture and design requirement complete as per  | <b>2.000</b> | <b>EA</b> | <b>153,662.00</b> | <b>307,324.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate              | Amount            |
|---|---------------|-----------|-------------------|-------------------|
| specification and tender document.<br>Note:<br>1. The switches are to be<br>configured in Dual Redundant mode.<br>2. OFC ports to be provided for<br>connecting interbuilding LANs, and<br>any other equipment which are to be<br>connected to above switch and<br>the communication is through OFC<br>cable."  |               |           |                   |                   |
| <b>01630</b><br>Supply of 4 port Industrial grade<br>layer 2 Managed POE based<br>Ethernet Switch with 4 Nos. RJ<br>copper port and 2 Nos. optical<br>fibre po<br>rts with inbuilt/external surge<br>protector Type (1+2) at the input<br>power supply as per specifications<br>and Tender Document.  | <b>10.000</b> | <b>EA</b> | <b>59,547.00</b>  | <b>595,470.00</b> |
| <b>01640</b><br>Supply of 42 U Rack Enclosure<br>cabinet/System cabinet with 19"<br>rack size, along with accessories<br>like Biometric fingerprint cum co<br>ntactless smart card reader along<br>camera with accessories, limit<br>switches, earthing arrangements,<br>breaker, fuses, required OFC compo<br>nents & accessories like LIU,<br>splice trays, loaded adaptor, blank<br>plates, UTP cables, Fibre patch<br>cords, pigtails, tags, ties etc c<br>omplete in all respect for<br>functioning of system,terminal<br>blocks and wiring etc complete as<br>per specification and tender<br>document Fo<br>r mounting of Server along with<br>associated rack mounted monitors,<br>Rack mounted keyboard, mouse, 4<br>port industrial grade KVM switches<br>, power adapters, layer 3 Ethernet<br>switch, MCBs etc as per<br>specification and tender document. | <b>1.000</b>  | <b>LS</b> | <b>126,021.00</b> | <b>126,021.00</b> |
| <b>01650</b><br>Supply of Server (Rack type)<br>Computer with 18.5" rack mounted  | <b>1.000</b>  | <b>EA</b> | <b>777,058.00</b> | <b>777,058.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate              | Amount            |
|--|--------------|-----------|-------------------|-------------------|
| Rack type monitor,with keyboard<br>drawer, optical mouse, OS, Antivirus<br>, etc complete as per<br>specifications and Tender Document.  |              |           |                   |                   |
| <b>01660</b>   | <b>1.000</b> | <b>EA</b> | <b>213,137.00</b> | <b>213,137.00</b> |
| "Supply of Master Control Station<br>for control room :<br># Modular design providing<br>individual design and configuration<br>of the device<br># Telephone set module with a<br>handset, build#in speaker and<br>microphone for duplex twoway<br>communication<br># Call station module for duplex<br>and simplex communication<br># Up to 3 extension modules (42#126<br>keys)<br># Hands#free communication<br># Gooseneck microphone with optical<br>«on#off» indication<br># Easy maintenance and<br>configuration by control keys and<br>display<br># Volume Setting<br># Hot swapping<br># Color TFT display<br># Button labeling (transparent<br>buttons)<br># LED indications for incoming,<br>missed call and line status (busy)" |              |           |                   |                   |
| <b>01670</b>   |              |           |                   |                   |
| "Outdoor Field Call Station :<br># Connection to Fast#Ethernet<br>network, power supply via PoE<br>function<br># SIP#connections support<br># Priority levels setting<br># Easy maintenance and remote<br>administration<br># LED indications for incoming,<br>missed call and line status (busy)<br># Noise reduction/elimination<br>adjustable microphone<br># 25W amplifier for additional<br>loudspeaker (optional)<br># Identification label<br># Hot swapping  |              |           |                   |                   |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity      | Unit      | Rate              | Amount              |
|--|---------------|-----------|-------------------|---------------------|
| # Protection degree IP65"  |               |           |                   |                     |
| <b>01680</b><br>Supply of Weatherproof (IP65)<br>industrial wall-mounted digital<br>call station IP based for two-way<br>communications, with Dial keypad,Han<br>dset ,status indication,<br>identification label,25 W amplifier<br>for additional loudspeaker with<br>mounting accessories,<br>sunshade,Double<br>compression Exd glands and Exd<br>Blind plugs complete as per<br>techincal specification of tender. | <b>10.000</b> | <b>EA</b> | <b>117,866.00</b> | <b>1,178,660.00</b> |
| <b>01690</b><br>Supply of industrical type<br>interface module for integration of<br>analogue and IP-devices for IPN<br>systems complete as per techincal<br>spe<br>cification of tender.  | <b>1.000</b>  | <b>EA</b> | <b>101,987.00</b> | <b>101,987.00</b>   |
| <b>01700</b><br>"Supply of 6W weather proof Box<br>type Speaker and mounting<br>accessories etc complete as per<br>specifications and Tender Document.<br>Type : Indoor, Wall Mountable,<br>suitable for speech and music<br>reproduction<br>Rated power : 6W<br>Frequency range : 20 Hz TO 20 KHz<br>Ingress protection : IP 52<br>Standard : EN 60065 "  | <b>6.000</b>  | <b>EA</b> | <b>4,446.00</b>   | <b>26,676.00</b>    |
| <b>01710</b><br>"Supply of 6W weather proof Ring<br>type Speaker and mounting<br>accessories etc complete as per<br>specifications and Tender Document.<br>Type : Indoor, Ceiling Mountable,<br>suitable for speech and music<br>reproduction<br>Rated power : 6W<br>Frequency range : 20 Hz TO 20 KHz<br>Ingress protection : IP 52<br>Standard : EN 60065"   | <b>4.000</b>  | <b>EA</b> | <b>5,245.00</b>   | <b>20,980.00</b>    |
| <b>01720</b><br>"Supply of 25W weather proof Horn<br>type Speaker and mounting   | <b>10.000</b> | <b>EA</b> | <b>19,543.00</b>  | <b>195,430.00</b>   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate              | Amount            |
|---|---------------|-----------|-------------------|-------------------|
| accessories etc complete as per specifications and Tender Document.<br>Type : Pole Mountable, suitable for speech and music reproduction<br>Rated power : 25 W<br>Frequency range : 20 Hz TO 20 KHz<br>Ingress protection : Min. IP 65,<br>Standard : EN 60065"   |               |           |                   |                   |
| <b>01730</b>  | <b>1.000</b>  | <b>EA</b> | <b>183,663.00</b> | <b>183,663.00</b> |
| Supply of Amplifier with mounting accessories for indoor speakers complete in all respect as per technical specification of tender.   |               |           |                   |                   |
| <b>01740</b>  | <b>1.000</b>  | <b>EA</b> | <b>466,190.00</b> | <b>466,190.00</b> |
| Supply of IP System Configuration, Monitoring, Controlling & Reporting Software with client licenses.Scope also include the IP recording system for with licenses with Software and accessories.  |               |           |                   |                   |
| <b>01750</b>  | <b>10.000</b> | <b>EA</b> | <b>18,275.00</b>  | <b>182,750.00</b> |
| Supply of outdoor weatherproof housing (IP 65 or better) suitable for installing Layer 2 switch, PSU, LIU and adaptor for Ethernet switch/media convertor surge protectors and other accessories of CCTV cameras. The scope also includes supply of blinding plugs,doub<br>le compression cable glands etc as per specifications and Tender Document.   |               |           |                   |                   |
| <b>01760</b>  |               |           |                   |                   |
| Miscellaneous   |               |           |                   |                   |
| <b>01770</b>  |               |           |                   |                   |
| Supply of flameproof cum weather proof to IP 65 or better SIL 2 smart pressure transmitter (Class 150/300 )with in built display, Bleed ring & valves/SS manifold with valves, canopy/sunshade, other erection material etc as per hook up drawing attached else where in tender complete as per specifications and Tender Document.<br>(Transmitter will have IEC & ATEX certified minimum and any other |               |           |                   |                   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate      | Amount       |
|---|----------|------|-----------|--------------|
| certi<br>fication as stated else where in<br>tender)  |          |      |           |              |
| <b>01780</b><br>Remote seal pressure transmitter<br>-Pump Suction end (2"300#RF)  | 8.000    | EA   | 71,892.00 | 575,136.00   |
| <b>01790</b><br>Remote seal pressure transmitter<br>-Pump Discharge end (2"300#RF)  | 8.000    | EA   | 71,892.00 | 575,136.00   |
| <b>01800</b><br>Remote seal pressure transmitter<br>-Exchange Pit product Header (VG-40<br>+ VG-30+VG-10) (2"300#RF)  | 3.000    | EA   | 71,892.00 | 215,676.00   |
| <b>01810</b><br>Pressure transmitter -Fire Hydrant<br>lines (3/4" 150#)   | 3.000    | EA   | 38,965.00 | 116,895.00   |
| <b>01820</b><br>Pressure transmitter -Steam Line<br>(Exchange Pit + Near Tanks-3 No.)<br>(3/4"Class 300)  | 4.000    | EA   | 57,781.00 | 231,124.00   |
| <b>01830</b><br>Remote seal pressure transmitter<br>-Product Header to pump house<br>(VG-40 + VG-30 +VG-10+CRMB)<br>(2"300#RF)  | 4.000    | EA   | 71,892.00 | 287,568.00   |
| <b>01840</b><br>Supply of flameproof cum weather<br>proof to IP 65 or better SIL 2<br>Smart Differential pressure<br>transmitter (Class 300) with remote<br>seal<br>in built display & keypad, Bleed<br>ring with valves, canopy/sunshade,<br>other erection material etc as per<br>hook up drawing attached els<br>e where in tender complete as per<br>specifications and Tender Document.<br>(Transmitter will have IEC & ATEX<br>certified minimum and any ot<br>her certification as stated else<br>where in tender) |          |      |           |              |
| <b>01850</b><br>Across all TLF pump strainers<br>(2"300#RF)   | 8.000    | EA   | 56,965.00 | 455,720.00   |
| <b>01860</b><br>Across Steam lines in tanks<br>(3/4"300#)   | 19.000   | EA   | 56,965.00 | 1,082,335.00 |
| <b>01870</b>  |          |      |           |              |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate                | Amount              |
|--|--------------|-----------|---------------------|---------------------|
| Supply of flameproof cum weather proof, Temperature transmitter (Class 300) along with display unit, RTD, Thermo well, canopy/sunshade with mounting accessories etc complete as per specifications and tender document.                                       |              |           |                     |                     |
| <b>01880</b>   | <b>3.000</b> | <b>EA</b> | <b>30,360.00</b>    | <b>91,080.00</b>    |
| Product Exchange Pit Header (VG-40 + VG-30+VG-10) (300#RF)   |              |           |                     |                     |
| <b>01890</b>   | <b>1.000</b> | <b>EA</b> | <b>30,360.00</b>    | <b>30,360.00</b>    |
| Steam Exchagne pit header (300#RF)   |              |           |                     |                     |
| <b>01900</b>   | <b>3.000</b> | <b>EA</b> | <b>30,360.00</b>    | <b>91,080.00</b>    |
| Near Pumps (300#RF)  |              |           |                     |                     |
| <b>01910</b>   | <b>1.000</b> | <b>EA</b> | <b>1,667,635.00</b> | <b>1,667,635.00</b> |
| Supply of 75 Tons Weigh Bridge system - Pit less above ground having sizes 16 x 3 mtrs with Digital weight indicator, load cell, related cables, printer, Software, Computer etc.  |              |           |                     |                     |
| <b>01920</b>   | <b>1.000</b> | <b>EA</b> | <b>386,424.00</b>   | <b>386,424.00</b>   |
| Supply of Ex/IS Wireless data entry terminal for Verification of Loaded Truck details along with accessories like wireless router( for integrating with TAS), charger etc complete as per specification and tender document.                                   |              |           |                     |                     |
| <b>01930</b>   | <b>1.000</b> | <b>EA</b> | <b>61,510.00</b>    | <b>61,510.00</b>    |
| Supply of Wailing siren along with controller with a provision to operate locally as well as from control room, mounting accessories etc complete as per specification and tender document.  |              |           |                     |                     |
| <b>01940</b>   | <b>1.000</b> | <b>LS</b> | <b>65,897.00</b>    | <b>65,897.00</b>    |
| Installation, integration, configuration, testing and commissioning of Digital Rodent Repellent System along with mounting accessories for main controller(s) & transducers etc complete as per specification and tender document (Minimum nos of transducers: |              |           |                     |                     |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate              | Amount            |
|---|---------------|-----------|-------------------|-------------------|
| Control Room - 12 nos., Invoice room - 4 nos. & Security Room - 4 nos.  |               |           |                   |                   |
| <b>01950</b>  | <b>1.000</b>  | <b>LS</b> | <b>355,335.00</b> | <b>355,335.00</b> |
| Supply of MCT block for entire Automation cable entry to Control Room, Admin Building, Security Room, PMCC with minimum 50% spare MCT blocks for future cable entry along with frame and mounting accessories complete as per specification and tender document.  |               |           |                   |                   |
| <b>01960</b>  |               |           |                   |                   |
| Supply of external surge & Lightning protection devices of suitable connector and type along with accessories complete as per specification and tender document at following places.  |               |           |                   |                   |
| <b>01970</b>  | <b>6.000</b>  | <b>EA</b> | <b>7,434.00</b>   | <b>44,604.00</b>  |
| Type 1+2 SPD  |               |           |                   |                   |
| <b>01980</b>  | <b>10.000</b> | <b>EA</b> | <b>7,190.00</b>   | <b>71,900.00</b>  |
| SPD (Type 2 / IC category C1,C2,C3,D1) -  |               |           |                   |                   |
| <b>01990</b>  | <b>6.000</b>  | <b>EA</b> | <b>10,602.00</b>  | <b>63,612.00</b>  |
| Type 1 SPD - Earth pit  |               |           |                   |                   |
| <b>02000</b>  |               |           |                   |                   |
| Cabling, JB, Earthing:  |               |           |                   |                   |
| <b>02010</b>  |               |           |                   |                   |
| Note: Supply of cables shall be along with accessories like certified double compression cable glands with PVC shrouds, plugs for excess entries, SS 316 engraved tag plate, mounting clamp, SS 316 fasteners , OFC accessories (like 12/24 port LIU, splice trays, loaded adaptor and blank plates, UTP and optical patch cords, pigtails, media converters etc), LAN face plates, conduits, mounting of equipments, making RCC trenches with cover wherever required, hume pipes, Aluminium tags, lugs, ferrules, etc |               |           |                   |                   |
| <b>02020</b>  |               |           |                   |                   |



