

RailTel Corporation of India Limited
(A Govt. of India Enterprise)
Regional Office: RailTel Corporation of India Ltd.
6th Floor, Block III, Delhi IT Park, Shastri Park, Delhi – 110053

OPEN TENDER NOTICE

No. Railtel/Tender/OT/NR/LKO/Patch Repl./16-17/2

Dated :26.07.16

RailTel Corporation of India Ltd. invites sealed Open Tenders from the established and reliable contractors with proven experience for the work of **“Replacement of OFC on age cum condition basis in LKO territory in the sections (1) Lucknow-Sultanpur-Jaunpur(2)Burwal-Gonda-Khalilabad for OFC route strengthening in northern region of Railtel Corporation Of India Limited.”**

| | Type of Tender | Open Tender |
|---|--|--|
| (a) | Last date of submission of tender & time | 14.10.16 up to 15:00Hrs |
| (b) | Date and timing of opening of tender | 14.10.16 up to 15:30Hrs |
| (c) | Approximate cost of tender | Rs 19.25 Lac |
| (d) | Completion period | 60 Days after issuing of LOA |
| (e) | Cost of Tender document by hand/Download from RCIL site (Including VAT and surcharge) | 5656 /- (In the form of Demand Draft favoring “Railtel Corporation of India Limited” Payable at New Delhi) |
| (f) | Cost of Tender document if required by Post (Including VAT, surcharge and postage charges of Rs 500/-) | 6156 /- (In the form of Demand Draft favoring “Railtel Corporation of India Limited” Payable at New Delhi) |
| <p>Earnest Money Deposit (EMD): Rs 38500/- (Rupees Thirty Eight Thousand Five Hundred only) in the form of DD favoring “RailTel Corporation of India Limited” payable at New Delhi should be submitted along with the offer.</p> | | |

(Y. P. S Malik)
General Manager/Operations

RAILTEL CORPORATION OF INDIA LIMITED
(A Govt. of India Undertaking)

OPEN TENDER DOCUMENT

FOR

THE WORK OF

“Replacement of OFC on age cum condition basis in LKO territory in the sections (1) Lucknow-Sultanpur-Jaunpur (2) Burwal-Gonda-Khalilabad for OFC route strengthening in northern region of Railtel Corporation Of India Limited.”

(Tender No. RailTel/OT/NR/LKO/Patch Rep./16-17/2 dated 26.07.16)

Copy No.

Sent to.....

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Preamble

1. Name of the work:

“Replacement of OFC on age cum condition basis in LKO territory in the sections (1) Lucknow-Sultanpur-Jaunpur (2) Burwal-Gonda-Khalilabad for OFC route strengthening in northern region of Railtel Corporation Of India Limited.”

2. Scope of Work:

Broad responsibility of Tenderer under the scope of work of this tender will be as under:

- a) **Supply:** Supply of items conforming to industry standards as per Schedule of Requirements and the technical specifications.
- b) **Services:** “Replacement of OFC on age cum condition basis in LKO territory in the sections (1) Lucknow-Sultanpur-Jaunpur (2) Burwal-Gonda-Khalilabad for OFC route strengthening in northern region of Railtel Corporation Of India Limited” as per Schedule of Requirements.

3. Supply of Stores by RailTel:

RailTel shall supply only **OFC cable** and **HDPE duct** (including accessories) to the extent required for completion of the work. The tenderer has to collect material from RCIL depot of Rewari.

4. Supply of Stores by the Contractor:

All stores (other than those mentioned in clause-3 above) shall be supplied by the contractor.

5. **Tender Bid:** The tender bid shall be submitted in a **sealed cover** super scribing it with the “Name of Tender” and “Due date of opening” and shall be addressed to:

**GM/OP, Northern Region Office,
RailTel Corporation of India Limited,
6th Floor, Block III, Delhi IT Park,
Shastri Park, Delhi – 110053**

6. Qualifying Criteria:

6.1 Technical Criteria

- 1 The tenderer must have experience of execution of OFC related works. He should have completed at least one work of Trenching, Laying, Splicing, Termination, Testing & Commissioning of OFC of value not less than 35% of the estimated cost of tenders in the current and the last 3 financial years

before the date of opening of this tender for Govt./Semi Govt/State Govt/Reputed Telcos. Documentary evidence for such experience must be furnished along with the offer.

- 2 Similar nature of work physically completed within the qualifying period, i.e. the last 3 financial year and current financial year (even though the work might have commenced before the qualifying period) shall only be considered in evaluating the eligibility criteria.
- 3 The total value of similar nature of work completed during the qualifying period and not the payments received within qualifying period alone, shall be considered.

(For this tender “similar single work” means one complete work involving:

“Trenching, Laying, Jointing, Splicing, Termination, Testing and Commissioning of Optical Fiber Cables.”)

6.2 Financial Criteria

- (a) The tenderer should have received total contract amount of 150% of the estimated cost of tender in the last three financial year.
- (b) The tenderer should produce the Audited Profit/Loss account and Balance Sheet for the last three financial year.

6.3 DELETED.

6.4 TECHNICAL REQUIREMENTS

Tenderer must have proper Man power, Equipments and Machinery as follows:

(i) Minimum Technical Man Power: Tenderer should have:

1. Engineer - 1 No.
2. Supervisor (Diploma Holder) - 1 No.
3. Splicer (Skilled & Experienced) - 1 No.
4. Wireman/Cable Jinter (ITI) - 2 Nos.
5. Skilled & Unskilled Man Power - (Sufficient)

(ii) Minimum Equipments/Machinery : Tenderer should own :

1. OTDR
2. Cable Route Locator
3. Cable Blowing machine
4. Optical Power Meter
5. Laser Source

- 6. Splicing Machine
- 7. JCB Machine
- 8. HDD Machine
- 9. Loading Vehicle

| Eligibility Clause no. | Actual Available | Whether Requirement Fulfilled (Yes/No) | Documentary evidence enclosed at |
|---|------------------|--|----------------------------------|
| <p>6.5</p> <p>(a) The tenderer must have experience of execution of OFC related works. He should have completed at least one work of Trenching, Laying, Splicing, Termination, Testing & Commissioning of OFC of value not less than 35% of the estimated cost of tenders in the current and the last 3 financial years before the date of opening of this tender for Govt./Semi Govt/State Govt/Reputed Telcos. Documentary evidence for such experience must be furnished along with the offer.</p> <p>(b) Similar nature of work physically completed within the qualifying period, i.e. the last 3 financial year and current financial year (even though the work might have commenced before the qualifying period) shall only be considered in evaluating the eligibility criteria.</p> <p>(c) The total value of similar nature of work completed during the qualifying period and not the payments received within qualifying period alone, shall be considered.</p> | | | |
| <p>6.6 The tenderer should have received total contract amount of 150% of the estimated cost of tender in the last three financial year.</p> | | | |
| <p>6.7 (i) Man Power Engineer Supervisor (Diploma Holder) Splicer (Skilled & Experienced) Wireman/Cable Joints (ITI) Skilled & Unskilled Man Power</p> | | | |
| <p>6.7 (ii) Equipments/Machinery</p> | | | |

| | | | |
|--|--|--|--|
| <p>1. OTDR 2. Cable Route Locator 3. Cable Blowing machine 4. Optical Power Meter 5. Laser Source 6. Splicing Machine 7. JCB Machine 8. HDD Machine 9. Loading Vehicle</p> | | | |
|--|--|--|--|

7. The work is of immense importance to RailTel, and it is required to be completed in a very tight time schedule as stated vide clause (f) below. RailTel cannot afford to delay the work at any cost. In view of above, terms and conditions are very stringent and non-negotiable.

Tenderers are therefore requested to read the following instructions carefully:

- a) The tender document shall have **Schedule of Requirements**. The tenderer shall be free to offer his best rates for the section "Replacement of OFC on age cum condition basis in LKO territory in the sections (1) Lucknow-Sultanpur-Jaunpur (2) Burwal-Gonda-Khalilabad for OFC route strengthening in northern region of Railtel Corporation Of India Limited." The tenderer should submit EMD in the prescribed form.
- c) The tenderers shall be required to give week wise proposed progress chart along with the bid in enclosed Performa (Form 7).
- d) The successful tenderer shall have to deposit the 10% of the value of the work as security deposit strictly within the period of Eleven days of date of issue of LOA and before the start of the work.
- e) The successful tenderer shall have to execute the contract agreement strictly within the period of Eleven days and before the start of the work.
- f) The time of completion of the work shall be limited to a maximum of 60 days.
- g) Timely completion of the work is the essence of the contract and paramount importance to RailTel and any extension would be considered only in exceptional circumstances.
- h) All the tender conditions, mentioned as above, shall supersede any conditions of the main tender document.
- i) Liquidated damages shall be imposed at the rate of 0.5% per week or part thereof (rounded off to the nearest whole number) of the total

value of the work, subject to a maximum of 10% of the value of the work.

8. Last Date of Submission:

The tender shall be received up to **15:00 hrs** on **14.10.16** in the office of The General Manager/OP “**Replacement of OFC on age cum condition basis in LKO territory in the sections (1) Lucknow-Sultanpur-Jaunpur(2)Burwal-Gonda-Khalilabad for OFC route strengthening in northern region of Railtel Corporation Of India Limited.**” Northern Region, 6th Floor, Block III, Delhi IT Park, Shastri Park, Delhi – 110053

9. Date of opening of Tender:

The tender shall be opened at **15:30 hrs** on 14.10.16 at the same address as mentioned in Para 5 above.

10. Completion Time:

The completion period of the work is **60 days** from the date of issue of LOA.

11. Addresses for Communication:

All correspondences and clarifications must be addressed to the

**GM/OP, Northern Region,
RailTel Corporation of India Limited,
6th Floor, Block III, Delhi IT Park,
Shastri Park, Delhi – 110053**

12. Earnest Money:

Tenderer shall deposit a sum of **Rs.38500/-** (Rupees Thirty Eight thousand Five Hundred only) as Earnest money in the form of **Bank draft** in favour of **RailTel Corporation of India Limited, New Delhi**

13. Security deposit:

On receipt of Letter Of Acceptance (**LOA**) of Tender from RailTel, the tenderer shall, within a period of **10 days** deposit with RailTel an amount equal to **10%** of the value of contract rounded off to the nearest whole number in terms of thousands of Rupees towards payment of **Performance Guarantee** for due fulfillment of the contract (as per Form No.3).

14. Approximate cost of the Work in the section is Rs 19.25 Lac.

(Approx. Rupees Nineteen Lacs Twenty Five Thousand only)

SECTION I

CHAPTER 1

PREPARATION OF AS-BUILT ROUTE PLANS

1.0 SCOPE:

The scope of this is to prepare a final set of As-Built drawings of route plans, based on the actual cable route (which in turn shall be based on a preliminary & approved drawings of route plans, already supplied to the contractor).

Points to be taken care of for laying the OFC cable:

- 1.1.1 Avoid underground structures, signaling cable, power cables and pipe lines etc.
- 1.1.2 Avoid rodent/termite infested or infected side of the alignment.
- 1.1.3 Offset of the cable trench from the central line of the track such as having burrows.
- 1.1.4 Avoid proximity to chemical, paper and such other industries which discharge chemically active affluent.
- 1.1.5 Avoiding areas prone to water logging.
- 1.1.6 Avoiding large rock cutting/thick jungles and areas difficult to approach etc. The orientation of the route (left or right side of the track in the sections) to be decided on following:-

That side of main line, which is away from coastal side, other cables such as signaling and power.

That side which is likely to involve least track crossings and likely to be more convenient for crossing the track, bridges culverts etc.

Avoid built up areas including those area where buildings etc. are likely to come up in future.

For the straight runs as far as possible a separation of 10 Meter should be kept from the nearest track. This is as per CCITT recommendation K.8.

As a rule a minimum distance of 5.75 M should be maintained between the OHE masts and the cable. In Yards etc. where observance of this rule may be difficult, a minimum distance of 3 Meter should be maintained. In exceptional

cases where the cable trench depth is less than 0.5 M the lateral distance may be reduced to 1 M.

Make the route of OFC cable within 1 meter of Railway boundary normally.

1.2 As-Built Cable route plan.-

Based on above actual route, the as-built cable route plan should be prepared:

- 1.2.1 The name of the location should be put in the 'LOC' column and the change in the 'CH' column. At every 10 cm. the Km. post number should be written and its exact equivalent change entered in the 'CH' column. The name of station should be shown against the location of the Station Master's Office.
- 1.2.2 Based on the route, the serial number and the length of culverts, bridges and level crossings should be marked on the 'Track Line' of the cable route plan.
- 1.2.3 The actual measurement of the separation distance from the central line of the track (the adjacent main line) is to be shown. This is to be compiled on the 4 Km charts.
The termination plan & locations of joint enclosures of OFC to be shown.

1.3 Preparation of Drawings:-

All the plans and drawings shall be neatly prepared using Computer Aided Design System & plotter etc. The drawings shall be in A3 size & suitably filed for ease of handling.

Further, a soft copy of Auto-CAD drawings in CD shall be submitted.

1.4 Information in Cable route plan:-

The cable route plan shall contain following information:-

- 1.4.1 Whether the cable route is on the up or down side of the Railway Tracks.
Exact locations and lengths where the cable is laid in RCC/DWC/G.I. pipes/ troughs and under the bed on culverts.
Location of track crossing and the number of tracks being crossed.
Location of road crossing and the no. of RCC/DWC/GI pipes provided.
Locations and length for protection of cable in rocky area and platform cutting etc.
Locations of Pull Chambers/Joint Pits.

1.5 DELETED.

1.6 DELETED

1.7 Guidelines for finalization of cable route plan:

- 1.71 The following are the guidelines for preparation of the cable route plan:

Prepare the "4 Km charts" as explained above and enter the relevant changes and details in the "4 Km charts" based on the latest copy of approved OHE/Overhead plan supplied to him by the engineer.

- 1.7.2 Actual measurement by 30 M steel tape or chain along the route is necessary only in case of important locations, to be termed as "special terrains", for example, approach to repeater station/cable hut, long bridges, big yards, sharp diversions in the cable route from its parallel course along the main railway tracks due to obstruction, cuttings etc.
 - 1.7.3 Inspect and decide the portions of route falling in category of "special terrains" stated in para 2.7.2 above, i.e. where actual longitudinal measurement is necessary.
 - 1.7.4 The remaining portions of the route, i.e. other than the portion decided as "special terrain" as per para 2.7.2 above are to be termed as "straight runs". Actual chaining along the route is not necessary for such "straight runs" and these can be marked on the "4 Km. charts" by taking changes from the OHE/Overhead alignment plan.
 - 1.7.5 The cable route should be started from a repeater/ cable hut/ station. Actual measurement along the route should be done by means of a 30 M steel tape for a few drum lengths up to a convenient point along the main line where from the distances along the route may be reckoned from the OHE/ Overhead alignment Plan. A termination allowance of actual length (prescribed 5M) of cable inside the repeater station/cable hut building should be, in addition to a length of about 10 M (actual length), kept in a pit just outside the building.
 - 1.7.6 It should be ensured that both "special terrains" and "straight runs" should consist of full drum lengths, so that the position of joints (other than T-Joint) is fixed without difficulty in both cases.
 - 1.7.7 Actual measurements of the separation distance should be done from the centre line of the reference track. In case of 'Special terrains' the separation distance at some points on the route may also have to be reckoned from some other permanent structures depending upon the site conditions.
 - 1.7.8 Once the cables are laid, the chain ages at diversions, crossings, approaches of bridges, Jointing Chambers and Joints/Extra lengths of Optical fibre cables should be clearly marked on cable route plan.
- 1.8 Length of Optical Fibre cables: -**
The approximate cable length is worked out on following basis to arrive at the location of the straight joints: -
Extra length for track crossing including 2.5 meter loop on each side.
Extra length on Approach/crossing of the bridges and culverts as per measurement in the detailed survey.
10 meter of cable to be kept on either side of major steel bridges and 5 meters on minor bridges.

At every Joint Pit a loop of 10 meters on either side of the joint and a loop of 15 meters in the Pull Chambers without joint, should be kept. In cable hut a loop of 10 meters should be kept in the cable pit.

1.9 Protective works for Cable/ Ducts:-

1.9.1 For building, masonry platforms, culverts, crossing of tracks, level crossings and roads etc. special protection for the cables is required. Some of the methods adopted for different types of protective works are specified in the following drawings:-

For RCC cable route marker drg no. 01 (Annexure 1).

For RCC joint chambers drg no. 02 (Annexure 2).



CHAPTER 2

TECHNICAL SPECIFICATION AND INSTRUCTIONS FOR TRENCHING AND LAYING OF OPTICAL FIBRE CABLE AND SPECIAL PROTECTIVE WORKS:

2.1 SCOPE:

This chapter deals with the specifications under which the various work for trenching & laying of optical fiber cable coming under the purview of the contract are to be executed by the contractor.

2.2 SUPPLY OF ROUTE PLAN:

Approved Cable Route plan and jointing schedule for mid section splicing of cable will be prepared and supplied by the RailTel This shall give a preliminary idea of the number & locations and the quantities and type of various equipment to be fixed, wired and commissioned.

2.3 INSTRUCTIONS FOR EXCAVATION & BACK FILLING OF TRENCHES

- 2.3.1 The Representative of Engineer In-charge of the work will mark the route of the cable in white chalk or lime as per the tapping and route plan and the instructions given to him by the Engineer, notwithstanding the cable route shown in the tapping and route plan to meet the requirement of local conditions at site, if any and as required shall be taken by the contractor to be final. The contractor shall be present at the time of marking and he shall furnish to the Engineer's representative required quantities of lime, rope, labour etc. for carrying out this work. The marking will be given on the track side of the trench at a distance approximately one meter away from the centre line of the trench. In the difficult terrains such as water-logged areas, the position of the cable route will be specified by off sets from the centre line of the nearest track.
- 2.3.2 Trenches for Telecom cable shall be dug to a depth of 1.0 meters. The width of the trench shall be adequate at the bottom to accommodate cables and their protection. Normally width of approx. 250-300mm at the bottom is sufficient. In places where underground pipes, electric main etc. come in the way, trenches deeper than one meter shall be dug as necessary and RCC/GI/DWC pipes shall be placed to protect the optical fibre cables.
- 2.3.3 Metalled, macadamized, concrete and stone paved roads shall also be cut to a depth of 1.0 meter. The cable shall be laid through RCC/GI /DWC pipe as per drg. at Annexure 2.11. **The road surface shall be restored to original.**
- 2.3.4 Wherever it is not possible to dig trench up to 1.0 metre depth due to site conditions, specific approval of site engineer / engineer's representative should be taken before digging trenches of lesser depth. Similarly where digging of trench for more than 1 metre depth is required due to site conditions, specific approval of site engineer / engineer's representative should be taken before commencing the work. In both cases prorate

payments for the items of schedule shall be made. The cable in these trenches shall be protected by providing second class bricks width wise as per instructions of site engineer.

- 2.3.5 The bottom of the trench where the cable is to be laid shall be free from any stones. The bottom of the trench shall be horizontal and shall in no case be undulating. When the cable bed changes from solid to soft surface or from the bridge to soft soil, tamped fill at the transition point shall be provided so that cable is not pressed against the edge of a hard surface.
- 2.3.6 The brick protection shall be provided, wherever required and instructed by the engineer-in-charge. The contractor shall arrange supply and distribution of second class bricks of standard size at site along the excavated trenches and after uniformly covering the cable laid in the trenches by stone-free sieved soil up to 50 mm height above the cable, he shall arrange to place the bricks flat and position them breadth wise so that on an average 8/9 (eight/nine) bricks shall be laid in a meter length.
- NOTE:** In order to be certain that the full requirement of bricks has been arranged by the contractor for placing on the top of the cable to be laid on any day, he shall spread the bricks side by side on the top of the trenches before the depth of the trenches are inspected by the authorised representative.
- 2.3.7 The backfilling of trenches shall be done by tamping and consolidating the excavated soil in layers of 15-20 cm at a time. All the soil that is excavated shall be put back to the trench and care shall be taken in consolidation to ensure that the back filling does not suffer any sinkage in monsoon.
- 2.3.8 If under unavoidable circumstances, the excavation is to be done between the tracks or between OHE foundation and track, it shall be done to the full depth just before laying the cables and in the presence of the Engineer's representative so as to ensure the safety of train operations.
- 2.3.9 Wherever the Engineer's representative considers it necessary to adopt shoring, the Contractor will be required to adopt shoring for which the Contractor shall have sufficient quantities of shoring material on hand as per RDSO Drawing No. TC 35003 given at Annexure-2.5. The shoring shall invariably be carried out in case of loose soil or banks made of cinders and ashes.
- 2.3.10 Where the direction of the trench has to change, it should be done in a gentle curve of not less than one meter radius and not at sharp angles.
- 2.3.11 While crossing tracks and laying over bridges & culverts, the engineers representative shall be present. The date and time of such works shall be communicated to concerned telecom supervisor of the Railways and adequate precautions, as advised by them, have to be taken.

2.4 TRACK CROSSING

All cable crossings across railway tracks shall be done in G.I. pipes (100 mm), threading the cable through these pipes. The contractor shall do the trenching to the required depth wherever necessary such as approaches to track crossing and the length in between the adjacent tracks. Two nylon rope of suitable strength shall be threaded through G.I. pipes, one to pull the cable and one for future use. The arrangement of cable and G.I. Pipe trunking under Track crossings has been shown in Drg. No. RE/S&T/ALD/SK/159/81 given at Annexure-2.10

2.5 ROAD CROSSING

- 2.5.1 When crossing road ways, it is necessary to lay the cables in such a manner as to avoid the necessity of handling the cable sharply and minimise excavation of road surface as far as possible. Where cable is laid in surfaced trunking, the trunking alignment should be curved down to the pipes and proper brick or concrete joint should be made between trunking and pipe.
- 2.5.2 The crossing of main roads often involves difficulties especially if traffic is heavy, precautions to avoid accidents to workmen, pedestrians and vehicles should be taken. On minor roads, which can be temporarily closed to traffic, it is possible to cross the entire width of the road and open up. Pipes should be installed quickly in the cutting which is then filled in there by reducing to a minimum time for which the road is closed.
- 2.5.3 Some roadways which are broad may be opened for half their width, allowing the other half for use of traffic. Pipes are laid trench filled in the first half and the other half opened up after the first half is opened for the traffic. Pipes laid in the second half is linked with those laid in the first half. G.I. pipes shall be used for road crossings. In all cases pipes should be laid at a depth of 1 meter, below the formation level or lower as may be required.
- 2.5.4 Whenever a cable is laid across an important road particularly one with a special surface it is necessary to provide for future expansion. The following methods may be adopted.
- (a) Separate pipes shall be laid for separate cable/HDPE duct. Two length of G.I. wire 10 SWG shall be used as lead wire. Two such lengths of G.I. wire shall be laid through the pipe. One wire shall be used for leading in the cable & the other wire shall be kept with suitable overlay to enable cable pulled out at later stage, if required.
- 2.5.5 At busy road crossings, trenching should be done in nights with appropriate protection and road warnings to road users.
- 2.5.6 The tenderer shall be responsible for compliance to applicable laws of the land and registration/approval from statutory authority, if required.

2.6 CABLE LAYING:

- 2.6.1 It is advisable to employ the same people at the same place or job while cable is being laid.
- 2.6.2 Before commencement of the laying of cable/HDPE duct, inspection of the trench and inspection of protection works should be carried out so as to ensure their conformity with the specification. The trench bottom should be clean, smooth and free of small stone. When the soil contains stone or pieces of rock and therefore cannot be raddled, sieved earth about 10 cm. thick should be used both for the bedding on which the cable is laid and for covering the cables.
- 2.6.3 The cable drum should be brought as close to the cable trench as possible. It should be lifted with the aid of cable jacks firmly mounted on a support of stone or wood. The spindle should be minimum of 55 mm diameter and have a clearance from ground by 5 to 10 cm.
- 2.6.4 Where necessary the cable drum may be placed at such a point so that 2/3 of the cable is laid directly in one direction and the balance in other direction. Care should be taken in such a case to see that there are no kinks or loops in the cable.
- 2.6.5 The wooden battens on the drums should be carefully removed shortly prior to laying and before the drum is mounted on the jack. The nails on the lagging should be carefully removed.
- 2.6.6 While rolling a cable drum for laying, the drum shall be supported on an axle running through its centre, the height of the axle being such that the end frames are free to rotate and do not touch the ground at any point. The cable shall be carefully uncoiled by gently pulling the cable assisted as necessary by carefully turning the drums. The quick pulling of the cable or turning the drums shall be avoided at all costs. Each cable drum shall be braked while laying is in progress to prevent sharp bending or buckling, particularly when the cable coils are sticking together.
- 2.6.7 Deleted
- 2.6.8 When drums are turned for change of direction, wooden blocks shall be carefully put under the drum bolts which stand out from the drum discs.
- 2.6.9 It is customary for the mate to stand in a commanding position where he can view the entire route, and shout evenly timed calls to his men to pull. If there is proper synchronization between the mate's calls and the pulling by the men, the cable will leave the drum without difficulty. It is important that the cable should be pulled with steady and even pulls and not be unnecessarily jerked or strained. On no account should a cable be allowed to twist or kink as this is likely to spring the Armor and fracture the outer serving of the cable. When pulling cable around bends, one or two men should be stationed to give the cable the correct bend when it passes.

- 2.6.10 While laying the cable, employ adequate number of men such that the cable can be conveniently carried by them in both hands without stretched arms. The distance between any two persons carrying the cable shall be from 2 to 10 metres depending upon weight of cable such that the maximum sag of the cable between any two persons is not more than 0.5 metres.
- 2.6.11 The cable shall be gently drawn by pulling the cable, which may be assisted as required, by smoothly and slowly turning the winch. The cable shall not be twisted on any account.
- 2.6.12 Before laying is commenced, the cable shall be uncoiled first in a straight line supported by men and then carried to the trench and laid gently & carefully ensuring that cable is not stretched while putting in the trench.
- 2.6.13 While laying work is in progress one man must continuously observe the cable along its length in order to determine whether any indentations, holes or other damaged parts are apparent. Such damaged parts have to be protected immediately by the cable jointer provided with the Laying party.
- 2.6.14 When two or three turns of cable are left on the drum, the pulling should be stopped and the inner end of the cable removed from the slot in the drum. Pulling should then be continued. If this is not done the cable end is likely to be stretched and damaged.
- 2.6.15 The ends of the optical fibre cable should have an overlap of 10 M at the end of each drum for jointing purpose.
- 2.6.16 The conditions of the cable shall be visually inspected throughout its length and in case any damage or defect is noticed, the trench shall not be filled up until the Engineer's representative is notified to examine and authorise filling of the trench.
- 2.6.17 **MINIMUM BENDING RADIUS:**
- Cables should always be bent (or straightened) slowly, they should never be bent to small radius while handling. The minimum safe bending radius for optical fibre cables should be 30 times the diameter of the cable but wherever possible larger radius should be used.
- 2.6.18 Wherever cable has to be coiled/looped, the diameter of the coil/loop shall be greater than 30 times the diameter of the cable.
- 2.6.19 The RCC Joint Pit / Pull Chamber to be constructed should be as per the specification given in the Annexure 2.14.

2.7 CABLE MARKERS

The RCC/Stone cable route markers shall normally be provided at a distance of every 100 meters on the straight portion of the cable route and also at diversions of the route of the cable. The joint indicators/markers shall be

provided at all types of cable joints. The cable Markers provided shall be of standard RCC/stone type with letters "RCIL O F C" engraved and suitably painted with standard paint as per drawing attached. Cable Markers shall also be provided at each Joint Pit / Pull Chamber with/ without a joint respectively.

2.8 Blowing /Drawing of Optical Fibre Cable:

- 2.8.1 OFC should normally be blown through the HDPE ducts by standard blowing machines.. Only in exceptional cases drawing may be adopted in short lengths with the permission of the site engineer of RailTel.