| Outline Level<br>Item no.Service no.<br>Service Description                       | Quantity         | Unit     | Rate          | Amount              |
|---|------------------|----------|---------------|---------------------|
| Supply of FRLS Armoured Copper<br>Power cable as per tender<br>specifications.    |                  |          |               |                     |
| <b>02030</b>  | <b>7,500.000</b> | <b>M</b> | <b>113.00</b> | <b>847,500.00</b>   |
| 3C x 2.5 sqmm   |                  |          |               |                     |
| <b>02040</b>  | <b>2,500.000</b> | <b>M</b> | <b>134.00</b> | <b>335,000.00</b>   |
| 4C x 2.5 sqmm   |                  |          |               |                     |
| <b>02050</b>  | <b>3,000.000</b> | <b>M</b> | <b>237.00</b> | <b>711,000.00</b>   |
| 8C x 2.5 sqmm   |                  |          |               |                     |
| <b>02060</b>  | <b>800.000</b>   | <b>M</b> | <b>295.00</b> | <b>236,000.00</b>   |
| 10C x 2.5 sqmm  |                  |          |               |                     |
| <b>02070</b>  | <b>2,400.000</b> | <b>M</b> | <b>352.00</b> | <b>844,800.00</b>   |
| 12C x 2.5 sqmm  |                  |          |               |                     |
| <b>02080</b>  | <b>2,000.000</b> | <b>M</b> | <b>609.00</b> | <b>1,218,000.00</b> |
| 24C x 2.5 sqmm  |                  |          |               |                     |
| <b>02090</b>  | <b>500.000</b>   | <b>M</b> | <b>156.00</b> | <b>78,000.00</b>    |
| 3C x 4 sqmm   |                  |          |               |                     |
| <b>02100</b>  | <b>100.000</b>   | <b>M</b> | <b>209.00</b> | <b>20,900.00</b>    |
| 4C x 4 sqmm   |                  |          |               |                     |
| <b>02110</b>  | <b>100.000</b>   | <b>M</b> | <b>262.00</b> | <b>26,200.00</b>    |
| 4C x 6 sqmm   |                  |          |               |                     |
| <b>02120</b>  | <b>100.000</b>   | <b>M</b> | <b>339.00</b> | <b>33,900.00</b>    |
| 4C x 10 sqmm  |                  |          |               |                     |
| <b>02130</b>  |                  |          |               |                     |
| Supply of FRLS Armoured Aluminium<br>Power cable as per tender<br>specifications. |                  |          |               |                     |
| <b>02140</b>  | <b>250.000</b>   | <b>M</b> | <b>487.00</b> | <b>121,750.00</b>   |
| 3.5C x 120 sqmm   |                  |          |               |                     |
| <b>02150</b>  |                  |          |               |                     |
| Supply of FRLS Armoured Copper<br>Control cable as per tender<br>specifications.  |                  |          |               |                     |
| <b>02160</b>  | <b>6,500.000</b> | <b>M</b> | <b>68.00</b>  | <b>442,000.00</b>   |
| 2C x 1.5 sqmm   |                  |          |               |                     |
| <b>02170</b>  | <b>1,200.000</b> | <b>M</b> | <b>83.00</b>  | <b>99,600.00</b>    |
| 3C x 1.5 sqmm   |                  |          |               |                     |
| <b>02180</b>  | <b>6,000.000</b> | <b>M</b> | <b>101.00</b> | <b>606,000.00</b>   |
| 4C x 1.5 sqmm   |                  |          |               |                     |
| <b>02190</b>  | <b>1,600.000</b> | <b>M</b> | <b>135.00</b> | <b>216,000.00</b>   |
| 6C x 1.5 sqmm   |                  |          |               |                     |
| <b>02200</b>  | <b>4,500.000</b> | <b>M</b> | <b>149.00</b> | <b>670,500.00</b>   |
| 8C x 1.5 sqmm   |                  |          |               |                     |
| <b>02210</b>  | <b>2,400.000</b> | <b>M</b> | <b>194.00</b> | <b>465,600.00</b>   |
| 10C x 1.5 sqmm  |                  |          |               |                     |
| <b>02220</b>  | <b>2,400.000</b> | <b>M</b> | <b>226.00</b> | <b>542,400.00</b>   |
| 12C x 1.5 sqmm  |                  |          |               |                     |
| <b>02230</b>  | <b>800.000</b>   | <b>M</b> | <b>257.00</b> | <b>205,600.00</b>   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity   | Unit | Rate   | Amount       |
|---|------------|------|--------|--------------|
| 16C x 1.5 sqmm<br><b>02240</b>  | 2,000.000  | M    | 322.00 | 644,000.00   |
| 18C x 1.5 sqmm<br><b>02250</b>  | 2,400.000  | M    | 361.00 | 866,400.00   |
| 20C x 1.5 sqmm<br><b>02260</b>  | 3,000.000  | M    | 420.00 | 1,260,000.00 |
| 24C x 1.5 sqmm<br><b>02270</b>  | 600.000    | M    | 515.00 | 309,000.00   |
| 32C x 1.5 sqmm<br><b>02280</b>  | 600.000    | M    | 560.00 | 336,000.00   |
| 36C x 1.5 sqmm<br><b>02290</b>  | 600.000    | M    | 781.00 | 468,600.00   |
| 48C x 1.5 sqmm<br><b>02300</b>  |            |      |        |              |
| Supply of FRLS Armoured Copper<br>Signal cable as per tender<br>specifications.   |            |      |        |              |
| <b>02310</b>  | 10,000.000 | M    | 68.00  | 680,000.00   |
| 1P x 1.5 sqmm<br><b>02320</b>   | 1,600.000  | M    | 135.00 | 216,000.00   |
| 2P x 1.5 sqmm<br><b>02330</b>   | 1,200.000  | M    | 172.00 | 206,400.00   |
| 3P x 1.5 sqmm<br><b>02340</b>   | 1,600.000  | M    | 212.00 | 339,200.00   |
| 4P x 1.5 sqmm<br><b>02350</b>   | 2,400.000  | M    | 262.00 | 628,800.00   |
| 6P x 1.5 sqmm<br><b>02360</b>   | 2,400.000  | M    | 329.00 | 789,600.00   |
| 8P x 1.5 sqmm<br><b>02370</b>   | 800.000    | M    | 456.00 | 364,800.00   |
| 10P x 1.5 sqmm<br><b>02380</b>  | 1,600.000  | M    | 594.00 | 950,400.00   |
| 12P x 1.5 sqmm<br><b>02390</b>  | 3,200.000  | M    | 740.00 | 2,368,000.00 |
| 16P x 1.5 sqmm<br><b>02400</b>  | 800.000    | M    | 849.00 | 679,200.00   |
| 18P x 1.5 sqmm<br><b>02410</b>  |            |      |        |              |
| Supply of FRLS Un-armoured Copper<br>Signal cable as per tender<br>specifications.  |            |      |        |              |
| <b>02420</b>  | 1,000.000  | M    | 51.00  | 51,000.00    |
| 1P x 1.5 sqmm<br><b>02430</b>   | 10,000.000 | M    | 86.00  | 860,000.00   |
| Supply of 6 core single mode<br>armoured optical fibre cable as per<br>tender specifications and<br>instructions of Engineer in charge. |            |      |        |              |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity         | Unit      | Rate            | Amount              |
|---|------------------|-----------|-----------------|---------------------|
| <b>02440</b><br>Supply of CAT 6 Ethernet armoured cable as per tender specifications and instructions of Engineer in charge.  | <b>8,500.000</b> | <b>M</b>  | <b>54.00</b>    | <b>459,000.00</b>   |
| <b>02450</b><br>Supply of CAT 6 Ethernet unarmoured cable as per tender specifications and instructions of Engineer in charge.  | <b>1,000.000</b> | <b>M</b>  | <b>89.00</b>    | <b>89,000.00</b>    |
| <b>02460</b><br>Supply of Pre fab CAT 6 Ethernet un-armoured cable as per tender specifications and instructions of Engineer in charge other than IO CL LAN Network.  |                  |           |                 |                     |
| <b>02470</b><br>10 M  | <b>10.000</b>    | <b>EA</b> | <b>578.00</b>   | <b>5,780.00</b>     |
| <b>02480</b><br>15 M  | <b>40.000</b>    | <b>EA</b> | <b>880.00</b>   | <b>35,200.00</b>    |
| <b>02490</b><br>20 M  | <b>40.000</b>    | <b>EA</b> | <b>1,174.00</b> | <b>46,960.00</b>    |
| <b>02500</b><br>25 M  | <b>20.000</b>    | <b>EA</b> | <b>1,476.00</b> | <b>29,520.00</b>    |
| <b>02510</b><br>30 M  | <b>10.000</b>    | <b>EA</b> | <b>1,756.00</b> | <b>17,560.00</b>    |
| <b>02520</b><br>Supply of 1C x 6 Sq. mm FRLS Flexible copper insulated green wire for earthing instruments and junction boxes etc complete as per specification and tender document   | <b>4,500.000</b> | <b>M</b>  | <b>59.00</b>    | <b>265,500.00</b>   |
| <b>02530</b><br>Supply of GI strip ( 50mm X 6mm) with Hot dip galvanizing (800 gm/m2 as per IS 4759) along with accessories required for complete Terminal Automation System as per Standard Design Engineering, specification and tender document.   | <b>8,000.000</b> | <b>M</b>  | <b>203.00</b>   | <b>1,624,000.00</b> |
| <b>02540</b><br>"Supply of anodized Aluminium perforated cable trays (2.5mm Thick and 25mm edge height), tray covers (1.5mm Thick and 10 mm edge height) along with structural steel for mounting of the cable tray. Complete as per specifications / |                  |           |                 |                     |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity         | Unit     | Rate            | Amount              |
|--|------------------|----------|-----------------|---------------------|
| tender documents.<br>Note: Seperate Payment will be done<br>for Structural steel"  |                  |          |                 |                     |
| <b>02550</b><br>50 mm  | <b>4,000.000</b> | <b>M</b> | <b>325.00</b>   | <b>1,300,000.00</b> |
| <b>02560</b><br>100 mm   | <b>4,000.000</b> | <b>M</b> | <b>496.00</b>   | <b>1,984,000.00</b> |
| <b>02570</b><br>150 mm   | <b>1,500.000</b> | <b>M</b> | <b>669.00</b>   | <b>1,003,500.00</b> |
| <b>02580</b><br>300 mm   | <b>500.000</b>   | <b>M</b> | <b>1,289.00</b> | <b>644,500.00</b>   |
| <b>02590</b><br>600 mm   | <b>150.000</b>   | <b>M</b> | <b>2,252.00</b> | <b>337,800.00</b>   |
| <b>02600</b><br>"CABLE TRAYS (LADDER TYPE) : Supply<br>of Hot dip G.I. LADDER TYPE cable<br>trays of<br>minimum 2.5 M length (with 100mm<br>side flange height for cable tray<br>of width 300 mm & above and 75 mm<br>side flange height for cable tr<br>ay of width below 300 mm) for<br>Straight run, bends, Tees etc. as<br>per enclosed specification &<br>drawings. Item includes all<br>accessories<br>, i.e. Coupler plate, Tray Fixing<br>clamp, Fastener, nut, bolt washer<br>etc. as required. All the hardware<br>i.e. Fasterener, Nut, Bolt,Wa<br>shers etc. shall be of SS 304. " |                  |          |                 |                     |
| <b>02610</b><br>600 mm Wide 3 mm thick - Runner<br>Size 100 mm x 20 mmx 20 mm / Rung<br>Size- 50mm x 20mm x 20mm at 250 mm<br>spacing  | <b>50.000</b>    | <b>M</b> | <b>1,214.00</b> | <b>60,700.00</b>    |
| <b>02620</b><br>300 mm Wide 2 mm thick - Runner<br>Size-100 mm x 20 mmx 20 mm / Rung<br>Size- 50mmx 20mm x 20mm at 250 mm<br>spacing   | <b>50.000</b>    | <b>M</b> | <b>552.00</b>   | <b>27,600.00</b>    |
| <b>02630</b><br>Supply of 1.6 mm thick Hot dip G.I.<br>Cover of minimum 2.5 M length<br>suitable for Cable tray of<br>following sizes including clamps<br>for fi<br>xing the cover to cable tray with  |                  |          |                 |                     |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity       | Unit      | Rate             | Amount              |
|---|----------------|-----------|------------------|---------------------|
| all accessories.  |                |           |                  |                     |
| <b>02640</b>  | <b>50.000</b>  | <b>M</b>  | <b>971.00</b>    | <b>48,550.00</b>    |
| 600 mm Wide   |                |           |                  |                     |
| <b>02650</b>  | <b>50.000</b>  | <b>M</b>  | <b>576.00</b>    | <b>28,800.00</b>    |
| 300 mm Wide   |                |           |                  |                     |
| <b>02660</b>  | <b>50.000</b>  | <b>M</b>  | <b>314.00</b>    | <b>15,700.00</b>    |
| 150 mm Wide   |                |           |                  |                     |
| <b>02670</b>  | <b>50.000</b>  | <b>M</b>  | <b>209.00</b>    | <b>10,450.00</b>    |
| 100 mm Wide   |                |           |                  |                     |
| <b>02680</b>  | <b>50.000</b>  | <b>M</b>  | <b>105.00</b>    | <b>5,250.00</b>     |
| 50 mm Wide  |                |           |                  |                     |
| <b>02690</b>  |                |           |                  |                     |
| Supply of Exd/FLP Junction Box/PDB<br>(Power/Control/Signal JB) with IP<br>65 as per specification suitable<br>for hazardous area of zone 1,<br>group IIA/IIB, T3 or better having<br>CCOE/CMRI approval. It shall be<br>complete in all respect.<br>Accessories like certified double<br>compression cable glands with PVC shrouds<br>& plugs for excess entries, SS 316<br>engraved tag plate, mounting clamp<br>& SS 316 fasteners. Complete as per<br>specification / tender documents. |                |           |                  |                     |
| <b>02700</b>  | <b>20.000</b>  | <b>EA</b> | <b>17,756.00</b> | <b>355,120.00</b>   |
| 24 ways JB  |                |           |                  |                     |
| <b>02710</b>  | <b>50.000</b>  | <b>EA</b> | <b>15,387.00</b> | <b>769,350.00</b>   |
| 18 ways JB  |                |           |                  |                     |
| <b>02720</b>  | <b>50.000</b>  | <b>EA</b> | <b>10,503.00</b> | <b>525,150.00</b>   |
| 12 ways JB  |                |           |                  |                     |
| <b>02730</b>  | <b>100.000</b> | <b>EA</b> | <b>9,898.00</b>  | <b>989,800.00</b>   |
| 8 ways JB   |                |           |                  |                     |
| <b>02740</b>  | <b>75.000</b>  | <b>EA</b> | <b>8,467.00</b>  | <b>635,025.00</b>   |
| 6 ways JB   |                |           |                  |                     |
| <b>02750</b>  | <b>40.000</b>  | <b>EA</b> | <b>1,441.00</b>  | <b>57,640.00</b>    |
| 4 ways JB   |                |           |                  |                     |
| <b>02760</b>  | <b>500.000</b> | <b>M</b>  | <b>181.00</b>    | <b>90,500.00</b>    |
| Supply of 50 mm HDPE pipe of<br>minimum 2.5 mm thick along with<br>accessories as per tender<br>specifications and instructions of<br>Engineer in charge.   |                |           |                  |                     |
| <b>02770</b>  | <b>20.000</b>  | <b>MT</b> | <b>88,131.00</b> | <b>1,762,620.00</b> |
| Supply of Structural steel (MS) for   |                |           |                  |                     |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate              | Amount            |
|---|--------------|-----------|-------------------|-------------------|
| erection of cable bridge (if required),tray installation for laying of above ground cables at road crossing or any other place within the Terminal including painting, Civil foundations, nuts, bolts, washers, cleats, stiffeners, gussets, base plate etc   |              |           |                   |                   |
| <b>02780</b>  | <b>1.000</b> | <b>MT</b> | <b>105,336.00</b> | <b>105,336.00</b> |
| Supply of hot dip galvanised Structural steel (MS) including civil foundations, nuts, bolts, washers, cleats, stiffeners, gussets, base plate etc required for complete Terminal Automation System  |              |           |                   |                   |
| <b>02790</b>  |              |           |                   |                   |
| Earth Pit   |              |           |                   |                   |
| <b>02800</b>  |              |           |                   |                   |
| "Supply of Maintenance Free CPRI approved Earth pit with 80 mm dia of minimum 3mtr length safe earthing electrode with Pipe-in-pipe technology consisting of two mild steel pipes one inside the other, hot dip galvanized (80-100 microns), filled with high conductive & corrosion resistance crystalline mixture and backfilling compound around electrode, brick masonry earth pit including plastering in CM 1:4, 600x600 mm C.I. Manhole chamber including providing suitable earth bus for interconnection etc. Equivalent make shall be approved by client / consultants. Procedure recommended by chemical earth supplier and IS code to be finally adopted. Item also includes provision of earth station flags with pit nos and date of inspection and the next due date of inspection. Job also includes provision of test certificate of earthing station from a class A licensed electrical contractor as |              |           |                   |                   |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate              | Amount            |
|--|--------------|-----------|-------------------|-------------------|
| per the format of the Corporation.<br>All Instruments, JBs, Equipments in<br>Field and CCR shall be earthed by<br>6 mm <sup>2</sup> PVC insulated copper cable to<br>nearest Insulated copper<br>Earth Bus bar ( minimum size 25 mm<br>x 6 mm ) and this earth bar shall<br>be connected to earth pit by<br>redundant Multi stranded copper c<br>able (Min 25 mm <sup>2</sup> ). Signal and<br>Power earth shall be separate as<br>per specification)" |              |           |                   |                   |
| <b>02810</b>   | <b>4.000</b> | <b>EA</b> | <b>20,004.00</b>  | <b>80,016.00</b>  |
| TLF gantry   |              |           |                   |                   |
| <b>02820</b>   | <b>2.000</b> | <b>EA</b> | <b>20,004.00</b>  | <b>40,008.00</b>  |
| TT earthing  |              |           |                   |                   |
| <b>02830</b>   | <b>9.000</b> | <b>EA</b> | <b>20,004.00</b>  | <b>180,036.00</b> |
| Control room   |              |           |                   |                   |
| <b>02840</b>   | <b>8.000</b> | <b>EA</b> | <b>20,004.00</b>  | <b>160,032.00</b> |
| Tank dyke  |              |           |                   |                   |
| <b>02850</b>   | <b>4.000</b> | <b>EA</b> | <b>20,004.00</b>  | <b>80,016.00</b>  |
| Pump house   |              |           |                   |                   |
| <b>02860</b>   |              |           |                   |                   |
| Heat tracing and thermal insulation  |              |           |                   |                   |
| <b>02870</b>   | <b>1.000</b> | <b>LS</b> | <b>230,903.00</b> | <b>230,903.00</b> |
| Supply of Distribution<br>Panel/Control panel for the heat<br>tracing system designed .The panel<br>should have min.20% spare circuit<br>capacit<br>y.The no. of Circuit to be provided<br>in the system to be finalised in<br>consultaion with IOCL.The panel<br>should have provision to pass o<br>n the signal to the main process<br>panel on serial communication.  |              |           |                   |                   |
| <b>02880</b>   |              |           |                   |                   |
| Supply & fixing of heat tracing<br>system including self regulating<br>heating cable/const. wattage<br>parallel tracer (with<br>un-conditional T<br>-3 rating) and accessories like end<br>connector,power connector, FLPJBS ,<br>RTD, Aluminum foil self<br>adhesive,Fiber glass tape, T connect<br>or, caution lables, etc;<br>Measurement will be for RM of   |              |           |                   |                   |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity       | Unit      | Rate             | Amount              |
|--|----------------|-----------|------------------|---------------------|
| pipeline.The job includeds providing tracing for all fittings & equipments in the pipeline network and no seperate payment shall be made for the same.   |                |           |                  |                     |
| <b>02890</b><br>80/100/150 MM Dia Pipeline   | <b>500.000</b> | <b>M</b>  | <b>13,360.00</b> | <b>6,680,000.00</b> |
| <b>02900</b><br>THERMAL INSULATION: Supply, fabrication, erection, testing and commissioning of Thermal insulation and SS cladding for the following items.The insulation material shall be light resin bonded mattresses(LRB) with desnsity of 120kg/Cum. The SS material shall be indu |                |           |                  |                     |
| strial grade. For pipelines of size 100 mm dia. and below shall be provided with 24 gauge SS cladding.For all other purpose the SS c   |                |           |                  |                     |
| ladding shall be of 22 gauge.The detailed specifications are enclosed.The insulation area of the pipeline shall be calculated based on the outside dia. of the Pipe.   |                |           |                  |                     |
| <b>02910</b><br>Insulation for Bitumen Pipelines from 80 mm NB to 300 mm NB - 50 mm thick.   | <b>400.000</b> | <b>M</b>  | <b>6,675.00</b>  | <b>2,670,000.00</b> |
| <b>02920</b><br>Insulation for Valves and Strainers etc - 50 mm thk  |                |           |                  |                     |
| <b>02930</b><br>20/25 NB   | <b>50.000</b>  | <b>EA</b> | <b>8,723.00</b>  | <b>436,150.00</b>   |
| <b>02940</b><br>50 NB  | <b>40.000</b>  | <b>EA</b> | <b>12,957.00</b> | <b>518,280.00</b>   |
| <b>02950</b><br>100 NB   | <b>100.000</b> | <b>EA</b> | <b>20,653.00</b> | <b>2,065,300.00</b> |
| <b>02960</b><br>150 NB   | <b>20.000</b>  | <b>EA</b> | <b>28,350.00</b> | <b>567,000.00</b>   |

ESTIMATE VALUE FOR ITEM 10 ( SUPPLY COMPONENTS ): 146,014,832.00 (Rs.FOURTEEN CRORE SIXTY LAC FOURTEEN THOUSAND EIGHT HUNDRED THIRTY-TWO)

#### 00020 SERVICES COMPONENTS



| Outline Level       | Quantity | Unit | Rate | Amount |
|---------------------|----------|------|------|--------|
| Item no.Service no. |          |      |      |        |
| Service Description |          |      |      |        |

**Plant:** 1521 Mathura RC Office  
**Material Group:** Services  
**Account Assignments:** F -Order  
**Order no.:** 926932  
**G/L Account:** 5999999999

**00010**

SERVICE COMPONENTS

**00020**

TANK LORRY FILLING

**00030**

"Installation, Configuration,  
Integration, Testing and  
Commissioning of Microprocessor  
based Coriolis mass flow meter for  
Bitumen a  
pplication along with display unit  
and mounting accessories with  
adjustable screw support etc  
complete as per specifications and  
ten  
der document for loading of bitumen  
for temperature upto 200 Degree.  
Note: In case MFM is not having  
inbuilt ASTM table, vendor has to  
Installation, Configuration,  
Integration, Testing and  
Commissionin  
g Flow Computers along with  
accessories as per tender document  
at no additional cost to IOCL."

|              |               |           |                 |                  |
|--------------|---------------|-----------|-----------------|------------------|
| <b>00040</b> | <b>14.000</b> | <b>EA</b> | <b>4,383.00</b> | <b>61,362.00</b> |
|--------------|---------------|-----------|-----------------|------------------|

For product (Bitumen) line size 100  
mm- TLF

**00050**

Installation, Configuration,  
Integration, Testing and  
Commissioning of Pneumatic type  
Multistage Piston type Digital  
Control Valve  
(DCV) or Quarter Turn Ball Valve  
with Weatherproof actuator suitable  
for temperature upto 200 Degree  
with secure locking arrangement  
etc along with accessories  
complete as per specifications and  
tender document.