2.9 Execution of HDD(Trenchless horizontal direct drilling-Boring)

- 2.9.1 Under road/platform/railway track/difficult terrain etc. horizontal direct drilling (HDD) method shall be adopted under the supervision of competent staff for laying of HDD pipe(40/33mm dia) at a depth of 1.5 meter and more(depth as per instruction of site engineer).
- 2.9.2 The depth of trench at any of the end should not be less than 1.5 meter in any case.Both ends of HDPE pipe should closed properly using accessories and the pits should be properly back filled.
- 2.9.3 There should be no damage to the platform/road/track or any such structure etc. enroot during or after the HDD operation.
- 2.9.4 The work include supply of all accessories required for laying of HDD pipes.
- 2.9.5 The contractor should normally adopt HDD by machine. In difficult area like track crossing,road crossing and sharp bend etc. the contractor may adopt manual pushing method only in short length with permission of site engineer of Railtel.

NOTE: The brick protection including supply of second class bricks of standard size at site shall not be required where OFC is being provided in HDPE/DWC ducts and quad cables are not laid. However, if quad cables are also laid along with the OFC in HDPE/DWC ducts, the brick protection shall be required as per clause 3.3.5 for protection of quad cables.

For protection of OFC and or quad cables at crossing across railway tracks, road crossings, over steel girder bridges and over culverts & arch bridges or any other special cases as decided by the site engineer during execution, DWC duct 50/39 mm dia (including supply of duct and other accessories required for protection of OFC/ quad cables) may be used in place of RCC pipes as mentioned in clause no. 2.4, 2.5, 2.6 & 2.7, as per instructions of RailTel's engineers at site.

CHAPTER 3

JOINTING AND TERMINATION OF FIBRE OPTIC CABLE

3.1 INSTALLATION OF JOINT CLOSURE & SPLICING OF OFC

Only fusion splicing which is accomplished by applying localized heating (i.e. by electric arc or flame) at the interface between two butted, pre-aligned fibre ends, causing them to soften and fuse together, will be used on RailTel's network.

3.2 STRAIGHT JOINT FOR FIBRE OPTIC CABLE:

3.2.1 There are various types of joint enclosures available in the market. The procedure for assembly of joint enclosure is described in the installation manual supplied with straight joint enclosure. This includes the following:

- a) Material inside joint closure kit.
- b) Installation tools required.
- c) Detailed procedure for cable jointing.
- d) Procedure for re-opening the closure.

3.2.2. The Optic Fibre straight through joint closure (Mechanical seal type) to be used shall be of TVSE, R&M, Raychem or 3M Make only.

3.2.3 Generally, the following steps are involved for jointing of the cable:

- Preparation of cable for jointing
- Stripping/cutting the cable
- Preparation of Cable and joint closure for splicing
- Stripping and Cleaving of Fibres
- Fibre splicing
- Organising fibres and finishing joints
- Sealing of joint closure and
- Placing joint in the Jointing Chamber/Pit.

3.3 PREPARATION OF CABLE FOR JOINTING

During the installation, a minimum of 10 meter of cable of each end is coiled in the jointing pit to provide for jointing to be carried out at convenient location as well as spare length to be available for future use in case of failures.

The pit size must be chosen carefully to ensure that length of the wall on which joint is mounted is greater than closure length plus twice the minimum bending radius of the cable. A RCC circular Joint Pit / Pull Chamber of 1 meter outer dia as given in annexure-2.14 is sufficient for most of the cable and joint closures.

The cable is then coiled and carefully placed in the pit/chamber in the same position as required after the joint is complete. The marking is done on all the loops so that it will be easier to install it later.

The distance from the last centre to the end of the cable must be atleast 1.8 meter. This is being the minimum to be stripped for preparation of joint.

Sufficient cable at each end up to the jointing vehicle/enclosure is then uncoiled from the pit for jointing.

3.4 STRIPPING/CUTTING OF THE CABLE

The cables are stripped of their outer and inner sheath with each sheath staggered approximately 10mm from the one above it.

Proper care must be taken when removing the inner sheath to ensure the fibres are not scratched or cut with the stripping knife or tool. To prevent this, it is best to only score the inner sheath twice on opposite sides of the cable, rather than cut completely through it. The two scores marking on either side of the cable are then stripped of the inner sheath by hand quite easily.

The fibres are then removed from cable one by one and each fiber is Cleaned individually using Kerosene to remove the jelly.

3.5 PREPARATION OF CABLE JOINT CLOSURE FOR SPLICING

The type of preparation work performed on the cable prior to splicing differs on the type of joint closure and fibre organiser used. However, the following steps are usually common: -

The strength member of each cable is joined to each other and/or to the central frame of the joint closure.

The joint closure is assembled around the cable.

The sealing compound or heat shrink sleeve is applied to the cables and closure, or prepared for application after splicing is complete.

The fibres are protected (usually with plastic tubing) in their run from the cable core to the fibre organiser trays (particularly if cable construction is slotted core type).

Tags which identify the fibre nos. are attached at suitable location on the fibres.

Splice protectors are slipped over each fibre in readiness for placing over the bare fibre after splicing.

3.6 STRIPPING AND CLEAVING OF FIBRE

Prior to splicing each fibre must have approximately 50mm of its primary protective U.V. cured coating removed, using fibre stripper which are manufactured to fine tolerances and only score the coating without contacting the glass fibre.

The bare fibre is then wiped with a lint free tissue doused with ethyl alcohol.

Cleaving of the fibre is then performed to obtain as close as possible to a perfect 90 degree face on the fibre.

3.7 SPLICING OF THE FIBRES

The fusion splicing shall be used for fibre splicing. Some of the basic steps for fusion splicing are as given in 4.8 below.

3.8 FUSION SPLICING OF FIBRE

Some of the general steps with full automatic micro processor control splicing machine are as under:

Wash hands thoroughly prior to commencing this procedure.

Dip the clean bare fibre in the beaker of ethyl alcohol of the ultrasonic cleaver. Switch on ultrasonic cleaver for 5-10 seconds (Some of the manufacturers do not prescribe the above cleaning).

Place the bare fibre inside 'V' groove of the splicing machine by opening clamp handle such that the end of fibre is app. 1 mm. over the end of the "V" groove towards the electrodes.

Repeat the same procedure for other fibre, however, first insert heat shrink splice protector.

Press the start button on the splice controller.

The machine will pre fuse, set align both in 'X' and 'Y' direction and than finally fuse the fibre.

Inspect the splice on monitor if provided on the fusion splicing machine and assure no nicking, bulging is there and cores appear to be adequately aligned. If the splice does not visually look good repeat the above procedure.

Slide the heat shrink protector over the splice and place in tube heater. Heat is complete when soft inner layer is seen to be 'oozing' out of the ends of the outer layer of the protector.

Repeat for other fibres.

3.9 FUSION SPLICER AND OTDR

The fusion splicer and Optical Time Domain Reflectometer (OTDR), to be used for splicing and measurements of parameters respectively, shall be of approved design and quality. The contractor shall submit

i) Specification of fusion splicer and OTDR

Certificate from the users, who have used the splicer and OTDR of the make, the contractor intends to use, regarding their satisfactory performance.

The RCIL reserves the right to direct the contractor to use the same or any other proven design of fusion splicer and OTDR if in the opinion of RCIL the specification of Fusion splicer and OTDR are not suitable.

3.10 ORGANISING FIBRE AND FINISHING JOINTS

After each fibre is spliced, the heat shrink protection sleeve must be slipped over the bare fibre before any handling of fibre takes place, as uncoated fibres are very brittle and cannot withstand small radius bends without breaking.

The fibre is then organised into its tray by coiling the fibres on each side of the protection sleeve using the full tray side to ensure the maximum radius possible for fibre coils.

The trays are placed in the position.

OTDR reading taken for all splices in this organised state and recorded on the test sheet to confirm that all fibres attenuation are within specification. This OTDR test confirms fibres were not subjected to excessive stress during the organising process.

After this the joint can be closed with necessary sealing etc. and ready for placement in the pit.

- 3.10.1 **Jointing Pit/ Pull Chamber:** The Jointing Pit / Pull Chamber is as per drawing at Annexure-2.14. The outer dia of the circular RCC Jointing Pit / Pull Chamber shall be approx. 1000mm. The pits shall be located at every 1Km of the OFC route and spare cable of 15 meters to be looped and placed in the pit. The pit shall be refilled with dry sand after completion of the work and then closed. Stone/RCC route markers shall be provided for identification of each Jointing Pit / Pull Chamber location with/without a joint and this should be incorporated in the As-Built-cable route plan.

3.11 PLACING OF COMPLETED JOINT IN PIT

Joint is to be placed on the tarpaulin provided near the pit.

The cable is laid on the ground, loop the cable such that pen mark previously place on the cable line up. Tape these loops together at the top of the coil.

The joint can now be permanently closed and sealed by heating heat shrinkable sleeve etc. However, before closing, silica gel to be kept inside for moisture protection.

Now the joint closure is placed in the jointing pit /chamber and the pit is closed after filling it with dry sand.

3.12 RE-OPENING OF THE JOINT

If required for attending to faults etc., manufacturers supply special kits for opening of the joint and the steps to be followed. However, the general steps are as under: -

Using suitable knife cut heat shrink sleeve longitudinally along its entire length.

Do not damage the smaller heat shrunk sleeve on the ends of the joint.

Apply heat to the cut sleeve until it begins to separate.

Gently remove the cut sleeve from the joint. Now the joint can be opened.

Protective sleeve/cover can be removed for attending to faults etc.

3.13 TERMINATION JOINT FOR FIBRE OPTIC CABLE.

3.13.1 This joint is provided in the cable hut for terminating the outdoor fibre optic cable of both the sides, splicing through fibres, connecting fibres to pigtails for connection to Optical Line Terminal Equipment etc.

3.13.2 The OFC Cables shall be dressed up on teak wood plank/Aluminium ladder inside cable hut. The armour of the OFC Cable shall be cut before taking the cable in the equipment rack. The cables shall be terminated on FDMS and derive required pigtails.

Two pairs of fibres shall be derived from either side cable at every OFC cable hut through pigtails with an FC/PC connectors. The remaining fibres shall be looped through.

3.13.2 The procedure for installation of termination joint box depend upon the type of joint enclosure. The installation manual supplied gives the step-by-step procedure for installation. However, the general steps are as under:-

- Marking the cable
- Stripping/cutting the cable
- Gripping cable in sheath/clamp
- Treatment of tension member
- Fibre splicing
- Enclosing fibre
- Fixing strength member
- Closing the cover

- Fixing termination box
- Fixing the cable.

3.14 MARKING THE CABLE

Determine the cable length up to the proposed location of termination box. It is also to be ensured that at least 10 meters of cable is coiled in the cable pit.

Determine the cutting point and mark the cable

Determine the sheath peeling point and mark the cable

3.15 CUTTING / STRIPPING THE CABLE

Cut the cable as per the marking

Remove the sheath from cable ends. During sheath stripping care should be taken not to damage the fibres.

The length and the steps for various sheath cutting shall be as per the instruction given in the manual.

3.16 GRIPPING THE CABLE

Wind PVC tape around the cable core just beside edge of the sheath.

Insert the bushing inside sheath by cutting the cable sheath for about 25mm.

Place the sheath grip (lower half and upper half) and tighten it with the help of torque wrench.

3.17 FIXING OF TENSION MEMBER

- a) Mark the tension member for the specified length and cut it.
- b) Clean the tension member thoroughly by Alcohol and cotton cloth.
- c) Fix tension member holder with the help of instant adhesive at the end of tension member.

3.18 FIBRE SPLICING

The procedure for splicing is same as described for straight joint closure in Clause 3.7 above.

3.19 ENCLOSING FIBRES

- a) Set the fibre cassette on the base
- b) Arrange excess length of fibre to make double figure of eight.
- c) Enclose the spliced fibre and its excess length carefully.

- d) Repeat the procedure for other fibres.
- e) After this, the box can be closed. However, a packet of silica gel may be placed inside for protection from entry of moisture.

3.20 MOUNTING OF TERMINATION BOX.

Termination box can be fixed either on wall or on equipment rack. At wayside stations it shall be mounted inside the equipment rack in order to prevent pigtailed from rodent attacks.

- a) Mark the fixing holes on the walls/bracket/frame
- b) Place the termination box and tightened the nuts inside the base box.
- c) Put the covers.

3.21 FIXING THE CABLE

Secure the cable on wall/frame at two places within one meter from termination box keeping in view straight entry of cable in termination box.

3.22 ISOLATION OF ARMOUR OF OFC CABLE

The maximum continuous length of armour of OFC Cable should not exceed 1.6 Kms. in order to keep the induced voltage within permissible limits. Where the continuous length of cable exceeds 1.6 Kms. a 50 mm cut shall be made in the armour after every 1.6 Kms. The Exposed cable at the cut shall be covered by shrinking suitable heat shrink sleeve as per TEC specifications.

3.23 ACCEPTANCE TEST FOR FIBRE OPTIC CABLE

The Procedure for Testing of Fibre Optic Cable shall be jointly finalised by Contractor with Engineer of the RCIL. The parameters in the concerned specification shall be taken as reference. The Test shall be conducted from cable hut to cable hut, after the Splicing & termination Joints are completed. The length of cable (as per marking in cable & as measured by OTDR), loss in cable, average loss per Km., No. of Splices, Splice loss, etc. shall be recorded and jointly signed as per pro-forma given in para 3.24 below.

3.24 TEST PROTOCOL FOR OPTICAL FIBRE CABLE

SYSTEM TEST PROTOCOL OPTICAL FIBRE CABLE FIELD TEST

Route: -----

Date: -----

Station: -----

No. of mid-section splices: -----

Section: -----

Measured by: -----

Length
(by OTDR): -----

Length as per meter
marking on cable sheath: -----

1) Optical measurements (On Line):

| Measurement | Fibre – number 1 2 3 4 22 23 24 | Accepted Value |
|---|--|---|
| 1.1 Total attenuation at 1300/1550 nm with OTDR | | |
| 1.2 Total attenuation per Km at 1300/1550 nm: | | <0.40 dB/Km at 1300 nm &<0.25 at 1550 nm |
| 1.3 Splice Loss in dB with OTDR Location | | Average splice loss |
| OHE Mast No./ Overhead alignment post no. A. B. C. D. E. | | |
| Average Splice Loss | | 0.15 db, no splice should have loss >0.2 db |

NOTE: ALSO ATTACH OTDR RESULTS |----|

2) Visual Inspection (On Line):

2.1 No. of Cable drum used in the section: -----

2.2 S.No. of cable drum and length of each drum:

| <u>S.No.</u> | <u>LENGTH</u> |
|--------------|---------------|
| 1. ----- | -----M |
| 2. ----- | -----M |
| 3. ----- | -----M |
| 4. ----- | -----M |
| 5. ----- | -----M |

2.3 Location of Isolation Sleeves: 1. 2. 3.

Contractor's Representative

RCIL's Representative

3.25 TOOLS AND EQUIPMENTS REQUIRED FOR JOINTING AND TERMINATION OF FIBRE OPTIC CABLE:

S.No. TOOL's Name

- 1.Branch Joint Closure
- 2.Termination Box
- 3.Rubber end Block
- 4.Sheath Clamp
- 5.Bushing
- 6.Strength Member holder
- 7.Heat Shrinkage tube
- 8.Arc fusion splicer machine.
- 9.Power cord AC/DC
- 10.Walkie-Talkie 12V DC source
- 11.Tube heater
- 12.Precision cleaver
- 13.Cable sheath stripper
- 14.Fibre stripper
- 15.Knife for HDPE cutting
- 16.Hexa for strength membrane
- 17.Isopropyl alcohol or methanol of high specific gravity
- 18.Johnson Buds
- 19.Tweezers
- 20.Gun heater Blower type
- 21.Sleeve for splice protection

- 22. O.T.D.R.
- 23. Stickers for numbering of splicers.
- 24. Portable k. oil generator
- 25. Umbrella's 2 Nos.
- 26. Dust protection for splicing machine

Note:- Wherever cable has to be coiled/looped , the diameter of the coil/loop shall be greater than 30 times the diameter of the cable.





CHAPTER 4

List of Address for Specification

4.0 Address from where specification copy can be purchased:

The copy of IRS, RDSO, TEC and BIS specification used in the tender documents can be purchased from following sources.

- 4.1 IRS Specification:** i) Manager Publications,
Government of India
Civil Lines, New Delhi- 110054
- ii) Government of India Book Depot,
8 - S.K. Roy Road, Calcutta – 110001
- 4.2 RDSO Specification:**
RDSO, Manak Nagar, Lucknow
- 4.3 DOT/TEC/ITD Specification:**
Khurshid Lal Bhavan, Janpath,
New Delhi- 110001
- 4.4 B.I.S. Specification:**
Directorate General ,
Indian Standards Institution,
9- Bahadur Shah Zafar Marg,
New Delhi -110002
- F- block, Unity Building,
Narsimhraja Square,
Bangalore- 560002
- 534- Sardar Vallabh Bhai Patel Raod , Mumbai.
- 5- Chowringhee Approach, PO Princep street,
Calcutta- 1100072
- Ahinsa Building (1st floor) , SCO 82-83, Sector 27-
C, Chandigarh- 160017
- 5-8-56/57, L.N. Gupta Marg, Hyderabad- 208004.
- 117/418-B, Sarvoday Nagar, Kanpur – 208005
- C.I.T. Campus, Adyar, Madras – 600020.
- 4.5** The specifications and drawings referred but not enclosed in the tender documents may be seen in the RCIL's office on any working day.
-

| Schedule of Requirements (SOR) | | | | | | | |
|---------------------------------------|--|-------------|----------------------------------|--------------------------------|------------------|------------------|---------------------|
| A | SCHEDULE-A(EXECUTION/SERVICE) | | | | | | |
| SN | Description | Unit | Required Qty For | | Unit Rate | Total Qty | Total Amount |
| | | | Lucknow-Sultanpur-Jaunpur | Burwal-Gonda-Khalilabad | | | |
| 1 | Trenching to a depth of 1.2 mtr and appropriate width for pipe/duct/cable and backfilling after laying OFC as per specification. | Mtr | 4640 | 7780 | 40 | 12420 | 496800 |
| 2 | Providing dry sand in FRP/RCC joint chambers up to 400mm height | N0. | 50 | 10 | 551 | 60 | 33060 |
| 3 | Laying of OFC/ QUAD Cable in trench and through HDPE/GI/RCC pipes where ever necessary. | Mtr | 6380 | 10697.5 | 6 | 17077.5 | 102465 |
| 4 | Laying of HDPE duct in trenches. Supply and pulling of nylon rope through it. | Mtrs | 6090 | 10211.25 | 4.227 | 16301.25 | 68905.38375 |
| 5 | Horizontal Drilling at a approximately depth of 1.65/1.2 m below the formation level of the earth including insertion of DWC pipes along with couplings etc. | Mtrs | 1160 | 1945 | 250 | 3105 | 776250 |
| Sub Total-A | | | | | | | 1477480.38 |

| B | SCHEDULE-B | | | | | | |
|--------------------|--|-----|----|----|------|----|-------------------|
| 6 | Supply & installation of jointing pit as per drawing with cover and required trenching to ease out cable/duct | No | 50 | 10 | 3200 | 60 | 192000 |
| 7 | Supply and fixing of cable route markers as per drawing | No | 50 | 10 | 250 | 60 | 15000 |
| 8 | Supply & Provision OFC Joint closure including Splicing (24 Fibre) .The Joint Enclosures shall be TVSE, Raychem model FOSC ,ROXTEC, 3-M Make | No. | 50 | 10 | 4000 | 60 | 240000 |
| Sub Total-B | | | | | | | 447000 |
| Total | | | | | | | 1924480.38 |

Total Amount (In words): Nineteen lac twenty four thousand four hundred eighty rupees and thirty eight paise.

Tenderer's offer.: " I/We hereby offer to do the work at following rates

| | |
|------------------|--|
| In Figure | % Above/Below the Schedule of rates |
| In Words | % Above/Below the Schedule of rates |

Note:- Above quoted rates are including all type of applicable taxes. It is mandatory for the tenderers to give tax break up in table given below.

Tax Break Up

| Schedule | Tax Name | Rate of tax (%) |
|-------------------|----------|-----------------|
| Schedule A | | |
| Schedule B | | |

The requisite EMD for an amount of Rs. _____ submitted vide DD No.

_____ dated _____ drawn on _____ bank.

Signature of Tenderer with Seal

Section II

(General Instructions to Tenderers)

1. **Submission of Tenders:** The tenders shall be submitted as per the format of RAILTEL enclosed herewith before or on 14.10.2016 up to 15:00 hrs in the Office of “**The GM/OP(Northern Region)**”, RailTel Corporation of India Limited, 6th Floor, Block III, Delhi IT Park, Shastri Park, Delhi – 110053”.
2. **The tender shall be addressed to: THE GM/OP (NORTHERN REGION), INVITING TENDERS AS INDICATED IN THE TENDER NOTICE.** The cover must mention: ““**Replacement of OFC on age cum condition basis in LKO territory in the sections (1) Lucknow-Sultanpur-Jaunpur(2)Burwal-Gonda-Khalilabad for OFC route strengthening in northern region of Railtel Corporation Of India Limited.**” And due date of opening.
3. Tenders submitted by post shall be sent as “REGISTERED POST ACK DUE” and shall be posted with due allowance for any postal delay. The tenders received after the due date and time of opening is liable to be rejected. Telegraphic offers and offers received by telex/fax shall not be considered. Tenders shall be opened at the date and time as specified in the Preamble of tender document in the presence of such of those tenderers or their authorized representatives who may be present at the Office of “RailTel Corporation of India Limited, 6th Floor, Block III, Delhi IT Park, Shastri Park, Delhi – 110053”.
4. The tenderers shall closely peruse all the clauses, specifications and drawings indicated in the Tender Documents before quoting. Should the tenderer have any doubt about the meaning of any portion of the Tender specifications or find discrepancies / omission in the Drawings or the tender documents issued are incomplete or shall require clarification on any of the technical aspect, Scope of Work etc., he shall at once contact the authority inviting the tender for clarification before the submission of the tender.
5. Before tendering, the tenderers are advised to inspect the site of work and the environments and be acquainted with the actual working and other prevalent conditions, facilities available, position of material and labour. No claim will be entertained later on grounds of lack of knowledge.
6. Tenderer must fill up all the schedules and furnish all the required information as per the instructions given in various sections of the specifications. Each and every page of the tender specification must be SIGNED, STAMPED & SUBMITTED ALONGWITH THE OFFER by the tenderer in token of complete acceptance thereof. The information furnished shall be complete in itself.
7. All entries in the tender shall be written in ink. Erasers and over writing are not permitted and may render such tenders liable to summary rejection. All cancellations and insertions shall be duly attested by the tenderer.
8. **Qualification of tenderers : N/A**
For qualifying in credential bid the contractor shall be required to meet the eligibility requirements as given in clause 6 of Preamble of the tender document.

- a. Earnest Money deposit:** The tenderer shall furnish a sum of **Rs.38500** (Rupees Thirty Eight Thousand & Five Hundred only) in favour of RailTel Corporation of India Limited, New Delhi.
- b.** The tenderers shall hold the offer open till such date as specified in Clause 10 of this chapter. It being understood that the tender documents have been sold/issued to the tenderer and the tenderer has been permitted to tender in consideration of the stipulation on his part that after submitting his tender he will not resile from his offer or modify the terms and conditions thereof in a manner not acceptable to Railtel. If the tenderer fails to observe or comply with the foregoing stipulation, the aforesaid amount deposited as Earnest Money shall be liable to be forfeited by Railtel.
- c.** The Earnest Money receipt shall be incorporated in the original copy of the tender document. The Earnest Money should be furnished either in any of the following forms:
- i. Demand Drafts of the State Bank of India or any of the Nationalized Bank. No confirmatory advice from the Reserve Bank of India will be necessary.
 - ii. Demand Drafts should be drawn in favour of the RailTel Corporation of India Limited, and endorsed "Account Payee".

These instruments should be valid at least for the period covering thirty days beyond the validity of the offer.

- d.** The bid guarantee / earnest money may be forfeited:
- i. If a tenderer withdraws its tender during the period of tender's validity specified in clause 10.
 - ii. In the case of successful tenderer, if the tenderer fails to:
 1. Sign the contract in accordance with clause 11.
 2. Furnish performance guarantee (Security Deposit) in accordance with clause 12.
- e.** The earnest money of unsuccessful tenderer will save as herein before provided, be returned within reasonable time to the unsuccessful tenderer but the RailTel shall not be responsible for any loss or depreciation that may happen to the security for the due performance of the above stipulation to keep offer open for the period specified in the tender documents or to the Earnest Money while in their possession nor be liable to pay interest thereon.
- f.** If the tender is accepted, the amount of Earnest Money will be held as security deposit for due and faithful fulfillment of contract. The Earnest Money of successful tenderer will be returned after the Contract Performance Guarantee (Security Deposit) as required and formal contract duly signed is received by the purchaser.

9. Authorizations and Attestation:

Tenders shall be signed by the person duly authorized / empowered to do so. Certified copies of such authority and relevant documents shall be submitted along with the tenders.

10. Validity of Offer:

THE OFFER SHALL BE KEPT OPEN FOR ACCEPTANCE FOR A MINIMUM PERIOD OF **60 DAYS** FROM THE DATE OF OPENING OF TENDERS. In case RAILTEL calls for negotiations, such negotiations shall not amount to cancellation or withdrawal of the Original offer which shall be binding on the tenderers.

11. Execution of the Contract:

The successful tenderers responsibility under this contract commences from the date of issue of the LOI/ LOA by RAILTEL. The successful tenderer shall be required to execute an agreement in the prescribed proforma enclosed herewith with the RAILTEL within one week after the acceptance of this tender. The expenses for completion and making required number of copies and compilation of contract documents duly bound / titled and stamping / registration of the agreement with prescribed authority, if necessary, shall be borne by the Contractor. The execution of the work must follow the following schedule.

- a. Mobilization and supply of required material at site: 20 days.
- b. 40% of the work must be completed within the next: 10 days.
- c. Remaining 60% of the work must be done in the next: 20 days.
- d. Testing & commissioning in the next: 10 days.
- e. **Total: 60 days.**

12. Security Deposit:

- a. On receipt of the Letter of Acceptance of Tender from the RailTel the successful Tenderer shall within a period of 10 days deposit with the RailTel an amount equal to **10%** of the value of contract rounded off to the nearest whole number in terms of thousands of rupees towards payment of **performance guarantee** for due fulfillment of the contract.
- b. The Earnest Money already paid by the successful Tenderer may at the discretion of the successful Tenderer be adjusted towards payment of this Performance Guarantee and the additional amount shall be paid in any one of the following forms:
 - i. Bank draft OR
 - ii. Irrevocable Bank Guarantee issued by SBI or Nationalized Banks or Scheduled Commercial Bank confirmed by SBI / Nationalized Bank acceptable to purchaser.
- c. The Instruments for security deposit should be valid for four months beyond the warranty period. On expiry of the warranty period and issue of the

certificate of final acceptance of the entire system, the Performance Guarantee will be refunded or Bank guarantee released to the contractor after adjustment of any dues payable by the contractor.

- d. If the value of the work done at any time exceeds the accepted agreement value, the Security Deposit shall be correspondingly enhanced and the extra Security Deposit shall be immediately deposited by the Contractor or recovered from payments due to him.
 - e. Failure to deposit the Security Deposit within the stipulated time, may lead to forfeiture of Earnest Money Deposit and cancellation of the award of work.
 - f. RAILTEL reserves the right of forfeiture of Security Deposit in addition to other claims and penalties in the event of the Contractor's failure to fulfill any of the contractual obligations or in the event of termination of contract as per terms and conditions of the contract. RAILTEL reserves the right to set off the Security Deposit, against any claims of any other contracts with RAILTEL.
 - g. RETURN OF SECURITY DEPOSIT: If the Contractor fully performs and completes the work in all respects to the entire satisfaction of RAILTEL and presents an absolute "No Claim Certificate" in the prescribed form from RAILTEL and returns properties belonging to RAILTEL taken, borrowed or hired by him for carrying out the said works, and has completed ONE YEAR from the date of Completion of work as certified by the authorized representative of RAILTEL, the total amount of Security Deposit will be released to the Contractor after deducting all costs, expenses and other amounts that are to be paid to RAILTEL under this or other contracts entered into with the Contractor.
13. No interest shall be payable by RAILTEL on Earnest Money Deposit, Security Deposit or on any moneys due to the Contractor.
- 14. Rejection of tender and other conditions:**
- a. The acceptance of Tender will rest with RAILTEL which does not bind itself to accept the lowest tender or any tender and reserves to itself full rights for the following without assigning any reason whatsoever.
 - i. To reject any or all the tenders.
 - ii. To split up the work amongst two or more tenderers.
 - iii. To award the work in part.
 - iv. In either of the contingencies stated in ii and iii above to modify the time for completion suitably.
 - b. Conditional and un-witnessed tenders, tenders containing absurd or unworkable rates and amounts, tenders which are incomplete or otherwise considered defective and tenders not in accordance with the tender conditions, specifications etc. are liable to be rejected.