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit       | Rate            | Amount           |
|---|---------------|------------|-----------------|------------------|
| <b>00060</b><br>For product (Bitumen) line size 100 mm - TLF  | <b>14.000</b> | <b>EA</b>  | <b>5,461.00</b> | <b>76,454.00</b> |
| <b>00070</b><br>Installation, Configuration, Integration, Testing and Commissioning of pneumatic operated ON-OFF Valve along with actuator suitable for temperature upto 200 Degree along with accessories, tubing arrangement as per installation drawing etc for line size 100 mm complete as per specifications and tender document. Service:Bitumen                               | <b>14.000</b> | <b>EA</b>  | <b>5,358.00</b> | <b>75,012.00</b> |
| <b>00080</b><br>Installation, Configuration, Integration, Testing and Commissioning of pneumatic operated, ON-OFF plug Valve suitable for temperature upto 200 Degree along with NRV & accessories, tubing arrangement as per installation drawing etc for line size 25 mm complete as per specifications and tender document. Service:Air  | <b>14.000</b> | <b>EA</b>  | <b>3,430.00</b> | <b>48,020.00</b> |
| <b>00090</b><br>"Installation, Configuration, Integration, Testing and Commissioning of flameproof cum weather proof, Head mounted Temperature transmitter (Class 150/300) along with display unit & keypad, RTD, Thermowell, mounting accessories etc complete as per specifications and tender document. (Mounting at each TLF loading point on main product for line size 100 mm)" | <b>14.000</b> | <b>EA</b>  | <b>2,740.00</b> | <b>38,360.00</b> |
| <b>00100</b><br>Installation, Testing and Commissioning of online proving valves manifold comprising of 4 nos. of 100 NB, full bore, zero leakage, fire safe ball valves along with   | <b>14.000</b> | <b>SET</b> | <b>6,075.00</b> | <b>85,050.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate            | Amount            |
|---|---------------|-----------|-----------------|-------------------|
| associated piping, Tee connection,<br>gaskets, copper jumpers, fasteners,<br>blind flanges at one end of<br>each ball valves, pipe fittings,<br>WNRF flanges etc for each loading<br>point assembly for making<br>arrangement to connect Mobile master<br>meter for proving of TLF MFM<br>complete as per specifications and<br>tender documents.   |               |           |                 |                   |
| <b>00110</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of top loading arm<br>along with Heat tracing arrangement<br>to maint<br>ain the temp of 160 Degree of size<br>100 mm NB along with 1 no. full<br>bore isolation ball valve (100 mm)<br>, bonding clip (for bonding o<br>f loading arm with TT),Heat<br>resistance paint etc complete as<br>per specifications and tender<br>document. Scope includes the LRB<br>mineral<br>wool mattresses of density 120<br>kg/cum conforming to IS:8183 in<br>required thicknes insulation along<br>with SS cladding. Heat tracing it<br>em will be paid seperately.<br>Application: Bitumen | <b>14.000</b> | <b>EA</b> | <b>9,343.00</b> | <b>130,802.00</b> |
| <b>00120</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Ex-proof Rack<br>Monitors for TT overfill protection<br>system al<br>ong with accessories like 10 pin<br>gantry plug, ATC copper coiled<br>cable of minimum 8 m as per API<br>RP1004 including required support f<br>or mounting of the Rack Monitor and<br>Pull-Away Plug and Cable Assembly<br>etc complete as per specifications<br>and tender document.  | <b>1.000</b>  | <b>EA</b> | <b>7,443.00</b> | <b>7,443.00</b>   |
| <b>00130</b><br>Installation, Configuration,<br>Integration, Testing and  | <b>14.000</b> | <b>EA</b> | <b>3,642.00</b> | <b>50,988.00</b>  |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate     | Amount    |
|---|----------|------|----------|-----------|
| Commissioning of Resistance -<br>Capacitance type Tank Truck<br>grounding unit along<br>with accessories like 2 nos. of<br>coiled cable and pull-away with<br>socket for TT earthing relay<br>interlocks and 1 no. for separate<br>earthing of TT, heavy duty SS/ brass<br>grounding socket, FLP double<br>compression glands, Ex-Plug,<br>mounting structure etc, complete as<br>per<br>specification and tender<br>documents. | 14.000   | EA   | 2,036.00 | 28,504.00 |
| <b>00140</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Ex-proof field<br>mounted Remote Interaction Terminal<br>(RIT) cum<br>Driver Ack Push Button station<br>along with FLP double compression<br>glands and Ex-Proof-plugs,<br>structural supports etc complete<br>as per<br>specifications and tender<br>documents.   |          |      |          |           |
| <b>00150</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Microprocessor<br>based Field mounted Dual arm Batch<br>Controller<br>along with accessories like double<br>compression glands, Exd Plugs,<br>hoods etc complete as per<br>specification and tender document.  |          |      |          |           |
| <b>00160</b><br>For TLF product loading   | 14.000   | EA   | 4,671.00 | 65,394.00 |
| <b>00170</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of intrinsically<br>safe / flameproof type proximity<br>card reader<br>along with mounting accessories etc<br>complete as per specifications and  |          |      |          |           |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity      | Unit      | Rate             | Amount            |
|--|---------------|-----------|------------------|-------------------|
| tender document for authorisation<br>of TT at  |               |           |                  |                   |
| <b>00180</b>   | <b>14.000</b> | <b>EA</b> | <b>3,570.00</b>  | <b>49,980.00</b>  |
| TLF bays (1 no. Per bay)   |               |           |                  |                   |
| <b>00190</b>   | <b>1.000</b>  | <b>EA</b> | <b>3,570.00</b>  | <b>3,570.00</b>   |
| License area Entry barrier gates ( 1 no. X 1)  |               |           |                  |                   |
| <b>00200</b>   | <b>1.000</b>  | <b>EA</b> | <b>3,570.00</b>  | <b>3,570.00</b>   |
| License area Exit barrier gates ( 2 nos. X 1)  |               |           |                  |                   |
| <b>00210</b>   | <b>1.000</b>  | <b>EA</b> | <b>3,570.00</b>  | <b>3,570.00</b>   |
| Security Entry barrier gates ( 2 nos. X 1)   |               |           |                  |                   |
| <b>00220</b>   | <b>1.000</b>  | <b>EA</b> | <b>3,570.00</b>  | <b>3,570.00</b>   |
| Security Exit barrier gates ( 1 no. X 1 )  |               |           |                  |                   |
| <b>00230</b>   | <b>2.000</b>  | <b>EA</b> | <b>3,570.00</b>  | <b>7,140.00</b>   |
| Near Security Gate/TT parking ( for TT registration )  |               |           |                  |                   |
| <b>00240</b>   | <b>1.000</b>  | <b>EA</b> | <b>3,570.00</b>  | <b>3,570.00</b>   |
| Weigh Bridge   |               |           |                  |                   |
| <b>00250</b>   | <b>1.000</b>  | <b>EA</b> | <b>3,570.00</b>  | <b>3,570.00</b>   |
| Drum Filling Yard Entry  |               |           |                  |                   |
| <b>00260</b>   | <b>1.000</b>  | <b>EA</b> | <b>3,570.00</b>  | <b>3,570.00</b>   |
| Drum Filling Yard Exit   |               |           |                  |                   |
| <b>00270</b>   | <b>15.000</b> | <b>MT</b> | <b>30,295.00</b> | <b>454,425.00</b> |
| "Installation of pre-fabricated Metering Skid (MS structure) including mounting of complete metering equipments as per BOQ. The mete ring assembly comprises of :<br>Main product line: Spool piece with tapping for additive dosing, MFM, Spool piece with tapping for Temperature Transmitter installation with tapping for connecting outlet of TRV, DCV, Online Master Meter proving manifold, Spool Piece with tapping, ON-Off valve & TRV installation.<br>Note: Skid to be mounted with Batch Controller, Rack Monitor(as applicable), Grounding unit, RIT cum Driver's Ack Push button stations, card reader, FLP sockets, FLP junctions boxes (Power, Signal and Control), FLP power isolator |               |           |                  |                   |

| Outline Level   | Quantity | Unit | Rate | Amount |
|---|----------|------|------|--------|
| Item no.  |          |      |      |        |
| Service no.   |          |      |      |        |
| Service Description   |          |      |      |        |
| <p>switch, interconnecting cables from respective equipment to JBs, cable trays with collar height of 50mm with covers, glands, support, MS structure, nuts, bolts, gaskets, Tees, bends, elbows, WNRF flanges, nozzles, plugs, isolators, Stud Bolts, Blind Flanges (if applicable) , any other equipment if required as per design Engineering etc complete as per specification and tender document. Note: Stud Bolts, Blind Flanges (if applicable) "</p> <p><b>00280</b></p> <p>"Note:</p> <ol style="list-style-type: none"> <li>1. All the equipments, JBs, cable trays, interconnecting cables etc as stated above to be installed and loop tested at factory. Complete assembly to be dispatched at site. The skid to be designed and fabricated by the party taking into consideration of all the equipment sizing, space available for mounting of the skid at the bottom of the gantry etc. The design Engineering along with weight calculation of individual skid excluding equipments to be submitted to IOCL prior to taking up fabrication job for review purpose. Payment shall be made based on theoretical weight calculation of the skid excluding weight of equipments, JBs, cable trays, piping, pipe fittings, flanges, stud bolts, Gaskets . The rate is also inclusive of surface preparation, powder coating, painting, transportation of the skid to site etc complete in all respect.</li> <li>2. All unused nozzle/ tapping/ opening to be blind flanged.</li> <li>3. For SKO metering SKID, tapping</li> </ol> |          |      |      |        |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate      | Amount    |
|---|----------|------|-----------|-----------|
| to be provided in the skid for both<br>bottom and top loading as per<br>design Engineering if applicable<br>."  |          |      |           |           |
| <b>00290</b><br>"Installation, integration, testing<br>and commissioning of barrier gate of<br>minimum boom length of 4/5 m along<br>with accessories, contro<br>llers etc complete as per<br>specification and tender document<br>for installation at following<br>location.<br>Note: Length of boom barrier<br>mentioned is tentative and boom<br>barrier to be supplied as per<br>length finalized during design<br>Engineerin<br>g. " |          |      |           |           |
| <b>00300</b><br>License area Entry gate   | 1.000    | SET  | 15,829.00 | 15,829.00 |
| <b>00310</b><br>License area Exit gate  | 1.000    | SET  | 15,829.00 | 15,829.00 |
| <b>00320</b><br>Security Exit gate  | 1.000    | SET  | 15,829.00 | 15,829.00 |
| <b>00330</b><br>Security Entry gate   | 1.000    | SET  | 15,829.00 | 15,829.00 |
| <b>00340</b><br>TT Parking Entry  | 1.000    | SET  | 15,829.00 | 15,829.00 |
| <b>00350</b><br>Drum Filling Yard Entry   | 1.000    | SET  | 15,829.00 | 15,829.00 |
| <b>00360</b><br>Drum Filling Yard Exit  | 1.000    | SET  | 15,829.00 | 15,829.00 |
| <b>00370</b><br>DISPLAY BOARDS  |          |      |           |           |
| <b>00380</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of weather proof<br>LED bay queuing display board<br>(Minimum 15 lin<br>es x 100 mm Character height x 25<br>characters per line) for outdoor<br>installation at TT parking area /<br>S&D building along with accesso<br>ries like public address system,<br>speakers, amplifier, mike,<br>structural steel for mounting of                     | 1.000    | EA   | 13,590.00 | 13,590.00 |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate             | Amount           |
|---|--------------|-----------|------------------|------------------|
| the same, canopy/sunshade etc<br>complete<br>as per specifications and tender<br>document.  |              |           |                  |                  |
| <b>00390</b>  | <b>1.000</b> | <b>EA</b> | <b>10,620.00</b> | <b>10,620.00</b> |
| Installation, integration, testing<br>and commissioning of LED monitor of<br>minimum 55" along with required<br>hardware and software for int<br>erfacing with TAS, lockable<br>enclosure (wall / ceiling mounted)<br>for mounting the monitor along with<br>accessories at Driver's Rest Room<br>for repeat display of Bay Queue<br>Display board complete as per<br>specification and tender document.<br>Kindly note, no additional paymen<br>t shall be made for any additional<br>hardware/ software/ cable etc<br>required for integration of the<br>monitor with TAS.  |              |           |                  |                  |
| <b>00400</b>  | <b>7.000</b> | <b>EA</b> | <b>11,834.00</b> | <b>82,838.00</b> |
| "Supply of weather proof single<br>line coloured display board with<br>scroll and flash effects (Each line<br>of min. 25 mm Character height<br>x 11 characters per line) for<br>outdoor application near Security<br>Gate/ TT parking Area and license<br>area Entry barrier Gate along wit<br>h mounting structure, SS canopy/<br>sunshade, accessories etc complete<br>as per specifications and tender<br>document for displaying the T<br>T Registration no. in bilingual<br>(English + local language) of<br>reported TT whose proximity card<br>has been shown on the PCR adjacent t<br>o the display board for TT<br>reporting at security gate/TT<br>parking area, TT status at Security<br>entry gate and the bay no.<br>(Bilingual)<br>etc of the authorised TT reported<br>at license area Entry Gate etc.<br>Note : (i) 1 line for display in<br>English & local language as a<br>rolling display" |              |           |                  |                  |



| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate     | Amount    |
|---|----------|------|----------|-----------|
| <hr/>   |          |      |          |           |
| <b>00410</b><br>TLF Header line instruments   |          |      |          |           |
| <b>00420</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of flameproof cum<br>weather proof, Temperature<br>transmitter (Class<br>150/300) along with display unit,<br>RTD, Thermo well, canopy/sunshade<br>with mounting accessories etc<br>complete as per specifications and<br>tender document.  |          |      |          |           |
| <b>00430</b><br>TLF Product Header<br>(VG-40+VG-30+VG-10) (2"300#RF)+TLF<br>Loading Point (2"150#RF)  | 6.000    | EA   | 2,010.00 | 12,060.00 |
| <b>00440</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of flameproof cum<br>weather proof, min SIL 2 certified<br>smart press<br>ure transmitter ,display unit &<br>keypad, bleed ring with isolation<br>ball valve/ss manifold with<br>isolation valve, canopy/sunshade<br>with<br>mounting accessories etc on the TLF<br>main header line complete as per<br>specifications and tender document.<br>(Transmitter will have IEC<br>& ATEX certified minimum along with<br>any other certification as stated<br>else where in tender) (Range 0-15<br>kg/cm2) (Class 150/300) |          |      |          |           |
| <b>00450</b><br>TLF Product Header with Remote<br>Seal-(VG-40+VG-30+VG-10 ) (2"300#RF)  | 6.000    | EA   | 3,187.00 | 19,122.00 |
| <b>00460</b><br>Pressure transmitter -Instrument<br>Air ( TLF Header-1 No.& Air<br>vessel) (3/4"150#)   | 4.000    | EA   | 2,191.00 | 8,764.00  |
| <b>00470</b><br>Tank Farm Management System   |          |      |          |           |
| <b>00480</b><br>"Installation, Integration, Testing<br>and Commissioning of minimum SIL 2   |          |      |          |           |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate            | Amount            |
|---|---------------|-----------|-----------------|-------------------|
| certified Non - contact type Radar level gauges with instrument accuracy of +/- 1 mm or better along with mounting accessories etc complete as per specification and tender document. (Transmitter will have IEC/ATEX certified minimum along with any other certification as stated else where in tender)<br>Note : Fabrication, Fixing, Laying of Pipeline for Air line is included in this item" |               |           |                 |                   |
| <b>00490</b><br>For Cone Roof Vertical tanks (Primary and Secondary Radar Gauges - Bitumen- 19 x 2+UG-6X1)  | <b>10.000</b> | <b>EA</b> | <b>7,930.00</b> | <b>79,300.00</b>  |
| <b>00500</b><br>Installation, Configuration, Integration, Testing and Commissioning of multi point temperature averaging sensor (MST) along with mounting accessories, spool piece of minimum 500mm etc complete as per specification and tender document. Vendor to consider additional 500 mm length for the same for MST.  |               |           |                 |                   |
| <b>00510</b><br>With minimum 8 elements temperature sensor (for above ground tanks - Bitumen+ UG-HT)  | <b>2.000</b>  | <b>EA</b> | <b>4,401.00</b> | <b>8,802.00</b>   |
| <b>00520</b><br>For AG Horizontal Tanks   | <b>6.000</b>  | <b>EA</b> | <b>4,401.00</b> | <b>26,406.00</b>  |
| <b>00530</b><br>Installation, Configuration, Integration, Testing and Commissioning of flameproof cum weather proof, min SIL 2 certified smart pressure transmitter with remote seal (Class 300 ), display unit & keypad , 1 no. isolation ball valve, canopy/sunshade with mounting accessories etc for density measurement complete as per specifications and tender document.                    | <b>19.000</b> | <b>EA</b> | <b>6,572.00</b> | <b>124,868.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate     | Amount    |
|---|----------|------|----------|-----------|
| (Transmitter will have IEC & ATEX certified minimum along with any other certification as stated else where in tender) (Range 0-2 kg/cm2) (100 mm)  |          |      |          |           |
| <b>00540</b><br>Installation, Configuration, Integration, Testing and Commissioning of Tank Side indicator ,canopy/sunshade along with mounting accessories etc complete as per specification and tender document for displaying respective tank inventory data. (TSI will have IEC & ATEX certified minimum along with any other certification as stated else where in tender) |          |      |          |           |
| <b>00550</b>  | 10.000   | EA   | 3,236.00 | 32,360.00 |
| For Vertical Product tanks - (Primary & Secondary Radar Gauges)   |          |      |          |           |
| <b>00560</b><br>Installation, Configuration, Integration, Testing and Commissioning of top mounted minimum SIL2 certified Overfill detector (vibrating fork type) of suitable for bitumen application,adequate probe length along with mounting accessories, spool piece of minimum 500 mm, proof testing equipment, etc complete as per specification and tender document.     |          |      |          |           |
| <b>00570</b>  | 25.000   | EA   | 3,507.00 | 87,675.00 |
| For Vertical Product tanks  |          |      |          |           |
| <b>00580</b><br>Installation, Configuration, Integration, Testing and Commissioning of parallel redundant Communication Interface Units (CIU) including all accessories etc for tank farm management system complete as per specification and tender document.  |          |      |          |           |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit       | Rate             | Amount           |
|---|--------------|------------|------------------|------------------|
| <b>00590</b><br>For Radar gauges installed on A/G<br>product tanks  | <b>1.000</b> | <b>SET</b> | <b>3,760.00</b>  | <b>3,760.00</b>  |
| <b>00600</b><br>"Configuration, Integration,<br>Testing and Commissioning of<br>existing Communication Interface<br>Units(CIU) with new TFMS Euipment.<br>Details of existing system is<br>provided in Tender Document"   | <b>2.000</b> | <b>SET</b> | <b>3,760.00</b>  | <b>7,520.00</b>  |
| <b>00610</b><br>Shifting of Existing System Cabinet<br>containing CIUs, TFMS Servers and<br>Workstation from Admin Building to<br>New Control Room including<br>disconnection of existing cables,<br>transportation, installation in new<br>control room, glanding &<br>termination of cables from existing<br>TFMS instruments.  | <b>1.000</b> | <b>LS</b>  | <b>16,168.00</b> | <b>16,168.00</b> |
| <b>00620</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 1 no. of<br>Redundant TFMS Server (Rack type )<br>along 1 no. rack<br>type (1U) LED monitor of minimum<br>size of 18.5" suitable for 24x7<br>operation, Licensed OS (latest<br>supported by TFMS software), Licens<br>ed Antivirus, Licensed latest MS<br>Office professional, TFMS licensed<br>software from Radar Gauge OEM etc<br>complete as per specification<br>and tender document. | <b>2.000</b> | <b>SET</b> | <b>4,036.00</b>  | <b>8,072.00</b>  |
| <b>00630</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Existing TFMS<br>Workstation with minimum 27" LED<br>colour monit<br>or, standard keyboard, mouse,<br>Licensed OS (latest supported by<br>TFMS software), Licensed Antivirus,<br>Licensed latest MS Office profes<br>sional, TFMS licensed client<br>software from same Radar Gauge OEM<br>etc complete as per specification   |              |            |                  |                  |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity      | Unit      | Rate            | Amount            |
|--|---------------|-----------|-----------------|-------------------|
| and tender document.   |               |           |                 |                   |
| <b>00640</b><br>Rack type/Tower Type at Control Room   | <b>1.000</b>  | <b>EA</b> | <b>3,933.00</b> | <b>3,933.00</b>   |
| <b>00650</b><br>Push Buttons Outside Dyke Walls  |               |           |                 |                   |
| <b>00660</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Exd/FLP Local<br>Push button station cum indication<br>lamp out si<br>de tank farm dyke wall for remote<br>opening and closing of MOVs from<br>LPBS, canopy/sunshade along with<br>FLP double compression gland,TB<br>s, mounting structure, accessories<br>etc complete as per specifications<br>and tender document.        | <b>57.000</b> | <b>EA</b> | <b>2,130.00</b> | <b>121,410.00</b> |
| <b>00670</b><br>For MOVs (A/G product tank's inlet,<br>outlet and recirculation etc. Line,<br>PT valve-12 nos. )   |               |           |                 |                   |
| <b>00680</b><br>ESD PUSH BUTTON STATION  |               |           |                 |                   |
| <b>00690</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Exd/FLP ESD push<br>button stations, mushroom head<br>type, with p<br>rotection cover to avoid accidental<br>activation along with cluster LED<br>indicaton,canopy/sunshade along<br>with FLP double compression gl<br>and, TBs, mounting structure,<br>accessories etc complete as per<br>specification and tender document. | <b>7.000</b>  | <b>EA</b> | <b>2,130.00</b> | <b>14,910.00</b>  |
| <b>00700</b><br>Local ESD Push Button Station ( TLF<br>- 2 no., P/H - 1 no. )-Housing<br>Colour should be Orange as per IS-5   | <b>10.000</b> | <b>EA</b> | <b>2,130.00</b> | <b>21,300.00</b>  |
| <b>00710</b><br>Plant ESD Push Button Station ( Each battery of TLF - 1<br>no.)-Housing Colour should be<br>Orange as per IS-5   | <b>3.000</b>  | <b>EA</b> | <b>2,130.00</b> | <b>6,390.00</b>   |
| <b>00720</b><br>Installation, Configuration,   |               |           |                 |                   |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity | Unit | Rate       | Amount     |
|--|----------|------|------------|------------|
| Integration, Testing and<br>Commissioning of Exd/FLP ESD push<br>button stations , mushroom head<br>type, with<br>protection cover to avoid<br>accidental activation along with<br>cluster LED indication ,<br>canopy/sunshade along with FLP<br>double compressio<br>n gland, TBs, mounting structure,<br>accessories etc complete as per<br>specification and tender<br>document.-Housing Colour should be<br>Red as<br>per IS-5. (control room - 1 no.,<br>security room - 1 no., TM's cabin -<br>1 no.)  |          |      |            |            |
| <b>00730</b><br>Control Room equipments  |          |      |            |            |
| <b>00740</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of redundant fault<br>tolerant Integrated Process PLC<br>along with<br>PLC Panels, Marshalling Panels,<br>Biometric fingerprint cum<br>contactless smart card reader along<br>with camera seperate for each panel<br>an<br>d front & rear door with<br>accessories for all panels along<br>with magentic lock having door<br>feedback feature, limit switches,<br>Input Out<br>put modules, Redundant Power<br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning units, Relays with<br>base, barriers,<br>TBs, Redundant host communication<br>ports, Serial Interface Modules,<br>HART modules, other communication<br>modules, HMI , wirings, glands<br>, plugs, other modules/ hardware<br>required for interfacing with all<br>the required field and control room<br>equipments including spare re | 1.000    | SET  | 107,304.00 | 107,304.00 |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate            | Amount          |
|--|--------------|-----------|-----------------|-----------------|
| <p>quirements, licenses, tags, GUI,<br/>licensed OPC compliant software etc<br/>complete as per specification and<br/>tender document.</p> <p>Note: Any other hardware, software,<br/>OPC server, Historian Server,<br/>storage, firewall, functional<br/>control key board etc required as pe<br/>r tender specification and design<br/>requirements, the same to be<br/>installed by the vendor at no<br/>additional cost to IOCL."</p>  |              |           |                 |                 |
| <b>00750</b>   | <b>1.000</b> | <b>LS</b> | <b>4,924.00</b> | <b>4,924.00</b> |
| <p>"Design, Installation,<br/>Configuration, Testing &amp;<br/>Commissioning of Complete Terminal<br/>Automation Software along with<br/>required licences<br/>, dongle/keys, GUI, SCADA etc<br/>meeting the complete functional and<br/>technical requirements of the<br/>tender document.</p> <p>Vendor to provide required<br/>software, licences, dongle/keys,<br/>GUI, SCADA etc for TAS Management<br/>Server, Distributed Control System,<br/>O<br/>perator work stations, Alarm<br/>display and annunciation OIC,<br/>Engineering Work Stations(for DCS),<br/>Web Server, OPC Server, Historian<br/>Ser<br/>ver / work station, any other<br/>devices connected to Control &amp;<br/>Management LAN of the integrated<br/>Distributed Control System complete<br/>a<br/>s per specification and tender<br/>document.</p> <p>TAS software shall be interfaced<br/>with following but not limited to<br/>major sub-systems / equipments<br/>alongwith GUI development for moni<br/>toring, logging, reporting,<br/>controls &amp; interlocks etc as per<br/>specification and tender document.</p> <p>- TAS- Management Server<br/>- TLF Automation System (TT</p> |              |           |                 |                 |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity | Unit | Rate | Amount |
|--|----------|------|------|--------|
| <p>reporting, registration &amp; entry system, TT Queuing, FAN generation, Bay allocation, Interface with TLF equipments like BCU, MFM, Barrier Gates, Bay Queue Display, Bay allocation Display, Auto flushing, TT loading, Invoice generated display, Proximity card readers etc)</p> <p>-Weigh bridge System</p> <p>-Valve Automation System including sequencing as per tender (MOVs, MCS Interface etc)</p> <p>-Tank Farm Management System ( TFMS Server, Primary &amp; Secondary Radar Gauging, AOPS, Level transmitters, TSI, MSTW, CIU etc)</p> <p>-Tank Temperature control system</p> <p>- Pipeline/ Refinery PLC Interface</p> <p>- MCC, Pump, Borewell, DG Sets, Air compressors etc.</p> <p>- PA paging Interface "</p> <p><b>00760</b></p> <p>"- FAS Interface &amp; DG Set</p> <p>- CCTV systems</p> <p>- Access Control System</p> <p>- ESD System, Emergency panel, Power ESD, Local ESD, Wailing sirens</p> <p>- Pressure Transmitters &amp; Temperature transmitter</p> <p>- UPS &amp; Power distribution boards etc .</p> <p>- Interface with IOCL SAP through firewall</p> <p>- Steam control Station interface</p> <p>- Master MFM integration</p> <p>- Steam leak detection system in tanks</p> <p>- Date Entry Terminal for Manual counting of Loaded Drums</p> <p>- Any other Third Party Interface/ devices as per scope of the work order etc</p> <p>Note: The offered software shall also includes fault detection module and Web Server software for remote viewing over IOCL Intranet across India as detatiled in the tender document.</p> |          |      |      |        |



| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate            | Amount          |
|---|--------------|-----------|-----------------|-----------------|
| "   |              |           |                 |                 |
| <b>00770</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of existing TAS<br>Management Server  | <b>1.000</b> | <b>LS</b> | <b>4,924.00</b> | <b>4,924.00</b> |
| <b>00780</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 42 U Rack<br>Enclosure cabinet/System cabinet<br>with 19" rack size,<br>along with accessories, magnetic<br>locks, limit switches, earthing<br>arrangements, breaker, fuses,<br>terminal blocks, OFC accessories, LI<br>U tray as applicable and wiring etc<br>complete as per specification and<br>tender document for mounting of<br>below mentioned equipments. |              |           |                 |                 |
| <b>00790</b><br>For mounting of TAS Management<br>Servers along with associated rack<br>type monitors & keyboard, mouse, 4<br>port industrial grade KVM switches,<br>power adapters, networking &<br>OFC components, Ethernet switch,<br>GSM modems, MCBs etc as per<br>specification and tender document.  | <b>1.000</b> | <b>EA</b> | <b>5,091.00</b> | <b>5,091.00</b> |
| <b>00800</b><br>For mounting of TFMS Servers along<br>with associated rack type monitors<br>& keyboard, mouse, 4 port<br>industrial grade KVM switches, power<br>adapters, networking & OFC<br>components, Ethernet switch, GSM<br>modems, MCBs etc as per<br>specification and tender document.  | <b>1.000</b> | <b>EA</b> | <b>5,091.00</b> | <b>5,091.00</b> |
| <b>00810</b><br>For mounting of Rack mounted Master<br>Control Stations for MOVs along<br>with power adaptors, MCBs, required<br>accessories etc as per specification<br>and tender document.   | <b>1.000</b> | <b>EA</b> | <b>5,218.00</b> | <b>5,218.00</b> |
| <b>00820</b><br>For mounting of Network equipments<br>along with power adaptors, MCBs,<br>required accessories etc as per   | <b>1.000</b> | <b>EA</b> | <b>5,218.00</b> | <b>5,218.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate     | Amount    |
|---|----------|------|----------|-----------|
| specification and tender document.<br><b>00830</b><br>"Installation, Configuration, Integration, Testing and Commissioning of Operator Interface Console Computer (OIC) with minimum 32" colour LED monitor, wireless keyboard and mouse for mounting of the same in OIC console, KVM Switch, software, SCADA, GUI, OS, Antivirus, MS office professional etc. complete as per specifications and tender document. CPU shall be kept in Panel room in 42 U Rack.<br>Note: 1. CPU of control room shall be kept in Panel room in 42 U Rack. KVM extender & receiver is to be supplied at no additional cost" |          |      |          |           |
| <b>00840</b><br>19" Rack type in Control Room ( 2 OICs, 1 for alarm Display)  | 3.000    | EA   | 4,134.00 | 12,402.00 |
| <b>00850</b><br>Tower mounted type in TM's Cabin  | 1.000    | EA   | 3,588.00 | 3,588.00  |
| <b>00860</b><br>Installation, Configuration, Integration, Testing and Commissioning of Engineering Workstation rack type (EWS) with minimum 27" colour LED monitor, standard keyboard, mouse, DCS software, HMI software, SCADA, GUI, OS, Antivirus, MS office professional etc. complete as per specifications and tender document. (Locations: 1 no. in CR for DCS)   | 1.000    | EA   | 3,588.00 | 3,588.00  |
| <b>00870</b><br>Installation, Configuration, Integration, Testing and Commissioning of Tank Truck Entry System (TTES) Workstation with minimum 27" colour LED monitor, standard keyboard, mouse, software, SCADA,   |          |      |          |           |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate            | Amount          |
|--|--------------|-----------|-----------------|-----------------|
| GUI, OS, Antivirus etc. complete as per specifications and tender document. (Locations: 2 nos. in S&D + 1 no. in Control room)   |              |           |                 |                 |
| <b>00880</b>   | <b>2.000</b> | <b>EA</b> | <b>2,844.00</b> | <b>5,688.00</b> |
| Tower type in S&D and Weighbridge Room   |              |           |                 |                 |
| <b>00890</b>   | <b>1.000</b> | <b>EA</b> | <b>5,218.00</b> | <b>5,218.00</b> |
| Installation, Configuration, Integration, Testing and Commissioning of Web Server (Rack type mountable in 19" rack ) along with 1 no. rack type (1U) LED monitor of minimum size of 18.5" suitable for 24x7 operation, standard keyboard, mouse, web application software, SCADA, GUI, OS, Antivirus etc located in panel Room complete as per specifications and Tender Document.   |              |           |                 |                 |
| <b>00900</b>   |              |           |                 |                 |
| "Installation, Configuration, Integration, Testing and Commissioning of Terminal servers (rack mounted) with inbuilt/externally mounted lightning and Surge Protection Device Type for all Serial ports, for interfacing and integration of card readers, Bay Queue display units (Indoor & outdoor), LED Display unit for TT reporting & Bay allocation with TAS in case the above listed equipments do not come with open communication protocol compatible to be directly interfaced with DCS Serial / MODBUS TCP IP module complete as per specification and tender document. Note: Terminal Servers to be configured in Dual Redundant mode. Terminal server to be provided with DB9-female-to-terminal-block adapter for connections as per site condition." |              |           |                 |                 |
| <b>00910</b>   | <b>2.000</b> | <b>EA</b> | <b>2,618.00</b> | <b>5,236.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate     | Amount   |
|---|----------|------|----------|----------|
| 16 ports at Control Room<br><b>00920</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 24 ports Layer 3<br>Managed Ethernet Switches<br>(10/100/1000 MB<br>PS) with SFP, copper, fibre<br>modules/ports along with<br>accessories for connecting Plant<br>management LAN equipments like CCTV<br>System, TA<br>S - MS Server/ Redundant OPC<br>server, TFMS Server, TFMS work<br>station, OICs, IOCL intranet for<br>SAP connectivity through fire wall,<br>Net<br>work printers, Access Control<br>Server, Web Server Access over IOCL<br>Intranet, connecting to OIC/ work<br>stations etc which needs to be c<br>onected to both Plant Management<br>LAN and Plant Control LAN for<br>getting the entire GUIs of Complete<br>Terminal Automation System and a<br>ny other third party devices which<br>needs OPC for interfacing with DCS<br>etc.<br>Note:<br>1. Ethernet Switches to be<br>configured in Dual Redundant mode.<br>2. OFC ports to be provided for<br>connecting interbuilding LANs and<br>any other equipment which are to be<br>connected to above switch and<br>the communication is through OFC<br>cable." | 2.000    | EA   | 2,541.00 | 5,082.00 |
| <b>00930</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 24 ports Layer 2<br>Managed Ethernet Switches<br>(10/100/1000 MB<br>PS) along with SFP, copper, fibre<br>modules, accessories for connecting<br>equipments installed in Plant<br>Control LAN like TAS- MS Servers<br>, OICs, TTES, EWS, OPC Servers,  | 2.000    | EA   | 2,541.00 | 5,082.00 |

| Outline Level       | Quantity | Unit | Rate | Amount |
|---------------------|----------|------|------|--------|
| Item no.Service no. |          |      |      |        |
| Service Description |          |      |      |        |

Fire fighting OICs, Alarm Display  
OIC, DCS, inter connecting building  
work stations etc as per system  
architecture and design  
requirement complete as per  
specification and tender document.

Note:

1. The switches are to be  
configured in Dual Redundant mode.
2. OFC ports to be provided for  
connecting interbuilding LANs, and  
any other equipment which are to be  
connected to above switch and  
the communication is through OFC  
cable."