- c. If the tenderer expires after the submission of his tender or after the acceptance of his tender, RAILTEL may at its discretion, cancel such tender. If a partner of a firm expires after the submission of the tender or after the acceptance of the tender, RAILTEL may cancel such tender at its discretion unless the firm retains its character.
- d. RAILTEL will not be bound by any Power of Attorney granted by the tenderer or by changes in the composition of the firm made subsequent to the execution of the contract. RAILTEL may, however, recognize such Power of Attorney and changes after obtaining proper legal advice, the cost of which will be chargeable to the Contractor concerned.
- e. If the tenderer deliberately gives wrong information in his tender, RAILTEL reserves the right to reject such tender at any stage or to cancel the contract, if awarded and forfeit the Earnest Money / Security Deposit / any other moneys due.
- f. Canvassing in any form in connection with the tender is strictly prohibited and the tenders submitted by the Contractor who resorts to canvassing are liable to be rejected.
- g. Should a tenderer or Contractor or in the case of a firm or Company of Contractors / one or more of its Partners / Share holders / Directors have a relation or relations employed in RAILTEL, the authority inviting the tender shall be informed to the fact along with the offer, failing this RAILTEL may at its sole discretion reject the tender or cancel the contract and forfeit the Earnest Money / Security Deposit.
- h. The successful tender shall not sub-contract the part or complete work detailed in the tender specifications without written permission of RAILTEL. The tenderer is solely responsible to RAILTEL for the work awarded to him.
- i. NO DEVIATIONS TO THE TENDER CONDITIONS SHALL BE ACCEPTED WHATSOEVER.
- j. The proposed Work shall be planned in such a way to avoid inconvenience to the normal working of trains in the section. Proper measure shall be taken to ensure safety of the workers.
- k. All completion drawings, As-built Drawings shall be submitted by the Contractor on completion of works along with the Final Bill.

Section III

(General Terms and Conditions)

The following terms and expressions shall have the meaning hereby assigned to them except where the context otherwise requires:

RAILTEL shall mean Office of General Manager (Northern Region) of RAILTEL CORPORATION OF INDIA LIMITED, (a Company registered office at 6th Floor, Block III, Delhi IT Park, Shastri Park, Delhi – 110053 and regional office at RailTel Corporation of India Ltd, Northern Region, 6th Floor, Block III, Delhi IT Park, Shastri Park, Delhi – 110053, acting in the premises through Executive Director or his successor authorized to deal with any matters with which these persons are concerned, on its behalf.

- 1.0 **'Territory Manager'** shall mean the Officer in Administrative In-charge of the contracting unit of RAILTEL.
- 2.0 **'SITE'** shall mean the place or places at which the plants / equipments are to be erected and services are to be performed as per the specifications of this tender.
- 3.0 **'CONTRACTOR'** shall mean the individual, firm or company who enters into contract with RAILTEL and shall include their executors, administrators, successors and permitted assigns.
- 4.0 **'CONTRACT' or 'CONTRACT DOCUMENT'** shall mean and include the agreement, the work order, the accepted appendices of rates, Schedules of Quantities, if any, General Conditions of Contract, Special Conditions of contract, instructions to Tenderers, the drawings, the technical specifications, the special specifications, if any, the tender documents and the Letter of Intent / Work Order / Acceptance letter issued by RAILTEL. Any conditions or terms stipulated by the tenderer in the tender documents or subsequent letters shall not form part of the Contract unless specifically accepted in writing by RAILTEL in the Letter of Intent / Work Order and incorporated in the Agreement.
- 5.0 **'GENERAL CONDITIONS OF CONTRACT'** shall mean the 'Instructions to Tenderers' and 'General Conditions of Contract' pertaining to the work detailed.
- 6.0 **'TENDER SPECIFICATIONS'** shall mean the Special Conditions, Technical Specifications, appendices, Site information and drawings pertaining to the work for which the tenderers are required to submit their offer.

- 7.0** **'TENDER DOCUMENTS'** shall mean the General Conditions of Contract and Tender Specifications.
- 8.0** **'LETTER OF INTENT / WORK ORDER'** shall mean the intimation by a letter / telegram / telex / fax to the tenderer that the tender has been accepted in accordance with provisions contained in the letter. The responsibility of the Contractor commences from the date of issue of this letter and all the terms and conditions of contract are applicable from this date.
- 9.0** **'COMPLETION TIME'** shall mean the period by date specified in the Letter of Intent / Work Order. The time allowed for completion of the work will be 60 days including Sundays & holidays from the date of issue of Letter of Intent / Work Order.
- 10.0** **'PLANT'** shall mean and connote the entire assembly of the plant and equipment covered by the Contract.
- 11.0** **'EQUIPMENT'** shall mean all equipment, machinery's, materials, structures, electrical and other components of the plant covered by the Contract.
- 14.0** **'TEST'** shall mean and include such test or tests to be carried out by the Contractor as are prescribed in the Contract or considered necessary by RAILTEL in order to ascertain the Quality, Workmanship, Performance and Efficiency of the contracted work or part thereof.
- 'APPROVED', 'DIRECTED' or 'INSTRUCTED' shall mean approved, directed or instructed by RAILTEL.
- 13.0** **'WORK' or 'CONTRACT WORK'** shall mean and include supply of all categories of labour, specified consumables, tools and tackles required for complete and satisfactory site transportation, handling, stacking, and storing.
- 14.0** **'SINGULAR' and 'PLURAL'** ETC. words carrying singular number shall also include plural and vice versa where the context so requires. Words importing masculine gender shall be taken to include the feminine gender and words importing persons shall include any Company or Association or Body of Individuals, whether incorporated or not.
- 15.0** **'HEADINGS'** the heading in these General Conditions are solely for the purpose of facilitating reference and shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or the contract.

16.0 'MONTH' shall mean any consecutive period of 30 days.

17.0 'WRITING' shall include any manuscript, type written or printed statement under the signature or seal as the case may be.

"The authorized representative of RAILTEL" shall mean the representative duly authorized by RailTel and can be the architect, or an official appointed by RailTel.

18.0 Law governing the contract and court jurisdiction:

The contract shall be governed by the Law for the time being in force in the Republic of India. The Civil Court at Delhi / New Delhi having ordinary Original Civil Jurisdiction shall alone have exclusive jurisdiction in regard to all claims in respect of this Contract.

19.0 Issue of Notice:

The Contractor shall furnish to the RAILTEL, the Name, Designation and Address of his authorized agent and all complaints, notices, communication and references shall be deemed to have been duly given to the Contractor, if delivered to the Contractor or his authorized agent or left at or posted to the address either of the Contractor or his authorized agent and shall be deemed to have been so given in the case of posting on the day on which they would have reached such address in the ordinary course of post or at which they were so delivered or left.

20.0 Use of Land:

No land belonging to RAILTEL or its customers under temporary possession of RAILTEL shall be occupied by the Contractor without the written permission of RAILTEL. Whenever such land is occupied by the Contractor for execution of works on permission of RAILTEL, the same shall be vacated by the Contractor within 2 days of instructions from RAILTEL and no request for extension shall be entertained by RAILTEL.

21.0 Commencement and Completion of Work:

The Contractor shall commence and execute as per para 11 of Section II.

21.1 If the successful tenderer fails to commence the work within the stipulated time, RAILTEL, at its sole discretion, will have the right to cancel the contract. His Earnest Money and / or Security Deposit will

stand forfeited without any further reference to him without prejudice to any and all of RAILTEL's other rights and remedies in this regard.

- 21.2 All the works shall be carried out under the direction and to the satisfaction of authorized representative of RAILTEL.
The transported equipment erected / constructed plant or work performed under the Contract, as the case may be, shall be taken over when it has been completed in all respects and / or satisfactorily put into operation at site.
- 21.3 On the completion of work, authorized representative of RAILTEL shall issue a Provisional Acceptance Certificate for successful completion of work to his satisfaction jointly with the contractor.
- 21.4 The period of warranty shall start from the date of issue of such Provisional Acceptance Certificate, as above, for a period of one year. After completion of **warranty period**, a Final Acceptance Certificate shall be issued by the authorized representative of RAILTEL. The final acceptance shall take effect from the date of expiry of warranty period.

22.0 Measurement of work and Mode of payment:

All payments due to the Contractor shall be made by "Account Payee" Cheques.

- 22.1 Payments for the works shall be made in accordance with approved designs & drawings and measured in relevant units except where provided or otherwise. The measurements will be made generally in accordance with standard engineering practices. The abstract of quantities arrived shall be entered in the Measurement Book and signed by the Contractor & the authorized representative of RAILTEL.
- 22.2 95%(Ninety five percent) of the progress payment for each item of Schedule shall be made after successful completion at various locations, joint measurement and testing to the satisfaction of Engineer.
- 22.3 Final payment of 5% (Five percent) value of the works/services completed shall be made after the issue of Provisional Acceptance Certificate and supply of Documentation as per Para k of Section II.
- 22.4 On the basis of Provisional Acceptance Certificate from the RailTel for all the works at all the locations covered in this contract and reconciliation of materials issued, the final bill for the balance payment for each item of work shall be submitted by the Contractor along with a clear 'No Claim Certificate'. The Final Acceptance

Certificate shall be issued by the RAILTEL only when he has accepted the work wholly after conducting the acceptance tests.

- 22.5 Release of Security Deposit shall be made after satisfactory performance of the work under the supervision of the contractor for a period of one year after commissioning and issue of Final Acceptance Certificate.
- 22.6 All recoveries due from the Contractor for the month / period shall be affected in full from corresponding running bills unless specific approval from competent authority is obtained to the contrary.
- 22.7 Measurement shall be restricted to that quantity for which it is required to ascertain the financial liability of RAILTEL under this contract. The Contractor shall bear the expenditure involved, if any, in making the measurements and testing of materials to be used / used in the work. The Contractor shall, without extra cost to RAILTEL, provide all the assistance with appliances and other things necessary for measurement.
- 22.8 If, at any time due to any reason whatsoever, it becomes necessary to re-measure the work done, in full or in part, the expenses towards such re-measurement shall be born by the Contractor only.
- 22.9 Passing of bills covered by such measurements does not amount to acceptance of RAILTEL of the completion of the work measured. Any left out work has to be completed by the contractor, as directed.
- 22.10 All measurement, method of measurement, meaning an intent of specifications and interpretation of Special Conditions of Contract, given and made by the authorized representative of RailTel shall be final and binding.
- 22.11 Subject to any deductions or recovery which the Railtel may be entitled to make under contract, the Contractor will be entitled to be paid from time to time by way of 'on account payment' for supply of goods and 'progress payment' for works as in the opinion of the Engineer he has executed in terms of Contract.
- 22.12 On expiry of the warranty period (i.e. ONE year) and issue of the certificate of final acceptance of the entire installations, the security deposit (Para 16.6) will be refunded or Bank Guarantee released to the Contractor after adjustment of any dues payable by the contractor.

23.0 Rights of RailTel:

RAILTEL reserves to itself the following rights in respect of this contract without entitling the Contractor to any compensation.

To get the work done through another agency at the risk and cost of the Contractor, in the event of poor progress or the Contractor's inability to progress the work for Completion as stipulated in the contract, poor quality of work, persistent disregard of instructions of Architect / RAILTEL, assignment, transfer, subletting of the contracted work without written permission of RAILTEL, non-fulfillment of any contractual obligations etc. and to claim / recover compensation for such losses from the Contractor including RAILTEL's supervision charges and overheads from Security Deposit / other dues.

- 23.1 To withdraw any portion of work and / or to restrict / alter quantum of work as indicated in the contract during the progress of work and get it done through the contractor of the adjacent section and / or by the departmental labour to suit RAILTEL's requirements or in case RAILTEL decides to advance the compensation due to other emergent reasons.
- 23.2 To terminate the contract after due notice and forfeit the Security Deposit and recover the loss sustained in getting the balance work done through other agencies in addition to liquidated damages in the event of:
 - Contractor's continued poor progress.
 - Withdrawal from or abandonment of the work before completion of the work.
 - Corrupt act of the Contractor,
 - Insolvency of the -Contractor,
 - Persistent disregard of the instructions of RAILTEL.
 - Assignment, transfer, subletting of the contract work without written permission.
 - Non-fulfillment of any contractual obligations.
- 23.3 To recover any moneys due from the Contractor from out of any moneys due to the Contractor under this or any other Contract or from the Security Deposit.
- 23.4 To determine the Contract or to restrict the quantum of work and pay for the portion of work done as per the satisfaction of RAILTEL.
- 23.5 To effect recoveries from any amounts due to the Contractor under this or any other contract or in any other form the moneys which RAILTEL is forced to pay to anybody due to Contractor's failure to fulfill any of his obligations.

- 23.6 To restrict or increase the quantity and nature of work to suit site requirements, since the tender specifications are based on preliminary documents and quantities furnished therein are indicative and approximate and the rates quoted shall not be subject to revision in any manner whatsoever.
- 23.7 To deploy RAILTEL's or adjacent-section-contractor's skilled and semiskilled workmen in case of emergency / poor progress / deficiency in skill on the part of the employees of the Contractor and to recover the expenditure on account of the same from the moneys due to the Contractor.
- 23.8 While every endeavour will be made by RAILTEL to this end, RAILTEL cannot guarantee uninterrupted work due to conditions beyond its control. The Contractor will not be entitled to any compensation / extra payment on this account.

In the event of any dispute of technical nature, the decision of RAILTEL shall be final and binding to the Contractor.

24.0 Responsibilities of Contractor in respect of local taxing rules, local laws, employment for workers etc.:

The following are the responsibilities of the Contractor in respect of observance of local laws, employment of personnel, payment of taxes etc.

- 24.1 The tenderer must be registered in relevant states for the payment of Works Contract Tax OR tenderer must register for the same and produce the same along with the bills for payment.
- 24.2 As far as possible, unskilled workers shall be engaged from the local areas in which the work is being executed.
- 24.3 The Contractor at all times during the continuance of this contract, shall in all his dealings with the local labour for the time being employed on or in connection with the work, has due regard to all local festivals, religious and other customs.
- 24.4 The Contractor shall comply with all State and Central Laws, Statutory Rules, Regulations etc., such as The Payment of Wages Act, The Minimum Wages Act, The Workmen's Compensation Act, The Employer's Liability Act, The Industrial Disputes Act, The Employee's Provident Fund Act, Employee's State Insurance Scheme, The Contract Labour (Regulations and Abolitions Act, 1970) and other Acts, Rules and Regulations for labour as may be enacted by the

Government during the tenure of the Contract and having force or jurisdiction at site. The Contractor shall give to the local Governing Body, Police and other concerned authorities all such notice as may be required under law.

- 24.5 The Contractor will obtain independent licence under the Contract Labour (Regulations and Abolition Act, 1970) from the concerned authorities based on the certificate (Form -V) issued by the principal employer / customer, if such license is required under the law.
- 24.6 The Contractor shall pay all taxes, fees, licence charges, deposits, duties, tolls, royalty, commissions or other charges which may be leviable on account of any of his operations connected with this contract. In case, RAILTEL is forced to make any such payment, RAILTEL shall recover the same from the Contractor either from moneys due to him or otherwise as deemed fit.
- 24.7 The Contractor shall be responsible for the provision of health and sanitary arrangements more particularly described in the Contract Labour (Regulations and Abolition Act, 1970) and safety precautions as may be required for safe and satisfactory execution of the contract.
- 24.8 The Contractor shall be responsible for proper accommodation including adequate medical facilities for the personnel employed by him.
- 24.9 The Contractor shall be responsible for the proper behaviour and observance of all regulations by the staff employed by him.
- 24.10 The Contractor shall ensure that no damage is caused to any person / property of other parties working at site. If any such damage is caused, it shall be the responsibility of the Contractor to make good the losses and compensate them.
- 24.11 All the properties/equipment/components of RAILTEL loaned with or without deposit, to the Contractor shall remain the properties of RAILTEL. The Contractor shall use such properties for the purpose of execution of this contract. All such properties/ equipment / component shall be taken to be in good condition unless notified to the contrary by the Contractor within 48 hours. The Contractor shall return them in good condition as and when required by RAILTEL. In case of non-return, loss, damage, repairs etc., the cost thereof, as may be fixed by the Engineer, will be recovered from the Contractor.

- 24.12 It shall not be obligatory on the part of RAILTEL to supply any tools and tackles or materials other than those specifically agreed to be given by RAILTEL.
- 24.13 The Contractor shall fully indemnify and keep indemnified RAILTEL against all claims of whatever nature arising during the course of execution of this contract.
- 24.14 In case the Contractor is required to undertake any work outside the scope of this contract, the amount payable shall be as may be mutually agreed upon.
- 24.15 Any delay in completion of works or non-achievement of periodical targets, due to reasons attributable to the Contractor, will have to be compensated by the Contractor either by increased manpower and resources or by working extra hours or more than one shift at no extra cost to RAILTEL.
- 24.16 The Contractor will be directly responsible for payment of wages to his workmen. A pay-roll sheet giving details of all payments made to the workmen duly signed by the Contractor's representative should be furnished to RAILTEL, if called for.
- 24.17 In case of any class of work for which there is no specification laid down in the contract, such work shall be carried out in accordance with the instructions and requirements of the Engineer.
- 24.18 No levy, payment or charges made or imposed shall be impeached by reason of any clerical error or by reason of any mistake in the amount levied, demanded or charged.
- 24.19 No idle labour charges will be admissible in the event of any stoppage of work resulting in the Contractor's workmen being rendered idle due to any reason at any time.
- 24.20 The Contractor shall take all reasonable care to protect the materials and the work till such time it has been taken over by RAILTEL.
- 24.21 Contractor shall not stop work or abandon the site for whatsoever reason or dispute, excepting for force majeure conditions. All problems / disputes shall be separately discussed and settled without affecting the progress of work. Stoppage or abandonment of work other than under force majeure conditions shall be treated as breach of work of contract and dealt with accordingly.

- 24.22 The Contractor shall keep the area of work clean and shall remove the debris etc. outside of RailTel's premises, while executing day-to-day work. Upon completion of work, the Contractor shall remove from the vicinity of work, all scrap, packing materials, rubbish, unused and other materials and deposit them in places specified by the Engineer. The Contractor will also demolish all the hutments, sheds, offices, etc., constructed and used by him and shall clean the debris. In the event of his failure to do so, the same will be arranged to be done by the RAILTEL and the expenses recovered from the Contractor.
- 24.23 The Contractor shall execute the work in the most substantial and workmen like manner in the stipulated time. Accuracy of work and timely execution shall be the essence of this contract. The Contractor shall be responsible to ensure that the quality, assembly and workmanship conform to the dimensions and clearance given in the drawings and/or as per the instructions of the Engineer.
- 24.24 The Contractor shall furnish fortnightly labour deployment report indicating the classification and number of workmen engaged, date wise and category wise. Besides, the Contractor shall also furnish progress reports on work at regular intervals as required by the Engineer.

25.0 Responsibility of contractor in respect of safety of men, equipment, material and environment:

All safety rules and codes applied by RAILTEL at site shall be observed by the Contractor and his workmen without exception. The Contractor shall be responsible for the safety of the equipment / material and work to be performed by him.

- 25.1 Contractor shall also take such additional precautions as may be indicated from time to time by the Engineer, with a view to prevent pilferage, accidents, fire hazards etc. Suitable number of Clerical Staff, watch and ward, Storekeepers to take care of equipment, material, construction tools and tackles shall be posted at site by the Contractor till the completion of work under this contract. The Contractor shall arrange for such safety devices as are necessary for this type of work and carry out the requisite site tests of handling equipment, lifting tools, tackles etc. as per usual standards and practices.
- 25.2 The Contractor shall provide to its work force and ensure the use of the following personal protective equipment as found necessary and as directed by the authorized RAILTEL officials.
Safety Helmets conforming to IS – 2925.
Safety Belts conforming to IS – 3521.

Safety Shoes conforming to IS – 1989.

Eye & Face Protection devices conforming to IS–8520 & IS–8940.

Hand & Body Protection devices conforming to IS – 2573, IS – 6994, IS – 8807 & IS – 8519.

- 25.3 All tools, tackles, lifting appliances, material handling equipment, scaffolds, cradles, safety nets, ladders, equipment etc. used by the Contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorized RAILTEL official who shall have the right to ban the use of any item.
- 25.4 All electrical equipment, connections and wiring for construction power, its distribution and use shall conform to the requirements of Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the Contractor to carry out all types of electrical works. All electrical appliances including portable electric tools used by Contractor shall have safe plugging system to source of Power and be appropriately earthed.
Where it becomes necessary to provide and / or store petroleum products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the Contractor shall be responsible for carrying out such provision and / or storage in accordance with the rules and regulations laid down in the relevant Government Acts, such as Petroleum Act, Explosive Act, Petroleum and Carbide of Calcium Manual of the Chief Controller of Explosives, Government of India etc. Prior approval of the authorized RAILTEL official at the site shall also be taken by the Contractor in all such matters.
- 25.5 The Contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working, when natural daylight may not be adequate for clear visibility.
- 25.6 In case of a fatal or disabling injury/accident to any person at construction sites due to lapses by the Contractor, the victim and/or his/her dependants shall be compensated by the Contractor as per statutory requirements. However, if considered necessary, RAILTEL shall have the right to impose appropriate financial penalty on the Contractor and recover the same from payments due to the Contractor for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by RAILTEL giving opportunity to the Contractor to present his case.
- 25.7 In case of any damage to property due to lapses by the Contractor, RAILTEL shall have the right to recover the cost of such damages from

the payments due to the Contractor after holding an appropriate enquiry.

- 25.8 In case of any delay in the completion of a jobs due to mishaps attributable to lapses by the Contractor, RAILTEL shall have the right to recover cost of such delay from the payments due to the Contractor, after notifying the Contractor suitably and giving him opportunity to present his case.
- 25.9 If the Contractor fails to improve the standards of safety in its operation to the satisfaction of RAILTEL, after being given reasonable opportunity to do so and / or if the Contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorised RAILTEL official, RAILTEL shall have the right to take the corrective steps at the risk and cost of the Contractor after giving a notice of not less than Eleven days indicating the steps that would be taken by RAILTEL.
- 25.10 The Contractor shall submit report of all accidents, fires, Property damage and dangerous occurrences to the authorised RAILTEL official immediately after such occurrence, but in any case not later than 12 hours of the occurrence. Such reports shall be furnished in the manner prescribed by RAILTEL. In addition, periodic reports on safety shall also be submitted by Contractor to the authorised RAILTEL official from time to time as prescribed.
- 25.11 During the course of construction, alteration or repair scrap lumbars with protruding nails, sharp edges etc., and all other debris including combustible scrap shall be kept cleared from working areas, passage ways and stair in and around site.
Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck or permitted to strike each other violently. When cylinders are transported by powered vehicles, they shall be secured in a vertical position.
- 25.12 The Contractor shall be responsible for the safe storage of his radioactive sources.

All the Contractor's supervisory personnel and sufficient number of workers shall be trained for fire fighting and shall be assigned specific fire protection duties. Enough number of such trained personnel must be available during the tenure of the contract.
- 25.13 Contractor shall provide enough fire protecting equipment of the types and numbers at his office, stores, erection site, other temporary

structures, labour colony area etc. Access to such fire protection equipment shall be easy and kept open at all times. Compliance of the above requirement under fire protection shall in no way relieve the Contractor of any of his responsibility and liabilities to fire accident occurring. In the event fire safety measures are not to RAILTEL's satisfaction, RAILTEL shall have option to provide the same and recover the cost plus incidentals from Contractor's bills and / or impose penalty as deemed fit by the authorised representative of RAILTEL.

26.0 Consequences of cancellation:

Whenever RAILTEL exercises its authority to terminate the contract/withdraw a portion of work, the work may be got completed by any other means at the Contractor's risk and cost provided that in the event of the cost of completion (as certified by the Authorised representative of RAILTEL which shall be final and binding on the Contractor) being less than the contract value, the advantage shall accrue to RAILTEL. If the cost of completion exceeds the moneys due to the Contractor under the contract, the Contractor shall either pay the excess amount demanded by RAILTEL or the same shall be recovered from the Contractor. This will be in addition to the forfeiture of Security Deposit and recovery of liquidated damages as per relevant clauses.

- 26.1 In case RAILTEL completes the work under the provisions of this clause, the cost of such completion to be taken into account for determining the excess cost to be charged to the Contractor shall consist of cost of materials purchased and/or labour provided by RAILTEL with an addition of such percentage to cover supervision and establishment charges as may be decided by RAILTEL.

27.0 Insurance:

- 27.1 Contractor shall arrange for insuring all the materials covering the risks during transit, storage, erection and commissioning. It shall be the sole responsibility of the Contractor to insure his workmen against risks of accidents and injury while at work as required by the relevant Rules and to pay compensation, if any, to them as per Workmen's Compensation Act. The Contractor shall also insure his staff against accidents. The work will be carried out in a protected area and all the Rules and Regulations of RAILTEL/its Client in the Project Area which is in force from time to time will be followed by the Contractor.

If due to negligence and/or non-observance of safety and other precautions, any accident/injury occurs to any other persons/public, the

Contractor shall pay necessary compensation and other expenses, if so decided by the appropriate authority.

- 27.2 The Contractor will take necessary precautions and due to protect the material, while in his custody from any damage/loss till the same is taken over by RAILTEL or customer. For lodging/processing of insurance claim the Contractor will submit necessary documents. RAILTEL will reserve the right to recover the loss from the Contractor, in case the damage/loss is due to carelessness/negligence on the part of the Contractor. In case of any theft of material under Contractor's custody, matter shall be reported to police by the Contractor immediately and copy of FIR and subsequently police investigation report shall be submitted to RAILTEL for taking up with insurance.

28.0 Strikes and lockouts:

The Contractor will be solely responsible for all disputes and other issues connected with his workmen. In the event of Contractor's workmen resorting to strike or the Contractor resorting to lockout and if the strike or lockout so declared is not settled within a period of one month, RAILTEL shall have the right to get the work executed by employing its own men or through other agencies or both. The cost incurred by RAILTEL in this regard shall be recovered from the Contractor.

For any purpose whatsoever, the employees of the Contractor shall not be deemed to be in the employment of RAILTEL.

29.0 Force Majeure:

The following shall amount to force majeure conditions. Acts of God, Acts of any Government, War, Sabotage, Riots, Civil Commotion, Police Action, Revolution, Flood, Fire, Cyclone, Earthquake and Epidemic and other similar causes over which the Contractor has not control.

- 29.1 If the Contractor suffers delay in the due execution of the contract, due to delays caused by force majeure conditions, as defined above, the agreed time of completion of the work covered by this contract shall be extended by a period of time equal to the period of delay, provided that on the occurrence of any such contingency, the Contractor immediately reports to RAILTEL in writing the cause for the delay but the Contractor shall not be eligible for any compensation on this account.