**00940**

"Installation, Configuration,  
Integration, Testing and  
Commissioning of minimum 10 ports  
( 8 nos. copper ports and 2 nos.  
optical p  
orts) Layer 2 Industrial grade  
Managed Ethernet Switches along  
with accessories for connecting BCU  
with TAS, equipments installed  
in S&D room, Security room, Terminal  
Manager room and other TAS  
equipments as per system  
architecture and design requirement  
complet  
e as per specification and tender  
document.

Note:

1. Ethernet switches for BCU  
communication shall have suitable  
mounting arrangement to mount  
inside FLP JB's.
2. The switches are to be  
configured in Dual Redundant mode.
3. All OICs, Workstations, Servers  
other than that of CCTV, ACS & TFMS  
are to be connected to both plant  
management and control LAN  
so that all the GUIs can be seen in  
all the PCs irrespective of its  
nomenclature like TTES, OIC, EWS,  
TM PC etc.
4. Printers to be connected to

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate            | Amount           |
|---|--------------|-----------|-----------------|------------------|
| Plant Management LAN and to be configured to all PCs, Workstation, TTES etc so that printout command can be issued from any of the Machine."  |              |           |                 |                  |
| <b>00950</b>  | <b>6.000</b> | <b>EA</b> | <b>2,541.00</b> | <b>15,246.00</b> |
| For BCU integration at TLF (copper ports of 10/100/1000 MBPS)   |              |           |                 |                  |
| <b>00960</b>  | <b>2.000</b> | <b>EA</b> | <b>2,541.00</b> | <b>5,082.00</b>  |
| For connecting all MODBUS TCP IP devices ( like BCU, any other devices) to DCS Ethernet port directly for integration (copper ports of 10/100/1000 MBPS)- to be located in Control Room   |              |           |                 |                  |
| <b>00970</b>  | <b>6.000</b> | <b>EA</b> | <b>2,541.00</b> | <b>15,246.00</b> |
| At Admin Building for TM cabin - copper ports of 10/100/1000 MBPS [control LAN - 2 nos., Management LAN - 2 nos., CCTV - 2 no.]   |              |           |                 |                  |
| <b>00980</b>  | <b>6.000</b> | <b>EA</b> | <b>2,541.00</b> | <b>15,246.00</b> |
| At Security Room - copper ports of 10/100/1000 MBPS [control LAN - 2 nos.,CCTV - 2 no.]   |              |           |                 |                  |
| <b>00990</b>  |              |           |                 |                  |
| Installation, Configuration, Integration, Testing and Commissioning of Layer 2 Managed Ethernet Switches along with SFP, copper, fibre modules, accessories, etc for IOCL LAN network (Non redundant ) complete as per specification and tender document. |              |           |                 |                  |
| <b>01000</b>  | <b>1.000</b> | <b>EA</b> | <b>1,701.00</b> | <b>1,701.00</b>  |
| 24 ports ( 8 optical & 16 Copper ports) - at Control room and S&D Building  |              |           |                 |                  |
| <b>01010</b>  | <b>1.000</b> | <b>EA</b> | <b>1,942.00</b> | <b>1,942.00</b>  |
| 24 ports ( 4 optical & 20 Copper ports) - at Admin Building   |              |           |                 |                  |
| <b>01020</b>  | <b>3.000</b> | <b>EA</b> | <b>3,706.00</b> | <b>11,118.00</b> |
| Installation, Configuration, Integration, Testing and Commissioning of Wall mounted Network Rack-minimum 15U,19" Rack for mounting  |              |           |                 |                  |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit       | Rate            | Amount           |
|--|--------------|------------|-----------------|------------------|
| of Terminal Server/Ethernet switches/LIU/ OFC components along with accessories like power sockets, MCBs, fan, mounting accessories etc complete in all respective at Security Room, TM room, S&D for TAS equipments   |              |            |                 |                  |
| <b>01030</b>   | <b>3.000</b> | <b>EA</b>  | <b>3,706.00</b> | <b>11,118.00</b> |
| Installation, Configuration, Integration, Testing and Commissioning of Wall mounted Network Rack-minimum 15U ,19" Network Rack of suitable sizes for mounting of Ethernet switches/LIU/ OFC components along with accessories like power sockets, MCBs, fan, mounting accessories etc complete in all respective at store room,security room, Admin building, Control Room cum S & D Room of IOCL LAN network. |              |            |                 |                  |
| <b>01040</b>   |              |            |                 |                  |
| Installation, Configuration, Integration, Testing and Commissioning of industrial grade redundant Serial to Ethernet converter of 8 port with mounting accessories etc complete in all respect as per specification and tender document.   |              |            |                 |                  |
| <b>01050</b>   | <b>4.000</b> | <b>SET</b> | <b>7,750.00</b> | <b>31,000.00</b> |
| Serial to Ethernet converter of 8 port- TLF MFM and Rack Monitor integration work  |              |            |                 |                  |
| <b>01060</b>   | <b>6.000</b> | <b>EA</b>  | <b>2,383.00</b> | <b>14,298.00</b> |
| Installation, Configuration, Integration, Testing and Commissioning of Monochrome Laser Printer along with accessories for printing in control room, Weighbridge Room, S&D Room as applicable  |              |            |                 |                  |
| <b>01070</b>   | <b>2.000</b> | <b>EA</b>  | <b>2,383.00</b> | <b>4,766.00</b>  |
| Installation, Configuration, Integration, Testing and  |              |            |                 |                  |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit       | Rate             | Amount           |
|--|--------------|------------|------------------|------------------|
| Commissioning of thermal printer<br>for printing of FAN at Security Room<br><b>01080</b>   | <b>1.000</b> | <b>SET</b> | <b>28,918.00</b> | <b>28,918.00</b> |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of parallel<br>redundant UPS of minimum capacity<br>of 30 KVA or as<br>per load calculation (whichever is<br>higher) for entire TAS equipments<br>and third party devices integrated<br>with TAS and powered through<br>TAS UPS with 30% spare capacity<br>for future load connection. The<br>scope also includes Installation,<br>Configuration, Integration, Test<br>ing and Commissioning of parallel<br>battery bank (2x50%) for minimum<br>back up time of ½ hour at full load<br>(rated capacity) along with<br>stand, supports for mounting of the<br>UPS and batteries etc complete as<br>per specification and tender<br>document. The batteries shall be<br>Sealed Maintenance free type Ni-Cd<br>batteries. | <b>1.000</b> | <b>LS</b>  | <b>12,210.00</b> | <b>12,210.00</b> |
| "Installation, Configuration,<br>Integration, Testing and<br>Commissioning of UPS Power<br>Distribution Panel for powering<br>DCS Panel,TAS-MS<br>, OIC, EWS, TFMS System, TTES,<br>printers, Bay Instruments other<br>control room equipments, Tank Farm<br>Instruments, CCTV system, Fire De<br>tection System, Access control<br>system, Bay Queue Display boards,<br>other display boards, header line<br>instruments and any other TAS equ<br>ipments where UPS power are<br>required for smooth un-interrupted<br>operation as per OEMs<br>recommendation. Miscellaneous<br>Instrumentation<br>comprising of suitable MCCBs for<br>Isolation, MCB etc are to be<br>provided. The panel shall be  |              |            |                  |                  |



| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate     | Amount    |
|---|----------|------|----------|-----------|
| complete in all respects with<br>necessar<br>y indication lamps for powering,<br>necessary control wiring voltmeter,<br>ammeter etc as per specifications<br>and tender document.<br>Note: Minimum 20% spare power<br>points to be made available for<br>future use."   |          |      |          |           |
| <b>01100</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Open desk<br>operator consoles, chairs, printer<br>tables etc comp<br>lete as per specification and<br>tender document.  |          |      |          |           |
| <b>01110</b><br>Open desk operator consoles for<br>mounting of 2 nos. of 19" Rack<br>mounted CPU, 2 nos. of key boards,<br>2 nos. of mouse, 2 nos. of monitor<br>in two tiers , etc complete as<br>per specification and tender<br>document.  | 5.000    | EA   | 4,252.00 | 21,260.00 |
| <b>01120</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of minimum 55" HD<br>LED Touch monitor along with 2 no.<br>of hooter,<br>ACK push button, mounting<br>accessories, cables etc for<br>critical alarms display &<br>annunciation complete as per<br>specifications and ten<br>der document. | 1.000    | EA   | 4,247.00 | 4,247.00  |
| <b>01130</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of minimum 55" HD<br>LED Touch monitor mounting<br>accessories, cable<br>s etc for control room OIC complete<br>as per specifications and tender<br>document.   | 1.000    | EA   | 4,247.00 | 4,247.00  |
| <b>01140</b><br>Automatic Fire Detection and Alarm  |          |      |          |           |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity       | Unit      | Rate            | Amount            |
|---|----------------|-----------|-----------------|-------------------|
| System  |                |           |                 |                   |
| <b>01150</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of microprocessor<br>based automatic Fire Alarm Panel<br>along with<br>required Software, and hardware<br>like Control module, monitor<br>module, fault isolation module (in<br>built/ External), mounting structur<br>e support etc complete as per<br>standard design engineering,<br>specification and tender document.<br>Location : Control Room" | <b>1.000</b>   | <b>EA</b> | <b>6,504.00</b> | <b>6,504.00</b>   |
| <b>01160</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Touch Type HMI<br>min 22"" for fire panel as repeater<br>along wi<br>th software, hardware, mounting<br>accessories etc required as per<br>standard design Engineering ,<br>specifications and tender document<br>co<br>mplete in all respect.<br>(Location : Security Gate - 1 no.)"   | <b>1.000</b>   | <b>EA</b> | <b>8,093.00</b> | <b>8,093.00</b>   |
| <b>01170</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of addressable type<br>detectors along with accessories,<br>fault iso<br>lation module (Inbuilt/ External),<br>structural supports etc required as<br>per standard design engineering,<br>specification and tender do<br>cument complete in all respect.  |                |           |                 |                   |
| <b>01180</b><br>Combination/Multi-sensor Detector   | <b>100.000</b> | <b>EA</b> | <b>1,101.00</b> | <b>110,100.00</b> |
| <b>01190</b><br>Heat Detector- Rate of Rise Type  | <b>10.000</b>  | <b>EA</b> | <b>1,101.00</b> | <b>11,010.00</b>  |
| <b>01200</b><br>Hydrogen Dtetector-Battery Room   | <b>2.000</b>   | <b>EA</b> | <b>1,101.00</b> | <b>2,202.00</b>   |
| <b>01210</b><br>Installation, Configuration,<br>Integration, Testing and  |                |           |                 |                   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit       | Rate            | Amount           |
|---|---------------|------------|-----------------|------------------|
| Commissioning of Manual Call Point<br>along with accessories, fault<br>isolation module (Inbuilt/ External) and<br>structural supports etc required as<br>per standard design engineering,<br>specification and tender document<br>complete in all respect.   |               |            |                 |                  |
| <b>01220</b>  | <b>10.000</b> | <b>EA</b>  | <b>1,413.00</b> | <b>14,130.00</b> |
| Ex-proof and weather proof<br>MCP-Outdoor   |               |            |                 |                  |
| <b>01230</b>  | <b>15.000</b> | <b>EA</b>  | <b>1,413.00</b> | <b>21,195.00</b> |
| Weather proof MCP-Indoor  |               |            |                 |                  |
| <b>01240</b>  |               |            |                 |                  |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Hooter along with<br>accessories, fault isolation module<br>(inbuilt/ External), structural supports<br>etc required as per standard design<br>engineering, specification and<br>tender document complete in all<br>respect. |               |            |                 |                  |
| <b>01250</b>  | <b>15.000</b> | <b>EA</b>  | <b>1,842.00</b> | <b>27,630.00</b> |
| Weather proof Hooter  |               |            |                 |                  |
| <b>01260</b>  | <b>50.000</b> | <b>EA</b>  | <b>559.00</b>   | <b>27,950.00</b> |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Response<br>Indicator along with accessories,<br>mounting structure etc required as per standard<br>design engineering, specification<br>and tender document complete in all<br>respect.                                     |               |            |                 |                  |
| <b>01270</b>  |               |            |                 |                  |
| Access Control System   |               |            |                 |                  |
| <b>01280</b>  | <b>2.000</b>  | <b>SET</b> | <b>9,451.00</b> | <b>18,902.00</b> |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of half man height<br>double lane turnstile (tripod) with<br>controller along with accessories, mounting<br>structure, pressure sensor etc<br>required as per standard design<br>engineering, specification and te              |               |            |                 |                  |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity      | Unit       | Rate            | Amount           |
|--|---------------|------------|-----------------|------------------|
| nder document complete in all respect.   |               |            |                 |                  |
| <b>01290</b><br>Installation, Configuration, Integration, Testing and Commissioning of half man height bi-directional turnstile (tripod) with contr<br>oller along with accessories, mounting structure, pressure sensor etc required as per standard design engineering, specification and tender document complete in all respect.                                 | <b>5.000</b>  | <b>EA</b>  | <b>9,451.00</b> | <b>47,255.00</b> |
| <b>01300</b><br>Installation, Configuration, Integration, Testing and Commissioning of Retractable Bidirectional Dual Lane Flap barrier with contr<br>oller along with accessories, mounting structure, pressure sensor etc required as per standard design, engineering, specification an<br>d tender document complete in all respect.                             | <b>1.000</b>  | <b>SET</b> | <b>9,451.00</b> | <b>9,451.00</b>  |
| <b>01310</b><br>Installation, Configuration, Integration, Testing and Commissioning of Biometric fingerprint, face recognition cum contactless ty<br>pe smart card reader with Seperate controller along with 2 nos. of electromagnetic door lock of 600 lb, 2 nos. of door position mag<br>netic contact with buzzer etc as per specifications and tender document. | <b>6.000</b>  | <b>EA</b>  | <b>3,877.00</b> | <b>23,262.00</b> |
| <b>01320</b><br>Installation, Configuration, Integration, Testing and Commissioning of Biometric fingerprint cum contactless type smart card reade<br>r along with camera & accessories, software , programming kit etc  | <b>18.000</b> | <b>EA</b>  | <b>3,606.00</b> | <b>64,908.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate     | Amount    |
|---|----------|------|----------|-----------|
| required as per standard design<br>engineering, specification and te<br>nder document complete in all<br>respect.   |          |      |          |           |
| <b>01330</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 1-1/2"size SS 304<br>guiding rail along with mounting<br>accessori<br>es complete as per specification<br>and tender document near turnstile/<br>tripod/flap barrier etc to prevent<br>un-authorised movement.   | 100.000  | M    | 496.00   | 49,600.00 |
| <b>01340</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Access Control<br>System Software for setup,<br>configuration, op<br>eration, events, history and<br>archiving, alarm monitoring,<br>recording, printing, time and<br>attendance etc. complete as per<br>specificatio<br>n and tender document including<br>hardwired interface with TAS for<br>ESD input. | 1.000    | LS   | 1,869.00 | 1,869.00  |
| <b>01350</b><br>IP BASED CCTV SURVEILLANCE SYSTEM   |          |      |          |           |
| <b>01360</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of HD IP Fixed Dome<br>camera with IR and MFZ lens (2MP)<br>along wit<br>h power supply unit (POE based),<br>with inbuilt/external surge<br>protection unit and mounting<br>accessories etc complete as per<br>specific<br>ations and Tender Document.  | 5.000    | EA   | 3,868.00 | 19,340.00 |
| <b>01370</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of HD IP PTZ Camera<br>(2MP) along with power supply unit<br>(POE bas   | 4.000    | EA   | 4,139.00 | 16,556.00 |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate            | Amount           |
|---|--------------|-----------|-----------------|------------------|
| ed) with POE injector (industrial grade),with inbuilt/external surge protection unit and mounting accessories etc complete as per specifications and Tender Document.   |              |           |                 |                  |
| <b>01380</b>  | <b>2.000</b> | <b>EA</b> | <b>4,139.00</b> | <b>8,278.00</b>  |
| Installation, Configuration, Integration, Testing and Commissioning of IP Fixed Bullet cameras with MFZ lens (8MP) # 4K resolution along with power supply unit (POE based), with inbuilt/external surge protection unit and mounting accessories etc complete as per specifications and Tender Document. |              |           |                 |                  |
| <b>01390</b>  | <b>1.000</b> | <b>EA</b> | <b>4,139.00</b> | <b>4,139.00</b>  |
| Installation, Configuration, Integration, Testing and Commissioning of IP Fixed Box cameras with varifocal lens (8MP) # 4K resolution along with supply unit (POE based), with inbuilt/external surge protection unit and mounting accessories etc complete as per specifications and Tender Document.    |              |           |                 |                  |
| <b>01400</b>  | <b>1.000</b> | <b>EA</b> | <b>4,139.00</b> | <b>4,139.00</b>  |
| Installation, Configuration, Integration, Testing and Commissioning of Integral Explosion Proof HD IP Fixed Cameras and MFZ lens (2 MP) along with power supply unit , with inbuilt/external surge protection unit and mounting accessories etc complete as per specifications and Tender Document.       |              |           |                 |                  |
| <b>01410</b>  | <b>5.000</b> | <b>EA</b> | <b>3,187.00</b> | <b>15,935.00</b> |
| Installation, Configuration, Integration, Testing and Commissioning of 4 port Industrial grade layer 2 Managed POE based Ethernet Switch for connecting Cameras with 4 Nos. RJ copper port and 2 Nos.   |              |           |                 |                  |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate            | Amount           |
|---|--------------|-----------|-----------------|------------------|
| optical fibre ports with<br>inbuilt/external surge protector<br>(Type 1<br>+2) at the input power supply as<br>per specifications and Tender<br>Document.   |              |           |                 |                  |
| <b>01420</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of outdoor<br>weatherproof housing (IP 65 or<br>better) suitable for<br>installing Layer 2 switch, PSU,<br>LIU and adaptor for Ethernet<br>switch/media convertor surge<br>protectors and other accessories of<br>CCTV<br>cameras. Installation,<br>Configuration, Integration, Testing<br>and Commissioning of required OFC<br>components & accessories like LIU,<br>sp<br>lice trays, loaded adaptor, blank<br>plates, UTP cables, Fibre patch<br>cords, pigtails, tags, ties,<br>Ethernet cable with RJ45 connector<br>etc complete in all respect for<br>functioning of CCTV camera.The<br>scope also includes Installation,<br>Configuration, Integration, Testing<br>and Commissioning of blinding<br>plugs, double compression cable<br>glands etc as per specifications<br>and Tender Document. | <b>5.000</b> | <b>EA</b> | <b>3,615.00</b> | <b>18,075.00</b> |
| <b>01430</b><br>"Design, fabrication and<br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Heavy Duty self<br>supported Hot Dip G<br>alvanized Poles for mounting of<br>CCTV cameras along with civil<br>foundation along with GI foundation<br>bolt, mounting brackets, ladder<br>arrangement (taking into account of<br>safety during climbing) on the pole<br>for installation and maintenance of<br>cameras, SS nut & bolts   |              |           |                 |                  |