30.0 Guarantee:

Even though the work will be carried out under the supervision of the authorized representative of RAILTEL, the Contractor will be responsible for the quality of the workmanship and shall guarantee the work done for a period of **one year from the date of completion of work** as certified by the authorized representative of RAILTEL and shall rectify free of cost to RAILTEL all defects arising out of faulty erection during the guarantee period starting from the date of completion of rectification. In the event of the Contractor failing to repair the defective works within the time specified by the authorized representative of RAILTEL, RAILTEL may proceed to undertake the repairs of such defective works at the Contractor's risk and cost, without prejudice to any other rights and recover the same from out of any moneys payable to the Contractor or by other legal means.

31. SETTLEMENT OF DISPUTE AND ARBITRATION

31.1 With Private Parties.

31.1.1 Any dispute or difference whatsoever arising between the parties out of or relating to the construction, meaning, scope, operation or effect of this contract or the validity or the breach thereof shall be settled by a sole arbitrator in accordance with provisions contained in Arbitration and Conciliation Act, 1996 as amended and the award made in pursuance thereof shall be binding on the parties. The venue of such arbitration or proceedings thereof shall be New Delhi.

31.1.2 All arbitration proceedings shall be conducted in English. Resources against any Arbitral award so rendered may be entered into court having jurisdiction or application may be made to such court for the order of enforcement as the case may be.

31.1.3 The Arbitral Tribunal shall consist of the sole Arbitrator if the value of claim is upto Rs. 10 lakhs. The arbitrator will be by the Managing Director of RailTel Corporation of India Limited. If the value of claim or amount under dispute is more than Rs. 10 lakhs, the matter shall be referred to the adjudication of arbitral council. Managing Director/ RailTel shall furnish a panel of three names to the contractor, out of which contractor will recommend one name to be his nominee and then Managing Director /RailTel shall appoint out of the panel one name as RailTel's nominee and these two arbitrators with mutual consent appoint a third arbitrator who shall act as deciding arbitrator. The award of the Sole arbitrator or the Arbitral council, as the case may be, shall be final and binding on both the parties, i.e. Contractor and

RailTel.

31.1.4 Each of the parties agree that notwithstanding that the matter may be referred to Arbitrator as provided herein, the parties shall nevertheless pending the resolution of the controversy or disagreement continue to fulfil their obligation under this Agreement so far as they are reasonably able to do so.

31.2 With CPSE / Govt Department / Govt Organisation.

31.2.1 In the event of any dispute or difference relating to the interpretation and application of the provisions of the contracts, such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary/Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

32.0 Rates of extra items/quantity:

The rates of the extra items will be derived from the tender wherever possible.

32.1 In case the rates do not exist in the tender, the rate will be derived as per the market rates. The Tenderer shall submit analysis of rates as per Annexure, with assumption of any one item.

32.2 If the quantity of any item under execution is varying up to $\pm 25\%$ of the total quantity (as per the Schedule of Requirement), the contractor shall have to execute the same item at **similar rates** as applicable in the contract agreement.

32.3 RailTel reserves the rights to vary the quantity by 25% above or below the BOQ without assigning any reason to the contractor.

- 32.4 All the work executed should be got approved by the authorized representative of RAILTEL and in case of any bad workmanship pointed out shall be either rectified or be taken away from the site if it is not rectifiable and shall be replaced without any extra cost by the Tenderer.
- 32.5 The Tenderer should indicate the breakup of the items of %age of the unit cost for material, wastage, labour, taxes, profits & overheads, etc. separately. This %age shall be the basis for evaluation of the rates of the extra items.
Measurements of the items shall be as per the IS1200 / CPWD manual / BOQ units.
- 32.6 All Government taxes, levies etc. like Works Contract – Sales Tax, TDS shall be deducted from all the running bills of the Contractors.
- 32.7 All the works executed or under execution finished or semi-finished including all materials lying at site shall become the property of RAILTEL immediately on receipt of bills of the Contractors for the same.
- 32.8 The procurement of Cement, Steel, as required for completion of work shall be the responsibility of the Contractor.
All Fittings / Fixtures, Materials shall conform to the relevant ISI specifications and approval of Authorised representative of RAILTEL.

Section IV

(Special Conditions of Contract)

1. The Tenderer should study all the Tender documents carefully and understand the conditions, drawing, specifications, design etc. before quoting. In case of non availability of any information or documents in the Tender Document or if there are any doubts, the Contractor shall obtain clarification either from authorized representative of RAILTEL in writing before submission of Tender and authorized representative of RAILTEL shall not be responsible for the same in any manner whatsoever. In case of any discrepancy, the sequence for execution of Works shall follow as mentioned below:-
 - 1.1. Detail Drawings.
 - 1.2. Bill of Quantities.
 - 1.3. Instructions.
2. The Tenderer shall take work permit from the concerned authorities, if required, before starting the Work.
3. The Tenderer has to obtain the required security permissions from the concerned authority prior to the commencement of the Work and should furnish the list of workers/staff for issue of temporary passes, if required.
4. All entries in the Tender document should be in ink/typed. Corrections, if any should be attested by full signature of the Tenderer.
5. The Tenderer or his authorized representative shall sign every page of the Tender documents. (Power of Attorney to be submitted)
6. All erasures and alterations made while filling the tender must be attested by initials of Tenderers. Over writing of figures is not permitted.
7. No page of this Tender shall be removed and the set must be submitted as it is. EACH PAGE OF THE TENDER FORM IS TO BE SIGNED ALONG WITH THE STAMP OF THE COMPANY/FIRM.
8. RAILTEL do not bind them to accept the lowest Tender and reserves the right to reject any or all the Tenders.
9. Joint Tenders shall not be accepted/considered.
10. The Tenderers shall remove all debris/wastes etc. wash and clean the floors and hand over the site quite clean on completion of the work.

11. In case of non-completion or delay in completion of the work or removal of defects in time, RailTel Corporation of India shall be free to appoint another agency to get the job done at the Tenderer's risk and cost.

12. **Penalty for delay in completion:**

12.1. If the contractor fails to execute and complete the work within the time specified in the Agreement or within the period of extension granted, the contractor shall accept reduction in the total amount payable to him by the purchaser at the rate of 0.5% per week or part thereof (rounded off to the nearest whole number) of the total value of the contract for the actual delay occasioned beyond the appointed time by which the work shall have been completed under the contract, for the reasons beyond his control.

12.2. The total value of penalty on account of above shall be limited to maximum of 10% (Ten percent) of the total contract value.

12.3. Such reduction shall be accepted by the purchaser in full satisfaction of the contractor's liability arising from delay only. This penalty for delay in completion will be applicable separately for each stage of completion of work when two or more stage of completion is specified in the contract. The purchaser's engineer shall at his sole discretion specify a time limit within which the unfinished portion of the work shall be completed after serving on the contractor a notice of Purchaser's intention to recover the said penalty in Form IV.

NOTE: For purpose of this para, the value of work shall be calculated on the basis of unit prices included in Schedule of Requirements.

13. **Adherence of time schedule**

13.1. Timely completion of the work is the essence of the contract. While delay in execution will attract penalty.

13.2. If any delay have arisen from any cause which the RAILTEL may agree as being a reasonable ground for extension of time, the authorized representative of RAILTEL may allow such additional time as he may in his absolute discretion consider to be reasonably justified by the circumstances of the case. Such extensions shall be granted, on request from contractor, **with or without** liquidated damages.

14. The work as detailed in this Tender shall be executed and completed in all respects in accordance with the Tender document, instruction to Tenderers, Bill of Quantities, Conditions of the Contract, technical specification, schedules and Drawings to the satisfaction of authorized representative of RAILTEL.

15. **Warranty Period:**

The work done / material supplied as a part of this tender is to be warranted for a period of one year after issue of Provisional Acceptance Certificate (PAC). This shall broadly cover the following:

- 15.1. Any defect arising out of bad workmanship must be rectified.
- 15.2. Manufacturing defects as may be detected during this period must be repaired or replaced as the case may be.
- 15.3. Any defective material that may be noticed must be replaced.
- 15.4. During this warranty period, work must be completed within 24 hours from the time it is notified. In case the same is not complied with, requisite penalty will be imposed and amount recovered from the security deposit of the contractor.

SIGNATURE OF TENDERER WITH RUBBER STAMP

राजकोट
RAILTEL

Declaration

1. I/We hereby declare that I/We _____ have read the various conditions to tender attached here to and hereby agree to ABIDE BY THE SAID CONDITIONS. I/We also agree to keep this tender open for acceptance for a period of 30 days from the date fixed for opening the same and in default thereof, I/We will be liable for forfeiture of my/our Earnest Money. I/We offer to do the work of “_____ Name of the work _____” at the rates quoted in the attached schedules and hereby bind myself/ourselves to complete the work within ----- days from the date of issue of Letter of Acceptance of the tender. I/We also hereby agree to abide by the Various Conditions of Contract and to carry out the work according to the Specifications for materials and works laid down by the RailTel for the present contract.
2. I/We understand that our tender will not be considered, if the offered rates are not written unambiguously.
3. I/We hereby confirm that only the relevant entries asked for have been made within the tender documents issued to us. I/We also confirm that in the event of any entry in this document, other than the relevant entry, shall make this tender invalid.
4. I/We hereby agree to obtain the registration number under the Contract Labour Act by registering with the Labour Commissioner and furnish the registration details to RailTel Corporation of India Limited.
5. I/We hereby also agree to get my/our firm registered with the Sales Tax Department of Government of relevant states for Works Contract Tax as per the current law, as applicable.
6. I/We hereby agree to obtain Employer’s number from the Employee’s State Insurance Corporation and the Provident Fund Commissioner. In the event of our not being able to provide the above said number, I/We agree to RailTel Corporation of India Limited retaining appropriate amounts at the stipulated percentage rates towards ESIC and PF covering employees and employers contribution from our interim and final bills and refunding the same to us on our providing the proof of having complied with the requirements of the relevant Acts regarding payment. We also agree that in case, I/We are unable to obtain these numbers for ESIC and PF, RailTel Corporation of India Limited may remit such amounts to the appropriate authorities.
7. I/We agree to submit to RailTel Corporation of India Limited necessary reports and returns as required for compliance of ESIC & PF regulations.
8. A sum of Rs.....only is herewith forwarded as “Earnest Money”. The full value of Earnest Money shall stand forfeited without prejudice to any other rights or remedies if, I/We do not execute the contract agreement within ----- days after receipt of notice issued by the Railways that such documents are ready or, I/We do not commence the work within -----days after receipt of orders to that effect.
9. Until a formal agreement is prepared and executed the acceptance of this tender shall constitute a binding contract between us subject to modifications, as may be mutually agreed to between us and indicated in the “Letter of Acceptance” of my/our offer for this work.
10. I have enclosed a list of document as per the list in Annexure to this declaration.

Date: _____

Place: _____

**SIGNATURE OF TENDERER WITH
RUBBER STAMP**

Contract Agreement Form

An AGREEMENT made this _____ day of _____
_____ Two thousand and Fourteen, between RailTel Corporation of India Limited,
New Delhi-110053 ,acting in the premises through General Manger or his
representative _____ of RAILTEL
CORPORATION OF INDIA LIMITED, (a Company with its Registered Office at 6th
Floor, Block III, Delhi IT Park,Shastri Park, Delhi – 110053) having its office at 6th
Floor, Block III, Delhi IT Park,Shastri Park, Delhi – 110053 (hereinafter referred to as
'RailTel ') of one part and M/s _____
(Hereinafter referred to as 'contractor') of the other part.

Whereas in response to a call for Tender for _____
_____, New Delhi –110 053 as per Tender papers at
Annexure 'A' hereto the Contractor has submitted a Tender as per Annexure 'B'
hereto and whereas the said Tender of the Contractor has been accepted for as
per copy of Letter of Acceptance of Tender No. _____
_____ dated _____
complete with enclosures at the accepted rates and agreed deviations from Tender
Papers _____ as per Annexure-C
hereto and at an estimated contract value of Rs. _____
(Rupees _____
_____ only).

Now this agreement witnesses that in consideration of the premises and the payment
to be made by the Purchaser to the Contractor provided for herein below the
Contractor shall supply all equipment and materials and execute and perform all
works for which the said Tender of the Contractor has been accepted strictly
according to the various provisions in Annexure 'B' and 'C' hereto and upon such
supply, execute and performance to the satisfaction of the purchaser and the
purchaser shall pay to the Contractor at the rates accepted as per the said Annexure
'C' and in terms of the provisions therein.

In the witness where of the parties have hereunto set and subscribed their respective
hands and/or seals day and year respectively mentioned against their respective
signatures.

Signed and delivered at _____
by Shri _____ for and on behalf of M/s. _____
_____, the contractor
within named in the presence of _____

1. Signatures
Date
Name in Block Capitals
Address

2. Signatures
Date
Name in Block Capitals
Address

Signed and delivered at _____ for
and on behalf of RailTel by Shri _____
_____ (General Manager /Northern Region or his successor) in the presence of:-

1. Signatures
Date
Name in Block Capitals
Address

2. Signatures
Date
Name in Block Capitals
Address

Annexure 'A': Tender Paper No. -----

Annexure 'B': Firm's Paper No. -----

Annexure 'C': Letter of Acceptance No. -----

Dated:

(Signature)



Guarantee Bond for Security Deposit

(On Stamp Paper of requisite value)
(To be used by approved Scheduled Banks)

1. In consideration of the office of the General Manager, RAILTEL CORPORATION OF INDIA LIMITED, (a Company with its Registered Office at 6th Floor, Block III, Delhi IT Park, Shastri Park, Delhi – 110053) having its office at 6th Floor, Block III, Delhi IT Park, Shastri Park, Delhi – 110053 (Herein after called RailTel) having agreed to exempt _____ (Hereinafter called “ the said Contractor(s)”) from the demand, under the terms and conditions of an Agreement No. _____ dated _____ made between _____ and _____ for (hereinafter called “ the said Agreement”) of security deposit for the due fulfilment by the said Contractor (s) of the terms and conditions contained in the said Agreement, or production of a Bank Guarantee for Rs. _____ (Rs _____ only). We, _____ (indicate the name of the Bank) hereinafter referred to as “ the Bank”) at the request of _____ Contractor(s) do hereby undertake to pay the RailTel an amount not exceeding Rs. _____ . Against any loss or damage caused to or suffered or would be caused to or suffered by the RailTel by reason of any breach by the said Contractor(s) of any of the terms or conditions contained in the said Agreement.
 2. We _____ bank do hereby undertake to pay the amounts due and payable under this Guarantee without any demur, merely on demand from the RailTel stating that the amount is claimed is due by way of loss or damage caused to or would be caused to or suffered by the RailTel by reason of breach by the said Contractor(s) of any of terms or conditions contained in the said Agreement or by reason of the Contractor(s) failure to perform the said Agreement. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____ only.
 3. We, _____ bank undertake to pay to the RailTel any money so demanded notwithstanding any dispute or disputes raised by the Contractor(s) / Supplier(s) in any suit or proceedings pending before any court or Tribunal relating thereto our liability under this present being, absolute and unequivocal. The payment so made by us under this Bond shall be a valid discharge of our liability for payment thereunder and the Contractor(s) / Supplier(s) shall have no claim against us for making such payment.
 4. We, _____ bank further agree that the Guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Agreement and that it shall continue to be enforceable till all the dues of the RailTel under or by virtue of the said Agreement have been fully paid and its claims satisfied or discharged or till RailTel certifies that the terms and conditions of the said Agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this Guarantee. Unless a demand or claim under the Guarantee is made on us in writing on or before the _____, we shall be discharged from all liability under this Guarantee thereafter.
- We, _____ (indicate the name of Bank) Further agree with the RailTel that the RailTel shall have the fullest liberty

without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the Agreement or to extend time of to postpone for any time or from time to time any of the powers exercisable by the RailTel against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said Agreement and we shall not be relieved from our liability by reason of any such variation, or extension to the said Contractor(s) or for any forbearance, act or omission on the part of RailTel or any indulgence by the RailTel to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have affect of so relieving us.

This Guarantee will not be discharged due to the change in the Constitution of the Bank or the Contractor(s) Supplier(s).

We _____ (indicate the name of Bank) lastly undertake not to revoke this Guarantee during its currency except with the previous consent of the RailTel in writing.

Dated the _____ day of _____ 2016
for
(indicate the name of the Bank)

Witness

1. Signature
Name

2. Signature
Name

NOTE: The Guarantee shall be valid for a period of four months after the expiry of the warranty period of the equipment as per clause 12.c.



Extension of period of completion of Work on Contractor’s account

No.
To,

Date:

.....
.....

Sub: (Name of Work)

1. Acceptance Letter No.
2. Undertaking / Agreement No.

Ref:(Quote specific application of the Contractor for extension to date, if received).

Dear Sir,

The stipulated date for completion of the work mentioned above is..... From the progress made so far and the present rate of progress, it is unlikely that the work will be completed by the above date (or However, the work was not completed on this date).

Expecting that you may be able to complete the work if some time is given the General Manager (Northern Region) RailTel Corporation of India Limited, New Delhi although not bound to do so, hereby extends the time for completion from _____ to _____.

Please note that an amount equal to 0.5% of the total value of the contract per week or part thereof (rounded off to the nearest whole number) subject to a maximum of 10% of the total contract value of the works as a recovery for delay in the completion of the work after the expiry of (1) will be recovered from you as mentioned in para 12 chapter II, section II of the special conditions of contract for the extended period notwithstanding the grant of this extension. You may proceed with the work accordingly. **(applicable when the extension has been granted with liquidated damages).**

The above extension of the completion date will also be subject to the further condition that no increase in rates on any account will be payable to you.

Please intimate within a week of the receipt of this letter your acceptance of the extension on the conditions stated above.

Please note that in the event of declining to accept the extension on the above said conditions or, in the event of your failure after accepting or acting up to this extension to complete the work by (2)_____ (mention the extended date here), further action will be taken in terms of relevant para of special conditions of contract.

Yours faithfully,
for & on behalf of RailTel Corporation of India Limited

Note:

1. [Give here the stipulated date for completion without any penalty fixed earlier.]
2. [Here mention the extended date.]

Statement of Deviations

PROFORMA FOR STATEMENT OF DEVIATIONS

1. The following are the particulars of deviations from requirement of the Instructions to Tenderers and Conditions of Tendering, Preamble and Special conditions of Contract.

1.1 Instructions to Tenderers and Conditions of Tendering

| | | |
|--------|-----------|--------------------------------------|
| Clause | Deviation | Remarks (Including Justification) |
|--------|-----------|--------------------------------------|

1.2 Preamble

| | | |
|--------|-----------|--------------------------------------|
| Clause | Deviation | Remarks (Including Justification) |
|--------|-----------|--------------------------------------|

1.3 Special conditions of Contract.

| | | |
|--------|-----------|--------------------------------------|
| Clause | Deviation | Remarks (Including Justification) |
|--------|-----------|--------------------------------------|

2. The following are the particulars of deviations from requirement of the technical specifications.

| | | | |
|----------|--------|-----------|--------------------------------------|
| Annexure | Clause | Deviation | Remarks (Including Justification) |
|----------|--------|-----------|--------------------------------------|

Notes:

Where there is no deviation, the statement should be returned duly signed with an endorsement indicated ‘no deviations.’

SIGNATURE AND SEAL OF THE
MANUFACTURER / TENDERER

FORM - 6

STANDING INDEMNITY BOND

(For on Account Payments and Stores supplied by RailTel)

(On Stamp paper of Requisite Value)

We, M/s _____ hereby undertake that we hold at our Stores Depot/s at _____ for and on behalf of RailTel Corporation of India Limited in the premises through General Manger (Northern Region) or his successor hereinafter referred to as "the Purchaser" all materials for which 'On Account' payments have been made to us against the Contract for ----- vide letter of Acceptance of Tender No. _____ and the materials handed over to us by the Purchaser for all purpose of execution of the said Contract, until such time the materials are duly erected or otherwise handed over to him.

We shall be entirely responsible for the safe custody and protection of said materials against all risk till they are duly delivered as erected equipment to the purchaser or as he may direct otherwise and shall indemnify the Purchaser against any loss, damage or deterioration whatsoever in respect of the said materials while in our possession and against disposal of surplus materials. The said materials shall at all times be open to inspection by any engineer authorized by the General Manager (Northern Region), whose address will be intimated in due course.

Should any loss, damage or deterioration of materials occur or surplus materials disposed off and refund becomes due, the purchaser shall be entitled to recover from us the full cost as per prices included in the Contract (as applicable) and also compensation for such loss or damage, if any, along with the amount to be refunded without prejudice to any other remedies available to his by deduction from any sum due or any sum which at any time hereafter becomes due to us under the said or any other Contract.

Dated this _____ day of _____ 2016

for and on behalf of
M/s _____

(Contractor)
Signature of witness

Name and witness in Block letters

Address

Progress Report

Name of the section

| Weeks | Trenching | Protective Works | Duct laying | Placing of Jointing Pits at sites | Splicings | Termination of OFC | Testing of OFC | Testing of HDPE Duct (Integrity Test) | Blowing of OFC | Joint/Route Markers | | Final Testing & Commissioning |
|--------------|-----------|------------------|-------------|-----------------------------------|-----------|--------------------|----------------|---------------------------------------|----------------|---------------------|--|-------------------------------|
| | | | | | | | | | | RCC | | |
| Week 1 | | | | | | | | | | | | |
| Week 2 | | | | | | | | | | | | |
| Week 3 | | | | | | | | | | | | |
| Week 4 | | | | | | | | | | | | |
| Total | | | | | | | | | | | | |

FORM NO: 8

QUALIFICATION EXPERIENCE

Details of works executed and under execution during the last 3 years (including the current Year) should be furnished in the following format.

| S.No. | Name of Project and Description of work. | Party's Address of whom the work was done | Total value of contract (in Indian Rupees) | Schedule period of Completion (Mention Period) | Actual period of Completion (Mention Period) | Reference Page for Satisfactory Performance of Work From the Authorised User | Remarks |
|-------|--|---|--|--|--|--|---------|
| ----- | | | | | | | |

Note: A certificate from the organisation, for which the work was executed, should preferably be executed to indicate that the contract was satisfactorily performed.

Form No.9

USER's CERTIFICATE

(To be given by Authorized Person on the Organization Letter Head)

Name of the Firm

Contract No. & date

Contract Amount (in Indian Rupees)

Completion Period as per contract

Data of Commencement

Actual date of Successful Completion

Contractor's Performance

Dated:

Name:

Designation:

Signature of the User

with Company Seal

RAILTEL

Form No.10

SYSTEM PERFORMANCE GUARANTEE

PROFORMA FOR THE SYSTEM PERFORMANCE GUARANTEE

To

The Director / Projects,

I / We hereby guarantee that the design on the basis of which we have submitted our tender no. has been carefully made to conform to the end objectives in the tender documents and to technical specification therein. We further guarantee that in the event of the performance of the system, when installed, not complying with the end objectives or with the specifications contained in the tender documents, we shall provide further inputs to enable the Railtel to realize the end objectives contained in these documents without any additional payment for any additional equipment which may be required in this regard. We further guarantee that all the expenses for providing the additional inputs under the System Guarantee will be borne by us. We further guarantee that these additional inputs will be provided by us to make the system workable within 1 months from the date on which this guarantee is invoked by the Purchaser. The guarantee is valid for a period of one year from the date of commissioning of the system.

(Signature of Firm's Authorized Officer)
Seal

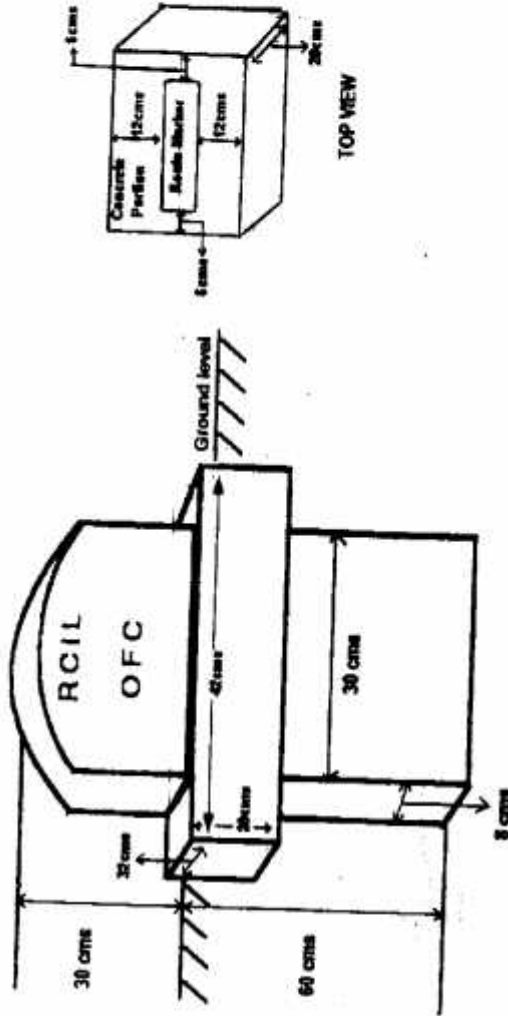
Signature of witness:

1.

2.

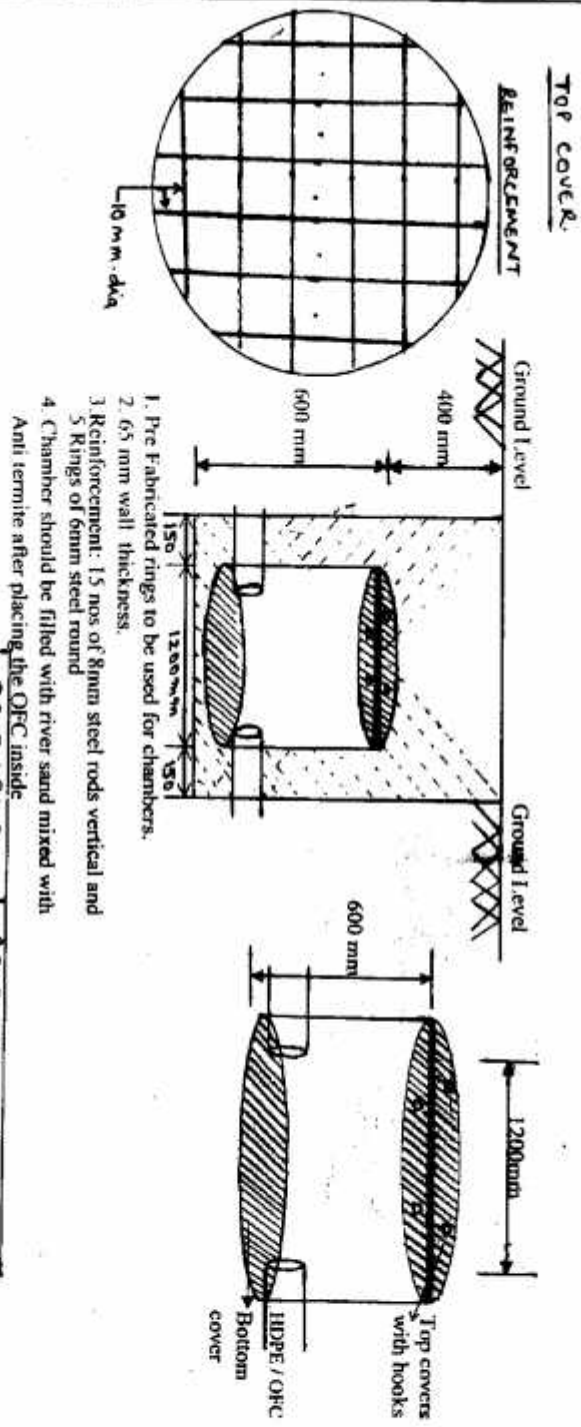


OFC ROUTE MARKER / JOINT MARKER



| | |
|---|---|
| RAILTEL CORPORATION OF INDIA L.P. EASTERN REGION PROPOSED BY | APPROVED BY 20/01/16 29/01/16 JGMC/2016/16 |
|---|---|

RailTel Corporation of India Limited EASTERN REGION KOLKATA
Diagram of Construction of Loop/Splice chamber



| | |
|--|---|
| <p><i>Sumit</i> Sumit Am (retd) 1st.</p> | <p><i>Sumit</i> Sumit DGM (OTM) IER</p> |
| <p>PROPOSED BY</p> | <p>APPROVED BY</p> |



END