Date: 18.05.2026

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate             | Amount            |
|---|---------------|-----------|------------------|-------------------|
| for fixing camera and other accessories required for complete installation and commissioning of the pole, submission of structural stability certificate based on existing soil bearing capacity and wind speed from Govt. Engineering colleges etc complete as per specifications and Tender Document of below mentioned height of the pole. (Foundation drawing and other details to be submitted prior to installation as per tender document) |               |           |                  |                   |
| Note: In case pole do not have ladder arrangement for maintenance purpose, then vendor to arrange for ladder for installation & maintenance purpose throughout the contract period including CAMC period at no additional cost to IOCL."  |               |           |                  |                   |
| <b>01440</b><br>10 M pole with cantilever arrangement for mounting of 1 fixed camera at 6m, 2 PTZ camera at 10 m and LED flood light at 8m of the pole across perimeter as per tender   | <b>4.000</b>  | <b>EA</b> | <b>15,093.00</b> | <b>60,372.00</b>  |
| <b>01450</b><br>10 M pole with Accessories as per specification of Tender   | <b>1.000</b>  | <b>EA</b> | <b>15,711.00</b> | <b>15,711.00</b>  |
| <b>01460</b><br>8 M pole with cantilever arrangement for mounting of 1 fixed camera at 6m and LED flood light at 8m of the pole across perimeter as per tender  | <b>2.000</b>  | <b>EA</b> | <b>14,782.00</b> | <b>29,564.00</b>  |
| <b>01470</b><br>6 M pole with Accessories as per specification of Tender  | <b>1.000</b>  | <b>EA</b> | <b>10,859.00</b> | <b>10,859.00</b>  |
| <b>01480</b><br>Installation, Configuration, Integration, Testing and Commissioning of Network Attached Storage ( NAS ) / Storage Attached Network (SAN) for storing recorded video for a minimum period 90 days @ 15   | <b>50.000</b> | <b>EA</b> | <b>3,530.00</b>  | <b>176,500.00</b> |



| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate      | Amount    |
|---|----------|------|-----------|-----------|
| FPS at full resolution & highest<br>Video quality of all cameras<br>(Continuous recording) complete as<br>per specifications and Tender<br>Document.  |          |      |           |           |
| <b>01490</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of CCTV client work<br>station along with client software<br>& licen<br>ses, key board, mouse, hardware &<br>connector for repeat/ Dual display<br>on wall mounted LED screen, OS,<br>Antivirus, etc complete as per<br>specifications and Tender Document.<br>( Location : Control Room - 1 no.,<br>Security room- 1 no. , TM room - 1<br>no.)<br>Note: CCTV Work station shall have<br>provision to connect to 2 nos. of<br>UHD LED monitors . Required<br>hardware & software is to be provid<br>ed for the same. Incase the offered<br>work station do not have such<br>provision, then additional work<br>station to be provided meeting the<br>tender requirement at no<br>additional cost to IOCL." |          |      |           |           |
| <b>01500</b><br>Rack type (2 U) with minimum 27"<br>colored LED monitor   | 1.000    | EA   | 5,064.00  | 5,064.00  |
| <b>01510</b><br>Tower type with 27" colored LED<br>monitor  | 1.000    | EA   | 5,064.00  | 5,064.00  |
| <b>01520</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of minimum 55" Ultra<br>High Definition (4K) LED Display<br>monitor<br>along with mounting accessories etc<br>complete as per specifications and<br>Tender Document for repeat display<br>of CCTV output. (Locatio<br>n : Security Room,TM room)  | 1.000    | EA   | 21,038.00 | 21,038.00 |

Note: Number of LED TV

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate      | Amount    |
|---|----------|------|-----------|-----------|
| monitor to be provided as per viewing window size requirement.<br><b>01530</b><br>Installation, Configuration, Integration, Testing and Commissioning of minimum 75" Ultra High Definition (4K) LED Display monitor a long with mounting accessories etc complete as per specifications and Tender Document for repeat display of CCTV output. (Location : Control room )   | 1.000    | EA   | 21,038.00 | 21,038.00 |
| Note: Number of LED TV monitor to be provided as per viewing window size requirement.<br><b>01540</b><br>"Installation, Configuration, Integration, Testing and Commissioning of Layer 3 Managed Gigabit Ethernet Switch with minimum 24 ports or as per site requirement + 20 % spare whichever is higher along with SFP, copper, fibre modules, accessories complete as per specifications and Tender Document. Note- The switches are required to be configured in dual redundant mode "                   | 1.000    | EA   | 2,541.00  | 2,541.00  |
| <b>01550</b><br>Installation, Configuration, Integration, Testing and Commissioning of 350 W LED flood ONLY light luminaries on Light poles up to 10M height including Installation, Configuration, Integration, Testing and Commissioning & fixing of clamps, scaffolding , temporary fire screen ifrequired, supports, nuts,bolts, earthing , required modification infixing arrangement , Installation, Configuration, Integration, Testing and Commissioning and welding of mounting structure as persite | 1.000    | EA   | 4,545.00  | 4,545.00  |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate            | Amount           |
|---|---------------|-----------|-----------------|------------------|
| condition , painting etc. all<br>complete with labo<br>ur and materials asper drawings,<br>specifications and directions of<br>the Engineer-in-Charge.  |               |           |                 |                  |
| <b>01560</b><br>PA PAGING SYSTEM  |               |           |                 |                  |
| <b>01570</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Layer 3 Managed<br>Gigabit Ethernet Switch with<br>minimum 24 port<br>s or as per site requirement<br>whichever is higher along with SFP,<br>copper, fibre modules, accessories<br>complete as per specifications<br>and Tender Document.  | <b>2.000</b>  | <b>EA</b> | <b>5,091.00</b> | <b>10,182.00</b> |
| <b>01580</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 24 ports Layer 2<br>Managed Ethernet Switches<br>(10/100/1000 MB<br>PS) along with SFP, copper, fibre<br>modules, accessories for connecting<br>equipments etc as per system<br>architecture and design requireme<br>nt complete as per specification<br>and tender document.<br>Note:<br>1. The switches are to be<br>configured in Dual Redundant mode.<br>2. OFC ports to be provided for<br>connecting interbuilding LANs, and<br>any other equipment which are to be<br>connected to above switch and<br>the communication is through OFC<br>cable." | <b>2.000</b>  | <b>EA</b> | <b>2,541.00</b> | <b>5,082.00</b>  |
| <b>01590</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 4 port Industrial<br>grade layer 2 Managed POE based<br>Ethernet<br>Switch with 4 Nos. RJ copper port<br>and 2 Nos. optical fibre ports with<br>inbuilt/external surge protector   | <b>10.000</b> | <b>EA</b> | <b>4,938.00</b> | <b>49,380.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate              | Amount            |
|--|--------------|-----------|-------------------|-------------------|
| Type (1+2) at the input power as per specifications and Tender Document.   |              |           |                   |                   |
| <b>01600</b><br>Installation, Configuration, Integration, Testing and Commissioning of 42 U Rack Enclosure cabinet/System cabinet with 19" rack size, along with accessories like Biometric fingerprint cum contactless smart card reader along camera with accessories, limit switches, earthing arrangements, breaker, fuses, required OFC components & accessories like LIU, splice trays, loaded adaptor, blank plates, UTP cables, Fibre patch cords, pigtails, tags, ties etc complete in all respect for functioning of system, terminal blocks and wiring etc complete as per specification and tender document For mounting of Servers along with associated rack mounted monitors, Rack mounted keyboard, mouse, 4 port industrial grade KVM switches, power adapters, layer 3 Ethernet switch, MCBs etc as per specification and tender document. | <b>1.000</b> | <b>LS</b> | <b>5,091.00</b>   | <b>5,091.00</b>   |
| <b>01610</b><br>Installation, Configuration, Integration, Testing and Commissioning of Server (Rack type) Computer with 18.5" rack mounted Rack type monitor, with keyboard drawer, OS, Antivirus, etc complete as per specifications and Tender Document.   | <b>1.000</b> | <b>EA</b> | <b>104,943.00</b> | <b>104,943.00</b> |
| <b>01620</b><br>"Installation, Configuration, Integration, Testing and Commissioning of Master Control Station for control room :<br># Modular design providing  | <b>1.000</b> | <b>EA</b> | <b>23,876.00</b>  | <b>23,876.00</b>  |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate      | Amount     |
|---|----------|------|-----------|------------|
| individual design and configuration<br>of the device<br># Telephone set module with a<br>handset, build#in speaker and<br>microphone for duplex twoway<br>communication<br># Call station module for duplex<br>and simplex communication<br># Up to 3 extension modules (42#126<br>keys)<br># Hands#free communication<br># Gooseneck microphone with optical<br>«on#off» indication<br># Easy maintenance and<br>configuration by control keys and<br>display<br># Volume Setting<br># Hot swapping<br># Color TFT display<br># Button labeling (transparent<br>buttons)<br># LED indications for incoming,<br>missed call and line status (busy)"<br><b>01630</b><br>"Outdoor Field Call Station :<br># Connection to Fast#Ethernet<br>network, power Installation,<br>Configuration, Integration, Testing<br>and Commissioning via PoE function<br># SIP#connections support<br># Priority levels setting<br># Easy maintenance and remote<br>administration<br># LED indications for incoming,<br>missed call and line status (busy)<br># Noise reduction/elimination<br>adjustable microphone<br># 25W amplifier for additional<br>loudspeaker (optional)<br># Identification label<br># Hot swapping<br># Protection degree IP65"<br><b>01640</b> | 10.000   | EA   | 18,095.00 | 180,950.00 |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Weatherproof<br>(IP65) industrial wall-mounted<br>digital call sta   |          |      |           |            |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate             | Amount           |
|---|--------------|-----------|------------------|------------------|
| tion IP based for two-way<br>communications, with Dial<br>keypad,Handset ,status indication,<br>identification label,25 W amplifier<br>for addi<br>tional loudspeaker with mounting<br>accessories,sunshade, Double<br>compression Exd glands and Exd<br>Blind plugs complete as per<br>techincal s<br>pecification of tender.  |              |           |                  |                  |
| <b>01650</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of industrial type<br>interface module for integration of<br>analogu<br>e and IP-devices for IPN systems<br>complete as per techincal<br>specification of tender.   | <b>1.000</b> | <b>EA</b> | <b>13,622.00</b> | <b>13,622.00</b> |
| <b>01660</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 6W weather proof<br>Box type Speaker and mounting<br>accessories<br>etc complete as per specifications<br>and Tender Document.<br>Type : Indoor, Wall Mountable,<br>suitable for speech and music<br>reproduction<br>Rated power : 6W<br>Frequency range : 20 Hz TO 20 KHz<br>Ingress protection : IP 52<br>Standard : EN 60065 " | <b>6.000</b> | <b>EA</b> | <b>1,291.00</b>  | <b>7,746.00</b>  |
| <b>01670</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 6W weather proof<br>Ring type Speaker and mounting<br>accessories<br>etc complete as per specifications<br>and Tender Document.<br>Type : Indoor, Ceiling Mountable,<br>suitable for speech and music<br>reproduction<br>Rated power : 6W<br>Frequency range : 20 Hz TO 20 KHz  | <b>4.000</b> | <b>EA</b> | <b>1,508.00</b>  | <b>6,032.00</b>  |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity      | Unit      | Rate             | Amount           |
|--|---------------|-----------|------------------|------------------|
| Ingress protection : IP 52<br>Standard : EN 60065"   |               |           |                  |                  |
| <b>01680</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 25W Explosion &<br>weather proof Horn type Speaker and<br>mountin<br>g accessories etc complete as per<br>specifications and Tender Document.<br>Type : Pole Mountable, suitable for<br>speech and music reproduction<br>Rated power : 25 W<br>Frequency range : 20 Hz TO 20 KHz<br>Ingress protection : MIn. IP 65,<br>FLP enclosure Required<br>Standard : EN 60065" | <b>10.000</b> | <b>EA</b> | <b>2,185.00</b>  | <b>21,850.00</b> |
| <b>01690</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Amplifier with<br>mounting accessories for indoor<br>speakers comp<br>lete in all respect as per<br>technical specification of tender.  | <b>1.000</b>  | <b>EA</b> | <b>34,668.00</b> | <b>34,668.00</b> |
| <b>01700</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of IP System<br>Configuration, Monitoring,<br>Controlling & Reporting<br>Software with client<br>licenses.Scope also include the IP<br>recording system for with licenses<br>with Software and accessories.  | <b>1.000</b>  | <b>EA</b> | <b>51,436.00</b> | <b>51,436.00</b> |
| <b>01710</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of outdoor<br>weatherproof housing (IP 65 or<br>better) suitable for<br>installing Layer 2 switch, PSU,<br>LIU and adaptor for Ethernet<br>switch/media convertor surge<br>protectors and other accessories of<br>IP PA<br>BX & PA Paging systems.<br>Installation, Configuration,   | <b>10.000</b> | <b>EA</b> | <b>3,561.00</b>  | <b>35,610.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate     | Amount    |
|---|----------|------|----------|-----------|
| Integration, Testing and Commissioning of required OFC components & accessories like LIU, splice trays, loaded adaptor, blank plates, UTP cables, Fibre patch cords, pigtails, tags, ties, Ethernet cable with RJ45 connector etc complete in all respect for functioning of IP PABX & PA Paging system.The scope also includes Installation, Configuration, Integration, Testing and Commissioning of blinding plugs, double compression cable glands etc as per specifications and Tender Document.                             |          |      |          |           |
| <b>01720</b><br>Miscellaneous   |          |      |          |           |
| <b>01730</b><br>Installation, Configuration, Integration, Testing and Commissioning of flameproof cum weather proof to IP 65 or better SIL 2 smart pressure transmitter (Class 150/300) with in built display, Bleed ring & valves/SS manifold with valves, canopy/sunshade, other erection material etc as per hook up drawing attached else where in tender complete as per specifications and Tender Document. (Transmitter will have IEC & ATEX certified minimum and any other certification as stated else where in tender) |          |      |          |           |
| <b>01740</b><br>Remote seal pressure transmitter -Pump Suction end (2"300#RF)   | 8.000    | EA   | 1,802.00 | 14,416.00 |
| <b>01750</b><br>Remote seal pressure transmitter -Pump Discharge end (2"300#RF)   | 8.000    | EA   | 1,802.00 | 14,416.00 |
| <b>01760</b><br>Remote seal pressure transmitter -Exchange Pit product Header (VG-40 + VG-30+VG-10) (2"300#RF)  | 3.000    | EA   | 1,802.00 | 5,406.00  |
| <b>01770</b><br>Pressure transmitter -Fire Hydrant  | 3.000    | EA   | 1,802.00 | 5,406.00  |



| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity      | Unit      | Rate            | Amount           |
|---|---------------|-----------|-----------------|------------------|
| lines (3/4" 150#)   |               |           |                 |                  |
| <b>01780</b><br>Pressure transmitter -Steam Line<br>(Exchange Pit + Near Tanks-3 No.)<br>(3 or 4"Class 300)   | <b>4.000</b>  | <b>EA</b> | <b>1,802.00</b> | <b>7,208.00</b>  |
| <b>01790</b><br>Remote seal pressure transmitter<br>-Product Header to pump house<br>(VG-40 + VG-30 +VG-10+CRMB)<br>(2"300#RF)  | <b>4.000</b>  | <b>EA</b> | <b>1,802.00</b> | <b>7,208.00</b>  |
| <b>01800</b><br>Installation, Configuration,<br>Integration, Testing and<br>Commissioning of flameproof cum<br>weather proof to IP 65 or better<br>SIL 2 Smart D<br>ifferential pressure transmitter<br>(Class 300) with remote seal in<br>built display & keypad , Bleed ring<br>with valves, canopy/sunshade, o<br>ther erection material etc as per<br>hook up drawing attached else where<br>in tender complete as per<br>specifications and Tender Document.<br>(Transmitter will have IEC & ATEX<br>certified minimum and any other<br>certification as stated else where<br>in tender) |               |           |                 |                  |
| <b>01810</b><br>Across all TLF pump strainers<br>(2"300#RF)   | <b>8.000</b>  | <b>EA</b> | <b>1,938.00</b> | <b>15,504.00</b> |
| <b>01820</b><br>Across Steam lines in tanks (3 or<br>4"300#)  | <b>19.000</b> | <b>EA</b> | <b>1,938.00</b> | <b>36,822.00</b> |
| <b>01830</b><br>"Installation, Configuration,<br>Integration, Testing and<br>Commissioning of flameproof cum<br>weather proof, Temperature<br>transmitter (Class<br>300) along with display unit &<br>keypad, RTD, Thermo well,<br>canopy/sunshade with mounting<br>accessories etc complete as per<br>specificatio<br>ns and tender document.<br>"   |               |           |                 |                  |
| <b>01840</b>  | <b>3.000</b>  | <b>EA</b> | <b>1,893.00</b> | <b>5,679.00</b>  |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate             | Amount           |
|---|--------------|-----------|------------------|------------------|
| Product Exchange Pit Header (VG-40<br>+ VG-30+VG-10) (300#RF)<br><b>01850</b>   | <b>1.000</b> | <b>EA</b> | <b>1,893.00</b>  | <b>1,893.00</b>  |
| Steam Exchagne pit header (300#RF)<br><b>01860</b>  | <b>3.000</b> | <b>EA</b> | <b>1,893.00</b>  | <b>5,679.00</b>  |
| Near Pumps (300#RF)<br><b>01870</b>   | <b>1.000</b> | <b>EA</b> | <b>19,200.00</b> | <b>19,200.00</b> |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of 75 Tons Weigh<br>Bridge system - Pit less above<br>ground having s<br>izes 16 x 3 mtrs with Digital<br>weight indicator, load cell,<br>related cables, printer, Software,<br>Computer etc.<br><b>01880</b>   | <b>1.000</b> | <b>EA</b> | <b>6,833.00</b>  | <b>6,833.00</b>  |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Wailing siren<br>along with siren controller with a<br>provision t<br>o operate locally as well as from<br>control room, mounting accessories<br>etc complete as per specification<br>and tender document.<br><b>01890</b>   | <b>1.000</b> | <b>LS</b> | <b>10,471.00</b> | <b>10,471.00</b> |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Digital Rodent<br>Repellent System along with<br>mounting accessor<br>ies for controller(s) & transducers<br>etc complete as per specification<br>and tender document (Minimum nos of<br>transducers: Control Room<br>cum S&D Room- 20 nos. & Security<br>Room - 4 nos.)<br><b>01900</b> | <b>1.000</b> | <b>LS</b> | <b>7,868.00</b>  | <b>7,868.00</b>  |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of MCT block for<br>entire Automation cable entry to<br>Control Roo<br>m, Admin Building, Security Room,<br>PMCC with minimum 50% spare MCT<br>blocks for future cable entry along<br>with frame and mounting acces   |              |           |                  |                  |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity         | Unit      | Rate          | Amount            |
|---|------------------|-----------|---------------|-------------------|
| sories complete as per<br>specification and tender document.  |                  |           |               |                   |
| <b>01910</b>  |                  |           |               |                   |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of external surge &<br>Lightening protection devices of<br>suitable c<br>onnector and type along with<br>accessories complete as per<br>specification and tender document<br>at following places.   |                  |           |               |                   |
| <b>01920</b>  | <b>6.000</b>     | <b>EA</b> | <b>835.00</b> | <b>5,010.00</b>   |
| Type 1+2 SPD  |                  |           |               |                   |
| <b>01930</b>  | <b>10.000</b>    | <b>EA</b> | <b>835.00</b> | <b>8,350.00</b>   |
| SPD (Type 2 / IC category<br>C1,C2,C3,D1) -   |                  |           |               |                   |
| <b>01940</b>  | <b>6.000</b>     | <b>EA</b> | <b>835.00</b> | <b>5,010.00</b>   |
| Type 1 SPD - Earth pit  |                  |           |               |                   |
| <b>01950</b>  |                  |           |               |                   |
| Cabling, JB, Earthing:  |                  |           |               |                   |
| <b>01960</b>  |                  |           |               |                   |
| Note: Laying, glanding, ferruling,<br>termination of cables shall be<br>along with accessories like<br>certified double compression cable<br>gla<br>nds with PVC shrouds, plugs for<br>excess entries, SS 316 engraved<br>tag plate, mounting clamp, SS 316<br>fasteners , OFC accessories (like<br>12/24 port LIU, splice trays,<br>loaded adaptor and blank plates,<br>UTP and optical patch cords,<br>pigtails, media converters etc),<br>LAN fa<br>ce plates, conduits, structural<br>steel for mounting of equipments,<br>making RCC trenches with cover<br>wherever required, hume pipes, Alum<br>inium tags, lugs, ferrules, etc |                  |           |               |                   |
| <b>01970</b>  |                  |           |               |                   |
| Laying, glanding, ferruling,<br>termination of FRLS Armoured Copper<br>Power cable as per tender<br>specifications.   |                  |           |               |                   |
| <b>01980</b>  | <b>7,500.000</b> | <b>M</b>  | <b>27.00</b>  | <b>202,500.00</b> |
| 3C x 2.5 sqmm   |                  |           |               |                   |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity         | Unit     | Rate          | Amount            |
|--|------------------|----------|---------------|-------------------|
| <b>01990</b><br>4C x 2.5 sqmm  | <b>2,500.000</b> | <b>M</b> | <b>32.00</b>  | <b>80,000.00</b>  |
| <b>02000</b><br>8C x 2.5 sqmm  | <b>3,000.000</b> | <b>M</b> | <b>36.00</b>  | <b>108,000.00</b> |
| <b>02010</b><br>10C x 2.5 sqmm   | <b>800.000</b>   | <b>M</b> | <b>36.00</b>  | <b>28,800.00</b>  |
| <b>02020</b><br>12C x 2.5 sqmm   | <b>2,400.000</b> | <b>M</b> | <b>36.00</b>  | <b>86,400.00</b>  |
| <b>02030</b><br>24C x 2.5 sqmm   | <b>2,000.000</b> | <b>M</b> | <b>36.00</b>  | <b>72,000.00</b>  |
| <b>02040</b><br>3C x 4 sqmm  | <b>500.000</b>   | <b>M</b> | <b>32.00</b>  | <b>16,000.00</b>  |
| <b>02050</b><br>4C x 4 sqmm  | <b>100.000</b>   | <b>M</b> | <b>32.00</b>  | <b>3,200.00</b>   |
| <b>02060</b><br>4C x 6 sqmm  | <b>100.000</b>   | <b>M</b> | <b>32.00</b>  | <b>3,200.00</b>   |
| <b>02070</b><br>4C x 10 sqmm   | <b>100.000</b>   | <b>M</b> | <b>41.00</b>  | <b>4,100.00</b>   |
| <b>02080</b><br>Laying, glanding, ferruling,<br>termination of FRLS Armoured<br>Aluminium Power cable as per tender<br>specifications. |                  |          |               |                   |
| <b>02090</b><br>3.5C x 120 sqmm  | <b>250.000</b>   | <b>M</b> | <b>108.00</b> | <b>27,000.00</b>  |
| <b>02100</b><br>Laying, glanding, ferruling,<br>termination of FRLS Armoured Copper<br>Control cable as per tender<br>specifications.  |                  |          |               |                   |
| <b>02110</b><br>2C x 1.5 sqmm  | <b>6,500.000</b> | <b>M</b> | <b>27.00</b>  | <b>175,500.00</b> |
| <b>02120</b><br>3C x 1.5 sqmm  | <b>1,200.000</b> | <b>M</b> | <b>27.00</b>  | <b>32,400.00</b>  |
| <b>02130</b><br>4C x 1.5 sqmm  | <b>6,000.000</b> | <b>M</b> | <b>32.00</b>  | <b>192,000.00</b> |
| <b>02140</b><br>6C x 1.5 sqmm  | <b>1,600.000</b> | <b>M</b> | <b>32.00</b>  | <b>51,200.00</b>  |
| <b>02150</b><br>8C x 1.5 sqmm  | <b>4,500.000</b> | <b>M</b> | <b>32.00</b>  | <b>144,000.00</b> |
| <b>02160</b><br>10C x 1.5 sqmm   | <b>2,400.000</b> | <b>M</b> | <b>32.00</b>  | <b>76,800.00</b>  |
| <b>02170</b><br>12C x 1.5 sqmm   | <b>2,400.000</b> | <b>M</b> | <b>36.00</b>  | <b>86,400.00</b>  |
| <b>02180</b><br>16C x 1.5 sqmm   | <b>800.000</b>   | <b>M</b> | <b>41.00</b>  | <b>32,800.00</b>  |
| <b>02190</b><br>18C x 1.5 sqmm   | <b>2,000.000</b> | <b>M</b> | <b>41.00</b>  | <b>82,000.00</b>  |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity          | Unit     | Rate         | Amount            |
|--|-------------------|----------|--------------|-------------------|
| <b>02200</b>   | <b>2,400.000</b>  | <b>M</b> | <b>41.00</b> | <b>98,400.00</b>  |
| 20C x 1.5 sqmm   |                   |          |              |                   |
| <b>02210</b>   | <b>3,000.000</b>  | <b>M</b> | <b>41.00</b> | <b>123,000.00</b> |
| 24C x 1.5 sqmm   |                   |          |              |                   |
| <b>02220</b>   | <b>600.000</b>    | <b>M</b> | <b>50.00</b> | <b>30,000.00</b>  |
| 32C x 1.5 sqmm   |                   |          |              |                   |
| <b>02230</b>   | <b>600.000</b>    | <b>M</b> | <b>50.00</b> | <b>30,000.00</b>  |
| 36C x 1.5 sqmm   |                   |          |              |                   |
| <b>02240</b>   | <b>600.000</b>    | <b>M</b> | <b>54.00</b> | <b>32,400.00</b>  |
| 48C x 1.5 sqmm   |                   |          |              |                   |
| <b>02250</b>   |                   |          |              |                   |
| Laying, glanding, ferruling,<br>termination of FRLS Armoured Copper<br>Signal cable as per tender<br>specifications.   |                   |          |              |                   |
| <b>02260</b>   | <b>10,000.000</b> | <b>M</b> | <b>27.00</b> | <b>270,000.00</b> |
| 1P x 1.5 sqmm  |                   |          |              |                   |
| <b>02270</b>   | <b>1,600.000</b>  | <b>M</b> | <b>32.00</b> | <b>51,200.00</b>  |
| 2P x 1.5 sqmm  |                   |          |              |                   |
| <b>02280</b>   | <b>1,200.000</b>  | <b>M</b> | <b>32.00</b> | <b>38,400.00</b>  |
| 3P x 1.5 sqmm  |                   |          |              |                   |
| <b>02290</b>   | <b>1,600.000</b>  | <b>M</b> | <b>32.00</b> | <b>51,200.00</b>  |
| 4P x 1.5 sqmm  |                   |          |              |                   |
| <b>02300</b>   | <b>2,400.000</b>  | <b>M</b> | <b>32.00</b> | <b>76,800.00</b>  |
| 6P x 1.5 sqmm  |                   |          |              |                   |
| <b>02310</b>   | <b>2,400.000</b>  | <b>M</b> | <b>32.00</b> | <b>76,800.00</b>  |
| 8P x 1.5 sqmm  |                   |          |              |                   |
| <b>02320</b>   | <b>800.000</b>    | <b>M</b> | <b>36.00</b> | <b>28,800.00</b>  |
| 10P x 1.5 sqmm   |                   |          |              |                   |
| <b>02330</b>   | <b>1,600.000</b>  | <b>M</b> | <b>41.00</b> | <b>65,600.00</b>  |
| 12P x 1.5 sqmm   |                   |          |              |                   |
| <b>02340</b>   | <b>3,200.000</b>  | <b>M</b> | <b>45.00</b> | <b>144,000.00</b> |
| 16P x 1.5 sqmm   |                   |          |              |                   |
| <b>02350</b>   | <b>800.000</b>    | <b>M</b> | <b>50.00</b> | <b>40,000.00</b>  |
| 18P x 1.5 sqmm   |                   |          |              |                   |
| <b>02360</b>   |                   |          |              |                   |
| Laying, glanding, ferruling,<br>termination of Unarmoured Copper<br>Signal cable as per tender<br>specifications.  |                   |          |              |                   |
| <b>02370</b>   | <b>1,000.000</b>  | <b>M</b> | <b>27.00</b> | <b>27,000.00</b>  |
| 1P x 1.5 sqmm  |                   |          |              |                   |
| <b>02380</b>   | <b>10,000.000</b> | <b>M</b> | <b>50.00</b> | <b>500,000.00</b> |
| Laying, glanding, splicing,<br>ferruling, termination of 6 core<br>single mode armoured optical fibre<br>cable as per tender specifications<br>and instructions of Engineer in |                   |          |              |                   |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity         | Unit      | Rate          | Amount              |
|--|------------------|-----------|---------------|---------------------|
| charge.<br><b>02390</b>  | <b>8,500.000</b> | <b>M</b>  | <b>32.00</b>  | <b>272,000.00</b>   |
| Laying, glanding, crimping with RJ45 connector, ferruling, termination of CAT 6 Ethernet armoured cable as per tender specifications and instructions of Engineer in charge.                     |                  |           |               |                     |
| <b>02400</b>   | <b>1,000.000</b> | <b>M</b>  | <b>30.00</b>  | <b>30,000.00</b>    |
| Laying, glanding, crimping with RJ45 connector, ferruling, termination of CAT 6 Ethernet un armoured cable as per tender specifications and instructions of Engineer in charge.                  |                  |           |               |                     |
| <b>02410</b>   |                  |           |               |                     |
| Laying, ferruling and plugging of Pre fab CAT 6 Ethernet un-armoured cable as per tender specifications and instructions of Engineer in charge other than IOCL LAN Network.                      |                  |           |               |                     |
| <b>02420</b>   | <b>10.000</b>    | <b>EA</b> | <b>348.00</b> | <b>3,480.00</b>     |
| 10 M   |                  |           |               |                     |
| <b>02430</b>   | <b>40.000</b>    | <b>EA</b> | <b>375.00</b> | <b>15,000.00</b>    |
| 15 M   |                  |           |               |                     |
| <b>02440</b>   | <b>40.000</b>    | <b>EA</b> | <b>402.00</b> | <b>16,080.00</b>    |
| 20 M   |                  |           |               |                     |
| <b>02450</b>   | <b>20.000</b>    | <b>EA</b> | <b>429.00</b> | <b>8,580.00</b>     |
| 25 M   |                  |           |               |                     |
| <b>02460</b>   | <b>10.000</b>    | <b>EA</b> | <b>456.00</b> | <b>4,560.00</b>     |
| 30 M   |                  |           |               |                     |
| <b>02470</b>   | <b>4,500.000</b> | <b>M</b>  | <b>41.00</b>  | <b>184,500.00</b>   |
| Laying, termination of 1C x 6 Sq. mm FRLS Flexible copper insulated green wire for earthing instruments and junction boxes etc complete as per specification and tender document                 |                  |           |               |                     |
| <b>02480</b>   | <b>8,000.000</b> | <b>M</b>  | <b>185.00</b> | <b>1,480,000.00</b> |
| Laying of GI strip ( 50mm X 6mm) with Hot dip galvanizing (800 gm/m2 as per IS 4759) along with accessories required for complete Terminal Automation System as per Standard Design Engineering, |                  |           |               |                     |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity         | Unit     | Rate          | Amount            |
|--|------------------|----------|---------------|-------------------|
| specification and tender document.   |                  |          |               |                   |
| <b>02490</b>   |                  |          |               |                   |
| laying of anodized Aluminium<br>perforated cable trays on<br>structural support/anchored rods.<br>Complete as per specifications /<br>tender doc<br>uments.  |                  |          |               |                   |
| <b>02500</b>   | <b>4,000.000</b> | <b>M</b> | <b>63.00</b>  | <b>252,000.00</b> |
| 50 mm  |                  |          |               |                   |
| <b>02510</b>   | <b>4,000.000</b> | <b>M</b> | <b>106.00</b> | <b>424,000.00</b> |
| 100 mm   |                  |          |               |                   |
| <b>02520</b>   | <b>1,500.000</b> | <b>M</b> | <b>148.00</b> | <b>222,000.00</b> |
| 150 mm   |                  |          |               |                   |
| <b>02530</b>   | <b>500.000</b>   | <b>M</b> | <b>190.00</b> | <b>95,000.00</b>  |
| 300 mm   |                  |          |               |                   |
| <b>02540</b>   | <b>150.000</b>   | <b>M</b> | <b>471.00</b> | <b>70,650.00</b>  |
| 600 mm   |                  |          |               |                   |
| <b>02550</b>   |                  |          |               |                   |
| "Laying of Pre-Fabricated G.I.<br>cable tray withaccessories like:<br>Coupler Plates,Holdon Clamps ,<br>bends etc. and<br>supportingarrangement.<br>The work includes transportation<br>from owners store to erection site,<br>unpacking, inspection; checking,<br>Erection in position on suppo<br>rts, fixing, All work, labour and<br>materials complete as per drawings,<br>specifications, codes and standards<br>and directions of<br>Engineer-in-Charge." |                  |          |               |                   |
| <b>02560</b>   | <b>100.000</b>   | <b>M</b> | <b>112.00</b> | <b>11,200.00</b>  |
| 600mm wide   |                  |          |               |                   |
| <b>02570</b>   | <b>100.000</b>   | <b>M</b> | <b>85.00</b>  | <b>8,500.00</b>   |
| 300mm wide   |                  |          |               |                   |
| <b>02580</b>   | <b>100.000</b>   | <b>M</b> | <b>32.00</b>  | <b>3,200.00</b>   |
| 150mm wide   |                  |          |               |                   |
| <b>02590</b>   | <b>100.000</b>   | <b>M</b> | <b>27.00</b>  | <b>2,700.00</b>   |
| 100mm wide   |                  |          |               |                   |
| <b>02600</b>   | <b>100.000</b>   | <b>M</b> | <b>19.00</b>  | <b>1,900.00</b>   |
| 50mm wide  |                  |          |               |                   |
| <b>02610</b>   |                  |          |               |                   |
| Laying or Removal & Re-laying of<br>G.I Tray Cover for Cable Trays of<br>following sizes including fixing<br>the cover to the trays with clam  |                  |          |               |                   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity       | Unit      | Rate            | Amount            |
|---|----------------|-----------|-----------------|-------------------|
| ps and accessories  |                |           |                 |                   |
| <b>02620</b>  | <b>100.000</b> | <b>M</b>  | <b>43.00</b>    | <b>4,300.00</b>   |
| 600mm wide  |                |           |                 |                   |
| <b>02630</b>  | <b>100.000</b> | <b>M</b>  | <b>37.00</b>    | <b>3,700.00</b>   |
| 300mm wide  |                |           |                 |                   |
| <b>02640</b>  | <b>100.000</b> | <b>M</b>  | <b>32.00</b>    | <b>3,200.00</b>   |
| 150mm wide  |                |           |                 |                   |
| <b>02650</b>  | <b>100.000</b> | <b>M</b>  | <b>27.00</b>    | <b>2,700.00</b>   |
| 100mm wide  |                |           |                 |                   |
| <b>02660</b>  | <b>100.000</b> | <b>M</b>  | <b>19.00</b>    | <b>1,900.00</b>   |
| 50mm wide   |                |           |                 |                   |
| <b>02670</b>  |                |           |                 |                   |
| Installation, Configuration,<br>Integration, Testing and<br>Commissioning of Exd/FLP Junction<br>Box/PDB (Power/Control/Signal JB)<br>with IP 6<br>5 as per specification suitable for<br>hazardous area of zone 1, group<br>IIA/IIB, T3 or better having<br>CCOE/CMRI approval. It shall be com<br>plete in all respect. Accessories<br>like certified double compression<br>cable glands with PVC shrouds &<br>plugs for excess entries, SS 31<br>6 engraved tag plate, mounting<br>clamp & SS 316 fasteners. Complete<br>as per specification / tender<br>documents. |                |           |                 |                   |
| <b>02680</b>  | <b>20.000</b>  | <b>EA</b> | <b>3,575.00</b> | <b>71,500.00</b>  |
| 24 ways JB  |                |           |                 |                   |
| <b>02690</b>  | <b>50.000</b>  | <b>EA</b> | <b>3,304.00</b> | <b>165,200.00</b> |
| 18 ways JB  |                |           |                 |                   |
| <b>02700</b>  | <b>50.000</b>  | <b>EA</b> | <b>2,627.00</b> | <b>131,350.00</b> |
| 12 ways JB  |                |           |                 |                   |
| <b>02710</b>  | <b>100.000</b> | <b>EA</b> | <b>2,356.00</b> | <b>235,600.00</b> |
| 8 ways JB   |                |           |                 |                   |
| <b>02720</b>  | <b>75.000</b>  | <b>EA</b> | <b>2,356.00</b> | <b>176,700.00</b> |
| 6 ways JB   |                |           |                 |                   |
| <b>02730</b>  | <b>40.000</b>  | <b>EA</b> | <b>2,085.00</b> | <b>83,400.00</b>  |
| 4 ways JB   |                |           |                 |                   |
| <b>02740</b>  | <b>500.000</b> | <b>M</b>  | <b>167.00</b>   | <b>83,500.00</b>  |
| Laying of 50 mm HDPE pipe of<br>minimum 2.5 mm thick along with<br>accessories as per tender<br>specifications and instructions of<br>Engineer i<br>n charge.   |                |           |                 |                   |



| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity      | Unit      | Rate             | Amount            |
|--|---------------|-----------|------------------|-------------------|
| <b>02750</b><br>Design, Fabrication, erection, weld, painting, cutting, drilling, grinding etc of Structural steel (MS) for erection of cable bridge (if required) for laying of above ground cables at road crossing or any other place within the Terminal including painting, Civil foundations, nuts, bolts, washers, cleats, stiffeners, gussets, base plate etc  | <b>20.000</b> | <b>MT</b> | <b>29,234.00</b> | <b>584,680.00</b> |
| <b>02760</b><br>Design, Fabrication, erection, weld, painting, cutting, drilling, grinding etc of hot dip galvanised Structural steel (MS) including civil foundations, nuts, bolts, washers, cleats, stiffeners, gussets, base plate etc required for complete Terminal Automation System   | <b>1.000</b>  | <b>MT</b> | <b>27,708.00</b> | <b>27,708.00</b>  |
| <b>02770</b><br>Earth Pit  |               |           |                  |                   |
| <b>02780</b><br>Installation, Testing and Commissioning of Maintenance Free CPRI approved Earth pit ( Ashlok /Equivalent make ) with 80 mm diameter of minimum 3mtr length safe earthing electrode with Pipe-in-pipe technology consisting of two mild steel pipes one inside the other, hot dip galvanized (80-100 microns), filled with high conductive & corrosion resistance crystalline mixture and backfilling compound around electrode, brick masonry earth pit including plastering in CM 1:4, 600x600 mm C.I. Manhole chamber including providing suitable earth bus for interconnection etc. Equivalent make shall be approved by client / consultants. Procedure recommended by chemical engineering |               |           |                  |                   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity     | Unit      | Rate              | Amount            |
|---|--------------|-----------|-------------------|-------------------|
| rth supplier and IS code to be finally adopted. Item also includes provision of earth station flags with pit nos and date of inspection and the next due date of inspection. Job also includes provision of test certificate of earthing station from a class A licensed electrical contractor as per the format of the Corporation.                                      |              |           |                   |                   |
| <b>02790</b>  | <b>4.000</b> | <b>EA</b> | <b>9,957.00</b>   | <b>39,828.00</b>  |
| TLF gantry  |              |           |                   |                   |
| <b>02800</b>  | <b>2.000</b> | <b>EA</b> | <b>9,957.00</b>   | <b>19,914.00</b>  |
| TT earthing   |              |           |                   |                   |
| <b>02810</b>  | <b>9.000</b> | <b>EA</b> | <b>9,957.00</b>   | <b>89,613.00</b>  |
| Control room  |              |           |                   |                   |
| <b>02820</b>  | <b>8.000</b> | <b>EA</b> | <b>9,957.00</b>   | <b>79,656.00</b>  |
| Tank dyke   |              |           |                   |                   |
| <b>02830</b>  | <b>4.000</b> | <b>EA</b> | <b>9,957.00</b>   | <b>39,828.00</b>  |
| Pump house  |              |           |                   |                   |
| <b>02840</b>  |              |           |                   |                   |
| Heat tracing and thermal insulation   |              |           |                   |                   |
| <b>02850</b>  | <b>1.000</b> | <b>LS</b> | <b>117,590.00</b> | <b>117,590.00</b> |
| Installation, Testing and Commissioning of Distribution Panel/Control panel for the heat tracing system designed .The panel should have min.20% spare circuit capacity.The no. of Circuit to be provided in the system to be finalised in consultaion with IOCL.The pane l should have provision to pass on the signal to the main process panel on serial communication. |              |           |                   |                   |
| <b>02860</b>  |              |           |                   |                   |
| Laying & fixing of heat tracing system including self regulating heating cable/const. wattage parallel tracer (with un-conditional T -3 rating) and accessories like end connector,power connector, FLPJBS , RTD, Aluminum foil self adhesive,Fiber glass tape, T connect or, caution lables, etc;  |              |           |                   |                   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity       | Unit      | Rate              | Amount            |
|---|----------------|-----------|-------------------|-------------------|
| Measurement will be for RM of pipeline.The job includeds providing tracing for all fittings & equipments in the pipeline network and no seperate payment shall be made for the same.  |                |           |                   |                   |
| <b>02870</b><br>80/100/150 MM Dia Pipeline  | <b>500.000</b> | <b>M</b>  | <b>454.00</b>     | <b>227,000.00</b> |
| <b>02880</b><br>THERMAL INSULATION: Fabrication, erection, testing and commissioning of Thermal insulation and SS cladding for the following items.T he insulation material shall be light resin bonded mattresses(LRB) with desnsity of 120kg/Cum. The SS material shall be industrial g rade. For pipelines of size 100 mm dia. and below shall be provided with 24 gauge SS cladding.For all other purpose the SS cladding shall be of 22 gauge.The detailed specifications are enclosed.The insulation area of the pipeline shall be calculated based on the o utside dia. of the Pipe. |                |           |                   |                   |
| <b>02890</b><br>Insulation for Bitumen Pipelines from 80 mm NB to 300 mm NB - 50 mm thick.  | <b>400.000</b> | <b>M</b>  | <b>381.00</b>     | <b>152,400.00</b> |
| <b>02900</b><br>Insulation for Valves and Strainers etc - 50 mm thk   |                |           |                   |                   |
| <b>02910</b><br>20/25 NB  | <b>50.000</b>  | <b>EA</b> | <b>1,198.00</b>   | <b>59,900.00</b>  |
| <b>02920</b><br>50 NB   | <b>40.000</b>  | <b>EA</b> | <b>1,455.00</b>   | <b>58,200.00</b>  |
| <b>02930</b><br>100 NB  | <b>100.000</b> | <b>EA</b> | <b>2,429.00</b>   | <b>242,900.00</b> |
| <b>02940</b><br>150 NB  | <b>20.000</b>  | <b>EA</b> | <b>3,122.00</b>   | <b>62,440.00</b>  |
| <b>02950</b><br>Other Services  |                |           |                   |                   |
| <b>02960</b><br>Providing training to IOCL employee as per schedule/Module for 2 days as per tender document  | <b>1.000</b>   | <b>EA</b> | <b>164,792.00</b> | <b>164,792.00</b> |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity     | Unit      | Rate              | Amount            |
|--|--------------|-----------|-------------------|-------------------|
| <b>02970</b><br>Submission of detailed system design, Engineering, Documentations etc as per tender document   | <b>1.000</b> | <b>LS</b> | <b>143,647.00</b> | <b>143,647.00</b> |
| <b>02980</b><br>Submission of Final Detailed system design, Engineering, Documentations etc complete as per tender   | <b>1.000</b> | <b>LS</b> | <b>122,894.00</b> | <b>122,894.00</b> |
| <b>02990</b><br>Resident Engineer support on quarterly basis   | <b>4.000</b> | <b>EA</b> | <b>242,294.00</b> | <b>969,176.00</b> |
| <b>03000</b><br>Design, development, modification, configuration, testing and commissioning of existing TAS software, DCS logic, GUI etc for implementation of following features after FAT (if required) or during CAMC period as stated in tender document. The job includes necessary tro-& fro travel, lodging, boarding, food etc required for implementation at site complete in all respect and as per direction of E IC. |              |           |                   |                   |
| <b>03010</b><br>Loading point addition   | <b>1.000</b> | <b>EA</b> | <b>113,609.00</b> | <b>113,609.00</b> |
| <b>03020</b><br>Product pump addition  | <b>1.000</b> | <b>EA</b> | <b>86,479.00</b>  | <b>86,479.00</b>  |
| <b>03030</b><br>Product tank addition  | <b>1.000</b> | <b>EA</b> | <b>100,046.00</b> | <b>100,046.00</b> |
| <b>03040</b><br>Product code change  | <b>1.000</b> | <b>EA</b> | <b>106,961.00</b> | <b>106,961.00</b> |

ESTIMATE VALUE FOR ITEM 20 ( SERVICES COMPONENTS ): 14,887,121.00 (Rs.ONE CRORE FORTY-EIGHT LAC EIGHTY-SEVEN THOUSAND ONE HUNDRED TWENTY-ONE)

#### 00030 COMPOSITE WORKS

**Plant:** 1521 Mathura RC Office  
**Material Group:** Services  
**Account Assignments:** F -Order  
**Order no.:** 926932  
**G/L Account:** 5999999999

**00010**

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity | Unit | Rate     | Amount    |
|---|----------|------|----------|-----------|
| COMPOSITE WORKS   |          |      |          |           |
| <b>00020</b><br>Demolishing cement concrete manually/ by mechanical means including disposal of material outside premises at an unobjectionable place as per direction of Engineer-in-charge.   |          |      |          |           |
| <b>00030</b><br>ii) 1:4:8 or leaner mix (i/c equivalent design mix)   | 30.000   | M3   | 903.39   | 27,101.70 |
| <b>00040</b><br>Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars & disposal of unserviceable material outside site to an unobjectionable place as/ direction of Engineer-in-charge  | 20.000   | M3   | 2,134.44 | 42,688.80 |
| <b>00050</b><br>Extra for cutting reinforcement bars manually/ by mechanical means in R.C.C. or R.B. work (Payment shall be made on the cross sectional area of R.C.C. or R.B. work) as per direction of Engineer-in-charge.  | 50.000   | M2   | 727.02   | 36,351.00 |
| <b>00060</b><br>Demolishing brick work manually/mechanical means including stacking of serviceable material & disposal of unserviceable material out side premises at an unobjectionable place as / direction of Engg-in-charge   | 20.000   | M3   | 1,237.78 | 24,755.60 |
| <b>00070</b><br>Taking out existing CC interlocking paver blocks from footpath central verge, including removal of rubbish etc., disposal of unserviceable material out of site at unobjectionable place and stacking serviceable material within premises as per direction of Engineer - in-Charge | 100.000  | M2   | 79.20    | 7,920.00  |
| <b>00080</b><br>Earth work in excavation by   |          |      |          |           |

| Outline Level<br>Item no.Service no.<br>Service Description  | Quantity       | Unit      | Rate          | Amount           |
|--|----------------|-----------|---------------|------------------|
| mechanical means (Hydraulic excavator) / manual means over areas (exceeding 30 cm in depth, 1.5m in width as well as 10 sqm on plan) including taking out and disposal of excavated earth within or outside site to unobjectionable place and lift upto 1.5m, as directed by Engineer-in-charge. Disposed earth to be levelled and neatly dressed. Extra for levelling & neatly dressing of disposed soil completely to be paid separately as per item no. MPLCN00600  |                |           |               |                  |
| <b>00090</b>   | <b>100.000</b> | <b>M3</b> | <b>153.13</b> | <b>15,313.00</b> |
| i) All kinds of Soil   |                |           |               |                  |
| <b>00100</b>   |                |           |               |                  |
| Excavating trenches of required width for pipes, cables etc including excavation for sockets & dressing of sides, ramming of bottoms ,depth upto 1.5m including taking out excavated soil & then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing surplus excavated soil as directed, within or outside site at unobjectionable place in all kinds of soil |                |           |               |                  |
| <b>00110</b>   | <b>100.000</b> | <b>M</b>  | <b>187.78</b> | <b>18,778.00</b> |
| i) Pipes,cables etc. not exceeding 80mm dia  |                |           |               |                  |
| <b>00120</b>   | <b>100.000</b> | <b>M</b>  | <b>306.68</b> | <b>30,668.00</b> |
| iv) Pipes, Cable etc. > 80mm < 300mm dia   |                |           |               |                  |
| <b>00130</b>   | <b>50.000</b>  | <b>M3</b> | <b>184.96</b> | <b>9,248.00</b>  |
| Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering,   |                |           |               |                  |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity       | Unit      | Rate            | Amount            |
|---|----------------|-----------|-----------------|-------------------|
| within premises and lift upto 1.5m<br><b>00140</b><br>Carriage charge for disposal of earth by mechanical means, including loading, transporting, stacking, unloading to approved municipa<br>l dumping ground / unobjectionable place as per direction of Engineer- in-Charge beyond IOCL Premises for all leads and including a<br>ll lifts.                              |                |           |                 |                   |
| <b>00150</b>  | <b>50.000</b>  | <b>M3</b> | <b>127.23</b>   | <b>6,361.50</b>   |
| i) Distance upto 1 km<br><b>00160</b><br>Supplying and filling in plinth with sand within specified grading zone of fine aggregates specified in table 3.1, clause 3.1.3 of a ttached specifications under floors, etc. in layers not exceeding 20cm in depth, each deposited layer to be compacted by ramming inc<br>luding watering, consolidating and dressing complete. |                |           |                 |                   |
| <b>00170</b>  | <b>100.000</b> | <b>M3</b> | <b>1,785.45</b> | <b>178,545.00</b> |
| ii) Local Coarse Sand within grading zone II/III<br><b>00180</b><br>Providing and laying in position cement concrete of specified grade excluding cost of centering & shuttering. All work up to plinth level:  |                |           |                 |                   |
| <b>00190</b>  | <b>20.000</b>  | <b>M3</b> | <b>5,716.59</b> | <b>114,331.80</b> |
| iii) 1:2:4(1 Cement : 2 Coarse Sand :4 Graded stone aggregate of 20mm)<br><b>00200</b>  | <b>20.000</b>  | <b>M3</b> | <b>5,270.70</b> | <b>105,414.00</b> |
| v) 1:3:6(1 Cement : 3 Coarse Sand : 6 Graded stone aggregate of 20mm)<br><b>00210</b><br>Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All  |                |           |                 |                   |

| Outline Level<br>Item no.Service no.<br>Service Description   | Quantity         | Unit      | Rate            | Amount            |
|---|------------------|-----------|-----------------|-------------------|
| work up to plinth level<br><b>00220</b>   | <b>20.000</b>    | <b>M3</b> | <b>7,690.04</b> | <b>153,800.80</b> |
| i) RCC 1 Cement :1 Coarse Sand: 2<br>Graded Stone Aggregate 20mm<br><b>00230</b>  | <b>20.000</b>    | <b>M3</b> | <b>6,144.15</b> | <b>122,883.00</b> |
| iii) RCC 1 Cement :2 Coarse Sand: 4<br>Graded Stone Aggregate 20mm<br><b>00240</b>  |                  |           |                 |                   |
| Supply of Steel reinforcement for<br>R.C.C. including straightening,<br>cutting, bending, placing in<br>position and binding all complete at<br>all levels<br><b>00250</b>  | <b>1,500.000</b> | <b>KG</b> | <b>70.32</b>    | <b>105,480.00</b> |
| ii) Thermo Mechanically Treated<br>Bars of Fe- 500D grade or more,<br>conforming to IS1786<br><b>00260</b>  |                  |           |                 |                   |
| Supply, fabrication, laying and<br>testing of GI, BLACK, ERW, threaded<br>pipes, heavy class conforming to IS<br>1239, PART I as per IOCL spe<br>cifications including pipeline<br>fittings like bends, tee etc as<br>required and as directed for<br>Underground pipeline with doping<br><b>00270</b>  | <b>40.000</b>    | <b>M</b>  | <b>1,559.44</b> | <b>62,377.60</b>  |
| i) 100 mm dia<br><b>00280</b>   | <b>40.000</b>    | <b>M</b>  | <b>1,217.26</b> | <b>48,690.40</b>  |
| ii) 80 mm dia<br><b>00290</b>   |                  |           |                 |                   |
| Supply, fabrication, laying and<br>testing of GI, BLACK, ERW, Welded<br>pipes, heavy class conforming to IS<br>1239, PART I as per IOCL Speci<br>fications including pipeline<br>fittings like bends, tee etc as<br>required and as directed for Above<br>Ground pipeline including painting w<br>ith 2 coats of red oxide zinc<br>phosphate primer and 2 coats of<br>Synthetic enamel / aluminium finish<br>paint as per IOCL specifications<br><b>00300</b> | <b>40.000</b>    | <b>M</b>  | <b>1,172.28</b> | <b>46,891.20</b>  |
| i) 100 mm dia<br><b>00310</b>   | <b>40.000</b>    | <b>M</b>  | <b>834.47</b>   | <b>33,378.80</b>  |
| ii) 80 mm dia   |                  |           |                 |                   |



| Outline Level       | Quantity | Unit | Rate | Amount |
|---------------------|----------|------|------|--------|
| Item no.Service no. |          |      |      |        |
| Service Description |          |      |      |        |

ESTIMATE VALUE FOR ITEM 30 ( COMPOSITE WORKS ): 1,190,978.20 (Rs.ELEVEN LAC NINETY THOUSAND NINE HUNDRED SEVENTY-EIGHT & PAISE TWENTY)

**TOTAL ESTIMATE VALUE: Rs. 162,092,931.20**  
**( Rs.SIXTEEN CRORE TWENTY LAC NINETY-TWO THOUSAND NINE HUNDRED THIRTY-ONE & PAISE TWENTY )**

|                  |                |                 |
|------------------|----------------|-----------------|
| <b>Initiator</b> | <b>Finance</b> | <b>Approved</b> |
| 00512516         |                |                 |